(mean age of onset = 5.21 days). Imaging identified stroke in 6 cases, subrenal aorta thrombosis in one case. We identified one case of protein S deficiency, 4 cases of isolated factor V Leiden mutation, one case of isolated hyperhomocysteinemia and one case of combined factor V Leiden and hyperhomocysteinemia. The last one was presented with multiple cerebral and abdominal thrombosis. Family screening was performed in 3 cases. Treatment was based on Fresh frozen plasma transfusion in newborn who had severe protein C deficiency. None of our patients was treated with thrombolysis. During follow-up, there was no recurrence of thrombotic events. Three patients had neurological deficit. Two newborns died of disseminated intravascular coagulation.

Conclusions Thrombotic disorders at an early age should lead to performing thrombophilia testing. Family screening is essential to detect *asymptomatic* deficiency. Clinical features and treatment depend on thrombosis localization and extension.

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MANAGEMENT OF ABDOMINAL MASSES IN THE NEWBORN: EXPERIENCE OF THE NEONATOLOGY DEPARTMENT OF Sfax (TUNISIA)

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Background Abdominal masses in neonates reflect a wide spectrum of diseases, from lesions that can cause significant morbidity and mortality, to conditions readily corrected surgically, to entities which may be safely observed.

Objective To evaluate epidemiology, clinical features, management and outcome of abdominal masses in the newborn.

Methods It's a retrospective study of all cases of abdominal masses registered in the neonatology department of Sfax between 2004 and 2019.

Results Thirteen patients were included in the study. A female predominance was noted (sex ratio = 0.18). Antenatal diagnosis was made in 10 cases. Seven patients were born via cesarean section. The mean gestational age was 37.7 weeks. Mean birth weight was 3160 g. Three patients had fetal acute suffering and respiratory distress. The most frequent physical finding was palpable abdominal mass (n=9). Ultrasonography (n=13), abdominal scan (n=3) and MRI (n=4) were used for diagnosis. Tumor sizes ranged from 4.6 to 10 cm. We had identified renal cystic lymphangioma (n=1), Infantile myofibromatosis (n=1), ileal duplication (n=3), hydrocolpos (n=4) and ovarian cysts (n=4). Total resection was the treatment for ileal duplication, ovarian cysts and lymphangioma cysts cases. The newborn with infantile myofibromatosis received medical treatment (vincristine) after incomplete resection. The treatment of hydrocolpos was based on simple hymenotomy in two cases and laparotomy in the other two complicated cases. Mean follow-up time was 24 months. Only one patient who had giant hydrocolpos died of refractory shock and acute kidney failure 3 days after surgery.

Conclusions Most neonatal abdominal masses are due to benign lesions. Some of them may provide diagnostic difficulties. Most of masses require surgical treatment, which can be safely performed in small infants by trained personnel. However genuine controversy exists in the management of some lesions including infantile myofibromatosis.

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PLANNING FOR THE NEW CHILDREN'S HOSPITAL: ANALYSIS OF PATIENT POPULATION AND RESOURCE USE IN THE NEONATAL UNIT OF TEMPLE STREET CHILDREN'S UNIVERSITY HOSPITAL

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Aims The neonatal service of Temple Street Children's University Hospital (TSCUH) includes St. Michael's B ward (SMB; 8 beds) and the HDU (6 beds). Admissions to the HDU are restricted to transfers from maternity hospitals (Brennan & Murphy, 2018). The new children's hospital (NCH) will establish a single entity to integrate the services currently provided by TSCUH, OLCHC, and the NCH Tallaght (Department of Health, 2017). The aim of this study is to produce qualitative analysis of the patient population/resource use in the neonatal HDU/SMB in order to plan for delivery of care in the NCH. **Methods** Using the nursing admissions books, data was retrospectively collected for 6 months of admissions (July to December 2017).

Results In the HDU (N=59), 15% of patients had a CGA of <37/40. The median age was 5 days; the median LOS was 8 days (range: 1 – 125 days). 71% of patients were jointly admitted by Neonatology/surgical specialty. The most common diagnoses were myelomeningocele (14%) and TOF (12%). 19% of patients required NIV; 27% received TPN.

In SMB (N=279), 2% of patients had a CGA of <37/40. The median age was 6 weeks; the median LOS was 2 days (range: 1 – 22 days). 71% of patients were admitted under the care of General Paediatrics. The most common diagnosis was bronchiolitis (22%) with a clear seasonal trend observed. 9% of patients required NIV.

Conclusion The neonatal ward in TSCUH offers a unique service, allowing access to specialist care that is not available in the maternity hospitals, and providing a high level of support to term/premature newborns. It is clear that a specialised neonatal ward is necessary to safely care for this patient population, along with separation from the significant burden of infection that is present on high-turnover general wards. We recommend the inclusion of a similar unit in the NCH.

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P446

ASSOCIATION OF MATERNAL HEMOGLOBIN LEVEL WITH GESTATIONAL AGE AND BIRTH WEIGHT OF BABIES

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Background Two million people, that is over 30% of world's population is anemic. In Nepal prevalence of anemia in pregnancy is 42% and low birth weight varies from 12 to 15

percentage. It has been noted from the previous study, the prevalence of LBW in BPKIHS is 17.56%. The low birth weight is the leading cause of morbidity and mortality among neonates and one of important parameter known to predispose the newborn to increase morbidity and mortality with LBW due to low hemoglobin level of mother. Hence we designed Cross Sectional descriptive study to find out the association between maternal hemoglobin level with gestational age and birth weight of the babies.

Methods 496 mothers admitted for delivery were recruited and their hemoglobin was measured. Hemoglobin in previous trimesters was noted from their antenatal record. The gestational age and birth weight of the babies recorded. Descriptive statistics was used for baseline characteristics. Comparison of means was done using student's t test and analysis of variance to determine associations between the maternal hemoglobin status and the birth weights.

Results Out of 496, around 38.5% mother were anemic at some point of time during pregnancy. 42% were anemic during first trimester, 26.4% during second and 21.1% during third trimester. Mean birth weight of babies born to anemic and non-anemic mother was 2876 and 2949 gram respectively ($p=0.172$). Mean POG in anemic and non-anemic mother was 39 2/7 week and 39 5/7 week respectively ($p=0.337$). There was 9.28% premature and 90.72% mature baby. Frequency of LBW babies in anemic and non-anemic mother were 18.1% and 15.5% respectively ($p=0.58$). The correlation coefficient of gestational age and birth weight of baby with maternal hemoglobin were 0.003($p=.975$), 0.072($p=.215$), 0.13($p=0.005$) and 0.065($p=0.421$), 0.157($p=0.007$), 0.091($p=0.05$) in first, second and third trimesters respectively.

Conclusion There were significant positive association between maternal hemoglobin level and birth weight and gestational age of the babies. Birth weight and Gestational age of the babies were low in mothers with anemia and increased as maternal hemoglobin increased and a U-shaped relation was observed between different range of hemoglobin and Period of gestation.

P447 ROLE OF SERUM PROCALCITONIN AS MARKER OF NEONATAL SEPSIS

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Background Despite the advances in perinatal and neonatal care and use of newer potent antibiotics, the incidence of neonatal sepsis remains high and the outcome is still severe. Early diagnosis of neonatal sepsis followed by appropriate treatment decreases mortality and morbidity in infants.

Objective To study the ROLE OF SERUM PROCALCITONIN AS A MARKER OF NEONATAL SEPSIS and To compare procalcitonin with CRP as a diagnostic marker for neonatal sepsis

Methodology Hospital Based prospective observational study.

50 neonates (preterm & term) with clinically suspected sepsis were studied during 1 year from Jan 2016 to Dec 2016 in Chaitanya Hospital Chandigarh. Conventional sepsis workup was done in all cases and the diagnosis of neonatal sepsis was proved based on the results of blood culture. The serum Procalcitonin was measured by quantitative Enzyme linked

immuno fluorescence assay and the results were compared to CRP levels between the neonates with or without proven sepsis.

Results Of the total 220 babies admitted in NICU during that period 50 were eligible for study and analyzed. 24% babies had Definite Sepsis, 60% had Probable Sepsis and 16% babies had No Sepsis. Of the neonates with suspected sepsis 24% had culture positive and 76% were culture negative. Mean PCT level was 13.27 $\pm$ 33.2 ng/ml. The mean PCT levels were higher in Meningitis group (Mean PCT-26.45) than no meningitis group (p value-0.216). The mean PCT levels was highest in neonates whose TLC>5000 (Mean PCT-18.5) (p value-0.002). The mean PCT levels were higher in all 3 infection groups in neonates with CRP>0.5 mg/dl (positive) than that of neonates with CRP $\leq$ 0.5 mg/dl (negative). Mean PCT levels were 0.433, 52.22 and 27.95 in no infection, probable infection and definite infection group respectively. (p value-0.001) Evaluating CRP as a diagnostic marker for definite neonatal sepsis with cut off value as 0.5 mg/dl, had sensitivity of 41.67%, Specificity of 89.47%, Positive Predictive Value of 55.56% and Negative Predictive value of 82.93%. Evaluating PCT as a diagnostic marker for definite neonatal sepsis. The Sensitivity, Specificity, Positive Predictive Value, Negative Predictive Value were 83.3%, 26.32%, 26.32% and 83.3% respectively taking cut-off level of procalcitonin to be >0.5 ng/ml.

Conclusion The importance of procalcitonin in diagnosing neonatal septicaemia becomes more useful when it is used along with other investigations. Especially in identifying the group of neonates who may not be infected and may not require antibiotics.

P448 9 YEAR EXPERIENCE AND OUTCOMES OF TRUNCUS ARTERIOSUS IN A TERTIARY NEONATAL INTENSIVE CARE UNIT

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Background Congenital heart defect affects around 10 in a 1000 live born babies. Truncus arteriosus is a rare conotruncal defect in which a common arterial trunk supplies systemic, pulmonary and coronary circulation. The incidence of truncus arteriosus is quoted as 1% of all congenital heart malformations.

Aim To evaluate the initial neonatal management and long-term outcomes of newborns with truncus arteriosus.

Method We conducted a retrospective review of all newborns with truncus arteriosus admitted to our neonatal unit and referred to a surgical centre between 2010 and 2018. Data were collected from Badger and Cardiology databases to evaluate the initial neonatal management and long-term outcomes of this cohort of patients.

Results Fifteen newborns with truncus arteriosus were admitted to our neonatal unit. Their mean gestational age was 36 weeks with a mean birth weight of 2407 grams. Cardiac defects were detected prenatally in 12 patients (80%). Three babies were diagnosed postnatally. One following failed pulse oximetry screening requiring non-invasive respiratory support and 2 diagnosed following on-going respiratory support on echocardiography. Respiratory support was initiated within the