ID: 226

TITLE: EFFECTS OF FAMILY CLINIC SUPPORTIVE OF BREASTFEEDING ON BREASTFEEDING DURATION OF PRIMAPAROUS WOMEN

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CONTENT:

WHO/UNICEF recommends, as the gold standard for children’s health and nutrient consumption, exclusive breastfeeding for infants until 6 months and to continue until 2 years with supplementary feeding.

We found that breastfeeding (at least once per day) until 6 months in some European countries as Norway is 71% (2013), Italy 46% (2013), Denmark 13% (2013) and Lithuania 45% (2015).

Anonymous questionnaire. Primaparous mothers raising 12–24 month-old infants 31 from private and 78 from state clinic were surveyed in 2017. Statistical analysis was performed with Statistical Package for Social Sciences SPSS (20.0 v.).

Breastfeeding duration in a private clinic ranged from 100 percent until 6 months to 90.22 percent until 12 months. Breastfeeding in state clinic ranged from 73.08 percent until 6 months to 35.9 percent until 12 months. (p<0,001).

Breastfeeding duration in a private clinic ranged from 11 months (9.7 percent) to 23 months (6.5 percent), averaging 15.45 (± 3.65) months, whereas a state clinic ranged from 1 month (10.26 percent) to 24 months (2.56 percent), averaging 9.45 (± 5.797) months (p<0,001).

The most common reason for discontinuing breastfeeding was the child's refusal to breastfeed (19.05 percent), followed by lack of milk (14.29 percent); all of them were respondents of state clinic. Another 7.94 percent of respondents indicated that they stopped breastfeeding because of the child's age or illness. Not one mother in private, breastfeeding–supportive clinic reported problems with lack of milk or problems of breasts.

Private clinic respondents more often received recommendations supportive of breastfeeding (chi²=24,034, df=6, p=0,001) (Table 1) and less often recommendations that would interfere with breastfeeding (chi²=31,983, df=8, p0,05), but breastfeeding–obstructive advice shortened breastfeeding duration significantly (r=-0,327, p=0,001).

1. Private clinic respondents more often received recommendations supportive of breastfeeding and less frequently recommendations interfering with breastfeeding as compared to state clinic respondents and breastfeed longer 2. Advice obstructive of breastfeeding shortened breastfeeding duration significantly.

IMAGES:
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Table 1. Recommendations supporting breastfeeding

COI: None declared
ID: 415

**TITLE:** LASER TREATMENT OF RETINOPATHY OF PREMATURITY IN MÁXIMA MEDICAL CENTER: A RETROSPECTIVE STUDY

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**CONTENT:**

Retinopathy of prematurity (ROP) is the primary cause of visual impairment and childhood blindness. However, the incidence of ROP in each individual neonatal intensive care unit (NICU) is relatively low and the specific ROP laser treatment experience among ophthalmologists is limited. Therefore, in 2006, Máxima Medical Center has started a national ROP treatment program for early ROP treatment, resulting in referral of patients from other NICUs and general hospitals to MMC for laser treatment. This study aimed to describe the population and treatment characteristics and outcome in premature infants with ROP who underwent laser treatment in MMC within the current treatment program.

In this retrospective study, conducted between 2006 and 2018, all MMC inborn and referred outborn patients with ROP laser indication who underwent laser treatment were included. We evaluated several aspects, including neonatal characteristics, anaesthesiological treatment and ophthalmological outcome. Therefore, de-identified data were abstracted from electronic medical records and surgery reports. The severity of ROP, the affected zone of the retina and signs of vasoproliferation define laser indication according to criteria based on the Early Treatment ROP (ETROP) study. The primary outcome measure was the prevention of retinal detachment, examined by using ophthalmoscopy around ten days after laser treatment. The results are given in median [25th-75th percentile] or percentages.

142 patients (gestational age 25.7 [24.8-26.7] weeks; birth weight 748 [650-876] gram) were included of whom 77% were referred from other NICUs. Postnatal age and postmenstrual age at the time of laser treatment were respectively 80 [69-95] days and 37.7 [36.1-39.3] weeks. The majority of the patients was supported by any kind of (non-)invasive respiratory support (70%) or received supplemental oxygen (52%). 84% of the patients were intubated before laser treatment of whom 66% was extubated postoperatively in the operation room. The duration of the laser treatment was 42 [33-55] minutes. In total 270 eyes were diagnosed with laser indication according to the ETROP criteria. The ETROP laser indications that occurred most were ‘Prethreshold Type 1’ (68.3%) and ‘Threshold’ (23.9%). In 97.4% (95%CI: 94.7-98.7) of the eyes, retinal detachment was prevented using laser treatment (figure 1).

Máxima Medical Center, as one of the ten Dutch NICUS, has become a national expertise center for laser treatment of ROP in an extremely vulnerable population. The national ROP treatment program is very successful since only 2.6% (95%CI: 1.3-5.3) of the eyes required additional treatment after performing laser treatment. This is considerably less than the success rate mentioned in the ETROP-study (9.1%).

**IMAGES:**
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Figure 1: Ophthalmological results of n=270 eyes, concerning the overall success rate of laser treatment according to diagnosis, in which the specific diagnosis refers to the laser indication according to criteria based on the Early Treatment

COI: None declared.
ID: 668  
TITLE: TRANSIENT RENAL MEDULLARY HYPERECHOGENICITY IN THE FIRST DAYS OF LIFE: CLINICAL AND ULTRASONOGRAPHIC FOLLOW

AUTHORS: Melda Taş1, İbrahim Murat Hirfanoğlu1, İsmail Akdulum2, Öznur Boyunağa2, Münevver Baş1, Elif Keleş1, Aytaç Kenar1, Başak Gürsoy1, Esra Eray Önal1, Canan Türkyılmaz1, Ebru Ergenekon1, Esin Koç1

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CONTENT:

Renal medullary hyperechogenicity is usually reported in newborns with transient renal failure, severe perinatal kidney damage, renal malformation and nephrocalcinosis. However, there are studies show that it can be transient without any biochemical abnormality and can show spontaneous recovery without any intervention. In our study; We have presented eight cases showing that medullary hyperechogenicity detected in early-term Renal USG in the neonatal period is not a serious condition and may not require any special treatment and can usually resolve spontaneously.

Eight patients who had medullary hyperechogenicity in renal ultrasonography between January 2016-December 2018 were included in Gazi University Neonatal Unit. The demographic characteristics, birth weight and week, type of delivery, prenatal history, APGAR score and hospitalization were evaluated. Blood pressure and anuria were recorded in all patients. The highest serum creatinine and uric acid values were used. In urine, spot urine protein, urine Ca/Cr ratio, ratio of tubular phosphorus reabsorption to GFR were investigated. Finally, the patients’ renal ultrasounds and spontaneous recovery rate at one week later were evaluated.

One of our patients had a history of Vasa Previa in the antenatal history and she was hospitalized with the diagnosis of HIE and get hypothermia treatment. Three patients were admitted to the service due to the high level of bilirubin levels. Two patients were diagnosed with TTN and one patient was admitted to the intensive care unit with the diagnosis of hypoglycemia. Although creatinine and uric acid levels were slightly high in the biochemistry of seven patients, there was no increase in creatinine levels in premature infant. All patients had normal blood pressure and none of them had anuria. USGs of all patients were performed in the first week of their life. Seven of the cases had bilateral medulla involvement. Values returned to normal in 72-96 hours in all patients with an increase in creatinine and and uric acid levels. Also, echogenicity improved in 7-10th day.

Although there was a transient increase in serum creatinine levels with medullary hyperechogenicity in our case series, dehydration was not detected in any of our cases. All patients completely become normal biochemical and ultrasonographically. Renal medullary hyperechogenicity may be observed as a temporary condition that can be improved without a specific treatment under follow-up.

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COI: None declared
ID: 701  
TITLE: A GIRL WITH TRIPLOIDY SURVIVES THE FIRST MONTHS; A CASE REPORT  
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CONTENT:  
Triploidy is a chromosomal disorder that may account for more than 10 percent of all miscarriages or early intrauterine deaths. Most often the disorder is suspected during antenatal ultrasound scan as there are some common signs such as intrauterine growth restriction, conspicuous facial profile or cleft palate. The disorder can then be confirmed by amniocentesis and often the pregnancy will be terminated as the child is seen as not viable. 1 in about 50,000 live-born babies will be diagnosed with Triploidy. Most die within a very short period due to associated malformations such as lung hypoplasia with consecutive pulmonary hypertension. Longer survival is usually associated with mosaicism.  

L. was born at 32+6 weeks gestation weighing 915g. Antenatal ultrasound scans had shown a severe intrauterine growth restriction with anhydramnios. Invasive diagnostic procedures were not wanted. Therefore delivery by caesarean section was scheduled when there was no more growth. Postnatal adaptation was appropriate for gestational age and weight with intratracheal surfactant application via LISA. Apgar score was 7/8/9 under CPAP-support, oxygen demand fell from 50% to 30% after surfactant application. At examination syndactyly of D3 and 4 on both hands and of D 3 to 5 on the left foot, thoracic scoliosis, elevated muscle tone, and facial features all pointed towards Triploidy which was later confirmed by chromosomal analysis. At 12 hours of life she was intubated due to increasing RDS and a second dose of surfactant was given. After 5 days extubation was possible and respiration was supported by CPAP for another 20 days. After that respiratory support was by High Flow Nasal Cannula. On day 34 she developed a sepsis-like illness and needed another 3 days of CPAP-support with only oxygen supplementation via nasal cannula from then on. Brain ultrasound showed a normal brain apart from a thin rostral corpus callosum. Echocardiography showed an atrial septum defect and mild pulmonary valve stenosis. Discharge home on oxygen and feeding via feeding tube was possible after 2 months, 2 weeks after due date. Since then she developed secondary pulmonary hypertension due to pulmonary hypoplasia, responding well to medical treatment. At discharge she would suck but only swallow a couple of ml of milk. There has been no development in feeding, so at the age of 9 months a PEG was inserted. The operation was done under general anaesthesia and extubation and postoperative course were uneventful. Though a slight development in regard to normalizing of muscle tone was observed and there is some kind of communication of wellbeing or distress, none of the developmental milestones have been reached. At the age of 10 months she does not fixate, grasp or reach for something, has not been able to change from supine to prone position or move intentionally at all.  

While it is easy to find information on Triploidy as a reason for miscarriages and early intrauterine death, parents and professionals do not find information on surviving patients easily. This case report aims to present the clinical course of a child with Triploidy that is now more than 10 months old being cared for at home with oxygen and feeding via feeding tube respectively PEG. Only a very slight neurological development was noted till now.  

COI: None declared
ID: 723

TITLE: CEREBRAL TISSUE OXYGENATION DURING OSTEOPATHIC THERAPY IN NEONATAL UNIT

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CONTENT:

Premature infants present immature organization of their systems. The assessment of components of autonomic nervous system: may be a good predictor of a neonate condition. Many efforts are done in order to regulate premature infants. All procedures have to be safe for neonates. These are studies that show benefits for some parameters of autonomic nervous system after osteopathic procedures. The aim of the study was to assess the impact of an osteopathic technique the “4th ventricle compression” (CV4) cerebral oxygenation

22 infants born between 25 and 39 weeks of gestation (GW) with corrected age between 32 and 40 GW were enrolled. No patient needed ventilatory support during the study. Infants were fed enterally using gastric tube (n=9) or bottle (n=17). Inclusion criteria included signs of hyperactive autonomic nervous system assessed by a Neonatal Behavior Assessment Scale (NBAS). Cerebral tissue oxygenation (StO2) was monitored using near-infrared spectroscopy. Oxygen saturation (SpO2) and heart rate were measured with pulse oximetry. Continuous monitoring of StO2, SpO2 and HR was performed 10 minutes before CV4, during the procedure and 10 minutes after its termination

The mean value of StO2 before CV4 was 69% (SD±8), during CV4 69% (SD±8), after CV4 70% (SD±8). Repeated measurement one-way ANOVA showed no statistical differences in StO2 values before, during and after the procedure. Before CV4, the mean value of SpO2 was 96% (SD±3), during CV4 95%(SD±3), and after CV4 95 (SD±4). Friedman’s rank test showed no statistical differences between SpO2 values before, during and after the procedure. Repeated measurement one-way ANOVA showed no statistical differences in HR between studied periods either. The mean value of HR before CV4 was 153/min (SD±21), during CV4 151/min (SD±18) after the treatment 151/min(SD±20)

CV4 osteopathic procedure appears to be safe and well tolerated by neonates. Its use does not influence significant changes in cerebral oxygenation, SpO2 or HR. Future studies might focus on possible influence of CV4 on other biophysical parameters

COI: We have no conflict of interest to declare
ID: 748

**TITLE:** THE AUXOLOGICAL OUTCOME IN THE FIRST YEAR OF LIFE OF THE MODERATE AND LATE PRETERM INFANTS

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**CONTENT:**

Moderate preterm (MPT) and late preterm (LPT) represent the majority of preterm births and up to 5-9% of all live births. The growth pattern of infants born severely preterm has been correlated in recent years to their neurodevelopmental outcome, but few data are available regarding the growth of infants born at 32-36 weeks of gestational age (GA).

We conducted a prospective observational study on subjects born at 32-36 weeks GA at the University Hospital of Siena in the years 2016-2017 was conducted. The aim was to evaluate the pattern of weight growth during the first year of life of MPT and LPT newborn infants. The newborns were divided into two groups: MPT (32-33+6 wks GA, n=16) and LPT (34-36+6 wks GA, n=39 infants). Data related to obstetric and neonatal history were collected from medical records. The auxological parameters at birth and discharge were calculated with reference to INeS neonatal anthropometric charts. All the newborns under examination were followed in a follow-up program, periodically at 1, 2, 3, 6, 9, 12 months. The z-scores (zsc) of weight were calculated with reference to the WHO 2006 growth charts.

Anthropometric data at birth were appropriate for gestational age in the two groups. The need of nutritional supports at birth (parenteral nutrition, intravenous infusion, gavage) was significantly greater in MPT than LPT. From birth to discharge, 56.2% of MPTs vs. 48.7% of LPT showed a change in weight zsc > 1DS. A significant difference in the zsc was observed between the two groups at 1, 2, 3 and 6 months of life; this difference was no longer appreciable in the second semester of life, with both groups reaching the average of the reference population (zsc -0.33 MPT; 0.08 LPT). MPTs showed a growth retardation from birth for the first 3 months of life, with evidence of catch-up growth (reaching a DS>2) between 3 and 6 months of life and recovery at 12 months; instead, LPTs showed a more linear weight growth trend with a gradual recovery after the first month of life.

Growth trajectories after birth of MPTs and LPTs are quite different. MPTs present an extrauterine growth deficit that lasts up to 3 months, but the subsequent catch-up between 3 and 6 months allows to reach the average centile of the reference population at 12 months. Further studies are needed to evaluate whether this growth rate can influence body metabolism of MPT infants in later ages.

**COI:** None declared
ID: 883

TITLE: PELVI-URETERIC JUNCTION OBSTRUCTION IN NEONATES AT A TERTIARY CARE CENTER IN NORTH INDIA: A TWENTY-SEVEN YEARS REVIEW

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CONTENT:

Pelvi-ureteric junction obstruction (PUJO) is one of the commonest congenital anomaly affecting the urinary tract in children. In developed countries, early diagnosis of hydronephrosis had become a norm with the widespread use of antenatal ultrasound (US) screening. However, in the resource-poor settings, management of PUJO still poses a challenge due to delayed diagnosis and associated anomalies. In the index study, we are presenting our 27-years experience with PUJO in neonates who were treated at our tertiary care center.

A retrospective analysis of medical records of all neonates with PUJO who were managed between January 1990 and December 2016 at our center was performed. Data regarding gender and age of patients, affected side; availability of antenatal diagnosis, findings on the postnatal US, and the number of patients who eventually had surgery, as well as the number of patients who were kept under observation until discharged, and renogram findings were noted.

We performed early surgical interventions in patients with obstructive hydronephrosis. In patients where renal pelvic diameter (RPD) was <20 mm on the postnatal US, expectant management was done consisting of repeat US at end of 1st week. If RPD dimension worsening occurred, then renogram was performed and surgery was planned accordingly.

A total of 383 patients (age ≤ 14 years) with PUJO were managed during the study interval. Among them, fifty-seven neonates (14.8%) were included in the analysis with M:F ratio 3.7:1. Left-sided lesions were commonest to be seen in 51%, followed by right-sided in 23% and bilateral in 26% neonates. Antenatal diagnosis was available in 40 (71%) patients. Thirty-seven neonates (64.9%) with obstructed hydronephrosis were managed with early surgical interventions. Abdominal lump was the commonest presentation in them. Expectant management was done in twenty neonates (35.1%) having RPD <20 mm. Among these, four patients required delayed surgical interventions due to deterioration of renal functions. After surgery, repeat renogram revealed improvement (renal split function 43-54%) in both groups. Among 57 neonates, undescended testis and multicystic kidney were seen in two patients each.

In resource-poor countries, the prenatal diagnosis of PUJO is not universally available due to lack of advanced screening modalities at the peripheral hospital. Expectant management can be carried out if renal pelvic diameter is moderately dilated, but renal functions need to be monitored.

COI: None declared
ID: 914  
**TITLE:** ROUTINE CRANIAL ULTRASOUND SCAN IN PRETERM BABIES: CORRELATION WITH TWO-YEAR NEURO-MOTOR OUTCOME  
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**CONTENT:**  
The cranial ultrasound scans (USS) are routinely done in preterm population for bleeding, ischaemic or cystic changes. The practice varies hugely across the globe in terms of timing, frequency, operator as well as reporting of these scans. A number of studies previously have also demonstrated limitations of these scans to predict the long term outcome. This also leads on to the vagueness in the communication to the parents while explaining the results of the scan and its potential long term implications. We designed this study to look into the correlation of early (within first week) and late (6 weeks postnatal) cranial USS to the neuro-motor outcomes at 2 years of corrected gestational age.  

**Setting:** Tertiary (Level-3) Neonatal Unit in England (Annual delivery rate of around 5000)  
**Population:** Preterm baby born less than 32 weeks gestation were included. The babies in whom 2 year outcome is not available were excluded.  
**Duration:** Two years (Jan 2011 to Dec 2012)  

The criteria for normal(0) and abnormal (1) USS were predefined as highlighted in Table 1. Similarly the criteria for normal (0) or abnormal (1) neuro-motor outcome were also predefined (Table 1).  

Both early and late USS were independently rated by two neonatal consultants who were blinded to the 2 year outcome of the baby.  

The babies were identified through a national neonatal database. If the scans or outcome were not found electronically, the paper medical notes were searched for the same.  

A total of 134 babies were included over 2 year period. The babies who either died or did not have 2 year outcome were excluded.  

The 2 year outcomes were available for around 70% of the babies.  

There was a high degree of agreement (132 out 134, agreement ratio 0.9) between the two raters who independently gave cranial ultrasound score of either 0 or 1 based on the USS reports using the criteria described in Table 1. This is a strength of our study as in our unit, trained paediatric radiographers do the scan with standardised imaging and reporting criteria. The results of the correlations of USS and the outcome are shown in table 2. The sensitivity of the USS was quite low (18%) whereas the specificity was high (96%).  

The negative predictive value was 89% and the positive predictive value was 40%.  

Our study shows that routine head USS still provide a good judgement about the overall outcome of the baby. The combination of week one and 6 scans can provide fairly accurate assessment of 2 year motor outcome. The clinician may give more positive outcome prediction based on the scan results rather than being vague about the outcome. Having a standardised scanning protocols to reduce inter-observer variability improve validity of cranial USS.
Table 1 - Cranial Ultrasound Grading and Two-year Neuro-motor Outcome criteria
Table 2 - Correlation of combined Cranial USS grade to the 2-years motor outcome

COI: None declared
ID: 917

**TITLE:** CARDIOTOCOGRAPHY AND NEONATAL HYPOTHERMIA: PREDICTIVE VALUE AND LONG-TERM OUTCOME

**AUTHORS:** Carlotta Caccialupi 1; Alessandra Cecchi 2; Maria Rosaria Di Tommaso 3; Enrico Tartarotti 4; Carlo Dani 5

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**CONTENT:**

Blood Gas Analyses values (i.e. pH, SBE) consistent for perinatal asphyxia and possible ischemic hypoxic encephalopathy, have still uncertain predictive value for the long-term outcome of these newborns. APGAR score and BGA values are the most common methods to assessing neonatal wellbeing. An umbilical pH >7.0 and/or an excess SBE <12 mmol/l are rarely associated with irreversible neurological sequelae and even a pH <7.0 in most newborns is not associated with adverse neurological outcome. In the literature there are many studies on the accuracy of CTG, but its correlations with long-term outcomes are lacking. We investigated this correlations among pH, SBE and 0-3 Apgar Score at 1°min of life.

We studied 75 infants born from 2010 up to 2016 in University Hospital Careggi of Florence who had pH <7 in cord BGA. Only 23 needed hypothermic treatment. The recorded maternal parameters were: age, Body Mass index (BMI), course of pregnancy, Assisted Reproductive Technology (ART), single/twin pregnancy, oxytocin’s utilization and epidural anesthesia. CTG monitoring has been classified according to the ACOG Guidelines. The neonatal recorded parameters were: sex, Apgar at the 1st and 5th minutes, the pH and the SBE. Follow-up was planned on the basis of pathological or not pathological course and performed at 6, 12, 24 months using the Bayley Scale of Infant and Toddler development third edition (Bayley – III). The two populations were examined with the Mid-P Fischer test, chi square test and t test.

The CTG results an excellent indicator also in the long-term neonatal prognosis: in fact pathological or indeterminate traces of degree 2C, according to the Coletta algorithm are associated, with a significance of less than 0.01, to a negative outcome at 2 years compared to newborns who had reassuring CTG traces. The Apgar extremely low to the first minute of life of the group of infants defined as “sick” is associated, with statistical significance equal to 0.04, to a negative outcome at 2 years compared to the group of infants defined as “healthy”. Some literature data concerning neonatal hypoxic risk factors are confirmed, such as the use of oxytocin, obesity and male fetal sex. We’re in agreement with the literature about the association between very low pH (<6.90) with more unfavorable neonatal outcomes as well as a loss of bases greater than -12 mmol/L, all without statistical difference.

The Cardiotocography (pathological or indeterminate traces of degree 2C, according to the Coletta algorithm) and an 0-3 Apgar score at first minute of life is predictive of an negative neonatal outcome at two years of life.

**IMAGES:**
https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=c3fd26bc6eda3baaa91a805735f6dc4d-MjAxOS0wNSM1Y2UyNjY2ZDi02GRk

P-Value of all maternal and neonatal parameters.

**COI:** None Declared