ID: 28

TITLE: FOLLOW UP OF NEUROPSYCHOLOGICAL DEVELOPMENT DURING THE FIRST YEAR OF LIFE IN INFANTS WITH A PROLONGED NEONATAL JAUNDICE

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CONTENT:

Neonatal jaundice is a part of the neonatal adaptation syndrome. It is believed that 98% of newborns have elevated bilirubin levels, but only about 60% have clinical manifestations. If the serum bilirubin levels are well controlled, unfavorable late neurological effects should not be observed. Is that the case? The aim of this study is to trace the nervous-mental development during the first year of life in children who have experienced neonatal jaundice.

Ninety-two babies born are followed up to the age of one year. The babies are divided into 4 groups: A – without neonatal jaundice, B – with jaundice treated with phototherapy in the 1st week of life, C – intensive jaundice during the first 14 days treated with phototherapy and urodeoxycholic acid, D – intensive prolonged jaundice requiring complex treatment (excluding exchange transfusion). Studied indicators: weight and gestational age at birth, sex, delivery way, Apgar score, maternal age & education, domicile. The serum bilirubin levels (total and direct) are traced during the hospital stay. Then a transcutaneous bilirubin level was monitored at day 14 and 28. In case of prolonged jaundice treatment with urodeoxycholic acid up to 3 months of age was performed.

Neuro-psychological development was monitored in the first 12 months of life, assessed by four indicators of development: motor functioning, sensor activity, emotional-social integrity and speech. The assessment was performed during prophylactic examinations by calculating a developmental rate according to the methodology of Manova-Tomova (1974, last update 2015). The analysis was performed by the studied indicators. We found that groups were comparable across all indicators except for residence, with the significant difference between groups B and D. Statistically significant development delay was proven in the group D compared to the other 3 groups for all studied age groups.

According to our data, prolonged intensive icterus has an unfavorable effect on the development of children for the first year of their life. Children with prolonged jaundice need to be followed up for a long period of time to assess possible deviations in their psycho-motor development.

COI: None declared
Title: Lessons learned from the perinatal audit on severe hyperbilirubinemia: The Dutch experience

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Content:

Newborns with severe hyperbilirubinemia (SH), i.e. total serum bilirubin (TSB) higher than exchange threshold, are at risk of neurological damage. Each year many jaundiced term infants present at emergency departments who need immediate treatment. Apparently, and despite a national guideline on hyperbilirubinemia, early recognition to prevent SH is difficult. We aimed to identify substandard factors (SSF) in health care processes of newborn infants with severe hyperbilirubinemia.

Since 2017, SH is one of the main themes of the perinatal audit in the Netherlands. In the SH audit, newborn infants with a gestational age > 35 weeks with an unconjugated TSB higher than the threshold of an exchange transfusion are included. Perinatal care is discussed with all stakeholders: obstetricians, midwives, pediatricians, maternity nurses and care assistants, and parents. A substandard factor is defined as care that deviates from recommendations of the guideline and has the potential to lead, directly or indirectly, to an adverse outcome. SSFs were divided in three categories: a) observation and communication, b) knowledge, and c) organization of care.

In total, 72 infants were reported (Table; estimated incidence of SH: 10-34/100,000 live births per year). Notification of jaundice occurred at a mean age of 45 hours. Midwives (42%) and maternity care assistants (32%) were the first to signal jaundice, in contrast to parents (4%). Mean interval between visible estimation of jaundice severity and phototherapy was 30 hours. Median (range) maximal TSB was 427 (271-658) µmol/L. Most frequent underlying causes were blood group incompatibility (n=30 (42%)) or lactation failure (n=14 (19%)). All newborns received phototherapy, 18 (25%) underwent an exchange transfusion. SSF were present in 40 (56%) infants: 83 in 2017 and 40 in 2018, respectively (see Table). Sometimes, a long delay existed between the first notification of jaundice and treatments. Risk assessment was not documented in many infants (83%).

Severe hyperbilirubinemia remains a serious health problem in the Netherlands. The perinatal audit is a tool to identify substandard factors in severely jaundiced infants. The lack of risk assessment and the long delay between the first notification of jaundice and treatment need attention. Improvement of substandard factors will hopefully occur after implementation of more strict recommendations in the revised Dutch hyperbilirubinemia guideline.

Images:
https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=1c73eeae8d22b4a725c23170b6cf29eb-MjAxOS0wNSM1Y2UyNyYmQ2ODk5

Table. Demographic and clinical characteristic of infants with severe hyperbilirubinemia

COI: None declared
ID: 255  
TITLE: EARLY ADMINISTRATION OF ERYTHROPOIETIN IN VERY LOW BIRTH WEIGHT PREMATURE INFANTS  
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CONTENT:  

Introduction:  
Since the most incriminated pathophysiological mechanism involved in the prematurity anemia is low serum erythropoietin, a logic conclusion would be that early administration could influence the transfusion requirement in this patient population.  

Purpose: to reduce the need for transfusion and the number of donors and to observe the non-haematological effects after early administration of erythropoietin.  

102 preterm with gestational age ≤30 weeks and weighing ≤1250 grams born between 2018-2019 in the SCOG "Filantropia" were randomized to two batches by the administration of erythropoietin. The EPO group (n = 40) received erythropoietin in the first 7 days of life, doses were 500 IU / kg, x 3 times/week, subcutaneous for 6 weeks. The group without erythropoietin nonEPO (n = 62) received iron therapy only. Otherwise, there were no differences in the therapeutic approach between the two groups.  

Were observed the main effects of erythropoietin on haematological parameters: the evolution of hemoglobin curves, red blood cell counts, number of packed red blood cells transfusions. Also, non-haematological effects of erythropoietin were observed: incidence of intraventricular haemorrhage, ROP, BDP.  

Results  
There were no significant differences between the two groups in respiratory distress, duration of ventilation, oxygen therapy and the incidence of bronchodylsplasia.  
There were no significant differences in the incidence retinopathy of prematurity in the two groups, the degree of which had a comparative mean: EPO 1.9 ± 0.9 / nonEPO 1.6 ± 1.3.  
Erythrocyte concentrate transfusions were generally administered at an average hemoglobin of 6.9 ± 1.1 g / dl (Htc 21 ± 3.5%), especially after 30 days of life (31.4 ± 9) in both groups. In the erythropoietin (EPO) group, 10 children received transfusions (24%) with an average of 1.1 ± 0.8 transfusions / patient. In the non-erythropoietin (non-EPO) group, 34 received transfusions (56%) with an average of 1.6 ± 1.3 transfusions / patient.  

Conclusions  
Early use of erythropoietin significantly reduced the need for transfusion. Although the global transfusion need per patient did not decrease significantly, an exposure to fewer blood products from multiple donors could represent a health benefit. Growth of aggressive forms of ROP (≥3) in children who received early erythropoietin therapy was not observed.  

COI: None declared
ID: 315

TITLE: CLINICAL CASE OF SEVERE NEONATAL THROMBOCYTOPENIA DUE TO MATERNAL IDIOPATHIC THROMBOCYTOPENIC PURPURA: REFRACTORY TO IVIG AND PLATELET TRANSFUSIONS, RESPONSIVE TO GLUCOCORTICOIDS

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CONTENT:

Risk of thrombocytopenia in neonates born to mothers with immune thrombocytopenic purpura (ITP) can reach 75%, while severe platelet nadir (below 50*10^9) and prolonged low platelet level (≥ 4 weeks) is quite a rare situation and happens in 0.2-1.5% of affected neonates. The aim of this report is to present clinical case of severe persistent neonatal thrombocytopenia (due to maternal ITP) refractory to Ig-therapy and highly responsive to predisolone.

Female infant was born in National Medical Research Center for Obstetrics, Gynecology and Perinatology (Moscow, Russia) to a 31-year-old mother at 38 weeks of gestation. The mother was known to have ITP for 7 years prior to become pregnant. She received IV-Ig therapy, oral prednisolone - without significant effect, only stimulators of thrombopoietin synthesis had partial positive effect. This pregnancy was the 1st, occurred spontaneously, proceeded with a tendency towards low level of amniotic fluid at 18-19 weeks, fever due to respiratory infection at 26-27 weeks. At the time of admission to the Center (23 weeks of gestation) the woman had platelet level 15x10^9 and manifestations of skin-hemorrhagic syndrome, frequent nasal bleeding and bleeding gums. Low platelet level less than 50x10^9 persisted despite Ig therapy. The woman refused from recommended splenectomy in the second trimester of pregnancy. Throughout the third trimester, she took daily prednisone which provided an increase in platelet count up to 50-75x10^9. The infant was born in a spontaneous delivery, Apgar score 8/8, birth weight - 3148 g, length 50 cm. The observation of the neonate included monitoring of the clinical signs as well as a comprehensive laboratory and instrumental examination.

At the age of 3 hours of life thrombocytopenia 21x10^9 was detected, manifestations of skin-hemorrhagic syndrome (multiple linear ecchymosis) appeared as well as mild signs of respiratory distress, the baby was transferred to the NICU. She received respiratory support with high flow nasal cannula for 14 hours. Sepsis work-up showed no signs of infection, daily head scans showed no signs of active bleeding during the early neonatal period. The level of associated platelet-antibodies was high 290%, glycocalycin – in normal range. Gigantic forms of platelet cells were not found. Screening for TORCH infections and coagulation tests showed no abnormality. Bone marrow aspirate was done to assess persistent severe thrombocytopenia with no evidence for peripheral consumption, myelogram revealed only slightly flaccid platelet detachment. In the first 30 days of life platelet counts fluctuated between 5-15x10^9 with minimum of 2,9 and maximum peak of 30x10^9 regardless of Ig therapy (800 mg/kg NS) and platelet-transfusions (N3). On DOL 30 the nadir of platelet count (2,9 x10^9 ) was noted, accompanied with recurrence of hemorrhagic syndrome and pedinsolone 3 mg/kg, which led to an increase in platelet count to normal range (219x10^9) 3 days after. The girl was discharged home at the age on DOL39. The main mechanism of action of Prednisolone in such patients is in reducing the expression of Fc receptors on macrophage membranes and blockage of activation of leukocytes and macrophages. This leads to the discontinuation of binding of phagocytic cells with anti-platelet antibodies and antibodies on the surface of platelets and, therefore, prevents the breakdown of platelets.

Apparently in small amount of patients with severe neonatal thrombocytopenia due to maternal ITP, immunoglobulins are not effective due to some characteristics of damaging maternal antibodies. In such cases start of corticosteroids may be indicated despite of moderate risk of adverse reactions as it has immediate effect and significantly reduces the likelihood of severe hemorrhagic syndrome.
COI: None declared
ID: 317

**TITLE:** RELATIONSHIP BETWEEN SKIN DEPTH AND BILIRUBIN CLEARANCE IN VERY PRETERM NEONATES UNDERGOING PHOTOTHERAPY

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Daniele De Luca

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**CONTENT:**

Few data are available about the use of phototherapy in preterm neonates. Some data seem to suggest a possible negative influence on mortality;(1) some hypothesized that this could be due to the irradiation of internal organs. The combination of 2nd generation transcutaneous bilirubinometry and high frequency ultrasound made possible the measurement of skin bilirubin and depth, respectively. We aim to study the relationships between skin depth and the efficacy of phototherapy in preterm neonates.

This is a prospective cohort study enrolling neonates needing phototherapy according to NICE guidelines. Total serum (TSB) and transcutaneous (TcB) bilirubin were simultaneously measured before the onset of LED phototherapy, which was provided for 24h. TSB has been remeasured at the end of phototherapy (after 24h) and TcB after 6h of phototherapy in patched skin areas. TcB has been measured in the forehead using Bilicheck® (Philips inc). Phototherapy efficiency has been estimated as the bilirubin clearance (delta between measurements before, after or during phototherapy). Skin depth has been measured using a “hockey stick”, microlinear ultrasound probe (CX50, Philips inc) on the right upper abdominal quadrant as previously described.(2) Clinical data including predicted mortality were realtime recorded.

95 babies (GA 30.5 (SD 3.2); BW 1453 (SD 636); male/female ratio 60/34; CRIB II: 4 [0-9.7]) have been enrolled. There was a significant correlation between skin depth and DeltaTcB (calculated before-after 6h of therapy) in covered areas (r=0.213; p=0.04), while no correlation is evident with DeltaTSB (r=0.04; p=0.67). Moreover, there is no significant correlation between mortality predicted by CRIB-II score and DeltaTcB (r=0.011; p=0.921) or DeltaTSB (r=0.08; p=0.465).

Skin depth is directly correlated to the efficacy of phototherapy (in terms of dermal bilirubin clearance). Skin depth does not influence the circulating bilirubin clearance and there is no relationship between mortality and the bilirubin clearance.

**REFERENCES**
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2. Ofri A, J Pediatr Surg 2018

**COI:** D. De Luca in the past has received travel grants and research assistance from PHILIPS inc, outside of the present work.
ID: 327

TITLE: MACHINE LEARNING-BASED INDIVIDUAL PREDICTION FOR NEONATAL JAUNDICE

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CONTENT:

Post-discharged newborn infants are often readmitted for severe jaundice (neonatal hyperbilirubinemia) and acute bilirubin encephalopathy still represents a significant cause of morbidity and mortality throughout the world, especially in developing countries. Machine learning methods may help to identify infants at risk from clinical data available right after birth and before discharge to improve clinical management in this vulnerable population.

Clinical variables of 300 newborns in Chongqing Maternal and Child Health Hospital were collected in the first quarter of 2019, including gestational age (GA), birth weight (BW), delivery mode, sex, umbilical cord pH, Apgar score, maternal blood group, daily type of feeding and body weight, serial transcutaneous bilirubin (TCB) values. For a subgroup of patients additional variables were available such as infant’s blood group and coombs test. A random forest algorithm was used, composed of an ensemble of decision trees, each of which learned to discriminate between the two classes phototherapy vs. no phototherapy, initiated and performed according to the American Academy of Pediatrics. The predictive performance was evaluated by area under the receiver operating characteristic curve (AUC).

The baseline characteristics of the patients were, median (95% CI), GA 38.5 weeks (35.4-41.3), BW 3173g (2190-3911), pH 7.25 (7.07-7.38), exclusive breastfeeding 82% and Caesarean section 60.4%. Our computational model was able to predict an upcoming phototherapy treatment 43 hours in advance on average with an AUC of 0.85 based on clinical variables available for all newborn infants. The most influential variables, in terms of variable importance and listed in decreasing order, were found to be: GA, pH, BW, hours since birth, ratio bilirubin BW, bilirubin, Apgar 1 min, ABO group mother. Including subgroup information, infant’s blood group and coombs test, the AUC increased to 0.93.

By using machine learning methods, we developed a computational model for the early detection of severe neonatal jaundice, which can detect with high AUC, sensitivity and specificity whether a neonate will need a phototherapy before discharge. We are currently about to increase the data base to further train the algorithm and thus to further improve the predictive power.

COI: None declared
ID: 356

TITLE: TRANSFUSION OF RED BLOOD CELLS FROM UMBILICAL CORD IN VERY PRETERM INFANTS IN A THIRD LEVEL HOSPITAL

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CONTENT:

Very preterm infants (VPI) born below 32 weeks of gestation often need blood transfusion during admission. Blood transfusion from adult donor in VPI has been associated to some prematurity complications as retinopathy of prematurity or bronchopulmonary dysplasia. Compared with adult blood, umbilical cord blood transfusion provides higher fetal hemoglobin concentration and immunological properties that could be beneficial for VPI.

The main objective of our study is to describe the transfusion needs of VPI born below 32 weeks of gestation. Secondary, we aim to establish its relationship with main prematurity complications and to know the current availability of umbilical cord blood in the reference blood bank.

We retrospectively described the transfusion needs of red blood cells in VPI born below 32 weeks of gestation admitted in our hospital between 2005 and 2017 and the productivity of cord blood in the reference blood bank. Logistic regression analysis was performed to evaluate the impact of transfusion on main prematurity complications.

A total of 1557 VPI born below 32 weeks of gestation were included the study period. The 65% of blood transfusion were administered in VPI below 1000 grams of birth weight. This group of patients presented more prematurity complications (p<0.05). Retinopathy of prematurity, bronchopulmonary dysplasia and periventricular leukomalacia were more frequent in transfused patients (p<0.02). The total of transfusion needs were 1.9 liters per year. The reference blood bank has produced 20 liters per year of cord blood in the last two years.

The impact of allogenic blood transfusion could be analyzed in VPI born below 32 weeks of gestation and less than 1000 grams of birth weight. The blood bank reference produces enough umbilical cord blood for transfusion needs in this group of patients.

COI: None declared
ID: 530

TITLE: CAN WE REDUCE NEONATAL ADMISSIONS DUE TO JAUNDICE?

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CONTENT:

Neonatal hyperbilirubinemia is a common cause for neonatal admission in term and preterm infants. These infants are primarily managed on postnatal wards for phototherapy, thus avoiding separation of mother and baby. However, they require admission to neonatal unit due to jaundice above the exchange level, rapidly increasing bilirubin levels, pathological jaundice or sepsis. Failure to initiate and establish adequate breastfeeding can play an important role in development of severe jaundice.

The aim of this project was to evaluate the infants admitted to neonatal unit with jaundice including the feeding practices; and identify areas of improvement to reduce admissions.

This was a retrospective observational project which included infants admitted to neonatal unit at a District Hospital with a primary diagnosis of jaundice from January 1, 2017 to December 2018. The cohort included late preterm infants (≥ 35 weeks) and term infants who were either admitted from postnatal ward or home because of jaundice. Data was collected using proforma, medical records and blood results on computer system.

A total of 519 infants were admitted of which 12%(60) infants were admitted due to jaundice. 42% were late preterm and 58% were term infants. The mean birth weight was 2892 grams and 20% were low birth weight. The risk factors for jaundice were identified as male (66%), first born (49%), gestation (37 weeks), prematurity, and breast fed infants (60%). 35% were admitted from home (mean 3.9 days) and 65% from postnatal wards. A three-quarter of admissions were either due to prematurity or poor feeding/ exaggerated jaundice. 60% infants were exclusively breastfed prior to admission which decreased remarkably to 11.6% on discharge; only 32% mothers received lactation support. 55% infants had bilirubin level above exchange line, required a mean of 24 hours (range 6-144 hours) of intensive phototherapy. None required immunoglobulins or exchange transfusion. The mean length of stay was 3 days.

There is a scope to decrease admissions due to jaundice by optimising feeding support and management of jaundice on postnatal wards/ community care in the presence of risk factors. Transitional care setting is vital for the care of preterm infants, thus avoiding mother and baby separation. Opportunities to support lactation on postnatal ward and neonatal unit are often missed. Effective measures are necessary to promote lactation support.

IMAGES:

https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=9fd9dd394bdacb93b694264bd48f3e85-MjAxOS0wNSM1Y2UyNjY2YzgyNmsQ0

Number of admissions due to jaundice at various gestations

COI: None declared
ID: 615  
**TITLE:** ERYTHROPOIETIN (EPO), IRON AND TRANSFERRIN STATUS IN PREMATURE BABIES BORN FROM MOTHERS WITH ANEMIA  
**AUTHORS:** Nargiz Mammadova 1; Safikhan Hasanov 2; Puste Orujova 1; Afag Akhundova 1; Nurangiz Hajieva 1  
**AFFILIATIONS:** 1 2nd Children Disease Department, 2 1st Children Disease Department, Baku, Azerbaijan  

**CONTENT:**  
As known, anemia in pregnant women and cumulative impacts of several factors lead to the prematurity and the development of pathological processes in newborns. On the background of the rapid development of the fetus, the lack of basic plastic matters is characterized by the morphofunctional inability that as a result, causes metabolic disturbance and the decrease of the synthesis of iron and enzymes. The purpose of this research was to study the hematological parameters of preterm babies born from mothers who suffered from anemia during pregnancy.

84 preterm infants were investigated and levels of EPO, Fe and transferrin were compared in 3 groups. 1st control group includes 30 infants, 2nd group - 36 non-asphyxiated infants with anemia, and 3d group-18 asphyxiated infants born with anemia. Levels of EPO, Fe and transferrin were checked in babies at 1st and 7th days of their life. The statistical processing of the results was done in Microsoft Windows 7 SPSS 20 package.

The difference of erythropoietin in group 2 was statistically significant compared to other groups at the 1st day of life. The level of Fe was lower in the 3rd group compared to the other groups (p <0.001). The level of transferrin was also high in the 3rd group, but was not statistically significant. Moreover, on 5-7 days of life we can see that EPO increased in groups 1 and 2 (p <0.001), Fe levels increased only in the 1st group (p 0.05). The results of the 1st day are shown in Table 1 and the results of 5-7 days of life are shown in Graph 1.

According to the findings, an increase in EPO levels in children born with asphyxia from anemic mothers reflects the stimulation of erythropoiesis. Due to the lack of iron deposits in this cohort of babies compared to babies in the same gestational age, but without anemia in mothers, prescription of iron supplements early on is preferable.

**IMAGES:**  
[https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=d00bbcc15ea6ab113c56ad65062e66c-MjAxOS0wNSM1Y2UyNjY2Y2E3MjBh](https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=d00bbcc15ea6ab113c56ad65062e66c-MjAxOS0wNSM1Y2UyNjY2Y2E3MjBh)

Table 1. EPO, Transferrin and iron levels in premature infants on 1st day of life  
Graph 1. Iron and EPO levels on 5-7 days of life in premature babies born from mothers with anemia

**COI:** None declared
**ID:** 882  
**TITLE:** IS IT TIME TO RE-EVALUATE ANAEMIA IN PRETERM BABIES?  
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**CONTENT:**

Anaemia is a common challenge encountered in preterm infants, yet the full clinical consequences and benefits of different treatment options remain unclear. Many factors contribute to neonatal anaemia, including inherited and acquired disorders such as infection, blood loss, iron and haemotinic deficiencies, and iatrogenic anaemia due to frequent blood sampling. One main intervention is packed red cell transfusion (PRCT) of which national guidance [New 2016] currently recommends a restrictive approach.

We undertook a single centre retrospective observational study of all inborn <32 weeks’ gestation infants admitted to our tertiary neonatal unit at the John Radcliffe Hospital, Oxford in 2017. The aim was to describe the distribution of haemoglobin (Hb) concentrations and prevalence of anaemia in preterm infants and correlate this with the number of administered PRCTs.

T1 was defined as the 1st Hb measured after birth; T2 was defined as the last recorded Hb before discharge. Anaemia was defined as per national standards, Hb <120g/L [New 2016]. Previously estimated Hb drop of 50g/L from day 0-28 [Jopling 2009] was used to predict T2 from T1. Data was collected from electronic and paper patient records. All data was routinely available, anonymised and entered into a data base for analysis.

Data was collected for 102 infants. 77 survivors at discharge, with a median gestational age of 28+1 weeks, were included. 7 (6.9%) infants were anaemic at T1 which rose to 45 (58.4%) at T2 (p<0.001). The median Hb at T1 was 170.5g/L and 109g/L at T2 (p<0.001). Lower gestational age was significantly correlated with lower Hb at T1 and T2 (p<0.001). Gestational age sub-group analysis (29 weeks) showed a significant decrease between T1 and T2 across all groups. The 26-28+6 week sub-group had a larger than expected Hb drop (Wilcoxon z=-2.814, p=0.005). Data was analysed for transfused and non-transfused groups. The average Hb at T1 and T2 of the non-transfused group was significantly higher than the transfused group. Mortality was significantly lower in infants who did not receive PRCT (p<0.000001).

Anaemia is highly prevalent in infants <32 weeks’ gestation during and specifically at discharge, with a progressive decrease in Hb during admission across all gestational ages. The management of anaemia to date has largely focussed on treatment during admission, little attention has been devoted to understanding the long-term consequences of anaemia after discharge, and in an infant population characterised by major neuro-developmental changes.

**IMAGES:**

https://www.eiseverywhere.com/eeselectv3/v3/events/351149/submission/files/download?fileID=bfb2469a6c0dedbf79bc0561f264e315-MjAxOS0wNSM1Y2UyNjY2ZDE4NjQ4

(A) Paired analysis showed that the Hb decreased significantly between T1 and T2 in both non-transfused and transfused infants.
(B) Measured Hb at discharge was lower than the predicted Hb in the sub-group who received PRCTs.

COI: None declared
ID: 888
TITLE: EFFECT OF MATERNAL PRE-ECLAMPSIA ON HEMATOLOGICAL PROFILE OF NEWBORNS IN QATAR
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CONTENT:
Pre-Eclamptic Toxemia (PET) is a major cause of pregnancy-related maternal morbidities. However, PET also carries higher rates of morbidities and mortalities in neonates. This study aimed to assess the effect of maternal pre-eclampsia on hematological profile of the newborn as well as certain maternal and fetal outcomes and to compare it with those of healthy normotensive mothers in Qatari population.

This was a hospital-based case control study. We reviewed the data and complete blood count (CBC) results of neonates born to Qatari mothers with the diagnosis of PET in Women’s Wellness and Research Center (WWRC) in 2017 and compared it with the data of a control group with almost the same number during the same year. Statistical analysis was done using unpaired t test, Chi-square test and logistic regression analyses.

A total of 211 Qatari neonates were recruited, comprising 108 neonates of mothers with PET and 103 neonates of healthy normotensive mothers. The mean weight, length, head circumference, placental weight and gestational age were significantly lower (P<0.05) was noted between the two groups regarding the White Blood Cells or the Absolute Neutrophilic Count.

There was a positive association between PET and neonatal thrombocytopenia. Prematurity, placental insufficiency, fetal growth restriction and need for neonatal resuscitation were found to be significantly higher in babies born to preeclamptic mothers when compared with the healthy controls. Hematological parameters of neonates of mothers with PET should be properly monitored to reduce the incidence of developing potential complications.

IMAGES: https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=b08385a8c8bf7957f52c9c92eff7e914-MjAxOS0wNSM1Y2UyNjY2ZDfhZjI0

COI: None declared