2nd WORLD CONGRESS ON MATERNAL FETAL NEONATAL MEDICINE

POSTER PRESENTATIONS ABSTRACT BOOK

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CONTENT

Background: Obstetric bleeding is one of the most frequent cause of maternal mortality worldwide. We can mention the increasing role of severe hemorrhage caused by placenta accreta in mother’s death for the last years. According to Xiao-Yu Pan et al. (In 2015) in China (where the frequency of cesarean sections reaches 40%), indications for hysterectomy in obstetrics have changed over the past 10 years, and if at the beginning of 2000 the atony of the uterus served as the leading indication for hysterectomy (in 2000, 50% of the uterine extirpation, in 2015 year - 17.7%), now in 77.8% of cases the indication for hysterectomy is placenta accreta. In vitro studies have shown that cytotrophoblast cells of placenta accreta are more invasive than normal placenta cells. The main factors of proteolysis, that play their role in placentation, are the enzymes of group gelatinase – matrix metalloproteinases (MMPs) and their special (TIMP-1, TIMP-2) and nonspecial inhibitors (kisspeptin). So there are so many difficulties with diagnostic of placenta accreta our aim is to find some serum predictors of this pathology.
OBJECTIVE: The purpose is to investigate is it possible to use MMP-2, MMP-9, TIMP-1, TIMP-2, kisspeptin as serum predictors of placenta accreta.

METHODS: We divided women in three groups (from 30 to 38 week of gestation). In main group (n=50) there were women with verified by ultrasound/MRI diagnosis of placenta previa/accreta; second group are the women with placenta previa (n=50) and control group of women with selected cesarean section without pathologic placentation. The material for investigation was serum blood. We investigate the concentrations of MMP-2, MMP-9, TIMP-1, TIMP-2, kisspeptin by ELISA kit (Cloud Clone corp., USA) in three groups and results were examined and compared. Also we compare the MMP-9/TIMP-1 concentrations in main and second groups. Statistics analyses were made in "Statistica 10.0" with criteria for parametric and non-parametric analyses.

RESULTS: There were statistically significant differences of average value of MMP-2, MMP-9, TIMP-1, TIMP-2, kisspeptin concentrations (p<0.05) in main group (placenta accreta) and control group. There are statistically significant (p=0.045) meaning of concentrations of MMP-2, MMP-9, TIMP-1, TIMP-2, kisspeptin in serum blood elevation of which can predict placenta accreta. There are 380,8 pcg/ml for MMP-2; 240 ng/ml for MMP-9; 8,5 ng/ml for TIMP-1; 6,1 ng/ml for TIMP-2 and 145,2 pcg/ml for kisspeptin. MMP-9/TIMP-1 concentrations are also statistically significant for main group and second group (placenta previa); decreasing of this meaning less than 49,9 predicts placenta accreta. There is sensitivity 78.8%, specificity 84.0% of this method.

CONCLUSION: The concentrations of MMP-2, MMP-9, TIMP-1, TIMP-2, kisspeptin can be used together as serum predictors of placenta accreta in 30-38 weeks of pregnancy with sensitivity 78.8%, specificity 84.0% in described meanings. Our investigation can lead to major investigation of serum markers to find more exactly the effectiveness of them.
CONTENT

Objective: The aim of this study is a retrospective analysis of premature neonatal death of newborns born to mothers with placenta preavia.

Material and methods: There were analyzed the total number of births in specific period, the incidence of birth of newborns from mothers with Placenta Preavia, mortality of this group of newborns, the gestational age of deceased newborns, the time of death of these newborns, the structure of death according to diagnosis.

During the past 3 years (2009-2011) at Special Hospital for Gynecology and Obstetrics, there were 9496 newborns. 9415 were born alive (99.14%), 81 died (0.85%). Out all newborns, 20 or 0.21%, were born from mothers with placenta preavia.

Results: The mortality in this group of newborns with placenta praevia is 17.39%. The gestational age of all deceased newborns is less than 33 weeks.

During the first 12 hours the percentage of deaths is 50%, from 13-24 hours 25%, from 25-48 12.5% and after 48 hours 12.5%.

According to patho-histological analysis that were done on 100% of the deceased newborns, 38.1% form this risk group of newborns died from hyalinomembrane disease as the main cause of death, 14% from intercranial hemorrhage. 42% had as a main cause of death
hyalinomembrane disease and intercranial hemorrhage, and 6% fall in the group of rare other causes. The high percentage of death of these newborns is determined by maturity and adaptability of these newborns.
Placenta previa poses a high risk for massive hemorrhage, from the antenatal period until after Cesarean section. This condition increases the risk of maternal and neonatal mortality and morbidity. In cases of placenta previa, the prenatal prediction of sudden bleeding during pregnancy and blood loss during Cesarean section, and the assessment of risk for adherence of the placenta using an ultrasound examination, can improve the perinatal outcome. In women who have had a prior cesarean delivery, placenta previa increases the risk of placenta accreta; risk increases significantly as the number of prior cesarean deliveries increases (from about 10% if they have had one cesarean delivery to > 60% if they have had > 4). Accurate prenatal identification of placenta previa allows optimal management for timing and place of delivery, availability of needed blood products, and requirement of an experienced anesthetic and surgical team can be arranged in advance.

The aim of this retrospective cohort study was to evaluate maternal and neonatal outcomes in patients with placenta previa (PP) and placenta accreta (PA).

Methods: This was a retrospective study conducted in the Odesa oblast perinatal center during 3 years. A total of 185 pregnancies complicated by placenta previa with (n = 49 - 26.5%) and without (n = 136) placenta accreta...
were reviewed. Maternal and neonatal data were obtained from medical records and the hospital database system.

Results: Total number of deliveries during this period is 14,268. The incidence of placenta previa was 1.3%. Mean age of presentation was 32 yrs. Women with previous history of surgical intervention (cesarean section) were in 125-67.6% of cases. During cesarean delivery, 66 (35.6%) patients had bled massively, among them placenta accreta was in 32 (48.4%) patients and placenta increta or percreta were in 17 (25.7%) patients, and in 7 patients uterine atony was the cause of massive bleeding. Cesarean hysterectomy was performed in patients and bilateral mass uterine artery ligation with uterine packing in 36 (54.5%) patients. These patients required blood transfusion. Our study included 4 women treated with conservative methods. Success was reported in 25% but there was a 25% overall rate of infection, 50% incidence of postpartum hemorrhage. Additional procedures like embolization of retained tissues have also been used to accelerate placental resorption. Perinatal mortality was 13-5.7% cases and maternal mortality was nil.

Conclusion: Early diagnosis of placenta previa and accreta and timely intervention with arrangement of blood transfusion, and a good anesthetic, surgical and pediatric team improves maternal and perinatal outcome. The risk for placenta accreta in a patient with placenta previa and prior cesarean delivery increases with number of previous caesarean deliveries.

Keywords: Placenta previa, placenta accreta, antepartum and postpartum haemorrhage, maternal mortality, perinatal mortality.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 158

TITLE: RISK FACTORS OF HYSTERECTOMY IN WOMEN UNDERWENT ARTERY EMBOLIZATION FOR MORBIDLY ADHERENT PLACENTA

AUTHORS: C. Sciorio1, G. Capobianco2, E. Coppola3, M. Oppedisano4, R. Ferrara4, A. Ferrara4, V. Cacciapuoti5, L. Stradella1, C. Crescini6, M.D. Spazzini6, G. Nazzaro7, E. Viora8, D. De Vita9

AFFILIATIONS: 1Department of Obstetrics and Gynaecology, Santa Maria delle Grazie Hospital, Pozzuoli (Naples), ASL Napoli 2 Nord, Italy; 2Gynaecologic and Obstetric Clinic, Department of Medical, Surgical and Experimental Medicine, University of Sassari, Sassari, Italy; 3Pediatric Neuropsychiatry Unit, Cava de’ Tirreni ASL Salerno, Italy; 4San Giovanni di Dio Hospital, Frattamaggiore (Naples), ASL Napoli 2 Nord, Italy; 5Department of Obstetrics and Gynaecology, San Giuliano Hospital, Giugliano in Campania (Naples), ASL Napoli 2 Nord, Italy; 6Department of Obstetrics and Gynaecology, Treviglio-Caravaggio Hospital, Treviglio (Bergamo), ASST Bergamo, Italy; 7Department of Obstetrics and Gynaecology, Cardarelli Hospital (A.O.R.N.), Napoli, Italy; 8Department of Obstetrics and Gynaecology, Obstetrical-Gynecological Ultrasound Unit, “Sant’ Anna Hospital”, Torino, Italy; 9Department of Obstetrics and Gynaecology, Department of Obstetric and Gynaecology, Hospital “A. Rizzoli”, Ischia, Naples, Italy.

CONTENT

Introduction: Major bleeding represents one of the most severe complications of deliveries. Hysterectomy is commonly performed to stop bleedings though other modalities are being developed, one of which is uterine artery embolization. This procedure involves occluding the vessels using either foam or coils. The normal myometrium rapidly develops a new blood supply from collateral circulations and acute bleeding is stopped.
The aims of this study were to identify the predictors of hysterectomy among women with antepartum diagnosis of morbidly adherent placenta who received artery embolization.

Methods: A prospective cross-sectional study was performed in nine centres, including 244 women with antepartum diagnosis of placenta previa between May 2010 and April 2011. Logistic regression analyses were performed to identify the risk factors.

Results: Sixty-two (25.4%) women underwent artery embolization and 35 (56.5%) women among them had a hysterectomy. In this population, higher number of caesarean deliveries (OR: 2.559, 95% CI: 1.347–4.862; P=0.004) was the only clinical risk factor associated with hysterectomy. At transabdominal and transvaginal ultrasonography, the presence of loss of the retroplacental “clear space” (OR: 3.997, 95% CI: 1.253–12.754; P=0.019), protrusion of the placenta into the bladder (OR: 24.408, 95% CI: 5.359–111.179; P<0.0001), increased vascularity of the uterine sierosa/bladder interface (OR: 0.225, 95% CI: 0.075–0.672; P=0.008), and turbulent blood flow through the lacunae on Doppler ultrasonography (OR: 24.695, 95% CI: 2.278–267.711; P=0.008) were predictors of hysterectomy. Embolization was associated to higher risk of vesccial lesions (OR: 5.100, 95% CI: 2.059–12.633; P<0.0001) and transfusions (OR: 1.333, 95% CI: 1.150–1.545; P<0.0001).

Conclusions: Women with a prior delivery by caesarean section have a high incidence of artery embolization and hysterectomy during the delivery. Ultrasound is useful in the identification of women at higher risk of hysterectomy.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 189

TITLE: HYDATIDIFORM MOLE: A CASE OF PREGNANCY MANAGEMENT

AUTHORS: Yu. Dobrokhotova 1, S. Danelyan 2, E. Borovkova 1, S. Zalesskaya 1, E. Nagaytseva 2

AFFILIATIONS: 1-N.I. Pirogov RNRMU
2- City clinical hospital № 40, maternity hospital

CONTENT

Objective. The hydatidiform mole is the most common form of the gestational trophoblastic disease, representing 80 percent of cases. Complete and partial hydatidiform moles are differentiated by their karyotype, gross morphology, histologic appearance, and clinical features. Women with hydatidiform mole typically present to their obstetric clinician with missed menstrual periods, a positive pregnancy test, and symptoms of early pregnancy complications (bleeding, pelvic discomfort, hyperemesis gravidarum). Molar pregnancy may be suspected based upon unusually high human chorionic gonadotropin levels or only after pathology evaluation of a failed pregnancy. Molar pregnancy-associated hyperthyroidism will resolve with treatment of the gestational trophoblastic disease. Ovarian theca lutein cysts regress slowly over 2 to 4 months following evacuation with declining hCG levels. Preeclampsia associated with complete molar pregnancy resolves promptly after molar evacuation and usually does not require medical management. Multiple gestations may be complicated by hydatidiform mole, either a complete or partial mole and a viable fetus. Multiple conceptions with a normal co-twin with a complete or partial mole is a rare occurrence, developing in only 1 per 20,000 to 100,000 pregnancies. Multiple gestations that include HM can usually be detected by pelvic ultrasound, but amniocentesis and
chromosome analysis is occasionally required. Patients should be advised of the potential risks, including severe complications such as preeclampsia, hemorrhage, and thyrotoxicosis, which typically develop in the second trimester; preterm delivery; and/or malignancy, gestational trophoblastic neoplasia.

**Methods:** Description of a clinical case. **Results:** A 32-year-old woman, primipara, apparently healthy, presented at the hospital at 12 weeks of gestation for prenatal diagnosis. Obstetric ultrasound at 12-13 weeks revealed heterogeneous mass 15 mm in diameter with numerous discrete anechoic spaces (“snowstorm or swiss cheese pattern”), located on the front uterine wall. On the back uterine wall, normal placenta and fetus were detected. Bilateral theca-luteal cysts were presented. A combined first-trimester screening was positive to high risk for preeclampsia and fetal growth restriction. The level of human chorionic gonadotropin (hCG) was 388.930 mIU/mL. Amniocentesis was recommended, but not performed because of women denial. The diagnosis was - multiple gestations complicated by complete hydatidiform mole. According to the high-risk pregnancy, low dose aspirin was prescribed. The level of hCG increased and amounted to 711.455 mIU/mL in 17-18 weeks, and 947.960 mIU/mL in 22 weeks.

The patient was admitted at 26 weeks of pregnancy diagnosed with preeclampsia and presented with high blood pressure (140/89 mmHg). Methyl-dopa was admitted. The corticosteroids course for induction of pulmonary maturity with intramuscular injections of Betamethasone (24 mg). At 28 weeks and 2 days of gestational age a team consisting of obstetrician-gynecologists, and oncologists made laparotomy, a cesarean section in the lower uterine segment because of the preeclampsia deterioration. Intraoperative, a 20 mm diameter formation consisting of a plurality of bubbles up to 10 mm in diameter was detected. Theca-luteal bilateral cysts reached 120 mm in diameter each. The volume of blood loss was 1000 ml. Hypotrophy newborn premature girl weighing 1030 g., height 33 cm, Apgar score 6/7 points were transferred to the second phase of incubation after 7 days. The level of hCG decreased 5 days after surgery to 60 mIU/mL.

**Conclusion:** HM presents with an elevated serum hCG concentration and is often accompanied by vaginal bleeding, an enlarged uterus, and pelvic
discomfort. The classic ultrasound appearance of a complete mole is a central heterogeneous mass with numerous discrete anechoic spaces (referred to as a "snowstorm or swiss cheese pattern"). The ultrasound is more likely to be indeterminate in a partial mole, but abnormalities of the gestational sac or a placenta with cystic spaces may be seen. In partial mole, a fetus is present.
ABSTRACT ID: 198

TITLE: DIAGNOSIS AND MANAGEMENT OF ABNORMALLY INVASIVE PLACENTA: ARE WE GETTING BETTER?


AFFILIATIONS: Heartlands Hospital, University Hospitals Birmingham NHS foundation Trust, Birmingham, U.K.

CONTENT

Background

Abnormally Invasive Placenta (AIP) is a potentially life-threatening obstetric condition associated with massive obstetric haemorrhage and peripartum hysterectomy. The incidence has increased with rising caesarean section rates. RCOG has recently produced its revised green top guideline No. 27a on Placenta Previa and placenta accreta: diagnosis and management. This guideline advises on the use of USS and MRI in the diagnosis of this condition with focus on multidisciplinary involvement and planning the management.

Objective

At Heartlands, University Hospitals Birmingham, we have developed a clear and robust pathway, which we have successfully been using for the screening and management of suspected Abnormally Invasive Placenta since 2015 that we present. Parameters which were reviewed included patient demographics, multidisciplinary involvement, intra-partum and post-partum outcome, complications and follow up. We also looked at the performance of USS and MRI as diagnostic tests for AIP.
Methods
A retrospective review of 22 patients who were suspected to have MIP over the period of 44 months from June 2015 to January 2019.

Results
All patients had multidisciplinary team involvement including scan by fetal medicine specialist, MRI, and care as per the pathway. The sensitivity and specificity of Ultrasound was 100% and 95.6% while for MRI it was found to be 81% and 33%. The positive predictive value for scan and MRI was 89.6% and 75%. And the negative predictive value showed 100% and 50% for scan and MRI.

Conclusions
- With the development of this pathway there has been uniform and consistent approach to the clinical issue management of suspected cases of MAP, hence improving patient safety.
- Audit shows that there was appropriate and timely referral of complex cases to a well informed and adequately prepared multidisciplinary team.
- There was reduction in overall complications and all the women were debriefed and follow up was arranged.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 209

TITLE: MATERNAL SERUM LEVELS OF PLGF AND SFLT-1 IN A LOW-RISK POPULATION OF PREGNANT WOMEN IN THE THIRD TRIMESTER IN PREDICTING PREECLAMPSIA

AUTHORS: L. Roubalova1, K. Langova2, V. Kroutilova3, V. Durdova3, T. Kratochvilova3, R. Pilka3, M. Lubusky3

AFFILIATIONS: 1 Department of Clinical Biochemistry, University Hospital Olomouc, Czech Republic
2 Department of Medical Biophysics, Palacky University Olomouc, Faculty of Medicine and Dentistry, Czech Republic
3 Department of Obstetrics and Gynecology, Palacky University Olomouc, Faculty of Medicine and Dentistry, University Hospital Olomouc, Czech Republic

CONTENT

Objective
Angiogenic factors (PLGF - placental growth factor, sFlt-1 - soluble fms-like tyrosine kinase 1) play a key role in the pathogenesis of preeclampsia (PE). The aim of the study was to assess maternal serum levels of PI GF, sFlt-1 and the sFlt-1/PIGF ratio in a low-risk population of pregnant women in the third trimester and evaluate the cut-off value in predicting PE.

Methods
In a prospective cohort study, in a group of 482 pregnant women with singleton pregnancies, maternal serum PI GF and sFlt-1 were assessed using the Thermo Fisher assays on a Kryptor Compact platform. PI GF and sFlt-1 were assessed two times (at 30–33 and 36–37 gestational weeks) and the sFlt-1/PIGF ratio was calculated. PE was diagnosed according to the International Society for the study of Hypertension in Pregnancy. A receiver operating characteristic (ROC) analysis was used to determine the
threshold of the levels of PlGF and sFlt-1 and sFlt-1/PlGF ratio in predicting PE.

Results
PE was diagnosed in 1.2% of pregnant women (6/482) at 34 - 40 gestational weeks (median 38w 1d) and the delivery followed within one week after the diagnosis. ROC analysis showed that all parameters were able to predict PE in both gestational periods. AUC (area under the curve) was excellent for all parameters regardless of gestational age and exceeded a level of 0.90. The best accuracy was found for the sFlt-1/PlGF ratio, at 30-33 weeks (AUC = 0.96), and particularly at 36-37 weeks (AUC = 0.97). The optimal sFlt-1/PlGF ratio cut-off at 30-33 weeks was 13 with sensitivity 100% and specificity 94% and at 36-37 weeks cut-off 86 with sensitivity 100% and specificity 95%, respectively.

Conclusions
Maternal serum levels of PlGF and sFlT-1 in a low-risk population of pregnant women in the third trimester can predict PE, particularly the sFlt-1/PlGF ratio, but the cut-off value increases with gestational age.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 219

TITLE: CONSERVATIVE MANAGEMENT OF PLACENTA ACCRETA – CASE REPORTS FROM A TERTIARY CARE HOSPITAL IN PORTUGAL

AUTHORS: C Miranda-Silva 1,2, AS Pais 1,2, MJ Carvalho 1,2, FJ Costa 1, A Areia 1, P Moura 1, F Águas 2

AFFILIATIONS: 1 Department of Obstetrics A, Coimbra University Hospital Center, Coimbra, Portugal
2 Department of Gynecology, Coimbra University Hospital Center, Coimbra, Portugal

CONTENT

Background/Objective: The incidence of placenta accreta spectrum disorders (PAS) is rising, in association with increased caesarean births worldwide. Gold standard treatment is hysterectomy. Conservative management is possible, but infrequently described in the literature. We aim to describe four cases of conservative management in our institution.

Methods: Review of clinical information of four patients diagnosed with PAS managed conservatively in our Institution in 2017 and 2018.

Case Report:
Case 1: S., 34yo, G2P0 (spontaneous miscarriage, medically treated), with an uncomplicated term pregnancy and vacuum-assisted delivery in 2017. Placental delivery was partial, and manual placental removal followed by curettage was unsuccessful. Postpartum ultrasound revealed a 'nodular, echogenic, 90x70mm lesion, apparently within the fundal myometrial wall', suggestive of retained placenta accreta. The patient remained hemodynamically stable and wished to preserve fertility, thus conservative management was decided. Within the first month postpartum, the patient presented twice to the emergency department for fever and pelvic pain,
which resolved with antibiotic therapy. β-hCG was negative. She remained stable and asymptomatic throughout clinical and ultrasound surveillance; at 11 months postpartum she presented only a residual echogenous lesion of 9x8mm.

Case 2: J., 38yo, G1P0, with an uncomplicated term pregnancy and vacuum-assisted delivery in 2017. Placenta was fully retained. Manual removal followed by curettage was attempted, complicated by severe bleeding (which resolved with misoprostol) and blood transfusion. A 33mm fragment of placenta, which on ultrasound seemed to invade the myometrium (placenta increta) was left in situ. At 2 months postpartum, blood loss was mild and levels of β-hCG were nearly undetectable. Patient was asymptomatic throughout the remaining follow-up, and at 10 months postpartum presented only a ‘9mm echogenous, non-vascularised lesion’ on ultrasound.

Case 3: E., 32yo, G5P0, with history of 4 miscarriages and 3 hysteroscopic myomectomies. Spontaneous pregnancy 5 months after last myomectomy. At 18 weeks, the patient suffered spontaneous rupture of membranes, followed by medical termination of pregnancy. Placenta was fully retained and impossible to remove by curettage. Postpartum anaemia resulted, with need for blood transfusion. On ultrasound, a 60x25mm fragment was identified, with poorly defined myometrial interface, suggestive of PAS. At 2 weeks postpartum, she presented normal lochiae, mild pelvic pain and, on ultrasound, placental tissue measuring 42x35mm and a nodular, 49x41mm lesion suggestive of leiomyoma. One week later, she presented to the emergency department with intense, intermittent pelvic pain, and abundant vaginal bleeding. On ultrasound, only a leiomyoma was identified, suggesting spontaneous placental expulsion. Later hysteroscopy confirmed complete expulsion of placenta. Remaining follow-up was uneventful.

Case 4: J., 33yo, G3P2 (1 tubal pregnancy with salpingectomy, 1 caesarean delivery). Pregnancy was uncomplicated, with forceps-assisted term delivery in 2017. Placenta was fragmented on removal, and ultrasound confirmed retained placental tissue, which was left in situ. Postpartum anaemia required intravenous iron therapy. Two weeks after delivery, the patient was admitted for fever associated with retained placental tissue. Curettage was attempted, unsuccessfully, and complicated by severe
intra and post-operative bleeding with need for blood transfusion. Surgery
was followed by acute respiratory distress and hypoxemia, compatible with
transfusion-related acute lung injury. Symptoms regressed after antibiotic
and oxygen therapy and the patient was discharged after 11 days. Before
discharge, placental retention was reassessed, confirming a nodular
71x58mm lesion invading the myometrium. At 1 month postpartum, she
presented to the emergency department for moderate vaginal bleeding,
and methotrexate was administered. She remained asymptomatic through
remaining follow-up, and at 14 months postpartum presented only an
echogenic 14x11mm intramural lesion on ultrasound.
Conclusions: PAS is an increasingly frequent phenomenon, which when
undiagnosed prenatally may have severe consequences. However, when
there is desire to maintain fertility and the possibility of close follow-up,
expectant management with placenta left in situ is possible with apparently
few complications.
INTRODUCTION
An abnormal invasion of the placenta (AIP) beyond the decidua basalis into uterine myometrium, uterine serosa or even beyond, involving adjacent pelvic organs is associated with significant maternal morbidity with a reported worldwide maternal mortality of 7-10% secondary to massive obstetric haemorrhage and/or injury to adjacent pelvic organs. The Triple-P procedure is a safe and effective conservative surgical alternative to intentional retention of the placenta or peripartum hysterectomy for women with AIP. It consists of perioperative placental localization by ultrasound scan and delivery of the fetus via transverse uterine incision above the upper border of the placenta; pelvic devascularization; and placental non-separation with myometrial excision and reconstruction of the uterine wall. In selected cases, where AIP does not involve the anterior lower uterine segment, a Modified Triple P Procedure, which consists of bilateral ligation of uterine arteries instead of placement of prophylactic occlusive balloon catheters inside the internal iliac arteries for the pelvic devascularization, can be performed.
MATERIALS AND METHODS
We present a case of a 35-year-old woman in her second pregnancy with previous caesarean section. During this pregnancy she was diagnosed of major degree placenta praevia with focal invasion of the placenta into the posterior uterine wall and the cervix.
The patient was counselled regarding the management options: a Modified Triple P Procedure, Peripartum Hysterectomy as well as conservative management by Intentional Retention of the Placenta, and she opted for the modified Triple P procedure.

RESULTS
After significant and recurrent antepartum haemorrhage at 33 weeks of gestation a modified Triple P procedure was performed under epidural anaesthetic.
Peri-operative ultrasound scan showed evidence of typical large placental lacunae with extensive blood flow on Doppler examination.
Peritoneal cavity was opened through a transverse suprapubic incision achieved through a 'St George’s Boat Incision,' accessing to the myometrium above the upper border of the placenta and delivering the fetus via transverse uterine incision. Afterwards, bilateral uterine ligation was performed.
Intra-operatively, there was evidence of focal abnormal invasion of the placenta as the placenta was adherent to the myometrium of the posterior uterine wall as well as on the cervix. The entire placenta was removed, after a focal excision of the myometrium underlying the adherent placental tissue and the uterine wall reconstructed.
The estimated blood loss during the procedure was 1.6 L. Copious amount of ‘PerClot’ was used on the placental bed, multiple compression sutures were applied to the focal areas of invasion, and a tamponade balloon with vertical compression sutures (Vertical sandwich technique) was used to control bleeding from venous sinuses at the area of cervical invasion.
The uterine tamponade balloon was deflated after 12 hours with no signs of active bleeding.
The patient did not require uterine artery embolization, peripartum hysterectomy or admission to the ITU. The postoperative recovery was good, without any complications, and she was discharged with good general condition on the third day after the procedure.
CONCLUSIONS
Invasion of the placenta into the posterior uterine wall is expected to result in less blood loss due to the lack of invasion into vital organs as well as reduced likelihood of neovascularisation from the vesical arteries. This allows the complete removal of the placenta along with the underlying myometrium.

In cases of invasion of posterior uterine wall, a modified Triple P procedure in combination with the use of local haemostatic agents and compression sutures can be performed safely without increasing the amount of blood loss and with minimal maternal morbidity, without recourse to the placement of occlusive balloon catheters within the internal iliac arteries. Suspected cases of AIP should be referred to experienced centres and managed by a multi-disciplinary team using an individualized care plan.
**TOPIC:** ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

**ABSTRACT ID:** 289

**TITLE:** MATERNAL AND NEONATAL OUTCOMES FOR PLACENTA PREVIA AND THE MORBIDLY ADHERENT PLACENTA

**AUTHORS:** R Elsheikh 1
S Almojel 1
A Madkhali 1
S Alshubat 1
M Elsheikh 1

**AFFILIATIONS:** 1 Obstetrics and Gynaecology department, King Abdul-Aziz medical city, Riyadh, Saudia Arabia

**CONTENT**

Introduction:
Placenta previa and the morbidly adherent placenta are major risk factors for maternal morbidity and mortality. King Abdul-Aziz medical city (KAMC) is a tertiary teaching hospital in Riyadh, Saudia Arabia, with around 8,000 deliveries per year. During 2018, 38 cases of abnormal placentation were reviewed and analyzed in this study.

Objective:
To determine the different variables in placenta previa and the morbidly adherent placenta and their relationship to maternal and neonatal outcomes

Materials and Methods:
This study is an observational descriptive study in KAMC. We reviewed the computer-based system of the hospital records, looking at the booked patients that were admitted to the OB/GYN department in the year of 2018 with abnormal placentation only. Data was collected by filling a spreadsheet, developed by the researcher, and analyzed using SPSS. Chi
square tests were used to evaluate the significance. A P value of less than 0.05 was considered statistically significant.

Results:

5 of the 7 relationships measured were found to be statistically significant while the remaining 2 were not. Adherent placenta was found to be associated with major bleeding of 2L or more (P value=0.000). Hysterectomies were carried out more commonly in adherent placenta compared to placenta previa (P value= 0.000). Having a hysterectomy is by itself a major risk factor for massive bleeding (P value= 0.000). Bladder injuries incidence was significantly higher in patients who had hysterectomy compared to those who did not (P value=0.000). Having 3 or more previous caesarian sections (CS) was found to have a statistically significant relationship to having major blood loss in these patients (P value= 0.044). Planning elective CS beyond 37 weeks was related to higher incidence of emergency CS but this relationship was not significant (P value=0.126). All NICU admissions occurred for babies delivered before 37 weeks, however no statistical significance was found (P value=0.101).

Conclusions:

In this series we reaffirmed the already known strong relationship between morbidly adherent placenta and the risk of major blood loss and hysterectomy. We also shed some light on the possible association between hysterectomy and bladder injuries. Further studies with larger number of patients is likely to draw significant relations between gestational age and neonatal outcomes.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 293

TITLE: UTEROVAGINAL PACKING, TRANEXAMIC ACID AND UTEROTONICS FOR PLACENTA PREVIA AND THE MORBIDLY ADHERENT PLACENTA CASE SERIES

AUTHORS: R Elsheikh 1
S Hassan 2
T. Gaafar 2
S AlHunain 1
H Mohamed 1
M Alawad 2
M Osman 2
S Almojel 1
M Elsheikh 1

AFFILIATIONS: 1 Obstetrics and Gynecology department, King Abdul Aziz Medical City, Riyadh, Saudia Arabia
2 Obstetrics and gynecology department, Al Habib Hospital, Riyadh, saudia arabia

CONTENT

Introduction:
Serious maternal morbidity along with higher incidences of maternal mortality have been strongly related to placenta previa and the morbidly adherent placenta. Different methods have been tried with various success rates and complications. For the morbidly adherent placenta early resort to hysterectomy remains the gold standard measure that proved to be lifesaving. Mechanism by which the bleeding happens is mainly due to deficient myometrium, highly vascular lower segment and the fast consumption of coagulation factors. Hysterectomy itself carries with it significant physical and psychological morbidities. In this case series we
tried to counteract this triad by another one that can be lifesaving with less comorbidities. Packing, tranexamic acid and uterotonic like misoprostol, syntocinon, and carboprost were used.

Objective:
To determine the effectiveness of packing, tranexamic acid and uterotonic and their complications in cases of placenta previa and adherent placenta.

Materials and Methods:
This study is an observational descriptive case series report in two hospitals in Riyadh, Saudi Arabia. King Abdul Aziz Medical City (KAMC) and Al Habib hospital are both tertiary hospitals with maternal care. Data was collected by filling a spreadsheet, developed by the researcher. In this series, 16 cases of uterovaginal packing in placenta previa and the morbidly adherent placenta were reviewed. Surgery started as usual with higher uterine incision avoiding opening through the placenta if possible and then delivering the baby. After that, the easily removable part of the placenta was removed; any adherent part was left behind. Before the surgery 2 uterine packs were prepared and tied together, and those were immediately used to pack the uterus after placental removal. The edge of the second pack was passed through the cervix to the vagina, and another 2 packs were inserted vaginally by an assistant. Tranexamic acid and uterotonic were used at the same time as packing. If the bleeding is controlled then routine closure was done, with a drain in situ. The pack being removed after 24-48 hours with conscious sedation. If the bleeding was uncontrolled then we proceed for hysterectomy.

Results:
Utero vaginal packing was successful in 12 out of 16 patients (75%) with no major comorbidities. Hysterectomy was done in only 4 cases (25%). 3 patients required ICU admission (19%) and 3 patients had bladder injuries (19%).

2 patients (early in the series) needed laparotomy for pack removal (12.5%). In the last 10 patients the packs were removed vaginally without difficulty. All patients including the hysterectomy patients were discharged home within 5-7 days.

3 patients had adherent remaining placenta (19%), and it was left there. They were all followed expectantly over a long period of time. In 2 of them
the placenta resolved completely and caused no complications. The remaining 1 patient (6.25%) was readmitted to the hospital with bleeding and fever 4 weeks after surgery. She received IV antibiotics and blood transfusion and then she was discharged home in good condition after 2 days.

Conclusions:
In spite of the low number of cases in this series, this method appears to be promising in reducing morbidity and mortality and saving the uterus. Larger number of cases need to be reviewed for better assessment. This method also needs to be compared with other methods in future studies.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 297

TITLE: GIANT PLACENTAL CHORIOANGIOMA: A RARE CASE OF ADVERSE FETAL OUTCOME.

AUTHORS: K. Biskupska Bodova 1, Z. Laucekova 1, E. Kudela 1, K. Biringer 1, J. Visnovsky 1, P. Zuber 1

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, Martin University Hospital, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia

CONTENT

Introduction: Chorioangiomas (CAs) are the most common non-trophoblastic tumor-like-lesions of the placenta. It usually presents as a solitary nodule or, less frequently, as multiple nodules. Ultrasound and magnetic resonance imaging (MRI) represent the dominant imaging techniques in diagnostic and monitoring process. CAs are typically found on fetal side of the placenta close to umbilical cord insertion. Microscopically, three histological subtypes have been described: angiomatous, cellular and degenerate. Although the clinical significance of small CAs is unknown, the larger tumors (more than 4cm) are often associated with maternal and fetal complications such as polyhydramnios, premature delivery or premature placental separation. Arteriovenous shunts in large chorioangiomas can impair the fetal circulation by increasing the venous return to the heart, causing tachycardia, cardiomegaly and hypervolaemia. As a result, there is the possibility of high output cardiac failure, oedema, hydrops, stillbirth and intrauterine growth retardation.

Case report: We aim to present a case of twenty-three year old first time pregnant patient who was first diagnosed with placental chorioangioma
on ultrasound screening in 20th week of gestation. The initial finding showed placental tumor 4cm in diameter with normal fetal growth and morphology. In 25th week of gestation patient started to suffer from abdominal pain and there was a progression in placental tumour size and dilatation of umbilical vein on ultrasound examination. Fetus wasn’t showing any other sign of distress and there was a physiological amount of amniotic fluid. Patient was therefore recommended to nearest perinatological centre. Admission ultrasound examination revealed a 7cm large placental tumor in diameter, of lobular shape which was localised close to the umbilical insertion. In place of its localisation patient claimed to feel dull pain. There were no signs of placental abruption. Patient was informed about the risks associated with the presence of placental chorioangioma for her pregnancy and for fetus. Despite the severity of the situation she decided to leave the hospital and preferred outpatient care over hospitalization. Four days later she visited her gynaecologist and complained about increased abdominal pain, decreased fetal movement activity and general weakness. Ultrasound examination revealed progression in tumor size and presence of universal fetal hydrops. A female foetus in 27th week of gestation was delivered by emergency caesarean section. Despite intensive care the newborn died after 24 hours after delivery due to multisystem organ failure.

Conclusion: Our case proved an importance of intensive ultrasound monitoring of placental tumours which can lead to abrupt deterioration of fetal condition and if not managed in time can lead to fetal demise.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 308

TITLE: INTRAUTERINE FETAL MEMBRANES DETACHMENT - A CASE REPORT

AUTHORS: IC Rotar 1; AM Levai 2; Muresan D 3

AFFILIATIONS: 1,2,3- 1st Departemnt of Obstetrics and Gynecology, University of Medicine and Pharmacy "Iuliu Hatieganu" Cluj Napoca, Romania
1,2,3 - 1st Clinic of Obstetrics and Gynecology, Emergency County Hospital, Cluj Napoca, Romania

CONTENT

In the normal situation fetal membranes are attached to the fetal face of the placenta and they cannot be visualised separately in the amnion during pregnancy. In this communication we aim to report a case where in 2G 2P 34 GWs patient with imminent preterm labour the visualisation of a free amniotic membrane floating in the amniotic fluid. The patient had previous ultrasound without any noticeable membrane or placental anomalies. After her admission in the Obstetric Departement corticosteroids for lung maturation and tocolitic therapy was initiated. The patient delivered five days after the initial evaluation a healty boy of 2800 g, Apgar score 10. On the fetal face of the placenta a free floating membrane could be see. In the literature the number of reports of free floating membranes in singleton pregnancies are scarce; a single article by Devlieger et al (2003) reporting the association of membrane detachment next to the cervical os, so called "moon sign" in relationship with preterm labor. To our knowledge it is not known what exactly determines the membranes to detach and if there is any connection with preterm labor.
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 316

TITLE: MANAGEMENT OF COMPLETE PLACENTA PREVIA IN A TERTIARY CENTER IN CYPRUS: A CROSS SECTIONAL STUDY

AUTHORS: D. Achilleos¹, P.P. Christofidis¹, S. Argyridis¹, A. Christofides¹

AFFILIATIONS: ¹ Archbishop Makarios, Child and Mother Hospital, Nicosia, Cyprus

CONTENT

Introduction
Placenta previa is an obstetric complication that refers to the presence of placenta tissue that lies proximal or covers the internal cervical os and can be further categorized as complete or incomplete. The pooled prevalence of placenta previa as it is described in systematic reviews is about 3-5 in 1000 births. Although it is a rare complication, this condition is associated with postpartum haemorrhage (PPH), preterm delivery, neonatal intensive care unit (NICU) admission and hysterectomy and has a significant impact in fetal and maternal morbidity and mortality.

Known risk factors include previous uterine scar, infertility treatment, increased maternal age, increased maternal parity, maternal smoking and multiple gestation.

Material and Methods
This is a cross-sectional study of all live births and stillbirths that took place at Archbishop Makarios, Child and Mother Hospital (tertiary care unit) in Nicosia, Cyprus between 01/01/2013 until 31/12/2017. The data were extracted from the hospital database and analysed.
Results
During that period the total deliveries at our hospital were 6723 and 75 cases were identified from a prenatal scan and confirmed during the CS as complete placenta previa, giving an incidence of 1.12% while incidence of placenta accreta spectrum disorders identified at that subgroup was 0.12% (8 cases). 80% of the cases (60/75) had at least one risk factor for the development of placenta previa. The median gestational age at delivery was 35+1/7 weeks, the median birth weight was 2400g and median maternal age was 34 years old. Intraoperative or postoperative blood transfusion was given to 35/75 patients (46.67%), uterine tamponade of any kind was necessary in 11/75 cases (14.67%) and emergency obstetric hysterectomy was performed in 7/75 cases (9.33%). Infertility treatment was applied for 11/75 cases (14.67%) and maternal smoking incidence was 12/75 (16%).

Conclusions
Although complete placenta previa is a rare disorder it is of great importance to recognise possible risk factors at the first antenatal visit and guide these women to a reference centre if there is a suspicion of abnormal placental location, where skilled and experienced obstetricians and anaesthesiologists can assess the pregnant woman and the neonate can be supported by the NICU.

References
1. Placenta Praevia and Placenta Accreta: Diagnosis and Management (Green-top Guideline No. 27a)
TOPIC: ANOMALIES OF PLACENTATION: FROM DIAGNOSIS TO MANAGEMENT

ABSTRACT ID: 318

TITLE: MANAGEMENT OF POSTPARTUM HAEMORRHAGE (PPH) WITH A DUAL BALLOON CATHETER FOR UTERINE TAMponade

AUTHORS: S. Argyridis 1; D. Achilleos 2; P. Christofidis 3; A. Christofides 4.

AFFILIATIONS: Obstetrics and Gynaecology Clinic, Archbishop Makarios III Hospital, Nicosia, Cyprus

CONTENT

Introduction: Postpartum haemorrhage (PPH) is the leading cause of morbidity and mortality among women in the third trimester and immediate postpartum period. Most of cases involve uterine atony, while other aetiologies involve lacerations, retained placenta and coagulation defects. Management of uterine atony involves several measures such as bimanual compression, uterotonic administration, uterine tamponade, uterine artery embolization, internal iliac artery ligation and hysterectomy. Uterine tamponade is a technique applied many decades back, with the use of gauze packing and subsequently with the use of various balloon tamponade systems. The use of such devices has been tested in cases of PPH due to uterine atony and/or placenta previa.

Objectives: Assessment of effectiveness of uterine tamponade by use of balloon tamponade in cases where uterotonics fail to control bleeding, secondary to uterine atony and abnormal placentation (previa).

Material: Women that delivered between June 2017 and December 2018 at the Archbishop Makarios III Hospital in Nicosia Cyprus that were diagnosed with severe postpartum haemorrhage and managed by placement of a dual-balloon catheter tamponade device (Belfort-Diddy or Ebb), following failure of other conservative methods (uterotonics).
Method: Retrospective analysis of birth registry and patient files.
Results: A total of 23 women were included that had uterine atony and/or placenta previa and were all managed with the dual-balloon catheter. The aetiology of PPH in 18 of them was uterine atony and placenta previa and 5 uterine atony only. 21 cases had elective caesarean section for placenta previa or previous caesarean section while 2 had vaginal delivery. Mean maternal age was 34 years (range 24-41) while mean gestational age was 37 weeks (range 34-39 weeks). 21 were singleton pregnancies while 2 multiple (twin pregnancy). All cases were managed with bimanual compression, uterotonic administration with oxytocin, methylergonovine and misoprostol and tranexamic acid as well. Mean time from delivery to balloon insertion was 34 minutes (range 24-65 minutes) and in all cases, ultrasound guided placement was used. Mean time for placement was 4.5 minutes (range 2.5-8 minutes) and mean filling volumes were 600ml (range 500-750ml) for the uterine balloon and 120ml (range 100-300ml) for the vaginal balloon. Mean duration of use was 14 hours (12-24 hours). Compared to previous studies there is decreased mean time from delivery to insertion (38 vs 34 minutes), mean filling volumes (650 vs 600ml and 120 vs 150ml) and duration of use (18 vs 14 hours), as well as blood loss (230 vs 200ml). Bleeding decreased and stopped in 22 of 23 cases while 1 case required hysterectomy due to continuous bleeding. Mean blood loss following insertion was 200ml (100-375ml). Transfusion with blood products was required in 16 cases, while day 1 mean hemoglobin was 9.5 g/dl (range 7.0-11.7 g/dl). Two cases required intensive care unit admission due to severe hypovolaemia related complications. All cases received oxytocin infusion for the duration of use and broad-spectrum antibiotics intravenously for 72 hours (cephalosporin, metronidazole). No cases of postpartum infection were reported.
Conclusions: Balloon tamponade is a safe and effective method of postpartum haemorrhage management in cases of uterine atony and/or placenta previa that pharmacological methods fail to control bleeding. Compared to previous results published there is a reduction of time from delivery to placement, filling volumes, duration of use and blood loss. These features are probably due to better training and expertise. Further studies are needed to evaluate its’ effectiveness in cases of uterine atony following vaginal deliveries or adherent placenta (accreta).
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 35

TITLE: MATERNAL ANTIMICROBIAL USE AT DELIVERY HAS A STRONGER IMPACT THAN MODE OF DELIVERY ON BIFIDOBACTERIAL COLONIZATION IN INFANTS

AUTHORS: N. Imoto 1; F. Amanuma 2; H. Maruyama 2; S. Watanabe 1; N. Hashiguchi 3

AFFILIATIONS: 1. Department of Microbiome Research, Juntendo University School of Medicine, Tokyo, Japan
2. Iwate Prefectural Iwai Hospital, Ichinoseki, Japan
3. Department of Emergency and Disaster Medicine, Juntendo University School of Medicine, Tokyo, Japan

CONTENT

Background: The period from birth to weaning is important for establishment of adaptive immunity and immune tolerance. In particular, the role of bifidobacterial colonization in early infancy is thought to be crucial in establishing the immune system against allergy or infections. The objectives of this study were to analyze the gut microbiota in Japanese infants using next-generation sequencing, determine the abundance of bifidobacteria in the infants, and identify factors related to infant bifidobacterial colonization, with a focus on the impact of maternal antimicrobial treatment on the colonization.

Material and Method: A cross-sectional study was performed. Feces samples of 33 Japanese healthy infants who underwent a check-up one month after birth were collected over 10 months from January to October 2016, and analyzed by next-generation sequencing to examine the diversity and abundance of the gut microbiota.

Results: Antimicrobial agents were given systemically to 19 mothers at delivery for Cesarean section, Group B Streptococcus positive status, and premature rupture of membrane. The beta diversity index of the gut
microbiota differed significantly based on maternal antimicrobial use at
delivery (P< 0.05). The most dominant genus was bifidobacteria, and the
relative abundance of bifidobacteria in infants exposed to maternal
antimicrobials at delivery was significantly lower than in those who were
not exposed (P< 0.05). In contrast, the delivery mode showed no significant
relationship with gut microbiota diversity and bifidobacterial colonization.
Conclusion: Maternal antimicrobial use at delivery has a stronger effect
than delivery mode on the gut microbiota, especially for colonization of
bifidobacteria, which dominates the gut in healthy infants.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 44

TITLE: PERFORMING A GENTLE CAESAREAN SECTION FOR A BREECH PRESENTATION: MATERNAL AND NEONATAL OUTCOME

AUTHORS: C. H. Brethouwer 1; A. Elvan 1

AFFILIATIONS: 1 Department of Obstetrics and Gynaecology, University Medical Center Groningen (UMCG), Groningen, the Netherlands.

CONTENT

The gentle caesarean section (GCS) has been introduced as an alternative to the conventional caesarean section. The GCS aims to optimize the parental satisfaction and wellbeing of mother and child by simulating certain aspects of a vaginal delivery when vaginal birth is excluded and a caesarean section is necessary. A breech presentation is one of the indications for a planned caesarean section. To our knowledge there are no publications on maternal and neonatal outcome concerning a GCS for breech presentation. The aim of this study was to compare the maternal and neonatal outcome of a GCS in cephalic and breech presentation. This retrospective study analysed the outcome of women who met the inclusion criteria and underwent a GCS, starting from the introduction of the GCS in December 2013 until November 2018 in the University Medical Center Groningen (UMCG), the Netherlands. In a total group of 180 women a GCS was successfully performed. Main outcome measures for the mother were maternal blood loss, maternal infection, type of feeding, and a prolonged hospital admission. Main neonatal outcome measures were APGAR score, temperature, birthweight, glucose, cord blood pH, hypothermia, hyperbilirubinemia, neonatal infection, need for consulting the paediatrician during the GCS or afterwards, any postnatal complications and admission to the neonatal intensive care ward. The
neonates in cephalic presentation were compared to breech presentation using Chi-square, Mann-Whitney U, and t-tests with a p-value of 0.05. We analysed 120 cases in cephalic presentation compared to 60 cases in breech presentation. The APGAR 1 was significantly lower for breech presentation, P=0.019. The first neonatal temperature was also lower in breech presentation (36.8 °C, ±0.36) versus cephalic presentation (36.9 °C, ±0.39), P=0.046. There was one case of severe neonatal hypothermia (<36.0°C), this was a neonate in breech position with an unexpected low birthweight (<p10) and was postnatally admitted for a suspected infection. Birthweight is significantly different between the two groups, (P=0.009). Six (10%) neonates in breech presentation were p90 versus twenty (17%) at cephalic presentation, P=0.027. For maternal outcomes, there was significantly more blood loss in cephalic presentation (441, ±230) versus breech presentation (353, ±151), P=0.002. There was a significant difference between the groups for neonatal APGAR 1, the first measured neonatal temperature, birthweight and maternal blood loss. However, there was no difference in APGAR 5 and 10. There was also no difference in admissions or consulting the paediatrician between the 2 groups. The neonatal temperature and maternal blood loss could probably be explained by the differences in birthweight. Being small for gestational age is a risk factor for less optimal temperature regulation, and macrosomia is a risk factor for more maternal blood loss in labour. The GCS for breech position were mostly planned GCS, the mothers were not in labour. This could also be an explanation for a significantly lower neonatal temperature. In conclusion, when performing a GCS, there is no clinical significant difference in outcome measures between a cephalic and a breech presentation and so it seems safe to perform the GCS also for breech presentation.
OBJECTIVE: The aim of this study was to prove the connection between the birth trauma and the way of delivery. MATERIAL AND METHOD: 9496 newborns, term 8630 (90.88%), praeterm 866 (9.12%), who were born at Special Hospital for Gynecology and Obstetrics – Mother Theresa, Skopje, Macedonia, during the period of three years (2009-2011), were studied retrospectively. We analyzed the method of delivery: vaginal (spontaneous and with intervention) and cesarean and the type of birth trauma. 7699 (81%) of newborns were born by spontaneous vaginal delivery, 135 (1.42%) were born vaginal with intervention and 1662 (17.5%) were born with cesarean section. RESULTS: The incidence of birth trauma in the whole group (9496 newborns) was 5.72% (544). In a group of newborns with spontaneous vaginal delivery 6% (462) were with birth trauma. In a group of newborns with vaginal delivery with intervention 37% (50) were with birth trauma. In newborns with cesarean section 1.92% (32) with birth trauma. From 9496 newborns: Intracranial hemorrhage (ICH) were 0.85% (81), term 0.7% (61), praeterm 2.3% (20). Cefalhaematoma 2.54% (242), term 2.6% (225), praeterm 2% (17). Fr-ae clavulae 1.94% (185), term 2.1% (181), praeterm 0.5% (4). Paresis plexus brachialis 0.23% (22), term 0.23% (20), praeterm 0.23% (2). Paresis N.Facialis 0.11% (11), term 0.1% (9), praeterm 0.23% (2). Fr-ae Femoris 0.01% (1), term newborn. Oedema cerebri 0.02% (2), term newborn 0.01% (1), preterm 0.1% (1). CONCLUSIONS: Obstetric...
techniques of delivery, like the methods of Bracht, vacuum extraction, forceps and extraction are connected with increase of incidence of birth trauma. This is pointing us to the risk of the use of vaginal obstetrics intervention, and to avoid them when ever it is possible.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 73

TITLE: FEATURES OF EPIDURAL ANALGESIA AND THE OUTCOME OF THE CHILDBIRTH PROCESS

AUTHORS: V. Zabolotnov 1,2, A. Antonov 2, E. Astreiko 1

AFFILIATIONS: 1. Zhytomyr Regional Perinatal Center, Zhytomyr, Ukraine
2. Zhytomyr Medical Institute, Zhytomyr, Ukraine

CONTENT

Introduction. Performing epidural analgesia (EA) during the childbirth process lately is considered being a routine practice lately. Often we hear such statements, that the implementation of the EA does not affect the birth outcomes. We have a positive attitude towards the usage of EA, but our experience confirms the impact of EA on the childbirth process and its outcome in particular.

Aim of research.
Study and analyze the impact of EA on childbirth process.

Material and Methods
We have analyzed the childbirth outcome of 272 female patients with EA. EA method is defined as continuous epidural infusion (CEI) of analgetic. The outcomes of childbirth depending on the disclosure of uterine throat when performing EA are studied.

Results
Usage of EA method during the childbirth process of 272 female patients is amounted to 24.0% of the total number of births. Reasons for EA were the following: somatic pathology – 56 (20.6%); obstetric indications – 159 (58.5%); will of the female patient – 57 (21.0%). The combined cases of female patient’s will and/or somatic pathology\ obstetric indications are amounted of 123 cases (45.0%).
15 births out of 272 with EA (5.5%) were premature and 23 (8.5%) were birth-permitted after 41 weeks.

47 births out of 272 (17.3%) have ended up with cesarean section (CS) during the usage of EA. Total rate of CS (including planned) in the perinatal center was 22.7%. The number of urgent CS performed during the childbirth process in the perinatal center includes 54 cases. Only 7 cases of CS were recorded when EA was not performed.

Out of 47 births with EA and CS two were premature 4.3%; 8 after 41 weeks - (17.0%); 10 female patients were identified as deutipara (21.3%).

Indications for CS with EA (47 cases) were weak birth activity in 19.1% of cases; fetal distress – 64.0%; premature detachment of a normal placenta – 2.1%; clinically narrow pelvis– 12.8%; frontal insertion – 2.1%.

The birth of a child on the APGAR scale of less than 6 points was only in one case when the opening of the uterine throat when performing EA was more than 6 cm and premature detachment of a normally situated placenta occurred.

EA was performed with cervix dilated 2 cm in 2,6% of cases; 3 cm – in 46,7%; 4-5 cm – in 40,1%; 6 and more cm – in 7.0% of cases. The lowest rate of CS is recorded when disclosing uterine mouth 4-5 cm (table 1).

Table 1

<table>
<thead>
<tr>
<th>Cervical dilatation</th>
<th>EA and childbirth (225 cases)</th>
<th>EA and CS (47 cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 cm</td>
<td>7 (3.1%)</td>
<td>3 (4.3%)</td>
</tr>
<tr>
<td>3 cm</td>
<td>127 (56.4%)</td>
<td>35 (74.6%)</td>
</tr>
<tr>
<td>4-5 cm</td>
<td>109 (48.4%)</td>
<td>4 (8.5%)</td>
</tr>
<tr>
<td>≥6 cm</td>
<td>19 (8.4%)</td>
<td>5 (10.6%)</td>
</tr>
</tbody>
</table>

In the perinatal center, the frequency of vacuum extraction is amounted of 42 cases (3.3%). Among 272 female patients with EA the birth process in 25 cases (9.2%) ended up with vacuum extraction. The indications for vacuum extraction in all cases was fetal distress. Against the background of EA, vacuum fetal extraction was performed almost 3 times more often.

Conclusions

Performance of EA is optimal when opening uterine throat by 4-5 cm, in this situation the frequency of CS is minimal.
Early EA up to 3 cm and / or not smoothed neck is limited (especially during induced births), the frequency of CS is significantly increasing against its background. The data obtained did not reveal the negative effect of EA on the fetus (newborn). The frequency of instrumental delivery (Vacuum extraction) increases with EA. The frequency of urgent CS on the background of EA increases.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 123

TITLE: C-SECTION “IN CAUL” PRETERM DELIVERY

AUTHORS: P. Talens 1; A. Martinez 2; J. Peiró 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia Universitary Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
Fetal extraction with intact membranes or “caul” preterm fetuses reduces complications associated with prematurity. Less handling in the extraction seems to cause less obstetric trauma, thus maintaining the mechanical protection of the amniotic fluid. Studies also indicate an improvement in Apgar score, reduced need for resuscitative measures and reduced hospital stay. The technique can be hindered by the amniotic fluid volume, an index of low Bishop and a high birth weight.

CASE DESCRIPTION
To perform the hysterectomy surgical scalpel is used with continuous aspiration to correctly display the uterine opening. After the same, the membrane integrity is observed under insertion. We proceed to the uterine opening digitally to avoid less trauma and thus preventing rupture of the membranes. Once the complete hysterotomy hand, serving as mechanism “spatula” approaching fetal exterior parts, while the assistant exerts controlled pressure on the fundus to facilitate extraction with the least possible manipulation is introduced. Once completely extracted fetus “In caul”, he proceeds to artificial amniorrhexis.
CONCLUSIONS
Fetal extraction with intact membranes or "caul" preterm fetuses appears to offer benefits to the fetus, pulmonary complications, and getting better scores on the Apgar test.
It is therefore recommended standardization of this technique, its implementation in large maternities attention to extremely premature.
Learning the technique is not easy, requires great handling capacity and careful handling, the performance of the expert hands of an experienced obstetrician matter being re
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 126

TITLE: HOW MANY C-SECTION CAN BE PERFORMED IN THE SAME PATIENT? A CASE REPORT

AUTHORS: J. Garvi 1; P.M. Rodríguez 2; J. Peiró 3; M. Velasco 4; M.A. Jodar 5; M. Lorente 6

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia Universitary Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
The cesarean section rate is increasing throughout the world for decades. The desire in many regions or countries have a high number of children with the lack of effective contraceptive measures is causing the emergence of a new type of patient, pregnant with multiple repeat cesarean (MRCS). In some countries now account for 4-6% of all pregnant women. Complications in these patients are frequent and morbidity is increased. Nevertheless, data on the risks and the management of this patient are still very limited.

PRESENTATION OF THE CASE
-Our patient is a woman of 39, blood group A+, BMI of 39.6 and menarche at 10 years. It has no known drug allergies or diseases of interest. His surgical history is 8 cesarean sections and curettage. Its formula is G11C8A3 obstetric. It does not use contraception and tubal ligation has refused on several occasions for cultural reasons.
-8 caesareans have occurred in the years 2000, 2002, 2003, 2006, 2008, 2010, 2012 and 2015. The shortest interval between time and over was 16 months between the 2nd and 3rd C-section and the longest 38 months between 7th and 8th cesarean section.
Regarding complications during pregnancy, the principal has been the threat of premature birth due to uterine dynamics. There have been episodes that required hospitalization in 5 of the 8 cesareans. As long as entered by APP it was in the last cesarean section with a total of 28 days followed by 23 days of the 7th cesarean section and 14 days of the 6th cesarean section.

About intraoperative complications, the principal has been the presence of previous accessions, present from the 2nd c-section. Due to them in the 4th cesarean was not possible to access the required segment and performing a body incision, which will be repeated in the following interventions. Despite this, no damage to peripheral organs in any intervention, or increased blood loss and need for transfusion. Neither it has been no episode of placenta previa and / or accreta.

Postoperative has been surprisingly good in all interventions. There were no episodes of urinary tract infection, wound infection, respiratory infection, and thromboembolic disease. Blood counts have always shown control hemoglobin above 10 mg / dl and has not required transfusions. Hospital stay was between 3 and 5 days, with a mean of 4 days.

CONCLUSIONS
Multiple repeat cesarean deliveries are at increased risk of complications with increased maternal mortality and morbidity. Most of this increase in complications occur in the subgroup of placenta previa and / or accreta. Nevertheless, the obstetrical outcomes in absolute terms are very good. It is currently considered that morbidity increases progressively from the first C-section, with some cutoffs established authors. Thus, the incidence of accretism increases from the 3rd caesarean; adhesions, placenta previa and intestinal damage from the 4th; general morbidity from caesarean 5th; and stay in intensive care from the 6th C-section.
INTRODUCTION:
Childbirth and assistance to it is the central element of perinatal medicine. Records parity and other variables associated perinatalógicas are indispensable as a method of quality control of the activity of a delivery room. Caesarean section is the most important surgery of a delivery room and their analysis one of the main indicators of quality of care.

OBJECTIVES:
Summarize the activity log cesarean delivery room during our 2015

MATERIAL AND METHODS:
Retrospective study of cesareans occurred, types and causes in our center during 2015

RESULTS:
The total number of births in 2015 was 2844 deliveries. The overall Caesarean section rate was 24.75%, of which 4.95% were elective and 19.8% were urgent. The indications for elective caesarean section were CA (19.15); Breech (36.87); Macrosoma (11.34); PP (4.96); Pat. Breast (8.51); Pat. Fetal (4.25); Other (14.89). Emergency cesarean section indications were DPF (17.93) IF (21.66) NPP (27.88) RPBF (24.33) Others (8.17)

CONCLUSIONS
The rate of cesarean section in our center is above average. Within the programmed cesareas, the principal indication was by breech
Within the urgent cesareans, the majority were due to no progression of labor. We must analyze these data and try to improve the management of labor to improve our statistics.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 160

TITLE: A SUCCESSFUL LIVE BIRTH WITH IN VITRO FERTILIZATION FROM A 55 YEARS OLD, NULLIPAROUS WOMAN WITH RECURRENT UTERINE FIBROIDS AFTER ABDOMINAL MYOMECTOMIES

AUTHORS: R. Sulukhia 1; N. Pirtskhalava 2; A. Sukhiashvili 3; I. Natsvlishvili 4

AFFILIATIONS: Perinatology Department, Academicion Otar Gudushauri National Medical Center, Tbilisi, Georgia

CONTENT

We report a successful live birth with in vitro fertilization (IVF) from a 55 years old, nulliparous woman with multiple uterine fibroids. A 55 years old woman with 3 years history of primary infertility, previous myomectomies, getting pregnant thanks to IVF, presented to our hospital with regular uterine contractions at gestational age of 35 5/7. The patient, originally scheduled for delivery this day, immediately proceeded to surgery. The patient underwent a classical cesarean delivery and delivered a healthy male baby weighing 2700 g, height 48 cm. Apgar scores were 7/7. During birth, it was difficult the placenta to separate from the uterine wall easily, a diagnosis of placenta increta was made. There was a great risk of hemorrhage during manual attempts to remove the placenta. The surgical team considered the hemorrhage to be life threatening and promptly initiated blood transfusion. The surgeons controlled the hemorrhage via a hysterectomy and a bilateral salpingo-oophorectomy. She discharged home 1 week later. The baby despite stillbirth was in normal heath.

More women between the ages of 50 and 55 are giving birth today, than ever before, largely thanks to in vitro fertilization, or IVF. Getting pregnant at 55 is rare, but conceivable. These older mothers are often
better prepared for pregnancy and to raise children, regularly attended prenatal check-ups, continued their healthy lifestyle during pregnancy, and delivered in a perinatal center. However, scientific publications on this subject are rare. Our case suggests, that for women with uterine fibroids, or otherwise unexplained infertility, assisted reproduction might lead to pregnancy and live birth, even if previous myomectomy didn’t exhibit beneficial effects on fibroids. We also would like to mention about Placenta increta, which occurs within 15% of cases, and happens when the placenta attaches itself so deeply into the uterine wall that it attaches to the uterine muscle. Hysterectomy is a common surgical intervention. Teamwork is essential to the effective management of an obstetric emergency. A multidisciplinary effort consisting of an experienced surgical and anesthesia team, neonatal care team, blood bank, and laboratory personnel, as well as intensive care unit staff, is vital for optimal management of the patient and fetus.

The effect of fibroids on reproduction remains in question. Submucosal fibroids seem to have an impact, whereas subserosal do not. Intramural fibroids might have an impact, but randomized studies with adequate evaluation of intracavitary involvement are necessary to adequately evaluate whether the benefits of treatment will outweigh the serious surgical and obstetrical risks that follow myomectomy.

The general consensus in the literature suggests the incidence of abnormal placenta attachment is rising secondarily to certain risk factors. These risk factors include increased age of the mother during pregnancy, multiple pregnancies, previous cesarean deliveries, previous curettages, Asherman syndrome, and the presence of placenta previa.

The mother in this particular case study presented with a number of associated risk factors including advanced age, a previous myomectomy, and subsequent cesarean delivery, as well as prior uterine procedures. Teamwork is essential to the effective management of an obstetric emergency. A multidisciplinary effort consisting of an experienced surgical and anesthesia team, neonatal care team, blood bank, and laboratory personnel, as well as intensive care unit staff, is vital for optimal management of the patient and fetus.

A surgical plan and prior communication of this plan between the teams are paramount. A disorganized, leaderless extended care exam creates
confusion, miscommunication, and misinterpretation of pertinent facts, which may lead to an increase in morbidity and mortality. The anesthetist’s role is to maintain the patient’s vital functions, replace blood volume, and if applicable, assume the responsibility at the team leader and coordinator of duties. The surgeon and anesthetist must communicate regularly throughout the case.

Excessive blood loss is a major concern of cesarean hysterectomies, and the extent of blood loss is almost always underestimated in these obstetric patients. Blood products should always be available, and communication with the blood bank should be initiated early lest the elective case change to an urgent case.
CONTENT

Background: In recent years, obstetricians around the world have witnessed an increment in the incidence of cesarean section. Scientific evidence suggests that this intervention is associated with increasing maternal morbidity and mortality without improvement of perinatal results. As history of two or more cesarean sections implies an absolute indication for a new one, promoting vaginal delivery in patients with a previous cesarean section seems to be a promising strategy to avoid future complications as uterine rupture or placenta accreta.

Objective: To evaluate the efficacy of an evidence-based score as a tool in selection of patients for vaginal delivery after one cesarean section.

Material and methods: Series of cases study in which an evidence-based tool developed in the reference institution is applied on eligible patients to promote vaginal delivery after one cesarean section.

Inclusion criteria: Conditions settled in the evidence-based score for vaginal delivery in patients with previous cesarean section (Table 1). Written patient’s informed consent registered in clinical records.

Exclusion criteria: Maternal or fetal clinical situation that contraindicates vaginal delivery. Lack of patient’s consent.
Results: During the first year of use of the score, 455 patients were admitted to the hospital, of which 237 met the inclusion criteria and accepted the possibility of having a vaginal delivery. In this group, 184 patients (74.68%) had a vaginal delivery, of which 177 (77.63%) were spontaneous and 7 with forceps (2.95%) while 53 intrapartum cesarean sections were performed (22.36%).

Regarding complications, endometritis occurred in 1.69% of vaginal deliveries (3 cases) and two cases of surgical site infection were registered in caesarean sections (3.87%). No differences were observed in the Apgar score or in admissions to the neonatal care unit among those born by vaginal birth or cesarean section.

The comparison between the two semesters of the year showed a reduction of 11.54% in the incidence of cesarean section in patients with a previous one.

Conclusions: The use of a selection criteria score based on scientific evidence was associated with a reduction in the incidence of cesarean section in patients with pregnancies between 36 and 40 weeks and one previous cesarean section. However, the authors consider it necessary to review the results in a larger number of patients.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 177

TITLE: SPONTANEOUS MYOMETRIAL CONTRACTILITY IN THE THIRD TRIMESTER OF PREGNANCY IN RELATION TO PAST MODE OF DELIVERY.

AUTHORS: G. Ryan
D. Crackshaw
J. Morrison

AFFILIATIONS: 1. Department of Obstetrics and Gynecology, Galway University Hospital, Galway, Ireland.
2. Department of Obstetrics and Gynecology, National University of Ireland Galway, Galway, Ireland.
3. Lambe Institute for Translational Research, National University of Ireland, Galway.

CONTENT

Background:
It is well described that women with a history of vaginal delivery (VD) have higher vaginal birth after cesarean (VBAC) success rates than those without [1,2]. However, the biological process of labor in this group remains poorly understood. There are no published data to our knowledge, assessing the myometrial contractile parameters, of women with a prior history of VD and comparing them to women with no previous delivery and women with a background of CD only.

Objective:
The aim of this study was therefore to compare the contractile parameters of women with: 1. No previous delivery (P0); 2. A history of only cesarean delivery (CD Only); and 3. A history of both vaginal deliveries and previous CD (CD/VD), to determine if there was a difference observed in the inherent contractile performance determined by past mode of delivery.

Methods:
Myometrial biopsies were obtained from n=71 women with singleton pregnancies undergoing planned CD procedures at Galway University hospital, Galway, Ireland. This was done with ethical approval (Ethics Reference Number C.A 1758) and written informed consent. Biopsies were dissected into 8 uniform strips and suspended for in vitro in tissue baths for analysis as previously described [3]. Multiple parameters of spontaneous contractile performance were measured including maximal amplitude (MAMP), mean contractile force (MCF), rate of rise of contractions and rate of relaxation of contractions and compared across the three clinical groups; 1. P0 group, 2. CD only group and 3. the CD/VD group and the results analyzed. Women with a history of labor in the CD only group were excluded from analysis. Statistical analysis was performed using one-way ANOVA and post hoc analysis performed using Tukeys HSD Test. A P value of <0.05 was taken as being statistically significant.

Results:
Biopsies were taken from n=71 women, with 5 were excluded from the CD only group who had a prior history of labor. This gave a total of n=66 for analysis (528 strips) with n=13 in the P0 group, n=44 in the CD only group and n=14 in the CD/VD group. The mean maternal age was 35.3 years (range 23-52 years) and the mean maternal body mass index was 25.8. The median parity of the women was 1 (range P0 to P7).

The MCF was significantly greater in the CD/VD group than in both other groups, with the MCF increasing from 3.4±0.2mN in the P0 group, to 4.1±0.2mN in the CD Only group (P0 vs CD Only P<0.01) to 4.9±0.3mN in the CD/VD group (P0 vs CD/VD P<0.01; CD Only vs CD/VD, P<0.01) (Table 1).

The MAMP in the CD/VD group is significantly greater than both other groups (P<0.01) (Table 1). There is a progressively faster rate of rise of contractions in the CS Only and CS/VD groups compared to the P0 groups, P<0.01. There is a faster rate of relaxation in the CS/VD group compared to both other groups, P<0.01.

Conclusion:
This is a novel study which highlights the enhanced contractile properties observed in an in vitro setting of the uterine tissue of women with a history of prior vaginal delivery, including increased force generated. This study adds to the understanding of the process of labor in this cohort and gives
a biological basis for what we observe clinically. Careful consideration should be given to the decision to augment labour in this group of women.

References:
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 184

TITLE: CAESAREAN SECTION RATES STANDARDIZATION

AUTHORS: Gascon R., Moreno R.

AFFILIATIONS: Can Misses Hospital, Ibiza, Spain

CONTENT

C-section rates have been increasing in the last ten years, specially in developed countries. Regarding Spain, currently 22% of all births in public hospitals occur by CS, with highest rates around 35%. In Private hospitals rates are even higher (40%). But there’s no evidence so far that links these higher CS rate areas to a specially high obstetric risk population. It seems to be more attached to certain clinical practices. According to WHO, there is no justification for any region to have c- section rates higher than 10-15 % but there is no empirical evidence for an optimum percentage. But are CS indications standardized? Do we always perform a CS in similar clinical situations?

OBJECTIVES AND METHOD

In 2008, 5 public hospitals in the Balearic islands, carried out a pilot study in order to analyse CS rates and their adequacy to different indications. CS were divided in 2 groups:

* Elective (when pregnancy is planned to finish by CS)
* Emergency (if any unplanned event happens during labour) with 5 different subgroups:
  1. Acute fetal distress (AFD)
2 Failed Labour Induction (FLI)
3 Arrest of dilatation
4 Cephalic Pelvic Disproportion (CPD)
5 Miscellany

There were strict criteria in each category that had to be met for a CS to be considered properly performed.

The main purpose was to prevent unnecessary c-sections and as a collateral effect to reduce the rates and keep them low.

RESULTS

We joined the study with 25% rate that has gradually come down to the current 12.9% that we maintain from 2017.

In the last 8 years we reduced the number of c-sections performed in Can Misses Hospital without an increase in assisted vaginal deliveries but a raise in uncomplicated vaginal birth. Today, chances of having a vaginal birth are more than 85%.

The emergency/elective CS ratio is 60/40 and has kept stable along this years.

With regard to the emergency CS indications, 50% are due to acute fetal distress (stated by fetal scalp pH testing), 20% due to dilatation arrest and the rest, equally split among the 3 other groups.

90% emergency CS are well suited to the criteria (this was one of the goals). On the other hand, elective CS fit the criteria in more than 98%. 50% of these cesarean are carried out as a result of breech presentation despite the introduction of external cephalic version technic in 2013, followed by 20% for those women with 2 or more previous c-sections, 16% to multiple pregnancy and the rest due to a heterogeneous diagnosis group.

CONCLUSION

The medical implementation of really strict criteria for caesarean performance has taken us to a
very important and sustained reduction of CS rates. The group overview of each individual situation and the staff concern and encouragement has brought a deep change in birth care. It is necessary to develop an educational programme directed to general public. Caesarean section standardization is essential in any Maternity Ward in order to raise awareness of the total number of unnecessary CSs.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 212

TITLE: WOMEN WITH ONE CESAREAN DELIVERY: A MULTI-CENTER SURVEY ON THEIR VIEWS ON VAGINAL BIRTH AFTER CESAREAN, ELECTIVE REPEAT CESAREAN & A FUTURE RCT PERTAINING TO MODE OF DELIVERY.

AUTHORS: G.Ryan, K. O Doherty, F. McAuliffe, J.Morrison

AFFILIATIONS: Department of Obstetrics and Gynaecology, Galway University Hospital, Galway, Ireland.
Department of Obstetrics and Gynaecology, National University of Ireland Galway, Galway, Ireland.
Department of Obstetrics and Gynaecology, National Maternity Hospital, Dublin, Ireland.

CONTENT

Background:
After one cesarean delivery (CD) the options for future delivery include vaginal birth after cesarean (VBAC) or elective repeat cesarean delivery (ERCD), albeit practice regarding this is controversial and varied worldwide.

Objective:
The aims of this study were: 1. to assess women’s views of their birth experience after their first CD; 2. to compare the findings between women who had an elective CD (ElCD) and those who had an emergency CD (EmCD); 3. to evaluate their views on a potential future delivery; and 4. to investigate whether they would be willing to join a clinical trial of VBAC vs ERCD in a future pregnancy.

Methods:
This was a prospective multisite questionnaire survey of woman who had their first CD between January and August 2018 in Galway University Hospital, Galway Ireland and the National Maternity Hospital, Dublin, Ireland. Eligible participants were contacted by telephone or post for consent and postal surveys sent out, with Ethical review board approval...
Survey results were collected and analyzed. Statistical analysis performed using Chi-Square test.

Results:
633 (86.2%) out of 734 eligible women consented to participate. 347/633 (54.8%) surveys were returned complete. 285/347 (82.1%) had an EmCD, and 62/347 (17.9%) had an EICD. The average age was 34.9 years and the average BMI was 25.9. The mean age of gestation was 39 + 5 weeks.

Results and P values are presented in Table 1. Women in both groups were satisfied overall that CS was the most appropriate delivery option for them. However, women in the EmCD group were significantly less satisfied with the information received prior to the CD than the EICD group (P<0.05). Both groups were unsatisfied with the postnatal counseling received, though this was lower in the EmCD group (P<0.05). 114 (40%) and 23 (37.1%) in the EmCD and EICD groups respectively, expressed a preference for VBAC in a subsequent pregnancy. Approximately 80% of women in both groups said they would consider randomization in a future pregnancy.

Conclusion:
Debriefing and counselling women after a CD is an important part of pregnancy care and can have a significant impact on a woman’s overall birth experience. We found no significant difference in a preference for future mode of delivery determined by having had an EmCD or EICD. A significant proportion of women in this cohort were considering VBAC for future delivery, and a majority of women stated they would consider randomization in a future RCT. These data indicate that an RCT of VBAC versus ERCD would be viewed positively by women with one previous CD in our population.
INTRODUCTION

Birth is a natural process and is expected to occur spontaneously. However, medical interventions in this process affect the vaginal birth process and raises new problems such as elective caesarean section. In recent years, the rates of cesarean delivery have increased rapidly in our country. The World Health Organization (WHO) recommends only 10-15% of all deliveries to be cesarean section. Caesarean section is effective in reducing maternal and infant mortality in cases of medical indication. However, the prevalence of cesarean section is above the recommended level in the most developed and developing countries and it shows an increasing trend over the years.

AIM AND METHOD

The aim of this review is to indicate the rate of cesarean deliveries between 2003 and 2018 in Turkey as regional and to emphasize the role and significance of midwives in reducing cesarean section rates.

RESULTS

Turkey, consists of 7 regions which are are Marmara, Aegean, Central Anatolia, Black Sea, Mediterranean, Eastern and Southeastern Anatolia, and also the rates of cesarean delivery vary depends on regions and years. According to Turkey Demographic and Health Survey (TNSA), cesarean section rate was 21.2% in 2003, it was 36.7% in 2008 and it was observed to
be 48% in 2013. The increase of these differences were determined not only in years, but also in the region. Considering the data of TNSA 2008-2013 in the Aegean Region by 11%, 10% in West Marmara, 16% in East Marmara, 13% in Central Anatolia, 13% in Central Anatolia, 6% in Western Anatolia, 12% in North-Eastern Anatolia, 14% in Middle East Anatolia 18% increase in Southeastern Anatolia, 13% increase in Western Black Sea and 3% increase in Eastern Black Sea. According to OECD data, Turkey ranks first among caesarean births countries. The number of babies born in Turkey in 2016 was 1,248,041 and 676,152’s of these infants (54.17%) were born by cesarean section. The cesarean section rates in Turkey were observed to vary depending on where the delivery was made, mother's education level, education level of husband, adequate prenatal care taking, working status of mothers, maternal age, parity. Health care professionals have a major role and responsibilities in reducing cesarean section rates. Midwives who are in direct contact with pregnant women in primary care centers and in maternal units have great duties. The tasks of midwives can be examined in two groups as clinical applications and structural practices. Some of the clinical practices; to focus on psychological well-being of women in prenatal, childbirth process and postpartum period, births in midwifery management, mobilization and position. Structural practices are related to hospital organization and policy.

Conclusions

Health care professionals have important responsibilities in order to reduce the increasing cesarean rates in Turkey. It is thought that this increasing tendency can be prevented by multidisciplinary studies and right strategic steps. In this context, it is extremely significant to combine evidence-based practices with clinical practices. To combine evidence-based practices with the clinic practices, it is necessary to ensure that midwives have a more active role in delivery and especially maternal units, childbirth and especially in maternal units. In order to reduce cesarean delivery rates, it should be encouraged that women and birth-based preparation courses given by midwives and a positive attitude towards birth should be supported. Increasing in-service training programs including evidence-based practices are important for midwives to follow current developments and implement them.

Keywords: Midwifery; Cesarean Rate; Turkey; Midwifery
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 232

TITLE: PRELABOUR UTERINE RUPTURES

AUTHORS: I. Al-Zirqi

AFFILIATIONS: MD, FRCOG, PhD. Norwegian National Advisory Unit on Women’s Health, Women and Children’s Division Rikshospitalet, Oslo University Hospital Postbox 4950 Nydalen, 0424 Oslo, Norway

CONTENT

Introduction: Uterine ruptures detected before start of labour are very rare, and little is written about their outcomes. It is important to explore the characteristics and outcomes of these ruptures as an aid in counselling especially for mothers with scarred uteri.

Materials and methods: we used the Medical Birth Reigstry of Norway (MBRN) and Patient Administration System (PAS) to identify ruptures occurring before start of labour in 1967-2008. All those identified were studied further in medical case records, and classified into complete and partial types. Complete rupture is rupture of uterine wall layers including serosa and membranes.

Population:
Births with unscarred uteri before start of labour: 55 170 births
Births with unscarred uteri before start of labour: 32 089 births.

Results:
Before start of labour, among unscarred uteri, there were 8 complete ruptures (1/10 000), while there were 22 complete ruptures (7/10 000) and 45 partial ruptures among those with scarred uteri (14/10 000).

The eight ruptures in unscarred uteri included one at 37 weeks, five at 23-28 weeks, two at 31 weeks. They included three after collision in traffic accident, two with uterine abnormalities, two with previous curettage after
miscarriages or termination of pregnancy, and one with placenta accreta. One of them was in 2000-2008; They all presented with pains, and five additionally with shock. There were two fetal extrusion into abdominal cavity and five with placental separation. All rupture places were outside lower uterine segment; they resulted in one hysterectomy and five perinatal deaths (62.5%). Six of eight became pregnant later and delivered healthy infants at 36-38 weeks with elective CS (75.0%).

There were 22 complete ruptures among scarred uteri including: 10 with previous 1 caesarean (CS), 2 with previous 2 CS, 4 previous myomectomy, 2 with tubal surgery and 3 with previous uterine ruptures. 17 of scars were outside lower uterine segment (77.3%); Gestational age at presentation was: 3 at 25-28 weeks, 10 at 30-35 weeks, and 9 at 37-41 weeks. All presented with severe abdominal pain, and half of them with additional fetal bradycardia. Immediate CS was done in 17. They resulted in 5 intrapartum deaths and 4 NND (40.9% perinatal deaths). Among nine perinatal deaths, there were 4 at term, and 3 in 2000-2008. All perinatal deaths were characterized with placental separation, though 6 of them had immediate CS. There were two hysterectomies, one due to large rupture, and another due to placenta accreta. Seven of 22 (31.8%) got pregnant later one (one of them twice), resulting in 8 healthy infants delivered by CS between 32-37 weeks; one of them with new rupture at 32 weeks.

We identified 45 partial ruptures (deheisences) among scarred uteri before start of labour; 22 of them at emergency CS due to abdominal pains. The majority occurred in 2000-2008, and 86.7% were at term. Half of these cases had more than 2 CSs, and 86.7% had previous lower segment caesarean section (LSCS). Three of them had previous ruptures, and 4 had previous deheisences. There were no perinatal deaths or hysterectomy.

Conclusion: Complete uterine ruptures were very rare during pregnancy but resulted in large percentage of perinatal deaths in both scarred and unscarred uteri. They had in majority a scar outside lower uterine segment or abnormality in the uterine wall. Partial ruptures were more frequent but less catastrophic, and more associated with increased number of previous CSs which were mostly LSCS.
Background:
Global rates of caesarean sections (CS) have been rising due to a multitude of reasons. In Europe, the rate of caesarean section has risen from 11.2% to 25%, between the year 1990 and 2014. Simultaneously, there has been a change in maternal demographics, with an increasing age and BMI.

Objective:
The aim of this study is to determine the percentage of caesarean sections in a primigravid population divided into groups by age and BMI, and to assess if these criteria could be used at the first antenatal booking visit, to predict more accurately the risk of caesarean section. Therefore, the primary objective of this study is to develop a counselling tool to determine CS risk in a first pregnancy stratified by age & BMI.

Method:
This was a retrospective review of CS performed on primigravid women in Galway University Hospital & The Rotunda Hospital from 2014 to 2017. The percentage of women who had a CS was calculated for each group by age & BMI. BMI was divided as per WHO classification. Age was divided into 8 groups: 1. <20, 2. 20-24, 3. 25-29, 4. 30-34, 5. 35-39, 6. 40-44, 7. 45-49, 8. ≥50. A table was created plotting age against BMI. Statistical analysis was
performed using regression analysis with SPSS. Data was collected anonymously and stored securely for analysis.

Results:
The total number of women included was 18,536. The table shows a clear trend emerging with significantly higher rates of CS in older mothers with higher BMIs (P<0.05). Primigravid women aged 20-24 with a BMI of <18.5 had a CS rate of only 10%, while older women 35-39 and 40-44 with a BMI of 35-39.5 had a CS rate of 59% & 73% respectively.

Conclusion:
This study is an initial phase of a large multicentre study to develop a counselling tool for our population to more accurately predict a women’s risk of CS in her first pregnancy based on age and BMI.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 301

TITLE: IMPLEMENTATION OF THE 10-GROUP CLASSIFICATION SYSTEM (ROBSON CLASSIFICATION) FOR CAESAREAN DELIVERIES: EXPERIENCE FROM A TERTIARY CENTRE IN CYPRUS

AUTHORS: S. Argyridis 1; S. Leontiou 2; N. Panagiotou 3; A. Christofides 4

AFFILIATIONS: Obstetrics and Gynaecology Clinic, Archbishop Makarios III Hospital, Nicosia, Cyprus

CONTENT

Introduction: The 10-Group classification system (Robson classification) for caesarean deliveries is a method used to standardize the way perinatal events and outcomes are analyzed in the process of labour and delivery. These events include diagnosis of labour, methods used to accelerate labour, intrapartum fetal monitoring, methods and indications of induction and indications for caesarean section. This method ensures measurable, standardized, comparable events and outcomes that may assist in monitoring and assessing caesarean delivery rates within a delivery unit as well as between units. By using the 10-Group classification the aim is to identify the groups of women that influence the high caesarean section rate of Cyprus, one of the highest in Europe, ranging above 50%.

Material: All caesarean deliveries performed at Archbishop Makarios III Hospital in Cyprus, the only tertiary maternity centre of the island between 01-01 and 31-06 2016. Between the time period described, 320 caesarean sections were performed in a total of 727 deliveries.

Methods: Retrospective analysis of the birth registry and maternity records of all caesarean section cases and classifying them according to the 10-Group classification system.

Results: The overall caesarean section rate of the sample analyzed was 44% (320/727). In Group 1 (nulliparous, single, cephalic >37 weeks, with
spontaneous labour) group size was 11.87% and contribution of 5.22%, less than described by Robson. Group 2 (nulliparous, single, cephalic, >37 weeks, induced or caesarean section before labour) size was 18.75% and 8.25% contribution, higher than expected. Group 3 (multiparous, single, cephalic, >37 weeks, spontaneous labour) size was 4.68% and contribution of 2.06%, while group 4 (multiparous, single, cephalic, >37 weeks, induced or caesarean section before labour) size was 4.37% and contribution of 1.92%, both less than expected. Group 5 (previous caesarean section, single, cephalic, >37 weeks) size was 28.43% and contribution 12.51% larger than expected, while group 6 (nulliparous breech) size was 0.93% and contribution 0.41% and group 7 (multiparous breech) size and contribution were 1.87% and 0.82% respectively, both close to previously reported rates.

Group 8 (multiple pregnancies) size and contribution were 8.12% and 3.57%, increased compared to reported rates, group 9 (abnormal lies) size and contribution at 0.93% and 0.41%, same as reported and finally group 10 (all single cephalic, <36 weeks) at 20% and 8.80% respectively, higher than expected.

Conclusions: Groups 1, 2 and 5 contribute to 60% of all caesarean sections while with the inclusion of groups 8 and 10, the contribution of the five groups reaches 87%. The contribution of group 5 is significant and is expected to remain high, as there are many women with a previous scar that will opt for an elective caesarean section in the future. The contribution of multiples and preterm caesarean section is also significant as the data are from a referral tertiary centre for high risk pregnancies but also due to high rates of multiple pregnancies due to multiple embryo transfer policy in all subfertile women. Group 2 women have a significant contribution probably due to the high pharmacological induction rate observed in GDM, PE and PPROM cases as well as lack of mechanical induction methods. Re-assessment of induction policies and techniques as well as implementing single embryo transfer will assist in the reduction of primary caesarean sections.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 309

TITLE: EVALUATION OF SUSPECTED MACROSOMIA AS PREVENTION OF POOR OBSTETRIC OUTCOMES

AUTHORS: J. Xavier 1; A. Figueiredo 1; S. Costa 1; M. Moucho 1; N. Montenegro 1,2,3

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, São João Hospital Centre, Porto, Portugal
2 Porto Faculty of Medicine, Porto, Portugal
3 i3S, Instituto Investigação e Inovação em Saúde Porto, Portugal

CONTENT

Introduction:
Fetal macrosomia is associated with an increased risk of obstetric complications, both maternal and neonatal.

Material and Methods:
Retrospective cohort study analyzing pregnant women who delivered a newborn with birth weight ≥ 4000g between 2014 and 2018, at a tertiary hospital. The pregnant women were stratified into two groups: those with ultrasound suspicion of fetal macrosomia (group 1) and those without suspected macrosomia in third trimester ultrasound (group 2). The aim of this study was to evaluate the impact of the suspicion of macrosomia in ultrasound (considered an estimated fetal weight >90th percentile for gestational age) in the prevention of poor obstetric outcomes. The statistical analysis was performed in SPSS®.

Results:
During the study period, 423 women delivered a newborn with birth weight ≥ 4000g. The mean age was 31.2 ± 5.31 years. Concerning the route of delivery, 66.0% (279/423) had a vaginal delivery and 34.0% (144/423) underwent cesarean section. Third or fourth degree perineal laceration
occurred in 3.3% of those who had a vaginal delivery (2.9% and 0.4%, respectively). Shoulder dystocia occurred in 8.6% and internal maneuvers were needed 45.8% of the cases.

Macrosomia was suspected at prenatal ultrasound in 100 women (group 1) and 272 women did not have that suspicion (group 2). Data about third trimester ultrasound was missing for 51 pregnant women.

The occurrence of shoulder dystocia was similar in both groups (7.4% vs. 7.1%, p = 0.995). Third and fourth degree lacerations were more frequent in women who did not have suspected fetal macrosomia (1.9% vs. 3.8%, p=0.394), but this difference was not statistically significant.

Mean gestational age at the time of delivery was inferior in the group 1 comparing to group 2 (39 ± 0.9 weeks vs. 40 ± 0.8 weeks, p<0.01). There was no difference in the rate of labor induction (38.0% vs. 39.7%, p<0.01). The mean gestational age at the time of induction was lower in the group 1 (39.6 ± 0.93 weeks vs. 40.6 ± 0.82 weeks, p<0.01).

Overall rate of cesarean section was higher in the group 1 (46.0% vs. 31.6%, p=0.01). This seems to have occurred due to scheduled cesarean deliveries: the rate of scheduled cesarean section was higher in the group 1 (15.2% vs. 13.6%, p=0.006), and the rate of emergency cesarean delivery was higher in the group 2 (51.5% vs. 19.7%, p=0.006). That is, the suspicion of fetal macrosomia may have conditioned the way of delivery, but the group 2 was associated with worse obstetric outcomes. Other outcomes were analyzed such as neonatal acidemia, Apgar<7 at fifth minute and admission at neonatal intensive care unit, and no differences were found in the two groups.

Conclusions:

Suspected fetal macrosomia may help to predict and reduce poor obstetric outcomes, such as perineal third and fourth degree lacerations and emergency cesarean sections. However, other outcomes such as shoulder dystocia cannot be prevented.
TOPIC: CESAREAN DELIVERY

ABSTRACT ID: 313

TITLE: ULTRASOUND DIAGNOSIS OF ASYMPTOMATIC UTERINE ARTERY PSEUDOANEURISM AFTER CESAREAN SECTION

AUTHORS: J.E. Asenjo 1; N. Izquierdo 2; P. Soler 3; I. Campo 4

AFFILIATIONS: Hospital Clínico San Carlos Madrid, Spain
Facultad de Medicina de la Universidad Complutense de Madrid, Madrid, Spain

CONTENT

CASE REPORT

This case report is based on a 33 years old primigravid woman who came to our institution’s obstetric urgencies with uterine dynamic sensation at 40 weeks and 6 days of gestation. She had not any medicament allergy, nor medical or surgery relevant antecedents. It was a clinical controlled gestation, with negative serologies, negative cultivate for Streptococcus agalactiae and negative O`Sullivan test.

During the dilatation time, we took a fetal cephalic capillary pH after suspect a fetal well-being lost; its result was 7.13. For this reason we indicated an urgent cesarean section, which was performed without operative incidences. In the third day of puerperium, the patient started having general temperature higher than 38°C. There was not evident focus for this fever: breasts were normal, surgical crippling had not infection symptoms and lochia had a normal quality. The complementary urine and blood analysis had not pathological values.

For this reason we decided to do an ultrasonographic exam of the patient, in which we identified a vascular image with a turbulent flux in uterine right artery, compatible with a uterine right artery pseudoaneurism. The rest of the examination was normal. We request later for a CT, which confirm our diagnosis.
We treated our patient with a uterine artery embolization by using coils with arteriography approach. After this procedure, the evolution was entirely normal and hospital stay ended on day 11 of puerperium.

Two years later, patient has a second pregnancy that has developed normally and she has a spontaneous vaginal labor of a normal healthy baby.

DISCUSSION:

A pseudoaneurysm is defined as a blood filled dilation of an artery caused by damage to one or more layers of the artery as a result of arterial trauma or rupture of a true aneurysm, which communicates with arterial lumen, whose spontaneous evolution leads to rupture. Its apparition can occurred in a spontaneous way or due to iatrogenic or trauma.

Uterine artery pseudoaneurysm can appear because of an artery hurt during a surgery like myomectomies, hysterectomies or cesarean sections. As we have reviewed, there are about sixty cases published of uterine artery pseudoaneurysm after gynecological surgery, and approximately half of them was diagnosed after a cesarean section (cita).

However, our case report has the peculiarity that was diagnosed in asymptomatic phase, which is rare, and we have only found one similar case (cita). The normal evolution of this entity is the spontaneous rupture that causes an important postpartum acute vaginal bleeding, which can occur from one to three months later the cesarean section, after an apparently normal clinical puerperium.

CT, angiography, ultrasound and IMR are principal diagnostic techniques employed to diagnose the pseudoaneurysm. Most case reports describe the use of several of them, but only 15 have established final diagnosis with ultrasonography, as we did.

There are several options to treat the pseudoaneurysm, but the most important of them is without any discussion, the uterine artery embolization. However, if the hemorrhage is severe and incontrollable, hysterectomy could be necessary (cita).

Uterine embolization do not necessary affect the future fertility of the patient. In fact, our patient has obtained a second normal gestation only two years later the uterine artery pseudoaneurysm embolization.

COMMENTS:
- Uterine artery pseudoaneurysm is a cesarean section rare complication that causes severe puerperal hemorrhages, which can affect vital prognosis of patient if diagnosed too late.
- Doppler ultrasound, CT and arteriography are principal diagnostic techniques. However, Doppler ultrasound could be definitive method.
- Uterine artery embolization is the best treatment, and it does not necessary affect the future fertility capacity of the woman.
- Our case report has two special characteristics: the pseudoaneurysm was diagnosed in asymptomatic phase, which avoid the developing of a late acute hemorrhage; and we report a second normal spontaneous gestation after embolization.
TOPIC: CRITICALLY ILL OBSTETRIC PATIENTS

ABSTRACT ID: 77

TITLE: SUPRAVENTRICULAR TACHYCARDIA (SVT) IN PREGNANCY – DON’T PANIC!

AUTHORS: Oluyinka Odusote, Nandini Halder, Nicola Piscorowskyj, Brigitte Baxter, Tom Lemon

AFFILIATIONS: Glangwili General Hospital
Hwyel Dda University Health Board, Wales, United Kingdom

CONTENT

Introduction: SVT is when HR is > 120/min and occurs in 1/8000 pregnancies mostly caused by AV nodal re-entry or WPW syndrome. Pregnancy is a trigger along with any cardiac lesion or drugs. Women present feeling unwell with exacerbated or new onset shortness of breath, palpitations, dizziness or syncope.

Case: 32-year-old G1P0 ex-smoker with booking BMI 50 and no significant medical or familial history attended A&E at 36 weeks gestation feeling generally unwell and was found to have HR of 200/min. Intravenous Adenosine 6mg followed by 12mg was administered bringing her HR down to 135/min. CTG initially showed a tachycardia of >200/min for 30 mins in A&E followed by bradycardia and she was transferred to LW Theatre. In view of her improved HR and FHR of 160/min in LW, she was moved to ICU for monitoring where she remained stable with no signs of cardiovascular decompensation. She was discharged home the following day after a normal CTPA and Echocardiogram. She presented 4 weeks further on to the obstetric triage at 40+5 weeks gestation with ruptured membranes for 35 hours and was induced in labour and delivered a 4.26Kg boy by NBF showing good apgars and umbilical cord pHs.
Discussion: Conservative techniques including Valsalva manoeuvre and carotid massage must be tried first. Short half-life of Adenosine (10s) makes it the first-line pharmacological choice for SVT in pregnancy. No teratogenicity is known although fetal bradycardia has been reported. Urge to proceed to emergency CS must be curbed as it increases maternal risk along with fetal risk of prematurity.

Conclusion: Antiarrhythmic drugs should be stocked in labour ward. Limited data is available on management during first trimester. Cardioversion or Radiofrequency ablation can be done during pregnancy if there are signs of haemodynamic instability. Multi-disciplinary drills should be conducted to manage such rare obstetric emergency.
TOPIC: CRITICALLY ILL OBSTETRIC PATIENTS

ABSTRACT ID: 163

TITLE: TWO CASES OF MATERNAL MIRROR SYNDROME: A DIAGNOSTIC CHALLENGE.

AUTHORS: L. Werquin 1; E. Roets 1

AFFILIATIONS: 1. Women’s Clinic, Ghent University Hospital, De Pintelaan 185, 9000 Ghent, Belgium

CONTENT

Introduction
Mirror syndrome (or “Ballantyne’s syndrome”) is a rare complication of fetal hydrops in which the mother mirrors the fetal pathology. Typically, it is the association of fetal, placental and maternal edema; also called “triple edema”. The pathogenesis of mirror syndrome remains unclear, some authors suggest that the large hydropic placental mass produces excessive vasopressin which leads to maternal water resorption, oliguria and edema.

This syndrome was first described in association with rhesus-immunization (28.5%), but is most commonly associated with non-immune fetal hydrops (NIFH) (37.5%). Causes of NIFH can be: fetal malformations, fetal and placental tumors and fetal arrhythmia. Other causes of mirror syndrome are infectious (16%) (e.g. Parvovirus infection) and hydrops occurring in multiple pregnancies (18%) (e.g. twin-to-twin transfusion syndrome). Often the etiology remains unclear.

A recent systematic review described 113 cases of mirror syndrome (1956-2016). The mean gestational age at diagnosis was 27 weeks ±30 days (16-39 weeks). The maternal symptoms observed were edema (84%), hypertension (60.1%), mild anemia and hemodilution (46.4%), proteinuria (42.9%), elevated uric acid and creatinine (25%), mildly elevated liver
enzymes (19.6%), oliguria (16.1%), headache and visual disturbances (14.3%). Severe maternal complications, including pulmonary edema, occurred in 21.4%. The overall rate of intrauterine death was 35.7%. The average time until maternal symptoms disappeared was 8.9 days after resolution of fetal edema or after delivery.

Material and methods
We present two cases of maternal mirror syndrome recently diagnosed at our maternal intensive care unit.

Results
Case 1
A 40-year old G3 P0 was referred to our clinic at 25 weeks 6 days of gestation for suspicion of early preeclampsia. Ultrasonographic evaluation showed a fetus with ascites, pericardial effusion with a raised peak systolic velocity (PSV) in the middle cerebral artery and a hydropic placenta. The underlying cause was spontaneous fetomaternal transfusion and was treated successfully with intrauterine blood transfusion. Both fetal and maternal edema disappeared completely in the days after resolution of the fetal anemia. At the moment of submission, this pregnancy is still ongoing, but outcome will be presented at congress venue.

Case 2
A 40-year old primigravida at 29 weeks 4 days of gestation went into spontaneous labour after PPROM. Ultrasonic evaluation revealed placental edema and a fetus with ascites with suspicion of meconium peritonitis. During labour the patient became oliguric, developed peripheral edema and acute respiratory insufficiency. Chest X-ray showed pleural effusion, which was confirmed by CT scan. The patient was admitted to the intensive care unit and was given supportive treatment with oxygen and diuretics. Her symptoms resolved quickly after delivery. The baby died 12 days later due to the consequences of the in utero bowel perforation.

Conclusions
Maternal mirror syndrome is a rare condition, but can potentially lead to severe maternal morbidity. The differential diagnosis has to be made with preeclampsia/HELLP syndrome, which in some cases can be difficult. The
maternal low hemoglobin and hematocrit in mirror syndrome is due to hemodilution, as opposed to the hemoconcentration seen in preeclampsia. The combination of maternal edema and hydrops fetalis should raise a red flag, as it is associated with increased fetal mortality and maternal morbidity. Procedural interventions that correct fetal hydrops as well as labor induction can improve both fetal and maternal outcome.
TOPIC: CRITICALLY ILL OBSTETRIC PATIENTS

ABSTRACT ID: 255

TITLE: SUBCAPSULAR HEPATIC HEMATOMA IN A PATIENT WITH PREECLAMPSIA: CASE REPORT

AUTHORS: M. Miranda 1, M. Lima 2, H. Batista 3, A. Diniz 4, T. Costa 5, E. Filho 6

AFFILIATIONS: 1. Hospital Barão de Lucena, Recife, Pernambuco, Brazil
2. Hospital Barão de Lucena, Recife, Pernambuco, Brazil
3. Faculdade Maurício de Nassau, Recife, Pernambuco, Brazil
4. Faculdade Maurício de Nassau, Recife, Pernambuco, Brazil
5. Faculdade Maurício de Nassau, Recife, Pernambuco, Brazil
6. Hospital Barão de Lucena, Recife, Pernambuco, Brazil

CONTENT

Introduction: Arterial hypertension is the major complication during pregnancy and the first cause of maternal mortality in Brazil. Amongst its complications, HELLP Syndrome stands out for its severity and is characterized by hemolysis, liver enzymes increase and low platelets count. Even worse, subcapsular hepatic hematoma, although rare, is associated with high maternal-fetal morbimortality rates.

Objectives: Report the case of a pregnant patient diagnosed with severe preeclampsia and discuss broken subcapsular hepatic hematoma as a high maternal mortality associated complication.

Methodology: The medical team at Hospital Barão de Lucena - Recife/PE reported the case of a patient during July/2016. The informations were obtained by retrospective analysis of medical records, imaging exams and literature review.

Results: 34 years old patient, in the 37th week of her first pregnancy, presented with high blood pressure and altered liver enzymes levels. She was submitted to cesarean section due to the diagnosis of HELLP syndrome, presenting with hypovolemic shock 12 hours later. In an abdominal ultrasound and CT, visualized a large, acute, broken subcapsular hepatic
hematoma, with moderate volume of free fluid in abdominal cavity. She was then submitted to exploratory laparotomy, with hepatic tamponade with compresses. Persisted with clinical worsening, being submitted to a second laparotomy. Visualized a necrotic right liver lobe with an active bleeding, and a necrotic gallbladder.Performed a right hepatectomy and cholecystectomy, being addressed to the ICU in a critical condition. Twenty four hours after the diagnosis of broken subcapsular hepatic hematoma, the patient evolved with a cardiac arrest, with no response to resuscitation maneuvers. 

Conclusion: HELLP Syndrome is the most severe and rare manifestation of preeclampsia. Subcapsular hematoma occurs in less than 2% of HELLP cases and its break, causing hemoperitoneum, is a devastating complication during pregnancy. Its prevention and early diagnosis is of utmost importance for better clinical and surgical management.
TOPIC: CRITICALLY ILL OBSTETRIC PATIENTS

ABSTRACT ID: 275

TITLE: ACUTE PULMONARY OEDEMA AND IMMUNE THROMBOCYTOPENIC PURPURA: THERE IS AN ASSOCIATION?

AUTHORS: S. Costa1; J. Xavier1; M. Guimarães1; N. Montenegro1,2

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, São João Hospital Centre, Porto, Portugal; 2 Porto Faculty of Medicine, Porto, Portugal;

CONTENT

Introduction: Immune Thrombocytopenic Purpura (ITP) is an acquired thrombocytopenia caused by autoantibodies against platelets and can be either primary or secondary. In pregnancy there are many causes for thrombocytopenia, such as gestational thrombocytopenia, ITP, thrombocytopenia associated with preeclampsia and thrombotic thrombocytopenic purpura. The diagnosis of ITP is made by exclusion.

Material and Methods: We present a case of a pregnant woman with ITP who underwent treatment with intravenous Immunoglobulin diagnosed with preeclampsia and progression to acute pulmonary oedema and acute respiratory failure.

Results: A 28-year-old pregnant woman with one previous caesarean due to preeclampsia was referred to an obstetric/hematologic outpatient clinic at 37 weeks of pregnancy diagnosed with ITP. She presented mild thrombocytopenia (64 000 platelets/μL) and anti-HPA-5b platelets antibodies. It was decided to start intravenous Immunoglobulin 1gr/Kg/day for 2 days to raise platelet count for labour. On the second day of immunoglobulin, the patient was referred to the labour ward because of elevated blood pressure. She was admitted because of fetal distress (suspicious cariotocography) and urine and blood tests were made. With a protein-creatinine ratio of 0.3, preeclampsia was diagnosed and labour was induced.
Ten hours later, she complaints of acute pain on abdomen’s upper quadrants and dyspnoea. On vital signs, there was hypoxemia (oxygen saturation of 85% on room air), systolic hypertension (150/84mmHg), 37.9°C temperature, decreased right breath sounds without adventitious ones on pulmonary auscultation. The patient initiated 31% of oxygen supplementation and the arterial gasometry some minutes later was normal. The diagnosis of fluid overload was suspected and diuretic therapy was initiated, along with request of blood tests, chest radiography and continuous vital signs monitoring. Based on chest radiography, possible diagnosis were acute pulmonary oedema plus atypical pneumonia or pneumopathy secondary to Immunoglobulin. Blood tests were within normal limits for pregnancy, except thrombocytopenia (69,000 platelets/microL).

Taking into account fever, dyspnoea, hypoxemia and preeclampsia it was decided to do an urgent caesarean section and initiate intravenous antibiotic therapy with azithromycin. A newborn weighting 3320 gr was born with an Apgar score of 9 and 10 at first and fifth minute, respectively. The mother stayed about four days on intensive unit care (IUC) medicated with oral antibiotic and oxygen supplementation. An echocardiogram was made at the second day of puerperium: mild aortic valve insufficiency and left ventricle hypertrophy was identified. Blood and urine culture, Influenza and bronchial secretions tests were negative. At third day of puerperium, platelet count was normal (244/microL).

Patient was discharge at seventh day of puerperium after finishing the seven days of oral antibiotic, being asymptomatic, with no fever and normotensive.

The histologic exam of placenta demonstrated distal villus hypoplasia and increase fibroid material in agreement with diagnosis of preeclampsia.

Conclusion:
Acute pulmonary oedema in pregnancy is a rare life-threatening illness and consequently there is limited experience on its management. It can result in high maternal and perinatal morbidity. Most commonly, acute pulmonary oedema occurs antepartum and its principal aetiology is hypertension triggered by fluid overload. Because of these risk factors, preeclampsia is a major obstetric cause of acute pulmonary oedema.
In this particular case, preeclampsia along with intravenous immunoglobulin used to treat ITP probably caused a fluid overload which lead to an acute pulmonary oedema. Additionally, immunoglobulin may have caused a pneumopathy that worsen respiratory symptoms and motivate oxygen supplementation.
TOPIC: CRITICALLY ILL OBSTETRIC PATIENTS

ABSTRACT ID: 283

TITLE: ENDOVASCULAR COILING OF RUPTURED SUBARACHNOID HAEMORRHAGE IN PREGNANCY: A CASE REPORT.

AUTHORS: N. Sethi 1; S. Sulaiman 2

AFFILIATIONS: Department of Obstetrics and Gynaecology, University Malaya, Kuala Lumpur, Malaysia

CONTENT

Introduction:
Haemorrhagic cerebral accidents are the third leading non-obstetric cause of mortality in pregnancy, with a rate of occurrence of about 1-5 per 10000 pregnancy. The incidence ranges from 0.01% to 0.05%. However, it has to be attended and treated immediately once suspected due to its high maternal mortality rate of 40% to 83%. The occurrence of subarachnoid haemorrhage in pregnancy is commonly due to a ruptured aneurysm or an arteriovenous malformation (AVM). The management of such case should involve a multidisciplinary team, including the obstetrician, neurosurgeons, radiologists and intensivists. Treatment modalities including surgical clipping, coiling or even the choice of conservative treatment have been reported. It should not differ from that of non-pregnant patients’. The decision of whether or not to deliver depends on individual cases and discussion between the obstetricians.

Case Report:
Mdm G.C.L is a 44 year-old primigravida, spontaneous twin pregnancy with Monochorionic diamniotic twins, had her early antenatal check up at private centre. She is not known to have any medical illness. She presented at 21 weeks of gestation to our centre with sudden onset of headache and vomiting. She described the headache to be throbbing in nature starting at the occipital region and then radiating to the whole head. She also
experienced brief blurred vision during that time. Her pregnancy was confirmed at 6 weeks by an early scan at the private centre, after many difficult and failed attempts at IVF with her partner of 10 years.

On examination, her GCS was full and vitals stable. She was pink and in pain due to severe headache. She was afebrile, normotensive, normoglycemic and non proteinuric. There was no neck stiffness and no neurological deficit. Both pupils were equal and reactive to light. Systemic examination was unremarkable. Abdominal examination revealed a gravid uterus at 24 weeks with twin pregnancy.

All investigations including a full blood count, renal function tests including electrolytes, liver function tests, and uric acid were within normal range.

An urgent CT Angiogram Brain was requested that revealed ruptured basilar tip aneurysm causing subarachnoid haemorrhage and hydrocephalus. There was diffuse subarachnoid haemorrhage in both cerebral hemisphere causing effacement of both Sylvian fissures and basal cisterns. There was extension of bleed into tentorium cerebelli and interhemispheric fissure with associated sulci effacement. However, there was no midline shift. There was intraventricular extension into the 4th ventricle causing mild dilatation of all the ventricles. Minimal periventricular hypodensities in keeping with acute seepage. Successful coiling of the aneurysm was done on the same day.

Mdm G.C.L was observed and monitored closely in the ICU and started on medications Oral Pravastatin 40mg ON, Keppra 500mg BD, Aspirin 100mg OD, Ranitidine 150mg BD. She was discharged from hospital after 2 weeks with close follow-up on condition and twin pregnancy. A repeat MRI Brain done 3 months later showed no residual basilar artery aneurysm. However, there was unchanged mild ventricular dilatation from previous CTV with periventricular hyperintensity. Her healthy twins were then delivered successfully via planned caesarean section at 36 weeks of gestation.

Discussion:
Management of acute subarachnoid haemorrhage due to aneurysm in pregnancy has been controversial, it varies from conservative treatment (spontaneous thrombosis) to surgical clipping or coiling. However, throughout the literature search done, a trend and shift towards coiling can be observed. There were only two cases of spontaneous thrombosis of ruptured aneurysm in pregnancy reported. Some authors believe in
spontaneous thrombosis of ruptured aneurysm in pregnancy due to the known physiological changes that happens in pregnancy, that is hypercoagulability. 1-2% of ruptured aneurysm in general show spontaneous and complete thrombosis on subsequent angiography.

Conclusion:
Subarachnoid haemorrhage in pregnancy is rare but of great maternal and foetal mortality rate. However, if immediate surgical treatment is given, the prognosis is fairly good. Therefore, it is vital for the obstetricians to recognize an acute subarachnoid haemorrhage as soon as possible to avoid complications. Further studies are warranted to evaluate the relevant risk factors of subarachnoid haemorrhage in pregnancy.
INTRODUCTION:
99% of maternal mortality occurs in developing countries. Everyday 830 women die worldwide due to preventable causes related to pregnancy and childbirth.
Developed countries have a mortality ratio of 12/100,000 live births, and Spain has a ratio of 5/100,000.
In our institution, Hospital General de Catalunya (HGC), we haven’t registered any maternal death in years. For this reason, since 2015, we register all maternal near misses.
The World Health Organization (WHO) defines a maternal near miss case as a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy. In practical terms, women are considered near miss cases when they survive life-threatening conditions.
Near miss events are increasingly used in order to evaluate the quality of the health system.
METHODS:
A prospective observational review included all maternal near misses between 1st Jan 2015 and 31st Dec 2018.
The inclusion criteria were the WHO criteria (Table 1).
RESULTS:
During this period there were 8,802 live births, with 33 women who had near miss presentations. The maternal near miss index rate was 3.75/1,000 live births. The main cause of obstetric near miss was post-partum haemorrhage.

CONCLUSIONS:
Our maternal near miss rate was 3.75/1,000 live births. Maternal near miss rate is a useful tool to analyze the obstetrical complications. Otherwise, there should be international agreement to apply the same criteria, to facilitate the results comparison.
**TOPIC:** CRITICALLY ILL OBSTETRIC PATIENTS

**ABSTRACT ID:** 315

**TITLE:** CLINICAL MANAGEMENT OF THE DELIVERY OF A PREGNANT WOMAN WITH A PROSTHETIC MECHANICAL HEART VALVE IN MITRAL POSITION: A CASE REPORT

**AUTHORS:** FM Comoglio1; N. Montalì 2; V Donvito 1; CA Remolli 1; R. Bordese 3; G. Pichierri 1; P. Gaglioti 1 and G. Menato 1

**AFFILIATIONS:** 1 Sant’Anna Hospital Torino, Italy; 2 AOU San Giovanni Battista di Torino, Italy; 3 Ospedale Regina Margherita Torino, Italy

**CONTENT**

**INTRODUCTION:**
Patients carrying a mechanical valve need a complex and accurate management that should consider patient pre-pregnancy warfarin daily dose, mechanical valve position and the patient therapeutic choices after full informed consent. It is mandatory to switch oral anticoagulants with low molecular weight heparin (LMWH) at 36 weeks of gestation in order to ensure at least two weeks before labour to prevent fetal hemorrhagic complications during delivery. Moreover, in order to prevent maternal hemorrhage, 2018 ESC guidelines on cardiovascular disease during pregnancy suggest to switch subcutaneous LMWH with intravenous heparin 36 hours before delivery and that the labour should happened 4 to 6 hours after its suspension.

**MATERIAL AND METHODS:**
Mrs C.I. gravida 2 para 1 had a first physiological pregnancy in 2003 with a spontaneous vaginal delivery at term. In 2012 she underwent mitral valve replacement with a mechanical valve, due to an acutely decompensated rheumatic mitral valve stenosis.
In 2018, at the age of 36, she was sent to our multidisciplinary outpatient clinic (fully dedicated to pregnant women with cardiovascular diseases)
pregnant for the second time at 7 weeks of gestation. In accordance to 2018 ESC guidelines she was classified mWHO III (high risk). She was in excellent clinical conditions, completely asymptomatic (NHYA I) and in sinus rhythm. She chose to be on LMWH bid instead of warfarin in the first trimester in order to prevent warfarin embryogenetic risk, even if her daily dose was < 5mg, considered at low risk. Her LMWH dosage had been adjusted to target peak anti-Xa level (4 hours after the injection) at 1.0-1.2 UI/mL and trough (pre-dose) level at ≥ 0.6 IU/mL. She was also taking carvedilol 6.25 mg per day, to avoid palpitations. At 13 weeks she switch back to warfarin (INR target 2.5÷3.5) up to 35 weeks. She was monitored monthly with an obstetric and cardiological visit with an echocardiografic examination targeted to check the proper function of the prosthetic valve, the left ventricle systolic function and the transvalvular mitralic gradient. At 24 weeks the patient developed gestational diabetes and was planned an hypoglycemic diet. The fetal growth has always been proper for the gestational age. The third trimester switch from warfarin to LMWH was performed at 35 weeks in a day hospital regimen in order to monitor both trough anti-Xa activity and its peak. It took three days to find the right dosage. The next two weeks we repeated the procedures twice a week. Even if the patient’s weight was 70 kilograms, the mean LMWH dose has been approximately 12000 UI enoxaparin bid. Finally the patient was accepted to our high risk obstetric department at 37+5 gestational weeks and started the planned 36 hours infusion of 25000 UI of unfractioned heparin (UFH) at a concentration of 100 UI in 1 ml. Every six hours the aPTT was checked. A mean 22÷24 ml/h infusion rate was needed to reach the target aPPT ratio between 2.0 and 2.5. The score bishop was 4 so the labour was induced using vaginal prostaglandins 34 hours after heparin infusion onset. 

RESULTS:
As soon as the labour started we stopped the heparin infusion and the patient was sent to the delivery room. Despite the delivery happened to be only 150 minutes after i.v. UFH infusion was stopped, the maternal blood loss have been only 400 ml, the clinical conditions of the mother were excellent and an healthy AGA 2720 grams baby boys was born.

CONCLUSIONS:
Managing a labour and delivery in a pregnant woman with a mechanical heart valve is a challenging task which require a proactive multidisciplinary team (formed by a gynecologist, a cardiologist, an hematologist, a doctor of internal medicine, an anesthesiologist, a pediatrician and a trained group of midwives) operating according to a preplanned roadmap tailored on the patient.

Considering that in the cardiac patients the highest percentage of severe obstetric and cardiological complications happened to be during the cesarean section (as a surgical procedure), and in particular in the higher mWHO classes, the goal standard should be a planned vaginal delivery. To reach this goal for a patient with such a complex management has been tuff but has to be consider a success.
TOPIC: EPIGENETICS

ABSTRACT ID: 192

TITLE: INTRODUCTION OF NON-INVASIVE PRENATAL DIAGNOSIS METHODS IN AZERBAIJAN

AUTHORS: J. Kurbanova; K. Nabiyeva; A. Salimova; S. Huseynova

AFFILIATIONS: Scientific Research Institute Of Obstetrics and Gynecology

CONTENT

Background: Prenatal diagnosis are aspects of prenatal care that focus on detecting problems with the pregnancy as early as possible. Screening can detect problems such as neural tube defects, chromosome abnormalities, and gene mutations that would lead to genetic disorders and birth defects. First trimester screening tests can begin as early as 10 weeks. These usually involve a blood tests and an ultrasound. Second trimester screening tests occur between 14 and 18 weeks. They can involve a blood test, which tests whether a mother is at risk for having a child with chromosomal abnormalities or neural tube defects, as well as an ultrasound. A special ultrasound called a nuchal translucency ultrasound is performed between the 11th and 14th weeks of pregnancy. When there’s more fluid than normal, this means there’s a higher risk of chromosomal abnormalities.

Materials and methods: 1562 pregnant women were examined at dual (PAPP-A, β hCG) and triple (AFP, hCG and free E 3) marker tests. Analysis is performed on an enzyme immunoassay, serum is used for analysis.

Results: 873 pregnant women were examined for dual test at the Scientific and Research Institute of Obstetrics and Gynecology in 2017, 88 patients (10%) were at the risk group. 689 patient were examined for triple test, 50 patients (7.3%) were at the risk group.

Conclusion: Complete survey pregnant on the chromosomal abnormalities allows to advance diagnose pathology 60% of cases.
TOPIC: EXERCISE IN PREGNANCY

ABSTRACT ID: 222

TITLE: FIT AND HEALTHY MOM

AUTHORS: M. Bogavac

AFFILIATIONS: Department of Gynecology and Obstetrics Clinical Centre of Montenegro, Podgorica, Montenegro
Smart gym, Podgorica, Montenegro

CONTENT

Exercise and healthy lifestyle in pregnancy contribute to successful delivery. The fitness in pregnancy (Pilates and yoga combination) is limited to uncomplicated cases, focusing to pelvic floor muscles strengthening, relaxation and breath exercises. The theoretical lectures are aimed to practical explanations of pregnancy physiology, impact of hormonal changes in pregnancy, explaining all delivery stages and reinforcement to successful breastfeeding implantation.

In the prospective study, we analysed 125 pregnant women, during the period of 5 years. The participants started exercising (beginning at 12th gestational week till the term) and listening the lectures about pregnancy and delivery physiology (starting from the 30th gestational week). All of them delivered in the Obstetrics Ward of Clinical Centre of Montenegro. The duration for all delivery stages, percentage of obstetric procedures, success of breastfeeding implementation and overall satisfaction with delivery event were analysed.
POSTERIOR URETHRAL VALVE IN TWIN PREGNANCY – CASE REPORT

Patient 37 years old, G1P0A0, presenting in 16th week of twin (diamniotic,dichorionic) pregnancy, complicated with large urinary bladder (megavesica), oligoamnios and bilateral hydronephrosis of male fetus. We performed amniocentesis (karyotype 46XX and 46 XY) and vesicocentesis to male fetus, in order to lower the pressure in urinary tract. During second trimester, we performed vesicocentesis few times. Sonography of urinary tract of affected fetus was the same as at previous examinations, but he develops intrauterine growth restriction. Delivery performed by cesarean section (obstetric indications) in 38th gestational week: first male newborn FW 1680g, Apgar score 1/3 and the second alive female newborn FW 2810g, Apgar score 8/9. Affected male newborn survived for 7 days, and the other newborn had unremarkable postnatal period.
Conclusion: Fetal invasive interventions regarding posterior urethral valve carries significant risk for both mother and fetus, having limited effect to overall prognosis, degree of renal insufficiency and lung hypoplasia, and should be offered to selected patients after informative consent.
ABSTRACT ID: 3

TITLE: THE ECONOMIC COST OF CONGENITAL CMV IN THE UK

AUTHORS: J. Retzler 1; N. Hex 2; P. Griffiths 3; C. Jones 4; S. Wood 5 & C, Star 6

AFFILIATIONS: 1 & 2 York Health Economic Consortium, United Kingdom
3. University College Hospital, London, United Kingdom
4. University Hospital Southampton, United Kingdom
5 & 6 CMV Action, London, United Kingdom

CONTENT

Background and Objective:
Congenital Cytomegalovirus (cCMV) is a leading cause of birth defects in the UK and is the most common infection passed from mother to unborn baby. Congenital CMV can adversely affect neurodevelopment, causing lifelong impairments such as sensori-neural hearing loss (SNHL), cerebral palsy and autism spectrum disorder (ASD) and 2 - 3 babies every day in the UK will be damaged by CMV. However, awareness of the virus is poor amongst health professionals and members of the public alike. The financial burden associated with the management and consequences of cCMV and its sequelae is not fully understood. This study aimed to estimate the annual direct and indirect economic costs of cCMV and its sequelae to the UK.

Methods:
A cost model providing a ‘snapshot’ of the estimated cost of cCMV to the UK in 2016 was developed, informed by interviews with clinical experts and a literature review. The cCMV population was split into four age bands (0 to 1 year; 1 year to 5 years; 5 years to 18 years; 18 years and over) and relevant estimates of incidence and unit costs were identified from the published
literature, using UK sources where possible. Direct and indirect annual costs were aggregated across the population to provide total estimates.

Results: The model base case estimated that the total cost of cCMV to the UK in 2016 was around £700 million. Approximately 40% of the costs were directly incurred by the public sector, with the remaining 60% being indirect costs, such as personal cost to families and lost productivity to society. Long-term impairments caused by the virus had a higher cost burden than the acute management of cCMV.

Results and Conclusion:
The cost of cCMV to the UK is substantial, predominantly stemming from the long-term impairments caused by the virus, and should be compared against the cost of educational and screening programmes, as well as future vaccination. Increasing awareness may help to prevent virus transmission in pregnancy. The introduction of universal screening for cCMV may increase detection of children who would benefit from treatment, and build a more robust evidence base for future research to reduce disease caused by cCMV.
CONTENT

Introduction:
Neonatal medicine is an expensive specialty and delivery of high quality neonatal care requires detailed attention to resource utilisation and planning. Currently there is relative lack of knowledge regarding neonatal cot-utilisation and cost-implications of hosting a foetal medicine service in a specialist trust. This knowledge is important for commissioning specialist services, resource planning and addressing staff training needs. The objectives of the study were to stratify Neonatal Intensive Care (NICU) admissions by principal category and to determine the cot-utilisation and cost to services.

Methods:
The information was collected from foetal medicine records of babies with expected date of delivery between January 2015 and December 2017. The postnatal data was reviewed from Badger database. The postnatal diagnosis, length of stay and Healthcare Resource Groups (HRG) costs were analysed. Multiple gestation foetal clinic inputs were excluded from data analysis unless they had a medical diagnosis.

Results:
The total number of admissions to NICU during the period of October 2014 and December 2017 were 6202 with 243 (3.9%) of these admissions following foetal medicine input. Most common categories for admission (Figure 1)
included cardiac (39%), gastrointestinal system (21%) and congenital diaphragmatic hernia (11%). The length of stay was longest for those with growth concerns (average 42.4 days), followed by genetic diagnosis (30.2 days) and renal disorders (16.7 days) and this reflected in costs incurred to the service.

Conclusions:
To our understanding this is the first ever description of impact of foetal medicine on neonatal service utilisation. The results of this study could be extrapolated to address training needs, antenatal counselling of expectant parents and resource planning for a centre attached to a foetal medicine unit.
TOPIC: INDIVIDUALISED MEDICINE

ABSTRACT ID: 64

TITLE: OPTIMISING PREGNANCY AND DELIVERY CARE IN ANISMUS – A PELVIC FLOOR DYSFUNCTION

AUTHORS: N. Halder 1; L. R. Shankar 2

AFFILIATIONS: Glangwili General Hospital, Hwyel Dda University Health Board, Wales, UK

CONTENT

Introduction - Anismus is better known as the spastic pelvic floor syndrome or anal sphincter dyssynergia or pelvic floor dyssynergia. Patients mostly present with a history of chronic constipation or faecal overflow incontinence and have a functional rectal obstruction due to impaired relaxation of the pelvic floor muscles like levator ani, puborectalis or external anal sphincter along with an abnormally angulated recto-anal axis.

Case – 34-year-old primigravida is booked under consultant-led-care for her pregnancy and is presently 28 weeks gestation. She has conceived following a cycle of ICSI with singleton pregnancy. She has Grand mal epilepsy, hyperthyroidism, degenerative changes with disc prolapse at L5-S1 and anismus with a long-standing history of defecation problem and constipation. Gastroenterology team has advised her to have a caesarean section in view of her pelvic floor dysfunction. She is planned for a close monitoring for both mum and baby although her pregnancy with regular MDT input from the neurology, gastroenterology, endocrine, orthopaedic, anaesthetic and the neonatal team.

Discussion – Spasticity or uncoordinated contraction of the pelvic floor muscles may be caused due to physical trauma like pregnancy and childbirth or without any cause known. Both children and adults may be affected with a higher incidence noted in females. Large proportion of
these patients have history of sexual abuse. Anismus is diagnosed by digital rectal examination and manometry and can be classified into 4 types of dyssynergia based on the manometric pattern. Dietary bulk forming agents and biofeedback may ameliorate the condition. Botulinum toxin injection into the external anal sphincter has shown mixed results.

Conclusion - Are we over-diagnosing the problem? Research has shown that pelvic floor muscle can tonically contract during per-rectal examination in a control population who present with no concern. More work is awaited in this field to understand the optimum pregnancy and delivery care plan in patients diagnosed with Anismus.
TOPIC: INDIVIDUALISED MEDICINE

ABSTRACT ID: 238

TITLE: SUCCESSFUL PRENATAL MANAGEMENT OF FETOMATERNAL HPA-1A ALLOIMMUNE THROMBOCYTOPENIA – A CASE REPORT

AUTHORS: A. Muller; Z. Kardum; B. Bošnjak; D. Kardum

AFFILIATIONS: 1 Department of Gynecology and Obstetrics, University Hospital Osijek, Osijek, Croatia
2 Department of Immunology, Allergology, and Rheumatology; Department of Internal Medicine; University Hospital Osijek, Osijek, Croatia
3 Department of Transfusion Medicine, University Hospital Osijek, Osijek, Croatia
4 Neonatal Intensive Care Unit, Department of Pediatrics, University Hospital Osijek, Osijek, Croatia

CONTENT

Background: Fetomaternal alloimmune thrombocytopenia (FMAIT) is the leading cause of severe thrombocytopenia in the newborn. It can cause severe complications and long-term disabilities. The most common antibody is anti-HPA-1a (75%–80%), which targets the polymorphic Leu/Pro residue of glycoprotein IIIa (GPIIIa) on the platelet membrane. There are several pre- and antenatal management strategies suggested in the literature.

Objective: To present a case of successful prenatal management of fetomaternal HPA-1a alloimmune thrombocytopenia.

Methods: Retrospective review of medical documentation.

Results: Following the second pregnancy, a term female neonate was born and presented with low platelet count (Plt 28) and generalized petechiae. A diagnosis of neonatal HPA-1a alloimmune thrombocytopenia was determined based on serological testing and HPA genotyping (infant HPA-1 a/b; HPA-2 a/a; HPA-3 b/b; HPA-5 a/a; HPA-15 a/b, mother: HPA-1 b/b; HPA-2- a/a; HPA-3 b/b; HPA-5 a/a; HPA-15 a/b, father: HPA-1 a/a; HPA-2- a/a; HPA-3 b/b; HPA-5 a/a; HPA-15 b/b). The neonate was successfully
treated with platelet transfusions and a 3-day course of IVIG (1mg/kg). There were no neurological sequelae.

In the third pregnancy at 20 weeks gestation using the MIPA method HPA-1a IgG antibodies (antibody titer 1:32) were found. Application of weekly IVIG 1g/kg was started at 24 weeks gestation. At 27 weeks gestation, the antibody titer rose to 1:128 and in addition to IVIG, the mother was started on prednisone 5 mg, 3x daily. The antibody titer remained at same levels in 30 weeks gestation, and at 34 weeks gestation was 1:64. Regular ultrasounds showed no fetal hemorrhage.

Following elective cesarean section, a well-appearing female neonate was born at 36 weeks gestation, BW 3570g, BL 50 cm, AS 10/10. There were no petechiae or organ involvement. The brain US was normal. The neonate had mild thrombocytopenia in the first day (Plt 120), and platelets rose to normal levels by the second day of life. There were no identifiable HPA-1a antibodies in the neonate’s plasma.

Conclusion: The antenatal management of FMAIT remains controversial, and currently involves weekly maternal intravenous immunoglobulin (IVIG), maternal steroid administration, or intrauterine platelet transfusions (IUPT). In our case, the treatment with weekly IVIG application (1g/kg) and low dose prednisone proved successful in preventing severe thrombocytopenia in the neonate. The history of a previously affected child was crucial for the optimal management of this pregnancy and the subsequent birth of a healthy child.
TOPIC: INDIVIDUALISED MEDICINE

ABSTRACT ID: 296

TITLE: LIGHT TRANSMISSION AGGREGOMETRY ALLOWS FOR MONITORING AND INDIVIDUALISING OF LOW DOSE ASPIRIN (LDA) PROPHYLAXIS IN HIGH-RISK PREGNANCIES

AUTHORS: C. Stern 1; K. Mayer-Pickel 1; I. Lakovschek 1; EC. Weiss 1, K. Eberhard 2; M. Cervar-Zivkovic 1; U. Lang 1; F. Pruller 3

AFFILIATIONS: 1 Department of Obstetrics and Gynaecology, Medical University of Graz, Graz, Austria
2 Core Facility Computational Bioanalytics, Medical University of Graz, Graz, Austria
3 Clinical Institute of Medical and Chemical Laboratory Diagnostics, University Hospital Graz, Graz, Austria

CONTENT

Introduction:
To avoid preeclampsia and placental mediated adverse pregnancy outcomes low dose Aspirin (i.e. acetylsalicylic acid) (LDA) is administered according to international guidelines. Even 150mg acetylsalicylic acid daily, as administered in the ASPRE trial, did not eliminate preeclampsia in these high-risk pregnancies. Platelet function testing is performed e.g. in cardiology to monitor the effectiveness of the dual anti-platelet therapy (DAPT) in patients on acetylsalicylic acid and P2Y receptor inhibitors.
Platelet function testing was incorporated into the care of high risk pregnancies to detect potential acetylsalicylic acid low response.

Material and methods:
High risk patients on LDA from the obstetric outpatient department of the Medical University of Graz were regularly monitored with light transmission aggregometry using a Chronolog 700 Born Aggregometer (Chronolog Havertown, PA). Blood was sampled in VACUETTE® 9NC coagulation sodium citrate 3.8% tubes (Greiner Bio-One International GmbH,
Kremsmünster, Austria) and platelet rich plasma prepared and stimulated with collagen, adenosine-5'-diphosphate (ADP), arachidonic acid (AA) and thrombin-receptor-activated-peptide 6 (TRAP-6).

Results:
In patients using 100mg LDA inadequate platelet inhibition was found in 43.9% of the pregnancies, and in those using 150mg LDA 57.9%, respectively (see Table 1).

Conclusions:
These data show that high risk pregnancies need an individualised LDA prophylactic therapy and appropriate monitoring to achieve an improved risk reduction. Furthermore, studies are necessary to provide a safe acetylsalicylic acid dosage for those high-risk pregnant women already taking 150mg acetylsalicylic acid, but still show Aspirin non-responsiveness using platelet function testing.
TOPIC: INDUCTION OF LABOR

ABSTRACT ID: 129

TITLE: INDUCTION OF CHILDBIRTH IN OUR CENTER: OUTCOMES

AUTHORS: M. Bueno 1; A. Jimenez 2; F. Batres 3; M. Velasco 4; I. Martinez; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION:
Childbirth and assistance to it is the central element of perinatal medicine. Records parity and other variables associated perinatalógicas are indispensable as a method of quality control of the activity of a delivery room. Medical induction of labor is a technique that has increased in recent decades as conduct before breast pathology and/or fetal.

OBJECTIVES:
Summarize the activity of induction of labour in our maternity ward during 2015

MATERIAL AND METHODS:
retrospective study of inductions occurred and causes in our center during 2015

RESULTS:
The total number of births in 2015 was 2844 deliveries. The induction rate was 32.55%. The reasons were RPM induction (36.93); EHE (12.74); EVP (12.31); Oligohydramnios (10.36); PEG / CIR (9.82); Other (7.99); DG (1.07); Monitor (2.05); MAO (1.72); Macrosomia (1.29); Gemelar (0.97); Polidramnios (7.55). The way was through vaginal delivery completion at 45.57%; instrumental delivery (20.94%); Cesarean (33.47%)
CONCLUSIONS

The induction rate of our center is above average. Despite the fact that most pregnancies end in a normal delivery, the cesarean rate within the inductions is high. We must review the indications of induction and the management of these to reduce interventionism.
TOPIC: INDUCTION OF LABOR

ABSTRACT ID: 137

TITLE: SPONTANEOUS VS INDUCED DELIVERY: OUTCOMES IN OUR CENTER

AUTHORS: M. Bueno 1; A. Jimenez 2; A. Martinez 3; M. Velasco 4; I. Martinez 5; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION:
Childbirth and assistance to it is the central element of perinatal medicine. Records parity and other variables associated perinatológicas are indispensable as a method of quality control of the activity of a delivery room. Medical induction of labor is a technique that has increased in recent decades as conduct before breast pathology and / or fetal.

OBJECTIVES:
Compare the outcomes of spontaneous deliveries vs induced deliveries.

MATERIAL AND METHODS:
Retrospective study of spontaneous and induced deliveries in our hospital in 2015.

RESULTS:
The total number of births in 2015 was 2844 deliveries. The onset of labor was spontaneous in 62.48% of cases. Elective caesarean section rate was 4.95%. The induction rate was 32.55%. Inductions completed in the vaginal delivery 46.22%; in the delivery instrumented 20.95%; and 32.83% urgent Caesarean section. The spontaneous deliveries completed in the vaginal delivery 69.61%; in childbirth instrumented the 15.86% and 14.51% emergency Caesarean section.
CONCLUSIONS
Nearly three-quarters of the pregnant women in our center start labor spontaneously, of which almost 75% end in a normal delivery. We induce almost a third of pregnant women in our center, of which half complete in a normal delivery, and of the other half, 50% are instrumented deliveries and 50% urgent cesareans. The results obtained coincide with those described in the literature. The onset of natural childbirth has a lower rate of interventionism compared to induced labor.
Abstract

Background: The Valsalva maneuver is normally accompanied by relaxation of the levator ani muscle, which stretches around the presenting part, but in some women the maneuver is accompanied by levator ani muscle contraction, which is referred to as levator ani muscle co-activation. The effect of such co-activation on labor outcome in women undergoing induction of labor has not been previously assessed.

Objectives: The aim of the study was to assess the effect of levator ani muscle co-activation on labor outcome, in particular on the duration of the second and active second stage of labor, in nulliparous women undergoing induction of labor.

Study design: Transperineal ultrasound was used to measure the anteroposterior diameter of the levator hiatus, both at rest and at maximum
Valsalva maneuver, in a group of nulliparous women undergoing induction of labor in two tertiary-level University hospitals. The correlation between anteroposterior diameter of the levator hiatus values and levator ani muscle co-activation with the mode of delivery and various labor durations was assessed.

Results: In total, 138 women were included in the analysis. Larger anteroposterior diameter of the levator hiatus at Valsalva was associated with a shorter second stage ($r = -0.230, P = 0.021$) and active second stage of labor ($r = -0.338, P = 0.001$). Women with levator ani muscle co-activation had a significantly longer active second stage duration (60±56 vs. 28±16 minutes, $P<0.001$). Cox regression analysis, adjusted for maternal age and epidural analgesia, demonstrated an independent significant correlation between levator ani muscle co-activation and a longer active second stage of labor (hazard ratio 2.085, 95% confidence interval 1.158 – 3.752; $P=0.014$).

There was no significant difference between women who underwent operative delivery ($n=46$) when compared with the spontaneous vaginal delivery group ($n=92$) as regards anteroposterior diameter of the levator hiatus at rest and at Valsalva maneuver, nor in the prevalence of levator ani muscle co-activation (10/46 vs. 15/92, $P=0.49$).

Conclusions: Levator ani co-activation is associated with a longer active second stage of labor.

Key words: co-activation, levator ani muscle, induction of labor, transperineal ultrasound, pelvic floor, operative vaginal delivery, perineal ultrasound, levator hiatus.
TOPIC: INDUCTION OF LABOR

ABSTRACT ID: 239

TITLE: IS TACHYSYSTOLE A PREDICTOR OF CAESAREAN SECTION AFTER LABOUR INDUCTION BY MISOPROSTOL?

AUTHORS: J. Sichitiu, D. Baud, Y. Vial, D. Desseauve

AFFILIATIONS: Obstetrics Dept., University Hospital of Lausanne, Lausanne, Switzerland

CONTENT

Background: In western countries, induction of labour is a common obstetrical intervention. Misoprostol, a prostaglandin E1 analogue, has long been employed as an effective means of induction of labour. However, it commonly provokes uterine tachysystole during cervical ripening. Currently, there is conflicting evidence regarding the clinical impact of tachysystole after labour induction.

Objective: Our primary objective was to evaluate if the presence of tachysystole was associated with a caesarean section following labour induction by misoprostol vaginal inserts (MVI). Our secondary objective was to evaluate maternal and neonatal outcomes in the presence of tachysystole.

Methods: We conducted a retrospective cohort study at the University Hospital of Lausanne’s Maternity unit, between May 2016 and May 2017. We included all pregnant women above 37 weeks of gestation and of low parity (three or less) admitted for labour induction by misoprostol vaginal inserts. Univariate analysis was performed by using t-test and Chi-square, comparing demographics, pregnancy characteristics, neonatal outcomes (APGAR < 7 at 5 min, Cord artery pH < 7.10, NICU admission), occurrence of tachysystole, and tocolytic administration by mode of delivery. To determine if tachysystole was an independent predictor of caesarean section, we performed a multivariate logistic regression analysis.
Results: 446 patients were included, with 140 patients (31.4%) presenting tachysystole. 95 women (21.3%) underwent caesarean section. In the multivariate logistic analysis, adjusting for all covariates, presence of tachysystole during induction of labour with MVIs was not associated with caesarean section (aOR = 0.9 95% CI 0.5-1.6). Administration of tocolytics during an episode of tachysystole was correlated with increased rates of caesarean section (aOR = 9.9 95% CI 3.3-29.6). The median duration of tachysystole was 2 hours 12 minutes. Tocolytics were administered to 4.7% of patients; 9 patients received atosiban, 12 received hexoprenalin. We did not observe any significant difference between tocolytics as regards caesarean delivery rates and time to resolution of tachysystole. No significant difference regarding unfavourable neonatal or maternal outcomes were observed.

Conclusion: This study illustrates that tachysystole is not an independent predictor of caesarean delivery after labour induction. A few women required administration of tocolytics due to altered foetal heart pattern, which was associated with increased rates of caesarean section. Clinical debate on the issue centres on uterine contraction frequency, but perhaps the examination of uterine contractile force bears more importance. Tocography remains an imprecise method to assess uterine contractile force. Further research on the development of accurate measures, qualitative and quantitative, of uterine activity is necessary to better understand uterine contractility.
TOPIC: INDUCTION OF LABOR

ABSTRACT ID: 303

TITLE: COMPARISON OF TWO ADMINISTRATION SCHEDULES OF ORAL MISOPROSTOL FOR INDUCTION OF LABOUR IN OBESE PREGNANT WOMEN

AUTHORS: M. Tintoni 1; S. Montori 1 2; M. Rossi 1; P. Antonazzo 1

AFFILIATIONS: 1 Ostetricia e Ginecologia, Ospedale M. Bufalini, Cesena - AUSL Romagna
2 Università degli Studi di Ferrara, Facoltà di Medicina e Chirurgia

CONTENT

Obesity is an emergent issue in Italy; the rate of obese women between 18 and 44 years of age is about 14%. Since obesity is also a risk factor for complications during pregnancy, more than one third of this population is subjected to induction of labour. Furthermore, obesity has been recognized as indication for induction itself. Induction of labour, in these cases, needs multiple methods, starts earlier and has an increased risk of caesarean section.

Italian Drug Agency allowed the use of misoprostol for induction of labour in 2014. The official Italian protocol provides an administration of 25 mcg of misoprostol every 2 hours, with at least 30 minutes of normal CTG before each dose, and at least 60 minutes of normal CTG after. Hence, we started first an internal protocol giving misoprostol every 3 hours, in order not to force the pregnant to a continuous CTG, and even because the effect of misoprostol is about 3 hours.

Then we decided to shift to a 2h schedule for obese pregnant to observe the outcome of deliveries.

In this retrospective study we compare two administration schedules of oral misoprostol for induction of labour in obese pregnant women. Group A includes 35 patients that received 25 mcg of misoprostol every 3 hours up to 8 doses; Group B includes 30 patients induced using 25 mcg of oral
misoprostol administrated every 2 hours up to 8 doses. Inclusion criteria were: singleton pregnancy with cephalic foetus, gestational age beyond 37 weeks and BMI over 30 before pregnancy. PROMs were included in the study, even though the internal protocol for induction with intact membrane starts by mechanical ripening of the cervix.

We aim to underline the differences in rate of mode of delivery, neonatal outcomes and length of induction.

Two groups were similar in term of rate of mechanical ripening of cervix (A: 50%; B: 40%), mean age (A: 34.1 years [SD: 5.8]; B: 34.4 years [SD: 5.8]), parity (A: 0.68 deliveries [SD: 0.98]; B: 0.53 deliveries [SD: 0.86]), gestational age at induction (A: 275.3 days [SD:8.9]; B: 275.3 days [SD: 8.6]), pregestational Body Mass Index (BMI) (A: 34.3 kg/m2 [SD: 4.0]; B: 35.1 kg/m2 [SD: 4.3]), BMI at term (A: 34.3 kg/m2 [SD: 3.8]; B: 35.1 kg/m2 [SD: 3.4]) and mean Bishop score at the beginning of the induction (A: 2.5 [SD: 1.7]; B: 2.5 [SD: 1.0]). The mean neonatal weight is significantly higher in Group A (A: 3514 g [SD: 490]; B: 3240 g [SD: 322]; p<0.05).

No differences were found comparing the two schedules in term of vaginal delivery rate, overall rate of caesarean section and rate of caesarean section performed before or after the beginning of active labour. We find no difference in the further use of oxytocin (A: 74%, B: 50%), either for induction or for augmentation.

Neonatal outcome is also similar in terms of Apgar score (at 1 minute, A: 8.97 [SD: 0.46]; B 8.90 [SD: 0.30]) (at 5 minutes, A: 9.94 [SD: 0.24]; B: 9.93 [SD: 0.25]), and cord blood gas analysis (arterial pH, A: 7.27 [SD: 0.11]; B: 7.24 [SD: 0.10]; venous pH, A: 7.30 [SD: 0.10]; B: 7.29 [SD: 0.10]).

Furthermore, the interval between labour induction and delivery was significantly shorter in the overall group treated using the 2-hours protocol (A: 1796 mins [SD: 738], about 30 hours; B: 1324 mins [SD 834], about 22 hours; p<0.05). Same significance is still present in the subgroup of patient who delivered vaginally and did not undergo to mechanical ripening (A: 805 mins [SD: 470], about 19.5 hours; B: 1177 mins [SD 401], about 13.5 hours; p<0.05), which is the group who had induction only by drug (misoprostol and oxytocin). In this subgroup the most significant difference is in the duration of dilating phase (A: 199 mins [SD: 166]; B: 99 mins [SD 68]; p<0.05). Our results conclude that the success of the two protocol is similar and we can also speculate that the difference is just “a matter of time”: this means
differences in how to manage human resources and how to deal with patient discomfort during induction.
TOPIC: INEQUITIES IN CARE

ABSTRACT ID: 157

TITLE: WHY, WHEN AND WHERE DO NEWBORNS NOT ONLY GET SICK BUT ALSO DIE IN SÃO TOMÉ AND PRÍNCIPE? – A CASE-CONTROL STUDY.

AUTHORS: A. Vasconcelos1, S. Sousa2, N. Bandeira2, J. Baptista3, M.C. Machado4, F. Pereira1

AFFILIATIONS: 1-Unidade de Clínica Tropical - Global Health and Tropical Medicine, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa; 2-Serviço de Pediatria do Hospital Dr. Ayres de Menezes, República Democrática de São Tomé e Príncipe; 3-Professor Convidado da Faculdade Ciências da Saúde, Universidade da Beira Interior; 4-Professora de Pediatria da Faculdade de Medicina de Lisboa, Universidade de Lisboa

CONTENT

Background: Neonatal deaths in São Tomé and Príncipe account for about 43% of all under-5 deaths, but major gaps exist in its understanding.

Objectives: To identify ante-intra-postpartum risk factors and to analyse characteristics of neonatal morbi-mortality.

Methodology: stillbirths and sick newborns (NB) with ≥32 week’s gestation or ≥1500g were eligible cases, while controls were healthy newborns ≥28 days. The study is still underway and more data will be still available. The results presented here are from a questionnaire applied by the investigator 2016-2018 and from mothers’ and NB medical records. The SPSS 23 statistical program was used for data analysis. Informed consent was obtained from every mother included in the study.

Results: Four hundred and twenty-five in 2568 mothers, corresponding to 436 NB (20 twins) were enrolled. One hundred and thirty nine cases and 239 controls NB were followed-up. Pregnant women medium age was 26 years, 16.2% being adolescents and 13.9% without antenatal care. Primary education was attended by 57%, secondary by 63%, 7% never attended school. Presence of maternal medical disease (e.g. chronic hypertension,
diabetes mellitus and asthma) was identified in 38% of the study subjects. Anaemia during pregnancy was noted in 24% and 62.6% pregnant women experienced intercurrent clinical conditions at any point during pregnancy, as intestinal parasitosis (36.8%) and urinary infections (25.6%). 5 Syphilis, 2 HIV mothers and 2 malaria were detected, 8 were infected with HBV. Over 83% of the deliveries were normal vaginal vertex and 10.6% of the mothers had caesarean sections. Vacuum extraction was used in 2.3% and forceps delivery in 0.8%.

From the 436 NB enrolled 50% were female with a mean birth weight of 3106g, 17.2% were LBW (<2500g). Newborns morbi-mortality: 7 (1.6%) stillbirths, 62 (14.2%) preterm, 23 (35.3%) birth asphyxia, 83 (19.4%) risk of neonatal and 13 (2.9%) invasive infections, 17 (3.9%) fetal growth restriction, 7 (1.6%) microcephaly, 8 (1.6%) congenital anomalies and one death in the first 24h of life (congenital lung anomaly).

Conclusions: In this study morbidity of NB is moderate (31.8%). More conclusions will be taken when a higher number of participants is included and analysed, as expected soon. As a result and at the completion of this study we hope to be able to design an intervention algorithm in order to achieve peri-neonatal morbi-mortality reduction.
TOPIC: INFECTIONS

ABSTRACT ID: 16

TITLE: HTLV1 (HUMAN T LYMPHOCYTE VIRUS TYPE 1) IN PREGNANCY AND BREAST FEEDING.

AUTHORS: Hamedi AB.1, Akhlaghi F.2.

AFFILIATIONS: 1. Faculty of medicine Mashhad University of Sciences Pediatrics Dept-Emam Reza Hospital. Mashhad Iran.
2. Faculty of medicine Mashhad University of Sciences Obstetric/Gynecology Dept-Ommolbanin Hospital. Mashhad Iran.

CONTENT

Background: Human lymph tropic T-cell virus is a retrovirus as HIV that produce the immune deficiency. Human T-cell leukemia virus type 1 (HTLV1) is endemic in the Carribbean, Japan, South America, Iran. Both types of HTLV can be transmitted through breastfeeding, sexual contact, and blood transfusion. The rate of vertical transmission from mother to child is 2.7% in formula-fed infants, 5% with three months of breastfeeding and up to 20% with prolonged breastfeeding and vertically acquired HTLV1 leads to adult T-cell leukemia/lymphoma 2-5% of infected infants.

Objective:
The aim of this study was to response this question: Do you need to request HTLV1 ab in pregnant women? this positive ab no problem and no preventive in pregnant women for the fetus. Antenatal screening for HTLV1 to recommend formula feeding has been carried out in the Nagasaki. In Iran, we should not be screen this ab routinely.

Method:
Follow up (Mother and fetus) and effects of HTLV1 positive ab in pregnant women referred to the pediatric infectious clinic.

Result:
Of 60 pregnant women that need infectious counseling, 45 cases had TORCH study ab, 14 cases (23%) had HTLV1 positive ab. 2 mother in the repeated test was negative. Of 12 cases 8 mother had delivery with a cesarean for positive ab HTLV1. About breastfeeding only 5 infants were breastfed and no problem until 18 months old baby (HTLV1 ab is negative).

Conclusion: Our results show that we should not be screen HTLV1 ab in pregnant women routinely, if a history of contact with disease (myelopathy, plegia) was in the family of pregnant women then we can to evaluate ab HTLV1 in mother. This positive ab no problem and no preventive for both mother and fetus/newborn

Keywords: HTLV1-pregnancy-Antibody.
Background and aims: Risk of HTLV-I antigen transmission via breast feeding is estimated to be approximately 16 to 30 percent. It is likely that transferred maternal antibodies in uterus is protective for some months after birth in her infant. Aim of this study was to determine intrauterine transmission rate of HTLV1 antigen to fetus in endemic area (Mashhad city, Norths Est of Iran).

Methods: In a prospective study on 407 women participated who admitted for delivery in omolbanin maternal Hospital, Mashhad of Iran from . Mother’s blood and cord blood sampling were done and HTLV1 antibody measured in all sample by Elisa test. Then in Elisa positive samples PCR test was done for detect proviral DNA in peripheral blood mononuclear cells. Data were collected and relation between positive mothers and cord blood samples was analyzed by SPSS .

Results: Mean age of women was 26 years. In 407 women 6 blood samples (1/5%) were positive for HTVL1 antibody by Eliza test and also PCR test was positive in all of them. So cord blood samples of all fetus who were born of positive women were positive (100%) by Elisa and PCR tests.

Conclusions: In our study frequency of HTLV1 positive women was 1.5% and intrauterine transmission rate was 100%.

Key words: Human T lymphotropic virus type 1- HTVL1 antibody, ELISA test, PCR test.
TOPIC: INFECTIONS

ABSTRACT ID: 50

TITLE: THE PRESENCE OF STAPHYLOCOCCUS AUREUS IN SMIRCHES TAKEN FROM MOTHERS WITH MECONIAL AMNION FLUID

AUTHORS: G. Bushinaska Ivanova 1; J. Ivanov 2

AFFILIATIONS: 1 Perinatology Dept., JZU University Clinic of Gynecology and Obstetrics - Skopje, Macedonia
2 Acibadem Sistina Hospital, Skopje, Macedonia

CONTENT

AIM: The aim of this study is to show the percentage of Staphilococcus aureus in smirches of newborns, from mothers with meconial amnion fluid after 48 hours of delivery.

MATERIAL AND METHOD: Newborns from mothers with meconial amnion fluid in 2010 year were analysed. Microbiologic findings from ear, pharynx and nose were analysed, taken randomly at our Department of Neonatology. They were processed at the Institute of Virology and Microbiology in Skopje.

RESULTS: In Special Hospital for Gynecology and Obstetrics"CAIR", Skopje, in the course of 2013 year, 3290 newborns were born live. 530 (16.1%) of them were born from mothers with meconial amnion fluid. Bacterial flora were analysed in 273 (51.5%) of newborns with meconial amnion fluid. 216 (79.12%) of them were sterile and 57 (20.87%) were positive. Staphilococcus aureus was isolated in 24 (42.1%), Streptococcus beta haemoliticus in 4 (7.01%), Klebsiella aerogenes in 4 (7.01%), Acinetobacter species 6 (10.52%), Enterococcus in 3 (5.3%), E.coli in 13 (22.8%), Streptococcus pneumoniae in 2 (3.07%) and Pseudomonas aeruginosa in 1 (1.75%).
CONCLUSION: The analysis showed that the most frequent bacterial flora in newborns from mothers with meconial amnion fluid, after 48 hours of delivery is Staphilococcus aureus, followed by E.coli and Streptococcus species.
Background. Implementation of the modern standards of perinatal care in Ukraine has ensured significant drop in main contributors to neonatal and maternal morbidity except intraamniotic infections (IAI), which showed the rise from 4.35% to 5.38%. Lower genital tract infections (LGTI) are very common among otherwise healthy looking pregnant women (40-54%). Untreated LGTI are linked to adverse outcomes. Treatment on the basis of laboratory data alone leads to considerable overuse of antibiotics. No benefit was found in treating women with low- or average-risk pregnancies for asymptomatic bacterial vaginosis. Several host defense mechanisms operate against ascending infection including vaginal acidity, cervical mucus, intact membranes and antibacterial activity of amniotic fluid due to polymorphonuclear leucocytes, lysozyme, β-lysin, transferrin, immunoglobulins and other bacterial inhibitory factors such as polypeptide-zinc complexes in amniotic fluid. Vitamin D is known to regulate innate and adaptive immune processes at the cellular level. Lower maternal vitamin D status may increase risk of infection across gestation. Maternal vitamin D status during pregnancy may modulate fetal immune system development.
and infant susceptibility to infections. The implication of maternal deficiency during pregnancy is that the fetus is also affected, with known consequences on fetal growth, dentition, bone density, immune function and risk of infections such as RSV. Infants of women who were deficient throughout pregnancy will maintain or reach a state of deficiency more quickly than an infant whose mother was replete during pregnancy.

Objectives. In order to lower the risk of asymptomatic LGTI for pregnancy outcomes and considering that maternal vitamin D deficiency (MVDD) is associated with increased risk of IAI, all pregnant women who had tested positively for LGTI (namely bacterial vaginosis, colonization with group B streptococcus, C. albicans, U. urealitica, HSV types 1 and 2) underwent evaluation for vitamin D status (25(OH)D by Mann-Whitney U-test, cutoff of MVDD <20 ng/ml). Those who were found deficient then were randomly allotted to the subset with vitamin D supplementation (VDS) either 400 IU/day or 4000 IU/day. During pregnancy the current standard VDS 400 IU/day has a minimal effect on circulating 25(OH)D in the mother and her infant. Daily uptake of 4000 IU/day had been reported to reach the point of 1,25(OH)2D optimization, therefore it was chosen for VDS.

Results. Our study revealed that 89% of women with LGTI had harbored 25(OH)D deficiency (18.9±3.2 ng/ml). VDS in the cohort of women with LGTI showed correlation with fewer adverse pregnancy outcomes comparatively to previous years, especially with regard to maternal preeclampsia, fetal growth, neonatal infectious complications including respiratory distress syndrome, necrotizing enterocolitis, intraventricular hemorrhage, IAI, presumed and confirmed neonatal sepsis, congenital pneumonia. When the data were stratified for patients receiving 400 or 4000 IU/day of VDS, it turned out that this improvement was mostly limited to latter dose with almost threefold decline (2.9) in total number of complication (premature rupture of membranes, preterm delivery, intrauterine growth restriction, stillbirth) and drop of perinatal mortality from 13.3% to 7.8%, better APGAR score and newborn weight (3200 ±200 vs 2850±150).

Conclusion. Because conversion of 25(OH)D to 1,25(OH)2D during pregnancy is unique, by 12 weeks of gestation 1,25(OH)2D level is over 280 ng/ml, that would be toxic due to hypercalcemia to the nonpregnant individual. However, gestational calcium metabolism is uncoupled from
1,25(OH)2D to let it ensure maternal tolerance to the fetal DNA via anti-inflammatory effect in lymphocytes, whereas 1,25(OH)2D consolidates IFN-γ-mediated bactericidal capacity of macrophages reinforcing host defence against ascending of LGTI. VDS up to 4000 IU/day in the case of MVDD with coexisting LGTI is safe and most effective in achieving 25(OH)D level sufficient for optimal 1,25(OH)2D production, resulting in better perinatal outcomes.
TOPIC: INFECTIONS

ABSTRACT ID: 152

TITLE: FETAL CEREBRUM CORTEX HEMISPHERES SLOW DEVELOPMENT IN SYphilis

AUTHORS: T.Yaremchuk 1,2; V.Kornienko 1,3; I.Okhabska 1,4; O.Korchynska 1,3; B.Korchynskyi 1,4

AFFILIATIONS: 1 Obstetrics, Gynaecology and Perinatology Dept., Faculty of Postgraduate Education, Danylo Halytskyi Lviv National Medical University, Lviv, Ukraine; 2 Lviv Regional Clinical Perinatal Center, Lviv, Ukraine; 3 Lviv Clinical Emergency Care Hospital, Lviv, Ukraine; 4 Lviv Regional Reproductive Center, Lviv, Ukraine

CONTENT

Introduction Peculiarities of fetal cerebrum development influence on psychical activity of a person. The oxygen concentration is a vital parameter for controlling the survival, proliferation, and differentiation of neural stem cells of fetus cerebrum [1]. Hypoxia and inflammation are considered ones of the most frequent factors of fetus cerebrum damages. They lead to alterations in size and shape of gray matter structures (e.g. hippocampus, amygdala), cortical thickness, functional connectivity, white matter fiber tracts. The consequence of cerebrum alterations is the development of autism, attention-deficit/hyperactivity disorders, schizophrenia, affective disorders, dementia [2]. The new factor of fetus cerebrum injury is gut dysbiosis of the pregnant woman and the fetus [3]. The aim of the research was the decrease of perinatal morbidity in treated syphilitic pregnant based on the study of fetus condition, ultrasonografic (USG) head size and cerebrum hemodynamics in mature pregnancy. Material and Methods Materials for the research were 30 case records of pregnant at 37-38 weeks treated with benzylpenicillinum natrium in 2-nd trimester and 30 afterbirths, which have been evaluated after staining by hematoxylin and eosin. The sick pregnant were treated and gave births in
Lviv hospitals in 2014-2016. Control group compose 30 case records of healthy pregnant. The methods of the research were clinical, cardiotocographic (CTG), USG, dopplerometric, morphological and statistical. Results CTG, biophysical profile and dopplerometric blood flow examination results of the pregnant women that underwent treatment indicate chronic fetus hypoxia. The decrease of fetal head biparietal diameter (90.64+-1.38 mm versus 94.32+-0.47 mm, P<0.05), head circumference (333.5+-4.37 mm versus 345.2+-2.91 mm, P<0.05) with the same frontooccipital diameters (115.22+-2.1 mm versus 115.5+-3.5 mm), have been discovered. Cerebrum hypovascularization has been revealed (cerebroplacental ratio CPR was 0.88 in treated women versus 2.057 in control group). The morphological structure of placenta of the treated women in 56.67+-9.2 % was within the norm. In other cases the following placental morphological signs have been determined: acute leukocyte-fibrin subchorial intervillitis in 46.67+-9.26 %, acute unspecific villitis in 13.33+-6.31 %, acute placental chorioamnionitis in 16.67+-6.92 %, acute basal deciduitis in association with intervillitis in 26.67+-8.21 %, extensive stroma villi fibrosis in 20.0+-7.43 %, multiple terminal villi angiomatosis in 46.67+-9.26 % of cases have been found out. In the cases of intervillitis small malfunctional zones in 30.0+-8.51 % and extensive pseudoinfarctions in 3.33+-3.33 % of cases have been determined. Pathological morphological placenta immaturity and predominance of villi hypovascularization in 43.33+-9.2 % of cases have been discovered. Morphological signs of placental dysfunction and fetus hypoxia have been found out. Conclusions Clinical, CTG, USG and pathomorphological research discovered placental dysfunction and fetus hypoxia in half of treated syphilitic pregnants. Syphilis causes fetus cerebrum hypovascularization (CPR 0.88) and slow development of cortex hemispheres [4]. Control of fetus condition and neurological newborns rehabilitation are the main necessary directions of perinatal morbidity prophylaxis, prevention of psychopathological developmental disorders and improvement of postnatal child cerebrum development.

TOPIC: INFECTIONS

ABSTRACT ID: 159

TITLE: WHERE GYNECOLOGY MEETS NEONATOLOGY; FATAL LATE-ONSET GROUP B STREPTOCOCCUS MENINGITIS - CASE REPORT

AUTHORS: D. Amrom (1), L. Vanek (1), A. Sobczak (2), R. Garash (1), J. Mavrikis (1)

AFFILIATIONS: (1) Jagiellonian University Medical College, Krakow, Poland
(2) Department of Pediatrics, Jagiellonian University Medical College, Krakow, Poland

CONTENT

INTRODUCTION
Group B streptococcus (GBS) is the most common cause of neonatal sepsis, meningitis, and pneumonia. Up to 25% of pregnant women are asymptomatic carriers of GBS in their vagina, rectum or perianal area. Transmission of GBS during delivery may result in a fulminant neonatal infection with either an early onset (presenting within 1st week of life) or a late onset (from 1 week to 3 months). Antibiotic prophylaxis is used to prevent bacterial transmission in colonized women, and has been effective at reducing the rates of early onset GBS infection by 80%. However, the rates of late-onset GBS infection have not changed since the introduction of the antibiotic prophylaxis. In this report, we present a case of fatal late-onset GBS in a neonate. We discuss possible routes of transmission that could have led to the late presentation as well as potential amendments to current protocols that may reduce infection rates.

CASE REPORT
Our patient (pt) was a 16-days old neonate, referred to our tertiary Neonatal Intensive Care Unit due to meningitis. She was born at 37 weeks of gestation via a C-section. Prior GBS screening was completed only vaginally; no intrapartum antibiotic prophylaxis was prescribed, the pt was discharged home in the first week of life. In the third week of life she
presented with symptoms of severe shock with capillary refill time of 7s, impaired coagulation, CRP 185mg/dl, PCT 410ng/ml and CSF cytosis of 20150 cells/ul. CSF microbial culture confirmed a GBS infection; the blood culture remained negative. Increased frontal swelling and bulging of frontal fontane was noted post admission (PA). USG revealed severe brain edema with symmetrical subcortical hypoechogenic areas of the frontal lobes that progressed to malacia. On the 7th day of hospitalization, brain MRI confirmed massive ischemic changes in the frontal, temporal and occipital lobes as well as within the corpus callosum and the pituitary gland (Figure 1). Furthermore, flaccid paraplegia, hypoesthesia and areflexia of the lower limbs was observed from the 4th day PA, which progressed to spasticity and varus legs. The pt experienced new onset diabetes insipidus on the 6th day PA and was given desmopressin. Immunodeficiency tests were negative. After 43 days of hospitalization our pt was discharged home with full enteral feeding, respiratory and circulatory efficiency, persistent spasticity of the lower limbs and mandatory desmopressin therapy.

DISCUSSION

The following case is unusual due to the late-onset of symptoms; was it maternal-acquired infection with late onset of symptoms due to CNS invasion, or was it acquired in the home environment? An elevated level of IL-6 (marker of tissue damage) was recorder shortly after birth, alluding to potential aspiration of infected amniotic fluid during pregnancy or delivery. We recommend that future IL-6 levels be considered a marker of possible transferrable bacterial infections and a reason to consider prophylactic antibiotic treatment. Additionally, studies suggest that GBS can cross intact amniotic membranes, thus a C-section does not eliminate the risk of transmission, and antibiotic prophylaxis may still be necessary. Streptococcus agalactiae is a ubiquitous bacterium widely distributed in the environment - GBS infections in pregnancy have been described in women of all races and in all geographic areas. Therefore, another possible explanation is that our pt acquired the disease from carriers in her environment, which warrants implementation of additional antiseptic techniques to protect neonates in their first 3 months of life. Other amendments to current protocols include vaccines and placental studies. Current clinical trials for GBS vaccine are taking place to help strengthen immune responses and prevent potential infections. Moreover,
The Human Microbiome Project demonstrated that placenta has its own endogenous microbiota, suggesting it could provide a controlled environment for the development of fetal microbiota, as well as contribute to chorioamnionitis, preterm birth, and the overall health of the neonate. Thus, the placenta has a dynamic function and could contribute to GBS prophylaxis in the future.
Herpes simplex virus is the most common sporadic cause of encephalitis, with the majority of cases due to HSV type-1, with 17 cases of HSV encephalitis in pregnancy in the literature identifying a predominance in the late 2nd and 3rd.

MATERIAL
We report the case of a 22 week pregnant woman diagnosed with herpes simplex encephalitis.

CLINICAL CASES.
We report a 33 year old woman, 22 weeks pregnant, admitted in our Hospital after generalized tonic-clonic seizures. The pregnancy, obtained by artificial insemination, was normal until week 21, when she attended to her general practitioner referring headache, fever, abdominal pain, nausea and vomiting. The symptoms weren’t solved, so she consulted to a tertiary referral center where ceftriaxone and fluid therapy were started. Photophobia appeared and a normal fundoscopy was performed. She was discharged after 24 hours.

At home, she suffered from amnesia, speech difficulty, behaviour disorders and seizures. Emergency service was called, she was intubated and transferred to our Intensive Care Unit with a Glasgow coma scale of 6. Deep sedation with levetiracetam was required. Despite she arrived afebrile, antibiotics were started.

A brain scanner noticed hypointensity in both temporal lobes. Magnetic Resonance Imaging (MRI) demonstrates wide damage.
A lumbar puncture showed high protein level and erythrocytes. Obstetricians were called to evaluate the pregnancy, a 22+5 weeks fetus was described. Intravenous acyclovir was started according to the suspicion, later, Polymerasa Chain Reaction (PCR) turned out to be positive for herpes simplex virus (HSV). Fetal movement wasn’t registered in the first ultrasound, probably due to the sedation the mother was induced, a single umbilical artery and a choroid plexus cyst were found. Amniocentesis was considered, but expectant attitude was decided taking into account the gestational age, in the limit of fetal viability, the lack of evidence in literature and family wishes. On day 11 she was extubated. On day 17 she was transferred to the Neurology department, 21 days of intravenous acyclovir 750 mg/8h were completed. On day 28 she was discharged with daily levetiracetam. Obstetrical High Risk Unit followed the pregnancy. On week 30 skin patches over inferior extremities and dark stains in teeth were observed seeming a toxic syndrome due to levetiracetam. Fetal MRI was requested at 30+ 5 weeks without pathological findings. 35 week ultrasound showed a slightly small for gestational age fetus with an estimated fetal weight of 2250 gr (p12). She was admitted 37 weeks pregnant with premature rupture of membranes diagnose. A vacuum extraction was performed under suspicion of fetal distress. A 2420 g. woman, pH 7.17 was delivered. Breastfeeding and Acyclovir were initiated in the neonate. Blood, urine, cerebrospinal fluid test were negative for HSV.

**DISCUSSION**

Headache, fever, seizures and speech difficulty are symptoms of herpes simplex encephalitis, a rare disease with mortality from 50 to 70% in untreated patients. If suspected MRI will show temporal lobe abnormalities and PCR for Herpes Simplex Virus will confirm the infection. A multidisciplinary approach will be needed and 21 days of intravenous acyclovir must be completed.
This case has to be considered a medical success, both mother and fetus are alive and healthy.
TOPIC: INFECTIONS

ABSTRACT ID: 203

TITLE: NEONATAL SEPSIS OF VERTICAL TRANSMISSION. AN EPIDEMIOLOGICAL STUDY FROM THE “GRUPO DE HOSPITALES CASTRILLO” NEONATAL NETWORK.

AUTHORS: B. Fernandez-Colomer; GD Coto-Cotallo; and Members of “Grupo de Hospitales Castrillo” Neonatal Network. Spain.

AFFILIATIONS: Neonatal Unit. AGC of Paediatrics. Universitary Hospital of Asturias, Oviedo, Spain

CONTENT

Background: Neonatal sepsis of vertical transmission (early onset-sepsis) occurs as a result of colonization of the fetus, before or during labor, by microorganisms from the maternal genital tract. Group B streptococcal (GBS) infection is the most frequent cause of vertical sepsis and a leading cause of neonatal mortality. In Spain, national guidelines for the prevention of perinatal GBS infection were issued in 1998.

Objective: To assess the epidemiology of early-onset vertical sepsis (EOVS) in our country (Spain).

Material and Methods: From 1996 the neonatal units of 43 acute-care hospitals in Spain (“Grupo de Hospitales Castrillo” Neonatal Network) carries out a prospective surveillance of the epidemiology of vertical neonatal sepsis.

Results: Of 2,091,663 live birth in the study period (1996-2017), 2,431 had EOVS. The incidence rate of EOVS (Fig 1) declined by 55%, from 2.4/1,000 live birth in 1996 to 1-1.2/1,000 in the period 2002-2017 (p< 0.0001). This incidence was significantly higher in the group of VLBW neonates than in those weighing >1500 g. GBS (767 cases) and E. coli (716 cases) were the most prevalent isolated organisms. 74.2% of GBS sepsis occurred in term babies while, on the contrary 65% of E. coli sepsis occurred in preterm
babies. The incidence rate of GBS vertical sepsis declined significantly by 73.6%, from 1.25/1,000 live births in 1996 to 0.3/1,000 as of 2002 (p<0.001). There were annual fluctuations in the incidence of E. coli sepsis with a non-significant increase in VLBWB (p <0.1). The mortality rate of vertical sepsis ranged between 8-18% in the study period and was significantly higher in preterm than in term infants (24.7% vs 3%) and in E. coli vertical sepsis than in GBS sepsis (18% vs 7.4%). The mortality per 1,000 live birth decreased from 0.20 (1996) to 0.11 (2017).

Conclusions: In Spain, there was a substantial decline in the incidence of early onset vertical sepsis with significant reduction in the incidence of GBS sepsis in the study period, as consequence of the impact of antimicrobial intrapartum prophylaxis. Fluctuations in the incidence of E. coli infection suggest the need for continuing epidemiological surveillance.
TOPIC: INFECTIONS

ABSTRACT ID: 224

TITLE: SEVERE PYELONEPHRITIS IN PREGNANCY - CASE REPORT

AUTHORS: A. Haliti; D. Natalic; V. Miketic

AFFILIATIONS: Department of Gynecology and Obstetrics, Clinical Centre of Montenegro, Podgorica

CONTENT

Pyelonephritis is the most common urinary tract complication in pregnant women, occurring in approximately 2% of all pregnancies. Untreated upper urinary tract infections are associated with low birth weight, prematurity, premature labor, hypertension, preeclampsia, maternal anemia and amnionitis. If patients do not respond to antimicrobial therapy within 48 hours, a retrograde stent or percutaneous nephrostomy tube should be placed to decompress an obstructed infected collecting system. Surgical care is rarely indicated in most severe unresponsive cases (enucleation of the abscess or nephrectomy).

The patient was referred to our hospital at 25 6/7 weeks of gestation in a third uncomplicated pregnancy. She presented with mild urologic symptoms (dysuria), afebrile, treated with rehydration, spasmolytic and urological tea. Urine analysis were unremarkable. The third day clinical course was abruptly deteriorating, with fever, costovertebral pain and elevated infection parameters, antibiotics administered. Transabdominal ultrasonography revealed the enlarged left kidney with accentuated parenchyma, with no urolites visualized, directing to pyelonephritis, repeated later associating with renal abscess. There was no respond to antibiotic therapy two days after and the patient was elected for urgent surgical intervention, nephrectomy. The postoperative treatment continued with two antibiotic regime, rehydration and analgesics, including progesterone. All urine and blood cultures taken during the
hospital stay remained negative for bacteria. Postoperative course with prophylactic antibiotic therapy and close surveillance continued till term. The patient gave birth at 38 2/7 weeks of gestation to a 2,960g healthy male, with Apgar scores of 8 (at 1 minute) and 9 (at 5 minutes).
TOPIC: INFECTIONS

ABSTRACT ID: 248

TITLE: FETAL GROWTH RESTRICTION AND PARVOVIRUS B19 INFECTION

AUTHORS: J. Pereira 1, J. Xavier 2, C. Coimbra 2, M. Moucho 2

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, Unidade Local de Saúde do Alto Minho – Viana do Castelo, Portugal
2 Department of Obstetrics and Gynecology, Centro Hospitalar Universitário de São João, Porto, Portugal

CONTENT

Introduction: Parvovirus B19 is a single chain DNA virus, cytotoxic for erythroid cells, with respiratory, blood, and transplacental transmission. The infection can occur with malar rash, arthropathy and anemia. It affects about 1-2% of pregnant women, and can reach about 10% in epidemic periods. The fetal transmission rate is 17-33% being the main cause of nonimmune hydrops. Infection during early pregnancy can cause significant placental changes that may lead to fetal growth restriction (FGR).

Clinical Case: Multiparous woman, 39 years, unifetal and spontaneous pregnancy. History of obesity and chronic hypertension. First-trimester ultrasonography without changes, fetal DNA screening in maternal blood shows a negative risk for trisomy 21. At 17 weeks of gestation, the 3-year-old daughter of the pregnant woman was diagnosed with Erythema Infectiosum and the pregnant presented a malar rash affecting the upper limbs, without other signs or symptoms of disease, with spontaneous resolution. Confirmation of serological infection by Parvovirus B19 at 19 weeks. Morphological ultrasound was performed at 21 weeks presenting the fetus biometrics at percentile 5, hyperechogenic intestine and placentomegaly, without other changes. The pregnant was referred to an hospital consultation at 24 weeks, maintaining, in the ultrasound FGR
(percentile 4.4), decreased amniotic fluid, hyperechogenic intestine, placentomegaly, hepatomegaly and high middle cerebral artery peak systolic velocity (MCA-PSV). Amniocentesis was performed at 25 weeks, fetus with normal karyotype (46, XY) with positive PCR for Parvovirus B19. Ultrasound performed at 26 weeks showed fetal growth at the 9.7 percentile, with normal amniotic fluid, no hepatomegaly, no placentomegaly, and no evidence of fetal anemia (normal MCA-PSV). Ultrasound at 28 weeks, without evidence of FGR (percentile 35.5) or other changes. Third trimester’s ultrasound showed a fetal growth in the percentile 31.4, without other changes and diagnosis of placenta previa. At 36 weeks fetus with growth in percentile 19.6, without other complications. Elective cesarean was performed at 39 weeks, birth of a male newborn, with 2810g (10th percentile) and APGAR 8/9/10. Puerperium without complications. Newborn discharged at day 3, requiring phototherapy in the postnatal period, without clinical or analytical evidence of anemia. Anatomopathological examination of the placenta demonstrated acute and focal acute chorioamnionitis, multifocal hydropic aspects, translated by large villi, edematous stroma by probable infection by Parvovirus. Absence of fetal eristroblastosis or nuclear inclusions of Parvovirus. Conclusion: Parvovirus B19 infection in pregnancy at an early gestational age increases the risk of fetal hydrops, with a higher risk of adverse outcomes. Regardless of not being the main cause of fetal infection, placental invasion by the virus can presents as FGR.
BACKGROUND: Despite progress made in the care of pregnant women and newborn infants in modern neonatal intensive care units (NICUs), neonatal sepsis is still an important cause of morbidity and mortality among newborns and an important issue for public health care services. Half of the neonatal deaths occurring in the first 2 weeks of life are due to infections. The World Health Organization estimates that 4 million newborns die annually and 98% of these deaths occur in developing countries. The spectrum of bacteria involved in the neonatal sepsis and their sensibility to antimicrobial therapy varies from country to country and is continuously changing. Treatment possibilities are often limited by the rapid emergence of species resistant to antibiotic therapy.

OBJECTIVE: The aim of this paper is to analyse the incidence, bacteriological profile and the risk factors for neonatal infections in a level II Intensive Care Neonatal Unit (NICU).

MATERIAL AND METHODS: We conducted a descriptive retrospective study on a sample of 542 newborn infants who were admitted to the Second Neonatology Department of the Emergency County Hospital from Cluj-
Napoca from January 2014 to June 2016. The data were collected from medical records. Data normality was assessed using the Shapiro-Wilk normality test. Evaluation of the association between qualitative variables was done through contingency tables and the existence of association was tested by the x2 test. In order to assess whether there are differences between two independent quantitative data groups, the Mann Whitney U test was used.

Results and conclusions: 54% newborns were preterm, having gestational age below 36 weeks and birth weight below 2800g and 45% were term newborns with birth weight over 3000g. 136 newborns had perinatal hypoxic events and 103 newborns have required respiratory support. 57 babies (9.67%) were diagnosed with early onset sepsis and 38 babies (7.06%) with late onset sepsis. 67 had positive blood cultures; Serratia Marcescens and Klebsiella Species were the most frequently isolated bacteria. Extreme prematurity and gestational age below 31 weeks were the main risk factors.
TOPIC: INFECTIONS

ABSTRACT ID: 276

TITLE: CESAREAN SECTION IN CHORIOAMNIONITIS

AUTHORS: S. Costa1; A. Figueiredo1; J. Xavier1; M. Moucho1; N. Montenegro1,2

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, São João Hospital Centre, Porto, Portugal; 2 Porto Faculty of Medicine, Porto, Portugal;

CONTENT

Introduction:
The use of antibiotics during intrapartum period can be used to prevent infections (Streptococcus agalactiae neonatal infection and cesarean prophylactics) or to treat infections such as chorioamnionitis. Chorioamnionitis is a intraamniotic inflammation frequently expressed by a clinical syndrome: maternal fever, maternal or fetal tachycardia, uterine tenderness and foul odor of amniotic fluid. The diagnosis of acute chorioamnionitis is made by microscopic examination of the placenta and is characterized by diffuse infiltration of neutrophils through the chorioamnionitic membranes. The aim of this work was to study the use of intrapartum antibiotic therapy in our institution and analyze the neonatal and obstetric outcomes in the different groups.

Material and Methods:
A retrospective study of 789 pregnant women admitted to labour in 2017 and whom intrapartum antibiotics were given. The study variables (antibiotics, Streptococcus agalactiae screening, mode of delivery, signs or symptoms of chorioamnionitis, neonatal and obstetric outcomes) were collected using Obscare® database and analysed through IBM SPSS®.

Results:
In our hospital, antibiotics were given to 32.3% of pregnant women admitted in labour ward: 39% for surgery prophylaxis, 48% to pregnant
colonized by Streptococcus agalactiae for neonatal infection prophylaxis and 13% represented empirical antibiotics for clinical suspicion of chorioamnionitis. Considering only the 97 pregnant women with clinical symptoms of chorioamnionitis, 79% had a negative Streptococcus agalactiae screening and 15% had a positive screening. In 85% of cases, antibiotic combination of ampicillin and gentamycin was the preferred option. The cesarean rate between Streptococcus agalactiae neonatal infection prophylaxis was 21% and empirical treatment of chorioamnionitis groups was 58% and this difference was statistically significant (p< 0.01). Comparing the reasons to cesarean delivery, in Streptococcus agalactiae neonatal infection prophylaxis group, second-phase arrest was detected in 33% and fetal distress in 22%. On the other hand, if we considered empirical treatment of chorioamnionitis group, 54% of cesarean were made because of second-phase arrest, 27% for fetal distress 16% for failed induction of labour. Considering the total of cesarean in our tertiary hospital, scheduled or urgent, 21.2% were done for second-phase arrest, 16.7% due to fetal distress and 8.6% for failed induction of labour. Conclusion: Intrapartum antibiotics were given essentially as Streptococcus agalactiae neonatal infection and cesarean prophylaxis. Clinical suspicion of chorioamnionitis was associated with increased rate of cesarean section, in the majority of cases due to second-phase arrest. This association of prolonged second stage and chorioamnionitis is corroborated by the literature but it could be either a cause or a consequence.
**TOPIC:** INFECTIONS

**ABSTRACT ID:** 305

**TITLE:** QUALITY IMPROVEMENT PROJECT: TOWARDS REDUCING COSTS AND DURATION OF STAY OF INFANTS TREATED FOR NEONATAL EARLY ONSET SEPSIS

**AUTHORS:** M. Noureldeen; R. Heaver

**AFFILIATIONS:** 1 Department of Neonatal Medicine, New Cross Hospital, The Royal Wolverhampton NHS Trust, Wolverhampton, United Kingdom

**CONTENT**

**INTRODUCTION**

Neonatal infection causes significant morbidity and mortality in the UK and worldwide. The introduction of national guidance for neonatal early onset sepsis (EOS) led to improved consistency in treatment but increased the length of stay.

**AIM**

We aimed to assess our compliance with NICE recommendation in neonatal EOS which is stopping antibiotics at 36 hours if blood culture is negative, normal CRPs and the baby’s clinical condition is reassuring. If these criteria are met, not to give the second dose of Gentamicin or do Gentamicin level. By achieving this we would hope to reduce the length of stay and improve patient flow in the maternity unit.

**METHODS**

We included all infants ≥37 week gestation who were treated for possible EOS and had negative blood culture and two CRPs <10 mg/L. Pre-intervention data was collected retrospectively during January 2018. Changes were subsequently implemented which were presenting the findings in the joint obstetrics/neonatal forum, creating an educational poster for postnatal wards and reminding the team at safety briefing. Post-intervention data was collected during July 2018.
RESULTS
During January, 31 infants were admitted with possible EOS, 13 out of them met inclusion criteria, while in July 47 infants were admitted, 24 of them met the criteria. After the intervention, the percentage of infants who didn’t receive the second dose of Gentamicin and in whom Gentamicin level was not done increased from 23% (3/13) in January to 75% (18/24) in July. The average duration of stay of patients received the second dose of Gentamicin was 56.4h in January and 53.6h in July, while for the patients who didn’t receive Gentamicin was 9.5h shorter, 46.7h and 44.2h in January and July respectively.

CONCLUSION
With increased awareness and education of medical and nursing staff, the percentage of babies who did not receive the second dose of Gentamicin and in whom Gentamicin level was not done has significantly increased. This led to the reduction of the duration of admission of infants with EOS. It also spared them the exposure to unnecessary painful blood tests and antibiotics, saved the time of medical staff to do blood tests and give antibiotics and saved the cost of Gentamicin level test and IV antibiotics.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 9

TITLE: PREGNANCY WITH HEART DISEASE IN TERTIARY CARE DR. SOETOMO TEACHING HOSPITAL, SURABAYA, INDONESIA AT 2016-2017

AUTHORS: F.Z.Amani1, E.G. Dahlan2

AFFILIATIONS: 1Resident of Obstetrics and Gynecology, Dr. Soetomo Teaching Hospital - Airlangga University, Surabaya, Indonesia; Email: dr.fariskazata@gmail.com
2Staff in Fetomaternal Division, Department of Obstetrics and Gynecology, Dr. Soetomo Teaching Hospital - Airlangga University, Surabaya, Indonesia

CONTENT

Introduction
Heart disease contributes high rates of morbidity and mortality in pregnant women. Prevalence of heart disease in pregnancy is vary between 0.3-3.5% and now it is the leading cause of indirect maternal deaths accounting for 20.5%. Indonesia is country with the second highest maternal mortality rate in Southeast Asia, reached 305 per 100,000 (three times higher than Indonesia's MDGs target of 102 per 100,000). Statistical data at Dr. Soetomo Surabaya in 2014-2016 found that heart disease ranks second cause of maternal death after preeclampsia.

Method
This retrospective study aims to find out prevalence and pregnancy outcome of heart disease in tertiary care Dr. Soetomo Teaching Hospital Indonesia from January 2016 until December 2017. Data of this study was obtained from medical record to describe detailed about profile of heart disease in pregnancy. Incomplete data from medical record was excluded.

Results
Prevalence of Heart Disease
Total number of pregnant women with heart disease from 2016 until 2017 was 134 with total number of deliveries was 2643. The prevalence rate of heart disease in pregnancy was 5.06%. Based on maternal age, heart disease in pregnancy was higher in group of age 25-35 years old (41.04%), followed by 18-25 years old (30.06%) and >35 years old (26.87%). Only 2 patient less than 18 years old in this study. Based on parity, multigravida was more common than primigravida (61.94% vs 38.06%).

Distribution of Heart Disease
There was three type of heart disease in pregnancy that found in this study: congenital heart disease (CHD), acquired heart disease (including rheumatic heart disease / RHD, hypertensive heart disease / HHD, thyroid heart disease, arrhythmia) and peripartum cardiomyopathy (PPCM). In western world, CHD is most common (75% to 82%) with shunt lesions predominating. In this study, RHD was the most common type (44.03%) followed by CHD (36.56%) and PPCM (17.16%). In CHD, three most heart lesion was ASD (28/49), VSD (12/49) and TOF (5/49). In 23 cases of PPCM, 13 cases correlate with incidence of preeclampsia. Most cases in RHD involve more than one valve lesion. The most frequently involved valve in RHD was mitral valve, followed by tricuspid, aortic and pulmonal valve. Four cases had done percutaneous transvenous mitral commissurotomy (PTMC) during antenatal (at 20/21 weeks, 28 weeks, 29/30 weeks, 30/31 weeks). There were three cases with corrected heart lesion (1 case with post ASD closure, 1 case with VSD closure and 1 case with post mitral valve replacement).

Cardiac Complications and Maternal Mortality
Cardiac complications were present in 56.62% women with the most common complication was congestive cardiac failure (27.61%). Detailed about cardiac complications can be seen in figure below. The number of maternal deaths in this study was 24 cases (17.91%) with 4 cases died when still pregnant.

Pregnancy Outcome
The most common mode of delivery was section caesarian followed by instrumental (forcep) with preterm delivery was higher. Preterm labor (48.51%) was higher than aterm (47%) and 2 women had abortion. Case of low birth weight is higher in women with heart disease in this study (73% vs 59%).

Conclusion.
Heart disease in pregnancy is increasing (4.43% in 2016 vs 5.67% in 2017) in Tertiary Care Dr. Soetomo Teaching Hospital Indonesia with maternal mortality was 24 cases (17.91%). It contributes 0.91% of maternal deaths in all pregnancy in 2016-2017. RHD is the most common type of heart disease among them.

Keywords: Pregnancy Outcome, Heart disease in Pregnancy, Indonesia, Maternal Death
Background: Diabetes is the most typical metabolic disease simultaneous with pregnancy. Preeclampsia is the most common disorder which accompanies gestational diabetes. Recent studies demonstrated the role of micronutrients in women with diabetes which accompanies preeclampsia.

Objective: The aim of this study was comparison between micronutrients in gestational diabetic hypertensive women with and without preeclampsia.

Methods: In this descriptive research, 72 gestational diabetic hypertensive women with and without preeclampsia participated who were in the third trimester of pregnancy. Demographic information and previous and current pregnancies data was filled in the questionnaire. Then a blood sample was taken and micronutrients include iron, zinc, magnesium and lipid profile was measured. Data analyzed by using SPSS version 19 and statistical method include T-test, and chi square. The value less than 0.05 were considered as significant.

Results: Of 72 participants 32 cases were gestational diabetes and hypertension with preeclampsia and 40 women without preeclampsia. Iron level in the group with preeclampsia was 108.91± 64.58 and in the group without preeclampsia was 79.75±53.33. The level of in the group with...
preeclampsia was 65.73±24.40 and group without preeclampsia was 53.17±19.23. The level of in group with preeclampsia was 220.59±61.92 and in group without preeclampsia was 192.83±47.46. Differences between two group for iron (P=0.39), zinc (P=0.02) and copper (P=0.035) was significant. Magnesium’s level and Cholesterol and triglyceride in two group were similar without significant differences (p>0.5)
Conclusions: Micronutrients include iron, zinc and copper in gestational diabetic hypertensive women with preeclampsia has been higher than gestational diabetic hypertensive women without preeclampsia.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 25

TITLE: PREGNANCY IN PATIENTS WITH THROMBOSIS IN HISTORY. CASE REPORT

AUTHORS: S.Baymuradova, E.Slukhanchuk

AFFILIATIONS: Scientific Center of Hemostasis Thrombosis and Fetal medicine. Moscow. Russia.

CONTENT

Introduction
Patient 33 years
Previous pregnancies:
1. Medical abortion 7 weeks
2. Spontaneous abortion up to 10 weeks
3. Delivery 40 weeks (from 30 weeks enoxaparin therapy)
4. This pregnancy. The patient went to the clinic on 14 weeks.

Diseases:
Thrombosis of the ileac vein at the age of 25, while taking oral contraceptives

Methods
Examination revealed:
- Homozygous form of factor V Leiden mutation
- Heterozygous form of polymorphism PAI-I 675 4G / 5G
- Homozygous form of platelet receptor polymorphism GpII1515T / C
- Homozygous form of polymorphism of the folate cycle MTHFR C677T
- Heterozygous forms of polyphosphism folate cycle MTS 2756
- Pronounced activation of intravascular coagulation

Preparation for pregnancy was not carried out, since the patient applied for a period of 14 weeks.
Therapy during pregnancy: folic acid, low molecular weight heparin in high doses, progesterone, polyunsaturated fatty acids.

Results
Pregnancy:
- from 24-25 weeks a slight violation of uteroplacental blood flow
- fetal growth retardation from 32 weeks (strengthening of anticoagulant and antiplatelet therapy)
- delivery at 38 weeks 3100 g 49 cm Apgar scale 8-9
- the postpartum period was uneventful

Conclusion:
1. The presence of thrombotic history in a pregnant woman is a prognostically unfavorable factor in pregnancy.
2. Patients with thrombosis in history need to be examined for genetic thrombophilia, antiphospholipid syndrome, hyperhomocysteinemia, hemostasiograms with D-dimer, and platelet aggregation at the preparatory stage for planning, during planning and in the dynamics against the background of pregnancy.
3. Pathogenetic therapy in such patients minimizes the risks of vascular and obstetric complications.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 29

TITLE: MATERNAL OBSTETRIC OUTCOMES IN WOMEN WITH IBD COMPARED TO THE GENERAL POPULATION

AUTHORS: G. Lever 1; T. Glanville 2; C. Selinger 3

AFFILIATIONS: Combined IBD Antenatal Clinic, Department of Gastroenterology / Department of Obstetrics, St. James's University Hospital, Leeds, UK

CONTENT

Background:
Pregnant women with Inflammatory Bowel Disease (IBD) face important but complex choices on medication, delivery and breastfeeding. While foetal and maternal IBD outcomes have been well studied there is less evidence regarding maternal obstetric outcomes. Women with IBD have higher rates of Caesarean section (CS) but the reasons for this remain largely unknown. Perineal birth trauma in IBD can potentially negatively affect long-term quality of life but is so far unstudied.

Objectives and Method:
In this prospective cohort study we compared maternal and foetal outcomes in singleton pregnancies of IBD and non-IBD patients in a tertiary centre. Outcomes studied included mode of delivery, perineal trauma, incidence of preterm and low birthweight infants, and choice to breastfeed at discharge. Comparisons were made between IBD and non-IBD patients and within the IBD cohort, where disease activity and treatment were also analysed. The objectives were to identify differences between the populations and establish whether these were significant enough to
warrant alteration of management during the antenatal, labour and delivery periods for women with IBD.

IBD patients from the Combined IBD Antenatal Clinic delivering between 2014 and April 2018 were included. All non-IBD patients delivering between 2015 and April 2018 were comparators. Routinely collected maternal and foetal data were analysed with sub-analysis of primiparous patients. We recorded indications for CS as IBD / obstetric and absolute / relative.

Results:

Of 31,707 births analysed 179 occurred in mothers with IBD. Incidence of CS was higher in IBD patients overall (30% vs 21%, RR 1.6, p=0.02, CI 1.2-2.6) and in primiparous analysis of 12639 births (33% vs 21%, RR 1.9, p=0.03, CI 1.2-2.9). CS rates between IBD subtypes in multiparous and primiparous women were similar. In IBD patients, obstetric rather than IBD indication was more common for elective CS (60% vs 40%). IBD indications were all absolute indications (active perianal disease, ileo-anal pouch, extensive previous surgery, emergency surgery for ileal perforation). Emergency CS constituted 35% of IBD and 40% of non-IBD CS deliveries with no significant difference across all patients (p=0.08, CI 0.9-3.8) or primiparous patients (p=0.3, CI 0.4-1.4).

There was no increased risk of perineal tears involving at least the internal anal sphincter in IBD patients compared to non-IBD (RR 0.7, p=0.5, CI 0.3-1.9). Four IBD patients with significant perineal trauma were followed in a specialist obstetric injury clinic: None had pelvic floor dysfunction or incontinence at follow-up. Previous perianal disease was not associated with an increased risk of significant tears.

Conclusion:

Data on Caesarean delivery and perineal trauma are reassuring for IBD patients. Whilst CS is more frequent in IBD patients, we found that all IBD indications were absolute. Emergency CS incidence is no greater in IBD patients than non-IBD, implying that Caesarean is recommended appropriately in the Combined IBD Antenatal Clinic. Perineal tears are a theoretical risk for poor future IBD outcomes. As significant perineal tears are not more common in IBD patients and healed well in our series, the promotion of normal vaginal delivery (barring other indication for CS) is advisable.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 33

TITLE: GROWING INCIDENCE OF STROKE IN PREGNANCY AND PUERPERIUM: REFLECTING CHANGING LIFESTYLE OVER TIME

AUTHORS: N. Halder; M. Nair; M. Bonduelle; R. Powell

AFFILIATIONS: Singleton Hospital, Swansea, Wales, United Kingdom

CONTENT

Introduction: Stroke associated with pregnancy is rare with an incidence of 3 to 30 / 100,000 pregnancies. The incidence is rising in recent years and remains an important cause of premature death and long-term disability. Case Summary: 32-year-old para 2 was delivered by emergency caesarean section at 31 weeks gestation due to worsening pre-eclampsia. She smoked 20 cigarettes per day and had a medical history of chronic hypertension, IDDM, post-traumatic epilepsy, anxiety and depression. On 2nd post-operative day, she developed slurring of speech along with tingling and numbness of right hand. Neurological examination revealed right-sided weakness affecting face, arm and leg and expressive aphasia. Initial CT scan of the brain was normal, but an MRI confirmed an Ischaemic stroke with left parietal infarct. Her blood pressure was high and antihypertensives were restarted having been stopped that morning. She was transferred to the Stroke unit for further care and rehabilitation. Thrombolytics could not be initiated due to her recent operation. The patient improved slowly over time. One month later she had regained more power of her right hand and legs though her speech remains slightly slurred. Discussion: Ischaemic stroke in the absence of clot points towards either an atherosclerotic plaque disease, underlying vasculitis or transient arterial spasm. This patient’s thrombophilia screen was negative, but she had several risk factors to have accelerated intimal damage and plaque disease like hypertension, diabetes, obesity and smoking.
Conclusion: An increased dose of prophylactic aspirin alongside routine thromboprophylaxis may be beneficial in high-risk women to prevent platelet aggregation. Optimal imaging modality is best decided after discussion with the radiologist. MR angiogram or MR diffusion phase scan may sometimes be needed. Differentials like venous sinus thrombosis, expanding AVM, Moyamoya disease and pregnancy-related causes of focal cerebral infarction like eclampsia, choriocarcinoma and amniotic fluid embolism need to be excluded.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 36

TITLE: TREATMENT OF INFERTILITY IN THE CASE OF A POLYCYSTIC OVARY SYNDROME

AUTHORS: E. Crauciuc 1*; D. Crauciuc 2; E. Stoica 3

AFFILIATIONS: "Gr.T.Popa" University of Medicine and Pharmacy, "Elena Doamna" Iaşi Clinical Hospital, Iasi, Romania

CONTENT

Background. About 10.0% of women of reproductive age are affected by polycystic ovary syndrome (PCOS), the main cause of infertility, which is also the most frequent form of endocrine disorder in women. Infertility is a consequence of anovulatory menstrual cycles but is maintained and aggravated by metabolic disorders associated with the syndrome, aging and the evolution of the disease, thus the treatment of infertility is the major objective for the patient diagnosed with this syndrome.

Objective. The central strategy of the medical treatment for female infertility is focused on the diagnosis and treatment of anovulation. Results of surgical therapy: restoration of ovulation, spontaneous pregnancy and decrease of spontaneous abortion rate.

Material and Methods. The study was conducted over a period of time of 5 years (2014-2018), on 115 patients, aged between 16 and 45 y, 68% of which came from towns and cities. The study was prospective, case-control type, to demonstrate that there was a statistically significant difference between the measurements of the patients in the treated group versus the untreated control group.

Results. The most common reason for addressability was infertility (69.0%); menstrual disorders associated with weight gain (16.0%); primary infertility was present in 65.9% of cases. Following the ultrasound, a higher ovarian volume was seen in women with PCOS. The glycemic profile of patients with
PCOS is altered, hyperinsulinemia having an increased incidence (30%). 56.5% of the patients showed hirsutism. Hormone dosage revealed low FSH (25%) or normal FSH levels (56.0%) and increased LH secretion (69.0%). Paraclinically, an elevated plasma testosterone level was demonstrated in women with PCOS versus normal. It has been found that the increase in plasma testosterone levels causes an increased urinary elimination of 17-ketosteroids. The percentage of pregnancies resulting from cycles of stimulation with FSH that is recombined in a reduced and continuous dose (60%) is due to the appropriate development of follicles following the treatment. Obesity has been highlighted in a high percentage (40.0%); this is an important factor in the etiopathogenesis and pathophysiology of PCOS, which is why diet is an adjunct to therapy. Metformin has been shown to have beneficial effects on fertility and restoration of ovulation. For the patients with PCOS with obesity, a weight reduction of first intention was attempted; in patients who underwent a weight loss, we noticed an improvement in symptomatology: spontaneous ovulation (55.4%), pregnancy (46.4%) and regular menstrual cycles (27.2%). Ultrasound examination is essential for diagnosis, having an important concordance with laparoscopy and histological examination. Evaluation of ovarian morphology by transvaginal ultrasound and Doppler flux analysis of uterine and ovarian arteries provided a picture of the pathogenic mechanisms and disease progression and the possibility of prevention and monitoring of ovarian hyper stimulation syndrome (OHSS). The ovarian laparoscopic drilling, followed by an appropriate stimulation with Clomif en citrate (Clomid) in association with Metformin is an efficient method of treatment for the patients with anovulatory infertility. After the procedure, the ovulation rate was 80.0% and the pregnancy rate was 36.6%. Conclusions. PCOS investigation is very complex, both from the diagnostic and treatment point of view, every case having its own peculiarity. The pregnancy rate was 60.0% following stimulation with recombined FSH (about 7% of the pregnancies were multiple ones) and 36.6% for the patients with ovarian drilling. It was noted that in PCOS patients who were able to lose weight, 50.0% achieved a spontaneous pregnancy, but only a part had reached the term (46.4%), the rest being spontaneously aborted.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 38

TITLE: ATYPICAL POSTPARTUM ECLAMPSIA IN A LOW-RISK PREGNANCY

AUTHORS: B. Bettencourt 1; C. Miranda 1, R. Sardinha 1, F. Brás 1; A. Andrade 1

AFFILIATIONS: 1 - Department of Obstetrics and Gynecology, Hospital Senhora da Oliveira – Guimarães EPE, Portugal

CONTENT

Introduction
Eclampsia remains an important cause of maternal death worldwide. It is typically defined as the new onset of generalized tonic-clonic seizures or coma during gestational period or postpartum (generally after the 20th week or until 48 hours postpartum), non-attributable to an underlying neurologic disease, in women with pre-eclampsia. Some women may present atypical forms of eclampsia, namely without previous hypertension and/or proteinuria.

Material and Methods
We report a clinical case of postpartum eclampsia without previous classic findings of pre-eclampsia and present a brief literature review.

Results
The patient was a 36-year-old woman, gravida 2 para 1 (vaginal delivery), with normal weight and no relevant medical history, except first-degree family history of hypertension. She had an adequate and uneventful prenatal surveillance for a low-risk pregnancy, with normal blood pressure measurements.

An elective cesarean section was performed at the 39th week by maternal request in a Private Hospital, without intercurrences. Ten hours postpartum, the puerpera experienced generalized tonic-clonic seizure, with spontaneous resolution in < 2 minutes, preceded by mild headache and photopsia, but normal blood pressure (118/70 mmHg). After postictal
phase, she recovered full consciousness and no focal neurological deficits were found. She underwent a brain CT scan which was normal. After 1 hour, she developed a similar seizure, which was suppressed with IV diazepam. The blood pressure remained normal (maximum 136/74 mmHg).

The patient was transferred to our Obstetric Emergency Room (Public Tertiary Hospital) 13 hours postpartum. She was hemodynamically stable and cooperative at admission, but suddenly had recurrence of generalized seizure in emergency room with severe hypertension (170/100 mmHg) and loss of consciousness. She was intubated and transferred to ICU. Loading dose of IV magnesium sulfate was immediately given, followed by maintenance dose. The blood pressure was controlled after 20 mg IV labetalol. Laboratory findings established the diagnosis of HELLP (Haemolysis, Elevated Liver enzymes, Low Platelets) syndrome: hemoglobin 10.4 g/dL with anisocytosis, spherocytes and schistocytes in blood smear, platelets 68 x 10^9/L, AST 848 UI/L, ALT 477 UI/L and LDH 1987 UI/L. Coagulation studies and urine output were normal.

Mechanical ventilation was suspended after 8 hours. The patient was transferred to the ward 48 hours postpartum and magnesium sulfate was withdrawn 36 hours after the last seizure. She maintained normal blood pressure or mild hypertension, without maintenance antihypertensive therapy (Figure 1). After clinical and analytical improvement, she was discharged on the 6th postpartum day. An etiological study has been conducted and no underlying pathology was found.

Conclusions

We present a case of atypical postpartum eclampsia, without previous hypertension or known risk factors. Eclampsia occurs after delivery in 30-40% of the cases and atypical forms in 8%. In this case, there was an associated HELLP syndrome, which can be considered as a variant of pre-eclampsia. However, it can arise without hypertension nor proteinuria and eclampsia is an uncommon complication.

Magnesium sulfate is the drug of choice to prevent and control eclamptic seizures. The recurrence rate is 5-20% and the treatment must be continued for at least 24 hours after the last seizure. Although less effective, intravenous diazepam can be used as an alternative. For women with pre-eclampsia, magnesium sulfate reduces by more than one half the risk of eclampsia. Atypical forms are problematic due to their
unpredictable onset, missing the opportunity to institute preventive therapy. Health care providers should have a high index of suspicion to make a timely diagnosis and treatment.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 40

TITLE: SUCCESSFUL PREGNANCY AFTER TOTAL BODY IRRADIATION IN ACUTE LYMPHOBLASTIC LEUKAEMIA – A SILVER LINING

AUTHORS: Z.X. Tan 1; N. Halder 2; R. Goel 3

AFFILIATIONS: 1 4th Year Medical Student, Cardiff University, Cardiff, Wales, United Kingdom
2 ST7 Year Trainee in Obstetrics and Gynaecology, Department of Obstetrics and Gynaecology, Glan- willi General Hospital, Hywel Dda University Health Board, Wales, United Kingdom
3 Consultant Obstetrician and Gynaecologist, Department of Obstetrics and Gynaecology, Glan- willi General Hospital, Hywel Dda University Health Board, Wales, United Kingdom

CONTENT

Introduction: Successful pregnancy following total body irradiation in Acute Lymphoblastic Leukaemia (ALL) survivors has rarely been reported.
Case summary: 37-year-old lady had T-cell ALL when she was 12 years of age treated with prophylactic cranial irradiation and chemotherapy. 3 months after completion of her chemotherapy, she was diagnosed with CNS and bone marrow relapse and was treated with sibling-matched allogenic bone marrow transplant (BMT) preceded by further chemotherapy and total body irradiation (TBI) as conditioning and was prescribed on lifelong penicillin post-splenectomy. She developed primary gonadal failure as a result of TBI and was started on combined HRT since the age of 16. She did not develop central hypothyroidism then. Following 1st cycle of IVF she conceived DCDA twins which ended in 2nd trimester miscarriage. She conceived again on her 3rd cycle of IVF using donor egg and stayed on oral oestradiol and vaginal progesterone supplement till 12 weeks gestation. Regular cervical length tracking was done in 2nd trimester that was 43mm at 24+6 weeks gestation. She had thyroid function tested in
each trimester and was started on levothyroxine 50 micrograms once daily from 25 weeks onwards. Regular fetal growth monitoring was done during 3rd trimester and she developed gestational diabetes that was diet controlled. She had threatened labour at 30 weeks and was transferred in-utero to another hospital whilst being on nifedipine tocolysis and steroids. She was admitted to the antenatal ward again at 35+4 weeks gestation with threatened labour and cervix was 2 cm dilated with bulging amniotic sac. She was transferred to labour ward the following day as she was contracting with 3-4 cm dilated cervix. She was transferred back to antenatal ward later that day as she did not labour. She was kept as inpatient over the next 7 days following which her membranes ruptured and she laboured spontaneously at 36+4 weeks gestation. A baby girl weighing 2.95 Kg was delivered by ventouse in good condition. She had an atonic postpartum haemorrhage of 2.73L and needed 3 units of blood transfusion alongside uterotonic. Baby needed phototherapy and both were discharged home on Day 12 post-delivery.

Conclusions: ART with oocyte donation has made pregnancy possible for those with ovarian failure however normal functioning of the uterus remains questionable after TBI. Pregnancy following BMT with TBI carries a high risk of miscarriage, preterm labour and fetal growth restriction and successful outcome as in this lady is a triumph.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 42

TITLE: POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME ASSOCIATED WITH REVERSIBLE CEREBRAL VASOCONSTRICTION SYNDROME IN A PATIENT PRESENTING WITH POSTPARTUM ECLAMPSIA: A CASE REPORT

AUTHORS: A. Pop 1; M. Carbonnel 1; A. Wang 3; J. Josseran 4; S. Condette Auliac 2; J.M. Ayoubi 1.

AFFILIATIONS: 1 Department of Gynecology, obstetrics and reproductive medicine, Foch Hospital, Suresnes 92150, France
2 Department of Neuroradiology, Foch Hospital, Suresnes 92150, France
3 Department of Neurology, Foch Hospital, Suresnes 92150, France
4 Department of Anesthesiology, Foch Hospital, Suresnes 92150, France

CONTENT

Posterior reversible encephalopathy syndrome (PRES) and reversible cerebral vasoconstriction (RCVS) are rare neurological disorders with complex physiopathology which is not yet fully understood. We present here the case of a 31-year-old woman with a bi-amniotic bi-chorial pregnancy who developed immediate postpartum eclampsia after vaginal delivery, associated with RCVS and PRES. Although post-partum is a well-known precipitating factors for these diseases, to our knowledge, there are only few similar cases reported with the association of these syndromes.

Repeated MRI scans were instrumental in the final diagnosis of RCVS associated with PRES, allowing us to give the patient the appropriate treatment. These two syndromes have similar symptoms but may have different treatments, thus highlighting the importance of a correct diagnosis.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 62

TITLE: PREGNANCY OUTCOME WITH PRIMARY BILIARY CIRRHOSIS

AUTHORS: E Eccles 1; N Halder 2; R Goel 3; D Bowen 4

AFFILIATIONS: 1 4th year Medical student, Cardiff University, Cardiff, Wales, United Kingdom
2 ST7 year trainee in Obstetrics and Gynaecology, Glangwili General Hospital, Carmarthen, Hwyel Dda University Health Board, Wales, United Kingdom
3 Consultant Obstetrician and Gynaecologist, Glangwili General Hospital, Carmarthen, Hwyel Dda University Health Board, Wales, United Kingdom,
4 Consultant Gastroenterologist, Glangwili General Hospital, Carmarthen, Hwyel Dda University Health Board, Wales, United Kingdom

CONTENT

Introduction – Primary Biliary Cirrhosis (PBC) is an immune mediated chronic liver disease characterised by progressive inflammatory obliteration of the intrahepatic bile ducts. It is more common in females with majority occurring during the 5th to 6th decade of life. A quarter of the disease occur in the child-bearing age group, with pruritis and fatigue being the commonest presentation. Limited data is available on maternal and fetal outcomes in pregnant women with PBC.

Case summary – 37-year-old G5 P2+2 lady is known to have PBC along with anxiety and depression. Her mother has advanced stage PBC and sister had obstetric cholestasis in both her pregnancies. Her obstetric history included two 1st trimester termination and a full-term pregnancy delivering a 3.6 Kg baby measuring on the 40% centile by Neville Barnes forceps. She thereafter was diagnosed with early stage PBC based on her liver ultrasound scan and positive autoantibodies. Her fibroscan was normal suggesting a non-cirrhotic range and liver biopsy was not needed at that point. She was started on ursodeoxycholic acid (UDCA) following which she had her 2nd baby that was induced at 40+5 weeks gestation delivering
a 2.66 Kg baby measuring on the 10% centile by spontaneous vaginal delivery. In her current pregnancy she was advised to continue UDCA and Vitamin K. She was admitted at 31+5 weeks with epigastric pain when no gall bladder stone or colonic disease was found and with no worsening of PBC. Regular fortnightly scans in third trimester suggested normal fetal weight. She was induced at 38+ weeks gestation in view of her liver condition with a possibility of superimposed cholestasis. She delivered a baby boy weighing 2.9 Kg by spontaneous vaginal delivery with good apgars.

Discussion – Diagnosis of PBC is based on two of the following three key criteria including persistently elevated serum alkaline phosphatase, the presence of serum anti-mitochondrial antibodies (AMA), and liver histology suggestive of PBC. Hence it is difficult to diagnose if presenting for the first time during pregnancy. Maternal and fetal outcomes are generally favourable although biochemical flare-ups and worsening of pruritus are common during and after pregnancy that may need treatment.

Conclusions – More research is needed on the course of the disease to predict long-term maternal prognosis. UDCA is the only proven treatment that may delay or prevent disease progression however 40% of PBC patients do not respond to it. Liver transplant has a place in advanced or end-stage disease.
Introduction: Lymphomas are the fourth commonest neoplasia associated with pregnancy with Hodgkin’s lymphoma being commoner as it occurs in younger women. An incidence of 1/6000 pregnancies is reported. Pregnancy is not known to increase the risk of relapse.

Case: 32-years-old Para-1 with 1 previous caesarean section developed stage IIA Classical Hodgkin’s lymphoma (cervical, mediastinal) following her first childbirth. She was treated with chemo (ABVD regime) and radiotherapy and been in remission for 2 years. She conceived spontaneously second time following preconception counselling and was jointly looked after by obstetrician and haematologist during her pregnancy. An elective CS was performed at maternal request at 39 weeks gestation delivering a baby boy of 3.3 Kg in good condition. Surgery was straightforward with a blood loss of 350 ml. About 4 hours after her operation, she had an atonic postpartum haemorrhage of 2.1 L that was managed conservatively and transfused with 2 units of blood. She was discharged home on the third post-operative day.

Discussion: Prophylactic uterotonics at delivery may have been appropriate in her case. They should receive irradiated blood products due to T-cell dysfunction to avoid transfusion associated graft-versus-host disease.

Conclusion: Sterility is a long-term treatment complication however ABVD regime is less gonadotoxic than other regimes. The most serious long-term
treatment-associated complications are secondary neoplasia, cardiovascular disease (Doxorubicin-induced) and respiratory disease (Bleomycin-induced), hence baseline preconception assessment is vital. Those who received mediastinal RT must have annual mammogram and those with neck, mediastinal RT must have regular thyroid function check.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 65

TITLE: VOMITING IN THIRD TRIMESTER – THINK LATERALLY. PRESENTING A LESSER KNOWN CAUSE OF NAUSEA AND VOMITING IN PREGNANCY

AUTHORS: N. Halder 1; L. McCann 2; M. Nair 3

AFFILIATIONS: Singleton Hospital, ABMU Health Board, Wales, UK

CONTENT

Introduction:
Benign paroxysmal positional vertigo (BPPV) is the commonest cause of vertigo due to vestibular disease in adults. It is characterised by acute, brief attacks of vertigo with or without nausea and vomiting, induced by head position changes. It is twice as common in women as men. There is paucity of data of BPPV in pregnancy with few cases described in literature causing lack of awareness leading to delay in diagnosis and management.

Case:
P1 lady was admitted through triage at 30+3 weeks gestation with vomiting. The initial care plan for hyperemesis failed to produce clinical improvement. An urgent neurological in-patient evaluation identified that the patient was reporting paroxysmal vertigo precipitated by changes in head position. This was accompanied by nausea and vomiting. Neurological examination including cranial nerve and cerebellar function remained normal and additionally, there was no deafness or tinnitus. CT Head along with CT venogram were normal. BPPV was diagnosed by Hallpike Manoeuvre. She was treated with Epley's canalith repositioning technique which convincingly and rapidly improved her symptoms. She was discharged home with advice to continue Brandt-Daroff exercises.

Discussion:
It is believed that BPPV is caused by dislodgment of crystalline particles called otoconia from the utricle. The debris may then enter one of the three
semi-circular canals positioned at right angle to one another. This leads to episodic positional vertigo in one plane. Hallpike Manoeuvre remains the gold standard bedside diagnostic tool. Early institution of conservative management results in more than 95% recovery.

Conclusion:
Increased prevalence in women more so whilst on oral contraceptives point towards a possible link between hormonal changes and BPPV that needs further research. Obstetricians need to be aware of this entity and seek appropriate interdisciplinary input for prompt diagnosis and to avoid untoward outcome to the mother and baby from dizziness and falls.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 132

TITLE: ANEMIA AND PREGNANCY: BASELINE PARAMETERS OF RED SERIES IN FIRST QUARTER OF PREGNANT WOMEN.

AUTHORS: P. Talens 1; A. Martinez 2; L. Batres 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and Gynecology dept., Santa Lucia Universität Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
Anemia is one of the most frequent complications related to pregnancy. Anemia has been linked to the lack of increase in maternal plasma volume, with consequent reduced blood supply, and therefore with inadequate platelet function. It is thus associated with complications of pregnancy and childbirth: the mother, the fetus and newborn, as increased morbidity and perinatal mortality, premature birth, low birth weight, hypertension, low iron in the newborn, which causes delayed psychomotor development and neurobehavioral disorders.

MATERIAL AND METHODS:
The aim is to assess baseline hemoglobin of pregnant women first quarter of Obstetrics and Gynecology Hospital Santa Lucía de Cartagena, between 2015 and 2016, a total of 950 pregnant women collected. An observational retrospective study, collecting analytical values first quarter, blood count (hemoglobin, hematocrit, and red blood cells) of all pregnant women: the variables are reviewed. A value of hemoglobin below 12 g / dl is considered anemia.

RESULTS:
The mean hemoglobin was 12.98, the maximum value of 15.5 and the minimum value of 8.3. According to the reference values, 100 950 patients
are anemic collected early in pregnancy. As the hematocrit, the average is 37.82%. Concerning the values of erythrocytes, the average is $4.46 \times 10^{12}$ / L.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 155

TITLE: LATE POSTPARTUM HEMORRHAGE DUE TO ACQUIRED HEMOPHILIA A. CASE REPORT AND REVIEW OF THE LITERATURE

AUTHORS: R. Vaques 1; L.Ojeda 2; N.Romero 3; P.Bocelli 4; L.Gómez 5; B.Biondi 6.

AFFILIATIONS: Maternidad Jose Federico Moreno, Hospital Luis Lagomaggiore, Mendoza, Argentina.

CONTENT

Background: Acquired Hemophilia A is a very rare disease caused by the presence of inhibiting autoantibodies of factor VIII. It clinically manifests as abnormal bleeding that can result in life-threatening situations.

Objective: Report a case of severe postpartum hemorrhage associated to Acquired Hemophilia A.

Material and methods: Clinical case study. Review of the literature published between 2013 and 2018 in bases PUBMED and SCIELO.

Results: We report a case of acquired hemophilia A in a 21 year-old multiparous patient with no history of clinical or obstetric pathology who presented a severe postpartum hemorrhage on her seventh day of puerperium. She was assisted at the local hospital where, presuming an endometritis, an uterine curettage was performed. In the next three weeks, the patient had four more bleeding episodes, during the last of which a total abdominal hysterectomy was decided. On presenting a severe episode of bleeding post hysterectomy, the patient was referred to our Obstetric Centre after multiple transfusion of red cells and plasma with the diagnose of coagulopathy due to haemostatic insufficiency. In our centre, we made hematological and immunological studies that showed a prolonged TTPK, a very low dosage of factor VIII (28%, for a normal minimum value of 50%) and a factor VIII inhibitor autoantibody. The patient was responsive neither to plasmaferesis nor to treatment with
recombinant factor VII and prednisone, so therapy was changed to rituximab with improvement of the patient’s laboratory tests as well as her clinical status.

Conclusions: According to recent literature, postpartum hemorrhage caused by acquired hemophilia A has a world incidence of one case per million per year, with a very high mortality and morbidity. We consider it important to take this disease into account when having an obstetric patient with a severe acute hemorrhage with no history of abnormal coagulation or bleeding and prolonged TTPK, in order to make an early diagnosis and correct treatment, avoiding surgery that may worsen the patients’ evolution and prognosis.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 156

TITLE: SPONTANEOUS OVARIAN HYPERSTIMULATION SYNDROME DURING PREGNANCY – CASE REPORT

AUTHORS: R. Pires 1, T. Ascensão 1, M. Branco 1, D. Marado2, E. Galhano1, M. Almeida1

AFFILIATIONS: 1 Coimbra Hospital and University Center – Obstetrics Department
2 Coimbra Hospital and University Center – Internal Medicine Department Portugal

CONTENT

INTRODUCTION: Ovarian hyperstimulation syndrome is commonly known as an iatrogenic consequence of ovulation induction. However it may be seldom associated with spontaneous ovulatory cycles and natural conception, with few cases reported in literature. The underlying mechanisms and classification were proposed by De Leener et al. Diagnosis and management during pregnancy is even more challenging due to its rarity as well as its potential severe clinical manifestations: large ovarian masses, ascites, dyspnea or thromboembolism. Awareness of this disorder is helpful to avoid overtreatment and potential unnecessary fetal harm.

MATERIAL AND METHODS: Case report description.

RESULTS: 22 years old woman presented to the emergency department complaining about progressive asthenia and lower abdominal pain for two weeks. Background: without medication (levothyroxine auto-suspension three years ago) or birth control method, G1/P1, previous high risk pregnancy – overt autoimmune hypothyroidism controlled with levothyroxine, urosepsis with J-J stent and ICU admission at 2nd trimester. With a spontaneous term labor she uneventfully delivered a girl presently three years old with normal development. At emergency room menstrual
delay and abdominal distention were verified and intrauterine viable pregnancy with 11w 6/7d was diagnosed. During ultrasound evaluation ascites and bilateral ovarian multilocular cystic tumors (18 and 16 cm large) were present. Differential diagnosis between ovarian malignancy, trophoblast disease and spontaneous ovarian hyperstimulation syndrome (sOHSS) was debated. First trimester routine analysis were normal except TSH 515 (0.4 - 4.0 uUI/mL) and immeasurable FT4. Ca125 was 1045 (<27 ng/mL) CEA and alpha fetoprotein were negative and B-HCG in the expected normal range (93753 ng/dL). Simple rules were inconclusive but Adnex Model results revealed high chance of benign tumors. Conservative management was proposed, focused on sOHSS, with pregnant agreement and consent. Therapeutic trial with levothyroxine 100 µg daily was initiated and first trimester screening offered. Two weeks later, follow-up revealed a consistent improvement in laboratory evaluation and a reduction of almost 50% in the ovarian volume. At 14w the couple requested medical pregnancy termination, based on a likely fetal neurodevelopment commitment due to such an early and severe hypothyroidism, which was accepted by a multi-disciplinary committee.

CONCLUSIONS: The present case highlights the importance of considering sOHSS in the bilateral multicystic ovarian tumors management, avoiding unnecessary resections in order to rule-out malignancy, especially during pregnancy. This woman recognized the importance of therapeutic compliance for the purpose of control her hypothyroidism as well as an effective contraceptive counselling and the need of preconception care.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 170

TITLE: THE CONCENTRATIONS OF PLACENTAL GROWTH FACTOR PLGF AND ENDOGLIN ENG IN PREGNANCY COMPPLICATED BY PRE-ECLAMPSIA.

AUTHORS: D. Darmochwal-Kolarz 1, A. Chara 2

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, University of Rzeszow, Rzeszow, Poland
2 Department of Obstetrics and Perinatology, Medical University of Lublin, Lublin, Poland

CONTENT

Background: Pre-eclampsia complicates about 5-10% of pregnancies and there is one of the most important causes of maternal and fetal/neonatal morbidity and mortality. Pre-eclampsia is the main cause of intrauterine growth retardation (IUGR), intrauterine death, premature deliveries and iatrogenic prematurity.

Objective: The aim of the study was to assess the role of Placental Growth Factor PLGF and soluble form of Endoglin sENG in the group of patients with pre-eclampsia and healthy pregnant women.

Methods: The sera concentrations of PLGF and sENG were measured with the use of immune-enzymatic method. The study included 33 patients with pre-eclampsia and 44 healthy women in I, II and III trimesters of uncomplicated pregnancy.

Results: The concentrations of PLGF were significantly lower in the group of patients with pre-eclampsia when compared to healthy pregnant women (median: 3.3 pg/ml vs. 19.8 pg/ml, p<0.001). There were positive correlation between the concentration of PLGF and week of pregnancy when blood was drawn (R=0.8). Furthermore, in the group of patients with pre-eclampsia there were positive correlation between the concentrations of PLGF and the level of serum protein (R=0.47) and the negative correlation between
PLGF and systolic pressure (R=-0.37). Moreover, in the group of patients with pre-eclampsia the concentrations of sENG were significantly higher when compared to healthy pregnant women (median: 11.47 ng/ml vs. 6.13 ng/ml, p<0.001). In the group of patients with pre-eclampsia there were negative correlation between the concentrations of sENG and prothrombin time (R=-0.41) as well as between the concentrations of sENG and the concentrations of PLGF (R=-0.21). In the group of healthy pregnant women there was a negative correlation between the concentrations of sENG and the week of pregnancy when the blood was drawn (R=-0.41).

Conclusions: In pregnancy complicated by pre-eclampsia the concentrations of PLGF were significantly lower and the concentrations of sENG were significantly higher when compared to normal pregnancy. It suggest the impaired process of the vascular formation in pre-eclamptic placenta. Moreover, the PLGF/sENG ratio was significantly higher in pre-eclampsia when compared to control group. The correlations between PLGF/sENG ratio and the indicators of disease severity were more profound when compared to correlations of single angiogenic factors and indicators of the disease. It suggest the potential usefulness of the PLGF/sENG ratio in the monitoring of the disease severity.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 187

TITLE: RECURRENT MULTI-DRUG-RESISTANT TUBERCULOSIS WITH UNILATERAL DESTROYED LUNG IN PREGNANCY: A CASE REPORT

AUTHORS: Is Febriana 1 ; As Putri 2 ; S Pudyastuti3

AFFILIATIONS: 1 Department of Obstetrics and Gynaecology, Universitas Indonesia – Cipto Mangunkusumo Hospital, Jakarta, Indonesia
2 MSc candidate, Institute of Women’s Health, University College London, United Kingdom
3 Persahabatan National Pulmonary Hospital, Jakarta, Indonesia

CONTENT

Introduction
Multi-drug resistant tuberculosis (MDR-TB) is defined as tuberculosis infection resistant to at least rifampicin and isoniazid. Indonesia, with approximately 6,800 new cases every year, is one of the 27 MDR-TB high burden countries worldwide.1 13% of MDR-TB cases in Indonesia have been received previous TB treatment.2 As much as 1,860 patients were confirmed MDR-TB in Indonesia.3 MDR-TB affects young adults, including child-bearing age women.4 We report a case of a 24 year old primigavida, diagnosed with unilateral destroyed lung due to MDR-TB in pregnancy at 32 weeks of gestational age (wga).

Case presentation
A 26-year-old primigravida at 32 wga presenting with progressive dyspnea (12 hours) was admitted. Other symptoms were chest pain, productive cough, fever, and swollen extremities. She had history of TB-MDR and completed her treatment 6 months prior to admission and now in long term oxygen therapy. She was consulted to Ob-Gyn due to contraction (4 hours) without any vaginal discharge.
On admission, she was fully conscious, blood pressure was 99/65 mmHg, heart rate was 100 /min, temperature was 37.5 °C, respiratory rate was 26 /min, and oxygen saturation was 83% at room air and was 98% at 4 lpm by nasal cannula. She weighed 35 kg and her height was 150 cm (body mass index = 15.5 kg/m2). Pale conjunctiva and enlarged bilateral submandibular lymph node were positive. Thorax examination revealed collapsed left hemithorax, decreased left vesicular sound, bilateral ronchi, and swollen extremities. Fundal height was 23 cm, cephalic presentation, fetal heart rate at 148 /min. Contraction was observed four times every 10 minutes for 40 seconds. Cardiotocography result was category 1. Ultrasound revealed EFW 1703 gr, BPD 82, HC 287, AC 276, FL 61, showing accordance to 32-33 wga with reduced amniotic volume ICA 8.5, SDAU 2.8, PI 1.08, MCA PI 1.52, CRP >1. Blood test revealed microcytic hypochromic anemia with Hb of 7.8 g/dl, hypoalbuminemia (2.4 g/dl), and hyponatremia (mEq/L). Chest x-ray showed collapsed left lung with pleural line (figure 1). Sputum test revealed resistance to rifampicin. Treatments given were daily intravenous fluid, parenteral nutrition, 4 course of dexamethasone for fetal lung maturation, intravenous ampicillin- sulbactam, oral treatments of albumin, folic acid, calcium, cholecalciferol, ferrous sulphate, sodium chloride, vitamin B complex. She received blood transfusion with Hb target of 11 g/dl. 3 days later she delivered spontaneously after preterm premature rupture of membrane, with baby weighing 1700 gr (centile 10th – 50th, Intergrowth chart), Apgar score of 7 and 8, and clear but reduced amniotic fluid. The baby was admitted to NICU with CPAP PEEP 7, FiO2 21% and saturation of 97%

Discussion
Patient’s history of MDR-TB was the origin of her left destroyed lung, which further complicated her pregnancy. Destroyed lung often leads to chronic hypoxia, whose main effect is intrauterine growth restriction (IUGR). Patient’s saturation in air room was only 83%, therefore she was given long-term oxygen therapy. Albeit reduced amniotic fluid, fetal ultrasound still showed normal growth and activity. This shows that oxygen therapy might be beneficial to prevent further sequelae of fetal hypoxia. While patient also had anemia of chronic disease as another risk factor of fetal hypoxia,
it is known for less deleterious effect for the fetal since higher oxygen affinity of fetal haemoglobin will be compensatory. Fetus is also able to increase cardiac output to increase transplacental oxygen transfer by interfering with the iron metabolism of the mother.11

Aside from maintaining adequate oxygen, decision about whether to conserve or terminate the pregnancy in this case was also challenging. The decision case should be based on IUGR management approach. Once small fetus is identified, measurement of UtA PI, UA PI, MCA PI, and CPR should be performed to distinguish SGA and IUGR, as well as to classify the stage of growth restriction. In this case, reduced amnion fluid could be the sign of mild placental insufficiency, which fall into first stage of IUGR. Monitoring should be performed weekly and labor induction should be offered at 37 wga.13 However, patient had preterm premature rupture of membrane and had preterm birth.

Conclusion
Aside from frequent monitoring, oxygen therapy might benefit the chronic hypoxia condition in gestational destroyed lung due to previous MDR-TB infection.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 190

TITLE: IMPACT OF CYTOKINE THERAPY DURING PREGNANCY ON PROGRESSION CERVICAL DYSPLASIA

AUTHORS: Yu. Dobrokhotova1, E. Borovkova1, S. Zalesskaya1, I. Stepanyants2

AFFILIATIONS: 1. N.I. Pirogov RNRMU HPE SEI, Therapeutical Faculty, Obstetrics and Gynecology Department, Moscow, Russia
2. CCH No. 40, Maternity Hospital, Moscow, Russia

CONTENT

Objective: Development of new approaches to cervical dysplasia treatment with pregnant women by correcting the innate immunity factors expression.

Materials and methods: Main group - 30 patients with cervical dysplasia (43.33% - LSIL, 56.67% - HSIL), comparison group - 11 patients without cervical disorders. The age of the main group patients was 31.6 ± 1.7 years, of the comparison group - 31.9 ± 2.2 years. Using the real-time PCR technique, expression of the innate immunity factors (TNFa, TLR9, TLR2, HBD-1) in the cervical canal epithelium and in the vagina was studied. HPV titer was defined by the DEGENE-test.

Results: Against the background of cytokine therapy, a decrease in viral load by 1.2 times for the A9 HPV group and by 1.8 times for the A7 HPV group was detected. A 2-fold increase in the TNFa expression and 10-fold HBD-1, TLR-9 and TLR-2 expression in the cervical canal were observed. TLR-9 level increased by 5.3 times in the vagina epithelium.

Conclusion: We confirmed that in 100% of cases regarding the cervical dysplasia the oncogenic type human papilloma virus was detected primarily of the A9 group (16, 31, 33, 35, 52 and 58 types) and in titer exceeding 3.5 DNA Lg per 105 cells. Innate immunity factors expression with pregnant women having cervical dysplasia differs from normal indicators.
and reflects intensity of antiviral protection factors both in the cervical canal epithelium and in the vagina. For most of the studied indicators, significant excess in the gene expression initial level was revealed. Against the background of therapy using Superlymph, in all samples (cervical canal and vagina) and regardless of dysplasia severity, an increase was noted in those genes expression that were responsible for viral DNA identification and cytokine production. During therapy and facing an increase in the genes expression regarding local immunity factors, decrease in viral load and improvement in the results of cytological studies were observed. Gradual decrease in viral load was revealed with 90% of patients: decrease by 1.2 times for A9 group HPV (16, 31, 33, 35, 52 and 58 types) and by 1.8 times for A7 group HPV (18, 39, 45, 59 and 68 types). After finishing the therapy, 29.63% of cases showed positive trend in the fluid cytology results followed by entire normalization with 7.4% of pregnant women. Against the background of cervical canal epithelium therapy, a 2-fold increase in the tumor necrosis factor gene expression was observed with women having cervical dysplasia; antimicrobial HBD-1 gene amount and TLR9 and TLR2 gene identification receptor expression increased by 10 or more times, which led to decreasing the HPV titer. In the vagina epithelium during treatment, the HBD-1 gene expression increased regardless of the viral titer. Evident increase in the TNFα gene expression was observed compared with that in the cervical canal; and it was not depending on the viral load dynamics.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 193

TITLE: FEASIBILITY OF POSTNATAL DEPRESSION EMAIL SCREENING, IN BRETON MOTHERS, BASED ON FRENCH VERSION OF EDINBURGH POSTNATAL DEPRESSION SCALE, 4 WEEKS AFTER DELIVERY

AUTHORS: C. Cornec 1; B. Pan-Petesch 2; A. Moal 3; C. Bertevas 4; F. Falchier 5; J. Hannigsberg 6; G. Drugmanne 7; F. Gatineau 8; C. Nicolas 9; Mc. Geraud-Welby 10; C. De Moreuil 11; K. Lacut 12; E. Le Moigne 13

AFFILIATIONS: 1 Department of Obstetrics and Gynaecology, University Hospital of Brest, Brest, France
2 Department of Hematology, University Hospital of Brest, Brest, France
3 Midwifery School of Brest, University Hospital of Brest, Brest, France
4 Department of Obstetrics and Gynaecology, University Hospital of Brest, Brest, France
5 Department of Obstetrics and Gynaecology, University Hospital of Brest, Brest, France
6 Department of Obstetrics and Gynaecology, University Hospital of Brest, Brest, France
7 INSERM CIC 1412, University Hospital of Brest, Brest, France
8 INSERM CIC 1412, University Hospital of Brest, Brest, France
9 INSERM CIC 1412, University Hospital of Brest, Brest, France
10 Department of Psychiatry, University Hospital of Brest, Brest, France
11 Department of Internal Medicine and Pneumology, University Hospital of Brest, Brest, France
12 Department of Internal Medicine and Pneumology, University Hospital of Brest, Brest, France
13 Department of Internal Medicine and Pneumology, University Hospital of Brest, Brest, France

CONTENT

Postnatal depression is the most common psychiatric disorder in mothers of newborns (from 3 to 25%), may lead to attachment difficulties and can
Impair children development. Diagnosis and treatment of this disorder are therefore crucial for obstetric healthcare providers. We attempted to assess email screening feasibility in order to improve detection, to establish postnatal depression rate among mothers of newborns and to identify depression risk factors.

From November 2017 to January 2018, we conducted a prospective observational study, nested in the cohort of HEMOTHEPP study (Haemorrhage and postpartum Thrombosis): this prospective multicentre study records data of mothers who gave birth in one of the 6 maternity wards of one county of Brittany, France. We enrolled all mothers for whom an email address was available. French version of Edinburgh Postnatal Depression Scale (EPDS) questionnaire was emailed 4 weeks after birth. A threshold ≥ 11 in the French version of EPDS was used to identify postnatal depression, and a threshold ≥ 12 defined severe postnatal depression. 931 emails were available (47.5% of total births of the period) and we received 283 usable replies (30.4% of sendings). Postnatal depression was detected in 17.3% of mothers [12.91-21.72; 95% CI] and severe postnatal depression in 10.9%. The average EPDS score was 6.4 (SD ± 4.7). Caesarean section and more exactly emergency caesarean section was significantly associated with an increased risk of postnatal depression (18.4% of postnatal depression vs 8.5%) (p=0.044) (OR 2.41) [1.02-5.67; 95% CI]. Finally, postnatal depression was more frequent, although not significantly, in mothers who had suffered from postpartum haemorrhage.

Email screening of postnatal depression using EPDS appeared to be feasible and could be a good option in current medical practice to detect women who may benefit from specific management.

For daily practice sending and replying could be improved by automatic emailing, in order to be less time-consuming, and interactive questionnaire to avoid misprints and to incite answers. The 17% of postnatal depression should alert obstetric healthcare providers.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 225

TITLE: PREGNANCY IN RENAL TRANSPLANT PATIENT - CASE REPORT

AUTHORS: D. Natalic; V. Miketic; A. Haliti

AFFILIATIONS: Department of Gynecology and Obstetrics, Clinical Centre of Montenegro, Podgorica

CONTENT

Pregnancy after transplantation is considered a high-risk pregnancy and should be monitored by both an obstetrician and the nephrologist (transplant physician). The risks are infection, proteinuria, anaemia, arterial hypertension and acute rejection for the mother, and prematurity and low birth weight for the foetus. Pregnant women and transplanted patients are at increased risk of infections (bacterial urinary tract infections and acute pyelonephritis of the graft), also in about 30% developing hypertensive disorders. Acute rejection episodes are uncommon but may occur after delivery.

Case report: We described a case of pregnancy in a young woman, renal transplant recipient, 2 years after transplantation. The pregnancy was complicated with hypertensive disorder, intrauterine growth restriction and glucosae intolerance, with close surveillance and chekups provided by a perinatologist and nephrologist according to guidelines for renal transplant recipient pregnancy. Cesarean section was performed at 34+5, alive female newborn 1830g delivered, Apgar score 5/5, transferred to NICU, with good postnatal course. The mother discharged the 5th postoperative day, in good condition.
BACKGROUND: Sickle cell disease (SCD) is the commonest single gene defect in the world. It is defined as an autosomal recessive haemoglobinopathy that includes sickle cell HbSS disease and various compound heterozygous genotypes [e.g. sickle cell HbSC disease or sickle cell β-thalassemia disease (HbSβ-thal)] characterized by chronic hemolytic anemia and vaso-occlusive complications. A recent systematic review meta-analysis has shown a strong association between SCD and adverse perinatal outcomes including stillbirth, pre-eclampsia, small for gestational age infants and preterm delivery. These manifestations could be as a result of abnormal placentation, which may result in reduced levels of first trimester pregnancy-associated plasma protein A (PAPP-A). However, there are no reported studies that examined the association of SCD and first trimester PAPP-A levels.

OBJECTIVE: The objective of this study is to investigate whether PAPP-A differs in pregnancies of women with SCD compared to pregnancies in women without SCD.
Methods: In each pregnancy the measured levels of PAPP-A were converted to multiple of the median (MoM) values corrected for gestational age and maternal characteristics. Median PAPP-A MoM in 101 pregnancies of women with SCD was compared to that in 1010 healthy controls.

Results: In pregnancies affected by SCD the median PAPP-A MoM levels were significantly lower compared to non-SCD pregnancies (0.72, 95% confidence interval 0.64-0.93 versus 1.09, 95% confidence interval 1.05-1.13; p<0.001). Within SCD pregnancies, PAPP-A MoM was significantly lower for genotype HbSS (median 0.62; p<0.001 compared to non-SCD pregnancies) than for HbSC pregnancies (median 0.94, p=0.21 compared to non-SCD pregnancies). Median PAPP-A MoM was significantly lower for HbSS compared to HbSC pregnancies (p=0.006).

Conclusion: Pregnancies with SCD have significantly lower PAPP-A MoM values compared to healthy controls. When stratifying by SCD genotype, pregnancies with HbSS have significantly lower PAPP-A MoM values than pregnancies with HbSC.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 252

TITLE: PERINATAL AND MATERNAL OUTCOME IN PREGNANT WOMEN WITH HISTORY OF CEREBRAL VENOUS THROMBOSIS (CVT):

AUTHORS: B. Grand (1,2), M.M. González Alcántara (1,2), J. Orti, G Voto (1,2), L. Voto (1,2).

AFFILIATIONS: Department of Maternal and Fetal Medicine. Hospital Juan A. Fernandez1. School of Medicine, University of Buenos Aires. Argentina2.

CONTENT

Introduction: The cerebral venous system is an unusual site of thrombosis with high incidence in young adults and is more common in women. There is few information about the rate of recurrence in next pregnancy, together with maternal and perinatal outcome.

Objectives: to describe the rate venous thrombosis recurrence, maternal and perinatal outcome in women with history of CVT. Period 2010-2018.

Material and Methods: 8 pregnancies (pg) in 4 patients were retrospectively evaluated: 1- Acute CVT: 1 pg developed an acute CVT in the context of a Catastrophic Antiphospholipid Syndrome (CAPS) that ended in early abortion. 2- 4 patients with previous CVT get a total of 7 new pg: 2 in the patient with CAPS, other 2 women have 2 new pg each one, and 1 woman 1 pg. Treatment: 3 pregnancies with full oral anti-vitamin K anticoagulants (AVK) switch to full dose anticoagulation (1mg/kg twice daily of enoxaparin) and 5 started prophylactic dose of enoxaparin (40 or 60/mg daily). All patients received 6 weeks of enoxaparin postpartum and those with long term anticoagulation restarted AVK.

Results: 1 early abortion in the patient with CAPS during the acute episode. There was no recurrence of either CVT or other VTE in women with previous CVT treated with prophylactic doses of enoxaparin or full dose in those women with indication of long-term anticoagulation. There were no
complications in the newborn. One patient developed preeclampsia. One pregnancy is ongoing. Hereditary thrombophilia tests were negative, and two patients have positive lupus anticoagulant (1 was the CAPS).

Conclusions: Our group of pregnant women with history of CVT did not develop recurrence either of CVT or other VTE. They all received strict prevention of VTE with either prophylactic or full dose of enoxaparin. There were no hemorrhagic complications. In our experience the prognosis of women with previous CVT is favorable in next pregnancy with early indication of VTE prophylaxis during whole pregnancy and puerperium.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 256

TITLE: PREVENTION OF VENOUS THROMBOEMBOLISM IN PREGNANT PATIENTS WITH HISTORY OF VENOUS THROMBOEMBOLIC DISEASE

AUTHORS: B. Grand (1,2), M.M. González Alcántara (1,2), J. Orti, L. Voto (1,2).

AFFILIATIONS: Department of Maternal and Fetal Medicine. Hospital Juan A. Fernandez1. School of Medicine, University of Buenos Aires. Argentina2.

CONTENT

Background: The prevention and management of venous thromboembolic disease (VTE) in pregnant patients lacks high quality data. Prevention strategies are extrapolated from non-pregnant women. A history of previous VTE is an important risk factor of recurrence in a next pregnancy, despite this we do not have yet an optimal prophylactic strategy. When to start, the duration, the dose and the selection of patients are issues that lack of good quality evidence.

Objectives: To evaluate VTE prevention during next pregnancy in a retrospective cohort of women with previous history of VTE.

Material and Methods: A total of 22 women with 24 pregnancies (pg) were included. Mean age: 34 (range 15-44).

Characteristics of previous VTE: 1. Out of pregnancy 8/22 of them 6/22 were under oral contraceptives (OC) and 2/22 under the presence of risk factors: bacterial endocarditis and trauma with paraplegia. 2. During pregnancy and puerperium:14/22, only one women had an upper limb venous thrombosis developed after a trauma (temporary risk factor).

Low molecular weight heparin (LMWH) regimens with enoxaparin were divided in two groups: a). Prophylactic dose: 40 and/or 60 mg/daily subcutaneous and b). Higher dose 1 mg/kg twice daily in 4 pg who were on chronic anticoagulation with anti-vitamin K anticoagulants (AVK). These patients were switch to enoxaparin during pg. A patient with history of
catastrophic antiphospholipid syndrome use AVK during the second trimester and a patient with an antiphospholipid syndrome (APS) lowers the dose to 60 mg/day because of menorrhagia and the need to add aspirin because a high risk of preeclampsia.

Duration: Patients with history of VTE unprovoked, related to OC or in pregnancy without provoked factors, received ante and postpartum prophylaxis. The only women with provoked VTE received only during the puerperium. All patients were indicated to continue prophylaxis for 6 weeks, with incomplete adherence.

Results: There was only one recurrence in a woman with the APS at 34 weeks. A temporary vena cava filter was introduced to this patient and taken satisfactory one week after the cesarean section. There were no major bleeding complications.

Conclusions: Our results suggest that the use of prophylaxis with LMWH enoxaparin during the ante and postpartum and/or only in the postpartum period in women with previous venous thromboembolism, results in a low rate of recurrence. We admit there can be a bias during the puerperium due to miss follow-up and adherence in some patients.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 268

TITLE: MATERNAL THROMBOPHILIA - A POSSIBLE RISK FACTOR FOR FETAL CEREBRAL HEMORRHAGE?

AUTHORS: M.L. Ognean1,2, C.L. Zgârcea2, R.E. Iosifescu2, O. Boantă2, R. Chicea1,3

AFFILIATIONS: 1Faculty of Medicine, University Lucian Blaga, Sibiu,
2Neonatology Dept., Clinical County Emergency Hospital Sibiu, Romania
3Obstetrics and Gynecology Dept., Clinical County Emergency Hospital Sibiu, Romania

CONTENT

The impact of maternal thrombophilia, both for the mother and the fetus, is controversial. Early during pregnancy thrombophilia may cause abortions while placental vascular abnormalities may induce problems towards the end of the pregnancy (fetal loss, preeclampsia, placental abruption, intrauterine fetal retardation). Perinatal intraventricular hemorrhages and cerebral vascular stroke were observed in the latest years in newborns delivered after pregnancies complicated by thrombophilia, and hemorrhagic and ischemic events were seen in the absence of a predisposing or causal context and without symptoms during neonatal period. Objective: Given these observations, the authors wanted to evaluate the incidence of this type of perinatal pathology using ultrasonography screening of the newborns from mothers with thrombophilia.

Methods: Cerebral and renal ultrasonography scans were performed between January 1, 2016 and December 31, 2017 in term newborns delivered by mothers with thrombophilia admitted in the Neonatology I Dept. of the Clinical County Emergency Hospital Sibiu. Data were collected
prospectively for neonates and maternal data were retrieved from the hospital charts.

Results: 232 newborns delivered by mothers diagnosed with thrombophilia (gestational ages 37-40 weeks, birth weight 2620-3860 g) were evaluated through cerebral and renal ultrasound scans during the study period (prevalence of 3.96% of all the 5853 deliveries during the study period; 91 cases in 2016, 3.23%, 141 cases in 2017, 4.64%). 17 of the 232 newborns had abnormalities on the sonographic screening: 16 on the head ultrasonography and 1 on the renal scan (right hypoplastic kidney - with possible vascular pathogenesis). 7 of the 16 newborns with abnormal head ultrasound had intraventricular hemorrhages, choroid plexus cysts being observed in the other 9 cases (maximum size 3 mm). Intraventricular hemorrhages were all minor - 4 grade I, limited to the germinal matrix and 3 grade I/II, extended in the lateral ventricle but without ventricular dilatation). In all the cases the sonographic aspect was typical for old hemorrhage, with antenatal onset. All neonates with abnormal cerebral scans were delivered by Cesarean section, only in 3 cases the surgical delivery being performed after labor onset. No correlation was observed between the severity of the cerebral hemorrhage and the maternal thrombophilia type (minor/major). None of the neonates with intraventricular hemorrhage identified during screening presented symptoms suggestive for cerebral hemorrhage during hospitalization, all had an uneventful adaptation to the extrauterine life.

Conclusions: The results of the postnatal cerebral and renal sonographic screening of the newborns delivered from pregnancies complicated with thrombophilia are raising more questions: are these abnormalities related to maternal thrombophilia?, if maternal thrombophilia is a hereditary one can this be the reason of the hemorrhages identified postnataally, is a more careful antenatal sonographic evaluation more cost-efficient than the postnatal screening?, which is the long term impact of these cerebral hemorrhages and if these neonates can be classified as at risk for developmental and neurological abnormalities?

Key words: maternal thrombophilia, pregnancy, newborn, prenatal ultrasound, head ultrasound, intraventricular hemorrhage.
Background
The proper glycemic control a maternal diabetes reduce the incidence of neonatal complications. The worsening maternal condition due to diabetes increase the risk of preterm delivery and complication.

Objectives
The aim of our study was to evaluate the morbidity of neonates of diabetic mothers. Were evaluates neonates from diabetic mothers tat antedates the pregnancy and mother with gestational diabetes mellitus.

Methods
We performed a retrospective cohort analysis of neonates admitted in our 3rd level Cluj -Napoca County Emergency Hospital unit between 2013 and 2017 and had mothers with history of diabetes during the pregnancy. We evaluated the complications that associated the neonates with positive history. At each neonates enrolled in the study the blood glucose level, hematocrit level, calcium level and bilirubin level was checked. The incidence of other complication like respiratory distress, congenital anomalies, macrosomia, renal anomalies and myocardial problems were quantified.

Results
In the study were enrolled 78 neonates, more males(57.69%) than females (42.31%). The main part of the study group was exposed to gestational
diabetes (75.64%). The most often morbidity of the study cohort was macrosomia (55 cases). At 14 (17.91%) cases we found congenital malformations and 13 (16.67%) cases presented hypoglycemia. At 29 (37.18%) cases we had preterm birth.

Conclusion
In our study the neonates were exposed to gestational diabetes of mothers. In the study period were more male affected than females. The most often complication was the macrosomia, hypoglycemia and congenital malformations.
BACKGROUND: Preeclampsia is still an urgent problem of modern obstetrics. In our country it is in second place of maternal mortality causes. Most of pregnant women who have had this disease develop chronic kidney pathology, endocrine disorders, and hypertension. At present time, new stages of the pathophysiology of endothelial dysfunction in preeclampsia are described and the brightest markers of its development are highlighted. Protein sFlt1 has been proposed as a possible factor that damages the endothelium in preeclampsia.

The aim of the study was to determine the role of the sFlt1 protein as a diagnostic marker of preeclampsia.

MATERIAL AND METHODS: We studied the concentration of angiogenic soluble factor (sFlt1) in 88 pregnant. All patients were divided into three groups. The first group consists of 27(31%) women with a physiological pregnancy. The second group consists of 29 (33%) women with mild preeclampsia. The third group 32(36%) women with severe preeclampsia. The mean age of patients ranged from 19-37 years. (29,13 ± 0,83) All patients in the hospital underwent additional examination, which consisted of ultrasound (abdominal access), Dopplerometry of uterus and fetus vessels, cardiotocographic examination of the fetus, etc. An enzyme immunoassay method was performed to quantify angiogenic factor (sFlt1) protein, in plasma.

RESULTS: During physiological pregnancy, the content of the angiogenic factor soluble sFlt1 was 0.16 ± 1.2 ng / ml, with preeclampsia there was a
significant increase in the concentration of soluble sFlt1 - 1.52 ± 3.4 ng / ml with mild preeclampsia, 8.59 ± 4.8 ng / ml with severe preeclampsia. Significant changes in the concentration of angiogenesis factor were detected in pregnant women with preeclampsia of varying severity. With the increase in the severity of preeclampsia, the concentration of the sFlt1 protein increases to 8.59 ± 4.8 ng / ml in severe preeclampsia. In pregnant women with severe preeclampsia, in parallel with the rise of blood pressure and an increase in proteinuria, the concentration of sFlt1 protein in the blood increases steadily.

Conclusions: The results of the study suggest that in the third trimester in pregnant women with a physiological course of pregnancy, as well as with preeclampsia of varying severity, there are changes in the level of angiogenesis factor. During the physiological course of pregnancy in the third trimester, a regular decrease in the activity of the angiogenesis factor occurs, since the sFlt1 protein is an inhibitor of angiogenic factors, the synthesis of which is inhibited.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 295

TITLE: HEPATIC DISEASES IN PREGNANCY – OVERLAPPING DIAGNOSIS

AUTHORS: C. Carneiro 1, S. Bernardes da Cunha 1, M. Martins 1, S. Leitão 1, T. Teles 1

AFFILIATIONS: 1 – Centro Hospitalar entre Douro e Vouga, E.P.E. Santa Maria da Feira, Portugal

CONTENT

Background
Pruritus in pregnancy presuppose a clinical and analytic evaluation in order to rule out hepatobiliary diseases or liver diseases specific to pregnancy. Intra-hepatic cholestasis of pregnancy is typically associated with elevated biliar acides and, sometimes, with another abnormal liver tests. Although, this is a diagnosis of exclusion, the clinical approach involves an evaluation of other hepatic diseases possible responsible for this changes and can be overlapped with other illness.

Objective
Review the management of pregnancy complicated by liver diseases

Methods
Retrospective review of a clinical case

Results
39 years, primiparous, no relevant personal or family history, begins a clinical condition of generalized pruritus at 17 weeks of pregnancy, refractory to hydroxyzine treatment, associated with right flank and iliac fossa pain. In emergency room, despite analgesic therapy, maintained pain, without fever, vomiting or diarrhea.
Analytically, there was a small increase in transaminases and bile acids, with normal hemogram, renal function and coagulation study. Viral markers were negative. In abdominal ultrasound, accidental finding of four solid,
vascularized hepatic nodules with exophytic growth, raising the hypothesis of adenomas or hemangiomas. In this context, MRN was requested that confirmed the existence of the nodules and suggested the diagnosis of focal nodular hyperplasia.

Multidisciplinary clinical evaluation decided to maintain clinical and laboratory surveillance with reevaluation on postpartum.

Pregnancy surveillance with no intercurrences. Although, pregnant developed clinical worsening of pruritus, with stable bile acids and hepatic function markers.

In view of the clinical picture, the diagnostic hypothesis of intra hepatic cholestasis of pregnancy associated with hepatic macronodules was proposed.

Induction of labor was scheduled to 37 weeks of pregnancy with a c-section performed because of a not reassuring fetal intrapartum state. The newborn weighed 2710g and the Apgar score was 9/10/10.

In the postpartum, progressive resolution of the pruritus. Liver biopsy and RMN with contrast were performed and suggested the diagnosis of hepatic adenomas with indication to ultrasound surveillance.

Conclusion

Intrahepatic cholestasis of pregnancy is an exclusion diagnosis in women presenting with pruritus. Taking into account the exuberance of clinical presentation, the clinical approach to this woman included an ultrasound abdomen evaluation to exclude compressive masses or hepatobiliary disease. In this clinical case we show the importance of differential diagnosis and multidisciplinary evaluation to improve the diagnosis accuracy and follow up during pregnancy. Multidisciplinary evaluation allowed to correct diagnosis and treatment, optimizing maternal and neonatal outcomes.
TOPIC: MATERNAL DISEASES

ABSTRACT ID: 321

TITLE: A CASE OF RETIFORM PURPURA IN PREGNANCY

AUTHORS: D.Pahiraja 1
         K. King 2
         S. Blake

AFFILIATIONS: St George Hospital
              Kogarah , NSW
              Australia

CONTENT
Retiform purpura (RP) are branching, non-blanching haemorrhagic skin lesions which result from intradermal extravasation of erythrocytes as a consequence of complete cutaneous vascular occlusion.

A 34-year-old para two female presented at 29 weeks gestation with a four-week history of erythema overlying the right triceps brachii, which progressed to become a large area of violaceous tissue. She had developed similar skin changes to the superior right pinna and had previously noted left pinna discolouration that resolved. She also demonstrated early purpuric skin changes to left upper limb. She had no history of recurrent miscarriages or thromboembolic events. On examination, her blood pressure was not elevated and CTG was reassuring. A large, tender eschar was noted on the extensor surface of the right upper limb with similar changes on right pinna and mild erythema of left triceps area.

Investigations showed raised anticardiolipin IgM (29.0 MPL unit/mL) slightly low protein S. A skin biopsy showed thrombotic microangiopathy with fibrin deposition without vasculitis. Her haemoglobin, platelets and renal function were stable. Blood film showed no evidence of microangiopathic haemolysis. Cryoglobulins, cryofibrinogens and cold agglutinin screen were
negative. Beta-glycoprotein, lupus anticoagulant and double-stranded DNA were not elevated and she had normal complement levels. An obstetric ultrasound showed no evidence of placental insufficiency. The cause of RP was unclear. The only positive finding was anticardiolipin antibodies of IgM subtype with borderline low protein S consistent with pregnancy. Given that her underlying pathology was thrombotic in nature she was commenced on therapeutic enoxaparin and aspirin.

On review at 36 weeks gestation, she had no further thrombotic episodes and her skin lesions were improving. At 37 weeks gestation, she presented with spontaneous rupture of membranes and progressed to 9cm, however underwent an emergency caesarean section for a pathological cardiotocograph. Following an uneventful postoperative period, she was discharged home on six weeks of therapeutic-dose enoxaparin.

Determining the underlying aetiology of RP is challenging. RP in pregnancy can be associated with thrombotic disorders such as antiphospholipid syndrome, thrombotic microangiopathy, preeclampsia/HELLP syndrome, disseminated intravascular coagulation, protein C/S deficiency, and cryoglobulinaemia.

Prompt recognition of RP in pregnancy and early multidisciplinary management is crucial as these conditions can have multi-organ involvement, have long-term therapeutic implications and may influence obstetric outcomes. A team-based approach assists in timely investigation and tailoring appropriate management including anticoagulant choice, condition-specific therapies such as plasmapheresis, wound care, and obstetric surveillance and management.
TOPIC: MATERNAL HEMODINAMICS

ABSTRACT ID: 191

TITLE: STRUCTURAL AND FUNCTIONAL STATE OF HEMOGLOBIN DURING PREECLAMPSIA USING RAMANS SPECTROSCOPY

AUTHORS: J. Gurbanova; F. Hajiyeva; A. Hasanova

AFFILIATIONS: Scientific Research Institute of Obstetrics and Gynecology, Baku, Azerbaijan

CONTENT

Introduction. To determine the role of structural and functional condition of hemoglobin by RAMANS spectroscopy in the progression of preeclampsia. Material and methods. There were 30 pregnant women with gestosis. They were in 3 gravity: mild-10 women (I-subgroup), moderate-10 pregnant (II subgroup) and severe-10 patients (III-I subgroup). A comparison group- 25 healthy pregnant women. They were patients of Research Institute of Institute of Obstetrics and Gynecology. The focus of the research is on the study of the structural and functional state of hemoglobin with the use of RAMAN spectroscopy. The presence of bands in the RAMAN spectrum when studying the conformation and properties of hemoglobin reflects the structural and functional state of hemoglobin, which in preeclampsia is a factor that can affect the course and outcome of pregnancy. With this method, it is possible to register the RAMAN-hemoglobin curves upon excitation with a laser of 532 nm and determine the ratio of the bands with the vibrations of the porphyrin bonds.

Results. RAMAN-spectroscopic studies revealed that in pregnant women with preeclampsia there are significant changes in the structural and functional state of hemoglobin. Thus, the ratio of the intensities of the bands characterizing the amount of oxyhemoglobin in the blood, which reflects the ability to bind oxygen, increases with increasing severity of the disease, and this indicator was 16-25% (p<0.05). The index reflecting the ability of
hemoglobin to bind ligands and, first of all, oxygen, in pregnant women with preeclampsia decreases with increasing severity of this pathology, so in pregnant women of the first subgroup it was 0.52±0.03, the second subgroup 0.43±0.03, in patients of the third subgroup 0.34±0.04. The ratio of the bands in the RAMAN spectrum, which reflects the affinity of hemoglobin for ligands, including oxygen in pregnant women with preeclampsia, is lower in comparison with this indicator in healthy pregnant women, and it decreases as the severity of preeclampsia increases by 19-36%. There is also an increase in the relative ability of hemoglobin to release ligands by 16-25% and an increase in the level of vibration of methine bridges of hemoglobin by 17-58.4% (p<0.05).

Conclusions. Pregnant women with preeclampsia notice significant changes in the structural and functional state of hemoglobin, which are associated with the severity of preeclampsia and are an aggravating factor not only for the pregnant woman, but also for the fetus. Changes in the structural and functional state of hemoglobin in preeclampsia are expressed as an increase in the relative amount of oxyhemoglobin in erythrocytes, a decrease in the relative ability of hemoglobin to bind ligands, a growth in the relative ability of hemoglobin to release ligands, reduce the affinity of hemoglobin for ligands, and increase the level of vibration of methine bridges of hemoglobin.
TOPIC: MATERNAL HEMODINAMICS

ABSTRACT ID: 234

TITLE: ACCURACY OF QUANTITATIVE BLOOD LOSS (QBL) MEASUREMENTS WHEN COMPARED TO CHANGES IN HEMOGLOBIN (HB) COUNTS AFTER DELIVERY

AUTHORS: I.A. Hoskins, MD; R.E. Berg, MD

AFFILIATIONS: Dept. of Obstetrics and Gynecology, NYU Langone Health, School of Medicine, New York, New York

CONTENT

Introduction:
The incidence of obstetric hemorrhage, which is a leading cause of preventable maternal morbidity and mortality, is steadily rising. Since reliance on changes in maternal cardiovascular stability and laboratory parameters can often provide late or misleading information, accurate assessment of the blood loss is a critical step in the management of this complication. In general, visual estimations of blood loss are inaccurate and can under or over estimate the blood loss volume by as much as 50%. Therefore, a gravimetric, weight based QBL measurement is preferred. However, this approach requires appropriately trained personnel who remain vigilant during the procedure in order to ensure accuracy.

Materials & Methods:
We retrospectively compared the QBL measurements after vaginal or Cesarean section delivery in 18,100 term, uncomplicated patients who delivered at our institution from 2014 to 2018, with changes in hemoglobin (Hb) levels that were drawn between 8 to 24 hours post partum. QBL measurements were calculated by measuring/weighing blood in all drapes, sheets, chux, towels, gowns, laps and suction cannisters. In order to ensure accuracy, amniotic fluid volumes and irrigation amounts were subtracted from the total volumes obtained. When comparing the drop in
Hb value to QBL, used 1g/dl as the measure of Hb change for every 400cc of blood loss. Chi-square analysis was used to draw statistical inferences, with a P value 0.700cc, there was only 63% correlation with Hb decrease ≥4g/dL. This was statistically significant.

Conclusion:
As the QBL increased to >700cc, its correlation with the drop in post-partum Hb value decreased significantly. A potential cause for this finding may be variability in the training and expertise of the personnel performing the assessment, especially in the stressful setting of obstetrical hemorrhage. Thus, focus on proper training in QBL measurements by using drills and simulation may help to alleviate this potential confounder and result in improved management of this obstetrical emergency.
The Aim:
We know that "Necessity is the mother of invention" It is clear that after the war of 2003, there was great deficiency of the drugs in Iraq, there was deficiency of anesthetic drugs mainly the muscles relaxant and other such as oxytosin which induce uterine contraction, so my aim was to use alternative method to save the life of many patients. This study done in the Red Crescent Hospital for Obst & Gynecology from 2004-2005 Baghdad-Iraq.

Summary:
I am writing concerning my experience of using acupuncture techniques to counteract uterine relaxation during Cesarean section, and in resuscitation of the newborn. In my series of 200 women anesthetized in the period 2004-2006, 70% were primiparous and 30% had previous uterine scars. There was an average of 60 deliveries per day at the hospital of which about 40% required Cesareans. It was more usual for women to have their babies at home as this was safer, given the dangers of crossing town, so only those at significant risk came to hospital. This explains the high rate of surgical interference.

T. C. M [traditional chine’s medicine] was used to induce uterine contraction to prevent uterine inertia during cesarean section inside of using high % of halothane [inhalation anesthetic agent ] which is recommended not to be used more 0.5% as it is well known anesthetic agent that cause uterine inertia in high dose.
200 cases [ 70 % prim, 30 % has previous scar ]
had been under go for emergency cesarean section, acupuncture used
after delivery of the baby, in 45% no need for oxytosin, 2 unit of oxytosin
needed in 35%, 2—5 unit in18%, and only 2% need more than 5 unit of
oxytosin.
Oxytosin is a medical drug which is given usually [10-30 unit] after delivery
of the baby to prevent uterine bleeding.
Technique:
General anaesthesia was induced by preoxygenation with 0.5% halothane
followed by minimal doses of all drugs: the non-depolarising muscle
relaxant pancuronium (4mg), the analgesic and dissociative anaesthetic
ketamine (100-150 mg) and the barbiturate induction agent thiopentone
(250mg). Patients were intubated and ventilated. Cricoid pressure could
not be given as no assistant was available; however no cases of acid
aspiration occurred. Blood pressure, pulse and oxygen saturation were
monitored in the usual way. The halothane concentration was increased to
3% until after delivery when it was again reduced to 0.5%.
Of the 200 women given acupuncture, uterine contraction was judged by
the surgeon to be satisfactory in 45% and there was thus no requirement for
oxytocin, 35% required 2 units, 18% had between 2 and 5 units, and 2% needed more than 5 units.
We were thus able to conserve stocks of those drugs we held in short supply
without ill effects on our patients
G.A induced by prioxgenenation + 0.5 % halothane which increased
gradually till 3%.
Ketamin [100-150 mg] + pentothal 250 mg.
Pancronium 4 mg [non depolarizing muscle relaxant]
Intubations [COET]
IPPV

Monitoring [BP,pulse, Oxymeter,
After delivery of the baby ;
Acupuncture done by needling of three acupoints in the leg on both side.
Result;
45 % need no pitosin.
35 % need only 2 unit.
18 % need 2-5 unit
2% need more than 5 unit

Advantage:
1- Good relaxation of the abdominal muscles.
2- Easy delivery of the baby because halothane increase the effect of muscle relaxant.
3- Safe without side effect on the mother and the baby.
4- Can be done easily.
5- Economic
   The number of pitosin amp dec 85%.
   Pancronium amp dec 40%.
6- Quick recovery of the patient.
7- Useful for patient with Hypertensions.

Advise
Using TCM technique to induce uterine contraction during cesarean, D&C, and after normal delivery can done easily.
Do it when author facility fail or not available.
Abstract:
A fetus affected by a congenital rubella infection can develop congenital rubella syndrome (CRS). Aniridia is the absence of iris, rarely been described in literature in association with CRS, can easily be overlooked, leading to complications e.g. glaucoma and blindness later in life. We report a case of a neonate with CRS and aniridia presenting at a tertiary care hospital.

Introduction:
The fetus acquires rubella through the course of pregnancy. The clinical significance depends on the time of the mother's acquisition of the virus. If maternal infection happens to be in the first trimester, the risk of rubella-associated defects is greatly increased. According to Pumper and Yamashiroya, between 50% and 80% of fetuses exposed to maternal rubella virus become infected prior to the 8th weeks of gestation. Infection of the fetus is fairly uncommon, during the 3rd trimester which is 6%-10%. The eyes, the ears, the heart, the central nervous system and the brain appear to be especially susceptible to rubella-associated damage [1]. Aniridia is the absence of iris, has rarely been described in literature in association with CRS. It is a rare association which can easily be overlooked, and can lead to complications e.g. glaucoma and blindness later in life. We report the
case of a neonate with CRS and aniridia presenting at a tertiary care hospital – the first of its kind reported in literature.

Case Presentation:

A female, full term neonate, weighing 2.4 kg, with symmetrical Intra uterine growth retardation (IUGR) was born to a young primigravida mother at a primary care hospital. The baby was referred to our hospital on the second day of life for management of cardiac failure secondary to Patent Ductus Arteriosus (PDA). Her antenatal course had been uneventful. The third trimester fetal ultrasound depicted IUGR. The mother had not been previously vaccinated against rubella, nor had she been investigated for antibodies against rubella during the pregnancy. She had not noticed any clinical manifestations of rubella during the pregnancy.

On clinical examination, all anthropometric measurements were below the tenth percentile. The baby was in obvious respiratory distress and required oxygen supplementation at a rate of 2 liters/minute. Her heart rate was 180 beats/minute and her blood pressure was 60/40 mm Hg. A harsh, grade 4/6 systolic murmur was heard at the left 1st intercostal space. Eye examination showed bilateral aniridia with clear media. No corneal edema was noted. Posterior segment examination showed a normal looking optic disc and retina. Intra-ocular pressure was 18 mm Hg. Anterior segment photographs were taken (fig. 1, 2). No red reflex was detected on indirect ophthalmoscopy.

The baby’s Complete Blood Count (CBC) was within normal limits. Patient’s cytogenetic work-up was negative for trisomy 13, 18 and 21; however we did not have Fluorescent In Situ Hybridization (FISH) available to check for specific micro deletions. Echocardiography showed PDA. A probable diagnosis of congenital rubella syndrome was made and serum samples of the baby and her mother were sent to check for rubella antibody titers. Her serum IgM for Rubella virus was positive; hence the diagnosis of CRS was confirmed. Appropriate treatment was initiated and the child is being followed up. Her next visit will be at the age of 6 months, when her condition will be reviewed. She will also undergo auditory examination at that time.

Conclusion

In a nutshell, besides systemic manifestation CRS also has many ocular manifestations. Iris hypoplasia has been reported repetitively in CRS cases around the world. Complete aniridia has not been reported and this is the
first such case report. Aniridia can lead to ocular complications such as glaucoma, nystagmus and photophobia. Patients with aniridia need to have regular, life-long and careful eye check-ups aimed at preventing the complications of aniridia and arresting further loss of visual acuity.
Introducing Accidental extravasation of drugs from intravenous drip into subcutaneous or perivascular space is not uncommon ranging from 10% to 30% of all intravenous therapy. Most of the time the consequences are minor, however sometimes it may cause serious complications like inflammation and necrosis.

Case Summary: P1 with previous vaginal delivery attended obstetric triage at 35+3 weeks gestation in labour with breech presentation. She was 6 cm dilated at admission and declined vaginal breech delivery hence was planned for Category 1 CS under general anaesthetic (GA). At induction the patient was awake after administration of anaesthetic agent – thiopentone sodium. The cannula was found to be tissued. A new one was sited and patient was put to sleep with repeat dose of thiopentone. The operation went well and the baby was delivered in good condition. On the recommendation of plastic surgery team, the area was washed out with normal saline and hyaluronidase at the earliest opportunity and elevated. The area was closely monitored and there were no signs of tissue ischaemia or necrosis, therefore patient was discharged home on Day 3.

Discussion: Extravasation injuries depend on the nature of drugs. They can be classified into vesicants, which cause tissue necrosis; irritants, which cause inflammation; and those with no tissue damaging properties. Thiopentone sodium is a fast-acting barbiturate that is known to have
vesicant property. It is still used commonly in obstetrics and is potentially more harmful than propofol, the most common anaesthetic agent. Early identification and limiting spread forms the key management. Conclusion: Evidence suggests that the time difference in achieving adequate anaesthesia in spinal verses general anaesthetic is only 7 - 8 minutes which has not shown to have a major bearing on the neonatal outcome. Obstetricians need to be mindful of this when requesting general anaesthetic for emergency caesarean section.
Introduction. Ovarian borderline tumours represent a controversial entity in neoplastic ovarian pathology. Histologically, they show some malignancy characters but not a destructive stromal invasion.

Objective. Ovarian tumours with low malignant potential (borderline tumours) are rare entities, with an excellent prognosis.

Material and methods. The study was conducted on 100 patients, diagnosed with ovarian tumours in “Elena Doamna” Clinical Hospital Iași between 2012 and 2017, and then divided into 3 groups according to the histopathological diagnosis: benign-50 cases, borderline-20 cases, malignant-30 cases. The patients were examined by abdominal ultrasound and morphopathological examinations. Anatomico-pathological diagnostics were established on the surgical parts processed by the paraffin inclusion technique. In the case of Ki67 and p53 markers we aimed to find immunoexpression in the nucleus of the tumour cells, while in the case of E-Cadherin, the marking in the cell membrane.

Results. The age of the patients varied between 28 and 69. For the benign tumours, the mean Ki67 was 5±3, suggests a weak positivity; for the borderline tumours, the mean Ki67 was 10±4, suggests a weak positivity, but which is still slightly higher than in the case of benign tumours; for the malignant tumours, the mean value of Ki67 was 57.9±25.1, suggesting a significantly higher mean positivity compared to the mean values recorded...
in other tumour types (p=0.001). Benign tumours did not show positive p53 immunoreaction, and from borderline tumours, only one case showed a weak positive immunoreactivity. From all malignant tumours, 23.3% showed positive immunomarking, with a moderate and intense expression, mean p53 has 65.7±17.8. It should be noted that the value of the p53 for borderline tumours was slightly lower than in the case of well-differentiated serous carcinomas, and in poorly differentiated serous carcinomas it showed statistically significant differences compared to well-differentiated malignant serous tumours (20%, 25% vs 70%; p=0.001). The E-Cadherin positivity index revealed the following aspects on tumour types (p=0.001): in benign tumours, the mean E-Cadherin was 99.5±10.7, which suggests an intense positivity of this marker; in borderline tumours, the mean value of E-Cadherin was 85.5±10.0, which suggests an intense positivity E-Cadherin, however, slightly lower than for benign tumours; in malignant tumours, the mean E-Cadherin value was 43.3±33.1, suggesting a significantly lower average positivity compared to the mean values recorded in other tumour types. The Ki67 index correlates with the increasing number of p53 positive cases from benign-borderline-malignant: benign tumours showed no p53 positivity; in borderline tumours only one case did not show Ki67 positivity, but it was p53 positive, the correlation of the parameters being indirect (r=-0.489; p=0.076); in malignant tumours the increased values of Ki67 were associated with an increased p53, the correlation being direct (r=+0.523; p=0.006). Ki67 correlates indirectly with the number of cases that are E-Cadherin positive, with smaller and smaller values from benign-borderline-malignant; in benign tumours the values for Ki67 are below 10 and are associated with values of E-Cadherin equal to 100 (r=-0.365; p=0.270); in borderline tumours the values below 25 of Ki67 associated with values over 65 for E-Cadherin, the correlation of these parameters being indirect (r=-0.146; p=0.604); in malignant tumours the increased values of Ki67 were associated with reduced values of E-Cadherin, the correlation being a direct one (r=-0.449; p=0.021).

Conclusions. Immune marker assessment revealed an increase in Ki67 index in advanced stages, with significant statistical differences both in the case of malignant tumours and in the borderline ones. The assessment of p53 immune marker in the case of borderline tumours and also in the category of serous carcinoma that are well differentiated show similar results, as
opposed to the increased frequency in the cases of weakly differentiated carcinoma, which confirms the possibility of a common pathogenic line for the first two types of tumours stated and also the fact that borderline tumours are not precursors of poorly differentiated tumours. The low expression of E-Cadherin immunomarkers on malignant tumours suggests the possibility of an unfavourable development and metastasis by decreasing intercellular adhesions.
Background: Female Sexual Function Index (FSFI) is a self-report that provides information about six domains of sexuality: desire, arousal, lubrication, orgasm, satisfaction and pain. A large impact of motherhood on women's sexuality has been proven but the results of available research are inconsistent and insufficient.

Objective: The aim of the study was to compare the quality of sexual life before pregnancy and after delivery and to find out whether and how selected factors associated with pregnancy and childbirth affect women's sexuality.

Material and Methods: The study group consisted of 537 women. The survey included 60 questions concerning demographic data, health and retrospective FSFI regarding a four-week period before pregnancy and current FSFI (referring to past four weeks). It was distributed between June and November 2018. The inclusion criteria were: term delivery, a period from 10 weeks to 2 years after the delivery and resumption of vaginal intercourses. Statistical analysis was carried out using STATISTICA software.

Results: Mean age of patients was 26.8 (±4.48). The total FSFI score and all of the studied aspects of sexuality worsened after the delivery (Table 1.). It was observed both after VL and CS delivery (p<0.01). We observed a decrease by at least 10% of the initial FSFI score in 39.66% (n=219) of women.
after childbirth (median=-7.8), but also an increase of at least 10% in 12.67% (n=68; median=4.55). The time that has passed since birth did not correlate with the changes in FSFI (p=0.347).

In women who underwent episiotomy, the decrease in FSFI was greater than in women who gave vaginal birth without episiotomy (p<0.01). Female Sexual Dysfunction (FSD), defined as a result in FSFI below 26.55, also appeared statistically more frequent in the group after the delivery (20.48% [n=110] before pregnancy vs. 42.64% [n=229] after childbirth; p<0.01). Women in whom FSD was diagnosed before pregnancy and who did not have contraindications to intercourse during pregnancy, earlier ceased to have vaginal intercourses in pregnancy than those without the diagnosis of FSD before (respectively, average 28th and 32th week; p<0.01).

Conclusions: Childbirth has an undeniably huge impact on women’s sexuality. Prevention of sexual dysfunctions and their immediate treatment is very important, especially in this crucial period of life. More insightful, prospective studies are needed to explore the topic precisely.

Table 1. Median scores in the studied aspects of sexuality in study population.
TOPIC: MISCELLANEA

ABSTRACT ID: 52

TITLE: TRENDS IN POSTPARTUM HAEMORRHAGE IN IN A SINGLE OBSTETRIC UNIT IN HONG KONG OVER 2 DECADES

AUTHORS: W. To, C.W. Kong

AFFILIATIONS: Dept of Obstetrics & Gynaecology, United Christian Hospital, Hong Kong

CONTENT

Objective: A rising trend in the incidence of postpartum haemorrhage (PPH) has been reported in many countries worldwide. This study aims to evaluate whether such an increasing trend also exist in a single obstetric unit in Hong Kong.

Methods: Epidemiological and PPH data of a single regional tertiary referral obstetric unit were extracted from a comprehensive obstetric database from 1998 to 2017. The incidence of PPH was then correlated with various epidemiological parameters in a regression model to identify any significant factors that could potentially contribute to PPH.

Results: There were a total of 88,716 deliveries within the study period (mean 4435 per annum, SD 615). The incidence of PPH (>=500 ml) (mean 5.05%, SD1.73%) fluctuated in the first decade between 3.2 to 4.8% and then rose sharply in the second decade to a peak of 8.4% in 2016. The incidence of severe PPH (>=1500 ml) (mean 0.42%, SD 0.12%) also rose from 0.2 to 0.4% in the first decade to 0.5 to 0.60% in recent years, with a peak of 0.65% at 2013. While perinatal outcome remained stable over the two decades, significant increases were observed in the incidence of advanced maternal age, as well as rates of labour induction, previous CS rates and CS rates. The rising PPH incidence was largely due to increasing incidence of uterine atony, which consistently constituted around 70% of all PPH and severe PPH cases, while placenta praevia/accreta constituted 6-7% of PPH.
and 16.6% of severe PPH cases. A regression analysis model to evaluate the possible risk factors and aetiologies associated with increasing PPH rates showed that uterine atony was the most significant factor (p<0.001). A further regression model showed that previous CS was the most significant factor (p=0.036) associated with increasing uterine atony rates.

Conclusion: Our local figures showed the significantly rising trend in PPH rates and severe PPH rates were basically related to increasing uterine atony rates, which was on par with the trends demonstrated overall for public hospitals in Hong Kong.
TOPIC: MISCELLANEA

ABSTRACT ID: 55

TITLE: TRENDS IN POSTPARTUM HAEMORRHAGE IN PUBLIC HOSPITALS IN HONG KONG

AUTHORS: C.W. Kong 1; W.W.K. To 2

AFFILIATIONS: 1. Department of Obstetrics and Gynaecology, United Christian Hospital, Hong Kong, melizakong@gmail.com
2. Department of Obstetrics and Gynaecology, United Christian Hospital, Hong Kong, towkw@ha.org.hk

CONTENT

Introduction: A rising trend in the incidence of postpartum haemorrhage (PPH) has been reported in many countries worldwide. This study aims to evaluate whether such an increasing trend also exist in Hong Kong, and to attempt to identify the risk factors associated with this trend.

Methods: Epidemiological and PPH data were extracted from the Hong Kong Hospital Authority Annual Obstetrics report available from 1998 to 2016, covering eight public obstetric units that overall managed around 65-70% of all deliveries in Hong Kong. The incidence of PPH was then correlated with various epidemiological parameters in a regression model to identify any significant factors that could potentially contribute to PPH.

Results: There were a total of 746,454 deliveries within the study period (mean 39,287 per annum). The incidence of PPH (≥500 ml) and severe PPH (≥1500 ml) was 3.43% and 0.22% in 1998 and 5.18% and 0.63% in 2016 respectively. A gradually rising incidence in both PPH (mean 3.79%, SD 0.3, range 2.72% to 5.18%) and severe PPH (mean 0.41%, SD 0.18%, range 0.17 TO 0.76) was observed, albeit with fluctuations between years. The caesarean section (CS) rate and previous CS increased from around 18% and 7% in early years to 25.2% and 11.9% in 2016 respectively. The rising PPH incidence was largely due to increasing incidence of uterine atony, which
consistently constituted around two-thirds of all PPH cases, while placenta praevia/accreta constituted less than 4%. A regression model using enter approach to evaluate the possible associated risk factors for increasing trends in uterine atony showed that induction of labour was the most significant associated factor (p<0.001) while rates in CS delivery, instrumental delivery, multiple pregnancy were excluded from the final equation.

Conclusion: Our local figures showed a significantly rising trend in PPH rates and severe PPH rates, which was on par with the trends demonstrated in many other countries. Increasing incidence of previous CS contributed more to the overall increasing PPH rates via uterine atony than via praevia/accreta.
TOPIC: MISCELLANEA

ABSTRACT ID: 66

TITLE: PERMEABILITY OF THE AMNIOTIC MEMBRANES TO THE NATURAL VANILLA MOLECULE: A STRATEGY FOR THE FUTURE.

AUTHORS: López Ramón Y Cajal C; Rodríguez González L.


CONTENT

Introduction. The permeability of amniotic membranes has been little valued in maternal-fetal medicine. We are developing a research strategy for the study of this biological membrane. We studied natural vanilla permeability through amniotic membranes.

Material and Methods. We studied natural vanilla permeability through amniotic membranes obtained from forty-five spontaneous normal deliveries at term. The ferric chloride test (FeCL3) was used to determine the presence or absence of phenols in a given sample. Vanilla is a polyphenol so it gives a reaction to FeCL3 with an intense color change. The diffusion of the vanilla was checked by dropping ferric chloride solution on the gauze once the membranes are lifted with care to avoid contamination. If vanilla has passed through the membranes the distilled water papers would change from an initial ferric yellow in the drops towards a marked gray / greenish color on the papers (positive test).

Results. In all cases, the swabs were stained, all the membranes in both directions were permeable to the whole vanilla molecule (Figure 1). We found more permeability from the maternal surface towards fetal environment than the fetal surface towards maternal environment. The integument membrane was permeable.
Conclusions. This experiment allows us to reevaluate the importance of molecular diffusion through the amniotic membranes with no placental metabolism existing between maternal and fetal environment. We studied the amniotic membranes in preterm birth, preeclampsia and fetal growth restriction.
INTRODUCTION: Piebaldism or partial albinism is a rare, autosomal dominant genodermatosis, with no preference for color or race, occurring due to the developmental disorder of melanocytes. The prevalence is less than 1: 40,000. Piebaldism is estimated to reach 100,000 people worldwide. This type of disease is observed in men and women with the same frequency. The classic clinical picture present at birth consists of a triangular area of depigmentation of the midline of the forehead and central part of the scalp in about 90% of cases, and symmetrical depigmented macules on the skin. It can be associated with deafness, cranial dysplasia, hypertrophy of the base of the nose and hypertrichosis. There are reports of occurrences of six generations of the same family. The main differential diagnosis is vitiligo. CASE REPORT: H.L.S., born spontaneously at the Regional Hospital of Sobradinho, with IG of 39 weeks + 3 days, weight 3000 g, Apgar 5/8. Prolonged expulsion period, with a circular cord, clear amniotic fluid. At the physical examination, an area of depigmentation of the skin was identified in the frontal region with white hair locks and areas of symmetrical depigmentation in the knees, wrists and hands. Evaluated by dermatologist, and then piebaldism was diagnosed and the family...
received information about the disease and the existing treatments. During the hospitalization, he performed the normal ear test, and BERA was requested to be monitored. Forwarded to Genetics outpatient clinic for follow-up. The father had the same injuries but had never been diagnosed or followed. DISCUSSION: Piebaldism appears to be associated with reduced expression of the KIT receptor, a consequence of several mutations occurring in the C-KIT gene located on chromosome 4, resulting in abnormal distribution and decreased proliferation of melanoblasts in embryonic life. Thus, there is no melanin in the epidermis, due to the lack of melanocytes. The depigmented hair appears in a leukodermic macula of a generally triangular shape, the base of which penetrates the scalp to the bregma (junction point of the frontal and parietal bones) and whose apex extends to the line of the eyelashes and nasal bridge, sometimes, graying of the hairs on the medial portion of the eyebrows. The leukotriarchy can extend to the axillary and pubic hair. The skin depigmentations are also quite distinct. Always present at birth, they are characterized by strict symmetry and affect predominantly face, anterior portion of the thorax and abdomen, arms, forearms, legs and thighs. The lesions remain stationary or present a discrete and limited evolution, with a proportional increase of area with patient growth. Another detail worth mentioning is the presence of small hyperpigmented lesions in the leukodermal lesions, which aid in the differential diagnosis with vitiligo, and also in normal skin. The acrylic areas exhibit partial loss of the barrier to ultraviolet radiation and are irresponsible to topical and phototherapeutic treatment. Piebaldism may be associated with other diseases: Woolf syndrome (deafness), Waardenburg syndrome (deafness, nose base hypertrophy, internal canthi clearance, cranial dysplasia, superciliary hypertrichosis and iris heterochromia). Tietz syndrome is probably a form of generalized piebaldism, with hypomelaniasis, hairs and depigmented eyebrows, blue eyes and deafness. Therapy consists basically in the use of photoprotectors, psoralens, topical steroids and autologous grafts. There have been reports of spontaneous repigmentation of the lesions.
ABSTRACT ID: 90

TITLE: MASSAGE THERAPY DECREASES DEPRESSION AND PAIN IN HOSPITALIZED OBSTETRICAL PATIENTS

AUTHORS: S. Pollat 1; M. Bartlett 1; C. Browning 1; S. Price 1; D. Lang 1; J. Blackstone* 1
*Principal Investigator

AFFILIATIONS: 1 University of New Mexico Hospital, Department of Obstetrics and Gynecology, Division of Maternal Fetal Medicine, Albuquerque, New Mexico, USA

CONTENT

Background: Pharmacological treatment for musculoskeletal pain and depression is common but patients and clinicians are increasingly seeking alternative therapies with minimal risk, especially during pregnancy when every drug ingested by the mother also affects her fetus. Although there have been a number of studies involving pregnant patients which address both pain and depression, no studies have specifically involved hospitalized antepartum or postpartum patients who may have prolonged hospital stays due to the complications of their pregnancies or from a complicated surgical delivery. These women are sometimes geographically remote from their families, are in a constant state of anxiety due to their diagnoses, have limited activity, limited stimulation, and may be on prolonged bedrest. These patients are often excluded from research studies because they are considered “high risk”. However, their diagnoses contribute to the need they have for alternative therapies that can improve the quality of their lives, particularly in a restrictive hospital setting. We hypothesized that massage therapy used as an integrative treatment modality could effectively address pain and depression in hospitalized patients who are not fully helped by conventional approaches or who are uncomfortable with taking medications either during pregnancy or after delivery.
Objective: To determine if massage therapy could decrease pain and depression in antepartum and postpartum women during hospitalization.

Methods: This is a historical cohort study. The control and experimental cohorts were separated by time. The control group consisted of 66 women who were either antepartum or postpartum and had been admitted to the obstetrical service due to complications of their pregnancies or for delivery. Patients in active labor were not included. Patients enrolled completed two validated questionnaires: the Wong-Baker (“faces”) Pain Scale evaluates pain visually and the Edinburgh Depression Scale (EDS) scores for depression. All women were treated for pain with standard modalities available in the hospital including analgesics, narcotics, muscle relaxants, etc. as prescribed by the managing obstetrical team. Patients who scored 13 or higher on the EDS were offered a psychiatric consult. The control group completed the same questionnaires initially and then again 24-48 hours later. The treatment group (64 women) completed the same two questionnaires both before and after receiving a massage from a trained study group member. These women continued to be managed by their own providers and were treated for pain and depression according to previously established guidelines at the University of New Mexico. The two sets of questionnaires were collected and analyzed individually using the two-tailed student T-test.

Results: There were 130 women recruited for the study; 66 controls and 64 in the treatment group. One patient in the control group did not complete the second set of questionnaires and was excluded from the analysis. The reduction in pain over time for the control group averaged 0.688 (sd=2.08) units (1 unit = ½ face on Wong Baker (“faces”) pain scale). In the treatment group the average post-treatment reduction in pain was 1.969 (sd=2.30) units. The difference in pain reduction between the two groups was 1.282 units. This difference was statistically significant (p-value = 0.0011). A 95% confidence interval (CI) for the difference is (0.519, 2.045). The reduction in depression scores in the control group averaged 0.338 (sd=2.93) points. In the treatment group the average reduction was 2.015 (sd=3.05) points. Again the difference was statistically significant (p-value = 0.0018). The difference between groups was 1.677 points with a 95% CI of (0.639, 2.715).
Conclusion: Massage therapy can make a significant difference in the perception of pain and feelings of depression in hospitalized peripartum patients. Though this was just a small pilot study which was not randomized, our findings indicate that massage therapy should be included in the armamentarium of treatment modalities available to both antepartum and postpartum women in the hospital. Further research is needed to determine if massage therapy could reduce the use of narcotics in this group of patients. We also need to evaluate the role of massage therapy in the treatment of the depression and anxiety so common in both the antepartum and postpartum periods.
CONTENT

INTRODUCTION
Testicular swelling in neonates is definitely a challenging issue for Pediatric Surgeons. Because of the wide variety of reasons that are hidden behind the diagnosis there is an indispensable obligation to find the appropriate etiology. Testicular tumors represent the less dominant reason of scrotum swelling in neonates. Especially, testicular immature teratomas are extremely rare in prepubertal population. We report a case of an unexpected immature testicular teratoma in a neonate mimicking a hydrocele in clinical examination. The authors chose to parallel this medical case with Pandora’s Box which was the container opened by the Greek mythological woman Pandora, releasing all the evils of humanity into the world.

MATERIALS AND METHODS
We report a case of an immature testicular teratoma in a newborn which was diagnosed accidentally by their parents persistence for scrotum ultrasound after the left testis descended in normal position. We must underline that the newborn was discharged after birth with cryptorchidism, anticipating the descent. The clinical examination of the neonate indicated a left hydrocele. AFP and β-hCG were within normal values. Due to the u/s findings the infant underwent a Magnetic Resonance Imaging (MRI) which revealed a testicular tumor.
The neonate underwent inguinal left orchiectomy with high ligation of the spermatic cord after intra-operative frozen section biopsy which revealed testicle teratoma with immature characteristics. The testis sparing technique was inevitable due to frozen biopsy results, macroscopically unclear tumor margins and minimal distances of normal testicle tissue. The neonate was discharged at the first postoperative day with no complications.

RESULTS
Pathology test revealed testicle teratoma with immature elements with clear surgical margins (R0 resection). Histological examination showed an nonseminomatous tumor consisting of luminar formations with squamous content, solid formations with clear cytoplasm and moderate atypia, luminar formations which were lined with cylindrical cells without atypia, small solid cell formations with clear cytoplasm and moderate density stroma of connecting tissue. Tumor issue index for cell proliferation Ki-67 had a low score between 8-10%. Normal testicle parenchyma was recognized at the circumference of the tumor. Immunochemistry was negative for AFP and CD117 biomarkers. The epididymis, spermatic cord, vas deferens and testicle tunics were not infiltrated by neoplastic cells. Tumor cells in lymphatic vessels were not identified.

The neonate was committed to the Pediatric Oncology Department a week after the operation for further treatment. Six months post operation the child is free of recurrence.

CONCLUSIONS
Neonatal testicular swelling is definitely a difficult problem both for Pediatricians and Pediatric Surgeons which demands an acute solution. Testicular torsion, hydrocele, large inguinal hernia, hemotoma, neoplasms, supernumerary testicle, splenogonadal fusion, adrenal rests and extensions of generalized processes can all clinically mimic solid scrotal masses. The diagnosis of a testicular tumor in prepubertal population and especially in infants is very rare.

A thorough clinical examination of the young patient is the key to the diagnosis which must be followed by a scrotum u/s according to the authors opinion which agrees with the literature, especially when there is a hypothesis of hydrocele with nonpalpable or previous undescented testicle the need for ultrasound is crucial.

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INTRODUCTION
Uterine fibroids are the most common benign tumors of the uterus. They are more frequent from the third and fourth decade of life. Due to the delay of maternal age, their presence in gestation is becoming an increasingly common problem of pregnancy. Despite its capabilities, ultrasound does not always give us enough detail for a proper assessment. In addition, MRI seems to be a diagnostic before delivery suitable technique for determining the position, size and structure of myomas at weeks.

DESCRIPTION OF CASE
We report the case of a 41 year old with uterine fibroids. As history has chronic hypertension and three previous normal deliveries in 3850, 4000 and 4800 g, the last fifteen years. Ultrasound evidence intramural myoma two main, the first anterior uterine isthmus of 87 x 82 mm and the other at right anterolateral 64 x 47 mm. Controls are adequate to diagnosis of preeclampsia. Because the first position prior mioma the birth canal, MRI is requested at week 31 with a view to a scheduled caesarean section, which was precipitated by severe preeclampsia 35 weeks. The RNM reports great isthmic myoma left anterolateral wall of 8.6 cm with hyaline degeneration and second right side wall myoma of 6.3 cm. It also describes a total of seven myomas, all intramural spread throughout the uterine thickness. This information was useful in the preoperative study, it was decided in
caesarean a body transverse incision is made two centimeters above the segmental myoma posterior longitudinal extension in reverse T. myomectomy forced three myomas of 5, 6 and 2 centimeters preventing a satisfactory hysterorraphy is performed.

CONCLUSION
The gold standard complementary test in obstetrics is ultrasound. However, in certain occasions we needed to resort to other more sensible tests to evaluate maternal pathology not associated with pregnancy. RMI is a safe test for the fetus and provides us with great information about the maternal anatomy., being able to assess the best management of labor.
TOPIC: MISCELLANEA

ABSTRACT ID: 119

TITLE: USE OF FETAL MAGNETIC RESONANCE IN ABDOMINAL CYSTS

AUTHORS: A. Beltran 1; P.M. Rodriguez 2; L. Batres 3; M. Velasco 4; I. Martinez 5; M.A. Jodar 6

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and ginecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
Abdominal cystic lesions are uncommon sonographic finding, caracterized by an anechoic image of variable size and location. Since there are various abdominal organs that may be affect, the range of pathologies and diagnosis it is very broad, and although most cysts are associated with good perinatal outcomes, complications can occur as bleeding, intestinal obstructions, perforations, etc.

DESCRIPTION OF CASE
We report the case of a patient of 28 years with no history of interest. This is her second pregnancy, taking the previous pregnancy and childbirth without incident. Visits first and second quarters enrolled without incident, with a low risk for aneuploidy screening. During the visit third quarter abdominopelvic cystic formation on the left side, 30 mm objective being the suspected diagnosis of ovarian cyst. In subsequent evaluations the same image is objective, located above and near bladder flank with the solid component and not captante Doppler. In the differential diagnosis the possibility of a digestive stenosis is discussed, so in 37 weeks fetal MRI is performed. It is observed therein a cystic tumor of 2.5 cm, thin and liquid-liquid walls and hyperintense on T2 T1 in sequence fat suppression. a radiologic diagnosis of hemorrhagic ovarian cyst content is performed.
CONCLUSIONS
Prenatal diagnosis is typically made by ultrasonography, however, MRI has the potential to improve diagnostic sensitivity test image as the second line in the presence of an inconclusive ultrasound. MRI allows better discrimination of tissues having higher spatial, temporal and contrast resolution.
INTRODUCTION
Teenage pregnancy as one that occurs in women under 18 is defined. Its importance lies in the increase the incidence of them in today's society. Teenage pregnancy has increased maternal-fetal morbidity and mortality, without being well established whether this is due to age or other factors uniquely associated risk

Methods
A descriptive retrospective study between 2011-2015. They have been selected pregnancies controlled in our center women under 18 years age at first trimester ultrasound. They excluded what they did not complete the control gestation in our center, no birth assisted in our paritorio, or gestational losses less than 24 weeks. They have collected variables: Gestational diabetes (DG), Hypertensive states (EHD), Intrauterine growth restriction (CIR), prematurity, Entry newborn (RN), instrumental delivery and cesarean section.

Results
The number total of pregnant between 2011 and 2015 was 136, with the following distribution:
Number of pregnancy: 2.94% of 14 years old, 5.88% of 15 years old, 32.35% of 16 years old, 58.09% of 14 years old.
The rate of complications in pregnancy was DM: 0%, EHE: 2.2%, CIR: Prematurity 7.35% and 3.68%
The rate of complications during childbirth were: Cesareans: 16.91%, Instrumental delivery: 15.44% and income RN: 1.47%  

Conclusions

The percentage of pregnant women under 18 years between 2011-2015 was: 1.07%
Complications of pregnancy that are diminished in our teens: DM and the EHE.
Other events, such as CIR are significantly increased.
No difference in the rate of Caesarean sections or income RN observed.
There is a significant increase in the rate instrumental delivery.
TOPIC: MISCELLANEA

ABSTRACT ID: 125

TITLE: WHY SEE A PREGNANT LOW-RISK OBSTETRIC EMERGENCIES?

AUTHORS: M. Bueno 1; A. Jimenez 2; A. Martinez 3; M. Velasco 4; I. Martinez 5; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
One of the main topics of discussion in public health is on hospital emergency services and their use by the population. In recent decades they are increasing visits, in many cases over the possibilities and raising sustainability. Pregnant women represent a major health, marked by increased medical supervision along with higher levels of health demand.

MATERIAL AND METHODS
This is a retrospective study of all low-risk pregnancies to continue throughout the pregnancy control in our center and calve in the month of October 2015. The objective was to evaluate the use of the emergency department Obstetric by pregnant low risk, making a count of the number of visits to Emergency Obstetric except the visit when he entered active partum period, distributing quarterly and reason for consultation. They were excluded from the study all pregnant women with obstetrical or medical condition of interest.

RESULTS
The number of patients who met all criteria was 179 women, a total of 307 visits during their pregnancies. The average number of visits was 1.71. The percentage of women who made no visit was 28.5%. The percentage of women who made 1, 2 or 3 visits was respectively 27.3%, 16.2%, 15.6%. The percentage of women who had 4 or more visits was 12.3%. The distribution
of visitors in the first, second and third quarter was 19.5%, 17.3% and 63.2%, respectively. The main reason for consultation in each quarter was bleeding (45%), abdominal pain (32%) and feel of uterine dynamics (45%), respectively.

CONCLUSIONS

The number of visits to Emergency Obstetric by low-risk pregnant women is relatively low. Almost 30% makes no and 43% carry one or two visits. The distribution is mainly concentrated in the last quarter, accounting for nearly two-thirds of all visits. The most frequent reasons for consultation match described in the literature, representing large percentages of other reasons for consultation.
INTRODUCTION:
Childbirth and its assistance is the central element of perinatal medicine. Records the number and types of delivery and other delivery outcomes are indispensable as a method of quality control of the activity of a good maternity ward. We summarized the activity of our maternity ward during 2015.

Methods:
Retrospective study of deliveries in our hospital in 2015.

Results
The total number of births in 2015 was 2844 deliveries. The onset of labor was spontaneous in 62.48% of cases. Elective caesarean section rate was 4.95%. The induction rate was 32.55%. The rate of vaginal delivery in our center was 58.75% of the total. The cesarean section rate was 24.75%. Implementation rate was 16.45%. The main instrument was the vacuum, with 92.09%; followed by forceps (7.05%) and spatulas (0.85%).

Conclusions
Most births in our center begin and end spontaneously. However, our induced delivery rate and c-section rate is above the average recommended by scientific societies.
Good planning and management of childbirth is essential to reduce intervention and delivery complications. It is important to know our own statistics of our work center to be able to improve. We must try to reduce the number of labor inductions and favor the spontaneous onset of labor.
INTRODUCTION
Ethnicity is an important clinical and social factor in the pregnant women in population. In clinical aspects, there are significant variations dependent on ethnicity especially sonographic markers, growth curves and screening methods. In the social aspect it allows to study trends vegetative growth of native and migrant population. Our goal is to study the prevalence and sociodemographic characteristics of the different ethnic groups in our health area.

MATERIAL AND METHODS:
This is a retrospective study that incorporates all the unique gestations controlled in our center as a whole in 2015 and 2016. The variables collected will be: ethnicity (Caucasian, Arab, African, American, Asian), age variables, BMI, smoking and type of reproduction.

RESULTS:
A total of 4902 pregnant women who met the criteria were obtained. The ethnic distribution was 82.86% Caucasian; 13.54% Arabic; 2.42% American; 0.77% African; 0.38% Asian. The mean age: 32.03 years African; caucasian 31.81 years; Arabic 30.28 years; American 29.90 years; Asian 29.78 years. BMI was Arabic: 27.68 kg / m2; African 26.96 kg / m2; American 25.96 kg / m2; Caucasian 25.25 kg / m2; Asian 21.74 kg / m2. Smoking was a 22.74%
Caucasian; South American 6.72%; 5.26% Asian; 2.63% African; 0.4% Arabs. Assisted reproduction was in the 2.85% Caucasian, 0.8% South America; 0.3% Arabs; and 0% African and Asian.

CONCLUSIONS: Significant ethnic differences in areas such as BMI, smoking and assisted reproduction are observed. Excepting Asian ethnicity, other non-native ethnic groups have a degree of overweight more than the native expectant points, which could be a specific target audience for interventionism.
TOPIC: MISCELLANEA

ABSTRACT ID: 133

TITLE: CHILDBIRTH CARE SATISFACTION SURVEY

AUTHORS: P. Talens 1; A. Martinez 2; J. Peiró 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

OBJECTIVES: To assess the overall satisfaction of our postpartum women, and the experience about intrapartum care. Identify predictors of dissatisfaction. Observe the experiences of women after hospital birth, expressed in their own words.

Material and method:
We conducted a survey descriptive study written by autofilled Maternity puerperal a general hospital during the month of August 2014. As exclusion criteria we use only the language barrier and cases of stillbirths.

Results:
A total of 180 surveys were collected.
The overall satisfaction was 4.37 / 5.
The degree of satisfaction with the physical environment was 4.33 / 5.
The degree of satisfaction on information and on participation was 4.2 / 5 4.11 / 5 respectively.
The degree of satisfaction with care was Gynecologist 4.45 / 5.
The degree of satisfaction on various aspects of midwifery care was higher than 2.90 / 3 in all of them.

Predictors of dissatisfaction we found in our study were low educational attainment, age younger than 25 or older than 35 years, absence of epidural analgesia, consumption of snuff and be unemployed.
30% of patients made a written comment, 24% of the same type was negative and 76% positive type.

Conclusions.
1. Conducting the survey has allowed us to know weaknesses of our attention.
2. The overall satisfaction of our postpartum women is high, as well as most of the parameters studied.
3. Aspects of information and participation are those who had lower scores.
4. Identified as predictors of dissatisfaction with the low level of education, age under 25 or over 35 years, no administration of epidural analgesia, consumption of snuff and be unemployed. almost third of puerperal wanted to write an additional comment, the vast majority of positive type.
INTRODUCTION
There is a tendency to delay motherhood by socio-economic issues. In recent years there has been a significant increase in the number of pregnancies in women over 35 years; almost one third of the total. Maternal age is the main risk factor for infertility, it implies an increase in the number of pregnancies achieved with Assisted Reproduction Techniques. The aim of this study is to determine the prevalence of pregnancies obtained by IVF / ICSI in the pregnant population assigned to General Hospital Universitario Santa Lucía de Cartagena and demographic characteristics associated with them.

MATERIAL AND METHODS
We conducted a retrospective study using data collected during the visit first quarter of pregnant women who have monitored the pregnancy at the University General Hospital St. Lucia during the years 2015 and 2016. Inclusion criteria are: pregnant women with full gestational control our center in 2015 and 2016, patients who have not visit our center first quarter and incomplete medical history are excluded.

RESULTS
A total of 5700 pregnant women were analyzed. They were included in the study 4288 (1412 excluded). The overall prevalence of pregnancies
obtained by IVF / ICSI was 2.56% of cases. The demographic characteristics of these were: average age 34, average BMI: 24.12. Almost all caucasian 98.2% and 9.1% smokers. The characteristics of the general population with spontaneous pregnancy were: mean age 31.6 years, mean BMI 25.56, 82.85% white, 19% smoking.

CONCLUSIONS
One of every 40 children born in our center is through assisted reproduction. Comparatively it comes to older patients with lower average BMI, white almost entirely and not smoking prevalence reaches 10%. Interestingly, many publications have found that these pregnancies are at an increased risk of adverse pregnancy outcomes such as: low weight, premature labor, CIR, preeclampsia, placental abnormalities, congenital anomalies and perinatal death.
TOPIC: MISCELLANEA

ABSTRACT ID: 141

TITLE: MATERNAL AGE NOWADAYS

AUTHORS: M.A. Urbano 1; A. Jimenez 2; L. Alvarez 3; M. Velasco 4; I. Martinez; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia Universitary Hospital, Cartagena, Spain

CONTENT

OBJECTIVES: It has been observed that the number of pregnancies are increasing at extreme ages, referring above at a important increase in the number of pregnancies in mothers of advanced maternal age. Both adolescence and the elderly are a risk factor. The aim of this study is to determine the prevalence of extreme ages in the pregnant population Hospital General Universitario Santa Lucía de Cartagena (Murcia).

METHODS: We conducted a retrospective study using data collected from one quarter of pregnant women who have been monitored at the University General Hospital St. Lucia during the years 2015 and 2016. Inclusion criteria are: Pregnant women with full gestational control from our center in 2015 and 2016, patients who have not visit our center first quarter and incomplete medical history are excluded.

RESULTS: A total of 5700 pregnant women were analyzed. We included 4288 (1412 excluded) in the study. The average age of pregnant women in our hospital was 31.7 years. Pregnant adolescents (age below 20 years) account 4.68%. Pregnant women aged between 21 and 34 account for 64.24% of the population. Pregnant women with advanced age (over 35 years) account
for 31.08%. If the latter group split in two, get that pregnant women aged 35-39 years is 25.3%, and pregnant with more than 40 years are 5.78%.

CONCLUSIONS:
As we can see from our results, the age of pregnant women is increasing, and pregnant with ages over age 35 account for almost a third of the pregnant population. We must inform pregnant women of the risks associated with pregnancies at extreme ages of life.
INTRODUCTION
ABO antigens are detected on erythrocytes between the fifth and sixth week of the embryo, and is not fully developed until after birth. Incompatibility ABO, in the context of pregnancy, is a common hematologic problem, occurring in fetuses and newborns with blood group A or B mothers O, and can occur at first pregnancy, since antibodies ABO IgG cross the placenta. When the mother is Rh negative, the biological father Rh positive, and the fetus is Rh positive, anti-Rh antibodies can be produced by the mother and attack the fetal red blood cells. This incompatibility is less risky in the first pregnancy, being most important in the following gestations. Antibody production starts on the third day of delivery, and can be prevented by Rh immunoglobulin after each delivery or abortion.

MATERIALS AND METHODS
A retrospective study was performed between 2015 and 2016, a total of 950 pregnant Service of Obstetrics and Gynecology at the University Hospital Santa Lucía de Cartagena, recording the ABO and Rh first trimester pregnant group.

RESULTS
The most common blood type is 0 positive. A total of 137 patients with Rh negative and 813 positive patients Rh are recorded.
OBJECTIVE: Smoking during pregnancy is associated with a large number of obstetric, neonatal and developmental disorders. Exposure to snuff in the uterus is a form of passive exposure. The objective of this research is to determine the prevalence of smoking in pregnant women Area II Cartagena (Murcia) and explore associated factors.

METHODS: We conducted a retrospective study using data collected during the visit for screening first quarter of pregnant women who have monitored the pregnancy at the University General Hospital St. Lucia during the years 2015 and 2016. Inclusion criteria are: pregnant women have done full control of gestation in our center in 2015 and 2016, patients who have not first trimester visit our center and pregnant with incomplete medical history are excluded. Data collected included age, weight, height, race, smoking and assisted reproductive techniques.

RESULTS: A total of 5700 pregnant women were analyzed. They were included in the study 4288 (1412 excluded). 19% of pregnant women were smokers (805 pregnant women).
Of smokers: The mean age was 30 years. The mean BMI of patients was 23.1. Our most common race was caucasian (98.7%). 1.24% of pregnancies were FIV.

Of non-smokers: The mean age of patients was 31.9 years. BMI was 24.7. The most common race was caucasian (80.6%), followed by the Arab race (15.4%). A 2.87% of pregnancies after IVF were.

CONCLUSIONS:
Maternal smoking during pregnancy is a significant risk to the fetus. The percentage of pregnant smokers is high. Is necessary to establish performance measures to quit smoking during pregnancy, maternal education remains important during any visit.
TOPIC: MISCELLANEA

ABSTRACT ID: 151

TITLE: THE ROLE OF Hysterectomy IN INVASIVE MOLAR PREGNANCY

AUTHORS: S.Passos.Silva; J.Araujo.Pereira; M.Gomes; S.Cunha; F.Domingues; P.Pinheiro

AFFILIATIONS: Obstetrics Department, Unidade Local de Saúde do Alto Minho, Viana do Castelo, Portugal

CONTENT

Introduction
Gestational trophoblastic neoplasia (GTN) refers to a group of malignant neoplasms that consist of abnormal proliferation of trophoblastic tissue, and includes the following histologic types: invasive mole, choriocarcinoma, placental site trophoblastic tumor and epithelioid trophoblastic tumor. Invasive mole may show invasion of the uterine vasculature and a production of secondary metastatic lesions, particularly involving the vagina and lungs. Uterine rupture and severe intraperitoneal hemorrhage are potential complications. 

Objective
The main goal was to describe a clinical case with relevance in the area of gestational trophoblastic neoplasia

Case Presentation
A 41 years-old healthy women, gravida3 para 1 (caesarian section in 2012) presented to the Obstetrics Department complaining of pelvic discomfort, a diagnosis of a non-viable uterine pregnancy at 7 weeks of gestation was made. After counseling she chose for expectant management. Two weeks later, she presented to the emergency room with vaginal bleeding. On ultrasound evaluation a fetal pole and a placental mass containing many small cystic spaces with apparent infiltration of the anterior uterine wall was seen. Beta -hCG was 53937.81 mU/L and the other laboratory studies
were within the normal range including renal, hepatic and thyroid function. A molar pregnancy was hypothesized and a suction curettage was performed. During the procedure, massive uncontrolled bleeding led to the decision of total hysterectomy. Intraoperative blood transfusion was necessary for severe anemia (Hb 5.5g/dL). The anatomopathological report on the surgical specimen described an invasive mole. The disease was in stage I of FIGO Staging for GTN, and score 5 of WHO Prognostic Scoring System. The case was discussed in a multidisciplinary team that decided for surveillance with seric beta-hCG values. 48 hours after the hysterectomy, beta-hCG values decreased to 1102.71 mUI/mL and 10 days after were negative. The values remained negative after 1 year of follow-up.

Conclusions
Despite the undoubted effectiveness of chemotherapeutic treatment, problems related to toxicity of these agents have led to reconsideration of the use of hysterectomy. In selected cases a hysterectomy may be an effective treatment to either reduce or eliminate tumor burden. In this case a hysterectomy was lifesaving and turned out to be the final treatment.
Introduction: Mood disorders, dyspareunia and other sexual dysfunctions are very complex phenomena that affect each other. The aim of the study was to determine the impact of depression disorders on specific aspects of sexual life - desire, arousal, lubrication, orgasm, sexual satisfaction and pain.

Methods: We performed cross-sectional study on the group of 561 women aged from 18-40. All of study participants completed a questionnaire, which consisted of 60 questions about demographic data, medical history, shortened Female Sexual Function Index (FSFI-6), Beck Depression Inventory (BDI) and 20 questions about pain characteristics and its rating with Visual Analog Scale (VAS).

Results: On the basis of the BDI result, the following depressive disorders were diagnosed: no signs of depression (BDI =49). Total BDI score negatively correlated with total FSFI-6 score and with results in all studied aspects of sexuality: arousal, desire, lubrication, orgasm, sexual satisfaction, pain (p<0.05). The strongest correlation was found between sexual satisfaction and total BDI (r=-0.3). Moreover, statistically significant positive correlation was found between the result in BDI and pain during sexual intercourse expressed in the VAS scale (p<0.05, r = 0.25). Pain assessed on the VAS scale during the relationship also significantly differed between the groups „no signs of depression”, „mild depression” and „moderate depression”
The FSFI-6 score was weakly correlated with the severity of following depression symptoms: sadness, anxiety for the future, neglecting of duties, anhedonia, sense of guilt and deserving punishment, feeling of being worse than others, uncontrollable crying, nervousness, lack of decisiveness, inability to work, fatigue, sense of illness and loss of interest in sex (strong correlation; \( r=-0.44 \)) but did not correlate with: suicidal thoughts, lack of interest in interpersonal contacts, sense of ugly appearance, insomnia, worse appetite, loss of weight.

Conclusions: The greater the severity of depressive disorders, the greater the exacerbation of sexual dysfunction. We should keep in mind that during the treatment of depressive disorders proper attention should be paid to this aspect. Patients with sexual dysfunction should be examined for depression.
TITLE: WHAT FACTORS AFFECT THE INCIDENCE OF FEMAL SEXUAL DYSFUNCTION IN YOUNG WOMEN? CROSS-SECTIONAL STUDY

AUTHORS: L. Rowicki1, M. Zgliczynska1, A. Majewska1, M. Zasztowt-Sternicka1, I. Szymusik1, K. Kosinska-Kaczynska1, M. Staruch

AFFILIATIONS: 1. 1st Department of Obstetrics and Gynecology Medical University of Warsaw

CONTENT

Introduction: Women's sexuality is very complex and influenced by various factors. Female Sexual Dysfunction (FSD) is a common but often neglected health problem. FSD encompasses problem of sexual desire, arousal, orgasmic ability and pelvic pain.

Objective: Aim of the study was to find out what are the possible risk factors of the occurrence of FSD.

Methods: We performed cross-sectional study on the group of 561 women aged from 18-40. All of study participants completed a questionnaire, which consisted of 60 questions regarding demographic data, general medical history, six-item version of Female Sexual Function Index (FSFI-6 is a shorter, validated version of FSFI-19 for screening) and Beck Depression Inventory (BDI). Basing on FSFI-6 total score, we divided them into two groups – with Female Sexual Dysfunction (FSD; FSFI=19, n=399).

Results: Prevalence of FSD in our group of patients was 28.88%). Those women who were: older, single, pregnant in the past or gave birth in the past, suffer from recurrent vaginal infections and achieved higher BDI scores, were more likely to have FSD. Of the 162 women diagnosed with FSD based on FSFI only 96 (59.26%) reported a problem with sexuality in recent times. Married women achieved statistically lower total FSFI results than women in informal relationships. Arousal, desire, lubrication and satisfaction
scores differed, while orgasm and pain did not differ between groups (respectively $p=0.00$, $p=0.00$, $p=0.00$, $p=0.02$, $p=0.00$; $p=0.73$, $p=0.92$)

Conclusions: Basing on data obtained from our population older age, being single, recurrent vaginal infections, hypertension and depression are potential risk factors for the development of FSD. Women in marital relationships achieve lower scores in FSFI than women in informal relationships. It is important to make doctors, therapists and patients aware of the possibility of such a problem and the necessity of its fast diagnosis and treatment.
TOPIC: MISCELLANEA

ABSTRACT ID: 183

TITLE: KANGAROO FATHER CARE (KFC) TO REDUCE STRESS LEVELS OF FATHERS OF PRETERM NEONATES ADMITTED IN NICU: A PROSPECTIVE OBSERVATIONAL BEFORE – AFTER STUDY.

AUTHORS: S.Dongre
S.Desai
R.Nanavati

AFFILIATIONS: Department of Neonatology, King Edward Memorial Hospital, Mumbai ,India

CONTENT

INTRODUCTION
There is lack of literature regarding the assessment of stress levels of fathers of preterm neonates admitted in NICU. Similarly, there is a dearth of literary texts regarding means to reduce their stress levels. Kangaroo Mother care has been proven to reduce maternal stress levels. Hence, the present study was done to assess the stress levels in fathers and use of “Kangaroo Father Care (KFC)” to mitigate this stress.

METHODS
This was a “prospective observational before and after” study in fathers of hemodynamically stable, preterm neonates in a tertiary level unit. Parental stress levels were assessed using the Parental Stressor Scale: Neonatal Intensive Care Unit (PSS: NICU) before and after 3 sessions of Kangaroo Father Care. PSS: NICU is a 50item scale that measured parental anxiety and stress related to the NICU environment: (a) sights and sounds in the unit, (b) appearance and behaviour of the neonate, (c) parent’s role and their relationship with their neonate and (d) staff behaviour and communication. The data was analyzed using Wilcoxon signed rank sum test.

RESULTS
The study showed that there was a statistically significant (p value - 0.006) reduction in stress levels after KFC. Amongst all the 4 subscales, stress levels were found to be reduced in ‘staff behaviour and communication’ (p - 0.001) domain and ‘baby looks and behaves’ domain (p - 0.05).

CONCLUSION
Fathers of preterm neonates admitted in NICU experience a lot of stress, adversely affecting their mental health. Kangaroo care is very effective in reducing the stress levels of the fathers.
Introduction
Aplasia Cutis Congenita (ACC) is a heterogeneous group of rare, congenital disorders that demonstrate focal or diffuse absence of skin. The preponderance of cases manifest on the scalp, but ACC may occur anywhere on the body. Few of the scalp cases may be accompanied by underlying bone and dura mater defect, with possible extension to the brain and sagittal sinus. The most common presentation of ACC is isolated, although it has been associated with various syndromes and congenital anomalies (genetic or congenital), namely cleft and abdominal wall defects, deformities of the limbs, as well as fetus papyraceus. ACC incidence is estimated at 1-3:10,000 live births. Sporadic ACC is most prevalent, but familial cases have also been reported.

Material and Methods
At a planned Cesarean delivery in 39 week of gestation, a girl was born with weight 3460 grams, height 51 cm and APGAR score 7, 8, 9. The indications for Cesarean delivery were signs of fetopelvic disproportion and myopia. Through the pregnancy the woman was taking only vitamins and iron supplements. During the delivery procedure we noticed a 2 cm round lesion
on the head of the baby, specifically at the vertex part. The baby was otherwise healthy, in good condition with no signs of other malformations. A neurosurgeon was called for consultation regarding the newborn. He decided that a CT scan is necessary to reject any possibilities of meningocele or encephalocele. The conclusion of the CT scan was: Normal CT status. Small intradermal fibrosis occipitally in the left. No changes of the structure of the skull bone and the brain tissue. Later the grandmother of the newborn reported that she also had a Cesarean delivery and her baby (our patient who gave birth) was born with a similar lesion on the skin of the head. Years ago she did not have enough information and it was considered a lesion of iatrogenic origin. It healed spontaneously and nowadays, the mother has a small scar in the vertex part of her head.

Results

After rejecting all other possible conditions, the baby was diagnosed with Aplasia cutis congenita type I. After studying other clinical cases of ACC and consulting with the parents about their desire, the Neonatology department decided to wait and observe the evolution of the lesion, which had no signs of infection. At the 4th postnatal day, the lesion was healing well and fresh granulation tissue occurred. The mother and the baby were discharged at the 6th day with a visible improvement in the lesion’s condition.

Conclusions

Aplasia cutis congenita is a rare condition characterized by a localized or widespread absence of the skin, which may be partial or complete. The lesions are typically small (0.5-10cm [1 or 10]) and well circumscribed, localized mostly at the vertex, but also at the face, trunk or limbs. There is no consensus about the management of ACC cases. The decision for conservative or operative treatment usually depends on the size of the lesion and the risk of infection or bleeding. Conservative management include local wound care (cleansing with physiological saline, bacitracin ointment, silver sulfadiazine dressings) and administration of systemic antibiotics. The aim is to provide moisture, to prevent infection and allow for spontaneous epithelization. Surgical treatment is performed when there is a big skin defect. It includes primary wound closure, skin grafts and local flaps.
In our case, the conservative approach resulted in fast improvement of the lesion.
INTRODUCTION
The spontaneous rupture of the uterus is rare but serious complication. It is more common to appear at patients who had previous scars on the uterine corpus involving the uterine cavity – in less than 1% of the patients with scared uterus. Even less common than that is the incidence of spontaneous rupture of unscarred uterus. Mainly it appears during labor after uncontrolled usage of labor inducing medicaments, weakness of the uterine muscles after multi-parity, application of operative methods for vaginal delivery (forceps, vacuum).

MATERIAL AND METHODS
We report a rare case of spontaneous rupture of unscarred uterus in first trimester of previously intact uterus.

RESULTS
The patient is 46 years old primipara after IVF procedure with multiple twin pregnancy at 13th week of gestation. She is being admitted in the hospital showing presentation of hyperemesis that related to the pregnancy. In the regular laboratory checks, severe anemia was found with levels of hemoglobin from 104 g/l rapidly decreasing to 55 g/l for just a day. Due to
clinical, para-clinical and ultrasound symptoms of hemoperitoneum with unknown etiology, a laparotomy was performed. In situ during laparotomy one of the two gestational sacs was situated at the right uterine horn where were found two openings – from one was shown through the gestational sac, the second one had piercing choral tissues. Because of the critical general condition of the patient and impossibility to recover the entirety of the uterus, a supra-cervical hysterectomy was done. The patient was stabilized and the recovery process passed smoothly without further complications.

Conclusions

This case report is pointing out the need of keeping in mind the chance of uterine rupture – either in scarred or unscarred uteruses. The possible complications of misdiagnosed case may end up with fatal outcome of maternal side, not only fetal.
TOPIC: MISCELLANEA

ABSTRACT ID: 216

TITLE: THE IMPORTANCE OF ENVIRONMENTAL COMPONENT IN REALIZATION OF RISK FACTORS OF THE NEONATAL SEPSIS

AUTHORS: L.O. Bezrukov, O.K. Koloskova, O.V. Vlasova, V.V. Bebykh, A.M Saranchuk

AFFILIATIONS: Bukovinan State Medical University, Chernivtsi City, Ukraine

CONTENT

Neonatal sepsis is a clinical syndrome characterized by signs of a systemic infectious process and an inflammatory response of the body in combination with bacteremia in the neonatal period of life. Neonatal sepsis is the main cause of mortality and persistent neuropsychiatric disorders of infants, which, from the clinical point of view, is characterized by the presence of a pathogen in the systemic blood flow of the newborn and inflammatory response of the organism, and is manifested by septicemia, pneumonia, meningitis, arthritis, osteomyelitis and / or urinary tract infection. Factors of predisposition to the disease are insufficient maturity of congenital immunity, imperfection of the skin barrier and protection of mucous membranes and the hematoencephalic barrier, which increases the susceptibility of newborns to infection. At the same time, the importance of unfavorable environmental factors, in particular, in the places of residence of pregnant women, on the course of neonatal sepsis is currently not sufficiently studied.

To make a comparative analysis of the risk factors of neonatal early-onset sepsis (EOS) and neonatal late-onset sepsis (LOS) in infants whose mothers live in different environmental conditions. Hospital chart of 90 newborns with signs of early-onset or late-onset neonatal sepsis (NS), whose mothers lived permanently in contrasting ecological characteristics of the environment, was made. Depending on the latter, the children were divided into two
groups: the first (I) group included 49 newborns from the areas of ecological distress, and the remaining 41 patients entered the second (II) group, which was characterized by favorable environmental conditions for pregnant women. The groups were compared according to the period of gestation, sex, and assessment of pregnant women.

It was shown that in spite of the absence of probable differences, among the patients in the II group, the proportion of boys probably exceeded the proportion of girls (70.73% vs. 29.27%, respectively, \( P < 0.05 \)), and the rest of the diseases were in clinical forms such as congenital pneumonia, purulent meningitis, osteomyelitis, septicemia, etc. Indices of the clinical and epidemiological risk of diagnosing a full-scale clinical picture of NS in the environmentally less favorable conditions for pregnant women were: the odds ratio was 1.53 (95% CI 0.9-2.7), the relative risk was 1.2 (95% CI 1.0-1.6), attributive risk - 11.0%. The comparative analysis of the peculiarities of the risk factors for early or late neonatal sepsis in clinical groups did not reveal any significant differences, with the exception of hyperthermia of pregnant women in childbirth (> 38.0 ° C), which probably prevailed in the I clinical group (6.1% vs. 2.6% respectively, \( P <0.05 \)). The risk indices for this case were: the odds ratio is 2.5 (95% CI 0.6-10.1), the relative risk is 1.7 (95% CI 1.6-1.8), the attributive risk is 22.0%.

Thus, in conditions of unfavorable ecological characteristics of the residence of pregnant women, the chances of their infectious-inflammatory processes in their childbearing on the background of normothermia increase by 2.5 times, which should be taken into account in the diagnosis of emergency situations in their newborns. At the same time, male sex is an additional risk factor for the NS, especially in the context of environmental disadvantages.
TOPIC: MISCELLANEA

ABSTRACT ID: 217

TITLE: CURRENT OPPORTUNITIES FOR VERIFICATION OF THE NEONATAL SEPSIS (CLINICAL CASE)

AUTHORS: L.O. Berzukov, O.V. Vlasova, L.V. Kolyubakina, V.V. Bebykh, A.M Saranchuk

AFFILIATIONS: Bukovinan State Medical University, Chernivtsi City, Ukraine

CONTENT

Child D., a boy, was born from the 1st pregnancy, which was threatened by the risk of intrauterine infection (bacterial culture test of the secretion of urinogenital organs found the pathogens of Candida alb. and Ent. Faecalis), the threatened miscarriage at 20-21 and 23-24 weeks, altered indices of the second biochemical screening, severe preeclampsia, short cervical syndrome corrected by pessary. Extracorporal fertilization (4 attempts). In the history of primary infertility (6 years). Patient parity I at 33 weeks, premature, pathological. Planned cesarean section, in connection with progressive preeclampsia on the background of treatment. Amniotic fluid is clean. Weight at birth is 2130 g, body length is 45 cm. The Apgar score at the first minute was 7 points, at the 5th – 7 points. The newborn has received initial resuscitation procedure according to the protocol of the Ministry of Health of Ukraine. The state of newborn was of moderate severity due to moderate respiratory disorders and neurological symptoms. Preliminary diagnosis: Light respiratory disturbances of the newborn. Respiratory failure 0-1 degree. Neonatal encephalopathy, acute period, neonatal depression. The term of gestation is 33 weeks. High risk of intrauterine infection.

In conducting paraclinical studies in the first day of life, signs of hypoxic-ischemic changes of the CNS against the background of intraventricular hemorrhage (IVH) 1 degree on the left, signs of immaturity of brain
structures; on the part of the heart while conducting an ultrasound examination reveals signs of carditis. Thrombocytopenia (79 g/l) was detected in a comprehensive clinical blood test on the first day, severe hypoglycemia (0.8 mmol/l), adjusted by parenteral administration of glucose solution) was detected in the biochemical blood test. The C-reactive protein level was 12 mg/l. At the end of the second day, the child's condition deteriorated due to the development of necrotic enterocolitis (NEC I-IIa). Partial parenteral nutrition has begun. Despite the treatment, in the dynamics, the severity of the general state of the disorder increased due to the appearance of pathological apnea and hemorrhagic syndrome, and it required hemodynamic and respiratory support, parenteral nutrition and hemostatic therapy. In the paraklinic study, there was an increase in thrombocytopenia (49 g/l) and leukocytosis (27.6 g/l). The presepsin level reached 12,000 pg/ml. At taking bacteriological culture before the beginning of antibiotic therapy on the first day of life the blood culture was negative, and on the third day the antibiotic-resistant strains Ac. Baumannii 106 and Kl. Pneumonie 106 were seeded. Clinical diagnosis was formed: neonatal sepsis, period of septicopimeemia: bacterial meningitis, bilateral pneumonia, NEC I-IIa. Poliorgan deficiency with respiratory depression (Respiratory failure III degree), Central nervous system, cardiovascular system, gastrointestinal tract (NEC), syndrome of disseminated intravascular coagulation, anemic syndrome, edema syndrome. Acute renal failure. The term of gestation is 33 weeks. Open oval foramen. During the stay in the Department of Intensive Care of Newborns of Regional Children’s Clinical Hospital health condition of the infant remained severe due to the progression of the phenomena of multiple organ failure. Despite intensive therapy, hemodynamic and respiratory support, strengthening antibiotic therapy, full parenteral nutrition and substitution therapy, with an increase in the incidence of multiple organ system failure and hemorrhagic syndrome, the death of a child at the age of 8 days.

Thus, neonatal sepsis has arisen in premature infants from the mother with the presence of infectious risk factors in the history. The peculiarities of clinical manifestations were a rapid increase in the phenomena of multiple organ failure with the lesion of many organs and systems, thrombocytopenia and leukocytosis, elevated CRP levels, and presepsin
In the epidemiological respect among the pathogens, the associations of microorganisms prevailed, in particular, the leading place among them was antibiotic resistant strains of Klebsiella pneumonia in combination with Ac. Baumannii.

On the basis of our own observation, it should be recognized that, in clinical practice, the determination of presepsin levels in biological environments is promising for an early and reliable verification of neonatal sepsis, especially among premature infants.
Background
Intrauterine intestinal volvulus is a rare and extreme emergency and a delay in diagnosis can be lethal. The main diagnosis is based on radiological features seen on imaging test.

Case report
First gestation of healthy mother whose prenatal ultrasounds showed no polyhydramnios. The women consulted at 33 weeks of gestation due to decreased fetal movements and the cardiotocograph record showed decreased variability.

Urgent cesarean section was performed for this reason. Apgar 7/9/9. Birth weight 2128 g. The baby started respiratory distress during the first minute of life so CPAP was placed.

At admission in the unit, physical examination revealed revealed pain, distension and tenderness in right hemiabdomen. Venous blood test showed metabolic acidosis. Abdominal radiography was done showing abdominal silence in right hemiabdomen with intestinal loops displaced to the left side without distal aeration. Findings of abdominal ultrasound were ascites, thickening and distension of loops. There were no other associated malformations.

Exploratory laparotomy was performed at 12 hours of age and revealed a volvulus involving 3 loops at midgut level with vascular compromise of distal ileum. A Ladd band was seen from the cecum to the undersurface of the
liver and duodenum. A 10 cm isquemic segment of distal ileum was removed and a termino-terminal anastomosis was done. On pathological examination, the resected bowel showed ischemia and necrosis of the wall affecting mucosa, submucosa and muscular layers. The postoperative course was uneventful and there were no complications due to the bowel resection.

Conclusions
Intrauterine midgut volvulus is a rare and life-threatening condition for the newborn. Prognoses of these patients depend on the length of remaining intestine so an early diagnosis is necessary.
TOPIC: MISCELLANEA

ABSTRACT ID: 244

TITLE: PLASMAPHERESIS IN THE COMPLEX TREATMENT OF PATIENTS WITH CONGENITAL THROMBOPHILIA AND RECURRENT MISCARRIAGE

AUTHORS: I Bushtyreva 1, N. Kuznetsova 2, VI. Barinova 1, A. Kovaleva 3, V. Barinova 2

AFFILIATIONS: 1 - Department of Obstetrics and Gynecology, "Clinic of Professor Bushtyreva", Rostov-on-Don, Russia.
2 - Department of Obstetrics, Gynecology and Perinatology, Rostov-on-Don State Medical University, Rostov-on-Don, Russia
3 - Department of Obstetrics, Rostov-on-Don State Perinatal Centre, Rostov-on-Don, Russia.

CONTENT

Background. One of the main aims of modern obstetrics and perinatology is to reduce maternal and perinatal morbidity and mortality. Due to the fundamental discoveries in molecular genetics and biology, occurred in the last 15 years, knowledge about pathogenesis of many obstetric pathological conditions have changed a lot. Discovering of antiphospholipid syndrome (APS) in 1986, as well as discovering of inherited and acquired thrombophilia, made it possible to create new ideological platforms for the treatment of obstetric complications. The leading role in genesis of thrombophilia belongs to the Leiden coagulation factor V mutation, mutations of prothrombin gene G20210A and MTHFR mutations. The extremely common prevalence of these mutations (from 40 to 75% of the population) doesn’t always lead to the manifestation of thrombophilia due to the trigger effects of exogenous or endogenous factors. It should be noted that different obstetric conditions - stillbirth, miscarriage, fetal growth retardation, preeclampsia, placental insufficiency - are the consequences of hypercoagulative effects of APS and thrombophilia. Since management of pregnant women with thrombophilia implies elimination of the causes of
acquired thrombophilia, or elimination of the pathogenic factor activation of the hereditary form of the disease, plasmapheresis can be considered as a promising method of treatment.

The objective of our study was to examine the efficacy of plasma exchange in the treatment of complications of pregnancy and in improving perinatal outcomes in patients with a history of recurrent miscarriage and inherited thrombophilia. Methods. The study included 37 pregnant women with a history of reproductive losses and genetically determined thrombophilia and 35 apparently healthy pregnant women without a history of reproductive losses. According to the results of molecular genetic studies we revealed the most common polymorphisms of genes in women with recurrent miscarriage: MTHFR C677T, MTRR A66G, FGB G455A, ITGB3 T1565S. Women with recurrent miscarriage were divided into 2 groups: 1 - 17 women treated during pregnancy with low molecular weight heparins, 2 group - 20 women, who in addition to the low molecular weight heparin were conducted 3 sessions of therapeutic plasmapheresis in the second half of pregnancy. Results. Patients of the 1 group had significantly higher levels of activation markers of coagulation and fibrinolysis (Group 1: D-dimer 2890 ng/mL, SFMC 9.00 mg/100 ml, group 2: D-dimer 1286 ng/mL, SFMC 5.3mg/100ml p = 0.02 and p <0.0001, respectively). In patients of the 1 group preterm births occurred significantly more often: in 7 women (41.2%), while in group 2 - in 1 (5%) (p = 0.014). Also in group 1 significantly more children were born with fetal growth retardation (group 1 - 6 children (35.3%), Group 2 - 1 child (5%), p = 0.033). Conclusions: The use of plasmapheresis in patients with recurrent miscarriage and hereditary thrombophilia can improve pregnancy outcomes.
ABSTRACT ID: 259

TITLE: NEONATAL INFECTIONS IN REGIONAL HOSPITAL PRIZREN-ONE YEAR STUDY

AUTHORS: Bajram Gallopeni 1; Rexhep Hoxha 1; Gezim Guhelli 1; Hajrip Ajdini 1; Xhevat Elezkurtaj 2; Myvedete Gallopeni 2; Kosove Bajraktari 3

AFFILIATIONS: 1 Pediatric Department, General Hospital "Prim.Dr. Daut Mustafa", Prizren, Kosovo 2 Center of Family Medicine, Prizren, Kosovo 3 Private Pediatric Ordinance "Kosova - Med", Suhareka, Kosovo.

CONTENT

Background and Objective. Infections are a frequent and important cause of morbidity and mortality in the neonatal period. Symptoms and signs in neonates are non-specific. The objective of study was to evaluate laboratory data and physical examination in the treatment and prognosis of neonatal infections.

Methods. During this retrospective study, examination and laboratory data were studied in 76 neonatal infants admitted in Pediatric Department from 1-28 days, between January to December 2017.

Results. In 2017 were admitted 76(3.57%) neonatal infants of total 2125 hospitalized children. 57.9% were male vs 32.1% female (p<0.01). According to age group 38.15% were age 1-7 days, 15.76% were 8-15 days, 18.42% were 16-21 days, 27.63% were 22-28 days. Mean age was 15.02 days. Sepsis neonati was 19.73%, urinary tract infections (UTI) 23.6%, hyperbilirubinemia 15.78%, bronchiolitis 28.94%, rhinopharyngitis 10.52%, omphalitis 6.57%, staphylococcal 2.63%. Poor feeding 36.84%, cough 39.47%, temperature 52.63%, C protein reactive was 52.63%. Average duration of neonatal infections was 8.04 days. Klebsiella spp. was isolated in urinocultures 13.15%, E.coli 6.57%, Citrobacter 1.31%, Proteuss spp
2.63%. Hemocultura was positive in 19.73% with staphylococcus aureus. Antibiotics used depend on infections: ampicillin 76.2%, gentamicin 38.15%, ceftriaxon 31.9%.

Conclusions. Bronchiolitis is the dominant infection. Temperature was frequent symptom. Klebsiella spp was most positive in UTI. Staphylococcus aureus was in most of the sepsis neonati. Ampicillin is most antimicrobial used in treatment of infections.
CONTENT

Background:
Caesarean scar pregnancy (CSP) is an increasingly common diagnosis with the rising rate of caesarean sections (CS). Published data have highlighted the difficulties in diagnosis and management options.

Objective:
To analyse the patient characteristics, management and outcome of 17 CSP at a tertiary referral hospital in Wellington, New Zealand.

Methods:
This was a retrospective cohort study. Cases were identified by clinical coding and the department ultrasound records. Data was then extracted from Concerto® (Orion Health. Version 7.11 2010. Auckland, New Zealand) and cross-checked with patient medical records.

Results:
Seventeen cases of CSP were identified from 2007-2018 from 16 women. The median maternal age was 35 years, with a median gestation at diagnosis of 6.3 weeks and 3.75 years from the last pregnancy. Forty one percent of women were asymptomatic on presentation. Sixty four percent of women in the study group had ≤2 prior caesarean sections. There was fetal cardiac activity present in 6 cases, in 8 cases there was no cardiac activity and the diagnosis was missed in 3 cases.

Conclusions:
An early pregnancy ultrasound scan is important to ensure that a timely diagnosis of CSP is made. A high index of suspicion should be maintained with any low-lying pregnancy, as the majority will be asymptomatic on presentation. When fetal cardiac activity is noted on ultrasound good success has been achieved with intra-sac injection of potassium chloride (KCl) and administration of systemic methotrexate with close follow up of bHCG levels and repeat methotrexate if required. Māori were overrepresented in the cases of CSP.
ABSTRACT ID: 285

TITLE: VIT D LEVELS IN HEALTHY PREGNANT WOMEN AND THEIR NEWBORNS IN GREECE

AUTHORS: V. Sideri1; A. Papadopoulou 2; A. Attilakos 2; P. Panagopoulos 3; P. Mexi 1; A. Daskalaki 1; E. Kapsabeli 1; P. Nicolaïdou 2; V. Papaevangelou 2

AFFILIATIONS: 1 NICU, 3rd Department of Paediatrics, National and Kapodistrian University of Athens, “Attikon” University General Hospital, Athens, Greece. 2 3rd Department of Paediatrics, National and Kapodistrian University of Athens, “Attikon” University General Hospital, Athens, Greece. 3 3rd Department of Obstetrics and Gynecology, National and Kapodistrian University of Athens, “Attikon” University General Hospital, Athens, Greece

CONTENT

Background: Despite vitamin D was discovered a hundred years ago, it has emerged as one of the most controversial nutrients and prohormones of the 21st century. Its role in calcium metabolism and bone health is indisputable, but its role in immune function and long-term health is also being discussed. A series of biological activities involving cell proliferation, differentiation and apoptosis correlate with vitamin D, actions that are equally important for fetal growth and development. Vitamin D deficiency has been increasing over the past 3 decades, with literature focusing on high-risk groups such as pregnant women and newborns.

Objective: The aim of this work was to evaluate the current levels of Vitamin D in pregnant women and their newborns living in Greece in association with the anthropometric features of their fetuses and newborns.

Method: 81 Athens’ residents, healthy pregnant women were monitored from September 2014 until August 2015. Biochemical markers, 25(OH)D and PTH levels were measured in serum samples of mothers-newborn pairs, at the 1st trimester and at labor in mother samples, in cord blood and at the 3rd day of birth in neonates. Fetal’s femur length ultrasonography...
measurement was performed during the 22nd and 32nd gestational week. Statistical associations were performed between laboratory findings and anthropometric features of mothers and newborns.

Results: 24% of the mothers at first trimester and 37.2% at delivery were vitamin D deficient (25(OH)D <20ng/ml). Vitamin D insufficiency (20-30ng/ml) was reported in 18.7% of the mothers at first trimester and at delivery. Furthermore, 29.9% of the fetuses and 37.2% of the neonates were deficient for vitamin D while vitamin D insufficiency was reported in 14.3% and 24.4% of the fetuses and newborns, respectively. A significant positive correlation was found between fetal femur length at 22nd week of gestation and maternal 25(OH)D at 1st trimester of pregnancy (r=0.36, p=0.048) while body length was significantly higher in newborns whose mothers had sufficient vitamin D levels (51.5±2.1).

Conclusion: The study confirms inadequate levels of vitamin D in pregnant women in Greece associated with inadequate vitamin D levels of their fetuses and newborns.
BACKGROUND
Performing external cephalic version (ECV) at or near term is a simple and safe procedure allowing the conversion of non-cephalic presentations into cephalic ones. Recent evidence suggests that in preterm pregnancies where an ECV attempt is performed, an anterior placenta may confer a greater risk of preterm birth in relation to other placental locations.

OBJECTIVE
Testing the hypothesis that, in term pregnancies with anterior placenta, labor will occur earlier.

METHODS
A retrospective study was carried out between January 1999 and June 2018, using the database of VCE attempts in our Department, complemented with clinical records and telephone interview. Were included ECV attempts performed at term (≥37 weeks) with a known location of the placenta and in which labor has spontaneously occurred.

RESULTS
A total of 378 ECV attempts were performed during the study period, of which 233 cases (61.3%) at term. Of these, 122 (52.4%) cases were excluded due to programmed induction, elective cesarean section or lack of data on labor. Of the 111 cases analyzed, ECV was successful in 80 (72.1%) and the placenta was anterior in 35 cases (31.5%). The latency until delivery did
not vary significantly in the cases of anterior placentation vs. other locations (14.2 days vs. 13.1 days, \( p = 0.622 \)) or when other variables such as multiparity (\( p = 0.384 \)) or body mass index (\( p = 0.237 \)) were analysed.

**Conclusion**

In our sample, ECV attempts at term and with anterior placenta were not associated with an earlier onset of labor.
A 27-year-old multiparous female at 39 weeks gestation underwent an emergency caesarean section at five centimetres following a pathological cardiotocograph. Two days following delivery she developed an erythematous, well-demarcated vesicular rash on her posterior trunk in a distribution consistent with the area of chlorhexidine (CHL) applied for epidural anaesthesia. She was treated for allergic contact dermatitis with topical mometasone furoate (Elocon) and wet dressings but after having minimal improvement was commenced on ‘Acticoat’ dressings and topical silver sulfadiazine (Flamazine). She then developed a secondary auto-eczematisation reaction with erythematous plaque formation due to Flamazine, which was treated with topical Elocon to good effect. The rash on her posterior trunk significantly improved with only crusting remaining at the sites of skin breakdown on discharge. A biopsy performed showed spongiotic dermatitis consistent with the provisional diagnosis of an allergic contact dermatitis to CHL however did not exclude a superficial burn by cautery.

CHL is a commonly used skin and mucosal disinfectant with bacteriostatic, bacteriocidal and virucidal effects. Despite its widespread availability and use of CHL in various preparations, hypersensitivity to CHL can be severe
ranging from contact dermatitis, generalised urticaria to anaphylactic shock.

Reactions to CHL in labour may be severe, as exposure can occur in several places at once including during preparation for vaginal examination (VE), urinary catheterisation, epidural catheter and for caesarean section. If CHL is not dry before incision it can potentially enter abdomen, epidural space and blood stream directly. This in combination of repeated contact with highly absorptive membranes during VE can lead to profound anaphylaxis in sensitised individuals. Use of CHL containing solution while placing an intrauterine device or other invasive gynaecological procedures including cervical conisations can also result in anaphylaxis. CHL reactions may be falsely attributed to other allergens commonly encountered in procedures for example, latex.

CHL is an underestimated allergen and delayed and immediate type reactions can coexist. CHL induced contact dermatitis can precede anaphylaxis by years. Additionally nosocomial CHL allergy can lead to interruption of surgical and anaesthetic procedures, increase in length of hospital stay and cause serious patient morbidity and mortality. Allergen avoidance through patient and staff education is the cornerstone for prevention. A detailed description of adverse drug reactions and previous exposures should be clearly documented at antenatal booking visit. Maternity care should ideally be provided in a shared care model with specialist obstetrician, hospital midwives with collaboration of anaesthetist, immunologist and dermatologists.
TOPIC: NEONATAL HAEMODYNAMICS

ABSTRACT ID: 131

TITLE: EARLY CLOSING OF DUCTUS ARTERIOSUS IN UTERO: A CASE REPORT

AUTHORS: J. Garvi 1; P.M. Rodríguez 2; J. Peiró 3; M. Velasco 4; O. García 5; M. Lorente 6

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

Introduction
The ductus arteriosus or conduit is a vascular structure allowing communication of the two fetal circulations and is vital to the survival and fetal development. Closure physiologically occurs after birth. In most cases it is related to the consumption of NSAIDs, flavonoids, steroids and other drugs. Should be included in the differential diagnosis of this entity if appearance dominance Right heart cavities., especially if associated signs of heart failure. The usual sonographic signs are cardiomegaly, right ventricular hypertrophy, ductus hourglass, pericardial effusion, and hydrops.

Clinical case:
A pregnant woman of 32.6 weeks of gestation. At ultrasound of the last trimester of pregnancy shows va dominance of right cardiac cavities, in addition to CIR. No history of interest, nor use of NSAIDs.

In advanced ultrasonography cardiomegaly (area C / area T = 0.45) is seen, dilated right heart chambers (RV / LV = 1.54; Pulm / Ao: 1.6) (Fig. 2), interatrial septum convex left and tricuspid regurgitation moderate (up roof jet holosistólico AD) (Fig. 3) as well as increased velocity flow duct (1.8 m / s); CIR is confirmed with impaired cerebroplacentario ratio.
At week 34, it was decided to terminate the pregnancy for signs of imminent full ductal closure (ductal flow increased acceleration to 2.13 m/s).
Elective caesarean is performed female, birth weight: 1800 grams, Apgar 9/10, and arterial pH = 7.31.
A postnatal examination morphological alterations as trigonocephaly, simian grooves in both plants clinodactyly arched palate appreciated. Cardiological evolution is satisfactory, presenting karyotype with a deletion of chromosome 8.
Conclusions
1. Closing ductus arteriosus an early stage during pregnancy is a rare but potentially underestimated entity.
2. The sonographic suspicion allows proper tempo fetal extraction avoid fatal results.
INTRODUCTION
Haemodynamically significant patent ductus arteriosus (hsPDA) is a common cause of mortality and morbidity in preterm infants. Existing medical therapies with ibuprofen or indomethacin have multiple adverse effects. Recent studies have shown that paracetamol can be used to treat PDA in preterm infants with good efficacy and seemingly few side effects.

OBJECTIVES

– To evaluate the efficacy and safety of paracetamol to treat hsPDA in preterm infants as an alternative to ibuprofen when it is contraindicated.
– To assess the mortality and morbidity among these infants.

METHODS

A retrospective observational study was carried out of all preterm infants admitted to our tertiary NICU who received IV paracetamol for hsPDA between July 2016 to June 2018. Echocardiography was performed before and after treatment. Data was collected from local, national electronic and other relevant databases.

RESULTS

We included 37 preterm infants who received IV paracetamol only for hsPDA. These infants had a mean gestational age of 25+5 weeks and mean birth weight of 798g. Male to female ratio was 1:3. The average age at starting paracetamol was 5 days. 92% received a paracetamol dose of
15mg/kg QDS, 8% received 10mg/kg TDS. The duration of treatment was 2-3 days, 60% completed 1 course while 30% had 2 courses of Paracetamol. PDA closure rate using paracetamol was 68% (25/37), compared to 69% (20/29) in patients who received ibuprofen during the same period (p=0.9). 14% (5/37) of infants had creatinine >100umol/L; 4 of which had high creatinine before paracetamol, which came down during and after treatment. Mean platelets count was $225 \times 10^9/L$, ranging from 26 to 443. 34% (12/37) of infants had platelets <100; all of whom had low platelets before paracetamol which remained stable during treatment. There were no liver function abnormalities following paracetamol use. 22% (8/37) had NEC/SIP. Cranial ultrasound before treatment showed large IVH in 30% (11/37) and small IVH in 27%(10/37). After treatment, 46%(17/37) had large IVH. On cranial ultrasound before discharge, 4/28 developed hydrocephalus and 1/28 PVL. Survival at discharge was 76% (28/37). For survivors, 79%(22/28) had chronic lung disease and 38%(11/28) needed home O2 on discharge. None of the infants who received paracetamol required surgical ligation.

CONCLUSION
In our cohort of preterm infants with hsPDA, IV paracetamol showed to be as effective as Ibuprofen; the closure rate was comparable to Ibuprofen. 76% of these infants survived at discharge, none of them needed surgical ligation. Although 79% developed chronic lung disease, only 38% discharged on home O2. Paracetamol may be a safe and effective alternative to ibuprofen for patients where ibuprofen is contraindicated. However, large trials including long neurodevelopmental outcome are required before recommending the routine use of paracetamol as a first line for hsPDA in preterm infants.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 78

TITLE: DIRECT COOMBS TEST: ITS IMPORTANTANCE IN THE EVALUATION OF NEONATES WITH ABO INCOMPATIBILITY?

AUTHORS: S. Ercin 1; N. Kavas 2; T. Gursoy 2

AFFILIATIONS: 1 Neonatology Unit, American Hospital, Istanbul, Turkey
2 Neonatology Unit, Koc University Hospital, Istanbul, Turkey

CONTENT

Introduction: Hemolysis from ABO incompatibility is one of the most common cause of isoimmune hemolytic disease that can cause significant morbidity. Positive Coombs test is considered a major risk factor for the development of severe hyperbilirubinemia and neurotoxicity.

Aim: To evaluate the importance of direct Coomb’s test in neonates with ABO incompatibility

Material methods: Medical records of all late preterm and term neonates with ABO incompatibility born in American hospital and Koc University hospital between January 2016 and January 2018 were reviewed retrospectively. Neonates with positive direct Coombs test constituted the study group whereas control group consisted of neonates with ABO incompatibility but the direct Coombs test is negative. Data for anthropometric parameters, percentage of weight loss, day of discharge, hemoglobin levels, first bilirubin, highest bilirubin and direct bilirubin levels, phototherapy exposure, rehospitalization were collected.

Statistical analyses were performed using the IBM SPSS Statistics software 21.0 (SPSS, Chicago, IL, USA). Descriptive analyses were presented using means and standard deviations and the Mann Whitney U test was used to compare. Chi-square test was used to compare categorical variables., and P < 0.05 was considered to indicate a significant difference.
Results: A total of 307 neonates were included in the study. A neonate with glucose 6 phosphate dehydrogenase deficiency was excluded so 306 neonates left. 231 (75.5%) had AO incompatibility, whereas 75 (24.5%) had BO incompatibility. Eleven (3.6%) neonates had both ABO and Rh incompatibility. However, none of them had positive direct Coombs test. Direct coombs test was positive in 31 (10.1%) neonates (study group), Control group consisted of 271 (89.9%) neonates with negative direct Coombs test. Direct Coombs test was positive in 8 of 75 (10.7%) BO incompatible neonates and 23 of 231 (10%) AO incompatible neonates (p=0.8). 52 (17%) neonates received phototherapy (PT) in the nursery. 31 (10.1%) neonates were rehospitalized for PT, among whom 12 neonates (12/31; 23.1%) had also received PT in the nursery. Characteristics of the groups are given in the Table 1. The neonates with negative direct coombs had lower gestational age. First bilirubin level is lower in the study group. However, the postnatal age it is obtained is younger in this group. Therefore, lower first bilirubin obtained in the study group can be explained by the earlier obtainment of bilirubin in that group. Besides, bilirubin level at 24th hour, highest bilirubin level, and rate of PT exposure and duration of PT are all higher in the study group. Whereas, hemoglobin level is lower in the study group. None of the neonates have undergone exchange transfusion.

Conclusion: Positive direct Coombs test in ABO incompatibility has clinical importance. Close follow up of these infants is crucial to prevent adverse outcome that can be caused by this condition.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 188

TITLE: PENTALOGY OF CANTRELL: CASE REPORT

AUTHORS: A.M. Bradeanu 1; C. Taran 1; L. Balanescu 1

AFFILIATIONS: 1. Grigore Alexandrescu Emergency Children’s Hospital, Bucharest, Romania

CONTENT

Introduction: Pentalogy of Cantrell (POC) is an extremely rare and usually lethal congenital syndrome characterized by: midline supraumbilical abdominal wall defect, lower sternal defect, diaphragmatic pericardial defect, anterior diaphragmatic defect and cardiac abnormalities including ectopia cordis (EC).

Methods: We report a case of a male newborn referred from level 3 maternity to our NICU at one hour of life for a complete form of POC.

Results: An antenatal ultrasound exam identified a large omphalocele; the mother refused the C-section and delivered spontaneously at 39Wks of gestation. The physical examination performed at birth revealed a giant omphalocele with a pulsatile mass situated above and a rupture of the membranous sac through which intestinal loops and liver protruded. During the first 3 hours of life the patient presented a severe respiratory distress; thus he was intubated and an emergency closure of the sac was performed. The CT scan revealed anterior diaphragmatic defect, sternal agenesis and a partial thoraco-abdominal ectopic heart; also a large ventricular septal defect was visible at the echocardiography. Postoperative, due to altered cardiovascular and respiratory functions, the patient remained mechanical ventilated with intravenous inotropic support, diuretic therapy and parenteral nutrition. During this period he suffered repeated episodes of severe bradycardia and heart failure and finally died after 4 months of hospitalization.
Conclusions: The surgical treatment strategy depends on the size of the abdominal wall defect, the type of EC and other cardiac anomalies. Patients with giant omphalocele often are unable to tolerate a single-staged approach due to a hypoplastic thoracic cavity with restrictive lung disease. In conclusion, due to a high mortality and severe complications, early prenatal diagnosis and parental counselling are essential.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 196

TITLE: PREDICTORS OF SUCCESSFUL EXTUBATION IN MECHANICALLY VENTILATED NEONATES

AUTHORS: K. Boudhar

AFFILIATIONS: Neonatal Intensive Care unit / Central hospital of army / Kouba Algeria

CONTENT

POSTER presentation

Introduction
The decision to extubate in infant is usually based on clinical assessment, blood gases, and ventilator settings. However, same newborn who are extubated on these criteria require reintubation, suggesting that the ability of clinicians to predict successful extubation is limited.

Objective
The aim of the study was to measure pulmonary mechanics in newborn before extubation and to correlate pulmonary function values with successful extubation.

Material and Methods
Pulmonary function testing was performed just prior to extubation on 124 infants mechanically ventilated for treatment of respiratory distress. All infants were ready for extubation as defined by clinical criteria. Pulmonary mechanics were measured by a pneumotachometer (Tidal volume, minute ventilation, dynamic lung compliance and pulmonary resistance).

Successful extubation was defined as greater than 72 hours without respiratory decompensation requiring reinstitution of ventilatory support.

Results
111 (89%) infants were successfully extubated and 13 (11%) infants failed extubation.
All patients met the clinical and biochemical criteria for extubation. Only dynamic lung compliance are statistically significant differences were seen between the two groups. Data suggests that successful withdrawal of mechanical ventilation may be related to multiple factors. Pulmonary function testing criteria alone may not be useful in determining optimal timing of extubation in newborn infants.

Conclusions
Only dynamic compliance of $\geq 0.9$ mL/cm H2O/kg predicted successful extubation.
We not recommend measurement of pulmonary function as an assessment tool in determining readiness for extubation.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 197

TITLE: VENTILATED NEWBORNS WITH NEONATAL RESPIRATORY DISTRESS IN A REFERENCE NEONATAL UNIT IN ALGERIA

AUTHORS: K. Boudhar

AFFILIATIONS: Neonatal Intensive Care unit / Central hospital of army / Kouba Algeria

CONTENT

POSTER presentation

Introduction
Neonatal respiratory distress (NRD) is a main cause of neonatal morbidity and mortality in developing countries. Early detection of its risk factors and early treatment of its etiologies are major challenges. Mechanical ventilation is the treatment of choice for severe NRD.

Objective
We aimed to determine the etiologies and outcome of ventilated newborns with NRD in a tertiary health care centre of Algeria.

Methods:
A retrospective recruiting was conducted over a period of three years (2012-2015), in which were included all newborns with NRD requiring conventional mechanical ventilation hospitalized at the neonatal intensive care unit of the Central Hospital of Army Algiers. Neonatal respiratory distress was diagnosed based on the presence of one or more of the following signs: an abnormal respiratory rate, expiratory grunting, nasal flaring, chest wall recessions and thoraco-abdominal asynchrony with or without cyanosis, in their files. Socio-demographic and clinical variables of newborns were analyzed.
Results:
122 newborns were analyzed. The main etiologies were hyaline membrane disease (54%), neonatal infections (20%) and transient tachypnea of the newborn (15%). Its neonatal mortality rate was 54%, mainly associated with neonatal sepsis and complications of mechanical ventilation.

Conclusion:
NRD is a frequent emergency and causes high morbidity and mortality. Progress remains to realize through the use of new ventilation modes but also in the global management of the premature infants.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 229

TITLE: NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE VERSUS BI-LEVEL POSITIVE AIRWAY PRESSURE AS AN INITIAL RESPIRATORY SUPPORT IN PRETERM INFANTS WITH RESPIRATORY DISTRESS: A RANDOMIZED, CONTROLLED NON-INFERIORITY TRIAL

AUTHORS: Mi-Ji Lee, MD 1, Won Young Lee, MD 1, Eui Kyung Choi, MD 1, Kyu Hee, Park, MD 1, Jeonghee Shin, MD 1, Byung Min Choi, MD, PhD 1

AFFILIATIONS: Department of Pediatrics, Korea University College of Medicine, Seoul, Korea

CONTENT

Background: Nasal continuous positive airway pressure (nCPAP) and bi-level positive airway pressure are frequently used as a noninvasive respiratory support in preterm infants with respiratory distress. Theoretically, BIPAP is more effective compared to nCPAP, but there are limited studies that compares nCPAP with BIPAP only as the initial respiratory support in preterm infants with respiratory distress immediately after birth.

Objective: The aim of this study is to compare clinical effectiveness and safety of nCPAP with BIPAP as an initial support preterm infants with respiratory distress.

Methods: A total 93 infants with a gestational age between 30 and 35 weeks, presenting mild to moderate respiratory distress, were randomized to nCPAP group (n=46, CPAP level 5 cmH2O) or to BIPAP group (n=47, Lower pressure 5 cmH2O, High pressure 8 cmH2O). The primary outcome was treatment failure (need for intubation). Secondary outcomes included successful weaning from the assigned device, duration of total respiratory support, chronic lung disease and complications of device such as pneumothorax or mucosal injury.
Results: The baseline demographic characteristics were not different between nCPAP and BIPAP groups. The treatment failure rate showed no significant difference between nCPAP and BIPAP. And the weaning rate from the assigned device did not differ between nCPAP and BIPAP. There were no differences in the incidence of chronic lung disease or other complications between the study groups.

Conclusion: We conclude that there is no evidence to support the noninferiority of nCPAP compared to BIPAP as an initial management of respiratory distress in premature infants between at 30 and 35 weeks gestational age.
TOPIC: NEONATAL INTENSIVE CARE

ABSTRACT ID: 249

TITLE: AVOIDING TERM ADMISSIONS INTO THE NEONATAL UNIT. A SINGLE TRUST 1 YEAR REVIEW OF ADMISSIONS WITH REFERENCE TO NATIONAL ATAIN PROGRAMME

AUTHORS: R. Walsh 1; N. Imolya 2; D. Evans 3; K. Swamy 4

AFFILIATIONS: 1. Neonatal Unit, Nottingham City Hospital, Nottingham, UK, rachel.walsh2@nuh.nhs.uk
2. Neonatal Unit, Nottingham City Hospital, Nottingham, UK, nora.imolya@nuh.nhs.uk
3. Neonatal Unit, Queens Medical Centre, Nottingham, UK, dale.evans@nuh.nhs.uk
4. Neonatal Unit, Nottingham City Hospital, Nottingham, UK, kumar.swamy3@nuh.nhs.uk

CONTENT

Background And Objectives
Between 2011 and 2014 the rate of live term births in the UK showed a declining trend. Over a similar time period, neonatal care days for the same population was seen to increase. There is widely recognised evidence detailing the bonding process between Mother and Baby in the first hours and days of life. A disruption of this by physical separation has adverse effects on breast feeding, physiological stabilisation and mental health. The national ATAIN programme reviewed term admissions across the UK, concluding that over 20% were potentially avoidable with alternative management or restructuring of services. There is a variation in local protocols and service provision between units. This review concerns two level 3 neonatal units within the same NHS trust. We reviewed term admissions to the neonatal units over a 1 year period. The aim was a comparison with national data, appraisal of the service delivered and
identification of any potentially preventable admission groups. The results will guide service development and family centred care.

Materials and Methods
The Badgernet database was used to identify all babies admitted over a 1 year period between 1/4/17 and 31/3/18. All babies were over 37 weeks completed gestation and were born within the trust. There were no other filters. The admission details of each baby was reviewed by a team of 3 reviewers. Sources of information were: Badger admission and discharge summaries, electronic inpatient notes and online blood results databases. Data was compiled in spreadsheet form by all 3 reviewers and analysed using Microsoft Excel by 1 analyser. Babies admitted to the neonatal unit as well as those attending for a septic screen were included in the analysis.

Results
882 babies were identified as admitted over the time period in question. This accounts for approximately 4.5% of the live term birth rate locally. Compared to national rates of 6 – 7%, this is encouraging. 44% were admitted to the neonatal unit while 56% attended for a septic screen only. The predominant admission categories were: Respiratory symptoms (37%), Hypoglycaemia (14%), Jaundice (3%) and Neurological (1%). Surgical problems accounted for 13% of all term admissions but are not addressed nationally and are defined as unavoidable admissions. Management was found to be largely appropriate. There were no unavoidable admissions of infants with jaundice. Neurological admissions were necessary from a neonatal point of view; although obstetric management is not appraised in this review. Only 5% of babies with hypoglycaemia were admitted during the first 4 hours of life, allowing appropriate time for physiological transition. This compared favourably to national data (30%). Areas with potential for optimisation were also identified. 37% of babies with respiratory distress were admitted for less than 48 hours and required no supplemental oxygen. 49% of hypoglycaemic babies required 2 hourly feeds but no intravenous (IV) therapy. 15% of admissions for respiratory symptoms and hypoglycaemia were hypothermic at the time of admission. Similar themes were identified locally as demonstrated in the national data.
Conclusions

Our overall term admission rates compare favourably to national data. In particular, the management of jaundice and hypoglycaemia is appropriate. Hypothermia in isolation does not account for a significant number of admissions but it is a recurring component symptom. It is likely that improved thermoregulation on the postnatal wards would reduce the number of infants presenting with hypoglycaemia and respiratory symptoms. In addition, an extension of transitional care services provided may help to prevent physical separation of mothers and babies. This would apply particularly to those in this review who received IV antibiotics, 2 hourly feeds and close respiratory and bilirubin monitoring. Such an extension would need appropriate staffing and policies to ensure the ongoing safety of these babies.
TOPIC: NEONATAL NETWORKS

ABSTRACT ID: 14

TITLE: ACCEPTABILITY OF NEWBORN PULSE OXIMETRY SCREENING TEST – MIDWIFERY VIEWS

AUTHORS: M. Giakoumi 1; O.K. Budha-Magar 2; Y. H. Chee 3; A.W. Kelsall 4

AFFILIATIONS: 1 Paediatric Department, Cambridge University Hospital, Cambridge, United Kingdom
2 Medical student, Cambridge University, Cambridge, United Kingdom
3 Paediatric Department, Cambridge University Hospital, Cambridge, United Kingdom
4 Paediatric Department, Cambridge University Hospital, Cambridge, United Kingdom

CONTENT

Background:
Newborn Pulse Oximetry Screening (NPOS) has been evaluated in multiple studies as a screening tool for detection of Congenital Heart Disease (CHD). The acceptability of this test amongst the staff who perform it, has not yet been properly documented.

Objective:
The primary aim of this study is to assess midwives’ experience in using the NPOS over the 4 years since it was introduced into this tertiary maternity unit in 2014.

Methods:
An electronic survey was sent to all the midwives working in the unit. The survey requested feedback on the ease of NPOS utilisation. The survey consisted of ten questions. On the feasibility scale, questions were scored on a scale from ‘1’ to ‘10’ with ‘1’ being ‘easy to perform with no disruption to care’ and ‘10’ being ‘difficult with problems including delayed discharges’. Other questions explored the respondents’ perception on usefulness and recollection of positive screening outcomes.
The data was analysed using the Wilcoxon Signed Rank test pairing each respondent’s rankings before and after NPOS introduction.

Results:
Complete responses were received from 99 out of 236 midwives (42% response rate). The average scale rankings of 3.46 (pre) and 2.38 (post) indicate that the midwives were very positive about the NPOS (z-value -4.5575; p-value of <0.001).

In addition, 95 (95%) of responding midwives stated that they routinely performed NPOS and 34 (35%) of them had at least one positive screening result. ‘Cardiac anomalies’ accounted for 15% of positive results. Other conditions identified include sepsis, diaphragmatic hernia and situs inversus. Virtually all, 98 (99%) respondents, felt that the NPOS was an important screening tool.

Conclusion:
Our single-centre survey showed that the NPOS was felt to be an easy screening tool to perform and it was regarded as an important screening test that has become well established in this unit.
TOPIC: NEONATAL NETWORKS

ABSTRACT ID: 22

TITLE: IMPROVED DESPATCH-TIME FOR TIME CRITICAL NEONATAL TRANSFERS – THE IMPACT OF DEDICATED VEHICLES

AUTHORS: M. Malviya
A. Leslie

AFFILIATIONS: CenTre Neonatal Transport, Nottingham University Hospitals, Nottingham, United Kingdom

CONTENT

IMPROVED DESPATCH-TIME FOR TIME CRITICAL NEONATAL TRANSFERS – THE IMPACT OF DEDICATED VEHICLES.
Presenting Author: M Malviya, CenTre Neonatal Transport, Nottingham University Hospitals, UK
Co-author: A Leslie, CenTre Neonatal Transport, University Hospitals of Leicester, UK
Abstract Topics: Neonatal networks

Introduction:
The UK Neonatal Transport Group defines national data collection items collected by all UK neonatal transport services. These are used to monitor performance against standards for emergency (unplanned) transfers which are deemed time critical. These state that the transfer team should depart from base within one hour from the start of the referring call (despatch time). There is standardised guidance as to what is classified as a time critical transport.
CenTre Neonatal Transport negotiated a new contract for the provision of dedicated crews and vehicles with East Midlands Ambulance Service from January 2013. Before this the vehicles were supplied ad-hoc from the A&E fleet. We wanted to identify the number of time critical referrals transferred
and compare despatch time to see if compliance with national standards improved with designated crews and vehicles

Methods:
Retrospective data review comparing three time periods. The first (July 2012-December 2012) was pre-introduction and the second two (January 2013-June 2013 and April 2016 – March 2017) post-introduction of dedicated crews and vehicles.
The data collected includes total number of time critical transports, percentage of time critical transports reaching the 1 hour despatch target & reason for delay if target not achieved.

Results:
The number of time critical transfers was greater in the earlier period (mean 4.6/month) than in the later two periods (mean 2.5 and 2.1 per month). Achievement of the one hour despatch target increased from 3/23 (13%) to 10/15 (66%) to 26/32 (81%) and the median despatch time fell from 110 to 45 minutes to 40 minutes over the three time epochs.
In the later two periods there were no recorded delays related to ambulance issues whereas in the earlier period there were 16 instances (70%) of an ambulance delay leading to failure of despatch within 1 hour.
The indication for triggering a time-critical transfer was reviewed for each case. The most common group of indications (n=32) were surgical emergencies, including ventilated oesophageal atresia/fistula & perforated NEC. Medical cases (n=27) were all unstable critically-unwell respiratory diagnoses, including severe respiratory distress syndrome, persistent pulmonary hypertension of the newborn and pneumothorax. In the later period 8 infants with hypoxic ischaemic encephalopathy were treated as time-critical in order to deliver active cooling to infants outside target temperature range at referral.

Conclusions:
Introduction of dedicated vehicles and crews has had a major impact on response to time critical transfers. Across the UK there is variance in ambulance provision and that this is a major factor in ability to achieve the 1 hour time critical target. All patients requiring time-critical neonatal transfer should have access to transport teams with dedicated vehicles. However we have also illustrated that ability to meet time critical transport
despatch targets is not solely reliant on ambulance provision but is a multifactorial process.
Introduction
Neonatal care in UK is provided in regional networks and the transport of infants between units is undertaken by specially commissioned neonatal transport services. The UK Neonatal Transport Group (NTG) is a clinician-led interest group affiliated to the British Association of Perinatal Medicine and which has representation from all UK neonatal transport services. NTG has developed and maintained an agreed transport dataset comprising carefully defined descriptive and physiological data items that all UK transport services agree to collect on all transfers. The dataset includes mutually-exclusive categories of transport (Uplift - transfer for care that the referring unit does not normally offer; Resource - transfer because of lack of space/staff to provide care locally; Repatriation - transfer to a centre closer to home). Further data regarding service provision are also collected. The dataset is reviewed each year and data items are iterated, added or removed.

Methods
Summary data covering the 6 month period Jan – June are submitted to NTG by each transport service every year. There has been complete data ascertainment for the years 2012-16, so these were examined to reveal trends in neonatal transport.

Results.
Results are given in Table 1.
The number of neonatal transport services covering the UK has fallen from 22 in 2012 to 15 in 2018. The proportion of services that have conference call facilities to support referrals and decision making has risen from 33% in 2012 to 72% in 2018. The proportion of services with vehicles dedicated to neonatal transport has increased from 58% in 2012 to 87% in 2018. The proportion of services with a consultant neonatologist scheduled to attend transfers 24hrs/7 days has increased from 24% in 2012 to 53% in 2018.

Conclusions
The UK is unique in having whole-country multi-service neonatal transport data collected according to robust definitions. The data show trends in a number of areas. High frequency oscillatory ventilation and high-flow oxygen therapy are emerging as new modalities for transport and the number of cases of each is increasing. The number of infants transferred on nitric oxide has increased by 50% over the period. The proportion of ventilated infants completing the transfer with pCO2 <4kPa has decreased. The proportion of time-critical transfers where the team is mobile within 60 minutes has increased.

Having a nationally agreed dataset and quality programme is associated with improving quality outcomes for transported infants and allows tracking of trends.
TOPIC: NEONATAL NETWORKS

ABSTRACT ID: 215

TITLE: IDIOPATHIC SCROTAL HEMATOMA IN NEONATE: A CASE REPORT

AUTHORS: S.Gkantseva-Patsoura¹, G.Karavana¹, G.Katsaras¹, P.Georgiadou¹, R.Sokou¹, N. Lainakis², R.Theofanopoulos³, M.Theodoraki¹

AFFILIATIONS: 1.NICU, General Hospital of Nikaia"Agios Panteleimon"-Peiraius,GREECE
2.Department of Pediatric Surgery, General Hospital of Nikaia"Agios Panteleimon"-Peiraius,GREECE
3.1-st TOMY, Sparti, GREECE

CONTENT

Introduction
Scrotal hematoma is the collection of blood inside the scrotum, which contains the testicles, the epidididimis and the spermatic cord. It is a rare genitourinary emergency in a neonate. Same cases have clear etiology such as testicular torsion, inguinal hernia, adrenal hemorrhage, meconium peritonitis, hematoccele, testicular tumor or birth trauma, whereas in some cases no cause may be discernable. Because Doppler ultrasonography (DUS) in the small neonatal testis has previously been regarded as inconsistently diagnostic, scrotal exploration was considered necessary for the diagnosis and treatment of these neonates. We report a case of idiopathic scrotal hematoma in a neonate which was managed conservatively with clinical and radiological follow-up, emphasizing the role of ultrasonography.

Case Presentation
A term male neonate (Ballard Score: 36w GA) was delivered by a 21-year-old woman at home with no professional care, no labors in pregnancy. He was transported by ambulance to the nearest Hospital where he was resuscitated and intubated. Afterwards, he was transported again by ambulance to our tertiary NICU at approximately the 6th hour of life.
At the time of admission, because he was hemodinamically stable, he was extubated. He was a SGA neonate with BW 2000gr. The examination of the abdomen was normal. Painless swelling of the scrotum and hydrocele were clinically observed. He had hematocrit -48.6%, normal platelet count and a negative Coombs test. He received vitamin K.

At the 3rd day of life jaundice appeared and phototherapy started. Furthermore, bruises were observed at both groins as well as at the whole scrotum. The swelling of the scrotum was thickened. There was no clinical feature suggestive of trauma or bleeding diathesis. The ultrasonography of the abdomen, the adrenals and the testicles were all normal. Clinical examination by a Pediatric Surgeon took place that excluded the acute scrotum.

At the 4th day of life the phototherapy was stopped. Due to the progressing clinical condition at the groins and scrotum, we conducted a new ultrasonography at these areas. The scrotal wall was grossly thickened (due to hematoma) and edematous, while the echogenic structure of both testicles was normal.

Based on the clinical and laboratory examination, we reached to the diagnosis of idiopathic hematoma. The child was managed nonoperatively. He was monitored clinically and radiologically. Follow-up ultrasound scans revealed complete resolution of the earlier noted hematoma at the scrotal wall.

Conclusion
The diagnosis of neonatal scrotal hematoma should be considered in a newborn with scrotal swelling and bluish discoloration. Some risk factors can be identified, e.g. evidence of bleeding diatheses, maternal gestational diabetes and high birth weight, evidence of delivery-related trauma or predisposing intra-abdominal lesions (adrenal hemorrhage, subcapsular liver hematoma) on ultrasonography. Hemoscrotum may be managed conservatively, with the exception of spermatic cord torsion as the cause which requires surgical treatment. A thorough clinical examination and ultrasonography are the cornerstones in establishing an early diagnosis. Idiopathic scrotal hematoma is usually a diagnosis of exclusion but not commonly encountered.
TOPIC: NEONATAL RESUSCITATION

ABSTRACT ID: 20

TITLE: MECONIUM STAINED LIQUOR AND ITS NEONATAL OUTCOME – A CLINICAL STUDY

AUTHORS: N. Mohammad 1; T. Jamal 2; A. Sohaila 3; S.Ahmed 4; S. Rehan Ali 5.

AFFILIATIONS: 1-3: Department of Pediatrics, Aga Khan University Hospital, Karachi, Pakistan.
4: Department of Bio technology, Karachi University, Karachi, Pakistan.
5: Department of Pediatrics, Indus Hospital, Karachi, Pakistan.

CONTENT

Background: Meconium Stained Amniotic Fluid (MSAF) is an alarming sign of fetal compromise and associated with a poor perinatal outcome. Incidence of meconium stained amniotic fluid ranges from 7-22%, while meconium aspiration syndrome (MAS) occurs in approximately 5% of all cases of MSAF. MAS contributes to neonatal death in up to 0.05% (i.e. 1 in 2000 of all pregnancies). Unfortunately Pakistan is number three among those ten countries who contribute two-thirds of the world’s neonatal deaths with an estimated neonatal mortality rate of 49 per 1000 live births. One such attribute is MSAF, 27.3% of neonatal deaths had a history of or evidence of meconium passage during delivery. Meconium stained neonates are more prone to develop respiratory distress than neonates born with clear fluid. MSAF predisposes perinatal mortality even in women with very low risk for obstetric complications. MSAF is associated with higher rate of caesarean delivery, instrumental delivery, NICU admission, fetal distress, low birth weight, neonatal death. Therefore identification of maternal factors may help to anticipate the need for neonatal resuscitation in delivery room which eventually help to improve the perinatal outcome and reduce perinatal mortality and morbidity associated with MSAF.
Objective: To determine the maternal factors and neonatal outcome of pregnancy complicated by meconium stained amniotic fluid.

Methods: This one year retrospective study was conducted at the Aga Khan Hospital for women Garden. Demographics information included gestational age, gender and birth weight of baby, medical and obstetric complications during pregnancy, mode of delivery, neonatal outcome (Meconium Aspiration Syndrome (MAS) and need for admission in nursery) were recorded on a pre-designed proforma.

Results: In our study the frequency of meconium stained amniotic fluid (MSAF) was 7.85%, out of them 12 % babies developed MAS. There was significant association between grades of meconium and MAS, babies with thick meconium were prone to develop MAS (P = 0.02). Emergency cesarean section was significantly associated with MAS. Gestational diabetes (GDM) and pregnancy induced hypertension (PIH) were the significant factors associated with MAS.

Conclusion: Thick Meconium stained amniotic fluid was associated with low APGAR score, high rate of emergency cesarean section and meconium aspiration syndrome. Anemia during pregnancy, PIH and GDM were important risk factor associated with MAS.
TITLE: THE EFFECT OF PERINATAL HYPOXIA ON LIPIDS IN TERM NEWBORNS

AUTHORS: Jovandaric ZM
present author Milenkovic JS

AFFILIATIONS: Clinic for Gynecology and Obstetrics, Department of Neonatology, Clinical Center of Serbia
Correspondence to: Miljana Z. Jovandaric, Clinic for Gynecology and Obstetrics Clinical Center of Serbia, Department of Neonatology, Visegradska 26, 11000 Belgrade, Serbia

CONTENT

The effect of perinatal hypoxia on lipids in term newborns
Miljana Z. Jovandaric 1, Svetlana J. Milenkovic1
[1] Clinic for Gynecology and Obstetrics, Department of Neonatology, Clinical Center of Serbia
Correspondence to: Miljana Z. Jovandaric, Clinic for Gynecology and Obstetrics Clinical Center of Serbia, Department of Neonatology, Visegradska 26, 11000 Belgrade, Serbia
Email: rrebecca080@gmail.com

Abstract
Objective: To test the influence of perinatal hypoxia on lipids in term newborns.

Materials and Methods: A prospective study included 50 consecutively born in term infants with the urge for oxygen therapy after birth. The control group consisted of the same number of healthy newborns consecutively born in the same period. Groups were matched by gender, gestational age and anthropometric parameters at birth and arterialized capillary blood was taken for analyses (pH, pCO2, pO2, BE) immediately after birth; also target biochemical parameters (total cholesterol, high density lipoprotein
(HDL), low density lipoproteins (LDL), triglycerides) were obtained from venous blood (cubital veins).

Results: There was no statistically significant difference in body weight and head circumference between groups. Body length, Apgar scores and gestational age were significantly different. Levels of arterialized capillary blood gases at birth and in the second hour of life (pH, pCO2, pO2, HCO3 and base excess) were significantly different between the groups in both times. Levels of cholesterol, TG, LDL and HDL after 24 hours of life were statistically different between groups.

Conclusion: The concentration of lipids in the hypoxic newborns may be of a great diagnostic value in assessment of hypoxia severity and also can contribute or/and revise current therapeutic approaches.

Key words: perinatal hypoxia, lipids, newborn
TOPIC: NEW TRENDS IN NEONATOLOGY

ABSTRACT ID: 258

TITLE: USING NEW CONCEPT IN NEONATAL INTENSIVE CARE RESULTED IN DECREASE IN MORTALITY AND MORBIDITY IN A HUNGARIAN CENTRE

AUTHORS: E.R. Czemmel 1, I.Kocsis 2, N. Ács 3,

AFFILIATIONS: 2nd Department of Obstetrics and Gynecology, Semmelweis University, Budapest, Hungary

CONTENT

Infant mortality rate is an important statistical data describing the level of a country’s health and socioeconomic status. Premature birth is the biggest contributor to death under 1 year of age in developed countries. Between 2013 and 2017 there was a 30% decrease in infant mortality in Hungary. Spectacularly in 2017 it was a mere 3.6%.

There has been a substantial change in the last 5 years in neonatal intensive care at the Perinatal Intensive Centre of 2nd Department of Obstetrics and Gynecology, Semmelweis University Budapest, Hungary including the introduction of a non-invasive approach in delivery room stabilisation, in respiratory care and in surfactant administration. Furthermore, a strong cooperation has been established between neonatal and obstetrics services in order to prevent prematurity and for the optimisation of time and other circumstances of premature births in pathological cases of Very Low BirthWeight (VLBW) neonates.

Our presentation compares the statistics of mortality and morbidity of VLBW infants born before (2012) and after (2016 and 2017) the introduction of new concept in neonatal intensive care in our department. Gestational age, anthropometric parameters and parameters of respiratory care, modes and incidence of surfactant administration and the incidence of Bronchopulmonary Dysplasia (BPD) were compared among the populations of VLBW infants admitted in 2012 (n=100), 2016 (n=111) and
2017 (n=101). In the populations of VLBW neonates the average gestational age was changed from 28.6±3.25 to 29.6±2.8 weeks in years 2012 to 2017, respectively. The average gestational weight was also elevated from 1056±306 to 1196±289 grams in years 2012 to 2017, respectively.

During the study’s years mechanical ventilation was administered for 687 days in 2012, 365 days in 2016 and 189 days in 2017. Surfactant administration was needed in 82 cases in 2012, 63 cases in 2016 and 58 cases in 2017 among the group of VLBW. The mode of surfactant administration technique was also changed in the investigated years, in most cases Minimal Invasive Surfactant Therapy (MIST) technique was used instead of INSURE (INtubation-SURfactant-Extubation). The incidence of BPD was significantly decreased during, before and after the period of the introduction of new concept in neonatal intensive care in our department.

The prevention of prematurity the high rate of antenatal corticosteroid administration, the prolongation of pathological pregnancies under thorough obstetric control, as well as the strong cooperation and teamwork between obstetricians and neonatologists and the introduction of non-invasive neonatal intensive care, resulted in a decrease in mortality rates from 14% in 2012 to 1% in 2017 in our Perinatal Intensive Centre.
Title: S100B Protein as Biomarker of Neuroapoptosis in Healthy Newborns at Term: An Observational Study

Authors: E. Soto-Pazos 1; H. González-Cedrún 2; R. Quintero Prado 3; C. González Macías 4; JD. Santotiribio *5; L. Moreno-Corral 6; J.J. Fernández-Alba 7.

Affiliations: Department of Obstetrics and Gynecology
*Department of

Content

Background
At birth, some newborns have transient respiratory acidosis. In the absence of other complications, the clinical course of these newborns is usually favorable. However, the effect that this transient acidosis exerts on the central nervous system of the newborn has not been well studied. The aim of the present study is to determine if newborns with transient respiratory acidosis at birth have greater neuroapoptotic activity than newborns with normal acid-base balance.

Methods
Cross-sectional descriptive study. Sixty-one seemingly healthy newborns were included. The neuroapoptotic activity was quantified at birth by determining the levels of S100B protein in umbilical cord blood. At the same time the pH, pCO2 and lactate levels were determined. The optimal cut-off point for pH and pCO2 to predict neuroapoptosis in the newborn was determined by ROC curves.

Results
Of the 61 newborns included in the study, 12 had neuroapoptotic activity and 49 did not. S100B protein levels correlate directly with the levels of pCO2 (Rho: 0.286, p <0.05) and lactate (Rho: 0.278, p <0.05); and indirectly with the pH (Rho: 0.286, p = 0.01). In the prediction of neuroapoptosis, the
optimal cut-off point of pH was 7.19 (sensitivity: 50%, specificity: 83.7%, AUC: 0.708); and the optimal cut-off point of pCO2 was 60 mm Hg (sensitivity: 30%, specificity: 85.4%, AUC: 0.705).

Conclusions
Transient respiratory acidosis of healthy newborns was related to high concentrations of S-100B in NB cord blood. pH and pCO2 can be diagnostic biomarkers of neuroapoptotic activity in apparently healthy NB.
TOPIC: NUTRITION AND EARLY FEEDING IN PERINATAL PERIOD

ABSTRACT ID: 11

TITLE: KANGAROO MOTHER CARE NURSERY AS A POSITIVE MODULATOR IN THE SUCCESS OF EXCLUSIVE BREASTFEEDING

AUTHORS: G.M.Fernandes 1; J. Caetano 2; R.F. Pinto 3; G. Buitrago 4; M. Papa 5.

AFFILIATIONS: 1 Area of Medicine for Children and Adolescents, University of Brasilia, Brasilia Brazil
2 Area of Medicine for Children and Adolescents, University of Brasilia, Brasilia Brazil
3 University Hospital of Brasilia, University of Brasilia, Brasilia Brazil
4 Area of Medicine for Children and Adolescents, University of Brasilia, Brasilia Brazil
5 Area of Medicine for Children and Adolescents, University of Brasilia, Brasilia Brazil

CONTENT

BACKGROUND:

Exclusive breastfeeding in preterm infants is a challenge in Brazil. Breastfeeding is worldwide known for its benefits in nutrition, mother-baby relationship, immunity, socioeconomic aspects, child development, and also the benefits for mother health. Despite the increasing encouragement of breastfeeding by health care professionals, health services and health policies, it is evident the early weaning of breastfeeding among Brazilian mothers. Among the main reasons for it are misinformation about the topic and the belief that breast milk is not enough for baby nutrition and development⁵. In addition, the role of health professionals may positively or negatively influence the onset and duration of breastfeeding.

The Kangaroo Mother Care is an effective method in reducing mortality among preterm and low birth weight infants. The method consists of prenatal care model focused on humanized care that combines strategies of biopsychosocial interventions that includes skin-to-skin contact between a mother and her newborn, frequent or exclusive breastfeeding
and early discharge from hospital. This is a safe, low-cost intervention and helpful to prevent many complications with preterm birth and also provide benefits to full-term newborns, such as improving overall physiologic regulation in the neonate. The Kangaroo Mother Care method is also an important ally in continuity of exclusive breastfeeding. The Kangaroo Mother Care Method in the maternity ward of HUB (University Hospital of Brasilia) has 6 beds in Kangaroo Mother Care Nursery, which aims to monitor growth and development of the babies, encouraging exclusive breastfeeding until hospital discharge.

OBJECTIVES:
To analyze if the maternal stay time in Kangaroo Mother Care Nursery interferes in the success of breastfeeding in premature newborn.

• METHODS:
This is a prospective cross-sectional study, in which medical records of patients admitted in the Kangaroo Mother Care Nursery of HUB were analyzed for 20 consecutive weeks (from January to May/2017). The medical records were accessed as the service is available. Were excluded from the research the following: older than 37 weeks of gestacional age, not admitted in Kangaroo Mother Care Nursery, babies with any syndrome or birth defects.

• RESULTS:
Among the 34 babies analyzed, 26 babies and their mothers were full time admitted in the Kangaroo Mother Care Nursery. From this 26 babies, 25 were exclusively breastfed at discharge and 1 were mix breastfed at discharge. Among the 8 babies, whose mother were not full time admitted in the Kangaroo Mother Care Nursery, 1 were exclusively breastfed at discharge, 5 were mix breastfed at discharge and 2 were discharged in formula feeding.

• CONCLUSIONS:
Despite the limited sample, the data suggests that the permanence of mothers in the Kangaroo Mother Care Nursery was positive for the promotion and maintenance of exclusive breastfeeding.
BACKGROUND: Based on extensive long-term research, scientists have developed the concept of nutritional programming. The main postulate states that the quality of maternal nutrition in pregnancy has a crucial influence on the functioning of the child’s metabolism. It’s development begins at the time of conception and continues for the next 1000 days.

OBJECTIVES: To evaluate the knowledge of women in reproductive age of nutrition during pregnancy and nutritional support by health care professionals.

METHODS: A group of 302 Polish women in reproductive age up to one year after delivery (single pregnancy) of 327 who completed an online questionnaire. The survey included questions concerning demographic data, complications during pregnancy and labour, eating habits and the use of diet supplements.

RESULTS: The percentage of women with proper pre-pregnancy BMI (18.5-24.9 kg/m2) was 67.5% and with proper weight gain during pregnancy was 38.7%. Folic acid and other dietary supplements during pregnancy declared 98% and 81.7% participants respectively. More than 80% of women changed eating habits during pregnancy (9.8% of them due to the
worsening health condition). Almost 71% of women began to pay more attention to nutrition in pregnancy, but only 3.6% sought the advice of a dietician. Over 65% of women did not receive any information on nutrition in pregnancy from their gynaecologists and just in 2.6% of cases doctors recommended them to consult a dietician. Almost 72% of women did not receive any information on nutrition from their midwives and only 2% of them were referred to a nutritionist. The most popular principles of healthy nutrition during pregnancy among patients (Table 1) were: the exclusion of alcohol (90%), avoiding products made from unpasteurized milk and raw eggs (75%), avoiding raw fish and seafood (74%). As many as 60% of pregnant women would like to get guidance on healthy gestational nutrition from a doctor or midwife and an additional 24.5% believe that education in healthy eating should be carried out in cooperation with a nutritionist.

Conclusions: The awareness about nutrition significance among many pregnant women is still insufficient. Lack of information implies a situation in which the Internet and people from the immediate surroundings are more likely chosen as a source of information rather than physicians and midwives. Therefore the guidelines of experts in gestational nutrition consensus should be known to healthcare professionals and conveyed to pregnant women in order to prevent harmful effects of inappropriate diet to both mother and child metabolism.
TOPIC: NUTRITION AND EARLY FEEDING IN PERINATAL PERIOD

ABSTRACT ID: 95

TITLE: PERINATAL RISK FACTORS OF EARLY ONSET HYPOCALCEMIA IN LATE PRETERM INFANTS

AUTHORS: JM Jung; EH Lee; EK Choi; KH Park; BM Choi.

AFFILIATIONS: Department of Pediatrics, Korea University College of Medicine, Seoul

CONTENT

BACKGROUND Early onset hypocalcemia which presents within 72 hours after birth is frequently founded in neonate and recommended to screen and treat in high risk infants. Although prophylactic calcium supplementation is recommended in extremely preterm infants, there is no consensus in late preterm infants.

OBJECTIVE to evaluate the risk factors as predictive values of early onset hypocalcemia and the effectiveness of intervention in late preterm infants.

METHODS This is a retrospective study, examining late preterm infants (32-36 weeks of gestation age) who admitted to neonatal intensive care units in Korea University Anam and Ansan hospitals from Jan 2017 to May 2018. Perinatal factors were analyzed comparing infants with hypocalcemia (serum ionized calcium of day 3 < 4.0 mg/dL) to infants with non-hypocalcemia. To estimate the effect of the recovery of early onset hypocalcemia, infants with hypocalcemia were divided and analyzed in infants with intervention or not. The logistic regression was used to evaluate the predictive factor of early onset hypocalcemia.

RESULTS Total 112 infants were enrolled and divided into two groups; non-hypocalcemia (n= 65) and hypocalcemia (n= 47). Between two groups, there were no differences of gestational age, birth weight, serum calcium and ALP levels of day 1, Apgar scores, small for gestational age, hypoglycemia, maternal hypothyroidism, oligohydramnios, maternal...
diabetes mellitus, maternal pregnancy-induced hypertension, and maternal magnesium administration before delivery. However, there were significant differences of serum phosphorus (mean 6.00 mg/dL vs. 5.71 mg/dL, P = 0.04) and magnesium level (mean 1.73 mg/dL vs. 1.98 mg/dL, P = 0.01) of day 1. Serum magnesium level of day 1, alone, was related to hypocalcemia of day 3 with odds ratio of 0.226. Other variables were founded to be irrelevant to cause hypocalcemia. The cut-off value of serum magnesium level of day 1 was analyzed at 1.7 mmol/L to cause hypocalcemia (sensitivity 42.6%, specificity 80.0%, P = 0.005). Maternal magnesium use was unlikely to contribute to the increment of the baby’s serum magnesium level of day 1. In infants with hypocalcemia, there was no infants showed clinical seizure. The intervention as oral calcium supplement or low phosphorus milk feeding was more effective to recover hypocalcemia than no intervention.

CONCLUSIONS Hypermagnesemia of day 1 may cause less hypocalcemia by four times. Late preterm infants with less than 1.7 mmol/L of serum magnesium level of day 1 are recommended to be monitored of early onset hypocalcemia. However, large scaled randomized control studies are required for the clinical application regarding intervention of early onset hypocalcemia in late preterm infants.
TOPIC: NUTRITION AND EARLY FEEDING IN PERINATAL PERIOD

ABSTRACT ID: 164

TITLE: RELATIONSHIP BETWEEN MATERNAL VITAMIN B12 AND POSTPARTUM DEPRESSIVE SYMPTOMS: CORRELATION WITH NEONATAL TEMPERAMENT.

AUTHORS: P. Dhiman1; S. Rajendiran2; RR Pillai3; N. Premkumar4; B Bharadwaj5.

AFFILIATIONS: 1-Dept of Biochemistry, JIPMER, Puducherry, India
2-Dept of Biochemistry, JIPMER, Puducherry, India
3-Dept of Biochemistry, JIPMER, Puducherry, India
4-Medical social wing, JIPMER, Puducherry, India
5-Dept of Psychiatry, JIPMER, Puducherry, India

CONTENT

Introduction
The study examined relationship between maternal vitamin B12, postpartum depressive symptoms and neonatal temperament.

Material and methods
Within a cohort of women in their 6 weeks of postpartum period, 217 women with relative risk of depression and 217 women without the risk were recruited using Edinburgh postnatal depression scale (EPDS) with a cut-off of 10. Information regarding neonatal physiological health (APGAR score, and birth weight) and temperament (presence or absence of excessive crying defined by > 3 hours per day in past week) were obtained. Maternal plasma was used to analyze total vitamin B12 and holotranscobalamin using commercially available ELISA kits.

Results
Total vitamin B12 concentration was significantly lower in those with postpartum depressive symptoms than those without them (p=0.000). Among women with depressive symptoms, total vitamin B12 levels were negatively associated with neonatal temperament (r= -0.176, p=0.009).
Conclusion

Lower plasma B12 status during postpartum was associated with depressive symptoms and affects neonatal crying behaviour.
TOPIC: NUTRITION AND EARLY FEEDING IN PERINATAL PERIOD

ABSTRACT ID: 181

TITLE: OPTIMISING PLASMA AMINO ACID PROFILES IN VERY PRETERM NEONATES USING A MODIFIED PARENTERAL NUTRITION FORMULATION WITH ADDITIONAL ARGinine

AUTHORS: C.M. Premakumar 1,2; M.A. Turner 1,3; C. Morgan 3

AFFILIATIONS: 1. Department of Women’s and Children’s Health, University of Liverpool, Liverpool Women’s Hospital, Liverpool, UK
2. Faculty of Pharmacy, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
3. Neonatal Intensive Care Unit, Liverpool Women’s Hospital, Liverpool, UK

CONTENT

Introduction
We have previously shown that neonatal plasma amino acid (AA) profiles suggest there is an oversupply of essential AA and undersupply of some conditionally essential AA, including arginine in current neonatal parenteral nutrition (PN) formulations (1). Arginine is the most abundant nitrogen carrier as it contains four nitrogen atoms per molecule and this is reflected in the important role it plays in fetal nutrition and metabolism. Arginine accounts for more than 12% of protein AA content and is involved in multiple metabolic functions including ammonia detoxification, inflammatory and immune function, nitric oxide synthesis, creatine and polyamine synthesis. Deficiency has been associated with hyperammonaemia, hyperglycaemia, NEC, PPHN and sepsis. The consequences of moderate oversupply of essential AA is unknown but suboptimal protein synthesis is likely to result from unbalanced AA provision. It is feasible to rebalance the neonatal PN AA formulation by increasing arginine content and reducing the total essential AA to maintain the same total AA content. We designed such a formulation by adding arginine to an existing UK neonatal PN AA formulation.
Objectives
To stability test the modified PN AA formulation (15% Arginine); to compare day 3 (D3) and day 10 (D10) plasma AA profiles achieved with the modified PN AA formulation and the unmodified (Arginine 6.3%) solution in PN-dependent preterm infants receiving the same total PN AA intake.

Methods
Stability testing for the modified PN (15% Arginine) was conducted (up to 90 days) using physical chemistry test specifications from the British Pharmacopoeia and Yellow Cover Document. AA analysis was also included to obtain laboratory measurements of AA in the formulation over time using ion exchange chromatography (IEC). This test was incorporated for the first time to test stability of PN formulations. The clinical study received ethics approval and parental consent was obtained before treatment allocation. Very preterm neonates (VPNs) born <29 weeks’ gestation and/or <1200g were non-randomly assigned in the first 72 hours of life to receive either modified PN AA formulation or standard PN AA formulation using the established PN regimen guidelines. Plasma AA levels were measured using IEC on D3 and D10 of life.

Results
A PN formulation containing 15% arginine was designed and tested in the laboratory for stability purposes. It was proven to be stable for a shelf life of 90 days without trace elements solution and 7 days with trace elements solution. The AA concentrations (including arginine) also remained stable over this time in the PN formulations. The mean gestation and birthweight for the control group was 27+6 weeks’; 904g and 27+5 weeks’; 961g for the intervention group. 8 neonates received standard PN (6.3% arginine) and 10 neonates received PN with 15% arginine (2 deaths before day 10 resulted in 8 infants completing the study on day 10). Plasma arginine levels were higher on D10 of life in the intervention group (mean 68.4±57.8 vs 45.9±20.4µmol/L, p=0.3) but this was not statistically significant. Figure 1 shows that neonates on the intervention group had mean plasma levels of essential AA and arginine closer to the reference values from a population of infants <6months old. Mean threonine levels are not included in Figure 1 as they were very much above the reference mean, although the mean percentage of threonine levels had markedly reduced in the intervention group to 395% compared to 847% in the control group. Absolute mean
threonine values were significantly higher in control group (744.0±281.7µmol/L vs 418.4±195.7µmol/L, p=0.018).

Conclusion
Neonatal PN formulations with a much higher arginine content than currently in licensed PN AA formulations reduces arginine deficiency and rebalances the preterm plasma AA profile to more closely resemble that of healthy infants.

Acknowledgement:
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References
Background and Aims: Previously, data from Sullivan et al. (JPeds April 2010) and Cristofalo et al. (JPeds Dec 2013) were reanalyzed using the proportion of cow milk-based nutrition received and demonstrated that the incidences of NEC, NEC requiring surgery and sepsis increased proportionally to the amount of dietary cow milk in extremely premature (EP) infants (birth weight 500 - 1250 g).

Methods: We combined the data from the two studies (and potentially others) yielding a cohort of at least 260 infants who received varying amounts of cow-milk. Outcome measures are shown below. Analysis utilized a negative binomial regression statistical model. The percent of cow milk-based nutrition was one predictor investigated, mitigated by other risk factors.

Results: For all outcomes the larger percentage of cow’s milk in the diet the greater the number of days of intervention required. However, only TPN days and days to full feeds achieved significance.

Clinical Outcome p-value for % cow’s milk
PN days 0.0280
Central line days 0.2300
Ventilator days 0.0600
O2 days 0.9000
Days to full feeds  0.0028
Conclusions: Incorporation of any cow milk-based nutrition into the diet of EP infants correlates with more days on TPN and a longer time to full feeds. Additionally, there was a trend towards increased ventilator days. These represent additional negative clinical consequences of the use of cow milk-based protein in feeding EP infants. Negative clinical outcomes are associated with increased health care costs indicating that cow-milk based nutrition has significant negative financial implications as well.
Introduction: It is estimated that every year 15 million preterm are born worldwide. In addition to the increase in preterm births, there are a significant increase in their survival in recent years. Growth disorders in the neonatal period can lead to long-term sequelae. The monitoring of anthropometric measures provides data for the diagnosis of possible deficiencies, since it allows to qualify the morphological variations resulting from the growth period and to monitor and assess the effectiveness of interventions and avoid harmful damages. Objective: Describing the weight profile of preterm infants in the first follow-up visit to the different types of feeding. Material and Methods: Data were collected regarding the birth and first consultation (gestational age, corrected gestational age and weight); type of feeding in the first follow-up visit; Weight data were placed on the Fenton Scale up to the corrected age of 50 weeks. Data were presented in median, minimum and maximum. Descriptive statistics were used to present the data. Results: A total of 36 medical records were analyzed. The sample consisted of 25 male preterm infants and 11 female
infants. The median gestational age at birth was 31 + 4 weeks, minimum 27 + 3 weeks, maximum 33 + 6 weeks. The median birth weight was 1528g, minimum 775g, maximum 2255g, only 1 (2.78%) was below P3 at birth, 3 (8.33%) above P90 and 32 (88.89%) were adequate on the FENTON scale. The median time of hospitalization was 39 days, minimum of eight days, maximum of 97 days. The median time between hospital discharge and first visit was 7.5 days, minimum of two days, maximum of 25 days. The median corrected gestational age at the first visit was 37 + 5 weeks, minimum 35 + 5 weeks, maximum 41 + 3 weeks. The median weight at the first visit was 2100g, minimum 1850g and maximum 3190g, only six (16.67%) were adequate on the FENTON scale and 30 (83.33%) were inadequate, of these 19 (63.33% %) were below P3 and 11 (36.67%) between P3 and P10. The prevalence of exclusive breastfeeding (EBF) at the first visit was 72%, mixed breastfeeding (MBF) 16.67% and bottle feeding (BF) 8.33%. All six preterm infants with adequate weight on the FENTON scale were in EBF. Conclusion: Most premature infants had inadequate weight at the first follow-up visit. Exclusive breastfeeding may provide adequate weight profile for preterm infants. The use of infant formula did not guarantee adequate weight gain.
Background. One in five pregnant women has obesity in Europe (X. Le Tinier B, 2018). It is well-known that maternal obesity is a risk factor for adverse maternal, fetal, and neonatal events. Numerous clinical trials are currently exploring the effectiveness of antenatal and peripartum interventions in improving pregnancy outcomes that can in future inform clinical practice. (Dadouch R, 2018).

Objective was to evaluate the outcomes of pregnancy and labor in women with morbid obesity.

Material and Methods. The study included 110 pregnant women and their newborns. The main group (I) consisted of 70 women with obesity, the control group (II) consisted of 40 normal weight women. The average age were 25.8±1.1 and 26.3±1.1 age (p>0.05). Body weight were 91.7 ± 15.6 and 68.8 ± 8.1 kg (p < 0.001), body mass index before pregnancy – 35.9 ± 5.6 kg/m2 and 20.5 ± 2.4 kg/m2 (p < 0.001). 40% of pregnant women had first degree of obesity, 54% - second degree and 6% - third degree. The hormonal levels were determined by Immunoassay method in the serum of pregnant women in the period from 37 to 39 weeks and in cord blood. We carried out statistical processing of the results using by program «Statistica for Windows 6.0».

Results. The results of this study showed that women with obesity had a statistically significant higher frequency of preeclampsia - 87% (p<0.001), gestational diabetes - 65% (p=0.032), placental insufficiency - 57% (p=0.047)
than normal weight women - 8%, 10% and 37% correspondingly. The episode of acute or recurrent vaginal candidiasis during pregnancy had 62% obese and 13% normal weight women (p=0.034). 29% of pregnant women with obesity are given a cesarean section, in the control group - 8% (p=0.025). The majority of women with obesity are registered for complicated births. Obese women had obstructed labor in 54%, normal weight women - in 8% (p = 0.03). Hypogalactia occurred in 37% of obese women and in 8% of normal weight women (p = 0.006). Asphyxia occurred in 46.4% of newborns in the main group and 5.4% in the control group (p<0.001). Obese mothers had a higher frequency of small to gestational age newborns and macrosomia in 13% and 28% (p <0.001), in the control group - in 7% and 2% correspondingly (p<0.001). Pregnant women with obesity were characterized by higher levels of prolactin, ACTH, cortisol and leptin and lower levels of TSH, T4 compared with pregnant normal weight women. The level of prolactin in Group I was 69.8 ± 4.3 ng/l, in Group II - 52.4 ± 3.7 ng/ml (p <0.001). The level of ACTH was in Group I - 63.56 ± 0.54 ng/ml; in Group II - 52.33 ± 0.63 ng/ml (p <0.001) and cortisol - 1420 ± 13.4 nmol/l and 812 ± 11.3 nmol/l correspondingly (p<0.001). The levels of TSH were 3.14 ± 0.72 ng/dl and 4.41 ± 1.18 ng/dl, T4 (12.73 ± 2.01 ng/dl and 11.54 ± 2.37 ng/dl, p = 0.041). The levels of leptin in the pregnant women with obesity were ranged widely from 36.4 to 125.7 ng/ml and averaged 76.3 ± 4.29 ng/ml, in Group II - 56.1 ± 4.9 ng/ml (p <0.001). An inverse statistically significant correlation was found between the level of maternal leptin and the point on Apgar score in the Group I (r = -0.56; p = 0.049). In newborns from obese mothers, TSH levels (12.47 ± 1.58 ng/dl and 9.23 ± 2.14 ng/dl) and T4 (12.17 ± 1.5 ng/dl and 9.23 ± 2, 14 ng/dl) was significantly (p <0.001) higher than in newborns from healthy women. The serum leptin content in pregnant women of both groups was statistically significantly higher than in cord blood (p <0.001). Cord blood leptin content in the main group ranged from 2.3 to 71.5 ng/ml and averaged 24.8 ± 4.1 ng/ml, in the control group the range of oscillations was from 6.7 to 72.9 ng/ml and averaged 26.1 ± 3.7 ng/ml (p = 0.28).

Conclusions. Obese pregnant women had significant metabolic disorders, a high incidence of pregnancy and childbirth complications, asphyxia, fetal growth retardation and macrosomia.
TOPIC: OBESITY AND ITS IMPACT ON MATERNAL INFANT HEALTH

ABSTRACT ID: 87

TITLE: OBSTETRIC CARE IN WOMEN WITH PAST BARIATRIC SURGERY REVISITED

AUTHORS: N. Halder 1; G. McSweeney 2; I. Abdelrahman 3

AFFILIATIONS: Glangwili General Hospital, Hwyl Dda University Health Board, Wales, United Kingdom

CONTENT

Introduction – Obesity is a global epidemic today and bariatric surgery is gaining popularity as the most effective treatment for morbid obesity. There is a growing number of women of reproductive age group becoming pregnant after undergoing bariatric surgery and we clinicians need to be wary of the unique challenges they present in view of their medical and surgical history. Pregnancy outcome is generally good however nutritional and surgical complications can arise.

Case summary – A 39-year-old G5 P0+4 lady with all 1st trimester miscarriages in the past is now at 31+2 weeks gestation in her fifth pregnancy. She underwent a bariatric surgery 18 months ago when her pre-treatment BMI was 56 which is now a BMI of 24 in her current pregnancy booking as she lost 12 stones following her operation. She was prescribed cyclogest vaginal pessaries in the recurrent miscarriage clinic to use till 14 weeks gestation after which she was advised to stay on aspirin and prophylactic enoxaparin (clexane) althrough her pregnancy. She is also on Citalopram with history of anxiety and depression alongwith vitamin supplements. An OGTT was arranged at 28 weeks gestation as her mum has Type 2 diabetes the result of which was normal. Regular fetal growth scan suggests satisfactory growth so far. The lady is expected to deliver in February 2019 hence her full surgical history and obstetric outcome will be presented at the time of the Conference in April 2019.
Discussion – Most bariatric surgeries are performed laparoscopically and are predominantly of 3 types namely (a) Restrictive type eg. adjustable gastric banding; (b) Malabsorptive type eg. Jejun-ileal bypass and; (c) Mixed or Combination type eg. Gastric Bypass Roux-en-Y. UKOSS carried out a national surveillance on “Pregnancy after gastric band surgery” between November’11 to October’12 which highlighted that the Laparoscopic Adjustable Gastric Band (LAGB) insertion is the predominant surgical method used in the UK however, the management of pregnancy following gastric band surgery is ill defined with a growing need to generate a guideline in this area. Most women who conceive following LAGB have their band deflated for the duration of the pregnancy because of concerns of hyperemesis and poor nutritional intake, however this risks excessive weight gain and subsequent obesity related pregnancy complications. Pregnancies following bariatric surgery usually have successful outcomes with decreased occurrence of gestational diabetes, maternal hypertension, caesarean sections and low birth weight compared to the obese control group however close monitoring is needed for their nutritional status in all the 3 trimesters alongside fetal growth survey. Women commonly tends to develop a deficiency of protein, iron, folate, calcium, and vitamins B12 and D after bariatric surgery hence early initiation of supplementation sometimes in parenteral route may be needed. Delayed operative complications including Dumping Syndrome may mimic general pregnancy symptoms leading to delayed diagnosis and management. Glucose tolerance test if needed may not be tolerated in the usual 50gm loading glucose drink and alternative pathways to check glycaemic control may be required.

Conclusion – Our case report is an endeavour to increase the data pool of pregnancy outcomes after bariatric surgery. ACOG developed a guideline on Pregnancy after Bariatric surgery in 2010 to identify and address the altered body physiology and unique needs in this cohort and we in the UK need something similar tailor-made to the needs of our local population. A minimum of 12-24 months gap after a bariatric surgery is recommended before embarking on pregnancy so that the fetus is not affected by the rapid maternal weight loss and the patient can achieve her pre-pregnancy weight-loss goals. Effective preferably non-oral contraception with preconceptional assessment is advisable. A multidisciplinary team
approach is needed for the pregnancy care involving the obstetrician, bariatric surgeon, dietician, anaesthetist and neonatologist. Whilst it is known that children born to obese mums have a higher chance of developing adult onset metabolic diseases, the long-term maternal and neonatal outcome of pregnant women who underwent bariatric surgery is still unknown. This case highlights the relationship between high BMI and infertility and or miscarriage and bariatric surgery may have an important role in the management of these women in future.
TOPIC: OBESITY AND ITS IMPACT ON MATERNAL INFANT HEALTH

ABSTRACT ID: 106


AUTHORS: F. Feldman 1; G. Vitureira 2.

AFFILIATIONS: 1 Clínica Ginecotológica B, Hospital de Clínicas, Universidad de la República, Montevideo, Uruguay.
2 Clínica Ginecotológica B, Hospital de Clínicas, Universidad de la República, Montevideo, Uruguay.

CONTENT

Introduction: Overweight and obesity has become a public health problem worldwide, constituting the XXI century pandemic and generating an increase in the morbidity and mortality of the general population. This has led many women to begin their pregnancy under these conditions, increasing obstetric-perinatal morbidity and mortality.

Objective: To evaluate the risk of developing adverse maternal-perinatal events in relation to the Body Mass Index (BMI) prior to pregnancy.

Material and Methods: It was conducted a retrospective cohort study of births occurred in Uruguay between 2014 and 2016, with data obtained from the perinatal computer system. Patients were divided according to BMI prior to pregnancy into two groups: 1) overweight or obesity, with BMI greater than or equal to 25 Kg/m² and 2) normal weight with BMI between 19 and 25 Kg/m².

Results: We included 112,189 patients of which 44,023 (39.24%) were obese or overweight while 68,166 (60.76%) presented normal weight. It was found that patients with overweight and obesity have a relative risk (RR) of 2.17 confidence interval (CI) 95% (2.04-2.31) of presenting preeclampsia, RR of 2.29 CI 95% (2.22-2.73) of presenting gestational diabetes, RR of 1.27 CI 95%
(1.25-1.28) of concluding their pregnancy through cesarean section, RR of 1.55 CI 95% (1.49-1.61) of preterm delivery, RR of 1.14 CI 95% (1.08-1.21) of presenting neonatal involvement, a RR of 1.83 CI 95% (1.75-1.91) of large for gestational age, and a RR of 1.41 CI 95% (1.19-1.67) of stillbirth, all of them in comparison with patients with normal weight before pregnancy.

Conclusions: Obesity and overweight in pregnancy significantly increase the risk of preclampsia-eclampsia syndrome, gestational diabetes, preterm deliveries, caesarean sections, low Apgar, macrosomia and stillbirth. Representing a risk factor for adverse maternal-perinatal outcomes. Preconceptional consultation and the recommendation of weight reduction prior to pregnancy as well as healthy lifestyles are fundamental.
TOPIC: OBESITY AND ITS IMPACT ON MATERNAL INFANT HEALTH

ABSTRACT ID: 144

TITLE: OBESITY AND PREGNANCY: PREVALENCE IN OUR POPULATION

AUTHORS: M.A. Urbano 1; P.M. Rodriguez2; L. Alvarez 3; M. Velasco 4; I. Martinez 5; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

OBJECTIVES:
In recent years we are witnessing an increase in obesity rates in the general population, and in the pregnant population. The incidence of obesity during pregnancy is high. It is estimated at 18-38% according to different series. The aim of this study is to determine the prevalence of overweight, obesity and morbid obesity in the pregnant population assigned to General Hospital Universitario Santa Lucia de Cartagena (Murcia).

METHODS:
We conducted a retrospective study using data collected during visit during the first quarter of pregnant women who have been monitored the pregnancy at the Hospital General St. Lucia during the years 2015 and 2016. Inclusion criteria are: pregnant women with full gestational control our center in 2015 and 2016. patients who have not visit our center first quarter and incomplete medical history are excluded. body mass index at the beginning of gestation was calculated and were classified according to WHO classification.

RESULTS:
A total of 5700 pregnant women were analyzed. They were included in the study 4288 (1412 excluded). The average BMI is 25.6. The 46.12% of pregnant women in Cartagena Area II have high BMI (greater than 25). 28% of pregnant women (1201 pregnant women) were overweight, 12.45% were
obese I (534), the 4.03% (173) were obese II and 1.63% (70) were morbidly obese.

CONCLUSIONS:
Obesity is one of the biggest health problems today. Obesity has a high morbidity and mortality associated so it is necessary to implement preventive programs. The process should begin before the gestation, giving women tips for weight reduction and explaining the risks that may exist during pregnancy.
TOPIC: OBESITY AND ITS IMPACT ON MATERNAL INFANT HEALTH

ABSTRACT ID: 150

TITLE: GESTATIONAL DIABETES AND THE RISK OF OFFSPRING OVERWEIGHT: THE ROLE OF PRE-GESTATIONAL MATERNAL WEIGHT AND ADEQUATE WEIGHT GAIN DURING PREGNANCY

AUTHORS: S.Passos.Silva1; J. Araujo.Pereira1; M.Gomes1; A.Miranda1; F.Domingues1; P.Pinheiro1

AFFILIATIONS: 1 Obstetrics Department, Unidade Local de Saúde do Alto Minho, Viana do Castelo, Portugal

CONTENT

Background: Gestational Diabetes Mellitus (GDM) is one of the most common serious medical complications in pregnancy. Intrauterine exposure to maternal diabetes may place offspring at increased risk for long-term adverse outcomes including overweight, obesity and metabolic syndrome. The factors associated with overweight in offspring of women with GDM have not yet been fully clarified.

Objective: The aim of this study was to evaluate the role of pre gestational maternal weight and adequate weight gain during pregnancy in childhood overweight of offspring of mothers with GDM.

Methods This is an observational, retrospective and case-control study. The data was collected in children born between January 2011 and December 2013 whose mothers had GDM using the software of primary health care. Overweight was defined as an average body mass index (BMI) above the 85th percentile for age and sex. ANOVA test was used to compare the mean of birthweight and BMI at 5 years of age between those that had an adequate, low or excessive weight gain during pregnancy following the
IOM criteria. T–student test and binary logistic regression was used to determine if pre-gestational maternal weight was a predictor of overweight in the offspring.

Results
The prevalence of overweight at 5 years-old was 25% in the 148 children of mothers with GDM studied. There were no significant differences in the mean birthweight ($p=0.435$) and the BMI at 5 years of age ($p=0.138$) among mothers with GDM with adequate, below adequate and above adequate weight gain. Higher maternal pre-gestational weight was related with the risk of children overweight at 5 years-old ($p = 0.012$). After adjusting the model for maternal age, weight gain during pregnancy, use of insulin and level of education, the higher maternal pre-gestational weight was still a risk factor for obesity in the offspring (aOR: 1.304; CI: 1.111-1.531, $p=0.032$).

Conclusion
In women with GDM the weight gain during pregnancy doesn’t seem to predict the likelihood of offspring overweight, but pre-gestational maternal weight is a possible predictor. However it is difficult to reach conclusions, because the risk for overweight and obesity is a complex mix of genetic, environmental, and psychological factors.
TOPIC: OBESITY AND ITS IMPACT ON MATERNAL INFANT HEALTH

ABSTRACT ID: 165

TITLE: ROLE OF MATERNAL LEPTIN AND ADIPONECTIN IN POSTPARTUM DEPRESSION: ASSOCIATION WITH NEONATAL OUTCOME.

AUTHORS: S.Rajendiran1; P.Dhiman2; RR. Pillai3; AB Wilson4; L.Sharon5; N.Premkumar6; S.Kattimani7

AFFILIATIONS: 1 Dept of Biochemistry, JIPMER, Puducherry, India.
2 Dept of Biochemistry, JIPMER, Puducherry, India.
3 Dept of Biochemistry, JIPMER, Puducherry, India.
4 Dept of Biochemistry, JIPMER, Puducherry, India.
5 Dept of Biochemistry, JIPMER, Puducherry, India.
6 Medical social wing, JIPMER, Puducherry, India.
7 Dept of Psychiatry, JIPMER, Puducherry, India.

CONTENT

Introduction
Studies in general population has proposed independent link between adipokines and depression, but very less is known about the postpartum period. The aim of the study was to assess the possible relationship between leptin/adiponectin status and postpartum depressive symptoms at 6 weeks and neonatal outcome.

Material and methods
This case control study included 90 women with depressive symptoms and 90 women without depressive symptoms at 6 weeks post delivery using Edinburgh postnatal depression scale (EPDS) with cut-off of 10. Serum was used to analyze lipid profile (spectrophotometric method), and leptin and adiponectin(commercially available ELISA kits). Information regarding neonatal physiological health (APGAR score, and birth weight) was also collected.
Results
Mean leptin levels were higher in women with depressive symptoms than without, though not statistically significant. Among women without depressive symptoms, serum leptin was positively associated with birth weight, and adiponectin, leptin : adiponectin ratio were found to be negatively associated with APGAR score at one minute and five minutes respectively. No such association was found in women with depressive symptoms.

Conclusion
These findings suggest dysregulated leptin and adiponectin secretion affects maternal depression and neonatal outcome.
Background: effective antenatal care is imperative for the wellbeing of pregnant women and the children. Nonetheless, contemporary studies show that in Saudi Arabia the prevalence of maternal-infant mortality and morbidity rates is greatly influenced by a number of factors related to access of antenatal care. This paper draws on quantitative research to evaluate the contributing barriers to antenatal care attendance for Saudi Arabian women. Further, the paper aimed to determine the relationship between health literacy, attitude toward antenatal visit, health belief model and pregnancy outcome in Riyadh and Riyadh rural area in Saudi Arabia.

Methods: The data was collected from three hospitals that consisted of king Abdul-Aziz medical city and Al Yamamah both in Riyadh, and King Khalid hospital located in Al Majmaah city of Saudi Arabia. A quantitative research design was used in the form of a survey. Convenience sampling was utilised to recruit 300 pregnant women. The data were collected using a previously validated questionnaire. Ethical approval was granted by the Swansea research ethics committee. The respondents of the study constituted of pregnant women seeking health services in the antenatal clinics, women with young infants.
Results:
Two hundred forty two pregnant women completed the questionnaire. The mean age of the respondents was 30.07 (SD: 5.89) with a range from 18 – 48. Further details of their background can be seen in table one below. 52.2% of respondents had bachelor degree , 29.5% secondary level, 7.5% intermediate, 4.1% primary level, 2.9% illiterate and 1.7% with diploma degree. Almost more than half of participants were unemployed with 65.7% and 21.1% employee, 13.2% student. 100% were married. 87.2 Of the respondent from Riyadh and 12.8% from rural area and other cities. The result showed a significant association among missing appointment and staff satisfaction items , the significant with information and the women who missed their appointment score was (225)=2.464,P=.014(M=20.972, SD=4.549), also significant seen in between the care items and missing appointment , where the score was (229)=-2.157,P=.032. And the mean (M=6.94, SD=1.63). In the other hand, there were no significant differences were found between those who planned to or not.

Conclusion:
To sum-up, the main factors that affecting women to attend antenatal visit and their plan to attend in the future was staff attitude and communication which showed strongly associated with women in missing their appointment, the high percentage of women who missed their appointments were not satisfied with staff attitude and communication. In the other hand, there were no relationship among the women who did not have planned to attend in the future and the staff attitude and communication.
TOPIC: PERICONCEPTIONAL MEDICINE

ABSTRACT ID: 89

TITLE: TO DETERMINE RISK OF INFERTILITY INDEX IN FEMALE WITH POLYCYSTIC OVARIAN SYNDROME (WHO GROUP 2 OVARIAN DYSFUNCTION)

AUTHORS: Corresponding author:
Munazzah Rafique, MD
Women specialized hospital
King Fahad Medical City, PO: 59046, Riyadh-11525 Kingdom of Saudi Arabia
Email: munazzahr@yahoo.com
Tel: 009661-2889999-Ext-12597, Fax 16717
Coauthors:
Ayesha Nuzhat, MD
Faculty of Me

AFFILIATIONS: King Fahad Medical City Riyadh

CONTENT

Background:
Prognostic factors are predictive of future fertility, specified investigation focused management, and selection of ART and IVF outcomes. PCOS is widely prevalent in KSA and is easily diagnosed based on certain criteria, but has not been classified in the current literature into at risk categories. Our aim is to construct a scoring system for females with WHO type 2 anovulation (PCOS) that can be used to assess the prognostic factors for conception and categorize them in mild, moderate and high risk groups. This grouping will provide recommendations on how these prognostic factors may be used to assess high-risk subgroups in different clinical situations and craft the ART treatment strategy according to risk assessment.

Objectives:
To develop a risk of infertility index (RII) in women with Polycystic ovarian syndrome WHO group 2 ovarian dysfunction (PCOS-G2) in order to have
pretreatment risk assessment that will help in unifying the ART treatment approach.

Methodology:
A retrospective cohort study was done for a period of 1 year from 2017 to 2018 at REIMD of KFMC. There were 50 women presented as PCOS that were selected randomly. After initial scrutiny 39 women who have all clinical, biochemical and sonographic criteria were included and patients with amenorrhea, CAH and POI were excluded. RII scale was used to assess the score in women with PCOS-G2 and to classify them into different risk categories like mild= score ≤7, moderate = score 8-10 and severe = > 10.

Result:
In our study, majority of the cases 24 (61.5%) had a moderate score of 8-10, whereas 13 (33.3%) had severe score of >10. Although there was no significant correlation between score and outcome, majority of our cases had no pregnancy 34 (89.8%).

Conclusion:
Majority of our patients had mild to moderate score (low risk group) than severe score (high risk group). Furthermore, the chances of pregnancy after infertility treatment including interventions are low.
TOPIC: PERICONCEPTIONAL MEDICINE

ABSTRACT ID: 94

TITLE: THE USE OF VITAMIN D3 (CHOLECALCIFEROL) IN PATIENTS WITH GENITAL ENDOMETRIOSIS AT THE STAGE OF PREGRAVID PREPARATION.

AUTHORS: M. Yarmolinskaya 1,2; A. Denisova 1

AFFILIATIONS: 1 Department of Endocrinology of Reproductology, Federal State Budgetary Scientific Institution “The Research Institute of Obstetrics, Gynecology and Reproductology named after D.O.Ot”, Saint Petersburg, Russia. 2 Department of Obstetrics and Gynecology, North-Western State Medical University named after I.I. Mechnikov, Russian Ministry of Health, Saint Petersburg, Russia.

CONTENT

Background. Genital endometriosis is a chronic, recurrent, progressive disease, often accompanied by normogonadotrophic ovarian insufficiency, anovulation and luteal phase insufficiency, as well as “progesterone resistance”. Vitamin D is known to have progesterone-like activity. Progesterone and vitamin D act as synergists, mutually reinforcing the activity of each other. Vitamin D helps to prepare endometrium for implantation, supports this process and the course of gestation. For a long time, vitamin D has been considered as a regulator of calcium-phosphorus metabolism, but recently it became known that it has non-classical effects, such as anti-inflammatory, antiproliferative, immunomodulatory and antiangiogenic actions. Taking into account the importance of these facts in the pathogenesis of endometriosis, we can assume a positive effect of the use of cholecalciferol in patients with GE, who have deficiency or insufficiency of 25(OH)D, both on the course of the disease and for support of luteal phase in pregnancy planning.

Objective. To determine the necessity of measurement of 25 (OH) D level and the use of cholecalciferol at the stage of pregravid preparation in patients with endometriosis.
Materials and methods. The main group of patients consisted of 47 women of reproductive age with laparoscopically confirmed diagnosis of pelvic endometriosis. The control group consisted of 22 healthy women of reproductive age planning pregnancy. Levels of 25(OH)D and progesterone in blood serum in the second phase of menstrual cycle were determined by enzyme immunoassay. Within 3 months after determination of deficiency or insufficiency of 25(OH)D all the women received daily replacement therapy with oral form of cholecalciferol in individual doses, selected according to the algorithm GrassrootsHealth. After 3 months of treatment, control analysis of levels of 25(OH)D and progesterone in serum was carried out.

Results. In the study group the mean level of 25(OH)D was 22.01 ± 1.09 ng/ml, and was significantly lower than in the control group, 37.04 ± 4.48 ng/ml (p<0.01). Patients with endometriosis-associated pelvic pain had lower level of 25(OH)D compared to patients with EGE without pain syndrome, but the difference was not statistically significant. Progesterone level in the main group was 7.1±1.8 nmol/l. 3 months after the start of replacement therapy with cholecalciferol in dosages from 4000 to 7000 IU, the level of 25(OH)D in serum reached reference values and was 37.4±3.68 ng / ml, whereas progesterone level during this period tended to increase (15.2±3.9 nmol/l).

Conclusion. Thus, for womens with endometriosis, planning pregnancy, it is advisable to determine level of 25(OH)D in blood serum, which has to be followed by individual selection of the dose of replacement therapy with cholecalciferol. Control measurement of level of 25(OH)D is advantageously to carry out after 3 months from the beginning of therapy with the drug for the adjustment of the dose of cholecalciferol. 25(OH)D deficiency and its compensation may be considered as one of the mechanisms influencing progesterone levels. It is increasingly evident that vitamin D gives an essential support for the luteal phase onwards.
INTRODUCTION

The pre-eclampsia is a hypertension pathology induced by the pregnancy. It manifests from the twenty weeks. On its upmost expression the pathology causes serious complications for the mother and fetus, and it is considered one of the principal factor of maternal morbi-mortality. With the pre-eclampsia screening during the first trimester, the consequences of this pathology are expected to be reduced down to a minimum. During the obstetric visits of the first trimester, the woman must be informed about this screening. Once the informed consent is obtained, the risks of developing pre-eclampsia during the pregnancy are simulated taking into account a personal medical history, analytics test results, blood pressure and the pulsatility index of the uterine arteries obtained in the ecography. Table 1 lists the parameters under consideration for the pre-eclampsia screening of the first trimester.

| Table 1 | Information needed for the pre-eclampsia screening of the first semester |

MATERIAL AND METHODS

A literature review in the databases Cochrane, Pubmed, SCIELO and CINAHL. The following words have been searched: risk of pre-eclampsia and first trimester screening. The Booleans employed were AND, OR.
Twenty publications between clinical essays and PhD thesis have been selected. The time span considered in this study was from 2010 to 2018 including English and Spanish documents. 

**Results**

Once the parameters needed for assessing the pre-eclampsia screening, the different values are analysed. A vast majority of documents employ a computer program introducing different parameters and it computes the pre-eclampsia risk.

Once the result is obtained, the woman is informed. Either there is a low risk situation in which no additional therapeutic method should be considered, or a high risk situation. As for the latter there are clinical evidences that the treatment, with low doses of acetylsalicylic acid, reduces the risks of developing this pathology. Moreover, there are new currents stating that an increase of calcium intake or eat chocolate could have positive effects.

In the high risk situation, an oral night dosing of acetylsalicylic acid is prescribed until the third trimester of pregnancy, together with a regular obstetric control for patients with high risk of developing pre-eclampsia. This control should be adjusted according to the evolution of the gestation of each woman.

Most of the papers agree that there are several factors that induce high risks of a positive screening. These include high pulsatility index of the uterine arteries together with higher values of body mass index (BMI), addition to smoking and chronic pathologies as the subjects with higher possibilities of developing positive screening.

On the other hand, the papers considering the ethnic group and the age, could not find a direct connection to the development of pre-eclampsia. They conclude that both are risk factors for its development, however, more factors should be considered for presenting a positive screening.

**Conclusions**

The pre-eclampsia screening during the first trimester of gestation provide the possibilities of implementing tertiary prevention, dedicated to prevent the complications originated from the natural evolution of the pathology. Additionally, the pre-eclampsia screening can be used to streamline the prenatal cares, together to select those women which can draw greater benefits from the application of preventive measures.
TOPIC: PREDICTION FOR DISEASE IN FIRST TRIMESTER

ABSTRACT ID: 59

TITLE: PERINATAL COMPLICATION IN FALSE-POSITIVE FOR FETAL ANEUPLOIDY CASES: RUSSIAN COHORT STUDY.

AUTHORS: T. Yarygina 1; R. Bataeva 2.3

AFFILIATIONS: 1. National Medical Research Center of Obstetrics, Gynecology and Perinatology, Moscow, Russia
2. Russian Medical Academy of Postgraduate Education, Moscow, Russia
3. “Fetal Medicine Centre Medica”, Moscow, Russia

CONTENT

Introduction
Number of retrospective studies described that the risk of adverse obstetrics, perinatal, and fetal outcomes is higher in women with false-positive results after prenatal screening for fetal aneuploidy than in screen-negative women, but no prospective study has been commissioned in Russian population.
Objective
The aim of this study was to determine whether a first trimester euploid fetus with false-positive risk for aneuploidy has a more unfavorable perinatal forecast than a fetus with low risk.
Material and Methods
This was a prospective cohort study on 2076 patients who were seen at the outpatient clinic of Fetal Medicine Center Medica (Moscow, Russia) for their pregnancy between September 2016 and September 2017 and who opted to have screening for chromosomal abnormalities at their 11+1 - to 13+6 weeks by means of an Fetal Medicine Foundation algorithm that combines maternal factors, multiple of the medians (MoMs) of maternal serum biochemistry (free b-hCG and PAPP-A), and ultrasound markers.
The criteria for an inclusion was singleton pregnancy with a live fetus at the time the screening was performed. The proposed cut-offs of ≤1:100 for trisomies 21, 18, and 13 was applied. Women with a high risk for chromosomal abnormalities were offered chorionic villus sampling (CVS) or amniocentesis for fetal karyotyping. All cases of aneuploidies and fetal structural defects (n=159), cases with detailed outcome data missing (n=299) were excluded from the study. According to the estimated at the first trimester individual risk, patients were divided into 2 groups: Group 1: false-positive (FP) for aneuploidy (n=55); Group 2: low-risk for aneuploidy (control group) (n=1563)

Statistical analyses were performed using MedCalc software (MedCalc, Mariakerke, Belgium). P-values <0.05 were considered statistically significant.

Results
Comparison analysis of outcomes revealed statistically significant differences (p < 0.001) in the rate of the following perinatal complications. The rate of miscarriage was 9.1% vs. 0.7% (Odds Ratio [OR] 14.1); the rate of preterm birth was 23.6% vs 3.97% (OR 7.36); the rate of perinatal death consists of antenatal and neonatal death was 3.6% vs. 0.06% (OR 122.5), in 1st and 2nd group, respectively.

SGA accounted for 16.36% vs 3.67% (OR 4.73), preterm SGA 10.9% vs 0.45% (OR 27.2); the rate of SGA in preterm birth was 46.2% vs 11.2%; and NICU admissions was in 12.73% vs. 2.4% (OR 5.86) of cases in 1st and 2nd group, respectively.

Conclusions
This study showed that the risk of the majority of obstetrical complication is much higher in pregnancies with false positive screening result for fetal aneuploidy. These pregnancies should be closely followed up by maternal-fetal medicine specialist with until delivery.

Figure 1 Multivariate analysis for association of FP for fetal aneuploidy with pregnancy complication in comparison with low risk group.
TOPIC: PREDICTION OF DISEASE IN FIRST TRIMESTER

ABSTRACT ID: 135

TITLE: ASSOCIATION OF LOW LEVELS OF PAPP-A WITH ADVERSE OBSTETRIC EVENTS

AUTHORS: P. Talens 1; A. Martinez 2; J. Peiró 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

Objective
To assess whether low levels of PAPP-A in the first trimester are associated with adverse pregnancy outcomes throughout gestation in our health area.

Material and method
A retrospective study evaluating pregnant women in 2012 and 2013 PAPP-A level less than 0.4 MoM in the first quarter analysis performed for aneuploidy screening combined. Gestations with chromosomal abnormalities, defects were excluded and multiple pregnancies. The appearance of the following obstetrical adverse events were examined during pregnancy: abortion, stillbirth, gestational diabetes, prematurity, gestational hypertension, mild preeclampsia, late preeclampsia, intrauterine growth retardation and placenta.

Obstetrical outcomes also were evaluated a control singleton pregnancies, correlative without pathology in the first quarter, and PAPP-A MoM than 0.4 group, to check the magnitude of the difference between the two groups for each event.

Results:
A total of 284 patients who met the inclusion criteria, searching association when compared with control group identical number. A statistically
significant association was observed with variables CIR (p < 0.004), prematurity (p < 0.007) and gestational diabetes (p < 0.019). No significant results were obtained in other variables.

Conclusions.

Literature describes association between PAPP-A and low adverse obstetric events uneven and some controversy manner. The described association is with prematurity, preeclampsia and intrauterine growth retardation. Our work is significantly associated with prematurity and intrauterine growth retardation, as well as gestational diabetes, but we have not found significant association with preeclampsia. PAPP-A MoM less than 0.4 is a useful marker for risk stratification of pregnant women in the first trimester, especially for the prediction of growth retardation.
TOPIC: PREDICTION FOR DISEASE IN FIRST TRIMESTER

ABSTRACT ID: 241

TITLE: MICRODUPlication 22q11 SYNDROME: A CASE REPORT

AUTHORS: C. Arispe Cornejo 1; B. Alonso 2

AFFILIATIONS: 1 Gynaecology Dept, Vithas Montserrat Hospital, Lleida, Spain
2 Gynaecology and obstetrics resident at La Paz Hospital, Madrid, Spain

CONTENT

Background
Microduplication 22q11.2 syndrome is an emerging syndrome with a prevalence of 2 in 10000 live births. Chromosome 22, particularly band 22q11.2, is susceptible to rearrangements due to misalignments of low-copy repeats (LCRs). It is usually inherited in an autosomal dominant pattern though it can also occur “de novo”. The clinical presentation fluctuates from very mild, (almost asymptomatic cases) with developmental anomalies (77%) to severe manifestations like congenital cardiopathies (15%), autism, craniofacial anomalies, epilepsy, motor and/or sensitive disorders, intellectual deficiency, deafness (20%), psychiatric (13%) and urogenital disorders (19%).

Objective
To report a confirmed case of this syndrome diagnosed at our institution and provide specialists with a brief description of the tools to properly identify these pregnancies.

Methods
We obtained data from the patient’s clinical reports, ultrasounds and verbally from all specialists involved in her care during pregnancy.

Results
We present a 32 year old woman. The patient’s first visit was at 8 weeks of gestation. It was her second pregnancy and her previous gestation was normal. At the 12 weeks ultrasound we detected a nuchal translucency
of 3mm for a 66.6mm cranio-rump length (CRL), which according to our percentiles table corresponded to a 98th percentile. The combined screening of the first trimester resulted in a low risk of 1 in 1175 for Down syndrome and 1 in 10000 for 13 and 18 trisomies. A cell-free fetal DNA test was recommended and showed a normal (46XY karyotype).

At the 20 weeks ultrasound we found a persistently elevated NT of 6mm without any other associated anomaly. According to our protocol a fetal echocardiography and laboratory tests for B19 Parvovirus and Cytomegalovirus (CMV) were sent. The echocardiography was normal and both CMV and B19 Parvovirus were positive for IgG but negative for IgM.

We informed the patient of her 10% risk of congenital defects and offered her an amniocentesis with arrays, which found a microduplication of 22q11 chromosome. We continued follow-ups every 4 weeks and no malformation or any other alteration has been noted. The patient is currently in the third trimester of gestation.

Conclusions
There is an emergent number of new diagnosis of this syndrome probably due to the availability for microarrays testing nowadays. We should pay attention to all the signs that may appear on ultrasound with the goal to better inform the parents about their prognostic value.
BACKGROUND: Preterm delivery is one of the major complications in pregnancy with a significant impact on neonatal and maternal morbidity and mortality. Maternal age, body mass index, socioeconomic status, parity, smoking, alcohol and substance use, chronic diseases (e.g., hypertension, asthma, diabetes), and intrauterine infection are the risk factors for spontaneous abortion and preterm delivery.

OBJECTIVE: The aim of this study was to evaluate the relationship between body mass index, mean arterial blood pressure, PAPP-A in the first trimester of pregnancy with preterm delivery and spontaneous abortion.

METHODS: Study involved 50 pregnancies, 22 with spontaneous abortion and 28 with delivery before 36+5 week of gestation. Protocol was approved by Ethical board of Medical Faculty, University of Novi Sad and Ethical board of Clinical centre of Vojvodina (Novi Sad). All patients were followed up from the first trimester of pregnancy (between 11+0 and 13+6 week of gestation) when laboratory tests and anthropometric parameters were performed. The screening of chromosomal abnormalities was performed in the licensed program The first fetal screening program, Fetal medical foundation, while markers of chromosomal abnormalities PAPP-A and free beta HCG were determined on the machine using Brahms Kryptor trace method which implies delayed emission of signals of immune complexes.
Results: The mean value of mean arterial blood pressure was 106 ±14 mm Hg, the mean value of body mass index was 27.7±5.6, PAPP-A: 1.19±0.56 CorrMom. Values of BMI were approximately equal in both groups. There was a statistically significant correlation between the mean arterial blood pressure (p<0.001, r=-0.52) and the week of delivery in the group with preterm delivery.

Conclusion: The association between women’s BMI, mean arterial blood pressure, PAPP-A and the risk of spontaneous preterm birth is complex and is influenced by ethnicity, gestational age, chronic diseases and parity.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 31

TITLE: FETAL CARDIAC Rhabdomyoma - THINK EARLY! THINK TUBEROUS SCLEROSIS!

AUTHORS: J. Godfrey 1, I. Abdeirahman 2, H. Samir 3, N. Haider 4

AFFILIATIONS: 1FY2 trainee in Obstetrics and Gynaecology, Glangwili General Hospital, Carmarthen, Wales; 2Consultant Obstetrician and Gynaecologist with Special Interest in Gynaec-Oncology & MAS, Glangwili General Hospital, Carmarthen, Wales; 3Consultant Radiologist with Special Interest in Intervention Radiology, Glangwili General Hospital, Carmarthen, Wales; 4ST7 Trainee in Obstetrics and Gynaecology, Glangwili General Hospital, Carmarthen, Wales.

CONTENT

Introduction:
Fetal cardiac tumours are rare with an incidence of 1/20,000 births of which Cardiac Rhabdomyoma (CR) is the commonest. CR is often the earliest sign of Tuberous sclerosis (TS) which is a rare AD genetic disorder with benign tumors in the brain, heart, kidneys, skin and/or eyes.

Case:
30-year-old primigravida with no significant medical/familial history was found to have an irregular fetal left ventricular outline at 20 weeks scan. Further scans at FMU suggested 31mmx28mm mass around left ventricle flattening left hemidiaphragm with small pericardial effusion. She was referred to Bristol where she had fetal MRI. Baby was closely monitored with fortnightly ultrasound scans and was delivered at 39+1 weeks by EICS for unstable lie. A baby boy of 3.7 Kg was born in good condition needing no respiratory support or surgical intervention. MRI brain done 4 weeks after delivery showed widespread tubers involving the cortex and white matter confirming TS. Echocardiogram showed a large LV rhabdomyoma with some LV impairment not needing treatment and ECG showed few benign ectopics. The child is now 1-year-old on medication for infantile spasm and
has poliosis of the eyelashes of right upper eyelid as the only cutaneous manifestation of TS.

Discussion:
Tumour size >20mm and haemodynamic instability are poor prognostic markers that may cause fetal cardiac dysrhythmias and hydrops.

Conclusions:
Once CR is detected in-utero, close surveillance is essential during pregnancy and post-delivery to diagnose TS and the extent of visceral involvement. Prenatal counselling and genetic screening for the child and family members should be offered.
TOPIC: Prenatal Diagnosis

ABSTRACT ID: 69

TITLE: PRENATAL CARE IN SOUTHERN ANGOLA (LUBANGO)

AUTHORS: D. Oliveira1; R. Castro2; M. Martins2; F. Pereira2

AFFILIATIONS: 1 Clínica Girassol, Lubango, Angola
2 Global Health and Tropical Medicine, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisbon, Portugal

CONTENT

Background: In Angola, studies about prenatal care are scarce and maternal mortality ratio remains very high. It is well-known that maternal morbidity and mortality are closely linked with prenatal care quality. Lubango, capital of Huila province, is the second most populous city of Angola and Irene Neto Maternity, the provincial reference maternity, is the place in the city where most childbirths occur.

Objective: To characterize the prenatal care of parturients admitted to Irene Neto Maternity.

Methods: A cross-sectional study was conducted between October 2016 and September 2017 in Irene Neto Maternity, Lubango city, Huila Province, Angola. Five hundred parturients were included after informed consent was obtained. The study questionnaire had data on prenatal care accessed through the consultation of the pregnant card.

Results: Only 9.1% of the pregnant women initiated prenatal care during the first trimester of pregnancy. Quantitatively inadequate prenatal care (<4 visits) was observed in 37.3% of the parturients, while HIV, syphilis and hepatitis B screening during pregnancy was performed in 66.5%, 60.2% and 44.6%, respectively. Only 12 (4.0%), three (1.1%) and one (0.5%) parturient with a first negative test were again screened for HIV, syphilis and hepatitis B during pregnancy, respectively. Of the five parturients who presented antibodies against HIV during pregnancy, one did not initiate antiretroviral
therapy. Penicillin treatment was given to five of the seven women who tested positive for syphilis during pregnancy, but only three partners of the five had access to treatment. None of the parturients that tested positive for hepatitis B initiated treatment.

Conclusions: Prenatal care in southern Angola is still below the desired levels. In order to reduce maternal mortality, control programs and policies for prenatal care must be implemented to improve the quality of prenatal care.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 72

TITLE: NEW PRENATAL ULTRASOUND INDEX FOR ASSESSMENT OF VISCERO-ABDOMINAL DISPROPORTION IN FETUSES WITH GASTROSCHISIS.

AUTHORS: I. Gordienko 1; O. Tarapurova 2; G. Grebinichenko 3; O. Slepow 4; A. Velichko 5

AFFILIATIONS: I. Gordienko 1, O. Tarapurova 2, G. Grebinichenko 1, O. Slepow 2, A. Velichko 1
1 Dpt. of Fetal Medicine, 2 Dpt. of Surgery for Children with Congenital Malformations.
Institute of Pediatrics, Obstetrics & Gynecology of National Academy of Medical Sciences of Ukraine, Kyiv, Ukraine

CONTENT

Background
Congenital malformations affect the course of pregnancy, childbirth, fetal and newborn wellbeing, and therefore are one of the causes of perinatal mortality. Gastrochisis has a special place among the defects that need urgent surgical intervention in newborns. The frequency of gastrochisis is 1 case per 4000 newborns. The frequency of preterm labor with gastrochisis is 40-65%, and stillbirth reaches 10%. Postoperative mortality in gastrochisis depends on the presence of associated pathology, country, clinic, etc., and may range from 4 to 100%.

Objective
The aim of the study was to develop a new method of prenatal evaluation of postnatal perspectives in the fetus with gastrochisis to decide about management of pregnancy. This information was used for professionals and parents (informed choice), to plan childbirth (place, term and method of delivery), as well as the choice of specialized surgical care for the newborn.

Methods
We proposed the method of prenatal determination of the viscero-abdominal disproportion (VAD) in the fetus with gastroschisis using an ultrasound viscero-abdominal index (VAI). VAD reflects discordance between the volume of eviscerated organs and the volume of the abdominal cavity of the fetus with gastroschisis. VAI equals to the volume of the abdominal cavity divided by the volume of eviscerated organs (Patent UA No. 113705, 2017). Volume of the abdominal cavity was calculated by multiplying the three diameters: two oblique diameters measured in transverse view under the liver and the vertical diameter in saggital view from lower part of the liver till the lower part of the bladder. Volume of eviscerated organs was calculated by multiplying three diameters: two oblique diameters measured in transverse view, and vertical diameter in saggital view. All measurements were in mm.

VAI does not depend on the size and weight of the fetus, what allows to assess the severity of the pathology:

a) VAI >1.0: no VAD; b) VAI 0.5 – 0.9: VAD is moderate; c) VAI < 0.5: VAD is expressed, the prognosis for the fetus is unfavorable.

VAI was used to determine the degree of viscero-abdominal disproportion in 64 fetuses with gastroschisis.

Results

There were conducted 109 detailed ultrasound examinations of 64 fetuses: 48 in the 2-nd trimester and 61 in the 3-rd trimester. In the second trimester 72.9 % of fetuses had no VAD, 20.8 % had a moderate VAD and 6.3 % - severe VAD. In the 3-rd trimester only 37.7 % of fetuses had no VAD, 52.5 % had moderate VAD and 9.8 % had severe VAD. There were 35 patients examined in dynamics and VAI was constant during the pregnancy in 60 % of cases. In 28.6 % of fetuses we noted the change from no VAD to moderate VAD, in 5.7 % cases from no VAD to severe and in other 5.7 % from moderate to severe.

Management of newborns with gastroschisis was carried out according to special protocol called “Surgery of the first minutes”, developed and introduced in the Institute from 2006, when the child is operated in the first 10-25 minutes of his life.

The following components were necessary for successful implementation of "Surgery of the first minutes":
- expert prenatal diagnosis of gastroschisis with a detailed assessment of the pathology;
- delivery exclusively by planned premature (36-37 weeks) Caesarean section;
- the presence in the obstetric operation room of pediatric surgeon and intensive care specialist for providing of medical care to the newborn from the first seconds after birth;
- transportation of the newborn from the obstetric operating room to a prepared child operation room, within a single medical facility, in the transport incubator, with the artificial ventilation of the lungs and monitoring of the vital functions.

Coincidence of prenatal and postnatal evaluation of VAD was found in 70.6% of cases. Difference in 29.4% cases may be explained by progression of pathology during the time from last US examination till delivery or some technical difficulties of measurements in late pregnancy.

Conclusions
1. Ultrasound viscero - abdominal index is the new tool to evaluate the viscero-abdominal disproportion in fetuses with gastroschisis.
2. It could be used in tertiary perinatal centers for prenatal multidisciplinary consulting to planning management of pregnancy, delivery and specialized surgical care for the newborn.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 79

TITLE: HYPERECHOGENIC BOWEL AND ITS CONSEQUENCES

AUTHORS: E. Celik 1; N. Kavas 2; H. Yagmur 1; S. Ercin 3; T. Gursoy 2

AFFILIATIONS: 1 Perinatology Unit, Koc University Hospital, Istanbul, Turkey
2 Neonatology Unit, Koc University Hospital, Istanbul, Turkey
3 Neonatology Unit, American Hospital, Istanbul, Turkey

CONTENT

Introduction: Though hyperechogenic bowel (HB) was considered to be a normal variant, it has also been related to crucial conditions such as cystic fibrosis, trisomy 21, intrauterine growth restriction (IUGR), congenital infection and chromosomal anomalies. It may resolve spontaneously prenatally or conversely may be associated with a poor pregnancy outcome with fetal and neonatal loss.

Material and methods: A 2-year (2016-18) retrospective study was performed to review all neonates presenting with intestinal echogenicity at Koc University Hospital.

The HB was defined as intestines with sonographic density equal to or greater than that of surrounding and evaluated according to the grading system proposed by Slotnick and Abuhamad. Whenever HB was suspected, the US gain was turned down as low as possible. If the intestines continued to meet this criterion, the diagnosis of HB was made. Only cases with grade II (moderately hyperechoic compared with liver or as echogenic as bone) or III (markedly hyperechoic compared with liver or greater than bone) were included in the study. Doppler and detailed ultrasonographies were performed in each case. The fetus was thoroughly investigated for congenital anomalies. Pulsality index of middle cerebral artery (MCA) and umbilical artery were measured via using Doppler ultrasonography (GE Voluson 8).
Results: Twenty neonates were included in the study: 5 had (25%) grade 2 and 15 (75%) had grade 3 hyperechogenicity. None of them had associated congenital anomaly. Four (20%) neonates had undergone surgery; one for necrotizing enterocolitis (NEC) and 3 for meconium ileus, all of whom had grade 3 hyperechogenicity and none of them died. 5 patients had NEC and/or died (Table 1). All had IUGR and all were SGA infants. All patients had oligohydramnios, grade 3 hyperechogenicity and “a” wave was present on ductus venosus. Four of five fetuses had MCA/Umbilical PI ratio less than 1. All neonates died in the first few days of life.

Conclusion: Grade 2 hyperechogenicity seems to cause no severe morbidity. Grade 3 hyperechogenicity together with IUGR and Doppler abnormalities may predict adverse outcome. Physicians involved in antenatal counselling need to clearly understand the implications of these antenatal findings on neonatal morbidity and mortality.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 99

TITLE: FREQUENCY OF CIR ACCORDING TO UTERINE EVOLUTION IN THE SECOND TRIMESTER

AUTHORS: R. Martínez 1; P. Tabernero 2; M. Rodríguez 3; I. Eznarriaga 4

AFFILIATIONS: Gynecology and Obstetrics Dept; University Hospital of Fuenlabrada, Madrid, España

CONTENT

Background: Restricted intrauterine growth (CIR) is defined as an estimated fetal weight below the 3rd percentile or percentile between 3 and 10. These fetuses have an increase in morbidity and mortality, which seems to be reduced with the use of acetylsalicylic acid as prevention. If we identify these fetuses prenatally, the resulting complications are minor. For this reason, screening methods such as the measurement of Doppler indices of the uterine arteries have been developed. Persistent increases in IPmAUt have a higher risk of adverse perinatal outcomes. The measurement of the uterine arteries in 2nd trimester has better predictive capacity than in the 1st trimester. Some authors consider uterine Doppler in 1st trimester a useful tool for the prediction of early preeclampsia and other adverse outcomes and justify the use of prophylactic acetylsalicylic acid.

Objective: determine the frequency of CIR according to the evolution of the uterine arteries in the second trimester.

Methods: A retrospective cohort study was conducted in patients assessed in the 1st trimester at the University Hospital of Fuenlabrada, from January 2017 to December 2017, with single pregnancies, CRL between 45-84 mm in first-trimester ultrasound, maternal age > or equal at 16 years, absence of major fetal malformations in which the measurement of IPmAUt was made. In the case group, patients were selected with IPmAUt 1ºt > 2.30 (prophylaxis with acetylsalicylic acid 100 mg daily was started before week 16) while for
controls those with an index ≤2.30 were selected and paired 1-to-1 with cases by age, tobacco and ethnicity. The evolution of uterine arteries in the second trimester was evaluated in the group of cases and controls and a subdivision was performed in each of them according to the value of the IPmAUt in the 2ºt was less than or equal to 1.50 or higher at this cut-off point. The clinical histories were reviewed and the outcome variables were collected. The qualitative variables were expressed with n° of cases and%. Quantitative variables with their mean and standard deviation or with median and interquartile range. The cohorts were compared with the chi-squared test, for qualitative variables and with Student's t test for independent data or the median test for quantitative variables. The results have been adjusted with univariate logistic regression models. Relative effects are presented as odds ratios (OR) with 95% CI. Discrimination was calculated with the ROC curves and their area under the curve and with 95% CI. In all contrasts, the null hypothesis was rejected with an alpha error of less than 0.05. The packages used were SPSS see 20 and STATA see 15.

Results; The group of cases consisted of 95 patients who met the inclusion criteria, compared to 91 patients who formed the control group. A greater frequency of CIR was observed in those pregnant women with abnormal 1st trimester uterine who persisted pathological in the 2nd trimester, compared to those who had normalized the values in 2nd trimester in a non statistically significant way (27.8% vs 11.8% p 0.088). In those pregnant women with normal uterine in the 1st trimester, a higher frequency of CIR was observed in those who were abnormal in the 2ºt compared to those who remained negative from 1st trimester (20% vs. 12.8% p 0.643).

Conclusion: In our study, the frequency of CIR according to the evolution of the IPmAUt 2nd trimester was not statistically significant. Although we can observe that there is a higher frequency of CIR in those pregnant with persistently pathological IPmAUt (both in 1ºt and 2ºt) while those with pathological IPmAUt 1st trimester who normalized the IPmAUt in 2nd trimester reduce the risk of CIR in a similar way to those with IPmAUt 1st trimester normal from the beginning.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 102

TITLE: PRENATAL DIAGNOSIS OF PRIMARY CONGENITAL LYPHEDEMA–CASE REPORT

AUTHORS: Freixo M 1; Coelho M 1; Soares E 1; Rocha J 1; Marinho C 1; Rodrigues G 1

AFFILIATIONS: Centro Hospitalar Tâmega e Sousa, Porto, Portugal

CONTENT

Introduction:
Primary congenital lymphedema, also known as Milroy disease, is a rare disorder associated with insufficient development of lymphatic vessels. It has an autosomal dominant inheritance with incomplete penetrance in the gene locus encoding for VEGFR3 with resultant dysgenesis of microlymphatic vessels. This mutation is only observed in about 70% of those affected. Usually most patients present with lower extremity edema seen sonographically. It is mostly a life-long condition but does not affect longevity. Rarely primary congenital lymphedema may be associated with severe lymphatic dysfunction resulting in hydrops fetalis.

Methods:
Analysis of the patient clinical process.

Results:
We report a case of a 38-year-old caucasian female, 4G1P (2AE 1TOP) with a history of termination of pregnancy due to fetal hydrops - autopsy revealed pulmonary lymphangiomatosis and cystic hygroma. The 1st trimester ultrasound revealed a NT>P95 (2.7mm). An invasive test was proposed and amniocentesis showed a normal karyotype (46xx) and normal array-CGH.
Abnormal sonographic findings in the fetus at 21 weeks included a nucal edema with 6.5cm and a bilateral pedal edema on the dorsal side of the feet.

Given the previous obstetric history, and according to the orientation of a geneticist Hennekam Syndrome was excluded through gene sequencing of CCBE1 and FAT4 genes.

In the 24th and 28th weeks of pregnancy, a fetal echocardiogram was performed and showed no cardiac abnormalities.

The ultrasound at 28 weeks showed bilateral edema from the legs to the thighs.

Serial sonographic reevaluations were performed and the edema seemed to be stable.

The last ultrasound, at 38 weeks and 3 days, showed a fetal growth percentile of 4.4 with normal doppler of AU, ACM, AUt. The bilateral edema progressed to the thighs and reached the right buttock.

At 38 weeks + 5 days of pregnancy, a labour induction was performed and the patient delivered a female newborn, weighing 2840g, with an APGAR score of 9/10/10.

The newborn physical exam confirmed a non-pitting edema on the right foot and dorsal side of both feet, reaching the legs, compatible with the prenatal diagnosis.

The newborn maintained medical follow-up consultations.

Conclusions:

Hereditary lymphedema is an inherited disorder resulting in chronic tissue swelling caused by abnormal lymphatic drainage. The diagnosis is suspected prenatally when ultrasound findings, usually edema of the lower limbs, coincide with a positive family history of chronic lower limb lymphedema.

Less common ultrasound findings that have been reported include hydrocele, dilated umbilical cord, dilated bowel loops, syndactyly, ambiguous genitalia, increased nuchal translucency, and hydrothorax.

It may occur as an isolated condition, or associated with a variety of syndromes, including Noonan, Turner, yellow-nail, and lymphedema-distichiasis syndrome.

Although the clinical course of lymphatic dysfunction is most commonly confined to the lower extremities, awareness of the possibility of the
development of nonimmune hydrops is important for clinicians and underscores the importance of serial sonography to monitor fetuses suspected to have primary congenital lymphedema.
BACKGROUND

Unilateral renal agenesis is the congenital absence of one of the kidneys. It is a pathology frequently undervalued, with an incidence that can reach 1/2000 RN. Unilateral agenesis is associated with a third of cases with congenital anomalies of the urinary tract and kidney. Also, there is an increased incidence of extrarenal abnormalities, such as cardiac, musculoskeletal or gastrointestinal. With regard to prognosis, renal function is usually well preserved and regular follow-up in pediatric consultations is usually sufficient. The objective of this work is to collect and study the cases of unilateral renal agenesis in our center throughout 2015.

METHODS

This is a retrospective study covering 2015 and includes cases of unilateral renal agenesis. Were excluded cases multicystic or dysplastic kidney.

RESULTS & CONCLUSIONS

A total of 6 cases of unilateral renal agenesis were identified. Two of the 6 mothers had a bad obstetric history, with a perinatal death and a stillbirth, respectively. There was obstetric disease in 4 out of 6 cases: 3 gestational diabetes, one case of obesity Grade III and one mild preeclampsia. Regarding fetuses, 5 of the 6 cases was left kidney agenesis and one case was a right agenesis. The contralateral kidney was altered in two cases, with a dilatation grade III-IV in a case, and multicystic kidney in another. About
extrarenal anomalies, a case of single umbilical artery was observed and a case of congenital torticollis diagnosed postnatal. The prognosis of renal function, the 6 cases are being followed by pediatrics time and do not require treatment.

Our results coincide with the contents in the literature. Most cases of unilateral renal agenesis are not associated with chromosomal or morphological alterations. In the majority of cases, the follow-up is clinical without the need for surgical treatment, with a good quality of life.
INTRODUCTION
Omphalocele is a defect in the base cord characterized by a protrusion of the visceral contents. Up to 20-50% of cases are associated with other abnormalities, including chromosomal defects. Survival in the case of isolated omphalocele exceeds 80%, while decreases significantly in case of major malformations or chromosomal disorder.

CASE 1
The first case is a 37 year old patient with no history of interest and vaginal delivery and caesarean earlier. During the first trimester ultrasound in week 12.4 an omphalocele objective, so it refers to specialized consultation. Therein it continues to display an omphalocele of 13 x 12 mm, cystic. A venous ductus with reverse wave, presence of bilateral choroid plexus cysts, and screening altered with 1/89 risk for trisomy 13 to 18 also objectified. After informing the patient, a genetic amniocentesis in week 16, resulting in Edwards syndrome, so he patient decided to interrupt the pregnancy.

CASE 2
The second case is a 35 year old patient with no history of interest and four normal deliveries. It did not make any control of pregnancy until week 37, which was referred to our hospital for finding omphalocele. Ultrasonographic evaluation in several associated malformations were
discovered, including a truncus arteriosus, megabladder, hypoplastic cerebellar and bilateral talipes vermix. An elective Cesarean section was performed in 38.4 week, a man born with Apgar 6/8 that requires intubation and admission to neonatal ICU. At 25 hours of life it is confirmed by QF-PCR diagnosis Edwards syndrome, so, after talking with parents, it was decided to limit the therapeutic effort. We proceed to extubation, causing death within hours.

CONCLUSIONS
Omphalocele is a feature of many genetic syndromes. Nearly half of individuals with omphalocele have associated a chromosomal alteration. So it is important to offer a genetic diagnostic test to the patient, in addition to following a close monitoring of the pregnancy until the moment of delivery. It is also convenient to carry out a multicentre follow-up with neonatologists and pediatric surgeons in order to offer the best possible attendance at the time of delivery.
INTRODUCTION
Gastroschisis is an abdominal wall defect resulting from ischemia to blood vessels that supply the abdominal wall during the first trimester of pregnancy. The injury results in an opening in the abdominal wall that allows the abdominal contents, most often intestines and stomach, to develop outside the abdominal cavity. The incidence of gastroschisis is rising, primarily in young mothers aged 20 years or younger. The ultrasound diagnosis, the presence of handles floating in amniotic cavity. The prognosis has improved greatly in recent years, with the majority of operated patients in the first week of life. We present three cases of gastroschisis in our center.

CASE 1
The first case is a 24 year old patient with no history of interest. In first-trimester ultrasound defect closure paraumbilical law objectives handles output. genetic amniocentesis performed at week 16, resulting in structural abnormality balanced present both fetus and mother. Monitoring continues without incident, performing an elective Caesarean section 35 weeks and a few hours after closing the defect with good postoperative evolution.

CASE 2
The second case is a 31-year-old with no history of interest, referred to our center after diagnosis of gastroschisis. In week 18 it was observed with a
defect paraumbilical right output intestinal contents. Genetic amniocentesis was performed, resulting in normal karyotype. Monitoring was continued in collaboration with pediatric surgery, performing elective caesarean section at 34 weeks and subsequent neonatal intervention without incident.

CASE 3
The third case is a 36 years. As history has two late abortions in context of cervical incompetence. In ultrasound first quarter wall defect without associated abnormalities diagnosed. chorionic biopsy reported normal karyotype was performed. monitoring was continued, with cerclage due to the background. In week 20 the defect left paraumbilical is objectified, leaving small intestine, not edematous. In week 24 the patient was admitted membrane rupture diagnosed with fetal death. cerclage was removed and assisted vaginal delivery.

CONCLUSIONS
In gastroschisis the exposure of the fetal intestine to amniotic fluid can cause inflammation and damage, and significant gastrointestinal problems occur during the neonatal period after closure of the defect. Complications include prolonged ileus, sepsis, associated intestinal atresias, malabsorption, wound infection, and necrotizing enterocolitis. However, the prenatal diagnosis allows to have things to treat the newborn ready sooner, doing most of surgeries the first week of life and improving the prognosis of this population.
INTRODUCTION
Within craniofacial malformations, orofacial clefts are the most representative anomalies. Two different entities, cleft lip and cleft palate are considered, although often occur together. The defect is usually unilateral, although up to 20% a bilateral defect is observed. They can also be isolated defects or belonging to a genetic syndrome. We present three cases of orofacial defects occurred in our center in the past year.

CASE 1
The first case is a 33 year old patient, surgery for cleft lip in children. After an uneventful first pregnancy in this second week observed in a bilateral orofacial defect 15 with bilateral cleft lip and palate on the right side. No abnormalities are observed and associated karyotype yields a normal result. Childbirth and subsequent pediatric follow-up takes place without incident, and has scheduled the first surgery in a few weeks.

CASE 2
The second case is a 22, also with a history of cleft lip and cleft palate intervened five times. During the morphological ultrasound, a bilateral orofacial defect affecting both lip and maxilla was observed. Obstetrical monitoring was conducted without incident, finishing no progression cesarean delivery. Three months later, it was performed programmatically bilateral primary chieloplasty, the patient being in currently monitoring.
CASE 3

The third case is a patient of 28 years with two previous cesareans, and no family history of orofacial defect. During the morphological ultrasound defect right lip and jaw covers, suspected of also left cleft lip objective. Birth findings described and retromicrognathia with glossoptosis observed, performing diagnostic Pierre Robin syndrome. At 5 months the first of several interventions planned by maxillofacial surgery was performed.

CONCLUSIONS

Orofacial clefts, especially cleft lip with or without cleft palate, can be diagnosed during pregnancy by a routine ultrasound. It is not any contraindication for a normal delivery. At the time of diagnosis, other associated malformations must be ruled out. In the case of isolated defects, the treatment is surgery. Surgery to repair a cleft lip usually occurs in the first few months of life and to repair a cleft palate is recommended within the first 18 months of life or earlier if possible.
INTRODUCTION
Tumors of the oropharyngeal region are rare, representing 2% of congenital tumors. Cervical lymphangioma occurs in 1/6000 pregnancies. It consists of dilated lymphatic vessels forming multiple cysts of varying size. Prenatal diagnosis occurs in about 50% of vessels, and is important for the implications for survival, as in large cysts can produce an obstruction of the upper airway. Depending on size, position and resectability treatment may vary between expectantly after delivery to EXIT type fetal surgery. We present a case of parotid cystic lymphangioma diagnosed in our center
CLINICAL CASE
We present a 32 years without medical history. This is her second pregnancy with vaginal delivery in previous pregnancy. Controls first and second quarter were all satisfactory. In week 29 was referred to our hospital for finding of cystic formation side of the neck. ultrasound and magnetic resonance imaging is performed with diagnosis of lymphangioma macrocystic left parotid affecting deep and superficial lobe, more cyst of 36 x 22 mm and a subsequent 30 x 30 mm. It was assessed with maxillofacial surgery, concluding that does not affect the airway, but elective caesarean is decided by traumatic intracyst risk of bleeding during childbirth. After surgery, the diagnosis is confirmed by neonatology.
CONCLUSIONS
Although cervical lymphangioma is a rare pathology, it is important a prenatal diagnosis for proper management and for the planning of the type of delivery. It is also important to perform multidisciplinary management with other specialists to prevent and assist the possible complications in the immediate postpartum period.
INTRODUCTION
It is called ambiguous genitalia genital abnormalities to those that do not adequately define sex. Apart from the impact on the family and the medical team, its importance lies in being a feature present in most disorders of sexual development or DSD, so a complex, fast and accurate diagnosis is required. Postnatal management and testing are set to follow, not the prenatal diagnosis. The chance discovery of some ambiguous genitalia ultrasound is a very limited number of diagnostic studies and soon established at present complicated handling.

CLINICAL CASE
Our patient is a 21 year old woman without medical and surgical history of interest. This is her first pregnancy. And ultrasound screening was satisfactory first quarter and second quarter ultrasound. At that time it was considered that the genitals were female. At 27 weeks it was seen to assess fetal growth, can not be defined fetal sex, with the diagnosis of ambiguous genitalia. You will bid an invasive test for fetal karyotype, the couple refused. At 38.5 weeks the patient went into active labor period. At that time the couple had preconceived fetal sex as female, despite the explanations. It ended in vaginal delivery and initial exploration of the genitals a small penis, scrotum bifida, palpation of both testicles without vaginal opening was. The fetal karyotype was mosaicism with 70% X0 / 30%
XY. Abdominal ultrasound showed uterine remaining 19mm length and dilated discretely vagina. The hormone analysis showed a deficit of testosterone. Currently the infant is under study, sex allocation has been male hormone is testosterone therapy in up to 7 months.

CONCLUSIONS
Newborns who present with ambiguous genitalia must be considered medical emergencies due to the life-threatening issues present in some cases. A work-up should be started immediately in the attempt to obtain a precise diagnosis when possible. Following a proper diagnosis, parents must be educated about DSD including what is known about long-term outcome. Once parents have received this education, the medical team should support the parents as they decide on an appropriate sex of rearing for their affected newborn. Finally, referring parents to support groups and introducing them to other caregivers of children born with ambiguous genitalia is extremely important to optimize parents’ understanding and acceptance of their child’s condition. With increased understanding and acceptance, optimal growth and development for children born with ambiguous genitalia will be obtained.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 116

TITLE: MYELOMENINGOCELE: MATERNAL-FETAL SURGERY

AUTHORS: M.A. Urbano 1; A. Jimenez 2; L. Alvarez 3; M. Velasco 4; I. Martinez; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
In 2011 were published the results of MOMS, US multicenter study on the management of myelomeningocele. Despite maternal morbidity, the results showed a significant improvement in neurological and functional prognosis by intrauterine fetal defect repair. Five years later, the standard technique has expanded globally, including our country, and is even experienced a fetoscopic approach. Nevertheless, completion rates gestation by this diagnosis remain stable, as well as a negative attitude of obstetricians and parents to continue the pregnancy. The current experimentation with tissue regeneration techniques along with the endoscopic approach in the near future could change the current perspective on the myelomeningocele.

CLINICAL CASE
We present a 21 years without medical history, and being her first pregnancy. Morphological ultrasound during the second quarter NTD sacral level objective, so it derives our fetal medicine consultation. In a new morphological tracking a boundary bilateral week 20.4 ventriculomegaly and cisterna magna decreased in context of obliteration posterior fossa herniation of the cerebellar vermis and a defect of neural tube closure to LS-S1 level shown. Functional ultrasound evaluation seems to show a normal mobility of the lower limbs. It informs the patient of fetal meningocele repair
and is derived national reference center for evaluation. A week later, the patient is seen in our clinic after referral.

CONCLUSIONS

The extent of disability is generally related to the level of the myelomeningocele defect. Open maternal–fetal surgery for myelomeningocele repair is a major procedure for the woman and her affected fetus. It is a highly technical procedure with potential for significant morbidity and possibly mortality. Maternal–fetal surgery for myelomeningocele repair should be offered only to carefully selected patients at facilities with an appropriate level of personnel and resources.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 117

TITLE: USE OF MRI IN FETAL THORACIC ANOMALITIES

AUTHORS: J. Garvi 1; P.M. Rodríguez 2; J. Peiró 3; M. Velasco 4; O. Garcia 5; M. Lorente 6

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia Universitary Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
After the fetal nervous system, the fetal thorax is the anatomical region that is most attracting attention for performing fetal MRI. Its emerging role is assuming a major impact on the council and obstetrical management of pulmonary masses. MRI is able to help define the anatomy of large masses, examine lesions with atypical sonographic appearance and also helps facilitate the prognosis of diseases such as congenital diaphragmatic hernia. It also serves to evaluate even thoracic structures not properly detected ultrasound as the thymus or thyroid. There are works on fetal thoracic anomalies showing that up to 50% of them presumptive diagnosis has changed after performing fetal resonance.

DESCRIPTION OF CASE
We report the case of a patient of 40 years without medical history, and a previous cesarean her first pregnancy 6 years. In this second pregnancy, first trimester ultrasound is satisfactory. Aneuploidy screening showed an intermediate result (T21 1/565), but the NIPT reported low risk. During the morphological thoracic ultrasound image it was observed initially suggestive of diaphragmatic hernia with stomach left lung field. Fetal MRI was requested at 28 weeks to clarify the diagnosis. Here a well defined edges only and cystic lesion 4 x 2 cm is observed in close relationship with left pulmonary hilum. The differential diagnosis changes, the first diagnostic
option cystic adenomatoid malformation type I. With this diagnosis, gestational monitoring continues. Lung mass continues to grow slightly and no signs of heart failure and other associated diseases are observed. Finally, the patient is referred to another center for termination of pregnancy for personal reasons.

CONCLUSIONS
Congenital cystic adenomatoid malformation (CCAM) of the lung is a rare pulmonary lesion. The appearance of CPAMs on prenatal ultrasound ranges from incidental findings of cystic-appearing lesions to massive pulmonary involvement. Prenatal diagnosis is typically made by ultrasonography but it seems convenient to perform an MRI scan for a correct evaluation.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 118

TITLE: LOWER URINARY TRACT OBSTRUCTION (LUTO): A CASE REPORT

AUTHORS: M.A. Urbano 1; A. Jimenez 2; L. Alvarez 3; M. Velasco 4; I. Martinez; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and ginecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
The lower urinary tract obstruction (LUTO) obstructive uropathy several groups occurring distally bladder. 50-60% of the cases are represented by the persistence of posterior urethral valves, and 20% by urethral stricture or atresia. All possess a common ultrasound picture, characterized by the appearance of a megacystis, urethral dilation and bilateral hydronephrosis. Mortality is very high, mainly associated with pulmonary hypoplasia and renal failure, and survivors will be affections cases of significant morbidity. Fetal therapy, introduced more than 30 years, has achieved significant improvements in prognosis, although not yet consolidated as an effective treatment.

CLINICAL CASE
We report the case of a patient of 29 years without disease of interest. Your obstetrical history indicates two spontaneous abortions and a third pregnancy to term. During a review of this week gestation fetal bladder 14.6 29 x 30 mm objective, so it is referred to our center. In our clinic one megacystis of similar dimensions, dilated urethra or sign of the lock, bilateral ureterohydronephrosis without renal dysplasia, and amniotic fluid within normal it was observed. The diagnosis was lower urinary tract obstruction (MOURNING), the etiologic diagnosis of presumed the persistence of urethral valves. The patient was transferred several days later to a
specialized center for fetal therapy, one whose result was normal genetic amniocentesis (46, XY) were performed. After that he underwent a fetal cystoscopy, but the etiology was causing urethral agenesis, so it was not possible obstruction ablation laser. At the end of the intervention, he was informed to the patient's poor prognosis, so he opted for termination of pregnancy.

CONCLUSIONS
LUTO can lead to marked morbidity and mortality in the fetus; therefore it is prudent for obstetric providers to understand it’s general presentation, and management principles. While several treatment modalities exist, including vesicoamniont shunting and fetal cystoscopy, large scale studies are needed to validate their efficacy in preventing pulmonary hypoplasia, and preserving renal function.
INTRODUCTION
The chorionic villus sampling (CVS) is an invasive procedure consisting of obtaining chorionic villi for cytogenetic or molecular study. It requires sufficient training and experience of the operator, as well as their equipment and Genetics Laboratory, as both rates obtaining results such as pregnancy loss will be related directly to these factors. (one) There are two ways to perform the BVC, transcervical and transabdominal. (two) In our center it is mainly done via transcervical.

MATERIAL AND METHODS
We conducted a retrospective study of pregnant women who have undergone performing chorionic villus sampling (BVC) at the University General Hospital St. Lucia (Cartagena) during the year 2016. This poster our experience is reflected in this procedure during the first year of its implementation in our hospital. Data were analyzed with the software SPSS v.23.0. The population included patients were pregnant first quarter derived prenatal diagnosis that met the inclusion criteria for conducting the test.

RESULTS
During 2016 there have been a total of 143 BVC in HGUSL. The average age of pregnant women that the test was conducted 34.11 years.
The mean gestational age at which the test was performed was 10.90 weeks.

Of our patients, 34.3% (49) were nulliparous and 65.7% (94) were multiparous.

The 62.93% of our patients had no history of interest.

99.3% BVC was performed transcervically. 0.7% was performed by transabdominal.

The indication of the test is reported in Figure 1. As the main reason: high-risk screening. Karyotype results are shown in Fig 2. 10 patients were performed after amniocentesis BVC (reasons: insufficient sample or samples need more Arrays, contamination or mosaicism)

Complications of the test:

- Bleeding: 11 (7.69%)
- Mild Pain: 3 (2.09%)
- Waters breaking early (PPROM): 2 (1.39%)
- Bruise: 2 (1.39%)

CONCLUSIONS

The chorionic villus sampling is a technique that is a very important tool for prenatal diagnosis. It is therefore important to have knowledge of genetics to know how to interpret the result. As an invasive technique has a learning curve and the results and complications of the art are in part operator dependent. During this first year of implementation in our hospital, we found no differences in complications compared to published data.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 124

TITLE: BIRTH DEFECTS IN OUR CENTER IN 2014-2015

AUTHORS: P. Talens 1; A. Martinez 2; J. Peiró 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
Birth defect is any anomaly of morphological, structural, functional or molecular, present at birth, external or internal, familial or sporadic, hereditary or not, single or multiple development. 3% of newborns are more evident in congenital anomaly or birth and 10-15% carry a minor abnormality. 20% of these defects have a genetic basis, 20% environmental insults relates to 60% has not yet known cause. Within the genetic causes chromosomal abnormalities, monogenic diseases and those resulting from the interaction of genes and environmental factors are included. Among non-genetic causes we distinguish maternal disease, teratogenicity, and cosanguiniedad infections.

MATERIAL AND METHODS
A retrospective descriptive study of congenital anomalies between 2014-2015. We had a total of 5775 births. 125 cases of congenital anomalies, with subsequent monitoring by Neonatal and Pediatric Surgery diagnosed.

RESULTS
In period 2014-2015 were diagnosed one total of 29 chromosopathy:
-16 cases of T21
-6 T18 cases
-4 T13 cases
In 2 cases the diagnosis was T21 and T13 Postnatal (both unchecked for our service).
Among chromosopathy not attributable to abnormalities we had a total of 97 cases diagnosed prenatally. Divided by systems, the most frequent malformations were:
- Urinary system: 24 cases
- Cardiovascular system: 18 cases
- Nervous system: 17 cases
- Digestive system: 4 cases
CONCLUSIONS
Major congenital malformations occur in approximately 3-4% of live births, although minor anomalies are more frequent. Birth defects may be isolated or present in a characteristic or pattern combination. In our area, the incidence of congenital malformations was approximately 2%.
Genetic causes of congenital abnormalities include chromosomal disorders, individual genes, and disorders resulting from the interaction of multiple genes and environmental factors (multifactorial disorders). In Santa Lucia de Cartagena hospital, the percentage of congenital anomalies attributable to chromosomal disorders was 23%. The most frequent malformations in our hospital were urinary tract, heart and central nervous system.
It is important to have a prenatal diagnosis of any fetal malformation to provide adequate assistance during labor and in the immediate postpartum period, in addition to preventing the greatest possible number of neonatal complications.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 139

TITLE: FETAL TRICUSPID ATRESIA: CARDIAC FUNCTIONAL PRESENTATION AND EVOLUTION.

AUTHORS: M. Bueno 1; A. Jimenez 2; L. Batres 3; M. Velasco 4; I. Martinez; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
The heart is a key organ in fetal development because it is responsible for perfusion and proper development of fetal organs. From very early stages of pregnancy, the heart must function correctly to maintain an adequate cardiac output. This determines that any sufficiently serious pathology in fetal life may affect the proper functioning of the cardiovascular system development can produce heart failure, hydrops and fetal death. Example of severe disease is pulmonary atresia; it is defined as complete agenesis of the tricuspid valve so that there is no communication between the right atrium and right ventricle whose incidence is 0.08 ‰. Prenatal echocardiographic diagnosis is possible as early as 16-18 weeks. Postnatal surgical treatment essentially. Overall survival at 25-30 years between 50 and 80%.

Case description
We report the case of a 33 year old pregnant woman with suspected heart disease complex in week 14, with incomplete screening and normal genetic study. In reevaluation in Week 16 with pediatric cardiologist is fetal tricuspid atresia catalogs. After rejecting legal abortion, the patient was followed in our consultations on a regular basis to follow the evolution of the disease and the resulting structural and functional impairment.
CONCLUSIONS

Functional echocardiography to detect those patients susceptible to developing severe cardiovascular disease, and therefore useful in early diagnosis and prenatal monitoring.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 146

TITLE: CONGENITAL DIAPHRAGMATIC HERNIA

AUTHORS: A. Beltran 1; P.M. Rodriguez 2; L. Batres 3; M. Velasco 4; O. Garcia 5; M. Lorente 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and ginecology dept., Santa Lucia University Hospital, Cartagena, Spain

CONTENT

INTRODUCTION
Diaphragmatic hernia is the displacement of the abdominal contents into the chest through a diaphragmatic defect. It is believed to be due to a lack pleuroperitoneal in closing the channel. It occurs between 1 in 2000 to 1 in 5000 live births. It produces hypoplasia and pulmonary hypertension that is often the cause of death, with a high mortality of up to 60%. Current treatment involves the insertion of an endotracheal ball endoscopically, which has improved significantly prognosis. This is one of the most fascinating and frustrating in prenatal and neonatal period diagnosis, because despite advances in diagnosis and new therapeutic measures used, continues to have a high mortality (40-60%). We present two cases of congenital diaphragmatic hernia.

CLINICAL CASE 1
A 33 year old woman with no history of interest and two previous deliveries. It's derived from another hospital in week 20 after morphological ultrasound, in which a mediastinal mass displacement is initially classified as lung objective. Afterwards, a detailed study was classified as left diaphragmatic hernia, with marked Dextrocardia, intestinal content, liver and spleen herniated, with traction also of the pancreas. The study of genetic karyotype was normal.
The patient was offered the possibility of referral center specialized in fetal therapy, but refused. From week 24 to 34 not reappeared for consultations. The case was filed in maternal-fetal committee, deciding to wait for the onset of spontaneous labor. She came in week 40 to the emergency room for broken bag. She finished in vacuo, the RN being served immediately after birth for the service of Pediatrics, which sedated and intubated him. Developed Persistent pulmonary hypertension, respiratory failure, multiple organ failure, oliguria/anuria, shock and sepsis. After 24 hours of life died.

CLINICAL CASE 2

The second case is a 27 year old woman with previous delivery, which was diagnosed in ultrasound morphologic left diaphragmatic hernia, with dextrocardia and intestinal herniation. She was offered the patient referral to specialized fetal accepted therapy center, planificándose surgery in week 30. However worsening was observed in subsequent tests, so in week 25 the patient opted for legal abortion.

CONCLUSIONS

In order to determine the severity of your fetus’s condition it is important to gather information from a variety of tests and determine if there are any additional problems. These tests along with expert guidance are important for you to make the best decision about the proper treatment. Careful and accurate prenatal assessment may help us predict before birth the severity of the CDH. One of the most important issues is to make sure there are no other birth defects (like heart problems) that can affect outcome and treatment options. There is a wide range of severity and outcomes for CDH. In the best cases, some infants do very well with treatment after birth, surgery and care in an intensive care nursery. In the most severe cases, some will not survive no matter how hard we try. And in the middle, some will live normally while others will have a difficult time and may have some handicaps ranging from mild learning problems to breathing and growth problems. How the baby does after birth is determined by how well the lung grows before birth and its function.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 153

TITLE: ABDOMINAL HEMANGIOLYMPHANGIOMA IN A NEWBORN. A CASE REPORT

AUTHORS: Ch. Demiri 1 ; D. Godosis 1 ; C. Kaselas 1 ; A. Neofytou 1 ; I. Spiridakis 1

AFFILIATIONS: 2nd Pediatric Surgery Department, Aristotle University of Thessaloniki, Papageorgiou General Hospital, Thessaloniki, Greece

CONTENT

INTRODUCTION

Hemangiolymphangioma (HLA) is a rare mixed vascular tumor with both endothelial and lymphatic elements. Approximately 40–60% of HLAs appear at birth, 80–90% during the first 2 years of life, and the frequency decreases with age. The incidence is 1:12 000. We present a prenatally diagnosed case of infantile abdominal HLA, analyze the diagnostic difficulties and discuss the treatment approaches of such cases.

MATERIALS AND METHODS

An otherwise healthy female neonate, born with caesarian section at 38+4 weeks of gestation, with 3200gr BW and first child of a healthy 22 years old Mother, was admitted to our department on the 3rd day of life with a prenatal diagnosis of a cystic abdominal tumor. Medical history begins at the 22nd week of gestation, when during a level-2 ultrasound the suspicion of a possible small intestine obstruction was raised. A week later, an embryonic MRI revealed a 30x44x25mm cavitary cystic mass with internal hemorrhagic elements. The mass was located in the sub-diaphragmatic area, anteriorly but separate from the left kidney, the spleen and the stomach.

After birth, a post-natal abdominal ultrasound performed at day 1 of life confirmed the diagnosis. Baseline laboratory exams were normal including normal total β-hCG, AFP levels and urine VMA levels. A new abdominal MRI
depicted an enlargement of the lesion (70X32X37mm) while bone scan and 123I-MIBG scan were normal.

After the completion of the preoperative investigation, resection of the lesion was performed under general anesthesia. During dissection of the mass, care was taken not to injure the adjacent organs, mainly the spleen and pancreas. However, splenic attachments of the mass were so stiff that a safe complete excision of the mass could not be performed without spleen injury. Therefore, a complete mass excision with splenectomy was decided and performed.

RESULTS
Pathology revealed histopathologic characteristics of neonatal hemangiolympangioma without mitotic activity or necrosis. The excised spleen was normal.

The neonate had a normal post-operative period and was discharged on the 8th postoperative day under specific chemoprophylaxis and vaccination instructions (due to splenectomy).

CONCLUSIONS
Abdominal infantile hemangiolympangioma is an extremely rare condition.

When concern of an intra-abdominal cystic tumor is raised during prenatal ultrasound, an embryonic MRI is proposed as the next step of the diagnostic algorithm. Postnatal abdominal u/s can confirm the diagnosis.

The differential diagnosis of a newborn with an cavitary abdominal cystic tumor includes cystic lymphangioma, hemangioma, ovarian cyst, cystic teratoma, cystic lesions of the kidney and cystic neuroblastoma. The heterogeneity of the pathologies above demand a thorough preoperative clinical examination, laboratory tests and imaging investigation preoperatively. Safe and complete excision of the lesion is mandatory.

In our case, abdominal HLA was suspected preoperatively and confirmed during histological analysis of the resected specimen that showed both hemangiomatosus and lymphangiomatosus components, while neither mitotic activity nor necrosis were present.

Aetiology and pathogenesis of HLA are not elucidated in the literature. The coexistence of these two pathological entities may be related to abnormal development of the jugular lymphatic sacs during the embryonic period.
There is no consensus in the management of HLAs in infancy. Therapeutic management includes the “wait and watch” approach because of the high probability of tumor remission until the age of 18 to 24 months and surgical approach with a complete excision of the lesion. Additionally, the use of remission-helping drug components, sclerotherapy and embolism are described in the literature as alternative pathways. When surgical excision is of low-risk as in this case and due to the possibility of mass bleeding, respiratory distress and infection, we prefer the surgical approach in similar cases. We emphasize that each medical case is unique and demands a unique therapeutic approach which should be individualized depending on the size of the lesion, anatomic localization and the possible complications.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 173

TITLE: LEARNING FROM MISSED ANOMALIES: A CONGRUOUS WAY TO IMPROVE DETECTION RATES.

AUTHORS: A. Fatma, A. Gandhi, S. Patni

AFFILIATIONS: Heartlands Hospital, University Hospitals Birmingham, Birmingham, U.K.

CONTENT

Background:
Ultrasound is a widely used tool for diagnosing congenital anomalies with an aim to improve both maternal and fetal outcomes. Early diagnosis allows parents to consider various options and be prepared for treatment as needed. National Congenital Anomaly and Rare Disease Registration Service (NCARDRS) has now produced its second report on Fetal Anomaly Screening Programme (FASP) detection rates. Eleven conditions are screened as a minimum in England by fetal anomaly ultrasound scan from 18 to 23 weeks as part of FASP. Every missed anomaly should be considered an opportunity to learn and improve future detection rates.

Objective:
The aim of our study was to assess: 1. Our performance against the FASP standards for the detection of congenital anomalies. 2. To review images of all the missed anomaly cases for wider learning and reflection and share with the team to improve future detection rates.

Methods:
It’s a retrospective review of ultrasound images of the cases which were missed antenatally over a period of 24 months (March 2015 to April 2017). The cases were identified from our own discrepancy data base and NCARDS report.
Results:
A total of 20,014 women delivered over this period at the University Hospitals Birmingham NHS Foundation trust. The incidence of congenital anomalies was 1.42% (284/20,014) out of which 0.83% (168) were FASP auditable anomalies. Our overall detection rate for congenital anomalies excluding cardiac anomalies was 95.16%. The pick up rate for cardiac cases was 82.6%, which is higher than FASP detection rate of 50%. Moreover, the detection rate of serious cardiac anomalies improved from 72.7% in year 2015-2016 to 90% in 2016-2017 after the inclusion of the outflow tract as a part of FASP. Out of 168 cases, 14 were missed which included serious cardiac anomalies (8), Congenital diaphragmatic hernia (2), Trisomy18 (1) and cleft lip/palate (3). Retrospective review of images revealed that the anomaly was identifiable on the archived images and that we could have detected ten out of fourteen missed anomalies.

Conclusions:
Major congenital anomalies missed on fetal anomaly scanning will unfortunately always exist, but our detection rates are at par or better than FASP standards. Anomalies can be missed because of suboptimal or inadequate views or because pathologic pattern changes are subtle at the time of anomaly scan. Any measure that improve the pattern-recognition ability of individual sonographers will enhance detection rates. Learning from retrospective review of images should contribute to improving pattern-recognition skills and detection rates.
Introduction:
Maternal Rh (D) alloimmunization develops as a result of Rh (D) negative women exposure to Rh (D) positive red blood cells (RBC). Transplacental fetomaternal bleeding accounts for virtually all cases of maternal Rh (D) alloimmunization. The risk of alloimmunization is affected by several factors, including the degree of fetomaternal hemorrhage and maternal immune response. Rhesus (D) alloimmunization is responsible for 94% of all hemolytic disease of the fetus and newborn cases. The frequency of incidence of alloimmunization in pregnant women is found to range from 0.4 to 2.7% worldwide. Owing to the introduction of mandatory programs, as we have in Portugal, for antenatal and postnatal anti-D immune globulin prophylaxis, there has been a significant reduction in the frequency of Rh (D) alloimmunization and its fetal and neonatal complications. However, hemolytic disease of the fetus and newborn due to maternal Rh(D) alloimmunization still occurs worldwide, particularly in low resource countries. It may also occur due to nonpaternity of the current spouse, being the biological father Rh (D) positive, injection with needles contaminated by Rh (D) positive blood or failure of the anti-D immune globulin prophylaxis programs.
We wish to present a rare case of positive anti-Rhesus (D) titers at 24 weeks of gestation, with no previous identifiable risk factors, as well as the management of the following pregnancy, complicated by alloimmunization.

Methods:
Maternal circulating free fetal DNA, fetal ultrasound examination and maternal anti-D titers determination were performed.

Results:
A 38-years-old healthy pregnant, G3P1A1, with no history of blood transfusions, was referred to our centre in the first trimester of pregnancy. Her blood group was A Rh (D) negative and that of her consanguineous spouse was O Rh (D) positive.

During the first pregnancy, in 2012, at 24 weeks of gestation, Rh (D) alloimmunization was diagnosed, based upon positive indirect Coombs titer (1:128). Indirect Coombs titers were negative at the first prenatal visit, in the first trimester. After diagnosis, the titers remained stable, middle cerebral artery (MCA) peak systolic velocity (PSV) was normal and at 39 weeks of pregnancy, the patient delivered a male newborn, weighing 3150g, with and APGAR score of 9/10/10. The newborn had no complications and was discharged with the mother on the 3th day after birth. The placenta anatomopathological study revealed multifocal hydropsy of chorionic villi.

In 2016, the patient had a spontaneous first-trimester abortion, of embryonic cause.

In 2018, at 7 weeks of pregnancy, maternal indirect Coombs titer was 1:32. Due to the history of alloimmunization in the first pregnancy, maternal circulating free fetal DNA was performed in the first trimester, and the fetus tested positive for Rhesus (D). Indirect Coombs titers were obtained serially (every two weeks) and remained stable until the 25th week of gestation, from which time they rose up until 1:64. Since the critical titer was reached, and as recommended by current guidelines, weekly MCA PSV doppler monitoring started at 18 weeks of gestation and remained normal (<1.5 MoM). The serial evaluation can be found in the attached chart.

At 32 weeks of gestation, the patient was referred to a hospital with differentiated neonatal care and at 37 weeks of pregnancy, the patient was submitted to a scheduled cesarean section due to placenta previa. A
female newborn was born, weighing 2675g, with an APGAR score of 5/9/9. The newborn was transferred to the Neonatal Intensive Care Unit due to jaundice and anemia, having undergone phototherapy, as well as RBC transfusion. The baby was followed up in pediatric consultations and was found to be healthy.

Conclusions:
In subsequent Rh (D) alloimmunization affected pregnancies, management entails an experienced maternal-fetal specialist, since fetal anemia usually is more severe and develops earlier in gestation. With appropriate pregnancy monitoring and intervention, this disorder can be treated successfully in almost all cases with minimal offspring sequelae. In addition, thanks to the existence of cell-free fetal DNA testing, it is possible to evaluate the fetal risk of complications, by determining the fetal Rh (D) type, and adjust the pregnancy surveillance and the place of delivery.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 176

TITLE: COMPLETE ANDROGEN INSENSITIVITY SYNDROME: A RARE CASE OF PRENATAL DIAGNOSIS

AUTHORS: M. Coelho 1, M. Freixo 1, E. Soares 1, J. Rocha 1, C. Marinho 1, G. Rodrigues 1

AFFILIATIONS: 1 – Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal

CONTENT

Introduction:
Androgen insensitivity syndrome (AIS) (OMIM 300068) is an X-linked recessive genetic disorder with an XY karyotype that is caused by androgen receptor (AR) defects. AIS occurs in 1 in 20,000-64,000 male births and it was first described in 1953, by John Morris. Prenatal diagnosis is an incidental and rare finding. We wish to present this rare mid-trimester diagnosis, which was based on ultrasound and genetic findings.

Methods:
For the preparation of this case report, the clinical process of the patient was consulted.

Results:
The fetus of a 34-years-old healthy primigravida, with no family history of congenital anomalies, was found to have high risk for trisomy 21 (1:220), based on the combined first trimester screening results at 13 weeks of gestation. Therefore, the patient was referred for prenatal diagnosis. Cell-free fetal DNA was performed and revealed a normal karyotype, 46 XY. Fetal ultrasound examination showed a female phenotype at 19 weeks of gestation. Amniocentesis was performed at 22 weeks of gestation due to mismatch between the fetal sex and ultrasound phenotype. Ultrasound reexamination confirmed previous findings. The AR gene molecular analysis showed the presence of the mutation c.1234del(A>Rfs), in homozygosis,
resulting in a premature stop codon and therefore a truncated protein, which explains the sex discordance. The couple was referred to genetic counseling and clinical psychology and decided to keep the pregnancy.

Conclusions:
In the case presented, the ultrasonographic and cytogenetic analysis showed discordance between chromosomal and phenotypic sex, suggesting the diagnosis of complete androgen insensitivity syndrome (CAIS). CAIS is either characterized by normal or near-normal female phenotype, with female external genitalia, testes in abdominal location or descended and absent mullerian duct derivatives. CAIS is commonly diagnosed in adolescence, based on primary amenorrhea or testes-like masses in the inguinal region. The prenatal disclosure of fetal sex enables early diagnosis of CAIS, which permits early management of these patients, reducing the risk of gender role change, as well as timely – prepubertal – removal of testes to prevent malignancy. Management of CAIS should depend on a multidisciplinary team including endocrinology, urology, gynecology and clinical psychology.
**TOPIC:** PRENATAL DIAGNOSIS

**ABSTRACT ID:** 226

**TITLE:** SIMULTANEOUS DETECTION OF FETAL CHROMOSOME ANEUPLOIDY AND MONOGENIC DISEASES BY A NOVEL NONINVASIVE PRENATAL TESTING METHOD: TARGETED AND GENOME-WIDE SIMULTANEOUS SEQUENCING (TAGS-SEQ)

**AUTHORS:** L. Yang1, H. Zhang1, W. Zhang1, Y. Wang1, F. Chen1, X. Ji, Y. Lu3, Y. Gao1

**AFFILIATIONS:** 1BGI-Shenzhen, Shenzhen, China  
2Department of Genetics, Shanghai Institute of Pediatric Research, Shanghai, China  
3Department of Obstetrics and Gynecology, Chinese PLA General Hospital, Beijing, China

**CONTENT**

**Background**
Next generation sequencing (NGS)-based cell-free DNA (cfDNA) analysis has been widely adopted for non-invasive prenatal testing (NIPT) for fetal chromosomal aneuploidy and monogenic diseases. However, the detection of chromosome aneuploidy and monogenic diseases requires different experiment procedures due to distinct sequencing strategies, and thus cannot be carried out at the same time in one experiment.

**Objectives**
We intended to develop a new sequencing method embracing both advantages of targeted and genome-wide sequencing, so that it can simultaneously screen for fetal chromosome aneuploidy and dominant monogenic diseases in a noninvasive manner.

**Methods**
Our method, called Targeted And Genome-wide simultaneous sequencing (TAGs-seq), integrates a step of multiplex PCR into the genome-wide NIPS library construction of cfDNA. As a result, whole genome and target region
can be simultaneously amplified in one tube (Figure 1). After NGS, the genome-wide region displays a low sequencing depth (0.1-0.5X) and the target regions an ultra-high depth (1000-10000X), which were sufficient for measuring chromosome aneuploidy and detecting single base mutations, respectively.

Results
We validated in-blind the TAGs-seq NIPT in 66 plasma samples with previously confirmed outcomes. The NGS data of all samples for TAGs-seq with a 0.2-0.8X genome coverage and a >1000X targeted coverage, the percentage of on-target reads are 0.22-2.63%. The TAGs-seq NIPT identified 7 cases of common aneuploidy (T21, n=3; T18, n=2; T13, n=2), 6 cases of de novo single base mutations (FGFR3 c.1138G>A, n=5; c.1118A>G, n=1), and 53 cases of normal controls. All results were concordant to the invasive diagnostic results.

Conclusions
We developed a novel TAGs-seq NIPT, which exploited low-coverage whole-genome sequencing data to analyze chromosome aneuploidy, and high-depth targeted sequencing data to analyze single base mutations. Compared to conventional NIPT method, TAGs-seq NIPT provides a convenient, low-cost and expandable solution to detect fetal chromosome aneuploidy and de novo mutations in a single experiment.
TITLE: PRENATAL SONOGRAPHIC DIAGNOSIS OF HETEROTAXY SYNDROME WITH SLIDING HIATUS HERNIA

AUTHORS: S.K. Deol 1
V. Krishnan 2
B. Vaidyanathan 3

AFFILIATIONS: 1. Fellow in Advanced Obstetrical Ultrasound, Dept. of Fetal Medicine, AIMS, Kochi, India
2. Associate Professor, Dept. of Fetal Medicine, AIMS, Kochi, India
3. Professor, Dept. of Pediatric Cardiology, AIMS, Kochi, India

CONTENT

Abstract
We report a case of heterotaxy syndrome with right isomerism, complex congenital heart disease associated with hiatus hernia in a 19 weeks fetus with relevant review of literature. This report highlights the importance of having a proper checklist for prenatal identification of extracardiac manifestations of heterotaxy syndromes. This will enable us to provide an effective prenatal counseling and postnatal management of this complex lesions. To our knowledge, prenatal sonographic detection of a sliding hiatal hernia in a fetus with asplenia syndrome has not been reported previously.

Introduction
Abnormal lateralization of the thoracic and abdominal organs, which are arranged in an unexpected arrangement is called heterotaxy syndrome.1 It is found in between 2.2% to 4.2% of infants with congenital heart disease. It is typically associated with malformations in central nervous, pulmonary, gastrointestinal, immunologic and genitourinaty systems.2,3. In earlier days the syndrome was segregated on the basis of anatomy of spleen in to
asplenia and polysplenia. However it has been shown that not the best discriminator of the two subsets of heterotaxy.4

Case report

A 42yrs old gravida 2, para 1 mother of gestation age 19wks was referred to us at 19 weeks and 2 days for fetal cardiac evaluation in view of suspicion of congenital heart disease in a fetal scan. Fetal echocardiogram performed showed a complex congenital heart disease. (Right isomerism, situs ambiguous, dextrocardia, common atrium, common atrioventricular valve, large inlet and muscular ventricular septal defect amounting to a single ventricle, pulmonary atresia, total anomalous pulmonary venous connection, intact inferior vena cava with sinus rhythm).

Incidentally, in the four chamber view, a hypoechoic structure was seen in the left fetal thoracic cavity and the heart was visible in the right thoracic cavity in the transverse view, hence congenital diaphragmatic hernia was suspected. The total lung area measured in four chamber view was within normal limits for the gestational age (value to be measured). However there was no mediastinal shift and normal appearance of the diaphragm, hence hiatus hernia was suspected. Fetal abdominal examination showed isolated complete herniation of the stomach. The other extra cardiac manifestation included a Cervical meningocele. Complexity of the CHD and the extracardiac abnormalities were explained to the parents and they opted for termination of pregnancy and declined fetal autopsy.

Discussion

Right isomerism is characterized by disruption of early left-right axis determination and bilateral right sidedness. It is typically associated with complex congenital heart malformations such as unbalanced complete atrioventricular septal defects along with asplenia and intestinal malformation.6 It carries a poor prognosis.7 Distribution of cardiac and extracardiac anomalies are different in heterotaxy syndromes.8

A retrospective postnatal study showed a significant association of hiatus hernia in patients with right isomerism (14.3% n=17/143). The common clinical manifestations are vomiting, recurrent bronchiolitis or pneumonia and upper gastrointestinal bleeding. Patients with hiatus hernia can have associated midgut malrotation. However the overall mortality was similar between those patients with or without hiatus hernia.9 There is an isolated case report on prenatal diagnosis of hiatus hernia (paraesophageal)
associated with heterotaxy syndromes. In paraesophageal hiatus hernia, the gastroesophageal junction (GEJ) is confined to its normal position, but a part of the stomach herniates into the chest. But in our case, the entire stomach including (GEJ) herniates into the thoracic cavity. To our knowledge, prenatal sonographic detection of a sliding hiatal hernia in a fetus with asplenia syndrome has not been reported previously.

Conclusion
This case illustrates the importance of having a proper checklist for prenatal identification of extracardiac manifestations of heterotaxy syndromes. This will enable us to provide an effective prenatal counselling and postnatal management of this complex lesions. Fetal echocardiography along with detailed anomaly scan can accurately delineate the anatomy in heterotaxy, helping to plan prenatal counseling and giving the couple option of termination of pregnancy before viability in cases with very poor prognosis.
CONTENT

Background. The human placenta development appears to be a complex and multistage process. The placenta formation processes shall commence starting from the 3rd week of the intrauterine development. From the 4th and to the 6th, and then from the 8th to the 12th weeks the wave-like increase in the maternal blood inflow to the placenta is observed. The trophoblast invasion processes violation is leading to complications in the pregnancy development starting from the early periods of gestation. Such complications include threatened miscarriage, chorion abnormal formation, embryo death, as well as placental insufficiency. It follows from the above that the key process within the first pregnancy trimester is the establishment of the mother – placenta – fetus system. The disorders in the placenta formation processes facilitate the development of gestational complications. Examination of the induced abortion formation mechanisms and placental insufficiency will lead to searching for new markers of the pathologic pregnancy course within the preclinical stage. The ultrasound examination is remaining to be one of the most promising diagnostic methods. Within the obstetric and gynecological practices such diagnostic technologies as pulse Doppler velocimetry, color Doppler imaging and 3D reconstruction of the placental complex vessels are widely employed. However, the study of intraplacental blood flow at the microcirculation level is still remaining to be the subject of research. The innovative SMI (Superb Micro-Vascular Imaging) ultrasonic methodology allows to visualize
the infinitesimal vascular structures possessing a low level of blood flow that previously were not subjected to any research.

Objective: To evaluate the intraplacental blood flow characteristic features against the background of the progesterone deficiency within the first pregnancy trimester.

Materials and methods: The primigravida patients \( n = 64 \) having the 7 – 8 weeks gestation term were subjected to examination. All the patients were relatively examined, which included completion of the detailed medical history, as well as the obstetric and gynecological examination. Patients of both groups were characterized by the menstrual cycle violation in their anamnesis. In both groups the pregnancy occurred independently and spontaneously. Age of the patients varied from 20 to 35 years. The gestational period determination was performed based on the date of the last menstrual period. All patients were subjected to checking the progesterone level in blood twice in the morning with an interval of a week. Based on the data obtained, all the patients were divided into two groups: I – with a low level of progesterone in blood \( n = 21 \); II - with the normal level of progesterone \( n = 43 \). In order to examine the intraplacental blood flow, the Toshiba Aplio™ 500 ultrasound system’s SMI technique was employed. Patients pertaining to both groups were subjected to the intraplacental blood flow examination using the Toshiba Aplio™ 500 ultrasonic device, which featured the SMI technique settings. Within the course of the study, the vascularization index automatic calculation was carried out (VI reflects the blood vessels functional density in the examination area). Results and conclusions: During the visual evaluation of the results obtained using the SMI technique, special attention was brought to the nature and intensity of the vascular component distribution in the examined area. The vascularization index determination was carried out automatically. Within the two groups under examination, the percentage of the blood vascular elements (IV) in the study area was ranging from 15.2 to 44.1 per cent. The reliable increase \( p < 0.05 \) was registered with the group characterized by the physiological pregnancy course.
CONTENT

Background
Gestational diabetes mellitus (GDM) is associated with an increased incidence of adverse perinatal outcomes. Ultrasound control of fetal growth is key in monitoring the pregnant woman with GDM. The clinical consequence of fetal overnutrition is macrosomia. According to the classic Pedersen hypothesis, fetal overgrowth is related to maternal hyperglycemia. Maternal glucose, abnormally high, crosses the placenta, stimulating the release of insulin by the fetal pancreatic beta cells. Since insulin is one of the main factors of fetal growth, the fetus in response to hyperglycemia experiences an overgrowth. In addition to hyperglycemia, the insulin resistance and the inflammatory state present in the DGM increase placental availability of nutrients to the fetus (glucose, amino acids and free fatty acids) influencing fetal growth. Prenatally suspected fetal overgrowth is derived from the presence of an ultrasound estimated fetal weight (EFW) abnormally elevated. When the EFW is higher than the 90th percentile, the fetus is classified as LGA. This method is more accurate than that based only on the absolute value of
the estimated weight (EFW greater than 4000 or 4500 g). By considering the gestational age at the time of ultrasound, it is possible to identify excessive fetal growth before the term [11]. Traditionally, the evaluation of fetal growth has been performed comparing estimated fetal weight with population-based reference curves. Following this approach, recent publications by the Intergrowth-21st Project defend the use of a single standard for fetal growth and birthweight [1, 2]. On the other hand, a customized approach has gained strength in recent years. This alternative method attempts to model the growth potential of each fetus. Initially described by Gardosi et al. [3], this methodology uses a mathematical model that includes maternal anthropometric variables to predict the optimal weight at term. By combining this optimal weight at term with a fetal proportionality weight curve it is possible to calculate a customized curve for each mother in each pregnancy. This curve can be used both to assess birth weight and to assess fetal growth [4].

Objective
The aim of the present study is to determine which of these two methods (INTERGROWTH21st vs customized) better predicts the nutritional status of newborns of diabetic mothers.

Methods
.- Determination of the risk of alterations in the nutritional status of the newborn (malnutrition or overnutrition). To calculate the risk of neonatal malnutrition and severe neonatal malnutrition, the study group included newborns classified as SGA and the control group included newborns classified as AGA. The same analysis was performed twice. One using INTERGROWTH21st as reference and another one using our customized foetal growth curves as a reference. To calculate the risk of neonatal overnutrition and severe neonatal overnutrition, the study group included newborns classified as LGA and control group included newborns classified as AGA. Again, the analysis was performed twice, once using the INTERGROWTH reference method, and the other using our customized curves.

Results
A total of 234 pregnant women with GDM were recruited to this study. Figure 1 shows the risk of malnutrition (PI < p10) and severe malnutrition (PIp90) and severe overnutrition (PI>P97) in newborns classified as LGA by...
INTERGROWTH21st vs. customized method. The risk of malnutrition at birth was greater when the diagnosis of SGA was established using the customized method (OR: 5.76; 95% CI: 2.07 – 16.08) than when using INTERGROWTH21st (OR: 3.07; 95% CI: 0.74 – 12.76). In the same line, new-borns classified as SGA using customized method, showed a significant increase in risk of severe neonatal malnutrition (PI < p3) (OR: 10.81; 95%CI: 2.65 – 44.16).

New-borns classified as LGA both by INTERGROWTH and by the customized method presented an increased risk of overnutrition. However, the risk of overnutrition in new-borns classified as LGA by the customized method was more than twice (OR: 9.80; 95%CI: 4.09 – 23.47) that found in new-borns classified as LGA by INTERGROWTH21st (OR: 4.79; 95%CI: 2.17 – 10.54). LGA new-borns also have an increased risk of severe neonatal overnutrition (PI > p97). Again, the risk was greater when the customized method was used (OR: 29.40; 95%CI: 5.47 – 158.72) than when INTERGROWTH was used as the reference method (OR: 22.92; 95%CI: 2.74-191.95).

Conclusions
In GDM, when a fetus is classified as SGA or LGA, the risk of found an abnormal nutritional status is greater than when using INTERGROWTH.
TOPIC: Prenatal Diagnosis

ABSTRACT ID: 292

TITLE: Accuracy of First Trimester Screening Test in Pregnants with Advanced Maternal Age – Should Maternal Age Alone Still Be an Indication for Prenatal Genetic Diagnostic Testing? A Case Report

AUTHORS: E. Soares 1, M. Freixo 1, M. Coelho 1, J. Rocha 1, C. Marinho 1, G. Rodrigues 1

AFFILIATIONS: 1 – Centro Hospitalar do Tâmega e Sousa, Penafiel, Porto, Portugal

CONTENT

Introduction
Prenatal genetic screening was designed to assess if a patient is at increased risk of having a foetus affected by a genetic disorder. All pregnant women should be offered prenatal assessment for aneuploidy by screening or diagnostic testing regardless of maternal age or other risk factors. Although aneuploidy risk increases with increasing maternal age, presently, age alone is not an effective screening. Thus, maternal age is no longer an indication for invasive diagnostic procedures. Final estimated risk for aneuploidy is calculated by assessing a combination of foetal nuchal translucency thickness (NT), presence or absence of nasal bone, maternal serum free β-human chorionic gonadotropin (hCG) and pregnancy-associated plasma protein-A (PAPP-A), as well as maternal factors such as age, prior history of aneuploidy, weight, race, and number of foetuses.

Methods
For the preparation of this case report, the clinical process of the patient was consulted.
Results
A 43-year-old caucasian woman, 2 Gesta 1 Para (caesarean), with spontaneous conception, was referred to our centre, where she was offered the combined first trimester screen. The a priori risk, based on her age, for Down Syndrome, Trissomy 18 and Trissomy 13 was, respectively, 1/44, 1/398 and 1/1195. A biochemical assay was performed at 10 weeks + 4 days, producing the following results: free β-hCG 65.69 ng/mL (1.18 MoM) and PAPP-A 1.14 IU/L (3.08 MoM). An ultrasound at 13 weeks + 2 days of gestation revealed presence of nasal bone and NT 2.6 mm (1.52 MoM).

After the prenatal screening, the final risk was calculated as 1:2589 for Down Syndrome and 1:100000 for Trisomies 18 and 13. Despite presenting low risk screening results for aneuploidies, the pregnant woman presented substantial anxiety with regards to her age and stated that she preferred to have an invasive prenatal screening.

After detailed explanation of the significance of noninvasive screening and the risks and benefits of amniocentesis, she maintained the intent to have the invasive exam.

The amniocentesis was performed at 15 weeks and 6 days and the cytogenetic analysis revealed the existence of two cell lines: a normal male line and another line with tetraploidy- Mosaicism 92, XXYY [13] / 46, XY [25] (Figure 1).

After genetic counselling, the couple decided for pregnancy termination, which occurred at 19 weeks + 3 days.

The anatomopathological study of the placenta revealed an appropriate weight for the gestational age and hypo-helical umbilical cord. The study of the foetus revealed a male foetus without significant anatomopathological abnormalities.

Conclusions
The purpose of prenatal screening for aneuploidy is to provide an assessment of the woman’s risk of carrying a foetus with one of the more common foetal aneuploidies. It is estimated that the combined first trimester screen is associated with a detection rate of 91%, 97% and 94% for trisomy 21, 18 and 13, respectively, and an overall false positive rate of 3.1%.
It is known that maternal age increases the risk of foetal aneuploidies. Presently however, maternal age alone does not represent a formal indication for invasive exam. Therefore, it is necessary to consider, on a case-by-case basis, the need for an invasive prenatal diagnosis test. The issues that prevail in situations of advanced maternal age are as follows:

- Should advanced maternal age be an indication for invasive prenatal test?
- How many invasive tests in women with low-risk prenatal screening would be performed for one diagnosis of chromosomal abnormality?
- Should cell-free DNA screening for foetal aneuploidy replace the prenatal combined screening test in advanced maternal age cases? How many invasive tests would be avoided?
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 299

TITLE: EXTRA-ABDOMINAL VARICOSITY OF UMBILICAL VEIN ON ULTRASOUND AS A PRENATAL SIGN OF CONGENITAL LAMELLAR ICHTHYOSIS OF NEWBORN.

AUTHORS: Z. Laučeková1,K. BiskupskáBoďová1,M. Ŏachajová, T.Bielik1,M.Zibolen2, P. Žúbor1

AFFILIATIONS: 1Department of Obstetrics and Gynecology, Martin University Hospital, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia 2Department of Neonatology, Martin University Hospital, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia

CONTENT

Introduction: Congenital ichthyosis is a collective name for a group of monogenetic disorders of cornification, sometimes associated with systemic symptoms. There may be an abnormal quality or quantity of scale produced, abnormal thickness of stratum corneum or abnormal keratinocyte kinetics, often associated with skin inflammation. Pruritus, skin fragility, ectropion and anhidrosis are sometimes associated with the rare types of ichthyosis. Lamellar ichthyosis (LI) and the closely related variants non-bullous ichthyosiform congenital erythroderma (CIE) and congenital ichthyosis with fine/focal scaling (CIFS) are very rare (incidence approximately 1/100,000) and are invariably present at birth. Collectively known as autosomal recessive congenital ichthyosis (ARCI), these rare diseases may be awkward to classify because different genotypes produce overlapping clinical pictures and, conversely, identical mutations in two individuals can produce different phenotypes. The most extreme form is harlequin ichthyosis, in which neonates are covered with plate-like scales and massive hyperkeratosis.
Case report: We aim to present a rare case of fetus born with congenital ichthyosis whose mother was being monitored during pregnancy for external varicosity of umbilical vein on ultrasound finding. A twenty-six year old first time pregnant patient was diagnosed with varicosity of external (extraabdominal) part of umbilical vein during routine third trimester ultrasound screening examination in thirty first week of gestation. Up to this point her previous ultrasound examination hadn’t shown any suspicious defects or malformations. She was afterwards hospitalized and regularly monitored for signs of progression of dilatation or any further signs of fetal intrauterine distress on ultrasound and cardiotocography. Reaching thirty seventh week of pregnancy patient was recommended for labour. Pregnancy was ended with emergency caesarean section for abnormal fetal heart rate on cardiotocography. A normotrophic female newborn in 37 week of pregnancy was delivered. The girl showed multiple skin vernix like hyperkeratotic plaques-lamellar type on the right sight of body, disseminated nevus flammeus and with leukoplakia in vulvar region. Vital functions were in normal range. Baby didn’t show any other structural anomalies, abdomen was without organomegaly and cardiovascular system examination didn’t reveal any major disorder. Conclusion: Extra-abdominal varicosity of umbilical vein is a rare ultrasound finding and can be associated with several syndromes and anomalies. A detailed anatomic scan must be performed to exclude such anomalies. This disorder is associated with a high risk of intra-uterine foetal demise. Therefore patients with this finding need to be intensively monitored. In our case this ultrasound finding was present in baby who was postnatally diagnosed with congenital lamellar ichthyosis.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 306

TITLE: CASE REPORT: PACEMAKER IMPLANTATION IN NEWBORN PRENATALLY DIAGNOSED WITH COMPLETE ATRIOVENTRICULAR HEART BLOCK DUE TO MATERNAL SYSTEMIC LUPUS ERYTHEMATOSUS


AFFILIATIONS: 1. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil
2. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil
3. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil
4. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil
5. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil
6. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brasil

CONTENT

We present a case of a congenital complete atrioventricular block, diagnosed prenatally by a doppler echocardiography requested to investigate low fetus cardiac pace. The pregnancy was terminated via C section at the 36th gestational week due to pre-eclampsia. The neonatal resuscitation steps, the inotropic and the vasoactive drugs were ineffective to elevate the newborn cardiac pace above 55 beats per minute. B.C.S.S was submitted to a cardiac pacemaker implantation with 20 days of his birth, recovered well and was discharged without any other therapy to sustain cardiac pace. The disease was attributed to non diagnosed mother systemic lupus erythematosus, investigated due to the newborn’s CCAVB diagnosis. The procedure was successful due to an effective prenatal program and efficient public health system.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 307

TITLE: CASE REPORT: NEONATAL CHOLESTASIS DUE TO RH ISOIMMUNIZATION

AUTHORS: G. Fernandes 1; N. Silva 2; M. Filho 3; I. Padua 4; G. Buitrago 5; M Vieira 6

AFFILIATIONS: 1. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil
2. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil
3. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil
4. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil
5. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil
6. Paediatric Dept., University Hospital of Brasilia, Brasilia, Brazil

CONTENT

Objective: Report a case of neonatal cholestasis diagnosed in the first days of life of a child who presented hemolytic disease of the newborn by isoimmunization RH, with intrauterine diagnosis.

Report: We report the case of a boy, newborn, preterm, gestational age of 35 weeks and 4 days, the result of the seventh maternal RH negative pregnancy, born of cesarean delivery by indication of Isoimmunization RH with maximum cerebral peak velocity peak mean above p95. He exhibited jaundice and anemia diagnosed at birth with need for exchange transfusion. It was left in phototherapy for two days, but it was present with predominance of direct bilirubin and increase of canalicular enzymes, being suspended soon after, opening investigation for neonatal cholestasis. Despite jaundice, the patient was clinically stable, exclusive breastfeeding and with good general condition.

Complementary abdominal USG did not show any significant findings. Performed several serial exams, remained with cholestatic pattern, increased serum ferritin and transferrin saturation index. In addition, it presented enzymatic alteration in neonatal screening test. After clinical and laboratorial follow-up for a few weeks in joint housing, some diagnostic
hypotheses were suggested, the main being cholestatic jaundice secondary to isoimmunization, therefore, patient was discharged taking ursodeoxycholic acid and followed up in ambulatory consultations. The symptoms of jaundice resolved spontaneously when he was 3 months old and is still being followed up at this service.

Conclusion: this case reveals that all patients with neonatal intrahepatic cholestasis should be thoroughly investigated at birth, and may only evolve spontaneously and totally or with a less favorable outcome, so that these patients should be managed carefully and with infrequent investigation.
TOPIC: PRENATAL DIAGNOSIS

ABSTRACT ID: 320

TITLE: TETRALOGY OF FALLOT WITH ABSENT PULMONARY VALVE - MAIN DIFFERENCES WITH CLASSIC FALLOT ARE CRUCIAL FOR AN ACCURATE PRENATAL DIAGNOSIS AND COUNSELING

AUTHORS: R. Ataíde 1; P. Epifânio 2; D. Martins 1; R. Anjos 1; A Teixeira 1

AFFILIATIONS: 1 Pediatric Cardiology Department, Hospital de Santa Cruz, Centro Hospitalar Lisboa Ocidental, Lisbon, Portugal
2 Hospital do Funchal, Madeira, Portugal

CONTENT

Introduction: Tetralogy of Fallot (TOF) is the most common cyanotic congenital heart disease. Classic features for prenatal diagnosis are: (1) a large perimembranous ventricular septal defect (VSD); (2) aorta overriding the interventricular septum; (3) right ventricular hypertrophy and (4) right ventricular outflow tract obstruction (RVOTO) at subvalvar, valvar or supravalvar level, and hypoplastic pulmonary arteries (PA), with variable severity.

A different and very rare form of TOF (3% of total cases) occurs with absent or dysplastic pulmonary valve leaflets, often with an hypoplastic ring causing RVOTO. In this rare condition, prenatal images are pathognomonic, with pulmonary valve regurgitation, enlargement of PA trunk and branches, and usually absent ductus arteriosus, besides the typical features of classic TOF.

Prenatal diagnosis can be easily made and its important to distinguish both conditions since it is determinant for counseling, and allows scheduling childbirth in a tertiary centre with the support of pediatric cardiology and/or cardiothoracic surgery.
Clinical case:
We present a case of TOF with absent pulmonary valve, diagnosed in Madeira island at 26 weeks gestation with typical features of TOF, severe pulmonary valve regurgitation (figure 1), significant dilatation of the pulmonary trunk and branches and absent ductus arteriosus. This fetus had a normal development and the pregnancy was uneventful. Delivery occurred in Lisbon at 38 weeks gestation. The newborn had an Apgar Index of 9 on the first and 5 minutes of life. After that he developed serious respiratory distress with oxygen refractory hypoxemia requiring invasive ventilation at 20 minutes of life. On the x-ray a right medium lobe atelectasis was documented. Transthoracic echocardiogram showed an exclusive right to left shunt in the absence of serious RVOT obstruction (peak gradient of 15mmHg measured by continuous wave Doppler). Pulmonary venous return anomalies were ruled out. Ventilatory parameters were optimized, including inhaled nitrous oxygen. This approach led only to transient improvement. Inotropic and vasoactive support were used, again with temporary improvement but ultimately leading to an inexorable decline. Extracorporeal membrane oxygenation (ECMO) was considered but it was found that the prognosis was particularly severe given the early presentation and he was considered a poor candidate for ECMO. Death occurred at 26 hours of life. Autopsy confirmed diagnosis and documented a severe respiratory involvement.

Conclusions: Prenatal diagnosis of TOF with absent pulmonary valve can be easily made once we are aware of its features and particularities. The differential diagnosis between this rare entity and the classic TOF is simple but crucial since these two conditions with similar name (TOF), are not the same cardiopathy and will require very different approaches to prenatal counselling and postnatal support. In TOF with absent pulmonary valve the prognosis is much poorer and most of the times unpredictable. Prenatal team must be aware that there are no predictors of morbidity on the prenatal scan in this particular form of TOF. The high mortality is related to airflow obstruction caused by aneurysmal dilatation of the pulmonary arteries. Once the diagnosis is well established, one can provide the adequate environment and medical team at labor.

Figure 1 – Absent pulmonary valve (white arrow) with significant regurgitation and dilatation of pulmonary artery and its branches
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 1

TITLE: COMPARISON BETWEEN NITROGLYCERIN DERMAL PATCH AND NIFEDIPINE FOR TREATMENT OF PRETERM LABOR, A RANDOMIZED CLINICAL TRIAL.

AUTHORS: M. Kashanian 1, Z. Zamen 1, N. Sheikhansari 2.

AFFILIATIONS: 1- Iran University of Medical Sciences.
2- PhD Candidate, Faculty of Medicine, University of Exeter, Exeter, UK.

CONTENT

Introduction:
Preterm labor and delivery are of the most important complications of pregnancy and play a major role in neonatal mortality and morbidity. Management of preterm labor and prevention from preterm delivery in order to lower these risks have always been under serious concern.

Objective:
The purpose of this study was to compare the effect of nifedipine and nitroglycerin (NG) dermal patch for taking control of preterm labor.

Material and method:
The study was performed as a randomized clinical trial on women who had been admitted in the hospital diagnosed with preterm labor. In one group, nitroglycerin (NG) dermal patch and in the other group, nifedipine was prescribed.

Then the women of the 2 groups were followed up to delivery and were compared according to arrest of labor for 2 hours, 48 hours, 7 days, gestational age at the time of delivery and their adverse effects. The primary outcome was to postpone delivery for 48 hours in order to have enough time for prescribing corticosteroids.
Results:
The women of the 2 groups did not have any significant difference according to age, BMI, primary Bishop Score, gestational age at the time of tocolytic therapy, history of abortion, vaginal or cesarean delivery and preterm labor. In more women in NG group delivery was postponed for 2 hours [59(98.3%) VS 48(80%), p=0.001], for 48 hours [52 women (86.7%) VS 41(68.3%), p=0.016] and also, for 7 days [47(78.3%) VS 37 (61.7%), p = 0.046], than the women in nifedipine group. 

Gestational age at the time of delivery was higher in NG group (35.6 + 1.9 VS 34.3 + 2.05 weeks, p=0.155), however, it was not statistically significant.

Apgar score of minute 5, (p = 0.03) and neonatal weight (p = 0.04), were more and cesarean deliveries, NICU admission and duration of NICU stay were less in NG group. Adverse effects were similar, minimal and negligible in both groups.

Conclusion:
NG patch is a more effective method for preterm labor control than nifedipine with regards to minimal side effects.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 32

TITLE: COMBINED TREATMENT OF MCDONALD CERCLAGE AND ARABIN-PESSARY: A CHANCE IN THE PREVENTION OF SPONTANEOUS PRETERM BIRTH?

AUTHORS: I. Kyvernitakis

AFFILIATIONS: Dpt. of Obstetrics and Gynaecology, Buergerhospital and Clementine Childern's Hospital Frankfurt, Goethe-University of Frankfurt, Germany

CONTENT

Background
Patients with cervical shortening obtained by transvaginal ultrasound and/or previous preterm delivery are at increased risk for preterm birth in the current pregnancy. The aim of the present cohort study was to compare the rate of preterm birth and early neonatal parameters in patients at risk and screening patients who received either a cerclage or a combined treatment of cerclage and cervical pessary.

Methods
A retrospective cohort study was conducted from March 2005 to March 2017 including all patients in our department which received a McDonald cerclage or a combined treatment of McDonald cerclage and an Arabin pessary. A total of 81 women with singleton pregnancies consisted the final sample of this cohort study, of whom 34 patients received a cerclage and 47 patients received a cerclage combined with a pessary. Patients ‘at risk’ with a history of preterm birth at < 37 weeks of gestation, late term abortion, conisation, or cervical cerclage in a previous pregnancy because of a cervical shortening < 10th percentile and women with no inherent historic risk factors but a current cervical length < 3rd percentile (screening group) were analyzed separately. We defined delivery < 34 weeks of gestation as the primary outcome. Secondary outcomes were PTB < 28, < 32 and < 37.
weeks of gestation, admission to the neonatal intensive care unit (NICU), neonatal admission time, birthweight and prolongation of the gestation.

Results
There were no differences between the two study groups with regard to baseline characteristics. Delivery <34 weeks of gestation occurred in 32.4% and 27.7% of patients treated with cerclage versus combined treatment respectively (p=0.48). Similarly, there was no difference in the rate of preterm birth at <28, <32 or <37 weeks of gestation. The mean neonatal admission time at the neonatal intensive care unit was shorter in the combined treatment group versus in the cerclage group (p=0.02). There was a trend for higher birthweight (2368 g +/-962 vs. 2650g +/-1063) in favor of the combined treatment arm (p=0.077).

Conclusion
The combined treatment of cerclage with an Arabin pessary seems to be a considerable alternative in the prevention of sPTB, especially for patients with cervical length < 3rd percentile, and in particular for patients with amnion prolapse in terms of birthweight and neonatal admission time.
**TOPIC:** PRETERM BIRTH AND PREMATURITY

**ABSTRACT ID:** 57

**TITLE:** FETAL FIBRONECTIN, PAMG-1 AND CERVICAL LENGTH AS EARLY PREDICTORS FOR PRETERM BIRTH IN ASYMPTOMATIC WOMEN AT MID-PREGNANCY- A PILOT STUDY

**AUTHORS:** S. Krucker 1; C. Granado 1; D. Mueller 1; G. Vetter 1; H. Huerter 2; G. Manegold-Brauer 2; K. Redling 1; H. Nussbaumer 1; E. Huhn 1; H. Schoenberger 2; I. Hoesli 1

**AFFILIATIONS:** 1 Department of obstetrics and antenatal care, University Hospital Basel, Basel, Switzerland
2 Department of gynecological ultrasound and prenatal diagnosis, University Hospital Basel, Basel, Switzerland

**CONTENT**

Introduction:
Preterm birth is one of the most important reasons for neonatal death or long-term disabilities. It is important to find predictive tools for asymptomatic women early in pregnancy to identify those women who will be at high risk for preterm birth and to exclude women at low risk from unnecessary interventions. Fetal fibronectin (fFN), placental alpha microglobulin 1 (PAMG-1) and the cervical length are already known markers ad mid-gestation for prediction of preterm delivery, but to our best knowledge, they have never been compared in asymptomatic women at mid-pregnancy. We hypothesize that those biomarkers already have a predictive value between the 18th and 22nd gestational week for preterm delivery before 30, 34 and 37 weeks of gestation (wks.). [1]

Material and Methods:
In this prospective study approved by the local ethical committee, 100 women will be included between the 18th and 22nd wks. after written informed consent. Inclusion criteria are: age > 18 years, cervix length >15mm. Exclusion criteria are: infections, bleeding, premature rupture of...
membranes, Muellerian anomalies, placenta praevia, cerclage, alcohol or drug abuse. The cervical length was measured transvaginally in a standardized method by qualified ultrasound experts. Studies have shown that transvaginal ultrasound prior to quantitative fFN did not significantly influence the test result. [2] Therefore for practical reasons afterwards the fFN was measured by the Rapid fFN® and tested with the TLiQ® System from Hologic®, the PAMG-1 was evaluated by the PartoSureTM bedside test, both blinded for the patient and the clinicians. 28 women have been included until now, 18 of them have already delivered.

Results:
Maternal characteristics are shown in table 1. 20 of the 28 women had a negative fFN test (<50 ng/ml) result as well as a negative PAMG-1 test. 15 of the 20 have already delivered, 1 before 37 wks. (35+3 wks.), 7 women had a positive fFN test. So far, 3 of them have delivered. There was 1 preterm delivery (26+3 wks.), caused by premature rupture of membranes. Only 1 woman had a positive PAMG-1 test. She has not born yet. There was no woman with a positive test result in both tests.

Conclusion:
In this pilot study we could successfully implement different biomarkers in mid gestation. Pregnant women with a normal cervical length and a negative test result of the qualitative fFN or PAMG-1 were at very low risk for preterm delivery. None of the women was tested positive for both biomarkers. However, 1 in 4 women who was tested positive by 1 of the biomarker resulted in a very early preterm birth, 1 woman had a late preterm delivery, although she was negative in all tests. Further results are needed to accurately evaluate the test performance.

Literature:
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 60

TITLE: PLACENTA AND PRETERM DELIVERY

AUTHORS: M. Kurochka 1, E. Volokitina 2

AFFILIATIONS: 1 Rostov State Medical university, Department of obstetrics and Gynecology 1, Rostov-on-Don, Russia
2 Rostov State Medical university, Department of obstetrics and Gynecology 1, Rostov-on-Don, Russia

CONTENT

Preterm delivery remains a pressing problem for obstetrics and gynecology specialists worldwide. Although the matter has been researched for a long time, it still poses many unsolved challenges. The issue is currently recognized as a multifactorial syndrome. However, influence of the same risk factors is known to result in childbirth occurring after different pregnancy duration. Severity of individual status may also vary among newborns of the same gestational age. The environment and mother’s organism affect the fetus indirectly through the placenta. Placenta is a provisory organ developing in the mother’s organism simultaneously with the fetus and providing for its needs.

Our work was intended as a study to determine the role of placenta in the genesis of preterm delivery.

We performed retrospective analysis for pathomorphological examinations of placenta carried out in cases of preterm delivery. 356 case records of pregnancy durations ranging from 22 to 36 weeks and 6 days were selected among the cases registered within a year at the Rostov Regional Perinatal Centre. All patients were subdivided into 4 groups based on pregnancy duration. Group 1: 22-27 weeks and 6 days, n=87. Group 2: 28-30 weeks and 6 days, n=29. Group 3: 31-33 weeks and 6 days, n=78. Group 4: 34-36 weeks and 6 days, n=162. We compared the groups using the Mann-Whitney test.
to estimate the extent of placental site reaction, the frequency of disorders revealed in placental villous maturation and blood circulation in the placenta.

Results. Villous dysmaturity manifested by revealed embryonic and immature intermediate villi was detected in Groups 1 and 2 with statistically significant frequency: 85.5% and 82.3% compared to 46% in Group 3, 56.5% in Group 4 (p1-3, 2-3, 1-4, 2-4<0.0005). No differences were found between Groups 1 and 2.

Disorders of blood circulation in the placenta demonstrated no reliable differences between the Groups 1, 2, and 3. Group 1 – 95.7%, Group 2 – 88.2%, Group 3 – 83.8%. However, the difference between Groups 1 and 4 (66.3%) was statistically significant (p1-4<0.000001).

<table>
<thead>
<tr>
<th>Extent of placental site reaction</th>
<th>None</th>
<th>Low</th>
<th>Distinct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>39.44%</td>
<td>47.89%</td>
<td>12.67%</td>
</tr>
<tr>
<td>Group 2</td>
<td>41.18%</td>
<td>11.76%</td>
<td>47.06%*</td>
</tr>
<tr>
<td>Group 3</td>
<td>13.51%</td>
<td>40.54%</td>
<td>45.95%**</td>
</tr>
<tr>
<td>Group 4</td>
<td>5.32%</td>
<td>10.64%</td>
<td>84.04%***</td>
</tr>
</tbody>
</table>

*p1-2 = 0.002
**p1-3 = 0.0002
***p1-4 = 0.000001

Table. Extent of placental site reaction
It follows from the suggested table that the better a placental site reaction is expressed, the longer the pregnancy lasts.

Conclusions.
1. Timing of preterm delivery depends upon the condition of placenta: villous dysmaturity and disorders of blood circulation shorten pregnancy; proper placental site reaction facilitates its extension.
2. When placental functionality is depleted, pregnancy maintenance accomplished with medications may result in fetal distress being therefore inexpedient.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 68

TITLE: AMNIOINFUSION IN SECOND TRIMESTER PRETERM PPREMATURE RUPTURE OF MEMBRANE: SERIAL CASES AND LITERATURE REVIEW

AUTHORS: M. Melinda; A. Putra

AFFILIATIONS: Obstetrics and Gynecology Department, Udayana University/ Sanglah General Hospital, Bali, Indonesia

CONTENT

Introduction: Prematurity is the main cause of neonatal morbidity and mortality in the world. Preterm premature rupture of membrane contributes most of the cases. Expectant management combined with antibiotic administration is the traditional management. But, it fails to reduce adverse events. Amnioinfusion has been considered as a potential treatment for this population. We aim to describe our experience with amnioinfusion done in patients with preterm premature rupture of membrane.

Material and Methods: This is a retrospective study with a study population of all patient who treated with amnioinfusion at Sanglah General Hospital, Denpasar from 2017 – 2018. There are three cases of second trimester preterm premature rupture of membrane were recorded already treated with amnioinfusion during that period. All three cases were given amnioinfusion to increase the amniotic index. Transabdominal approach was chosen, guided by ultrasound.

Results: All three patient were received their first amnioinfusion at 22 – 27 weeks of gestational age. Two patients received amnioinfusion therapy twice, with a time lag of between dua and four weeks. All were born at 28 – 32 weeks of gestational age with labor in the form of caesarean section in two patients and one patients was spontaneously. No neonatal mortality or significant morbidity were found.
Conclusions: Amnionfusion for patients with preterm premature rupture of membrane potentially reduce neonatal morbidity. Although it cannot prevent preterm birth, it may prolong the latency period.
Background. Preterm birth is one of the major global health problems and part of the Millennium Development goals because of the associated high number of perinatal or neonatal mortality and long-term risks of neurodevelopmental and metabolic diseases [Kyvernitis I et al., 2018]. Globally, preterm birth (PTB) rates are rising and have a significant impact on neonatal morbidity and mortality. PTB remains difficult to prevent and a number of strategies for preterm birth prevention (progesterone, cervical pessaries, cervical cerclage, tocolytics, and antibiotics) have been identified. A paucity of effective interventions exists for the prevention of PTB [Karis Allen L, 2017]. Despite being a common clinical practice, evidence to support the combined use of multiple versus single interventions for preventing PTB is scarce [Jarde A., 2017].

Objective was to evaluate the comparative use of Arabin pessary and intravaginal progesterone vs cerclage and intravaginal progesterone for the prevention of preterm birth in high risk women.

Materials and Methods: This was a retrospective cohort study of 100 women with singleton pregnancies from August 2015 to March 2017 in the Gynecological Department of L. Reshetova Regional Clinical Perinatal Center. This study included women with high risk of PTB due to short cervix (≤25 mm) and cervical funneling found on ultrasound (64%) or history indicated (36%). All patients have been administered intravaginal
progesterone in the dosage 200 mg per day. Group I consisted of 50 women who had a cerclage at the 22 week. Group II consisted of 50 women with pessary placement at the 18 week. Primary outcomes were rates of PTB before 37, 34, and 28 weeks gestation. Secondary outcomes were the average weight of a newborn, the infant's score on the Apgar scale, the percentage of low-weight newborns.

Results: One patient from Group II dropped out of the study. Fifty four (54%) and fifty seven singleton women (57.1%) delivered at term correspondingly. Of these deliveries, eighty seven (87.7%) and sixty five (65.9%) were spontaneous. The primary outcomes are shown in Table 1. The rates of PTB before 28 weeks were six (6.0%) and eight (8.1%), before 34 weeks gestation were sixteen (16.0%) and twelve (12.2%) for all deliveries, in 34-37 weeks were twenty for (24.0%) and twenty two (22.4%) correspondingly (χ² =5.518; p=0.138). The average weight of a newborns were 3400g [Me 2770; 3560] and 2916 g [Me 2530; 3510], U=841.0; p=0.222; the percentage of low-weight newborns were 8.1% and 6.0% (χ² =2.746; p=0.253) and the Apgar points were 7.75 [Me 7; 8] and 7.0 [Me 7; 8] (U=800.0; p=0.102) correspondingly. Conclusions: Arabin pessaries or cerclage with vaginal progesterone are equally efficacious in the prevention of preterm birth in high risk women in the mid trimester and singleton gestation. Further multicenter studies are necessary to confirm these findings and determine as guidelines in the future.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 88

TITLE: PRETERM BIRTH – CASUISTICS BETWEEN 2015 AND 2016 IN A PORTUGUESE MATERNAL-FETAL CENTRE

AUTHORS: Gouveia, I.F.1; Ferreira, S.; 2; Leitão, C.2; Carvalho, R.S. 1; Ferreira, C.1; Silva, J.R. 1; Almeida S.2; Quintas C.2; Carvalho, C.1

AFFILIATIONS: 1. GYNECOLOGY AND OBSTETRICS DEPT. OF V.N.GAIA/ESPINHO HOSPITAL CENTRE, V.N.GAIA, PORTUGAL
2. PAEDIATRIC AND NEONATOLOGY DEPT. OF V.N.GAIA/ESPINHO HOSPITAL CENTRE, V.N.GAIA, PORTUGAL

CONTENT

BACKGROUND
Preterm birth is still a central problem of maternal-fetal medicine, being responsible for most cases of neonatal and post-neonatal morbimortality. It represents about 6.2% of births in the European paradigm, but can be higher in sub-developed countries.

OBJECTIVE
The objective of this study was to identify and understand the risk factors of our population and the effect of measures that can prevent premature birth.

MATERIAL AND METHODS
Retrospective observational study compiling the preterm births of women until 34 complete weeks of gestation between 2015 and 2016. Patients’ data were processed in Microsoft® Excel 2016® and IBM SPSS Statistics 21®.

RESULTS
A total of 301 preterm births occurred in our centre between 2015 and 2016 (prematurity rate of 8.8%) . From those, 124 (41% of the total premature births) took place between the viability threshold (23-24 weeks) and 34
complete weeks of gestation. We registered 67 spontaneous premature births (54%) vs. 57 iatrogenic births (46%).

In spontaneous premature births, similar rates of premature labour and preterm rupture of membranes were found (49% and 51%, respectively). The most frequent risk factors were multiple gestation (37%), cervical measure inferior to 25 millimetres (22.4%), antepartum haemorrhage (17.9%), cervical pathology or intervention (12%), low level of education (9%) and maternal age extremes (9%). Only 6% (4 cases) had no inherent risk factors. Progesterone for the prevention of preterm birth was initiated in 34% of the spontaneous preterm birth population. Cervical measurement was conducted in 60%.

Concerning management of spontaneous preterm birth, most women completed pulmonary maturation cycle with corticosteroids (88%). The cases in which it wasn’t performed included imminent labour and gestational age superior to 34 weeks (12%).

Regarding iatrogenic preterm birth, we chose to analyse data dividing this etiology in different categories: Hypertensive Disorders (Pre-eclampsia and HELLP Syndrome); Fetal Growth Restriction (FGR), Cerebral, and Umbilical artery Doppler abnormalities; Placental Abruption.

In the Hypertensive disorders group, 23% of women had history of chronic hypertension and 2 cases (8%) had history of preterm birth due to an hypertensive disorder. Most cases of women with Preeclampsia superimposed upon chronic/pre-existing hypertension (83.4%) were medicated with anti-hypertensive drugs since the beginning of pregnancy. Of these, one third was medicated with acetylsalicylic acid.

Concerning the FGR and Doppler abnormalities, it is important to take into account history of present and previous signs of placental insufficiency or anomalies such as history of abruption, PE, FGR and previous repetitive abortions. Only one quarter was under acetylsalicylic acid (only one woman and previous history of placental abruption). Most cases had concomitant Doppler and amniotic fluid abnormalities.

In the placental abruption (PA) group, we gave high relevance to risk factors since an effective and quick response is imperative in these cases. Trauma, hypertension/PE, chorioamnionitis and history of previous placental ischemia are frequent risk factors (21% of the PA cases). Tobacco and
alcohol consumption were also important in this subgroup (36% of PA cases). Placenta previa represented 14% of PA cases.

Regarding premature neonates, only 10 cases of neonatal death (6%) were registered, but 50% of the population had important morbidities such as infection (42%), intraventricular haemorrhage (13%), pulmonary haemorrhage (9%) and other. Most cases had no sequel in normal development (only registered in 20%).

CONCLUSIONS

As positive points, we highlight the quick and effective intervention and the administration of steroids and magnesium sulphate in the majority of cases of both etiologies.

There are many issues to improve, namely the importance of recognizing risk factors for preterm birth and successful implementation of preventive measures. In the PE/HELLP group, the application of angiogenic and anti-angiogenic markers can help clinical decisions and improve the identification of the severity of the hypertensive pathology.

Although research advances in the past years, preterm birth is still difficult to anticipate. Risk factors should be paid careful attention while gathering of a woman’s medical and obstetric history, applying the adequate prevention measures during pre-conception and pregnancy.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 100

TITLE: FREQUENCY OF PREMATURE LABOR IN RELATION TO PRE-ECLAMPSIA AND GROWTH RESTRICTION

AUTHORS: R. Martínez 1; PM. Tabernero 2; M. Rodríguez 3; I. Eznarriaga 4

AFFILIATIONS: Gynecology and Obstetrics Dept. University of Fuenlabrada, Madrid, España

CONTENT

Background: The concept of placental disease envolve an spectrum of obstetric complications, including preeclampsia (PE) and restricted intrauterine growth, which are an important cause of morbidity and mortality, both maternal and fetal. PE is a multisystemic and progressive pathology characterized by the appearance of hypertension and proteinuria or hypertension and microangiopathy, with or without proteinuria, starting in the second half of gestation or in the postpartum period. It affects 2-3% of pregnancies and is an important cause of premature birth and maternal and fetal morbidity. It can cause liver, kidney, brain and coagulopathy complications in the mother, and be a cause of fetal growth restriction and prematurity (CIR). CIR is defined as the inability of the fetus to reach its expected growth potential and is defined as an estimated fetal weight lower than the 3 th percentile or 3 th percentile and 10 with Doppler alteration that suggests the presence of hemodynamic redistribution as a reflex of adaptation to fetal malnutrition / hypoxia and histological and biochemical signs of placental disease, so they also have more risk of association with preeclampsia. Recent evidence suggests that the prophylactic use of acetylsalicylic acid can substantially reduce the risk of preeclampsia, as well as other adverse perinatal outcomes including preterm delivery before 32 weeks, decreasing perinatal morbidity and mortality.
Objective: evaluate the frequency of premature labor in relation to pre-eclampsia and CIR

Methods: A retrospective cohort study was conducted in patients assessed in the 1st trimester at the University Hospital of Fuenlabrada, from January 2017 to December 2017, with single pregnancies, CRL between 45-84 mm in 1st-trimester ultrasound, maternal age> or equal at 16 years, absence of major fetal malformations in which the measurement of IPmAUT was made. In the case group, patients were selected with IPmAUT 1st trimester> 2.30 (prophylaxis with acetylsalicylic acid 100 mg daily was started before week 16) while for controls those with an index ≤2.30 were selected and paired 1-to-1 with cases by age, tobacco and ethnicity. The clinical histories were reviewed and the outcome variables were collected. The qualitative variables were expressed with nº of cases and%. Quantitative variables with their mean and standard deviation or with median and interquartile range. The cohorts were compared with the chi-squared test, for qualitative variables and with Student’s t test for independent data or the median test for quantitative variables. The results have been adjusted with univariate logistic regression models. Relative effects are presented as odds ratios (OR) with 95% CI. Discrimination was calculated with the ROC curves and their area under the curve and with 95% CI. In all contrasts, the null hypothesis was rejected with an alpha error of less than 0.05. The packages used were SPSS see 20 and STATA see 15.

Results: The group of cases consisted of 95 patients who met the inclusion criteria, compared to 91 patients who formed the control group. The frequency of late prematurity 34.0-36.6 was similar in both groups (6.4 vs. 6.6%, p = 0.614). There was only one case of preterm delivery below 34 weeks and took place in the group of abnormal uterine. In the case group, all those born with <34 weeks (n = 1) and 2 cases (33.3%) of those born between 34 and 37 weeks had PE, while in the control group 1 case (16.7%) of those born between 34 and 37 weeks had PE (p = 0.242). In relation to the CIR, in the case group the only one born before week 34 did not have restricted intrauterine growth and 3 cases (50%) of those born between week 34 and 37 had CIR, while in the group of controls 2 cases (33.3%) of those born between 34 and 37 weeks had CIR. (p = 0.177)

Conclusions: All the premature deliveries within the group of abnormal uterines were related to PE, in a not statistically significant way. Regarding
the CIR frequency, a greater frequency was observed among late preterm infants in the group of abnormal uterines compared to the control group, also without statistical significance.
**TOPIC: PRETERM BIRTH AND PREMATURITY**

**ABSTRACT ID: 154**

**TITLE: THE STATE OF HEMOSTASIS IN PREMATURE NEONATES OF DIFFERENT GESTATIONAL AGE DURING THE 1-ST MONTH OF LIFE**

**AUTHORS:** A.I. Chubarova1,2, A.V. Katiukhina2

**AFFILIATIONS:** 1N.F. Filatov Children’s City Hospital of Moscow Healthcare Ministry, Moscow, Russia

2Pirogov Russian National Research Medical University (RNRMU) Moscow, Russia

**CONTENT**

Introduction. The control of hemostasis in premature newborn remains an urgent problem. The aim of this study was to assess the values of haemostatic parameters in premature infants of different gestational age during 4 weeks of postnatal life.

Material and Methods. 60 premature infants born from 27 to 36 weeks of gestation were involved in the study (40 born before 33 weeks and 20 - on 33 or after). Only 2 inclusion criteria were taken – prematurity and parent’s agreement. Each child was examined every week from 1 to 4 weeks of life (a total of 240 blood tests). During the study period 37 children had pneumonia, 25 children from them had different type of hemorrhages; 23 children had no infectious pathology. The parameters of coagulation link – activated partial thromboplastine time (APTT), prothrombine time (PT), fibrinogen, anticoagulants – AT-III, proteins C and S; and plasma factors – plasminogen, plasminogen activator inhibitor 1 (PAI-1) and D-dimer were investigated. The results of each test were assigned to one of three types of hemostatic disorders – hypercoagulation (increased D-dimer, fibrinogen and plasminogen), signs of fibrinolysis activation (increased PAI-1, fibrinogen) and secondary coagulopathy as a result of disseminated coagulation (reduced fibrinogen, plasminogen, protein C,S and at-111).
Results. Of all 240 studies, the most common disorder was coagulopathy seen in 44.5% of analysis, the signs of fibrinolysis activation were seen in 40.4%, and hypercoagulation - 15.1%. The direct negative correlation (Pearson correlation coefficient) was found between the frequency (calculated for each particular postconceptional week) of signs of coagulopathy and postconceptional age was found ($r_s = 0.7 \ p<0.05$) of the frequency decreases fibrinolysis also negatively correlated with the postconceptional age ($r_s = -0.6 \ p0.05$). The analysis of individual indicators of haemostasis during 4 weeks of life before and after 33 weeks of gestation. The specific values of the indicators are given in table 1/

In children with pneumonia there dominated the processes of fibrinolysis activation: in 74% of probes taken during pneumonia, and only in 12% hypercoagulation was found. Hemorrhagic syndrome in all children developed only in the period of infection illness and it happened mostly on 1 or 2-nd week of life. It was found that hemorrhagic syndrome was 1.85 times more common in children whose mothers had thrombophylia (odds ratio 1.85 at 95% CI 1.2 - 2.4, $p< 0.05$).

Summary. Of all chosen types of haemostatic disorders in the examined group of children coagulopathy was the most common event (was seen in 44% probes) and signs of fibrinolysis activation was on second place - 40.4%. The incidence of haemostatic disorders does not depend on the gestational age at birth. With increasing postconceptional age, the frequency of occurrence of signs of fibrinolysis activation decreases and the frequency of consumption coagulopathy decreases. It can partially be the result of lower incidence of pneumonia at 3-4 weeks of life. The examined parameters are not predictors of hemorrhagic syndrome in premature infants.
Abstract

Objective: Effective antenatal care is important for the health and wellbeing of pregnant women and infants. However, in Saudi Arabia, attendance rates are low, affecting birth outcomes. The aim of this research is to understand the beliefs of pregnant women and health professionals about the factors affecting these low attendance rates.

Design: Semi structured face to face interviews

Setting: Data was collected from three hospitals in two regions of Saudi Arabia.

Participants: Pregnant women in any stage attending for antenatal care or ultrasound, women in postnatal department and a range of health professionals, the doctors who are working to support pregnant women.

Interventions: Interviews were conducted exploring attitudes to a) the use of antenatal care by pregnant Saudi women and b) beliefs of the perceptions of women towards the value of antenatal care and c) the perceived barriers to attendance

The interviews focused on obtaining information on the prevalence, availability, and use of antenatal facilities by Saudi women from the various departments- such as the ultrasound departments- across three hospitals as
well as the health care workers in these facilities. The respondents of the study constituted of pregnant women seeking health services in the antenatal clinics, women with young infants, and health professionals such as doctors attending to the needs of these women across the three hospitals.

Measurements and findings: Although ANC is generally reported to be important for maternal health, several factors that affected the rate of antenatal attendance among the Saudi women. These factors were classified into three themes of physical barriers (e.g. lack of transport), low maternal education, and inadequate healthcare facilities (including staff attitudes). These factors were exacerbated by partner and family beliefs.

Key conclusions: Barriers to antenatal care exist at the personal, social, socioeconomic and
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 214

TITLE: THE EFFECT OF THE VOLUME OF AMNIOTIC FLUID AT THE TIME OF DELIVERY ON THE NEONATAL OUTCOMES IN PATIENTS WITH PROM

AUTHORS: N. Kuznetsova 1, I. Bushtyreva 2, V. Barinova 1, M. Dmitrieva 3, V. Dybova 3.

AFFILIATIONS: 1 - Department of obstetrics, gynecology and perinatology, Rostov-on-Don State Medical University, Rostov-on-Don, Russia
2 - Department of obstetrics and gynecology, Maternity Hospital “Clinic of Professor Bushtyreva”, Rostov-on-Don, Russia
3 - Department of obstetrics, Rostov-on-Don State Perinatal Centre, Rostov-on-Don, Russia

CONTENT

Background: Premature rupture of membranes is the main cause of perinatal mortality and morbidity. It accompanies about 2% of pregnancies, 40% of these cases lead to preterm birth, significantly contributing to increased neonatal morbidity and mortality.

The objective of the study was to identify predictors of adverse neonatal outcomes in pregnant women with PROM with oligohydramnios at the time of delivery.

Methods: Study was held at Rostov-on-Don Regional Perinatal Center from 01/01/2017 to 12/31/2017. We studied 43 women with PROM and extremely early preterm birth (from 22 to 27.6 weeks of gestation).

Results. In pregnant women with PROM three subgroups were formed depending on the index of amniotic fluid according to ultrasound examination at the moment of delivery: less than 3, from 3 to 4 and more than 4. Using correlation analysis the following neonatal outcomes were evaluated: neonatal sepsis, early neonatal mortality, neonatal mortality, mortality from 28 days to 2 months. The relationship between the severity of oligohydramnios and adverse neonatal outcomes was revealed:
when the amniotic fluid index is less than 3, there is a significant correlation with infant mortality from 28 days to 2 months \( (r = 0.579, \ p\text{-value} = 0.000058, \) moderate correlation). However, sepsis of newborn \( (r = 0.008, \ p\text{-value} = 0.958) \), early neonatal mortality \( (r = 0.021, \ p\text{-value} = 0.893) \) and neonatal mortality \( (r = 0.152, \ p\text{-value} = 0.333) \) were not significantly associated with a decrease of amniotic fluid index up to 3 and less. Also, significant correlation between the amniotic fluid level more than 3 and the risk of adverse neonatal outcomes, including mortality from 28 days to 2 months \( (r = 0.079, \ p\text{-value} = 0.618) \), was not revealed.

Conclusion. Prolongation of pregnancy with PROM and extremely preterm birth depends on a number of factors, one of which is the level of amniotic fluid. Delivery with olyhohydroamnios less than 3 correlates with mortality of newborns from 28 days to 2 months, but there is no association with such neonatal complications as sepsis of the newborn and infant mortality in the first 7 and 30 days.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 266

TITLE: PLACENTAL ABRUPTION FOLLOWING TOCOLYSIS FOR ACUTE PRETERM LABOR WITH HEXOPRENALINE (GYNIPRAL)

AUTHORS: L. Strat

AFFILIATIONS: University of Medicine and Pharmacy, Iasi, Romania

CONTENT

Introduction. Tocolysis in preterm labor continue to be a hot topic in obstetrics. Classical used drugs as sympathomimetic agents are recognized to do their job, but also to have side effects. We want to signal one possible real threat concerning placental abruption after gained tocolysis with Hexoprenaline (Gynipral). Placental abruption is the cause of preterm birth in 10-20% of all deliveries and one of the most important causes of maternal morbidity and perinatal mortality.

Material and Methods. We analyze retrospectively a lot of 13863 patients which delivered in our service in the last 5 years. Preterm delivery rate in this interval of time was 10.8%. We were able to control acute preterm deliveries by using single or repeated dose of Hexoprenaline (Gynipral 10 μg/2ml) i.v. Placental abruption complicated dramatically the evolution of pregnancies in 150 cases (1.08%). The incident occurred at term in 76 cases (50.66%) or preterm - between 32 and 36 weeks in 58 cases (38.66%) and before 32 weeks in 16 cases (10.66%). Emergency C-section was performed in the majority of cases. 119 babies (79.33%) were born alive, but finally only 103 survived (68.66%).

Results. In the lot of 74 preterm birth complicated with placental abruption, 61 had received recently Hexoprenaline (Gynipral) i.v. for tocolysis. From those, 4 patients presented placental abruption at 10 to 62 hours after administration (two of them left the hospital and turned back in emergency). In those patients no identifiable risk factors were found, they
had no hypertension during pregnancy and no other problems of health. Their age ranged between 19 and 32 years old. Pregnancies were in their 29, 33, 34 and 36 week. The administered dose of Gynipral was 10 to 20 μg. When diagnosed with placental abruption, C-section was performed in emergency. All newborn resulted alive.

Conclusions. Hexoprenaline (Gynipral) i.v. used to prolonge the duration of pregnancy seemed possible implicated in inducing placental abruption. Further studies are necessary for a reliable conclusion. Anyway, having in mind the gravity of such a severe complication, close follow up of pregnant women receiving this tocolytic is mandatory.
CONTENT

Introduction: Respiratory distress can complicate the clinical course not only in very preterm infants but also in late preterm infants, some of them needing invasive respiratory support.

Aim: The study aimed to identify the incidence and risk factors for invasive respiratory support in late preterm infants with respiratory distress.

Material and methods: Epidemiological and clinical data were retrospectively collected from the neonatal charts of all the late preterm infants born between 01.01.2013-31.12.2015 in our regional level III neonatal unit. Data related to pregnancy, labor, birth, respiratory distress were analyzed using SPSS Windows 10.0 for Windows; p was considered significant when <0.050 (CI 95%); OR were calculated where appropriately.

Results: 435 late preterm infants were born during the study period, respiratory distress was diagnosed in 117 of them (27.9%), 9 newborns requiring invasive respiratory support (2.1% of all infants in the study group, 7.7% of those with respiratory distress). No significant differences were found as regards GA, BW, maternal epidemiological characteristics, pregnancy history between late preterm infants needing mechanical ventilation and those managed with oxygen or nasal CPAP. Late preterm infants needing mechanical ventilation had, however, lower mean Apgar scores and 1 minute (7.9±1.4 vs. 6.7±1.2, p=0.010), needed more often resuscitation at birth (66.7 vs. 27.8%, p=0.015), have been more often diagnosed with PPHN.
(66.7 vs. 30.7%, p=0.032; OR 3.79) and severe PPHN (100 vs. 8.7%, p<0.05), infants delivered by C-section (66.7 vs. 41.7%, p>0.05) or elective C-section (33.3 vs. 18.5%, p>0.05), and in those diagnosed with maternal-fetal infections (22.2 vs. 7.4%, p>0.05). No other differences were found between other data of the two groups.

Conclusion: Birth asphyxia and development of PPHN were significantly more often found in late preterm infants with severe respiratory distress, managed using invasive respiratory support in late preterm infants. Male gender, delivery by C-section, mainly elective C-section, and presence of maternal-fetal infections were also found more often in late preterm infants with severe respiratory distress but the association didn’t reach statistical significance.

Keywords: late preterm infant, mechanical ventilation, CPAP, persistent pulmonary hypertension, birth asphyxia.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 270

TITLE: IMPACT OF BED REST ON OBSTETRIC AND NEONATAL OUTCOMES AFTER CERCLAGE

AUTHORS: C. Reis-Carvalho; N. Clode

AFFILIATIONS: Obstetrics Dept, University Hospital Lisboa Norte, Lisbon, Portugal

CONTENT

Introduction
Bed rest or activity restriction in hospital or at home is a very common obstetrical practice for various indications, including prevention of preterm after cerclage. The rationale for this treatment is based on the hypothesis that bed rest could reduce uterine activity, although there is no scientific basis for it. We aim to study whether bed rest has impact on the outcomes of cerclage.

Material and Methods
Single-center retrospective analysis of all cases of McDonald’s cerclage performed between January 2007 and March 2018. Data was obtained through consultation of medical registers. Cases with incomplete information or loss of follow-up were excluded. The primary outcome was the incidence of PTB < 37 weeks. The secondary outcomes were incidence of PTB < 34, <32, and <28 weeks. Univariate comparisons of dichotomous data were performed with the use of the chi-square test, comparisons of unrelated variables were performed using Student’s t-test. Logistic regression was performed for primary and secondary outcomes.

Results
Study population included 158 pregnant women: 113 women (71.5%) had indication for bed rest after cerclage and 37 (23.4%) delivered at or after 37 weeks-of-gestation. PTB < 37 weeks occurred in 61 women (38.6%). Regression analysis revealed that bed rest was not associated with preterm
birth, after adjustment for maternal age, gestational age at cérclage, and cervical dilatation.

Conclusion
The results of this study do not support the efficacy of bed rest in the prevention of preterm birth in patients submitted to cerclage.
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 282

TITLE: REVIEW OF THE VITAMIN D BENEFITS IN PREGNANCY

AUTHORS: R. Dragomir1,2, A. Olaru1,2, O. Toader1,2, R. Stânculescu2,3

AFFILIATIONS: 1 Department of Obstetrics and Gynecology, Polizu Hospital, National Institute for Mother and Child Health “Alessandrescu - Ruseșcu” (ROMANIA)
2 University of Medicine and Pharmacy “Carol Davila” (ROMANIA)
3 Department of Obstetrics and Gynecology, “St. Pantelimon” Clinical Emergency Hospital (Romania)

CONTENT

Introduction
Preterm birth is the most important cause of neonatal morbidity and mortality, and it represents a major public health problem. Despite the impact it has, preventing preterm births remains an unsolved issue. Therefore, to establish if vitamin D has effects on the outcome of pregnancies is essential and it represents a theme of interest for further research.

Material and methods
Current study is conceived relying upon the selected published studies online from international bases data. The analysis of research results is performed by assigning the pregnancies into two groups; the first group is a control one, with normal levels of vitamin D, the second group includes pregnant women who had a poor level of vitamin D. It were also analyzed the results of the second group based on the therapy (supplement with vitamin D) or the absence of it. Including criteria consists in gestational and neonatal pathology. The collected data were processed in a Excel table and statistically analyzed mainly by T-student test.
Results
The review shows that there is a strong relationship between the poor level of vitamin D levels during pregnancy and adverse outcomes. It was shown that maternal serum 25 (OH) vitamin D deficiency (<50 nmol/l) was associated with increased risk of preterm birth, and maternal oral supplementation with vitamin D during pregnancy can reduce the risk of preterm birth, but the right approach is still unclear. During this review we could not find studies regarding the necessary supplement of vitamin D in pregnancy related to the geographical belonging and the seasons of the year, therefore this could be a reason for the increased incidence of gestational and neonatal pathology.

Conclusions
As worldwide screening programs have not been yet initiated, present research stand for a well founded support to recommend checking the levels of 25 (OH) vitamin D correlated with geographical belonging and seasons during pregnancy.

References
TOPIC: PRETERM BIRTH AND PREMATURITY

ABSTRACT ID: 290

TITLE: ANALYSIS OF HIGH RISK WOMEN FOR PRETERM BIRTH IN A LEVEL 3 MATERNAAL-FETAL CARE CENTRE IN PORTO, PORTUGAL

AUTHORS: M. Morais 1; A. Coimbra 2; A. Rocha 2; M. Moucho 2; N. Montenegro 2

AFFILIATIONS: 1 Centro Hospitalar Trás-os-Montes e Alto Douro, Vila Real, Portugal
2 Centro Hospitalar Universitário de São João, Porto, Portugal

CONTENT

INTRODUCTION
Prematurity is one of the most important causes of neonatal mobility and mortality worldwide. A preterm birth (PTB) is defined as a delivery before 37 weeks of gestation and a very preterm before 34 weeks. PTB is a complex condition resulting from multiple etiological pathways and for an accurate risk assessment several maternal/obstetric characteristics must be considered. Developing strategies to screen and prevent spontaneous PTB is a public health priority. In 2016, portuguese incidence of PTB was 7.8%.

OBJECTIVE
The aim of the present study was to identify characteristics associated with PTB and analyze obstetric and neonatal outcomes in a high risk population.

MATERIAL AND METHODS
This was a retrospective study which assessed all singleton pregnancies with high risk for PTB in the last year at Centro Hospitalar Universitário de São João, Porto, Portugal. We only looked for spontaneous PTB (with or without pPROM). Women with iatrogenic PTB as a consequence of induction of labor or an elective C-section were excluded.

A total of 133 cases were identified and after inclusion and exclusion criteria we reached a final sample of 51 cases. The sample was divided into 2
groups. Group A (n 18) with only one risk factor for PTB and group B (n 33) with two or more risk factors.

The primary outcome was time of delivery. Secondary outcomes were perinatal mobility defined as admission on NICU and Apgar at 0’and 5’, birth weight (BW) and the need of maternal admission during pregnancy. Categorical variables were presented as frequencies and percentages and continuous variables as means/standard deviation (SD) or medians/interquartile ranges (IQR). Student’s t test and Mann-Whitney test were used for comparative analysis. A p value ≤ 0.05 indicate statistical significance. Analysis were performed with SPSS Statistics software, version 25.

RESULTS

Figure 1 shows prevalence of PTB’s risk factors in studied patients. The main prevention method used was vaginal progesterone, in 46 (90.2%) pregnancies. 8 cases (15.7%) delivered before 37 weeks and 2 (4%) of them before 34 weeks. All cases submitted to cervical cerclage (n=3) have delivered after 37 weeks of gestation. 9 (18%) newborns weighed less than 2,500 g and only 4 (8%) needed specialized neonatal care in the first hours of life. 23.5% of pregnant women needed hospital admission during pregnancy, mainly for steroids and symptomatic surveillance.

The mean gestational age (GA) for delivery in group A was 38.31 ±1.49 and the median BW was 2835 gr (IQR 768). Group B showed a mean GA for delivery of 37.63 ± 3.28 and a median BW of 2872 gr (IQR 508). In both groups Apgar score was 9 (0’) and 10 (5’). 83.3% of all maternal admissions during pregnancy and 58.3% of NICU admissions belong to group B. No statistical difference was found between the 2 groups.

CONCLUSION

In this study, the most prevalent risk factor is midtrimester short cervix followed by history of PTB in a previous pregnancy. There are also modifiable factors that contribute to PTBs in the study population. There is no cumulative effect for neonatal outcomes if more than one risk factors is present. On the other hand, a higher number of risk factors seems to increase the probability of maternal hospitalization during pregnancy. The identification of women at risk is essential for a correct subsequent management to prevent PTB. Every pregnancy that is identified as high risk
should be referred to a tertiary center for prenatal care in order to have a better follow-up and reduce adverse birth outcomes.
CONTENT

Introduction and Aim
Worldwide premature infants represent a public health problem; prematurity is the single most important cause of death in the first month of life and is a factor in over 75% of pediatrics deaths in the neonatal period. The present study aims to analyze the risk factors of the premature birth under 28 weeks of gestation and early complications of the premature babies.

Material and methods
The study has been performed in the Ist Department of Neonatology Cluj-Napoca, Romania, between 2011 and 2016 and included 111 premature infants below 28 weeks of gestation. The study group had BW = 944.55 ± 226.2 g, GA = 26.53 ± 1.32 weeks, L= 35.26 ± 3.95 cm and HC = 25.007 ± 2.17 cm.

For every patient we have assessed the following parameters: pathology during pregnancy, medical indication for delivery, anthropometric data (weight, length, and head circumference), the mode of delivery,
antenatal corticotherapy, the severity of respiratory distress syndrome, resuscitation maneuvers, Astrup parameters, early complications and mortality rate.

The statistical analyses were performed with STATISTICA VI.

Results
The incidence of extreme prematurity increases continuously in this period from: 1.53% to 3.31% to from all the admissions from which 17.11% were born through C-section.

The antenatal corticotherapy, that has been administered was done completely in 31.69% of cases; incompletely 34.95% and no prophylaxis in 35.15%.

Medical indications identified were pre-labour C-section 22.91%, spontaneous unexplained preterm labour with intact membranes 30.2%, idiopathic preterm premature rupture of membranes (PPROM) 46.86%.

We identified a varies of factors involved in the causality of extreme premature birth in our study: 25% premature rupture of membrane, 13% corioamnionitis, 14% urinary infection of the mother, In vitro fertilization 14%, placenta praevia 15%, preemclapsia 10%, polyhidramnios 12%, oligoamnios 10%, prior preterm birth 10.41%.

Only 51% of pregnancy were correctly followed.

All the prematures needed resuscitation in the delivery room – ventilation on NeoPuff or intubation.

The mean Apgar score at 1 minut was 4.57±2.11.

The value of the pH was 7.21±0.11.

The lactat values were high 9.96±2.5, took in the delivery room form omibilical cord.

The severity of respiratory distress syndrome was increase - Silverman score was 6.89±2.14.

Most of the cases were presented in a severe form of respiratory distress syndrome – 69 cases (62.16%) and developed different forms of bronchopulmonary dysplasia.

The most frequent complication was persistance of ductus arteriosus (PDA) in 12.30%.

Necrotizing enterocolitis has been diagnosticated in 8.97%.

The mortality rate was 25.22% with no influence by the mode of delivery (p=0.47).
The immediate complications (pneumothorax, cerebral hemorrhage, pulmonary hemorrhage, digestive hemorrhage or persistence of arterial duct) have not been influenced by the delivery mode.

Conclusions
The main risk factors for extreme premature birth in our study were: premature rupture of membrane, placenta praevia, urinary infection of the mother in the last month, In vitro fertilization, corioamnionitis and prior preterm birth.

Medical indications identified were pre-labour C-section, spontaneous unexplained preterm labour with intact membranes and idiopathic preterm premature rupture of membranes (PPROM).

The immediate complications (pneumothorax, cerebral hemorrhage, pulmonary hemorrhage, digestive hemorrhage or persistence of arterial duct) have not shown significantly differences between c-section and vaginal delivery groups.

The mortality rate decrease with the increasing of gestational age.
BACKGROUND. Severe preeclampsia is one of the major causes of maternal and perinatal morbidity and mortality. There is growing evidence that preeclampsia is a significant risk factor for cardiovascular and metabolic diseases in later life of these mothers. A growing body of evidence suggests an association between genetic predisposition and preeclampsia. Previous studies of the association between PE and polymorphisms of factor V Leiden FVL-1691G>A, prothrombin FII-20210G>A, angiotensin II receptor AGTR1-1166A>C and endothelial nitric oxide synthase NO3-894G>C have yielded conflicting results. In recent years, a growing body of literatures suggests that maternal infections play an important role in the pathogenesis of PE.

OBJECTIVE. The aim of the present study was to assess the association between FVL-1691G>A, FII-20210G>A, AGTR1-1166A>C and NO3-894G>C gene polymorphisms, and maternal infection and risk of severe preeclampsia.

METHODS. This study included two groups of Russian primiparous women with spontaneous singleton pregnancy: 100 patients with severe preeclampsia and 100 women without pre-eclampsia (control). Median age of women ranged till 20 to 35 years. All women had not a history of hypertension, autoimmune, metabolic, renal, or cardiac diseases, and preeclampsia before this pregnancy. Genetic polymorphisms were studied by polymerase chain reaction with the detection of the amplification product in real time. We have analyzed \( \chi^2 \), odds ratio (OR) and its 95% confidence intervals (95% CI). Results. Factor V Leiden and
prothrombin gene mutation has not been identified in surveyed women. We did not observe increased risk of severe preeclampsia in mutant homozygotes with NO3-894CC genotype (OR=1.5, 95% CI 0.42-5.6; p=0.517). Mutant genotype AGTR1-1166CC was detected only in patients with preeclampsia (5% vs 0%, p=0.024). We found significant association between maternal systemic infectious and severe preeclampsia (OR=49.6; 95% CI 13.05-188.64). The risk of severe preeclampsia were significantly lower in patients with local infections of the lower genital tract (OR=4.5; 95% CI 1.49-6.71). Asymptomatic bacteriuria is associated with the highest risk of severe preeclampsia (OR=17.0; 95% CI 4.66-61.81). Acute gravidurum pyelonephritis showed lower association with severe preeclampsia (OR=5.4; 95% CI 1.69-10.54). We did not observe increased risk of severe preeclampsia with acute respiratory infections (OR=2.0; 95% CI 0.71-4.69). Acute non-specific bacterial vaginitis and acute candidiasis vulvovaginitis were found to be risk factors of severe preeclampsia (OR=6.7; 95% CI 1.90-11.02 and OR=4.3; 95% CI 1.45-9.99 respectively). Cytomegalovirus infection (2%), toxoplasmosis (2%), Chlamydia trachomatis cervicitis (4%), acute Trichomonas colpitis (2%) and bacterial vaginosis (4%) were found only in patients with severe preeclampsia. Conclusions. Our data support that acute maternal infection is associated with an increased risk of severe preeclampsia in healthy women with singleton pregnancy. Systemic inflammatory response might be the main potential mechanisms related to infections and enhanced development of severe preeclampsia. More epidemiological and experimental studies are needed to investigate the impact of maternal infection on the development of preeclampsia.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 56

TITLE: CONNECTIVE TISSUE DYSPLASIA, PELVIC VARICOSE AND OBSTETRICAL SYNDROMES

AUTHORS: T. Belokrinitskaya 1, N. Frolova 1, P. Ivanov 2

AFFILIATIONS: 1 Obstetric and Gynecological Department, Chita State Medical Academy, Chita, Russia
2 Zabaikalsky Regional Hospital, X-ray Surgery Department, Chita, Russia

CONTENT

Introduction. Structure of connective tissue (CT) varies depending on its type. Principally, it consists of various cells and the intercellular substances. CT performs important functions in the body some of them are: a supporting matrix for many highly organized structures; forms fascial planes which provide convenient pathways for vessels (blood and lymphatic vessels) and nerves. The macrophages of CT serve a defensive function against the bacterial invasion by their phagocytic activity. The plasma cells are capable of producing antibodies against specific antigens. The mast cells are responsible for the various inflammatory, allergic and hypersensitivity reactions. Methods. This report is based on the analysis of the literature and case discussion. Results. CT plays an important role in reproduction as supporting different organ’s form as so providing reproductive function through some connective tissue cells and vasculature. The term “connective tissue dysplasia” (CTD) covers a wide range of disorders. Undifferentiated CTD may be a cause of female infertility, pelvic varicose, genital prolapse (including pregnancy and labour), early pregnancy losses, preterm delivery, preeclampsia and antenatal fetal death [Siedentopf F., Sillem M., 2014; Beznoshchenko G.B. et al, 2016; Cervical Insufficiency. Guideline, 2018]. According to latest studies, different elements of connective tissue play main role in the cervical “ripening” and...
pathogenesis of cervical insufficiency. Pelvic varicose in women was found as an independent disease which leads to a menstrual and generative disorder (76%), preeclampsia (36%), preterm labor (16%) and antenatal fetal death ($\chi^2=19.64; \ p=0.0001$). Globally, aetiology of pelvic varicose is associated with undifferentiated CTD and pelvic veins valvular incompetence and ovarian and pelvic veins retrograde blood flow or venous reflux. Typical symptoms of pelvic venous insufficiency (PVI) include dull aching unilateral pain in the pelvis, which can be worsened by postural changes and walking and may be accompanied by dyspareunia, menstrual disorder, anovulation, and pregnancy loss. Duplex ultrasound of the lower limbs and pelvic, ovarian and pelvic vein phlebography should perform in all cases [Asciutto G et al, 2009; Champaneria R et al, 2016]. The most effective method of diagnosis for PVI is selective phlebography of the pelvic veins, which allows accurate detection of reflux pathways in the pelvic and ovarian veins. Treatment options of reproductive disorders and obstetrical syndromes associated with undifferentiated CTD should be individual and base on a differentiated manner depending upon the stage of the disease and degree of clinical manifestations. Comprehensive conservative treatment including venotropic preparations, microcirculation-improving agents should be used in women with early stage of PVI. Patients with last stage of PVI were subjected to X-ray endovascular occlusion of the ovarian veins by means of sclerosing agents. Laparoscopic surgery, embolization or Gianturco spring embolisation coils associated with a risk of complications and relapses [Asciutto G et al, 2009; Siedentopf F, Sillem M, 2014; Champaneria R et al, 2016; Daniels JP, 2016]. CASE REPORT: The lady of 27 years old, a surgical nurse, had an antenatal fetal death on 24 wg in 2001. The next 3 years were followed with chronic pelvic pain, dysmenorrhea, anovulation, dyspareunia and infertility. In 2005 dilated pelvic veins were found during ultrasound. Superselective retrograde transcatheter venography and simultaneous sclerotherapy of ovarian and pelvic veins were performed through the left renal vein (Figure). Desired pregnancy followed this successful procedure soon. Her son was born in term by CS (3200g 51cm). In 2008 patient started to work again and pelvic pain and dyspareunia reappeared. Ultrasound evaluated recurrent pelvic varicose in 2009. The women refused of invasive procedure, but conservative treatment was no effective. In 2010 she get divorced and
remarriage in 2011. She was underwent the second sclerotherapy of the pelvic veins in this year. Two daughters were born in 2012 and 2014 by CS on 36 and 34 wg with a birth weight of 2.500 and 2.200 g, respectively. Childbirth and postpartum periods were without any complications in all cases. Conclusion. Connective tissue dysplasia and pelvic varicose may be a reasons of obstetrical syndromes and should be corrected due to prevention pregnancy complications.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 149

TITLE: CELL FREE PLACENTAL DNA IN PREDICTION OF EARLY AND LATE PREECLAMPSIA

AUTHORS: A. Karapetian 1; O. Baev 1, 2; A. Krasnyi 1, 3; A. Sadekova 1

AFFILIATIONS: 1 National Medical Research Center for Obstetrics, Gynecology and Perinatology named after Academician V.I. Kulakov of Ministry of Healthcare of Russian Federation, 117997, Russia, Moscow, Ac. Oparina str. 4
2 I.N. Sechenov First Moscow State Medical University of Ministry of Healthcare of Russian Federation, Department of Obstetrics, Gynecology, Perinatology and Reproductology, 119991, Russia, Moscow, Trubetskaya str. 8/2
3 Koltsov Institute of Developmental Biology of Russian Academy of Sciences, 119334, Russia, Moscow, Vavilova str. 26

CONTENT

Nowadays the search of prognostic markers of preeclampsia (PE) continues. One of the least studied is cell free placental DNA (cfpDNA). The main mechanism of PE development is the trophoblast invasion disturbance, dysfunction of the placenta. The source of cfpDNA are apoptotic trophoblast cells. Therefore, the concentration of cfpDNA may increase due to dysfunction of the placenta and acceleration of trophoblast cells apoptosis during PE development. The aim of the study is to determine the prognostic value of cfpDNA evaluation in maternal blood during early and late PE. Blood samples were collected from 580 pregnant women at 11-14 and 24-26 weeks of pregnancy. 10 women developed early PE, 10 women – late PE. To compare the level of cfpDNA 22 healthy women with uncomplicated pregnancy and delivery in term were selected. The concentration of
cffDNA was quantified by determining hypermethylated RASSF1A sequences using PCR method.

At 11-14 weeks of gestation the concentration of cfpDNA was significantly increased in women with early and late PE compared with uncomplicated pregnancy (median 54.85 (30.33-108.09), 51.93 (27.49-142.15) and 14.15 (6.55-19.40) GE/ml, respectively) (p<0.05). At 24-26 weeks of gestation in women with PE the level of cfpDNA was significantly higher compared with uncomplicated pregnancy regardless of PE phenotype (median 24.87 (15.61-38.80) GE/ml) (p≤0.026).

Thus, the content of cfpDNA in maternal blood in PE is significantly increased from early stages of pregnancy, which indicates a disturbance of trophoblast invasion. A significant increase in the level of cfpDNA during pregnancy reflects the progressive apoptosis of trophoblast cells and an earlier manifestation of the disease.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 204

TITLE: THE VALUE OF MATRIX METALLOPROTEINASES IN LATE PREECLAMPSIA

AUTHORS: S. Ibragimova, E. Timokhina, E. Gitel, A. Strizhakov

AFFILIATIONS: Sechenov First Moscow State Medical University of the Ministry of Health of the Russian Federation (Sechenov University)

CONTENT

Context
Pre-eclampsia is a serious complication of pregnancy worldwide, characterized by insufficient placentation causing vascular dysfunction. Matrix metalloproteinases (MMPs) exhibit proteolytic activity associated with the effectiveness of the invasion of the trophoblast into the uterine wall, and also play a role during the gestational restructuring of the spiral arteries and the development of endothelial dysfunction, as the process of oxidative stress. Thus, MMPs play a role in the pathogenesis of PE at its two stages of its development. They are important in the pathogenesis of early and late PE.

Objective
Determine the level of MMP-2 in severe and moderate preeclampsia with a late debut.

Methods
The level of MMP-2 in venous blood in women with severe PE was determined by ELISA. Inclusion criteria: PE, diagnosed after 34 weeks gestation. The control group consisted of women with a physiological course of pregnancy and childbirth.

Results
The average age of women with late PE was 33.8 ± 3.7 years. Primiparous with late PE was 14.2%, with early - 55.5%, 14.2% of women had a history of PE. Anamnesis of women was burdened with chronic arterial hypertension
(28.5%), diabetes mellitus (6.2%), and genetic thrombophilia (18.1%). About 15% of pregnancies that were complicated by late PE came as a result of IVF. The gestational age at the time of delivery was 36.5 ± 1.3 weeks. The mass of children at birth is 2400 ± 181.5 g. The rating according to Apgar is 5 min - 6.5 points. The severity of the condition of children was due to prematurity in 44.1% of cases (38.4% - severe PE, 7.6% - late PE), fetal growth retardation syndrome (14.2%), respiratory failure (57.1%), cerebral depression (57.1%), intrauterine infection (28.5%), severe asphyxiation (14.2%), congenital tachypnea (42.8%). Maternal complications: premature detachment of a normally located placenta (9%), HELLP syndrome (9.0%), hemolytic uremic syndrome, thrombotic microangiopathy, eclampsia, brain edema (4.5%). The average MMP-2 in women with severe PE was 50763.2 ± 3222.2 ng / ml, in the control group 27281.3 ± 1456.2 ng / ml. The average value of MMP-2 in women with severe late PE was 49106.4 ± 3372.0 ng / ml, with a physiologically proceeding pregnancy for a period of more than 34 weeks, the level of MMP was 24238.3 ± 1422.9 ng / ml. In women with moderate late PE, MMP-2 was 29214.2 ± 893.1 ng / ml.

Conclusions
An increase in the level of MMP-2 was observed in severe PE, both with early debut and late. In moderate PE, the level of MMP-2 does not significantly differ from the control group. Thus, MMP-2 can act as a diagnostic tool for the late development of severe PE. Extensive and detailed study of the expression of matrix metalloproteinases in preeclampsia can be a key method in their diagnosis, assessment of prognosis, the effectiveness of therapy and the development of new methods of treatment.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 205

TITLE: DIAGNOSTIC MARKER OF SEVERITY OF EARLY PREECLAMPSIA

AUTHORS: S. Ibragimova, E. Timokhina, E. Gitel, N. ZAfiridi

AFFILIATIONS: Sechenov First Moscow State Medical University of the Ministry of Health of the Russian Federation (Sechenov University)

CONTENT

Context.
Preeclampsia (PE) is a complication of pregnancy, which occupies a leading position in structure of maternal and perinatal morbidity and mortality. Currently, the leading cause of incomplete restructuring of the uterine artery walls in PE is considered to be an insufficient number of invasive cells or the absence / inactivation of the necessary lysing enzymes. Therefore, the change in the concentration of matrix metalloproteinases (MMPs) in various tissues is the subject of close attention of PE researchers.

Objective. Determine the level of MMP-2 in severe and moderate PE with early debut.

Methods. The ELISA method determined the level of MMP-2 in venous blood in women with early PE. Inclusion criteria: PE, diagnosed before 34 weeks gestation. The control group consisted of women with a physiological course of pregnancy and childbirth.

Results. The average age of women with early PE was 31.2 ± 4.8 years. Primiparous amounted to 55.5%, PE in anamnesis had 22.2% of women. The anamnesis was aggravated by chronic arterial hypertension (44.4%), genetic thrombophilia, autoimmune diseases (APS) in 22.2%, diabetes mellitus (11.1%). About 20% of pregnancies that were complicated by early PE were conceived as a result of IVF. The gestational age at the time of delivery was 30.6 ± 2.6 weeks. The mass of children at birth is 1573.7 ± 136.4 g. The severity of the condition of children was due to prematurity (88.6%),
FGRS (45.1%), respiratory failure (78.5%), cerebral depression (65.1%), intrauterine infection (33.2%), severe asphyxia, congenital tachypnea, anemia (22.1%), hypoxemic shock, hemorrhage (11%). Perinatal mortality was 4.5%. Maternal complications: HELLP-syndrome (18.1%), PDNLP (9%), HUS, TMA, eclampsia, brain edema (4.5%). The average value of MMP-2 in women with severe early PE was $50763.2 \pm 3222.2$ ng / ml, in the control group $27281.3 \pm 1456.2$ ng / ml. In women with moderate early PE, MMP-2 was $37294 \pm 618$ ng / ml.

Conclusions. Thus, MMP-2 can act as a criterion for the severity of PE with early debut, since its significant increase was detected with early PE compared with the control group. At the same time, MMP-2 showed no significant differences in moderate early PE compared to severe early PE.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 218

TITLE: DENITRIFICATION PATHWAYS IN MICROBIOME AND PREECLAMPSIA: HOW CAN WE GET BENEFITS FROM BACTERIA?

AUTHORS: Violetta Florova M.D.1, Prof. Michael Buck2, Prof. Robert J. Genco Ph.D., DDS 3

AFFILIATIONS: 1 Genetics, Genomics and Bioinformatics PhD Program
2 Dept. of Biochemistry, Dept. of Biomedical Informatics
3 The Oral Biology Department, The Center of Microbiome Research
State University of New York at Buffalo, Buffalo, New York

CONTENT

Introduction
The blood pressure regulation via nitric oxide (NO) is the essential question in preeclampsia pathogenesis. NO mediates the blood vessels dilatation and the dispersal of bacteria from biofilms. There are two main pathways of NO production in the human body: endothelial from L-arginine (75%) and dietary pathway (25%) by the microbiome residing in the digestive tract. Bacteria use the NO3-ion from food in anaerobic condition as an additional source of oxygen. The nitrate (NO3) reduction by oral microbiome is the key step in the dietary pathway of NO production. Recently, the nitrite (NO2) and NO productions by oral microbiome have been shown to be essential in blood pressure regulation during chronic arterial hypertension. The ability of gut microbiome producing NO isn't still clear.

Nitrate ion in itself is inert and needs to be reduced to nitrite in order to exert any biological functions. The nitrate reduction by oral microbiome is the key step in the dietary pathway of NO production. Bacteria use the NO3-ion from food in anaerobic condition as the additional source of oxygen.

Aim
The aim of this project is to build the map of denitrification and identify the bacteria and their enzymes involved in nitrogen metabolism across the human body.

Material and methods
We evaluate the enrichment of different nitrogen-metabolizing bacteria-specific proteins in different locations (tongue dorsum, buccal mucosa, supra/subgingival plaque, feces) across the human body based on the whole-genome sequence data of healthy population from Human Microbiome Project using Shortbread software.

Results
The hierarchical centroid cluster analysis showed 3 main clusters separated by the body part gut, tongue, gingiva.

The tongue shares all enzymes with gingiva samples whereas the gingiva has additional enzymes unique to its location.

The nitrite and NO synthesis were observed only in the oral cavity. Most of the steps were performed separately by different species confirming the biofilm interaction.

The ammonia synthesis and utilization are the most enriched pathways in gut microbiome (represented in Bacteroides). These pathways are glutamate-dependent as well as endothelial NO-synthesis from L-arginine. The increasing demand for glutamate due to the increase of ammonia production could lead to the depletion of glutamate uptake. Therefore, these results raise the next question of comparative analysis of the microbiome metabolism during preeclampsia. The further studies of the nitrate-metabolism pathways could be important for the better understanding of pathological basis such pathologies as preeclampsia and gestational arterial hypertension.
TOPIC: PREVENTION OF MAJOR OBSTETRIC SYNDROMES

ABSTRACT ID: 278

TITLE: EARLY PREDICTORS OF PREECLAMPSIA IN NULLIPAROUS

AUTHORS: V.Volkov; L.Badalova

AFFILIATIONS: Tula State University, Lenin av., 92, Tula, 300012, Russia

CONTENT

Objective: to study the characteristics of the course of pregnancy, maternal and perinatal outcomes in nulliparous with early preeclampsia.

Methods: 127 nulliparas were included in the prospective case-control study. Two groups were formed: I (n = 27) - pregnant with early preeclampsia, II (n = 100) - pregnant without preeclampsia. Mild preeclampsia occurred in 21 (77.8%) and severe in 6 (22.2%).

Results: a significant difference was detected in the first trimester, which was expressed in differently directed changes in the indices of ß-hCG and PAPP-A. The level of ß-HCG in group I was (55.7±32.0 IU/l) and was higher than in group II (45.1±23.6 IU/l, p=0.05), and the level of PAPP-A in group I (1.2±0.6 IU/l) was lower than in group II (4.7±3.8 IU/l, p=0.003). Violation of hemodynamic parameters was noted at 18-21 weeks which was observed in group I and was expressed by an increase in the systolic-diastolic ratio predominantly in the left uterine artery. In group I, antenatal death occurred in two cases. The fetal growth retardation was significantly more often identified in group I – 55.5%, than in the II – 3% (OR=39,519 [11,73; 133,138], p=0. Gestational pyelonephritis, oligoamnios and placental presentation were more common in group I, whereas in group II pregnant women with gestational diabetes mellitus, gestational hypertension, hydramnion and a large fetus prevailed. In total, 25 newborns were born alive in group I, 100 in group II. Apgar score: less than 7 points in group I in 5 (18.5%), and in group II - 8 (8%).
Conclusions: The peculiarities of the course of pregnancy with early preeclampsia are a decrease in the level of PAPP-A in the period of 11-13 weeks and a violation of hemodynamics in the period of 18-21 weeks. The timely detection of pregnant women at risk of developing early preeclampsia will determine the criteria for more intensive monitoring and the use of prophylactic treatment methods.
TOPIC: RANDOMIZED CONTROLLED TRIALS IN MATERNAL INFANT MEDICINE

ABSTRACT ID: 15

TITLE: COMPARISON OF ORAL RECOMBINANT ERYTHROPOIETIN AND SUBCUTANEOUS RECOMBINANT ERYTHROPOIETIN IN PREVENTION OF ANEMIA OF PREMATURITY

AUTHORS: Saeidi R*a, Banihashem Aa, Hammoud Ma, Gholami Mb

AFFILIATIONS: aDepartment of Pediatrics, Mashhad University of Medical Sciences, Mashhad, Iran. P.O.Box: 91735-1453
bDepartment of Midwifery, Islamic Azad University, Neyshabur Branch, Neyshabur, Iran

CONTENT

Background: Premature neonates are at risk for severe anemia and erythropoietin is the most important hormone in erythropoiesis. The aim of this study was to evaluate the influence of oral recombinant human erythropoietin (rhEPO) in proving erythropoiesis in neonates.

Methods: This was a randomized clinical trial study. Thirty neonates were enrolled from September 2007 to September 2008. The first group received oral rhEPO and Fe and the second, subcutaneous rhEPO and Fe. The patients’ Hb, HCT and the need to blood transfusion were recorded. We included all infants with gestational age 85%, FiO2 of 30%, full feeding tolerance so that oral Fe can be administrated.

Results: In first group (oral=PO), 65% of neonates were female and 35% were male, mean weight was 1140 g and mean GA was 32.6 weeks. In the second group (subcutaneous=SC), 42% were female and 58% were male. The mean weight was 1245 g and mean GA was 31.2 weeks and this was not statistically significant. In the first group, the mean Hb and HCT were 9.7±1.9
and 29.6±5.9 g/dl. In the second group, the figures were 12.5±1.7 and 38.8±5.1 which were statistically significant. There was no difference in the weight gain between two groups. In the first group, 3 neonates (20%) and in the second one, 1 neonate (15%) needed blood transfusion.

Conclusions: rhEPO administration either PO or SC could prevent anemia of prematurity but SC rout was more effective.
TOPIC: RANDOMIZED CONTROLLED TRIALS IN MATERNAL INFANT MEDICINE

ABSTRACT ID: 166

TITLE: ASPIRIN FOR OPTIMISING PREGNANCY OUTCOME IN PREGESTATIONAL DIABETES: THE VALUE OF OBJECTIVE TESTING OF STUDY PARTICIPANT COMPLIANCE. PILOT FOR THE IRELAND STUDY (INVESTIGATING THE ROLE OF EARLY LOW-DOSE ASPIRIN IN PRE-EXISTING DIABETES)

AUTHORS: Hala Abu, Ann McHugh, Siobhan Corcoran, Sami Backly, Elizabeth Tully, Dermot Kenny, Sean Daly, Fergal Malone, Fionnuala Breathnach

AFFILIATIONS: Rotunda Hospital- Dublin, Ireland
Royal College of Surgeons in Ireland- Dublin

CONTENT

Objectives:

Pregestational diabetes mellitus (PGDM) confers a significant risk for the development of preeclampsia (20% vs 5% in the general population). Use of low dose aspirin has been suggested for the prevention of preeclampsia in this high-risk group, owing to the negative effect that aspirin exerts on thromboxane production. Yet randomized trials have yielded conflicting results, both for women with diabetes and for other high-risk groups studied. We sought to determine the feasibility of administering aspirin in women with PGDM from the first trimester of pregnancy (prior to 12 weeks’ gestation) and to objectively judge compliance through serial platelet function testing.

Study design:

This is an open labelled randomized pilot study conducted in 2 large tertiary maternity units in Dublin. Inclusion criteria were all women with PGDM at least 6 months prior to conception with a viable singleton pregnancy and who presented before 12 weeks’ gestation. Women were recruited and randomized to aspirin or no aspirin and were compared to a control group. Aspirin 75 mg was initiated between 8+0 and 11+6 weeks.
Compliance was evaluated by diary card review, pill counting and further assessed using platelet function testing (platelet aggregometry) every 4 weeks throughout gestation. This is an effective method of measuring platelet aggregation through light transmission on plasma after it has been treated with agonist such as Arachidonic acid.

Results:

A total of 48 women screened over six months period of those 30 (62%) were deemed eligible for entry. 23 (76%) agreed to consent for the trial and were randomized (12 in the aspirin group and 11 in the no-aspirin group). Study participants were deemed to be fully compliant if the diary cards and pill counts indicated that less than 5% of pills had been missed, in addition to demonstration of suppression of platelet aggregation with serial (4-weekly) platelet aggregometry. This was the case for all but two participant assigned to the study drug group. Figure 1 demonstrates suppressed platelet aggregation throughout the duration of aspirin treatment in a study participant, compared to a normal platelet aggregation pattern in a control patient. Normal platelet activity was restored within 7–10 days of cessation of aspirin.

Conclusion:

This randomized study demonstrates consistency between subjectively reported study-drug compliance and objective testing, with a high level of compliance among participants of this pilot RCT. Platelet aggregation testing is valuable in demonstrating optimal biological drug effect and could be considered as a means of assuring compliance in other aspirin studies. This pilot study is a precursor for a definitive large randomized controlled trial aiming to assess if low-dose aspirin initiated in the first trimester reduces obstetric complications related to placental dysfunction in the setting of pre-existing diabetes.
TOPIC: RESPIRATORY DISTRESS SYNDROME AND BRONCHOPULMONARY DYSPLASIA

ABSTRACT ID: 108

TITLE: FACTORS PREDICTIVE OF RESPIRATORY DISTRESS SYNDROME IN TERM INFANTS

AUTHORS: Y.Han 1,3; N. Lee 1,3; M Bae 2,3; K Park 2,3; S Byun 1,3

AFFILIATIONS: 1. Department of Pediatrics, Pusan National University Children’s Hospital, Yangsan, Korea
2. Department of Pediatrics, Pusan National University Hospital, Busan, Korea
3. Department of Pediatrics, Pusan National University School of Medicine, Yangsan, Korea

CONTENT

Introduction: Respiratory distress occurs in approximately 7% of newborns. Transient tachypnea of the newborn (TTN), a typical respiratory disease in infants, has a good prognosis; however, respiratory distress syndrome (RDS), which primarily affects premature infants but also occurs in term infants, is a serious progressive respiratory disease that requires active treatment. An early serum test that can identify the risk factors for RDS in term infants and distinguish TTN from RDS could be useful for treatment and prediction of prognosis in newborns with respiratory distress. Although lactate dehydrogenase (LDH) has been thought to predict a poor prognosis, research has not yet determined its value for RDS in term infants.

Material and Methods: This retrospective study aimed to identify risk factors and serological tests predictive of RDS and TTN in term infants. The study was conducted between January 2014 and June 2018 in term infants (gestational age [GA] greater than 37 weeks) who were diagnosed with TTN or RDS. The infants were admitted to the neonatal intensive care unit in the Pusan National University Children’s Hospital due to tachypnea or respiratory failure occurring within 3 days after birth. Infants with a major
anomaly, congenital infection, meconium aspiration syndrome (MAS), or other significant diseases were excluded from this study. The RDS group received surfactant and the TTN group did not. Clinical factors as well as serum LDH, aspartate transaminase (AST), alanine transaminase (ALT), and arterial blood gas analysis (ABGA) were evaluated at the time of hospitalization in both groups, and LDH levels were determined on the third day of hospitalization.

Results: Among 343 infants, 28 with MAS, 11 with persistent pulmonary hypertension of the newborn, 7 with heart disease, 12 with lung deformities, 18 with congenital infections, and 13 with other diseases were excluded, resulting in 254 infants in our study. Of these, 29 were diagnosed with RDS and received surfactant, and 225 were diagnosed with TTN. The mean GA of all subjects was 38.6±1.2 weeks and mean birth weight was 3,279.2±494.0 g. The group with RDS had a lower mean GA (37.9±0.8 weeks vs. 38.7±1.2 weeks, P=0.001), more caesarean sections (89.7% vs. 52.9%, P=0.001), and an older maternal age (35.4±4.4 years old vs. 32.2±4.5 years old, P=0.001). Multivariate logistic regression analysis revealed that GA 37-38 weeks (adjusted odds ratio (AOR), 5.5; 95% confidence interval (CI), 1.19-25.87; P=0.029), caesarean section (AOR, 3.3; 95% CI, 0.88-12.52; P=0.075), and maternal age ≥35 (AOR, 2.43; 95% CI, 1.04-5.67; P=0.039) were independent risk factors for RDS. AST, ALT, LDH, and ABGA showed no significant differences between the two groups at the time of hospitalization; however, LDH was higher in the RDS group on the third day of hospitalization (1,504±334 IU/L vs. 1,265±697 IU/L, P=0.070) and showed a tendency to increase compared to the level on the first day (198±334 IU/L vs. 20±546 IU/L, P=0.089).

Conclusions: GA 37-38 weeks and caesarean section were found to be independent risk factors for RDS. Preventing elective caesarean section before 38 weeks could reduce respiratory failure. LDH tended to be high on the third day of hospitalization, suggesting possible use as a predictive marker for respiratory distress in infants, but further research is needed.
TOPIC: RESPIRATORY DISTRESS SYNDROME AND BRONCHOPULMONARY DYSPLASIA

ABSTRACT ID: 267

TITLE: NON-INVASIVE RESPIRATORY SUPPORT AND RISK FACTORS FOR BRONCHOPULMONARY DYSPLASIA IN VERY PRETERM INFANTS

AUTHORS: O. Boantă1, S. Kovacs2, C.I. Zgărcea1, R. Iosifescu1, M.L. Ognean1,3

AFFILIATIONS: 1Neonatology I, Clinical County Emergency Hospital Sibiu, Romania
2Neonatology II-Premature Infants, Clinical County Emergency Hospital Sibiu, Romania
3Faculty of Medicine, University Lucian Blaga, Sibiu, Romania

CONTENT

Introduction: Bronchopulmonary dysplasia (BPD) is a severe pulmonary complication associated with prematurity, significantly affecting later growth and neurodevelopment.

Aim: The study aimed to identify risk factors for BPD in preterm infants ≤ 32 weeks of gestation managed on non-invasive respiratory support.

Material and methods: Data were prospectively collected from the National Register of Respiratory Distress Syndrome between 01.01.2010-31.12.2015. The study included all surviving infants ≤32 weeks GA admitted to our regional level III unit. Anthropometric data, epidemiological data related to pregnancy, labor, birth, respiratory distress, and complications were analyzed using SPSS Windows 10.0 for Windows; p was considered significant when <0.050 (CI 95%), OR were calculated were appropriate.

Results: 391 premature infants with GAS≤32 weeks were admitted during the study period, 278 of them (71.1%) being managed on non-invasive respiratory support. 16 of these 278 infants developed BPD (5.7%). These infants had significantly lower mean GA (27.6±1.3 vs 30.3±1.6 weeks), mean birth weight (990.2±175.2 vs 1423.1±309.1 g), and mean Apgar scores at 1
and 5 minutes compared to infants managed non-invasively without BPD (p<0.001). INSURE strategy was practices more often in preterm infants developing BPD without further assisted ventilation (81.3 vs 21%, p <0.00; OR 13.04; 95% CI [4.03-42.16]), and these infants were significantly more often diagnosed with PDA (75 vs 42.7%, p=0.012; OR 4.02; 95% CI [1.26-12.79]), maternal-fetal infections (31.3 vs 9.9%, p=0.008, OR 4.13; 95% CI [1.33-12.80]), and nosocomial infections (25 vs 9.5%, p=0.050; OR 3.16; 95% CI [0.95-10.540]). No other risk factors for BPD were identified during data analysis. An increased incidence of BPD in preterm infants managed conservatively was observed during the latest two years of study (11 of the 16 cases).

Conclusion: Extreme prematurity, very low birth weight, birth hypoxia, PDA and perinatal infections were identified as associated with BPD development in very preterm infants managed on non-invasive respiratory support. A more careful evaluation may be needed when considering non-invasive respiratory support in extreme preterm infants presenting with birth hypoxia, diagnosed with PDA and maternal-fetal infections. Also, all measures needed to decrease the nosocomial infection rate is important in preventing BPD in these high risk infants.

Keywords: very preterm infant, bronchopulmonary dysplasia, non-invasive respiratory support, gestational age, PDA, perinatal infections.
TOPIC: STEM CELLS IN PERINATAL MEDICINE

ABSTRACT ID: 8

TITLE: IS VIABILITY OF HEMATOPOIETIC STEM CELL OF CORD BLOOD GOOD FOR BANKING AND THERAPEUTIC USE AFTER ASPHYXIA??

AUTHORS: Ahmad Shah Farhat1, Abolfazl Nosrati Tirkani 2Mohammad hassan arjmand3, Daryoush Hamidi Alamdari 4Ashraf Mohammadzadeh5, Reza Saeidi6

AFFILIATIONS: 1 Assistant Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. 3,4Department of Biochemistry, Faculty of Medicine, Mashhad University of Medical Sciences
5. Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
6. Associate Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

CONTENT

Background: Prenatal asphyxia or birth asphyxia is the medical situation resulting of deprivation of oxygen to a newborn infant that lasts long enough during the birth process to cause physical harm usually to the brain. Human umbilical cord blood (UCB) is a well-established source of hematopoietic stem/progenitor cells (HSPCs) for allogeneic stem cell transplantation. Low level of O2 in infants with asphyxia during labor can influence on proliferation and differentiation of stem cells in cord blood.

Method: viability and the quality and colony forming unit of hematopoietic stem cells in cord blood of infants with severe asphyxia with Apgar score 3-5 or need to cardiac pulmonary resuscitation five minutes after delivery were compared with the normal group with more than 8 Apgar score. Afterward, hematopoietic stem cells were isolated and cells were cultured
in enriched media H4435 special for HSPCs for 7 days to assessment growth and colony formation.

Results: There was a significant difference in the number of RBC, P value 0.0016 and WBC precursor’s colonies, P value 0.006, in plate with 103 cord blood hematopoietic stem cells in infants who exposed to hypoxemia during labor.

Conclusion: Umbilical cord blood is valued for its content of stem cells. Severe hypoxia in the perinatal period does not have negative influence on viability of UCB hematopoietic stem cells to growth and formation colonies. Based on our research transient severe asphyxia does not have negative effects on HSPCs to save and banking for likely problems in future

Keywords: asphyxia, hypoxia, hematopoietic stem cell of cord blood, banking of HSPCs
TOPIC: THE BRAIN OF THE FETUS AND THE NEWBORN

ABSTRACT ID: 61

TITLE: PREVALENCE OF PERI-INTRAVENTRICULAR HEMORRHAGE AND ITS FACTORS ASSOCIATED WITH PREMATURE NEWBORNS OF VERY LOW WEIGHT

AUTHORS: G. Fernandes 1; M. Cunha 2; G. Garcia 3.

AFFILIATIONS: 1 Hospital Regional de Sobradinho - SES/DF - Brasilia - DF, Brazil
               2 Hospital Regional de Sobradinho - SES/DF - Brasilia - DF, Brazil
               3 Hospital Regional de Sobradinho - SES/DF - Brasilia - DF, Brazil

CONTENT

Retrospective and descriptive study was carried out with patients admitted to the neonatal intensive care unit of the Regional Hospital of Sobradinho, Brasilia-DF, Brazil, during the period from November 2016 to November 2017 with the objective of identifying the prevalence and the risk factors of peri-intraventricular hemorrhage (PIVH) in very low birth weight preterm infants hospitalized in a neonatal unit. The subjects of the study were newborns with birth weight of less than 1,500g. Of the 72 patients weighing less than 1,500 g, 31 patients had a diagnosis of PIVH, with a prevalence of 43.1%. Of the patients with PIVH, 54.8% were males, 48% had a birth weight of less than 1,000 g and 64% had a gestational age of less than 28 weeks. There was a predominance of grade I and II hemorrhage of Papile (61.3%). Preeclampsia was the most prevalent complication in gestation. The need for neonatal resuscitation was 74.2% and the use of invasive mechanical ventilation during hospitalization occurred in 74.2% of the patients. Among the therapeutic practices, the use of vasoactive drugs (54.8%), blood derivatives (71%) and volume expansion (58.1%) stood out. The most prevalent comorbidities among the patients were neonatal sepsis (100%), hypotension (51.6%) and respiratory distress syndrome (45.2%). The antenatal corticosteroid therapy was performed in 29% of the patients and the antenatal magnesium sulphate in 6.4%. 19.3% of the patients died.
Among the deaths, 50% had a diagnosis of PIVH grade IV, 33.3% diagnosed PIVH grade I and 16.7% had PIVH grade III. The results obtained may increase knowledge and awareness of the existence of risk factors for the development of PIVH in our service. By understanding the importance and consequences of this neurological condition in premature patients, we can favor the reduction of morbidity and mortality, thus promoting a better quality of life for our patients.
TOPIC: THE BRAIN OF THE FETUS AND THE NEWBORN

ABSTRACT ID: 67

TITLE: ANTENATAL STUDY OF THE HESCHL’S GYRUS.

AUTHORS: López Ramón Y Cajal, C


CONTENT

Introduction. We studied the in utero Heschl’s gyrus during antenatal development.

Material and Methods. Two hundred and forty-four human fetuses between 18 and 41 weeks’ gestation were studied by two-dimensional (2D) and three-dimensional (3D) ultrasounds according to neurological fetal development: Fetal Stage, Extremely Preterm, Very Preterm, Moderate to Late Preterm, and Term. We considered the Heschl’s gyrus (HG) shapes: single gyrus (SG) and duplicated gyrus (DG). We studied two subtypes of the DG shape: partial and complete duplicated gyrus.

Results. We found 156 cases (63.9%) of single gyrus and 88 cases (36.1%) of duplicated gyrus, of which 39 (44.3%) showed a partial duplication and 49 (55.7%) showed complete duplication (Figure 1). SG appeared in 93.5% of cases in the Fetal Stage and represented 75% of the Term group. DG was found to increase during fetal life. In the Very Preterm group, the relation between SG and DG was detected in 50%, so that the prevalence of DG (59.1%) was found to be greater than that of SG (40.9%) in the Moderate to Late Preterm group, and the majority of fetuses were found to exhibit SG (75%) in the Term group. The increase of DG observed was due to the complete duplicated gyrus subtype. We did not find differences between hemispheres in any of the groups.
Conclusions. The fetal Heschl's gyrus showed SG and DG shapes, and the peculiar pattern of these in each stage could be a functional sign in a cortical area with a remarkable adaptation capacity.
TOPIC: THE BRAIN OF THE FETUS AND THE NEWBORN

ABSTRACT ID: 85

TITLE: THE EFFECT OF PRENATAL HYPERHOMOCYSTEINEMIA ON THE BRAIN DEVELOPMENT IN OFFSPRING: AN EXPERIMENTAL STUDY

AUTHORS: A. Arutjunyan 1; Yu. Milyutina 2; A. Shcherbitskaia 3; G. Kerkeshko 4; I. Zalozniaia 5.

AFFILIATIONS: 1 D.O. Ott Institute of Obstetrics, Gynecology, and Reproductology, St. Petersburg, Russia
2 D.O. Ott Institute of Obstetrics, Gynecology, and Reproductology, St. Petersburg, Russia
3 I.M. Sechenov Institute of Evolutionary Physiology and Biochemistry of the Russian Academy of Sciences, St. Petersburg, Russia
4 D.O. Ott Institute of Obstetrics, Gynecology, and Reproductology, St. Petersburg, Russia
5 D.O. Ott Institute of Obstetrics, Gynecology, and Reproductology, St. Petersburg, Russia

CONTENT

Introduction. During pregnancy, several complications have been associated with hyperhomocysteinemia (HHC) and elevated homocysteine (HC) levels play a role in the etiology of preeclampsia, placental abruption, intrauterine growth retardation, and neural tube defects. Recently, we have shown that maternal HHC results in the learning deficits in offspring. However, little is known about the effects of maternal increased HC levels on subsequent brain development of fetuses and neonates, especially at the functional level. Clinical research on HHC is difficult, as the onset of the disease is sudden and requires immediate medical assistance to help prevent negative maternal and fetal outcomes. Therefore, animal models may greatly contribute to the advancement of knowledge in this field.
Material and Methods. HHC was induced in pregnant female rats by administration of methionine at a dose of 0.6mg/kg of body weight in drinking water from the 4th day of pregnancy to delivery. We analyzed classical parameters of development such as weight of placenta on the 20th day of pregnancy (E20), body weight of embryos on E20 and brain weight of newborn pups (P1) and on the 5th day after birth (P5). In this study, we examined the HC content in blood serum and brain of offspring on P1 and P5. Additionally we have assessed by Western blotting the effect of maternal HHC on the levels of neuregulin 1 (NRG1) and proapoptotic protein caspase-3 associated with cell survival in placenta and brain tissue of rat pups.

HHC was induced in pregnant female rats by administration of methionine at a dose of 0.6mg/kg of body weight in drinking water from the 4th day of pregnancy to delivery. We analyzed classical parameters of development such as weight of placenta on the 20th day of pregnancy (E20), body weight of embryos on E20 and brain weight of newborn pups (P1) and on the 5th day after birth (P5). In this study, we examined the HC content in blood serum and brain of offspring on P1 and P5. Additionally we have assessed by Western blotting the effect of maternal HHC on the levels of neuregulin 1 (NRG1) and proapoptotic protein caspase-3 associated with cell survival in placenta and brain tissue of rat pups. We have also developed immunoblotting methods for the determination of neurotrophic factors NRG and BDNF.

Results. HHC embryos were characterized by lower body weight (3.59±0.02 and 4.02±0.07g in control group) and decreased placenta weight (0.52±0.01 and 0.60±0.02g in control group). It has been shown a significant increase in the brain weight of control pups on P1 (216.40±2.54g) and P5 (408.80±2.83g) compared to HHC offspring (P1 – 209.00±2.00g, P5 – 375.00±6.46g). There was also an increase in the level of HC in the blood serum of P1 pups subjected to prenatal HHC (2.55±0.04 and 1.63±0.12 µM in control rats). No difference was found concerning HC levels between the HHC group (2.65±0.11 µM) and control (2.86±0.26 µM) by P5. Total brain HC content was found to be 0.21±0.03 µmol/mg protein in control rats and 0.29±0.02 µmol/mg protein in HHC group on P1, 0.21±0.01 and 0.17±0.04 µmol/mg protein for control and HHC pups on P5 respectively. They also had increased NRG1 and caspase-3 in the brain on E20 and P5.
accompanied by reduction in the levels of NRG 1 and no changes in caspase-3 in placenta. In the placenta, and the brain of fetuses (P20) detected both forms BDNF, and it is shown that the ratio mBDNF/proBDNF in the placenta is equal to 0.19, and in the brain of the fetuses is 0.65. It is extremely important because these isoforms BDNF have an opposite effect on the developing brain: mBDNF contributes to its maturation and proBDNF suppresses it. Preliminary results on increasing the content of mBDNF and NGF in the brain of fetuses (E20) undergoing prenatal HHC were obtained.

Conclusions. The results obtained indicate that proposed HC-induced apoptosis of neuronal cells causes early developmental impairments of brain maturation, which might underlie long-term deficits in the offspring learning and memory processes. Metabolic changes observed may be due to the disturbances of placental functioning caused by increased HC content in the maternal organism. The presented data may be useful for clinical practice.

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ABSTRACT ID: 206

TITLE: THERAPEUTIC HYPOTHERMIA (TH) AND PLASMA LEVELS OF MANNOSE BINDING LECTIN AND S100B PROTEIN IN ASPHYXIATED NEONATES: WHAT IS THE EFFECT?

AUTHORS: C. Auriti1, G. Prencipe2, R. Inglese3, M. Moriondo4, F. Nieddu4, V. Mondi5, A. Santisi1, F. Piersigilli1, M. P. Ronchetti1, D. Longo6, A. Dotta1.

AFFILIATIONS: 1) NICU Department of Medical and Surgical Neonatology. Bambino Gesù Children’s Hospital Rome, Italy.
2) OU Reumatology, Department of Pediatrics, Laboratory of Immunoreumatology, Bambino Gesù Children’s Hospital Rome, Italy.
3) OU Laboratory of Biochemistry, Department of Laboratories, Bambino Gesù Children’s Hospital Rome, Italy.
4) OU Immunology, Anna Meyer Institute, Florence, Italy.
5) NICU Policlinico Casilino, Rome, Italy.
6) OU Neuroradiology, Department of Imaging, Bambino Gesù Children’s Hospital Rome, Italy.

CONTENT

Background. The effect of TH on some mediators of complement activation, their temporal trends and relationships between inflammatory mediators and the brain damage are still little explored. Improving their knowledge could change the time window for hypothermic treatment. Mannose-binding lectin (MBL) is a pattern-recognition protein that binds to microbial and damaged tissue cells, triggering complement activation, while S100 B is a biomarker of brain tissue damage.

Aims. To study the effect of TH on MBL and S100 B plasma levels in asphyxiated neonates, treated and untreated with TH. To explore the influence of MBL, S100 B protein levels and genetics of MBL2 on the severity of MRI brain damage.

Methods. MBL and S100B plasma levels were measured in 42 treated with TH and 11 untreated asphyxiated infants and
compared. Then MBL and S100B plasma levels, MBL2 genetics and TH were correlated with MRI brain damages and/or death. Results. MBL significantly increased in all infants from 24 hours to 7-10 days of life, as described in the first week of life, while S100B protein decreased in the first 48 hours of life, more in treated infants. MBL peak increase, convulsions and to be untreated with TH were significant risk factors for brain damage or death. Carriers of AA MBL2 genotype had a worse outcome. Conclusion. TH does not influence MBL plasma levels in the first weeks of life, while S100B protein decrease quicker in treated infants, until 48 hours from the hypoxia. Neonates with perinatal asphyxia would benefit from an expansion of the entrance window to hypothermia.
BACKGROUND. Perinatal hypoxia acutely triggers the release of cytokines and chemokines from neurons, astrocytes and microglia. The brain damage extension seems to be related with both the severity of hypoxia and the balance between pro and anti-inflammatory host response.

AIMS: To preliminary explore possible relationships between inflammatory cytokines and MRI brain damages in 10 asphyxiated neonates, treated with therapeutic hypothermia, who underwent brain MRI within ten days of life.

METHODS: In a group of 10 asphyxiated cooled neonates, 5 with normal and 5 with clearly pathological brain MRI, we measured and compared plasmatic cytokines levels (CCL2, CXCL8, GFAP, IFNγ, IL-10, IL-18, IL-6, CCL3, ENOLASE2, GM-CSF, IL-1B, IL-12p70,IL-33,TNFα ) at different time points from the hypoxic insult. Cytokines were measured by Magnetic Luminex Assay (Luminex SV 013-17 (14), instrument Biorad Bio-Plex 100 s.n. LX 10005039304.
MR images were classified according to Barkovich score. Results. GM-CSF, IL-1, and TNF alpha levels were low in both the groups of neonates. Patients with worse MRI showed plasmatic GFAP levels significantly higher than those with normal MRI whereas IL-18 values were significantly lower. Conclusion. Severe brain damage due to perinatal asphyxia may be associated to an unbalance between pro and anti-inflammatory host response. Plasmatic levels of GFAP could have a prognostic value in neonates with birth asphyxia.
TOPIC: THE BRAIN OF THE FETUS AND THE NEWBORN

ABSTRACT ID: 317

TITLE: CYCLING AS AN OVERLOOKED CTG FEATURE IN THE INTRAPARTUM PERIOD AND ITS RELATIONSHIP TO OTHER CTG FEATURES AND NEONATAL OUTCOMES.

AUTHORS: C. Modestini 1; S. Pereira 2; K. Lau 3; D. Wertheim 4; E. Chandraharan 5

AFFILIATIONS: 1 Maternity Department, Guy's and St Thomas' NHS Foundation Trust, London, UK
2 Maternity Department, Kingston Hospital NHS Foundation Trust, London, UK
3 Kings College Hospital NHS Foundation Trust, London, UK
4 Kingston University, London, UK
5 St George's University Hospital NHS Foundation Trust, London, UK

CONTENT

Introduction
Cycling is a hallmark of autonomic system integrity and consists of alternating periods of reduced variability with periods of normal variability at a stable baseline reflecting different behavioural states. Cycling is a feature not considered in most intrapartum CTG guidelines including FIGO and NICE.

In this study, we aimed to determine whether the absence of cycling is associated with neonatal outcomes measured by Apgar score, cord pH and neonatal unit admission. We also tested the hypothesis that absence of cycling is associated with other subtle CTG changes as a high baseline than expected for gestational age and no accelerations in the first 40 minutes of the intrapartum CTG trace.

Materials and methods
Evaluation of a pre-existing database of sequentially acquired intrapartum cardiotocography traces with neonatal outcome, from a single tertiary centre. Only cases of term singleton pregnancies in cephalic presentation with arterial cord pH were considered.
Results
A total of 684 cases were analysed. Absence of cycling was noted in 5% of cases. Absence of cycling was associated with a baseline higher than expected for gestational age (p<0.001) and absence of accelerations (p<0.001) in the first 40 minutes of CTG trace. Cases with no cycling were more likely to have Apgars ≤7 at 5 minutes (p<0.05) and neonatal admission (p<0.05). The proportion of cases with no cycling increases with increasing baseline fetal heart rate. There was no significant difference between the 2 groups (with and without cycling) in mode of delivery (p=0.29) or arterial cord pH <7.05 (p=0.53).

Conclusions
Fetuses with no cycling during labour are more likely to have poorer outcomes measured by Apgar ≤7 at 5 minutes and admission to neonatal unit, despite no association with fetal acidosis. Absence of cycling is associated with increased baseline fetal heart rate and absence of accelerations from the beginning of the CTG trace. Alternative mechanisms of fetal compromise other than hypoxia should be considered.
TOPIC: THE CHALLENGE OF IUGR FETUS AND NEWBORN

ABSTRACT ID: 18

TITLE: MATERNAL PREDICTORS OF INTRAUTERINE GROWTH RETARDATION AT SECONDARY CARE HOSPITAL: A CASE-CONTROL STUDY.

AUTHORS: N. Mohammad 1; A. Sohaila 2; U. Rabbani 3; S. Ahmed 4; S. Ahmed 5; S. Rehan Ali 6.

AFFILIATIONS: 1,2 & 5: Department of Pediatrics, Aga Khan University Hospital, Karachi, Pakistan. 3: Family Medicine, Ministry of Health, Qassim, Saudi Arabia. 4: Department of Biotechnology, Karachi University, Karachi, Pakistan. 6: Department of Pediatrics, Indus Hospital, Karachi, Pakistan.

CONTENT

Background: Intrauterine growth retardation (IUGR) represents the second leading cause of perinatal morbidity and mortality in non-anomalous fetuses, after prematurity. IUGR is observed in 23.8% of newborns around the world; and significant global burden approximate 75% of IUGR neonates are contributed by the Asian continent. In Pakistan, the incidence of IUGR is around 25%, more than the WHO criteria for triggering a public health action. It is mainly due to a pathologic slow-down in the fetal growth pace, resulting in a fetus that is unable to reach its growth potential. The objective of this study was to identify maternal factors associated with IUGR. A comprehensive understanding of these factors will help to provide early interventions to improve the perinatal outcome due to IUGR.

Objective: To identify maternal factors associated with intrauterine growth restriction.

Methodology: This was a case-control study conducted at neonatal Unit of the Aga Khan Hospital for Women (AKHW), Karimabad, from January 2014 to December 2015. Cases were IUGR live born babies (n=90), while control were appropriate-for-gestational age (AGA) babies (n=180). Information recorded in pre-designed proforma included gestational age and birth
weight of baby, demographics of mothers, pregnancy related medical and obstetric complications. Data were analysed through SPSS-19. Multi-variable logistic regression was used to determine the maternal factors associated with the intrauterine growth restriction.

Results: Maternal factors associated with IUGR after adjusting for confounders in the multi-variable model included younger age (OR=0.9, CI=0.8-0.9), poor gestational weight gain (OR=3.0, CI=1.6-6.1) and history of previous abortion (OR=3.06, CI=1.1-8.0). Significant interaction was found between pregnancy-induced hypertension (PIH) and parity of mother, primary-para mother with PIH having an increased risk for IUGR babies (OR=10.1, CI=1.0-23.2).

Conclusion: Young age, primigravida status, low gestational weight gain, previous history of abortion, PIH and GDM have strong association with IUGR; hence, special consideration is essential to overcome these issues in order to improve maternal and neonatal health.
Background: MicroRNAs (miRNAs) are small RNA molecules that regulate expression of genes. Decreased miR-21 and increased miR-141 concentrations in the placenta correlate with lower birth weight of fetuses, and the reverse dependence was found in placenta of women with fetal macrosomia. It suggests that miR-21 and 141 are involved in processes related to intrauterine growth.

Objective: The aim of the study is to determine if abnormal expression of microRNA-21 (miR-21) and microRNA-141 (miR-141) occurs in intrauterine fetal growth restriction (IUGR).

Material and methods: The study group consisted of 10 women in single pregnancies complicated by IUGR and the control group was made up of 10 women in healthy pregnancies. From each patient samples of blood and placenta were collected. Total RNA was extracted and diluted in diethylpyrocarbonate water to a final concentration of 450 ng/μL. Total RNA was used in a reverse transcription reaction. The product was subjected to amplification. The expression levels of chosen miRNA were normalized by using endogenous control RNU6B. $2^\Delta\Delta$Cp values were used
to detect differences in the expression. Kruskall-Wallis test for non-parametric distribution was used to compare the expression among groups. Other applies tests were: T-student test and chi2-test. Differences with a p-value <0.05 were considered as statistically significant.

Results: MiR-141 had significantly higher expression in samples of placenta derived from women in pregnancies complicated by IUGR (p=0.02) than in control group. Moreover, in control group, significantly more samples had detectable expression of miR-21 in placenta than in study group (p=0.006).

Conclusions: Overexpression of miR-141 and lower expression of mir-21 might be a part of IUGR pathogenesis. Exploration of epigenetic mechanisms of IUGR may help to understand mechanisms of the disease and identify possible maternal predictive factors as well as possible gene therapy targets in IUGR treatment.
TOPIC: THE CHALLENGE OF IUGR FETUS AND NEWBORN

ABSTRACT ID: 210

TITLE: MATERNAL SERUM LEVELS OF PLGF AND SFLT-1 IN A LOW-RISK POPULATION OF PREGNANT WOMEN IN PREDICTING DELIVERY OF AN SGA NEWBORN

AUTHORS: L. Roubalova1, K. Langova2, V. Kroutilova3, V. Durdova3, T. Kratochvilova3, R. Pilka3, M. Lubusky3

AFFILIATIONS: 1 Department of Clinical Biochemistry, University Hospital Olomouc, Czech Republic
2 Department of Medical Biophysics, Palacky University Olomouc, Faculty of Medicine and Dentistry, Czech Republic
3 Department of Obstetrics and Gynecology, Palacky University Olomouc, Faculty of Medicine and Dentistry, University Hospital Olomouc, Czech Republic

CONTENT

Objective
Currently, there is no laboratory screening test available to identify pregnancies at risk of delivering a small for gestational age (SGA) newborn. SGA is associated with placental dysfunction. It can be supposed that there is an association between maternal serum levels of angiogenic factors (PlGF - placental growth factor, sFlt-1 - soluble fms-like tyrosine kinase 1) and SGA. The aim of the study was to assess maternal serum levels of PlGF, sFlt-1 and the sFlt-1/PlGF ratio in a low-risk population of pregnant women and evaluate the cut-off value in predicting the delivery of an SGA newborn.

Methods
In a prospective cohort study, in a group of 476 pregnant women with singleton pregnancies and term delivery (≥37th week), maternal serum PlGF and sFlt-1 were assessed using the Thermo Fisher assays on a Kryptor Compact platform. PlGF was assessed three times (at 9–13, 30–33 and 36–37 gestational weeks) and sFlt-1 two times (at 30–33 and 36–37 weeks) and the sFlt-1/PlGF ratio was calculated. Newborn weight centiles were
evaluated according to INTERGROWTH-21 standards. A receiver operating characteristic (ROC) analysis was used to determine the threshold of the levels of PlGF and sFlt-1 and sFlt-1/PlGF ratio in predicting the delivery of an SGA newborn.

Results

SGA (birth weight <10th centile) was diagnosed in 6.3% of the newborns (30/406) and 1.1% (5/476) had a birth weight <3rd centile. ROC analysis showed that none of the parameters were able to predict delivery of SGA <10th centile, the area under the curve (AUC) was poor for all parameters regardless of gestational age and did not exceed a level of 0.75. In the group SGA <3rd centile, ROC analysis showed good accuracy for PlGF in the 3rd trimester, at 30-33 weeks (AUC = 0.80), and particularly at 36-37 weeks (AUC = 0.81). The optimal PlGF cut-off at 30-33 weeks was 223 with sensitivity 80% and specificity 80% and at 36-37 weeks cut-off 76 with sensitivity 85% and specificity 80%, respectively.

Conclusions

Maternal serum PlGF in the 3rd trimester, particularly at 36-37 weeks, can predict the delivery of an SGA <3rd centile at term, but not <10th centile, and neither sFlt-1 nor sFlt-1/PlGF ratio improve prediction.
TOPIC: THE CHALLENGE OF IUGR FETUS AND NEWBORN

ABSTRACT ID: 213

TITLE: PREDICTION OF INTRAUTERINE GROWTH RETARDATION – FROM SCREENING TO EPIGENETICS

AUTHORS: I. Bushtyreva 1, N. Kuznetsova 1,2, E. Zabanova 1,2, T. Shkurat 3, E. Butenko 3

AFFILIATIONS: 1 Rostov State Medical University, Rostov-on-Don, Russian Federation
2 State Budgetary Institution of Rostov Region Perinatal center, Rostov-on-Don, Russian Federation
3 Southern Federal University, Rostov-on-Don, Russian Federation

CONTENT

Objective. The frequency of intrauterine growth retardation (IUGR) varies in a wide range, in the State Budgetary Institution of Rostov Region Perinatal center this pathology is diagnosed in approximately 11.3% of pregnant women. The contribution of IUGR to the structure of antenatal mortality, as well as early neonatal and neonatal mortality, is significant. Moreover, it is known that the prenatal environment, the conditions in which the fetus was formed during pregnancy, lay the foundation of human health in the future (Barker DJ, 2006). In this regard, the newborns with IUGR subsequently have an increased risk of disability, especially neurological disorders, as well as cardiovascular and endocrine pathology; increased susceptibility to infectious diseases (ACOG, 2013; Mendez-Figueroa H, 2016; Leitner Y, 2007; Ojeda NB, 2008). Early prediction of IUGR may help to optimize the management of pregnant women (additional ultrasound for early diagnostics of this complication of pregnancy, prescription of drugs), which will improve perinatal outcomes.

Method: 73 patient cards in patients with IUGR (the 1st group) and 66 patient cards in patients without IUGR (the 2nd group) for 2016-2018 years were studied at the State Budgetary Institution of Rostov Region Perinatal
center, Rostov-on-Don, Russian Federation. The groups were comparable in the body weight of newborns: average body weight in the 1st group was 1195.6 ± 229.2 grams (M ± m) and in the 2nd group was 1204.4 ± 207.7 grams, p>0.05. All the patients delivered preterm, in the period of gestation from 26 to 34 weeks. Gestation age was higher in the 1st group (31.9 ± 2.1 weeks) compared to the 2nd group (28.9 ± 1.8 weeks), p<0.01. This difference is due to the presence of IUGR in the patients of the 1st group. Statistical processing of the data was carried out using Fisher statistical criteria, Pearson’s χ² criterion and Mann-Whitney criterion.

Results. In the 1st group IUGR debuted at an average of 28.4 ± 1.7 weeks of gestation. The level of beta-subunit of hCG according to the genetic screening of the 1st trimester was lower in the 1st group (1,015 ± 0.723) compared to the 2nd group (1,204 ± 0.508), p<0.05, as well as the PAPP-A level (0.892 ± 0.475 in the 1st group and 1.086 ± 0.436 in the 2nd group), p0.05. The anamnesis of pregnant women (unsuccessful pregnancies, infectious history, comorbidity, acute respiratory viral infections during an observed pregnancy, etc.) were comparable in groups 1 and 2. The criteria for delivery for patients in the 1st group were selected according to the recommended TRUFFLE study, also considering individual characteristics and comorbid diseases (severe preeclampsia, chorioamnionitis etc.). Patients from the 2nd group were delivered prematurely because of preterm rupture of membranes, cervical insufficiency, pre-eclampsia, combined indications, etc. The rate of operative delivery by cesarean section was 91.8% in the 1st group and 60.6% in the 2nd group (p0.05).

Conclusions. The predictor of an IUGR is a decrease of the level of beta-subunit of hCG and PAPP-A according to the genetic screening of the 1st trimester. The presence of low uteroplacental blood flow in the second trimester was not significantly different in the pregnant women with and without an IUGR. A promising direction in the prediction of IUGR is epigenetics: the identification of placenta-specific miRNAs as a highly specific predictor of pregnancy complications associated with placental insufficiency, including IUGR. Rostov State Medical University, together with the Southern Federal University, is currently working on this topic.
TOPIC: THE CHALLENGE OF IUGR FETUS AND NEWBORN

ABSTRACT ID: 220

TITLE: INTRAUTERINE FETAL GROWTH RESTRICTION AND PROCOAGULANT ACTIVITY OF MICROPARTICLES: A CASE-CONTROL STUDY

AUTHORS: Makris V 1; Nigdelis Mp 2; Goulis Dg 2; Mamopoulos A 3;

AFFILIATIONS: 1 Gynaecology Oncology, Royal Surrey County Hospital, University of Surrey, United Kingdom
2 Unit of Reproductive Endocrinology, 1st Department of Obstetrics and Gynaecology, Medical School, Aristotle University of Thessaloniki, Greece
3 3rd Department of Obstetrics and Gynaecology, Medical School, Aristotle University of Thessaloniki, Greece

CONTENT

Introduction: Microparticles are membrane-derived vesicles, released in response to cell activation or apoptosis. They demonstrate procoagulant activity (PA) and are involved in the pathogenesis of vascular complications in pregnancy, such as pre-eclampsia or miscarriages. This case-control study aimed to compare the PA of microparticles between IUGR and uncomplicated pregnancies.

Methods: Thirty-five IUGR pregnancies [asymmetrical (IUGRa), n = 15; symmetrical (IUGRs), n = 20] and 35 uncomplicated pregnancies (controls) between 26 and 37 weeks, from a tertiary care hospital were included in the study. All fetuses had normal anatomy scans. History-taking, clinical examination, biochemical and ultrasonographic examinations were performed in all pregnant women. Microparticle PA was assessed by the Zymuphen MP-Activity Kit (Hyphen BioMed, France). The reference range was ≤5 nanomolar of equivalent phosphatidylserine (Eq nM PS) and the detection threshold 0.05 Eq nM PS. The study was powered to detect a 3.0 Eq nM PS difference in microparticle PA. A Receiver Operating Characteristic (ROC) curve was constructed to analyse the accuracy of microparticle PA to discriminate IUGR and uncomplicated pregnancies.
stepwise multiple linear regression model was constructed to predict the value of PA based on a series of predictive factors. Data analysis was conducted using the SPSS 24 software (IBM Corp.).

Results: IUGR pregnancies had higher microparticle PA compared with controls (5.92 ± 7.92 vs. 2.22 ± 1.16 Eq nM PS, Mann-Whitney test, p < 0.001). Both IUGR groups (IUGRa and IUGRs) showed higher PA compared with controls (p < 0.001). No difference was detected between IUGRa and IUGRs (3.93 ± 1.97 and 2.22 ± 1.16, respectively, p = 0.069). The area under the curve (ROC AUC) evaluating the accuracy of microparticle PA to predict the IUGR status (IUGR or uncomplicated pregnancies) was 0.854 (95% confidence interval 0.767 to 0.941). The multiple linear regression model [microparticle PA = -1.249 + 0.463·CRP (mg/ml) + 3.069·AREDV + 0.061·SGOT (IU/ml); CRP: C-reactive protein, AREDV: absent or reversed end-diastolic volume, SGOT: serum glutamic oxaloacetic transaminase] explained 83.5% of the variability of the microparticle PA.

Conclusions: Microparticles may be involved in IUGR, as pregnancies complicated with IUGR have higher microparticle PA compared with uncomplicated pregnancies. Further studies are needed to clarify the role of microparticles in the pathophysiology of IUGR.
TOPIC: THE ORIGINS OF NEURODEVELOPMENTAL DISEASE

ABSTRACT ID: 12

TITLE: ASSOCIATION BETWEEN HYPERTENSIVE DISORDERS OF PREGNANCY AND CHILDHOOD DEPRESSION: THE MEDIATION ROLE OF LOW BIRTH WEIGHT

AUTHORS: B.Dachew 1,5; K.Betts 1; J.Scott 2,3,4; A.Mamun 1; R.Alati 1,6

AFFILIATIONS: 1 Institute for Social Science Research, The University of Queensland, Indooroopilly, Queensland, Australia
2 Faculty of Medicine, Centre for Clinical Research, The University of Queensland, Herston, Queensland, Australia
3 The Park Centre for Mental Health, Queensland Centre for Mental Health Research, Wacol, Queensland, Australia
4 Metro North Mental Health, Royal Brisbane and Women’s Hospital, Herston, Queensland, Australia
5 Department of Epidemiology and Biostatistics, Institute of Public Health, University of Gondar, Gondar, Amhara, Australia
6 School of Public Health, Curtin University, Perth, Western Australia, Australia

CONTENT

Background: Around 10-15% of global pregnancies are complicated by hypertensive disorders of pregnancy (HDP). HDP are responsible for various adverse birth outcomes including low birth weight and associated with an increased risk of adverse health outcomes later in life. HDP may also increase the risk of offspring depression in childhood.

Objective: This study aimed to investigate (i) whether there is an association between HDP and the risk of depression in childhood, and (ii) whether low birth weight mediates this association.

Methods: We used data from the Avon Longitudinal Study of Parents and Children (ALSPAC), a prospective longitudinal birth cohort study in Avon, United Kingdom. Childhood depression at the age of 7 years was
diagnosed using parent reported Development and Wellbeing Assessment (DAWBA).

Results: Among those children who had data on childhood depression at age 7 (n=7847), 15.9% were exposed to HDP. Children of women with HDP had an increased risk of depression at 7 years (OR= 2.4, 95%CI: 1.23-4.71). Results were adjusted for a wide range of confounding variables including maternal depression and anxiety during pregnancy. Low birth weight was a weak mediator of this association.

Conclusions: This study suggests that fetal exposure to maternal hypertensive disorders of pregnancy increased the risk of childhood depression after taking into account the mediation effects of low birth weight and a wide range of confounders. Early screening for childhood emotional problems in offspring of women with HDP may be warranted.
TOPIC: THE ORIGINS OF NEURODEVELOPMENTAL DISEASE

ABSTRACT ID: 71

TITLE: ASSOCIATIONS BETWEEN PERINATAL STROKE AND LONG-TERM NEURODEVELOPMENTAL OUTCOME IN DIFFERENT SUBGROUPS OF PATIENTS

AUTHORS: E. Vojcek 1, G. Rudas 2, R. Gráf 3, I. Seri 1,4

AFFILIATIONS: 1 1st Department of Pediatrics, Semmelweis University, Budapest, Hungary
2 Semmelweis University MR Research Center, Budapest, Hungary
3 Department of Pediatric Psychiatry and Rehabilitation, Szent János Hospital and North Buda Unified Hospitals, Budapest, Hungary
4 Children’s Hospital Los Angeles, University of Southern California, Los Angeles, California

CONTENT

INTRODUCTION: Perinatal stroke is a serious condition with an estimated incidence of 1/1600-3000 live births. It carries the risk of a significant long-term neurodevelopmental burden in survivors. A better understanding of the relationship between the risk factors and outcome is a major interest. We aimed to analyze patient characteristics of different clinical subgroups of term and late preterm neonates with the diagnosis of perinatal stroke at Level III Neonatal Intensive Care Units in Budapest, Hungary.

MATERIAL AND METHODS: We conducted a retrospective cohort analysis enrolling 225 term (37-41 weeks’ gestation) and late preterm (31-36 weeks’ gestation) neonates with the diagnosis of perinatal stroke born between 2007-2017. Neonates with congenital heart disease were excluded. The diagnosis of perinatal stroke was confirmed with MRI in all patients. Infants were followed for at least 18 months, unless they died earlier. The Bayley Scales of Infant Development-II, the revised Brunet-Lézine test and the Stanford-Binet Intelligence scales-V were used, as appropriate, at a mean age of 62 months (range 18-138 months). Follow-up was available in 174 infants. Logistic regression models were applied for each outcome variable.
as the dependent variable (normal neurodevelopment, death, cerebral palsy, cognitive impairment, behavioral problems, visual field defects, hearing loss, epilepsy, language delay, ventriculoperitoneal (VP) shunt) and for a set of explanatory variables (late preterm neonate, in utero stroke, cerebral sinovenous thrombosis (CSVT), mild to moderate asphyxia, preeclampsia, gestational diabetes mellitus (GDM) and infection). Odds ratios (ORs) were calculated with 95% confidence intervals (95% CIs). In addition, Fisher exact tests were run to test the dependency between pairs of binary variables based on their frequency.

RESULTS: Apgar scores at 1 and 5 minutes were 7.2 ±2.6 and 8.5 ±2.0, respectively. There was a slight male predominance (61%). Clinical subgroups selected were late preterm neonates (n=28) and neonates with in utero stroke (n=20), CSVT (n=29), mild-to-moderate asphyxia (n=27), preeclampsia (n=26), GDM (n=18) and infection (n=48). Normal neurodevelopmental outcome was recorded in 39% of the cases. CSVT was an independent predictor of death [OR [95% CI]: 18.2 [3.2, 104.3]; p=0.001]. Asphyxia [OR [95% CI]: 41.5 [3.0; 567.2]; p=0.005] and infection [OR [95% CI]: 12.3 [1.1; 134.2] p=0.040] were independent predictors of hearing loss. In utero stroke was significantly associated with VP shunt (p=0.027), while infection correlated with cognitive deficit (p=0.01). Infection and asphyxia predicted hearing impairment (p=0.042 and p=0.004, respectively). Finally, late preterm neonates developed hemorrhagic stroke more frequently (86% vs. overall 54%; p<0.001).

CONCLUSIONS: Perinatal stroke adversely affects neurodevelopmental outcome in the majority of cases. Our findings also suggest that, as different risk factors impact different aspects of neurodevelopment, understanding of these interactions may help predicting long-term outcome and even planning management strategies earlier when neurodevelopmentally focused interventions might be more effective.
TOPIC: THE ORIGINS OF NEURODEVELOPMENTAL DISEASE

ABSTRACT ID: 76

TITLE: PARTICULARITIES OF THE EARLY ADAPTATION PERIOD OF NEWBORNS WITH HYPOXIC-ISCHEMIC ENCEPHALOPATHY DEPENDING ON BIRTH WEIGHT

AUTHORS: Ye.P. Ortemenka, A.M. Saranchuk

AFFILIATIONS: The department of Pediatrics and pediatric infectious diseases, Bukovinian State Medical University, Chernivtsi, Ukraine

CONTENT

Currently hypoxic-ischemic encephalopathy (HIE) of newborns takes a leading position (47% of cases) among all perinatal central nervous affections. Although the risk of hypoxic-ischemic injury of central nervous system is significantly higher in preterm and low birth weight (LBW) infants, among term infants with an adequate to gestational age body weight this condition is not rare (on average 2 to 9 cases per 1000 deliveries). However, data on the features of the early adaptation period of the term newborns with HIE depending on birth body weight are still limited and conflicting. 

Material and Methods. In the department of neonatal pathology of the Chernovtsy Regional Children Clinical Hospital 41 newborns with HIE have been examined. The first (I) clinical group has been formed from 28 term neonates with corresponding to gestational age body weight. The second (II) clinical group included the remaining 13 LBW newborns. These survey results have been analyzed by parametric (Pt, Students’ criteria) and nonparametric (Pφ, Fisher’s angular transformation) methods of biological statistics.

Results. Although the average maternal age did not differ significantly in observation group (26.2 years old in the I group and 25.1 years old in the II group, P> 0.05), quota of mothers aged 30 years and older came to one-third (28.6%) of cases in the I group, but only 15.4% of observations in the II group (Pφ> 0.05). Maternal age < 20 years has been registered in 10.7%
cases of the I group and in 15.4% of mothers of LBW neonates with HIE (Pφ>0.05). Despite the fact that representatives of both groups of observations were related to term infants, patients of the II group were born in probably less gestational age. Thus, the gestational age averaged 39.5±0.3 weeks in the newborns of the I group, but 38.5±0.4 weeks in the II group (P <0.05). At that, infants of the II clinical group were born twice as likely (84.6% of cases) under the 40th week of gestation (in term of 37-39 weeks) than neonates of the I clinical group (42.9% of patients; P 0.05). An thus, tight nuchal cord with development of the newborns’ distress during delivery has been occurred in a quarter (25%) infants of I group, but only in one (7.7%) LBW neonates (Pφ <0.05). Pathological amniotic fluids (thick, meconial or hemorrhagic) have been registered in a third (32.1%) cases of the I group versus 7.7% of cases in the II group (Pφ 0.05). At once, in LWB neonates after the first minute of life the respiratory problems, requiring artificial lung ventilation, have been occurred twice as often (61.5% of newborns in the II group vs. 35.7% of infants in the I group, Pφ 0.05) postasphyctic multiple organ dysfunction syndrome has been developed, while only representatives of the I group have had convulsive syndrome (17.9% of infants) compared with no cases in the II group. At one time, according to the ultrasound of the heart, in the first ten days of life the signs of overload of the right heart chambers have been registered in every third newborns of the I group (28.6%), but only in 7.7% of cases in the II group (Pφ <0.05).

Conclusions. The early adaptation period of term newborns with HIE and an adequate to gestational age body weight is characterized by: pathological delivery in one third (32.1%) of cases and the birth of a quarter (25%) of the infants with tight nuchal cord that three times often (22.2% of neonates) led to severe asphyxia, associated with the development of the multiple organ failure syndrome (14.3% of cases) and seizures (17.9% of patients). In the term low birth weight neonates with hypoxic-ischemic encephalopathy the following features of early adaptation period were observed: lower gestational age (37-39 weeks) at birth (84.6% of newborns), which associated in 15.4% of cases with maternal age < 20 years, and twice as likely (61.5% of cases) led to the development of respiratory disorders at birth, requiring artificial lung ventilation.
TOPIC: THE TWINS

ABSTRACT ID: 81

TITLE: IMPACT OF OOCYTE DONATION ON OBSTETRICS AND PERINATAL COMPLICATIONS IN TWIN PREGNANCIES

AUTHORS: M. De la Calle 1; F. Borja 1; M. Cuerva 1; N. Martinez 1; E. Martín Boado 1; MD Elorza 2; JL Bartha 1.

AFFILIATIONS: 1 Obstetrics Dept., University La Paz Hospital, Madrid, Spain
2 Neonatology Dept., University La Paz Hospital, Madrid, Spain

CONTENT

Background
Over the last years the number of pregnancies after oocyte donation (OD) have increased dramatically. Historically, OD was a technique reserved for women with premature ovarian failure. Nowadays, its indications have been extended to patients with multiple failure of in vitro fertilization (IVF) with autologous oocytes (AO) or infertile women with advanced age (physiological ovarian insufficiency).
The literature suggests that among IVF users, women using OD are at higher risk of obstetrical complications than women using their own oocytes. Higher rates of pregnancy-induced hypertension and preeclampsia have been reported in several studies.

Twinning is an independent risk factor for many obstetric and neonatal complications and multiple pregnancies are more frequent among IVF users. Most of the studies with OD include only singleton pregnancies, and there are only a few evaluating obstetrical outcomes of OD in twin pregnancies.

Objective
The aim of the present study is to evaluate only twin populations in order to distinguish the separate roles of OD conception and twinning in obstetrics and perinatal complications.
Methods
A case-control retrospective study was conducted at the Department of Obstetrics in the University Hospital La Paz, a tertiary care referral center in Madrid (Spain), after ethical committee approval. Data were collected from 50 consecutive women with twin pregnancies after OD who delivered after 24 weeks of gestation from January 1, 2012, to December 31, 2016 in University Hospital La Paz. For every case, a control was selected among women with a twin pregnancy after AO IVF with a due date within two months before or after that of the case.

Clinical records were reviewed. Women were classified into two groups: IVF with OD and IVF with AO. Social and demographic characteristics, obstetrical and perinatal complications were registered.

Obstetric and perinatal outcomes studied were: chorionicity, rates of Pregnancy Induced Hypertension (PIH) (systolic blood pressure >140 or diastolic blood pressure >90 after 20 weeks of pregnancy), preeclampsia (PIH with proteinuria >300mg/24h), gestational diabetes, intrahepatic cholestasis, anemia, premature rupture of the membranes (PROM), cesarean delivery, preterm birth (delivery before 37 weeks of gestation), threatened preterm labor (regular uterine contractions associated to cervical changes), neonatal birth weight, Apgar score, and fetal acidemia (pH after birth <7.20).

Statistical analysis
For qualitative variables, the groups were compared with the use of chi-square test or Fisher exact test, as appropriate. For quantitative variables, we used Mann-Whitney U-test as most of the variables were distributed in a non-parametric manner. For the complications significantly associated with the mode of conception in the univariate analysis, a multivariate analysis with logistic regression models was conducted in order to adjust for maternal age. Statistical analysis was performed using the Statistical Package for the Social Science (SPSS) software version 20.

Results
Patient characteristics are shown in Table 1. Women in the OD group were significantly older than those in the AO group (mean 40.8 vs 36 years old, p<0.001). There were no differences in body mass index (BMI), nulliparity, thrombophilia, smoking or chorionicity.
No differences were observed in maternal complications such as rates of gestational diabetes, PIH, intrahepatic cholestasis, anemia, threatened preterm labor or PROM. Table 1.
On the univariate analysis, the OR for preeclampsia was 3.63 (1.08-12.19), for preterm birth was 2.3 (1.02-5.18), and for cesarean delivery 4.62 (1.55-13.88). After adjustment for maternal age only the risk of preterm birth remained significantly higher [OR 3.2 (1.15-8.86); p= 0.025].
Comparing neonatal outcomes, there were no differences in birth weight, pH or Apgar score at birth. Table 1.
Conclusions
Twin pregnancies after oocyte donation are associated with a significant higher risk of preterm birth before 37 weeks of gestation. Although in our study there is a higher prevalence of preeclampsia in the OD group, after adjustment for maternal age it does not remain significant. Neonatal outcome, on the other hand, was not worse for those twin pregnancies conceived with OD. This information is important for patients planning OD treatment and for clinicians.
BACKGROUND:
In industrialized societies the gradual increase in maternity age, infertility and need of Assisted Reproduction Techniques (ART) contributes to the rise in twin pregnancies, which are associated with fetal complications, such as Intrauterine Growth Restriction (IUGR) and prematurity. These complications are not only important for immediate neonatal health, but they are also related to low birth weight, which is a risk factor for later development of adult diseases. Therefore, the assessment of predictive biomarkers is important, particularly in twin gestations, which have been less studied.

OBJECTIVE:
We hypothesize that it is possible to detect women at risk in early pregnancy based on maternal blood parameters. To evaluate this hypothesis we have assessed the possible association between several blood biomarkers and the development of fetal complications in twin pregnancies. We have also compared these parameters between twin and single gestations.

METHODS:
This is a single-center, prospective, observational cohort study of 200 healthy pregnant women being attended at the Obstetrics and
Gynecology Service from La Paz University Hospital (HULP, Madrid, Spain) were included in the study. Recruitment was performed at 9th week of pregnancy. The study included both single and twin pregnancies recording the following data: 1) use of ART, 2) single or twin pregnancies, 3) development of fetal complications including IUGR (defined as growth <3rd percentile or <10th percentile with hemodynamic alterations) and prematurity (≤37 gestational age) and 4) birth weight.

The data were expressed as median ± Interquartile range (IQR) and U Mann Whitney test was used for variables without normal distribution. Mean ± Standard Error Mean (SEM) and Student’s T test was used for normal variables. Chi2-test was used for the analysis of the relationship between qualitative variables. Spearman-ρ was used to correlations analysis. Statistical significance was established at p<0.05. Software was used SPSS statistics (v.24).

Results:
In the recruited population of 200 pregnant women, 48.2% of the women had single pregnancies and 51.8% were twin gestations, the majority derived from ART (93.2%). IUGR was significantly higher in twin (13.6%) compared to single gestations (3.7%; p=0.023). Prematurity was also significantly higher in twin (41.7%) compared to single gestations (4.9%; p<0.001). Due to the low number of IUGR and premature births in single gestations, the evaluation of the proposed predictive biomarkers was only analyzed in the population of twin gestations. As expected, birth weight was significantly lower in twin neonates (twin=2339.8±56.3 g; single=3137.9±62.8 g; p<0.001).

Compared to single pregnancies twin gestations had: 1) higher leucocytes, cholesterol, triglycerides and cortisol levels and 2) lower Antiox-S and IL-8. In women with twin pregnancies when compared whose developed or not FGR or prematurity: 1) no differences in hematological or biochemical parameters were detected; 2) Melatonin was significantly lower in women with prematurity 3) Antiox-S was significantly lower in women with IUGR; 4) no differences in cytokines were observed. Birth weight associate positively with melatonin and negatively with cortisol.

(Tables and Figures)
Conclusions: In twin gestations, low maternal global antioxidant status in plasma or low melatonin levels, adversely affect fetal outcome. Melatonin and cortisol could be useful to predict birth weight.
CONTENT

INTRODUCTION
Ultrasound is an effective tool for determining the chorionicity and the right time for this is in the first quarter. If the ultrasound is between 6-9 weeks of pregnancy, the pregnancy BC can be easily distinguished by the presence of aseptum thick between the two bags, which gradually becomes thinner but is easy to identify in the base membrane, which appears as a triangular projection or sign "lambda". This triangular projection tissuecorial, decreases after week 20 and You can even disappear. By contrast, gestationmonochorionic diamniotic It is identified by the presence of the sign "T". We report the case of a pregnancymonochorionic which it was misdiagnosed as dichorionic in the first quarter due to a false lambda sign.

Case Presentation
A 43-year-old woman, first pregnancy got by IVF treatment, was referred to our center for her first-trimester ultrasound scan. The examination shows two morphologically normal fetuses according to 12 2/7 weeks of gestation and a positive lambda sign suggesting a dichorionic-diamniotic twins , so we followed-up every 4 weeks according to protocol. At 20-week morphologic ultrasound scan we noticed a selective intrauterine growth restriction of fetus A, with a weight mismatch of 23%. A week later, in fetal medicine consultation, we observed a weight increase discordance of 47% and an amniotic liquid mismatch: Fetus A featured a largest liquid pool of 1.5 cm
(oligohydramnios) and fetus B featured largest liquid pool of 11 cm (polyhydramnios). Both bladders being seen normal. Despite the reliability of the lambda sign in the first trimester, the new sonographic findings made us consider an error in the diagnosis of chorionicity and the probability of twin-to-twin transfusion syndrome (TTTS).

We remitted the patient to a referral center for fetal medicine, which confirmed the suspected diagnosis and at 24 5/7 weeks of gestation laser fetoscopy therapy was performed. Four days later the patient was hospitalized for preterm premature rupture of membrane (PPROM) in our center. The ultrasound scans made during the hospitalization showed a decrease of both weight and liquid discordance from 23% to 3% and from 47% to 7% respectively. A Caesarean section was performed at 34 weeks of gestation because of breech presentation of the first twin. Twin A, the suspected donor, had a birth weight of 1550g with Apgar scores of 9/10; Twin B, the suspected acceptor, had a birth weight of 1685g with Apgar scores of 9/10. Histological examination confirms a monochorional biamniotic and lobed placenta.

Conclusions
The chorionicity determines the risk of complications gestational, And therefore the prognosis and monitoring of gestation. The lambda sign is currently the most important sonographic marker for determining the chorionicity. The existence of a “false” lambda sign emphasizes the potential limitations of common sonographic markers chorionicity and the importance of the continued appreciation of the chorionicity when examining a multiple pregnancy.
INTRODUCTION:
Intergemelar transfusion syndrome is a disease of multiple pregnancies monochorionic, with an incidence of 5.5 to 17.5%. It is characterized from the point of view by the ultrasound polyhydramnios in a sack and oligohydramnios in the other. This complication can be found in triple, quadruple and monoamniotic pregnancies. From the physiological point of view there is an unbalanced blood exchange between the fetus through the placenta vascular connections, resulting in a donor fetus and another receiver. It has been found that these vascular anastomoses are up to 85% of monochorionic twins.

CLINICAL CASES:
We present two cases with complications from laser fetoscopy by TTTS. The first case is a 43 year old patient with monochorionic-diamniotic pregnancy following IVF-ET (ovodón). In week 24 + 4 was diagnosed with TTTS a fetoscopy took place in week 24 + 6 and 25 + 3 week suffered PPROM fetal A. The patient was admitted to our hospital until week 34, when an elective Caesarean section was performed two live born males without complications.
The second case is a 31 year old woman with monochorionic-diamniotic spontaneous pregnancy after diagnosis of TTTS, that in week 24 A fetoscopy took place. In week 24 + 3 and week 25 + 5 the absence of heartbeat was found in the fetus B is maintained until week 34, taking elective caesarean section and being born a living fetus and a dead fetus.

CONCLUSIONS:
Treatment with laser-fetoscopy be regarded as 1st CHOICE AND THE "GOLD STANDARD" in TTTS, regardless of stage. This technique is the only causal treatment syndrome, allows the survival of both fetuses and in case of intrauterine death of one of them, has a protective effect on the survivor. Published experience refers survival of 80-90% of at least one of the fetuses and> 60% survival of both.
The risk of neurological sequelae in the surviving fetus is <5-10%.
As described in the literature there early or late complications of laser therapy TTTS, which can reach reach 20% of cases.
Between the early they are most frequent Chorionic hematomas, PREMATURE RUPTURE MEMBRANE OR chorioamnionitis.
Between the late, Highlight the death of one or both twins, recurrence TFF and appearance of a SAP.
INTRODUCTION
The twin pregnancy is a situation of greater obstetric risk and requires closer control than the single gestation. These pregnancies increase the rate of complications such as preeclampsia, gestational diabetes, CIR, preterm labor, as well as complications of these gestations and fetal-fetal transfusion.

OBJECTIVES
Know the complications that arise in twin gestations based on the control that we perform in our center.

MATERIAL AND METHODS
A retrospective study of twin gestations who performed the complete control of pregnancy in our center, analyzing the medical records to collect epidemiological data on pregnant women (chorionicity, age, spontaneous pregnancy or TRA, etc.) and calculate the incidence was conducted complications that have arisen during pregnancy: preeclampsia, gestational diabetes, CIR, APP, TTTS, late abortions and no income required during pregnancy.

RESULTS
A total of 273 twin gestations, which 70 are excluded from the study for not having done full monitoring of gestation in the center (late collection,
delivery in external center, IVE, etc.) were in our center. 83% of pregnancies were dichorionic, 14.8% monochorionic biamnióticas and 1.2% monochorionic-monoamnióticas. The average age of pregnant women is 32.7 years and 60% were spontaneous pregnancies. The complication rate shown in Table 1.
TOPIC: THE TWINS

ABSTRACT ID: 148

TITLE: TWINS DELIVERY: OUTCOMES IN OUR CENTER

AUTHORS: M.A. Urbano 1; P.M. Rodriguez 2; L. Alvarez 3; M. Velasco 4; I. Martinez 5; M.A. Jodar 6.

AFFILIATIONS: 1, 2, 3, 4, 5, 6. Obstetrics and gynecology dept., Santa Lucia University Hospital, Cartagena, Spain.

CONTENT

INTRODUCTION
Twin pregnancy has higher risk than single pregnancy, increasing the number of complications during pregnancy, such as the rate of prematurity and cesarean rate and intrapartum complications.

OBJECTIVES
Knowing the completion of the twin gestations of our center, including the number of abortions and fetal loss, prematurity rate, the rate and indications of cesarean section and neonatal outcomes (income infants and neonatal deaths, if any).

MATERIAL AND METHODS
A retrospective study including all twin gestations who performed the complete monitoring of pregnancy in our center between 2011 and 2015. We added electronic medical records to see if the completion of gestation was used and perinatal outcomes of infants was performed. The data collected were: week end of pregnancy, mode of delivery (caesarean / vaginal delivery / caesarean birth 1st 2nd twin-twin), indication of cesarean if any, income infants, neonatal deaths.

RESULTS
We had a total of 192 twin pregnancies, of which 9 were miscarriages before week 24. 46% of births were premature, and 27% before week 34. 65% of cases ended in cesarean section, being most frequent indication of
non-cephalic twin 1 (45%). 38% of infants required hospitalization in neonatology and perinatal deaths were 9 (2.5%).

CONCLUSIONS
Twinhood is a risk factor for prematurity and complications of pregnancy. In addition, the twin pregnancy has a higher risk of cesarean delivery for the mother, which affects the future reproductive life.
TOPIC: THE TWINS

ABSTRACT ID: 162

TITLE: LONG-TERM NEURODEVELOPMENTAL OUTCOME IN MONOCHORIONIC TWINS WITH SELECTIVE INTRAUTERINE GROWTH RESTRICTION OR BIRTH WEIGHT DISCORDANCE: A SYSTEMATIC-REVIEW

AUTHORS: S. Groene 1; L. Tollenaar 2; D. Oepkes 2; E. Lopriore 1; J. van Klink 1

AFFILIATIONS: 1 Division of Neonatology, Department of Pediatrics, Leiden University Medical Center, Leiden, The Netherlands
2 Division of Fetal Medicine, Department of Obstetrics, Leiden University Medical Center, Leiden, The Netherlands

CONTENT

Objective: To evaluate the long-term neurodevelopmental outcome of monochorionic (MC) twin pregnancies complicated by selective intrauterine growth restriction (sIUGR) and/or birth weight discordance (BWD) according to current literature.

Methods: Pubmed database was searched for studies describing the long-term neurodevelopmental outcomes of MC twins with sIUGR and/or BWD. An article was excluded when the study design was a case report or a case series with less than three cases or when an intrauterine intervention was performed in the study population. Quality assessment for each individual article was performed using the JAMA ‘Users guides to the Medical Literature’ and the overall level of evidence was determined with use of the GRADE working group method for grading quality of evidence.

Results: Five articles were included in the systematic review. Two articles concluded that the incidence of long-term neurodevelopmental impairment was higher in MC BWD twins (N=37) as opposed to BWD dichorionic (N=115) and concordant MC twins (N=63). Three articles analyzing within-pair differences showed that the smaller twin (N=202) has a disadvantage as they frequently demonstrated mild
neurodevelopmental impairment and lower developmental test scores. The overall level of evidence of the five included studies is of moderate quality as the methodologies and outcome measures differ extensively. Definitions of neurodevelopmental impairment varied widely including cerebral palsy, aberrant developmental test scores and/or developmental delay, behavioral disorders and sensorineural deficits.

Conclusion: The incidence of long-term neurodevelopmental impairment in MC twins with sIUGR or BWD is higher as compared to BWD dichorionic or concordant MC twins with a within-pair disadvantage for the smaller twin. More extensive research should be performed to draw a reliable conclusion, preferably in a prospective setting with a large cohort of MC twins and a follow-up period of at least until school age, using well-defined outcome measures and the appropriate developmental tests.
TOPIC: THE TWINS

ABSTRACT ID: 174

TITLE: PREGNANCY MANAGEMENT IN TWIN REVERSED ARTERIAL PERFUSION SEQUENCE.

AUTHORS: K. Kostyukov 1; K. Gladkova 1; V. Sakalo 1

AFFILIATIONS: 1 National medical research center for obstetrics, gynecology and perinatology named after V.I. Kulakov, Moscow, Russian Federation

CONTENT

Background. Twin reversed arterial perfusion sequence (TRAP) is a rare complication of monochorionic multiple pregnancy, which is characterized by the presence of malformations in one of the twins which includes the absence of a functioning heart (acardiac twin). Acardiac twin receive blood supply from other healthy twin (pump twin). An unfavorable outcome of pregnancy complicated by TRAP is observed in 60–85%. The pathogenesis of this condition is not completely clear. Pregnancy management is divided into conservative follow-up and fetal surgery. In order to improve the perinatal outcomes of pregnancy complicated with TRAP, various intrauterine interventions are undertaken to stop the blood supply to the acardiac twin. Currently, the question remains unknown whether intrauterine intervention should be performed in all patients with TRAP, since the operation have risks such as pump-twin death, preterm rupture of membranes and premature birth. On the other hand, in the absence of expressed blood supply and growth of the the acardiac twin, conservative follow-up management should performed.

Objective. To compare the effectiveness of surgical and conservative management of pregnancy complicated by TRAP.

Methods. There is retrospective study of 47 patients with multiple pregnancy complicated by TRAP, who examined and treated in the National Medical Research Center for Obstetrics, Gynecology and Perinatology named after
V.I. Kulakov from 2010 to 2017. According to the proposed pregnancy management, the patients were divided into two groups. In the first group were 17 patients with expectant management. The second group included 28 pregnant women who underwent fetal surgery. Depending on the type of surgery performed, the second group was divided into two subgroups – A and B. Subgroup A included 22 patients who underwent interstitial laser ablation of the umbilical cord vessels under ultrasound guidance. Subgroup B included 6 cases monoamniotic monochorionic multiple pregnancies underwent laser ablation and dissection of umbilical cord of the acardiac twin under fetoscopic guidance.

Mathematical methods of data analyzing include statistical and correlation analysis. The Pearson coefficient value less than 0.05 was taken as the level of statistical reliability.

Results. In the first group we noticed positive progression of pregnancy in 8 cases (47.1%), by the way 5 of them at the gestational age before 20 weeks showed spontaneous cessation of the blood flow in umbilical cord of the acardiac twin. Adverse perinatal outcomes took place in 9 cases (52.9%), in 6 due to increased blood supply. In 3 cases were antenatal death of the pump twins before 16 weeks’ gestation without any signs of decompensation. Average term of delivery in the 1st group was 32.3±5.4 weeks.

The second group showed favorable outcome in 78.6% cases. In the subgroup A (22 cases) was performed interstitial laser coagulation of acardiac twin vessels. It was performed at gestational age 19.3±3.2 weeks. The favorable outcome rate in this subgroup was 77.3%. Interstitial laser coagulation of acardiac twin vessels was not totally performed in 4 cases, so in those observations blood flow exist during the whole gestation. There were 5 patients with unfavorable outcome after interstitial laser coagulation: in 4 cases were intrauterine death of the pump twin after surgery; in 1 case - preterm rupture of membranes and preterm delivery. Coagulation and intersection of umbilical cord of acardiac twin under fetoscopy was performed in 6 cases (subgroup B), with mean gestation age - 21.2±2.4 weeks. The favorable outcome rate was 83.3%. One patient had preterm rupture of membranes and termination of pregnancy at the 19 weeks. Average term of delivery was 34.5±3.1 weeks. By the way the
frequency of preterm delivery in subgroup A was less than in subgroup B - 4.5% and 16.7%.

Conclusion. The prognosis for the pump-twin in a twin reversed arterial perfusion sequence is usually unfavorable. The natural course of this syndrome is accompanied by high rates of perinatal morbidity and mortality. Unfortunately, the expectant management of pregnancy does not prevent the development of complications. According to our results, timely performed fetal surgery for TRAP sequence contributes to a significant reduction in perinatal losses.
TOPIC: THE TWINS

ABSTRACT ID: 240

TITLE: THE TAPS TRIAL: FETOSCOPIC LASER SURGERY VS. STANDARD CARE FOR TWIN ANEMIA-POLYCYTHEMIA SEQUENCE – A MULTICENTER OPEN-LABEL RANDOMIZED CONTROLLED TRIAL

AUTHORS: L.S.A. Tollenaar 1; L. Lewi 2; M. Lanna 3; P. Lindgren 4; K. Hecher 5; M. Kilby 6; A. Khalil 7

AFFILIATIONS: 1. on behalf of the fetal therapy team of the Leiden University Medical Center, Leiden, The Netherlands
2. University Hospital Leuven, Leuven, Belgium
3. University of Milano, Ospedale Buzzi, Milano, Italy
4. Karolinska University Hospital, Stockholm, Sweden
5. Universitätsklinikum Hamburg-Eppendorf, Hamburg, Germany
6. Fetal Medicine Centre, Birmingham WOmen’s Foundation Trust, Edgbaston, Birmingham, United Kingdom
7. Fetal Medicine Unit, St. George’s Hospital, London, United Kingdom

CONTENT

Introduction: Twin anemia polycythemia sequence is a chronic form of feto-fetal transfusion through minuscule placental anastomoses in monochorionic twins. TAPS is characterized by large inter-twin hemoglobin differences without signs of amniotic fluid discordances. Management options include fetoscopic laser surgery, intra-uterine blood transfusion (IUT) with or without partial exchange transfusion (PET), selective feticide, preterm delivery and expectant management. The best treatment option for TAPS is not clear.

Design: We will conduct the first international multi-center open-label randomized controlled trial to assess if fetoscopic laser surgery improves the outcome of TAPS compared to standard care. We will randomly assign 44 women pregnant with a monochorionic twin with TAPS (≥ stage 2, between 20-28 weeks of gestation) to the fetoscopic laser surgery group or the
standard treatment group (IUT/PET, expectant management, preterm delivery). Randomization will be performed using a web-based application with a computer-generated list with random permuted blocks, stratified by gestational age at inclusion (20-24 weeks vs. 25-28 weeks) and TAPS type (spontaneous vs. post-laser TAPS). The inclusion period will be 2.5-3 years.

Outcome: Primary outcome will be gestational age at birth; secondary outcomes include a composite of perinatal mortality and severe neonatal morbidity, hematological complications, procedure related complications and long-term neurodevelopmental outcome at the corrected age of 2 years.

Status: We received approval from the national ethics committee in the Netherlands and will start recruiting cases for The TAPS Trial in February 2019. Other fetal therapy centers are welcome to participate.
TOPIC: THE TWINS

ABSTRACT ID: 242

TITLE: LONG-TERM NEURODEVELOPMENTAL OUTCOME IN SPONTANEOUS TWIN ANEMIA POLYCYTHEMIA SEQUENCE

AUTHORS: L.S.A. Tollenaar 1; E. Lopriore 2; F. Slaghekke 1; D. Oepkes 1; J.M.M. van Klink 2;

AFFILIATIONS: 1 Department of Obstetrics, Division of Fetal Therapy, Leiden University Medical Center, The Netherlands
2 Department of Pediatrics, Division of Neonatology, Leiden University Medical Center, The Netherlands

CONTENT

Background
Twin anemia polycythemia sequence is a chronic form of feto-fetal transfusion through minuscule placental anastomoses in monochorionic twins. TAPS is characterized by large inter-twin hemoglobin differences at birth, without signs of amniotic fluid discordances. TAPS can occur spontaneously and after laser surgery for twin-twin transfusion syndrome. At this moment, there are no studies performed into the long-term neurodevelopmental outcome of twins with spontaneous TAPS.

Objective:
To study the long-term neurodevelopmental outcome in a large cohort of twins with spontaneous TAPS.

Methods
Neurological, motor and cognitive development were assessed in a consecutive cohort of spontaneous TAPS survivors born between 2005 and 2017. The primary outcome was neurodevelopmental impairment (NDI), classified into mild-to-moderate and severe NDI. Severe NDI was defined as one of the following: severe cerebral palsy, bilateral blindness or deafness, severe motor or cognitive developmental delay. Mild-to-moderate NDI was
defined as one of the following: mild cerebral palsy, unilateral deafness or blindness and mild motor- or cognitive developmental delay.

Results
We included 48 cases of spontaneous TAPS evaluated at the Leiden University Medical Center. Fetal demise and neonatal death occurred in 16% (15/96) and 2% (2/96) of the cases, respectively. Overall perinatal survival rate was 82% (79/96). In total, 79 children were eligible for long-term follow-up. Loss to follow-up occurred in 9% (7/79) of the cases. A total of 72 children were tested, consisting of 33 TAPS donors and 39 TAPS recipients, originating from 40 TAPS pregnancies. Severe NDI was detected in 10% (7/72) of the total group, in 18% (6/33) of the TAPS donors and in 3% (1/39) of the TAPS recipients. Mild-to-moderate NDI was observed in 31% (22/72) of the total group, in 46% (15/33) of the TAPS donors and in 18% (7/39) of the TAPS recipients. In 15% (5/33) of the TAPS donors, bilateral hearing loss was observed. Overall, NDI (mild-to-moderate + severe) was found in significantly more TAPS donors than in TAPS recipients (p = 0.001).

Conclusions
The percentage of NDI in spontaneous TAPS twins is high. TAPS donors seem to have an increased risk for (severe) NDI compared to TAPS recipients. Our data can be used to counsel parents and design adequately powered, prospective studies to determine the best management option in spontaneous TAPS.
TOPIC: THE TWINS

ABSTRACT ID: 263

TITLE: LASER TREATMENT FOR TWIN-TO-TWIN TRANSFUSION SYNDROME: A SINGLE CENTER EXPERIENCE.

AUTHORS: K.V. Kostyukov, K.A. Gladkova, V.A. Sakalo, O.V. Eremina, N.K. Tetruashvili, R.G. Shmakov

AFFILIATIONS: The National Medical Research Center for Obstetrics, Gynecology and Perinatology named after Academician V.I. Kulakov of Ministry of Healthcare of Russian Federation, Moscow, Russia.

CONTENT

INTRODUCTION:
Twin-to-twin transfusion syndrome (TTTS) is the severe complication of monochorionic (MC) twin pregnancies, with perinatal mortality rate up to 90%, if untreated. This study was aimed to review the perinatal and perioperative outcomes of MC twin pregnancies treated for TTTS by fetoscopic laser photocoagulation (FLP) at the National Medical Research Center for Obstetrics, Gynecology and Perinatology named after Academician V.I. Kulakov of Ministry of Healthcare of Russian Federation, Moscow.

METHODS:
A retrospective review of 136 consecutive patients (133 MCDA twins, 3 DCTA triplets) who underwent FLP of placental anastomoses for TTTS from 2011 to 2018 was carried out. FLP was offered to patients who were diagnosed with TTTS (Quintero Stage II-IV) before 27 weeks of gestation. Studied outcomes were perioperative complications and perinatal survival rates.

RESULTS:
136 sets of MC pregnancies underwent FLP during the study period. Median gestational age at laser photocoagulation was 21.6 (range 16-27) weeks.
Overall perinatal survival rate, double-infant survival rate and survival rate for at least one twin were 78.6%, 51.9% and 26.7%, respectively.

CONCLUSION:
FLP is a feasible treatment for TTTS, with minimal maternal complications. Perinatal survival rates of these patients, managed in our Center, were comparable to those of other international centers.
TOPIC: THE TWINS

ABSTRACT ID: 281

TITLE: THE ROLE OF EARLY ULTRASONIC MARKERS IN PREDICTION OF SPECIFIC COMPLICATIONS IN MONOCHORIONIC TWIN PREGNANCIES.

AUTHORS: K.V. Kostyukov, V.A. Sakalo, K.A. Gladkova, N.K. Tetruashvili, R.G. Shmakov

AFFILIATIONS: The National Medical Research Center for Obstetrics, Gynecology and Perinatology named after Academician V.I. Kulakov of Ministry of Healthcare of Russian Federation, Moscow, Russia

CONTENT

Introduction: The aim of the study was to evaluate the accuracy of first trimester ultrasound markers in the prediction of twin-to-twin transfusion syndrome (TTTS) in monochorionic twin pregnancies.

Objectives: We conducted a single center retrospective cohort study in the National Medical Research Center for Obstetrics, Gynecology and Perinatology named after Academician V.I. Kulakov of Ministry of Healthcare of Russian Federation, Moscow with the participation of 143 women with monochorionic diamniotic twin pregnancies with two live fetuses at the 11-week to 13-week 6-day sonographic examination who had serial follow-up sonography until delivery. Isolated nuchal translucency (NT), crown-rump length, abnormal ductus venosus (DV) flow in at least one twin, and combined discordances were correlated with adverse obstetric outcomes, individually and in composite, including the occurrence of 1 or more of the following in either fetus: intrauterine growth restriction (IUGR), twin-twin transfusion syndrome (TTTS), intrauterine fetal death (IUD).

Results: Increased nuchal translucency length more then 2.5 cm and NT discordance of 0.6 mm occurs in 24 % of cases, with a sensitivity of 88 % and a specificity of 75 %. Crown-rump length discordance (sensitivity of 44 % and a specificity of 93 %) and abdominal circumference (sensitivity of 40%,
specificity 94%) are the best predictors of Twin-to-Twin Transfusion Syndrome development. 

Conclusions: During current study we identified possible predictive ultrasound markers of specific complications in monochorionic twin pregnancies. A lack of evidence-based information revealed the need for a large cohort studies to evaluate these proposed factors for high-quality management of multiple pregnancies and improving perinatal outcomes.
TOPIC: THE TWINS

ABSTRACT ID: 284

TITLE: FETAL ECHOCARDIOGRAPHY IN COMPLICATED MONOCHORIONIC TWIN PREGNANCIES.

AUTHORS: K. Kostyukov, V. Sakalo, K. Gladkova

AFFILIATIONS: National medical research center for obstetrics, gynecology and perinatology, Moscow, Russian Federation

CONTENT

Background. Progress in the field of fetal medicine set up new requirements in fetal cardiology especially in multiple pregnancies. Proper interpretation of prenatal echocardiography is crucial to clinical decision making and perinatal management. Monochorionic twins associated with significant perinatal morbidity and mortality, due to presence of specific syndromes, such as TTTS, TRAP, TAPS and SIUGR. TTTS and TRAP are most often associated with pathological changes of the cardiovascular system of twins. These syndromes are characterized by unidirectional blood transfusion from one twin to another by placental anastomoses, which lead to hypervolemia of the recipient twin or pump-twin and hypovolemia of the donor. An increase of the blood volume and vascular resistance are main reasons of cardiomyopathy, which is accompanied by a wide range of pathological changes of the cardiovascular system. The recipient twin in TTTS may have progressive volume and pressure overload, that lead to myocardial remodeling. With early signs like hypertrophy and diastolic dysfunction, TRAP sequence is associated with abnormal reverse flow from the pump-twin to the acardiac fetus, without passing the blood through placental capillaries. Therefore the main reason of cardiac failure in pump-twin is a blood volume overload. Once a TTTS or TRAP is fully installed, echocardiographic findings tend to progress over time, with worsening
ventricular hypertrophy and systolic dysfunction, which can ultimately lead to fetal hydrops and intrauterine fetal demise.

**Objective.** To assess the role of fetal echocardiography in the evaluation of complicated monochorionic twin pregnancies.

**Methods.** We performed prospective analysis of 157 complicated monochorionic twins referred to our center from 2011 to 2018. There were 110 pregnant women with TTTS and 47 with TRAP. We assessed different cardiac parameters such as cardiac size, ventricles hypertrophy, cardiac output, AV-valve regurgitation and valve sizes (aortic and mitral), doppler assessment of the ductus venosus and the umbilical venous flow and global systolic and diastolic ventricular function by the Tei-index.

**Results & Conclusions.**

The incidence of cardiomyopathy in TTTS group was 78.2%, in TRAP – 19.1%. Correlation was noted between degree of severity of cardiovascular abnormalities and outcome in twins affected by TTTS and TRAP. Fetal echocardiography play an important role in the evaluation of monochorionic twin pregnancies, particularly in the assessment of fetal cardiomyopathy in TTTS and TRAP.
Background: Twin-twin transfusion syndrome (TTTS) is an important risk factor for severe cerebral injury and long-term neurodevelopmental impairment (NDI). Several studies have shown improvement of short and long term outcome after fetoscopic laser surgery over time.

Objective: To evaluate changes during the past decade in long-term neurodevelopmental outcome in survivors of twin-twin transfusion syndrome (TTTS) treated with fetoscopic laser surgery in the Dutch national fetal therapy center.

Methods: We compared the neurodevelopmental outcome of TTTS survivors treated with laser surgery between 2011 and 2014 (new cohort) to a cohort treated between 2008 and 2010 (previous cohort). We evaluated the incidence of severe neurodevelopmental impairment (NDI) and identified risk factors associated with Bayley-III cognitive and motor scores.

Results: Severe NDI occurred in 7/243 (3%) survivors in the new cohort compared to 10/173 (6%) in the previous cohort (P = .178). Disease-free survival (survival without severe NDI) remained stable with 241/347 (69%) in the new cohort versus 162/217 (75%) in the previous cohort (P = .261). Low birth weight and growth restriction were independently associated with
lower cognitive scores (both $P < .01$). Severe cerebral injury was related to decreased motor scores ($B = -14.10; 95\% CI -25.04 - -3.16; P = .012$). Of the children with severe NDI, $9/17$ (53\%) were born $\geq 32$ weeks gestation and $10/17$ (59\%) had no evidence of cerebral injury on cranial ultrasound scan in the neonatal period.

Conclusion: The incidence of severe NDI and disease-free survival has remained unchanged in the past decade, suggesting that the improvement in outcome of TTTS treated with laser surgery has reached a plateau. Low birth weight, growth restriction and cerebral injury are risk factors for poor neurodevelopmental outcome. Neither gestational age above 32 weeks nor the absence of cerebral injury preclude severe NDI.
TOPIC:

ABSTRACT ID: 323

TITLE: DYNAMICS AND ANALYSIS OF PERINATAL MORTALITY IN KYRGYZ REPUBLIC IN 2004-2016

AUTHORS: Abduvalieva S. 1, Nurzanova S. 2

AFFILIATIONS: 1. The National Centre of Maternity and Childhood
2. The Kyrgyz State Medical Academy
Bishkek, Kyrgyz Republic

CONTENT

Resume: We analyzed cases of infant mortality in Kyrgyz republic in 2004-2016y using Babies matrix. The introduction of the matrix BABIES in Kyrgyzstan since 2004 for evaluation the quality of services to the mother before pregnancy, during pregnancy, childbirth, newborns and infants up to 1 year, show a decline in health status indicators of women before pregnancy, pregnant and woman in labor compared with 2016, which requires immediate effective interventions to women of reproductive age pregnancy, during pregnancy and childbirth. Comparative analysis of perinatal, neonatal and infant mortality for the period 2004-2016 revealed an improvement in care for the newborn and infant as a result of the integration of programs for effective perinatal care and management of childhood illnesses.

Key words: matrix BABIES, foetus-infant losses, infant mortality, packed of services.

Introduction
The introduction of effective perinatal technologies in Kyrgyzstan contributed to the reduction of perinatal, neonatal and infant mortality rates. In the Kyrgyz Republic since 2004 a register is held in accordance with the criteria of WHO’s live birth and stillbirth. Over the past 12 years, there has been an increase in the birth rate from 21.4 to 27.4 per 1000 population, a
natural increase in the population from 14.7 to 21.6 per 1000 population and a decrease in the overall mortality rate from 6.9 to 5.4 per 1000 population. Over the same period, infant mortality rates dropped from 30.6% to 16.6% o, early neonatal mortality from 19.6% o to 11.3% o, stillbirth rate from 14.4% o to 9.3% o.

The aim of the research is to analyze the feto-infant loss indicator, which includes the stillbirth rate and the death rate of children aged 0–1 years, in order to select the interventions necessary to solve the health problems of the mother and the child.

Materials and methods.
To determine the responsibility for fetal and infant losses, we used the BABIES matrix, which includes data from the Republican Medical Information Center on the number of births and deaths of newborns and infants in accordance with body weight at birth for 2004-2016. We calculated proportional indicators of fetal and infant losses depending on body weight at birth and the time of death. The data obtained are aggregated into the BABIES matrix, in accordance with the factors determining responsibility for stillbirth, death of the newborn and infant.

The results of the research.
The main responsibility for fetal and infant losses in Kyrgyzstan in 2004 depended on the health of the woman before pregnancy (14.2 %o), on caring for a pregnant woman before and during delivery (6.8%), on organizing care for a newborn in obstetric institutions (10.3% o), from care for an infant up to 1 year old (10.4% o). In 2016, as compared with 2004, there was an improvement in indicators of feto-infantile losses from 41.7 to 27.1 %, that is, by 14.6. Of these, in 2016, 10.0, and in 2004, 14.2 %o are related to the health of the mother. The quality of medical services at the antenatal and intranatal level tends to improve from 6.8 in 2004 to 5.7 in 2016. The improvement of the quality of care for newborns from 10.3 to 6.3 %o, the rates of care for the baby from 10.4 to 5.1 %o has been established. Analysis of the range of factors affecting fetal losses indicates a worsening of the health of a woman before pregnancy, during pregnancy and childbirth by 7.65%. There is a tendency to improve services in the neonatal by 1.7% and in the infant period by 5.95%.

Conclusion
Thus, the analysis of the feto-infant loss of 2004-2016, including the stillbirth and mortality of children aged 0 to 1 year, to select the interventions necessary to solve the health problems of the mother and child indicates a deterioration in the health status of the woman and requires effective interventions women of reproductive age before pregnancy, during pregnancy and childbirth. The trend towards improved neonatal and infant care over the same period reflects the integration of effective neonatal and infant programs.

Literature:
Objective: To report the management of a repeated early onset preeclampsia

Case presentation: A 38-year-old female (G4, P2, A1) came with 6-week gestational age. The patient had two history of early onset preeclampsia before and no live child. Patient did not have hypertension at the presenting time, but developed mild hypertension (140 – 150 / 90 – 100 mmHg) over the course of this pregnancy. The patient was being monitored closely from the start, advised to have a thorough antenatal care. Patient had ferritin 3.5, vitamin D 25-OH 8.8, ANA (+) titer 1/100, and therefore was prescribed calcium hydrogen phosphate, Fe(OH)3 by infusion, vitamin D3, zinc, folic acid to correct her micronutrient levels and low dose aspirin (LDA). At 32-week gestational age, the patient was diagnosed with early onset preeclampsia (BP 150/100 mmHg; proteinuria +1) and IUGR, with the baby having no significant growth over the course of two antenatal cares and was small for its gestational age. A c-section was performed for this patient in 33-week gestational age. The baby was delivered successfully with body weight 1300 gram, moving actively with Apgar score 9-10. Now the baby is 21 months old, 10 kg and active.
Conclusion: A close watch is need for the management of pregnant women with two history of early-onset preeclampsia. It includes early diagnosis and prompt treatment early in the pregnancy. LDA supplement for <16 weeks while correcting the nutrition, as well as carbohydrate, protein, vitamin dan mineral could result in a better outcome.

Key word: early onset preeclampsia, Intra-Uterine Growth Restriction, nutrition