3% Saline (AHS) 15 ml/kg, n=10, over 30 min. Hemodynamic parameters determined by femoral arterial thermodilution calibrated pulse contour analysis, central venous saturation (SvO_2), and intramucosal gastric pH (pHi) were recorded before and after fluid load. Non-parametric correlations between pre-infusion parameters and post-infusion changes with cardiac index increase (ΔCI) were analyzed.

Results CI (median; IQR) increased from 2.1 (1.7–2.7) to 4.1 (3.6–4.6) L/min/m^2. There were no correlations between ΔCI and pre-infusion parameters or post-infusion changes in most parameters. Only pre-infusion stroke volume index (SVI) and global end diastolic volume index (GEDVI) showed strong negative correlation (SVI r: –0.61, p: 0.009; GEDVI r: –0.75, p: 0.001). ΔCI showed also strong correlation with SVI increase (r: 0.89, p: 0.000) and GEDVI increase (r: 0.88, p: 0.000).

Conclusion Pre-infusion SVI and GEDVI were predictor parameters of fluid response in this model of hemorrhagic shock. Other parameters previously proposed as predictors of fluid response as SvO_2, PPV and SVV were not able to predict changes in cardiac index.

793 MANAGEMENT OF ACUTE CIRCULATORY FAILURE IN CHILDREN BASED ON THE EVALUATION BY ECHOCARDIOGRAPHY IN PEDIATRIC INTENSIVE CARE UNIT (PICU)

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Background and Aims Echocardiography has an important role to perform in the PICU, as it is an efficient, accurate, non invasive diagnostic modality that can aid the intensivist in the management of the acute circulatory failure in children to Improve the hemodynamic Management.

The Aim is to describe how echocardiography can answer 3 of the more commonly asked questions that arise in the PICU: Complete the clinical diagnosis, guide the therapeutics, and Repeat the measures for the evaluation.

Methods In this prospective study, children who had an acute circulatory failure, the evaluation of the cardiaque output, contractility and the indications of filling were obtained by echocardiography. Each patient had a measurement before therapeutic and after to evalulate treatment.

Results In 20 children, 06 patients had septic shock, 09 with sever sepsis and 05 with severe brain injury. Median age was 3.5 years.

Intervention Standardized volume expansion (VE) when the Respiratory variations in aortic blood flow (ΔV Peak Ao > 12%), the VE-induced increase in LV stroke volume was > 15%.

Treatment inotrope when, is an acute circulatory failure related to impaired myocardial contractility responsible for a decrease in cardiac output (Cardiogenic shock or myocardial dysfunction in the septic shock).

Norepinephrine when the mean pressure decrease with normal myocardial contractility and cardiaque output.

Conclusion Echocardiography is a incountournable tool in the evaluation and management of acute circulatory failure in children in PICU because its guide therapeutic, evalulate the efficiency of treatment and improve the surveillance.

794 A PDA SCORE AT 48 TO 72 HOURS OF AGE (MANITOBA SCORE) PREDICTS A HEMODYNAMICALLY SIGNIFICANT PDA

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Objectives To determine whether a composite PDA score (Manitoba score), determined at 48–72 hours of age can predict a hemodynamically significant PDA (HSPDA) requiring closure in Infants <31 weeks.

Study Design Infants <31 weeks GA, admitted August 2010 to September 2011, to NICU Winnipeg, Canada, following parental consent, had a blinded echocardiogram and a novel PDA score determined at 48–72 hours postnatally. The PDA score is a numerical score (maximum 28) incorporating echocardiographic parameters reflective of both volume and pressure overload (max score 15), and clinical, radiological and laboratory features of both pulmonary over-circulation and systemic hypo-perfusion (max score 13). PDA diameter >1.5mm with left to right non-restrictive shunt by echo was considered for this study the reference standard for HSPDA requiring treatment. All components of the score were correlated with this reference standard.

Results 70 of 132 eligible neonates were studied. HSPDA was present in 24 (34%) infants, a non significant PDA in 32 (46%) and no PDA in 14 (20%). Infants with HSPDA were of lower birth weight and less mature than those without (non-HSPDA/no PDA) (905±46 vs. 1218±43 grams; p<0.001, 28.6 ±0.3 vs. 26.8± 0.3 weeks). Both the clinical and echo component correlated strongly with each other and with overall score (p<0.001, Kendall's tau test. The PDA score and components significantly predicted HSPDA.

Conclusion The Manitoba PDA score performed at 48–72 hours of age predicts HSPDA who eventually received treatment. Use of PDA score may reduce the number of infants who are treated with non significant PDA.

795 ARTERIAL BLOOD PRESSURE VARIATION IN CRITICALLY ILL NEWBORNS. CAN WE PREDICT THE VOLUME STATUS?

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Volume expansion is one of the most frequent used interventions in critically ill newborns, despite lack of hard evidence. In a case of a truly hypovolaemic patient, for example after massive hemorrhage secondary to an abruptio placentae, volume expansion is life-saving. However, volume expansion in a normo- and/or hypervolemic newborn infant is not without risk. Excessive fluid intake is associated with a disturbed neurologic outcome, an increased prevalence of chronic lung disease and an increased mortality. It would be profitable when the volume status of a critically ill newborn infant could objectively be assessed so the response to volume expansion could be predicted ('fluid responsiveness' - FR). The clinical assessment of the volume status is rather unreliable. Recently new dynamic parameters are introduced that reliably predict fluid responsiveness in ventilated adult patients. These variables, like 'pulse pressure variation' (PPV) and 'systolic pressure variation' (SPV), are based on arterial blood pressure variations secondary to mechanical ventilation (heart-lung interaction).This inspired us to study the phenomenon of arterial blood pressure variation in critically ill newborn infants under several clinical conditions. The (preliminary) data will be presented.

796 PALMER'S POINT FOR SAFE INSERTION OF PERCUTANEOUS DIALYSIS CATHETER IN NEONATES

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Background and Aim Acute renal failure occasionally occurs in neonates secondary to generalized sepsis or major cardiac surgery. Insertion of a peritoneal dilyasis (PD) catheter is needed in majority of cases. Open laparotomy techniques are prone to bleeding and dialysate leakage. Percutaneous bed-side insertion of PDs is the preferred method in our setting.
Methods In a retrospective study, over a 8-year period, neonatal PDs were inserted using Palmer's point at the bed-side in intensive care unit. Plamer's point is an anatomical landmark; it is on the left anterior axillary line and just in front of the 10th rib. This point is known to have the least amount of adhesions and therefore blind insertion of catheters and trocars are least likely to cause iatrogenic gut perforations.
Results 51 PDs were inserted in that period; in 7 cases pervious gastrostomy or pacemaker forced an insertion of PD in the right hypochondrium resulting in 2 minor liver injuries. The remaining 44 PDs using Palmer's point were successfully placed. Dialysis was carried out for 2 weeks on average and was successful in controlling renal failure in all cases. However, in the long-term, 12 patients succumb to their septic, respiratory or cardiac lesions subsequently.
Conclusion Percutaneous bed-side insertion of PD catheter in neonates is possible, safe and successful using Palmer's point.

797 TRANSFORMING GROWTH FACTOR-B1 IN CHILDREN WITH CHRONIC LIVER DISEASE

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Background Chronic liver disease is marked by the gradual destruction of liver tissue over time. Hepatic fibrosis is a wound healing response ending eventually with cirrhosis. Transforming growth factor beta among the cytokines and growth factors known to influence lipocyte collagen synthesis.
Objectives The aim was to study the correlation between serum TGF-β1 and liver fibrosis and dysfunction.
Patients and methods: This retrospective descriptive study was carried out in the Pediatric Hepatology Clinic, Benha University Hospital, to review the files of patients diagnosed with chronic liver disease during the period from June 2008 to January 2009 and they were 40 cases. They were classified to; group IA (minimal or no liver fibrosis), group IB (marked liver fibrosis), 10 normal children (group II, control group) were collected matching with patients in sex and age.
Result Using METAVIR score, the mean TGFbeta1 in group II was higher than in group I, and the difference was highly significant between group IA and group II. Moreover the difference was highly significant between group IB and group II, but no significant difference between group IA and group III. The mean TGF beta is highly significant ($p<0.01$) between child-Pugh class A and C, also between Child-Pugh class A and B, but no significant difference ($p>0.05$) between Child-Pugh class B and C.
Conclusion TGF-β-1 cytokine increases in the plasma of children with chronic liver diseases of various etiology and may be correlated to the chronicity of the liver disease and the extent of the hepatic injury.

798 ELEVATED VALUES OF SERUM TRANSAMINASES IN CHILDREN-ONE YEAR EPIDEMIOLOGY AND ETIOLOGY STUDY

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Aminotransferases are used worldwide for the screening of liver and muscular diseases.
Purpose To indicate the prevalence of elevated serum aminotransferases at the time of child's admission, the epidemiologic aspects of these abnormal values.
Materials and Methods We performed an observational, retrospective study (January–December 2008) in which we studied demographic data (age, sex distrbution), biological findings, correlation between age and level of enzymes or etiology. The analysis was performed usig Microsoft Excel 2007 and SPSS Statistics 17.0.
Results We studied 925 children aged 1month-18 years (8% of 11797 admission in a pediatric hospital) with abnormal serum aminotransferases. The highest frequency was noticed in male (54.4%, p<0,008). In the majority of cases hepatocytolysis was minor. Corelating the aminotransferases values with age we discovered that lower values are more prevalent with smaller ages, while higher values were encountered in children above 14 years. As etiology the majority of cases is represented by cytolysis with no obvious cause (87%) and, out of this population, by non-specific infectious diseases.
Conclusions Elevated serum aminotransferases are frequently encountered in hospitalized children. The lower values prevail in the context of non-specific infectious diseases. Small children are more susceptible to hepato-muscular injury by non-specific infectious diseases. Therefore we highlight the necessity for further prospective studies in order to investigate if incidentally discovered abnormal serum aminotransferaseses children.

799 FACTORS INFLUENCING EARLY NEONATAL MORTALITY IN RETRIEVED EXTREME PRETERM NEONATES

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Background and Aims Neonatal care is increasingly delivered within regionalised networks, often necessitating transfer of vulnerable preterm babies from local neonatal units to neonatal intensive care units (NICU). Extreme preterm infants (gestation < 28 weeks) born in hospitals without a NICU have a relatively higher mortality rate than those inborn in hospitals with NICU. In this study we aim to investigate the factors that impact on early (7-day) neonatal mortality in retrieved extreme preterm infants.
Methods Inclusion criteria (< 28 weeks gestation, transfer < 24 hours of birth, complete data entry) were applied to all entries in a regional transfer service database between January 2005 and December 2011 (n=7669) leaving 621. Early mortality was analysed against gestational age, birth weight, lowest pH, temperatures on NTS arrival at referring unit (T1), departure from referring unit (T2) and arrival at the receiving unit (T3). Statistical analysis was carried out using SPSS v18.
Results 7-day mortality was 88 (14.17%). Mean (Range) for gestational age was 25.35 weeks (22.0–27.86), birth weight 794g (440–1650) and lowest pH (prior to transfer) was 7.28 (6.90–7.53). Only gestational age (< 0.001), birth weight ($p<0.001$) and lowest pH affected mortality individually ($p<0.001$). Mortality was not significantly affected by T1 ($p=0.152$), T2 ($p=0.265$) and T3 ($p=0.065$). To control for confounding, we performed logistic regression, after which gestational age ($p<0.001$) and lowest pH ($p=0.001$) remained significant.
Conclusion Gestational age and lowest pH significantly influence 7-day mortality within retrieved extreme preterm infants.

800 ETIOLOGY AND OUTCOME OF HYDROPS FETALIS: A SINGLE CENTER EXPERIENCE IN TURKEY

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