September 20th, 2023 15:00 - 17:00

Epidemiology E-Poster (STATION 1)

ID 17. Prognostic value of immunological markers in the development of atopic dermatitis in children

Doctor Nurangiz Hajiyeva[1], Doctor Huseyn Gabulov[1], Doctor Afag Akhundova[1], Doctor Nargiz Mamedova[1]
[1]Azerbaijan Medical University

Background: 528 newborns with a gestational age of 34-42 weeks were divided into groups of premature and term newborns with split into control, comparison and main subgroups.
Methods: The predictive role of an increase (p≤0,05) to a level of 40.8 ± 6.4 ng/ml of the CD31 receptor, which is involved in the regulation of Tcell homeostasis from early neonatal age of newborns was confirmed in the formation of atopic dermatitis. Influence on the severity of atopic dermatitis with an increase in IgG1 to 122.0 ± 30.8 ng/ml, changes in the humoral immune response were noted (p≤0.05).

Results: Concentration of H4R in the control group averaged 10.5±5.3 ng/ml and varied between 0.00-34.70 ng/ml. In the comparison group, the concentration of this peptide increased by 83% compared to the control group and was on average 19.2±3.2 ng/ml (0.00-35.27 ng/ml). In the newborns in the main group, the concentration of H4R increased by 3 times compared to the control group. Concentration of H4R in this main group ranged from 0.00 to 473.00 ng/ml, making an average of 31.1±7.9 ng/ml. H4R was not significant in the main group (pku=0.394), but its sensitivity was determined in the comparison group.
The concentration of IgG1 in the blood of term newborns was 88.7±8.9 ng/ml and varied within the group within the limits of 0.00-642.54 ng/ml. This indicator was 90.6±55.9 (0.38-419.00) ng/ml in the control group, 70.3±6.3 (0.00-131.97) ng/ml in the comparison group, and 97,9±12,9 (0,00-642,54) nq/ml in the main group.
Concentration of IgG1 in the blood was not significantly different in the control group that in the main group (p≥0.05).
For interm newborns increase of CD-31 as cellular and humoral indicators of the immune response (p≤0.05), the formation of atopic dermatitis, the increase of IgG1 level (p≤0.05) can be considered significant for predicting the severity of the disease.

Conclusion: Increased CD31 receptor, which is involved in the regulation of T cell homeostasis, has been confirmed as a predictor in the formation of atopic dermatitis. The increase in the concentration of IgG1 was characterized by changes in the humoral immune response affecting the severity of atopic dermatitis.

ID 1035. A CASE OF CONGENITAL SYPHILIS- THE GREAT PRETENDER

Doctor Antoine Costenoble[1], Doctor Emilie Everard[1], Doctor Dimitri Van der Linden[2], Doctor Olivier Danhaive[1], Doctor Katherine CARKEEK[1]
[1]Cliniques Universitaires Saint-luc, Neonatal Intensive Care, [2]Cliniques Universitaires Saint-luc, Department of Pediatrics

Background: Syphilis, a sexually transmitted infectious disease, caused by bacterium Treponema pallidum, first described in 1300s, continues to impact on a global scale.

The burden of syphilis is rising, WHO stating that 7.1 million adults were newly infected in 2020. Congenital syphilis, is usually devastating to the fetus if maternal infection is not detected and treated early. The fetus can be cured, and adverse outcomes minimal if women receive screening and treatment as part of routine antenatal care. In 2016 WHO estimated 661,000 infants were born with congenital syphilis.

Congenital syphilis is not notifiable in Belgium and according to ECDC report in 2019, no cases have been identified since 2015. This is not correct and we are currently leading a nationwide retrospective study to establish the true incidence in Belgium. A database is being established to raise awareness amongst colleagues.

Case Report: We present a newborn born by emergency cesarean section at 34 weeks gestation, following a pregnancy with no clinical appointments or ultrasounds. He required resuscitation, intubation and ventilation with Apgars of 1/3/4. Clinical examination showed a lethargic and hypotonic newborn with a distended abdomen, hepatosplenomegaly, skin desquamation and petechiae. He had significant respiratory distress and was hypotensive. Intravenous antibiotics were started with Glucose 10%. Blood gas showed an acidosis (pH 6.8, PaC02 76 mmHg, bicarbonate 14 mmol/l, base excess of -18.8 mmol/l and lactate of 75mg/dl).

The neonate had a CRP 153 mg/l, severe hypoglycemia (7mg/dl), a normocytic anemia (7,2 g/dl) and thrombocytopenia (17.000/uL). He had an elevated CK (372Ui/l), LDH (1234Ui/l) and coagulopathy. CMV, HSV 1&2, Chlamydia, Neisseria Gonococcus and Parvovirus B19 PCRs were negative. Maternal Hepatitis B/C and HIV were negative. Due to clinical suspicion, syphilis testing was performed and returned positive on mother and neonate. Antibiotics were altered to IV Penicillin. He had an uncomplicated bilateral subependymal hemorrhage and cerebral MRI at term and was normal. He has normal neurological and developmental follow up.

Conclusion: Syphilis, although an ancient disease, is on the increase, hence keep alert for the “great pretender”. Do not miss this treatable condition which may have significant long-term effects.

ID 531. INFANT OUTCOMES OF ASSISTED REPRODUCTION

Doctor Natasa Sarlic[1], Doctor Mirta Starcevic[1], Doctor Urelija Rodin[2]
[1]Clinical Hospital Zagreb, [2]Croatian institute of Public Health

INFANT OUTCOMES OF ASSISTED REPRODUCTION

1 Natasa Sarlic, Mirta Starcevic, 2 Urelija Rodin
1 Clinical Hospital Zagreb, Department of Neonatology
2 Croatian institute of Public Health

BACKGROUND:
Assisted reproductive technologies (ART) have become widely used in the treatment of sub fertility over the last few decades. In recent years there is increased problems with fertility and as such has created higher need for ART. Also advances in science and technology have made ART more accessible to populace.
As such it is necessary to take closer look at risks that are connected with the process to be aware and ready to assist mothers and babies
METHODS:
Method used to monitor a number of patients with health issues and compare this numbers with children that were conceived with ART and children that were not conceived with it, was our Clinic's records for period from 2017 to 2021.
RESULTS:
In total we have 18611 birth and from them we had 1142 ART, what is 6.13%
From 1142 ART babies we had 224 twins, what is 19.6%
From total number, 1142, of ART birth we had 211 premature babies what is 18.5%
From 211 ART premature babies we had 124 multiple births (from them 9 where triples) what is 58.76%

CONCLUSION:
Children conceived with ART are under higher risk of birth defects, multiple pregnancies and premature deliveries with complications that they are related too.

ID 1019. OMPHALOCELE OR UMBILICAL CORD HERNIA? A DIFFERENTIAL DIAGNOSIS ISSUE

Mr André Assunção[1], Mrs Débora Valente-Silva[1], Mrs Cristina Ferreras[2], Mrs Susana Pissarra[2], Mrs Carolina Soares-Aquino[3], Mrs Filipa Flor-de-Lima[2,4]
[1]Department of Pediatrics, Centro Hospitalar Universitário São João, [2]Department of Pediatric Surgery, Centro Hospitalar Universitário São João, [3]Department of Neonatology, Centro Hospitalar Universitário de São João, [4]Faculty of Medicine, University of Porto,

Background: Among anterior abdominal wall congenital defects, omphalocele is one of the most common affecting 2-4 newborns per 10.000 live-births. The etiology is not known, but hinges upon an abnormally formed umbilical ring and insertion of the umbilical cord into a periumbilical membranous sac. In up to 50% of cases is associated with other congenital abnormalities and its size is a major determinant for morbidity and mortality. An umbilical cord hernia (UCH) is a rare event that develops when the umbilical ring fails to clos properly and the abdominal content herniates into the base of a normally inserted umbilical cord; there is no association with other congenital anomalies.
The proper differential diagnosis is essential for management, prognostic and follow-up purposes. Many consider the size the size of the hernia as the main difference, however other conditions should be pondered as well.

Case Report: After a pregnancy only notable for gestational diabetes, a 38-weeks male newborn was delivered by elective C-section. No resuscitation was needed and immediate physical examination revealed an umbilical cord containing abdominal contents and a bilateral syndactyly of the 2nd and 3rd toe. The rest of the examination was unremarkable. Abdominal ultrasound revealed a 19x3mm hernia inside the umbilical cord containing an intestinal loop and no other anomalies were detected by ultrasound. He was submitted to surgery to repair the abdominal wall defect, during which a Meckel's diverticulum was discovered and removed by segmental enterectomy. As the defect size was borderline and there were other anomalies associated, collaboration from genetics was requested.

Conclusion: Anterior abdominal wall congenital defects are common anomalies and omphalocele is one of the most common. However, the differential diagnosis with UCH is important, because they share similar clinical presentation, but are substantial differences in evaluation, management and prognosis. Omphalocele is usually has an abdominal wall defect > 2cm, while UHC is usually <2cm. Omphalocele often associates with other anomalies, including cardiac, gastrointestinal, genitourinary, chromosomal and musculoskeletal, while UCH does not. Therefore, not just the size of the defect but also concomitant anomalies must be looked into to better defined a management strategy.

ID 715. DIFFERENCES IN NICU STAY BETWEEN FULL-TERM AND LATE PRE-TERM NEONATES

Dr Anastasia Kapetanaki[1], Dr Eirini Koutsounaki[1], Doctor Stavroula Parastatidou[1], Dr Spyridon Zisimopoulos[1], Dr Marilena Mani[1], Dr Stavroula Charoni[1], Dr Aikaterini Fotiou[1], Dr Stamatia Dagli[1], Ms Kalliopi Dritsakou[2], Dr Iraklis Salvanos[1]
[1]NICU, General Maternity Hospital Elena Venizelou, [2]Quality Department, General Maternity Hospital Elena Venizelou

Background: Late preterm (34- 36+6 weeks) and full-term (37- 41+6 weeks) neonates represent a significant rate of total Neonatal Intensive Care Unit (NICU) admissions, contributing a remarkable financial burden to healthcare systems. Efforts are underway on a global scale to eliminate factors possibly associated with NICU admissions in these subpopulations.

Methods: The patient charts of the neonates admitted in a level II-III NICU over a period of 12 months (January- December, 2020) were retrospectively reviewed. The reasons for admission and the length of hospital stay were assessed. According to NICU protocol, preterm neonates could be discharged at a gestational age of 36+2 weeks. For all neonates <36+2 weeks both the predicted (until 36+2 weeks) and the actual duration of hospital stay were estimated and compared between groups.

Results: The total number of labors throughout the study period was 3,557, with 64.6% of them via cesarean section. During this time, 869 neonates were admitted in the NICU. The mean (interquartile range, IQR) gestational age was 37.2 (35.1-38.4) weeks; with 59.2% of the admitted neonates ≥37 weeks and 19.7% between 35 and 36+6 weeks. The mean birth weight was 2,740.25 (±759.8) g. A statistically significant difference was observed in the reason for admission between neonates ≥37 weeks and <37 weeks ($p<0.001$). Reasons for NICU admission among full-term neonates included respiratory distress (56.3%), perinatal stress/ asphyxia (7.8%), intrauterine growth restriction (5.2%), and hypoglycemia (5.2%). Also, the expected significantly increased length of stay of preterm versus full-term neonates was noted, with a mean hospital stay of 5 (2-7) days for full-term versus 9 (6-19) days for preterm neonates ($p<0.001$). However, for full-term neonates, the actual duration of hospital stay was significantly higher than the expected compared to late preterm neonates (35- 36+6 weeks).

Conclusions: An unexpected high rate of NICU admission of full-term neonates was noted, with unpredictably extended duration of hospital stay compared to late preterm newborns of 35-36+6 weeks. Although the reasons for this finding were not thoroughly investigated, possible solutions should be sought, including improvement of obstetric care.

ID 865. Myocarditis complicating Bronchiolitis In a newborn

Assistant Professor Maroua El Ouaer[1], Professor Fatma Zohra Chioukh[1], Professor Kamel Monastiri[1]
[1]Department of ICU and Neonatal Medicine, Teaching Hospital Of Monastir

Background: Viral invasive infections in neonates are frequently miss diagnosed. In fact, they have a very high mortality with no specific symptoms. We report a case of Rhinoviral myocarditis in a neonate complicating a bronchiolitis.

Case Report:It was a girl born by cesarian section with an average birth weight. She has the diagnose of a small ventricular septal defect. The newborn was asymptomatic until the tenth day of life when she developed fever and cough. There was viral contagion in the family. Four days after, she presented with dyspnea, cyanosis, tachycardia and hepatomegaly. Echocardiography showed biventricular dilatation and reduced contractility. Laboratory examination revealed a C-reactive protein of 2 mg/ l and 13.400/mm³ leukocytes. Electrocardiogram confirmed sinusal tachycardia. The diagnosis of myocarditis was made, the patient was intubated and treatment with dobutamine was started. Urine screening was negative. Polymerase Chain Reaction testing showed a positive Human Rhinovirus. After 24 hours of stabilization, the newborn died by bilateral choking pneumothorax.

Conclusion: Severe and fatal myocarditis may complicate any viral invasive infections such as bronchiolitis in neonate.

ID 878. NECROTIZING ENTEROCOLITIS IN NEWBORN: MANAGEMENT IN A NEONATOLOGY DEPARTMENT

Associate Professor Hayet Ben Hamida[1], Dr Hend Badri[1], Dr Maha El Ghali[1], Assistant Professor Maroua El Ouaer[1], Assistant Professor Siouar Abdelmoula[1], Assistant Professor Sahar Ben Amar[1], Dr Manel Bizid[1], Professor Kamel Monastiri[1]
[1]Department of ICU and Neonatal Medicine,Teaching Hospital Of Monastir

Background: The necrotizing enterocolitis (NEC) is a serious inflammatory intestinal pathology affecting mainly premature newborns.
Aim of the work: To describe the epidemiological and evolutionary characteristics and to analyze the risk factors of NEC with a prevention protocol.

Material and methods: This was a retrospective study including 23 newborns with ECUN, collected over a period of ten years, from 2010 to 2020.

Results: The majority of cases were reported in preterm newborns (n=18). The mean birthweight was 2151g.Antepartum corticosteroid therapy was received in only two women. Two mothers received amoxicillin-clavulanic acid for premature rupture of membranes. Eleven newborns were born by c-section. The most common reason for hospitalization (n=13) was neonatal respiratory distress. A maternal-fetal infection was considered in twelve cases. The digestive forms (n=8) evolved to early NEC. Four neonates presented hemodynamic disorders. Anemia was noted in five newborns, three of whom had a blood transfusion before the declaration of NEC. The majority (n=20) received formula. Eight patients received initial trophic feeding. Six preterm infants received probiotics. The entire diet was reached after 2.86+/- 3.07 days. The mean time to onset of a healthcare-associated infection was 9.28 days. The age of onset of NEC ranged from 2 to 24 days with a mean of 8,47 days. Fourteen neonates had early ECUN (≤ 7 days) and nine had developed late NEC. An occlusive syndrome was the synthesis of all digestive signs. Five patients presented with septic shock. Pneumoperitoneum was visualized in four cases on abdominal X ray. Twelve neonates were classified as stage Ⅲ according to the Bell classification. All neonates were put on digestive rest and under antibiotherapy. The outcome was favorable for eight neonates. Six neonates benefited from surgery. The death rate in our study was 43.5% (10/23).

Conclusion: A protocol for the prevention of NEC in at-risk newborns is the only guarantee of an improvement in the morbidity and mortality of this serious pathology.