Intrauterine growth restriction (IUGR) remains a frequent cause of perinatal morbidity and mortality, which appears in up to 10% of the pregnancies, characterized by the inability of the fetus to reach its biological growth potential, with an estimated fetal weight below the 10th percentile given for the equivalent gestational age. The responsible factors are often detected, either it is about genetic disorder, infections or congenital anomalies, but in up to 25% of them the causes remain unknown. For some of these, the answer may be thrombophilia, a coagulation abnormality, that can be either inherited or acquired, affecting about 15% of the Caucasian population, including factor V Leiden or prothrombin gene mutation.

We conducted a study collecting data from the Bucharest University Emergency Hospital archive records, including 343 patients with singleton pregnancy admitted at the Obstetrics and Gynecology Clinic, over a period of one year. We analyzed the correlations between inherited thrombophilia and IUGR using blood test samples and ultrasound evaluation. Patients were tested for thrombophilic gene mutation for factor V Leiden, prothrombin G20210A, methylenetetrahydrofolate reductase (MTHFR) C677T/A1298C, PAI, factor XIII, endothelial protein C receptor (EPCR) G4600A/C4678G. The patients were distributed in two groups, one consisting of 314 patients, and the other consisting of 29 patients matching our criteria and diagnosed with IUGR, divided by the ultrasound evaluation and birth weight percentile.

In the second group, representing 8.45% of the patients, we found a positive association between FV Leiden mutation, C677T MTHFR gene mutation and IUGR. 6.89% of the patients in the second group presented with FV Leiden mutation, comparing to only 2.54% in the first group, being 2 to 3 times more prevalent in the fetuses affected by IUGR. Similarly, 55.17% of the patients in the second group presented with MTHFR C677T genotype comparing to 30.25% in the first group. For the remaining types of thrombophilia, the difference was not significant or relevant. We also encountered 5 cases with middle cerebral artery/umbilical artery pulsatility indices ratio smaller than 1, representing the population at risk for a higher maternal and fetal morbidity and mortality, out of which 3 were affected by IUGR, concluding that 60% of the total cases with hemodynamic redistribution were affected by IUGR.

The results showed a positive correlation between FV Leiden and C677T MTHFR gene mutations, being up to 3 times more frequent in IUGR fetuses. Although routine screening is not considered cost-efficient, pregnant patients should undergo tests for inherited thrombophilia as the management of these cases is challenging, by the risk/benefits of leaving the fetus in utero vs the complications of prematurity with short and long-term health consequences.

COI: None declared
ID: 482

TITLE: PLACENTAL HISTOLOGICAL FEATURES AND NEONATAL OUTCOME IN VERY LOW GESTATIONAL AGE INFANTS

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CONTENT:

Chorioamnionitis is closely related to premature birth and prematurity is associated with an elevated risk for neonatal morbidities and mortality. Evidence from the literature is conflicting in relation to the association between various placental lesions and severe neonatal conditions. Some studies found that chorioamnionitis or malperfusion are risk factors for bronchopulmonary dysplasia (BPD), neonatal sepsis, intrauterine growth restriction (IUGR), necrotizing enterocolitis (NEC) or retinopathy of prematurity (ROP) while others do not or even are protective for some of these morbidities. Our objective was to evaluate the relationship between placenta histology and neonatal morbidities.

A retrospective cohort of preterm infants with gestational age between 24 and 28 weeks gestational age (GA) born from January 2014 to June 2018 was carried out. Placenta histology, newborn clinical characteristics, morbidities and mortality during hospitalization were recorded. Amsterdam placental workshop consensus criteria were used for classifying placental lesions classification. For each particular morbidity were only included those patients not discharged from hospital at postnatal age when diagnosis was possible to define: mortality at any moment, early onset sepsis in all patients, NEC and late onset sepsis in those who stayed more than 72 hs, ROP and BPD only those who were alive at 36 weeks postmenstrual age. Kruskal-Wallis and Chi-square tests were used as appropriate.

Placenta histology and clinical records were obtained from 178 of 210 (85%) infants born between 24 and 28 weeks GA during the studied period. Mean body birthweight of the whole population was 928 g (SD 239), GA 26.4 weeks (SD 1.5), male gender 57%, multiple gestations 23.6%, IUGR 8.3% and mortality 34%. Placenta lesions and their relation with clinical characteristics, morbidities and mortality are shown in the table. We found statistical association between combining maternal and fetal inflammatory response with early onset sepsis (OR 3.91 CI 1.17-13.07, p=0.026) but this association was protective for BPD (OR 0.28 CI 0.08-0.98, p=0.035). Placenta malperfusion was associated with intrauterine growth restriction (OR 3.39 CI 1.05-10.94, p=0.049).

In this population of very premature infants the prevalence of chorioamnionitis was 50% and 62% of them had maternal and fetal inflammation. The combination of both lesions was associated with early onset sepsis but was protective for BPD. Malperfusion was associated with IUGR. Infant mortality was not associated with any placental lesion.

IMAGES:
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COI: None declared
ID: 488

**TITLE:** INHERITED THROMBOPHILIA IN PREGNANT PATIENTS: RELATIONSHIP BETWEEN THROMBOPHILIA AND INTRAUTERINE GROWTH RESTRICTION

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**CONTENT:**

Intrauterine growth restriction (IUGR) is the term used to describe a fetus that has not reached its growth potential because of fetal, placental or maternal factors. The most common maternal factor is thrombophilia, an abnormality of blood coagulation, which correlates with a hypercoagulable state. The definition of IUGR is an estimated weight via ultrasound below the 10th percentile for gestational age in the second half of pregnancy. Complications of IUGR include perinatal complications as asphyxia, meconium aspiration, low resistance to infection, hypoglycemia, stillbirth, neonatal death, neonatal morbidity and abnormal neurodevelopmental outcome. Inherited maternal thrombophilia as a cause of IUGR, is the cause of decreased placental transfer of nutrient, including oxygen, resulting in reduced fetal body weight. The most important risk factor for a pregnant women experiencing pregnancy-related venous thrombosis is prior personal history of venous thrombosis. Low-risk inherited thrombophilias include the following mutations heterozygous factor V Leiden, heterozygous prothrombin G20210A mutation, protein S deficiency, protein C deficiency. High-risk inherited thrombophilias include the following homozygous factor V Leiden, homozygous prothrombin G20210A mutation, compound heterozygous factor V Leiden with prothrombin mutation, antithrombin deficiency.

There are three types of IUGR: asymmetrical IUGR, symmetrical IUGR and mixed IUGR, based on various clinical and anthropometric features. In asymmetrical IUGR the embryo fetus has grown normally for the first two trimesters but encounters difficulties in the third trimester. Symmetrical IUGR is often known as global growth restriction and indicates that the fetus has developed slowly throughout the entire duration of the pregnancy, in this case the fetus is more likely to have permanent cerebral sequelae.

The aim of this study is to analyse the relationship between maternal thrombophilic modifications and intrauterine growth restriction, in order to establish prophylactic interventions which can be made in patients considered to be part of a high risk group for fetal and perinatal bad outcome.

A case-control study was conducted in Bucharest Emergency University Hospital for a period of 1 year between 2015 and 2016. Patients were included in RO19.10 project “Improved healthcare for high-risk pregnancy, premature birth, and hematological diseases”. The selected cases (n = 100) were pregnant women with singleton pregnancies ranging from 30 weeks to 40 weeks, 50 were diagnosed with intrauterine growth restriction and thrombophilia and 50 patients represented the control group who had normal growth fetuses. Laboratory samples included protein C, protein S, antithrombin III, homocysteine and lupus anticoagulant. Genetic analysis collected during the study included mutations of factor V, gene MTHFR, mutation of factor XIII, polymorphism mutation of PAI 4G / 5G and EPCR gene mutations.

The incidence of hereditary thrombophilia was 54% (n=27) for MTHFR C677T heterozygous in IUGR group and 36% (n=18) in control group.

The highest incidence of thrombophilia had the mutation of the protein S deficiency 62% (n=31) as well as the pattern Factor V Leiden heterozygous mutation 52% (n=26) in the IUGR group.

A total of 75 patients came from urban areas, 25 from rural areas.

The mean age of patients included in our study was 30 years.

A total of 50 patients included in the study and diagnosed with thrombophilia had not any pregnancy lost, 21 said they had lost a pregnancy, 11 patients lost 2 pregnancies, and 5 patients reported loss of 3 or more pregnancies. Also in IUGR group 30 pregnant women were diagnosed with high risk thrombophilia and received thromboprophylactic treatment with LMWH - Enoxaparin, 40 mg once daily, and 20 women were diagnosed with low risk thrombophilia.
This study highlighted that inherited thrombophilia in the case of intrauterine growth restriction plays an important role, in which case MTHFR mutations and protein C deficiency are most often involved. IUGR is a major problem for both obstetrician and neonatologist, by associating increased morbidity and mortality among preterm newborns. Also routine screening for thrombophilic modifications is not recommended.

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COI: None declared
ID: 525

TITLE: THE APPLICATION OF DRIED BLOOD SPOTS FOR THE ASSESSMENT OF MATERNAL AND NEONATAL VITAMIN D STATUS

AUTHORS: Hsin-Chung Huang 1; Chien-Yi Chen 2; Po-Nien Tsao 3; Hung-Chieh Chou 4; Ting-An Yen 5; Wuh-Liang Hwu 6; Yin-Hsiu Chien 7

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CONTENT:

The health impact of vitamin D deficiency is especially important during pregnancy and infancy, but the epidemiological data is lacking in Taiwan. The difficulty in obtaining adequate blood sample is the major resistance in determining neonatal vitamin D status. The purpose of this study is to develop a novel screening test by dried blood spots (DBS) and the accuracy is compared with the standard serum test in infants and their mothers.

This is a cross-sectional study of the infants who is under 1 year of age and their mother from June 2017 to June 2018. After informed consent was signed, around 2.5 cc blood was collected from artery or vein. The blood sample was first to fill five DBS in a card, and then serum was collected from the rest blood sample after appropriate centrifuged. DBS were analyzed with LC/MS/MS assay, and the serum 25OHD levels (ng/ml) was measured by LIAISON® (DiaSorin, Inc, Stillwater, MN, USA).

Totally 129 DBS samples were available for analysis and compared to serum sample, 37 from newborn, 41 from infants and 51 from mothers. 25OHD concentrations in DBS and serum were highly correlated (Pearson r=0.8117, 95% CI 0.7408 to 0.8647, P < 0.0001). In the 45 deficient cases (serum 25OHD level 12 ng/ml, but only 1 had DBS level >20ng/ml. In the 83 inadequate cases (serum 25OHD level 20 ng/ml, but only 1 had DBS level >30ng/ml.

Using DBS to measure 25OHD level is a valid and practical method for screening vitamin D deficiency. Further larger study is warranted.

COI: None declared
ID: 551

**TITLE:** CARDIOVASCULAR PROFILE SCORE IN PATIENTS WITH NON-IMMUNE HYDROPS FETALIS AND CARDIAC ANOMALIES

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**CONTENT:**

Non immune hydrops fetalis (NIHF) in fetuses with cardiac anomalies is associated with high perinatal mortality. Regardless of the etiology of the disease that causes hydrops, fetal myocardial function must be evaluated. Hofstaetter et al. used the cardiovascular profile score (CVPS) to assess myocardial function in fetuses with NIHF, and showed that those who died prenatally or postnatally had lower CVPS values (median 5), than survivors (median 7). The aim of this study was to explore whether the CVPS correlates with fetal outcome in a selected population of patients with NIHF and cardiac anomalies.

In this retrospective study, we included fetuses with NIHF and a cardiac anomaly. The CVPS was calculated using information obtained by fetal echocardiographic examination. Five parameters were evaluated: 1) fetal hydrops, 2) cardiothoracic ratio, 3) pulsed Doppler study of the atrioventricular valves, 4) Doppler flow velocimetry of the umbilical artery and 5) Doppler flow velocimetry of the ductus venosus and umbilical vein. A score of two was attributed to each category for normal findings. In case an abnormality occurred, the CVPS decreased by one or two, depending on the severity of the findings. Perinatal mortality was defined as intrauterine fetal demise or death in the first six months of life. The CVPS was calculated once per fetus. No longitudinal analysis was performed.

Between 2007 and 2018, 90 patients with the diagnosis of NIHF were referred to the Department of Obstetrics and Gynecology of the Johannes Gutenberg University in Mainz. Among them, seventeen revealed a cardiac anomaly. After exclusion of six pregnancies (one termination of pregnancy and five because of incomplete data), eleven cases were left for analysis. Mean gestational age at which the CVPS was calculated was 28+5 weeks. One fetus died in utero (CVPS 5). Of the remaining ten hydropic fetuses, three newborns died in the neonatal period (27.3%) and seven survived after a six months surveillance period (63.6%). Median CVPS of all fetuses was 7. Surviving fetuses showed significantly higher CVPS values (median 8) than fetuses who died (median 5, p-value=0.009).

Although the study was limited to a small number of patients, our results point towards a positive correlation between CVPS and fetal outcome in fetuses with NIHF and cardiac anomalies. We recommend the integration of the CVPS in the surveillance of all hydropic fetuses and to further investigate its use as a prognostic marker.

**COI:** None declared
ID: 561

TITLE: INVOLVING PREMATURE NEWBORNS’ PARENTS IN REVIEWING A NEONATOLOGY STUDY CONSENT MATERIAL

AUTHORS: Maude LUHERNE 1; Charlotte BOUVARD 2; Guy CARRAULT 3,4; Patrick PLADYS1,3,4,5

AFFILIATIONS: 1 CHU Rennes, Neonatology, France
2 SOS-prema parent association, France
3 Inserm 1099 signal and images analyses, Rennes, France
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CONTENT:

Obtaining patient’s informed consent is especially a challenge in neonatal intensive care units (NICU) where parents and infants are frequently exposed to difficult situations. While parents value to be asked for consent and to actively take part to the consent process, written material prove to be little used by parents in deciding whether to consent. Literature shows that written information sheets are valued by parents and clinicians but are often perceived as complex and not adapted to their information needs. Empirical investigations examining parental perspectives on consent material are still lacking.

Our objective was to investigate parents’ review of Institutional Review Board-validated information sheet and consent form of an ongoing study on premature newborns (Digi-NewB) through a qualitative study based on open-ended questionnaire and inductive analysis approach. Digi-NewB is an EU-funded Digi-NewB study (NCT02863978) aiming to develop a decision support system for an early diagnosis of neonatal infection. We studied parents’ own review of the letter of information and consent form previously validated by the Institutional Review Board. We involved voluntary parents members of a French national network representing parents of premature newborns “SOS Prema”. Their comments were classified and categorized. Categories were improved until saturation was reached.

Five categories emerged from the 29 parents who replied to the consultation (115 comments): two on general levels and three on specific levels. 19 parents had comments on the overall comprehensiveness of the document and 14 on form corrections, while 9 parents had specific comments on the decision-making and consent process, 8 parents on the study impact and 7 parents on data management processes. Their comments aimed in particular at improving understanding of the material and its readability, and at anticipating how the consent process and study would impact their and their newborn life at the hospital. Parents tend to value to be informed on data management, treatments and analysis aspects.

Experienced parents involved in the study operated a different review than the ethical board.

COI: None declared
**ID:** 674  
**TITLE:** RECOMMENDATIONS FOR PREVENTION AND INVESTIGATION OF SUDDEN UNEXPECTED POSTNATAL COLLAPSE (SUPC) IN INFANTS IN THE FIRST WEEK OF LIFE  
**AUTHORS:** Laura Ilardi 1; Irene Picciolli 2; Simona Perniciaro 3; Concetta Buggè 4; Paolo Tagliabue 5; Stefano Martinelli 1  
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**CONTENT:**

SUPC defines term or near-term infants over 35 wks who are well at birth, with a normal 5 min Apgar score and deemed well for routine care, who collapse unexpectedly within 7 days of birth, in a state of cardiorespiratory extremis that requires resuscitation with intermittent positive-pressure ventilation and who either dies or requires intensive care. Incidence is underestimated and etiology is not well understood but risk factors have been identified. The aim of our work was to provide a practical and easy-to-use guide to educate clinicians in order to prevent SUPC and to help the management and the diagnostic process following an event, both in case of infant’s survival or exitus.

The SUPC Workgroup has met periodically since April 2016. We reviewed the international scientific literature in order to apply evidence into our Italian birth centers. Firstly we focused on SUPC prevention, clearly defining risk factors and assuming that standardized procedures have to be promptly available. Then we dealt with SUPC event management, using case reports experience, British Guidelines and Italian Sudden Infant Death Syndrome (SIDS) and Unexpected Fetal Death laws as main references. We involved a multidisciplinary team of experts to define the investigations that need to be carried out in order to guide clinicians in the complex diagnostic pathway.

We defined roles and responsibilities for all health professionals involved in newborn and mother care and we promoted a widespread education of parents and clinicians. Two observational checklists were created: 1) early skin to skin (SSC) newborn evaluation, every 15 min for the first 2 hours (neonatal position, breathing, reactivity, skin color and temperature) 2) rooming-in surveillance, 2 evaluations between 3rd and 12th hours and then every 6 hours (infant’s wellbeing and parent’s continuing education). Then we created an anamnestic datasheet to use in case of SUPC, detailing full parental medical history, obstetric and newborn records and circumstances of event. We designed two different quick reference tables to use in case of infant’s survival or exitus. We listed laboratory tests on different biological samples, procedures and histopathological assessment.

A pocket vademecum has been printed and distributed to Italian neonatologists. The aim of the recommendations is to standardize the strategies of prevention of SUPC in all Italian birth centers and provide a tool for quick consultation for the management of an event that could hesitate dramatically in serious neurological outcomes or death. Complying with the recommendations would also help the medical staff in cases of medical-legal disputes.

**COI:** I was a speaker at a Master class on the LISA technique organized by Chiesi (2017)
ID: 677
TITLE: THE IMPACT OF TRANSPORTATION ON NEWBORNS MORBIDITY IN OUR NEONATAL INTENSIVE CARE UNIT, DURING 2016.
AUTHORS: Aikaterini Konstantinidi, Rozeta Sokou, Evaggelia Tavoulari, George Katsaras, Konstantinos Adamopoulos, Katerina Lampropoulou, Stelios Sotirakos, Polytimi Panagiotounakou.
AFFILIATIONS: NICU, Nikaia General Hospital “Agios Panteleimon”, Piraeus, Greece

CONTENT:
A lot of studies have dealt with the factors potentially affecting the morbidity of sick neonates but only few of them have focused on the transportation conditions, and their potential detrimental impact on the newborn short-outcome. Indeed, vibrations, noise, travelling mode, duration of travel as well as the skills of the transport team to monitor and assess patients, and give appropriate measures of resuscitation when needed, may contribute to the unsteadiness of the transported newborns, and determine their final evolvement. We aimed to assess the impact of transportation on the morbidity of newborns transferred to our Neonatal Intensive Care Unit (NICU).

229 newborns hospitalized in our NICU within one calendar year (2016) were included in the study. The newborns were grouped according to 1) their birth location (A: inborn, B: outborn), and 2) their birth weight (2500 grams). The body temperature on admission, and morbidity factors such as hypoglycemia, hypoxia-perinatal stress, Acute Respiratory Distress Syndrome (ARDS), Intraventricular Hemorrhage (IVH), bronchopulmonary dysplasia (BPD), moderately increased echogenicity in brain ultrasound after the 14thday of life, retinopathy of prematurity (ROP), sepsis, duration of oxygen therapy, and hospital stay were recorded in all study neonates. Electronic patient records were used for the retrospective collection of data.

The relative risk for every individual morbidity factor was calculated. The population of outborn neonates (n= 136) had greater risk of suffering from ARDS (11,9%), air leak syndrome (105%), IVH (11,1%) και BPD (83%) when compared with inborn neonates (n= 93).

Adequate neonatal transport is a key component of care of the sick newborns who require referral to tertiary care center as it affects the neonatal morbidity. Despite advances in technology and education, the antenatal transport (when possible) represents the favored transportation mode for newborns, since the mother utero still remains the optimal transport incubator.

COI: None declared
ID: 693

TITLE: THE ROLE OF PLACENTAL AUTOPHAGY IN PRETERM MORBIDITIES: A PROSPECTIVE COHORT STUDY

AUTHORS: Burak Deliloglu 1; Funda Tuzun 1; Anıl Aysal Ağalar 2; Erdener Ozer 2; Merve Cengiz 1; Nuray Duman 1; Hasan Ozkan 1

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CONTENT:

Autophagy is an intercellular lysosomal degradation process. This process contributes to basal cellular and tissue homeostasis, as well as developmental regulation in higher organisms. Conditions like hypoxia, starving, infection, free oxygen radicals trigger autophagosome activity. The importance of autophagy has been shown in pathogenesis of certain morbidities in immature animal models. The aim of this study is to determine the relationship between placental autophagy activity and morbidities in extremely preterm infants.

In this prospective cohort study infants between 24-29 gestational weeks were evaluated. Maternal and neonatal data were collected. Placental histologic evaluation was performed by two blinded pathologists. Placental findings categorized as vasculopathy and/or intrauterine inflammation. As an autophagy marker, placental LC3 immunohistochemical staining was scored semi-quantitatively from 0 to 2. Intraventricular hemorrhage, periventricular leukomalacia, culture proven late onset neonatal sepsis, necrotizing enterocolitis, retinopathy of prematurity and bronchopulmonary dysplasia were listed as neonatal morbidities.

Totally, 59 preterm infants and placentas were eligible for the study. The mean gestational age and mean birth weight were 27.0 ± 1.5 weeks and 953 ± 257 grams respectively. Placental histology results were: n=34 (58%) vascular pathology, n=7 (12%) chorioamnionitis and n=16 (27%) coexistence of vasculopathy and inflammation. Anti-LC3 staining was found in 42 (73%) placentas, 7 (12%) of them showed intense staining (immunohistochemical score 2). Increased placental autophagy activity was found to be increased in all evaluated preterm morbidities, particularly, severity of placental autophagy seems to be an important predictor of any preterm morbidity or mortality.

This is the first study to investigate the relationship between placental autophagy and preterm morbidities. Our preliminary study shows a clear trend towards increased placental autophagy activity in preterm infants with morbidity or mortality in extremely immature babies. This study indicated that placental autophagy may be a promising biomarker for predicting preterm morbidities and it may contribute to new treatment options in the future.

COI: None declared
ID: 736

TITLE: PREDICTORS OF EARLY MORTALITY IN VERY LOW BIRTH WEIGHT INFANTS

AUTHORS: Mehmet Buyuktiryaki1, Evrim Alyamac Dizdar1, Bengü Karacaglar1, Esra Beser Ozmen1, Fatma Nur Sari1, Serife Suna Oguz1, Cuneyt Tayman1

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CONTENT:

It is very important to determine the factors predicting early mortality in very low birth weight (VLBW) premature infants who constitute the most sensitive group in neonatal intensive care units. We aimed to describe the potential risk factors of mortality in the first seven days of VLBW infants.

Data of all preterm infants born in our clinic at 24 0/7 and 29 6/7 gestational age between 2013-2017 were retrospectively analyzed. In addition to demographic and clinical features, laboratory tests of patients were recorded. Infants with major congenital anomalies and incomplete data were excluded from the study. VLBW infants who died during the first 7 days of life were determined as study group and were compared with control group who were alive.

117 (14.3%) of VLBW premature infants included in the study died within the first seven days. Mean gestational age and birth weight were significantly lower in the study group in comparison with control group [(26.1 ± 1.8 - 27.6 ± 1.6 weeks), p <0.001; (780 ± 246 - 1032 ± 237g), p <0.001, respectively]. The first and fifth minute APGAR scores were significantly lower while CRIB score was higher for VLBW newborns who died. Surfactant requirement for respiratory distress syndrome, early onset sepsis and grade III-IV intracranial hemorrhage were significantly higher in the study group. Multivariate logistic regression analysis revealed early onset sepsis, surfactant requirement two or more, birth weight 50 pg / ml as independent risk factors for mortality (Table).

In addition to current mortality scores, other simple clinical and laboratory parameters may predict early mortality in preterm infants. This may provide an opportunity for physicians to carefully assess the delicate preterms in the early days of life

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Independent risk factors for early mortality

COI: None declared.
ID: 819

**TITLE:** EFFICACY OF A DISCHARGE CHECKLIST FOR NEONATES IN REDUCING NEONATAL MORBIDITY AND MORTALITY

**AUTHORS:** Murila F 1, Odundo D 2, Wamalwa D 3

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**CONTENT:**

Of the estimated 5.9 million child deaths in 2015, almost 1 million occurred in the first day of life while about 2 million deaths occurred in the first week. Most of these deaths are readily preventable or treatable with proven, cost-effective interventions. The checklist can act as a tool to reduce neonatal morbidity and mortality. The primary objective was to determine the impact of introducing a standardized neonatal discharge checklist on the rate of hospitalization during the neonatal period at the Kenyatta National Hospital. The secondary objective was to determine the acceptability of a structured postnatal discharge checklist among healthcare workers at Kenyatta National Hospital.

A mixed method study that included the Quasi experimental pre-post intervention design and focus group discussion was carried out in the postnatal wards at Kenyatta National Hospital, which is the main referral hospital. Neonates with no complications awaiting discharge were enrolled for the study after consent was obtained. Qualitative and quantitative methods were incorporated in this study. Structured questionnaires were administered to both the mothers in the postnatal ward and the trained nurses on the checklist for the danger signs of newborns, breastfeeding, immunization and the use of chlorhexidine in cleaning the umbilical stump. Qualitative data was obtained using focus group discussions.

Hospitalization rates were 7.4% and 3.2% in the pre-intervention and post-intervention periods respectively. There was significant improvement in knowledge on cord cleaning after the intervention (p =<0.001) as well as on identifying newborn danger signs (p=0.005). There was a trend noted for reduced hospitalization following introduction of the neonatal discharge checklist.

There was a trend for reduced hospitalization following implementation of the neonatal discharge checklist. Acceptability of the discharge checklist was appreciated by healthcare workers while a call for collaboration with the paediatric department was emphasized.

**COI:** None declared