months) and (6.31±1.75 kg) respectively. The age and weight in group B was (7.6±3.9 months) and (4.8±1.12) kg respectively. There were no significant differences between the 2 groups in term of post operative mortality or morbidity.

**Conclusion** Failure to thrive can complicate congenital heart diseases (CHD) associated with significant left to right shunt and heart failure. FTT was not associated with increase in ICU morbidity or mortality. Attempt to optimize the body weight for age in children with CHD may not add any beneficial advantages in term of surgical risk or postoperative ICU outcome.

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**Abstract 805**

**OUTCOMES OF PEDIATRIC TETANUS IN WESTERN INDIA**

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**Background** Despite being easily preventable with a highly effective vaccine, tetanus remains a significant source of morbidity and mortality. We determined the clinical profile and outcome of management of paediatric tetanus admitted to our tertiary care hospital over 7 years.

**Methods** Retrospective chart evaluation of all patients admitted from 2005 to 2012 between age groups of 1 month and 18 years. Demographic and Clinical Profile, management of paediatric tetanus admitted to our tertiary care hospital over 7 years.

**Results** 65 patients (43 males, 22 girls) were admitted. Average age was 8.4 years. 12 children died, 32 discharged while 21 were transferred to another facility. 24/65 were unvaccinated, 21/65 partially vaccinated and 10 received proper immunization. Average incubation period (IP) was 7 days with patients with otogenic tetanus having IP of 15 days. 19 patients were ventilated for average duration of 5.74 days while 18 required tracheotomy. 25 patients had laryngeal spasms and 7 had autonomic instability. 14 patients did not receive Tetanus Immunoglobulin (TIG) while 51 received TIG in various forms (intrathecal, intramuscular or both). 5 patients who received only intrathecal survived while 13 of 19 that received both survived. 3/27 who received intramuscular tetanus died and 3/14 who received no TIG died. Odd Ratio for Death in No TIG use vs TIG use was 1.16 (CI 0.26.6, 5.3).

**Conclusions** Tetanus is prevalent in India and causes significant morbidity and mortality. 27.3% mortality shows that treating tetanus is still difficult. Use of intrathecal TIG was not associated with a beneficial effect.

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**Abstract 806**

**ARTERIAL OXYGEN TENSION AND OUTCOME AFTER OUT-OF-HOSPITAL CARDIAC ARREST IN CHILDREN**

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**Background** There is good evidence that hyperoxia after resuscitation in the newborn period can be detrimental to neurological outcome and survival. The association between hyperoxia and survival after out-of-hospital cardiac arrest (OHCA) in children has not been evaluated.

**Methods** A retrospective, observational study of children admitted to 3 PICUs after OHCA (2004–2010). Primary outcome was survival to hospital discharge. Patients were divided into three groups (hypoxia < 8kPa, normoxia 8–40kPa, hyperoxia >40kPa) based on arterial oxygen tension in the first 24 hours. The FIO2 thresholds used are based on recently published literature.

**Results** 140 patients were identified (51 hypoxia, 60 normoxia, 29 hyperoxia), with the hyperoxia group significantly older than other groups (Table). The predicted probability of death (PIM2) at PICU admission was similar across the three groups, as was the use of interventions, such as transfer between hospitals and requirement for inotropes. Survival to hospital discharge was only 14% (95% CI: 4–31) in the hyperoxia group against 27% (95% CI: 16–40) in the normoxia group and 37% (95% CI: 24–52) in the hypoxia group (p=0.08). The Odds Ratio for survival in the hyperoxia group was 0.44 (95% CI: 0.13–1.46, p=0.18) compared to the normoxia group.
Conclusions This study has observed a difference in survival related to oxygen tension status, with a trend to worsening survival from hypoxia through to hyperoxia. Confirmation of this preliminary finding is required in a larger cohort before embarking on a randomised controlled trial.

807 HYPOCORTISOLEMIA IN SICK CHILDREN ON PAEDIATRIC INTENSIVE CARE UNIT (PICU): TRANSIENT OR CAUSE FOR CONCERN

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Background and Aims Cortisol insufficiency has been reported in sick children with severe sepsis, post-cardiac surgery, and may contribute to rapid cardiovascular collapse. Hypothalamic-pituitary-adrenal axis dysfunction may play a role in low-cardiac-output syndrome. We performed a review of PICU patients to describe cortisol levels in those with suspected adrenal insufficiency.

Methods Retrospective review of PICU patients (general and cardiac cases) over 6 months from April to September 2011, who had cortisol levels checked and/or received hydrocortisone.

Results Total PICU admissions were 519, of which 30(5.7%) patients had cortisol levels. Most common indication for cortisol assessment was refractory hypotension (73%) in cardiac and sepsis patients. 12/30(40%) had cortisol levels < 500nmol/L (suboptimal response to stress), and 2/12 had undetectable cortisol levels. Of 12 with low cortisol, 50% were post-operative cardiac neonates and 50% were mix of other post-operative and chronic illness, 75% were hypotensive on inotropes and one-third of these received hydrocortisone. Hydrocortisone dose used was variable. None of the septic children had low cortisol in our study group. 50% of hypocortisolemia patients were followed up by endocrine team and had normal cortisol levels on follow-up. 10/30(33%) patients with suspected adrenal insufficiency died (50% had hypocortisolism).

Conclusions Our data shows that hypocortisolemia can be transient in sick PICU patients, and may play a role in low-cardiac-output syndrome. There is a need to identify these complex patients with high mortality, and have a uniform management policy jointly with advice and follow-up by the Endocrine team.

808 UNPLANNED READMISSION TO THE PAEDIATRIC INTENSIVE CARE UNIT (PICU): CAN IT BE PREVENTED?

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Background and Aims It is known that patients readmitted to the PICU during the same hospitalization have significantly adverse outcomes. Prevention of unplanned readmissions to the Paediatric Intensive Care Unit (PICU) is a key factor when considering the quality of care received by our patients.

Methods All admissions to the PICU during 2011 were examined and all readmissions to the unit were identified. A readmission was defined as those requiring PICU < 48 hours following discharge. Patients who were readmitted for an elective procedure within the specified time were discounted.

Results During 2011, 511 children had 615 admissions to the PICU. 12 children were readmitted for acute care having deteriorated in the ward setting. 2 of the 12 children required 2 readmissions. 5 of the readmissions took place between April and September. The remaining 9 occurred during October to March.

Conclusions It remains a subject of debate as to whether or not any of the readmissions could have been avoided as hindsight is always easy. With nearly double the amount readmissions occurring during the winter months, it could be argued that the children were discharged prematurely due to bed pressures. This a serious concern and one which we will continue to monitor.


809 PROSPECTIVE STUDY OF PEDIATRIC CARDIAC ARREST IN EUROPEAN AND LATINOAMERICAN INTENSIVE CARE UNITS

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Objective To study the characteristics of cardiac arrest (CA) and the results of resuscitation in pediatric intensive care units (PICU).

Patients and methods: Prospective, international, multicentre study. Children between 1 month and 18 years who suffered CA in the PICU were included. Sustained return of spontaneous circulation (ROSC) and survival at hospital discharge were analyzed.

Results 304 CA episodes in 250 patients were registered, 96 (31.6%) in latinoamerican and 208 (68.4%) in European hospitals. Mean age was 47.9 months, mean weight 16.4 kg and 55.6% males. The most common causes of CA were cardiac (55.9%), respiratory (31.6%) and sepsis (15.3%). ROSC was attained in 68.1% of the cases but only 40.4% survived. ROSC was higher in European 75.9% than in latinoamerican 55.4% PICUs (p = 0.001). Patients with good neurological scales before CA (PCPC <=2) had significantly higher ROSC rates (74.5% vs 33.3%; p = 0.006). Patients who had suffered a previous CA had lower ROSC percentages (51.7% vs 71.1%; p = 0.05). Respiratory and cardiac CA have higher survival rates (40% and 56.3%) than sepsis (13.5%), and neurologic and traumatic causes (31.7%) (p < 0.001). Initial respiratory arrests achieved higher survival rates than primary CA (49% vs 35.1%; p = 0.029). Patients previously receiving inotropic drugs survived less than those who received no medication (51.3% vs 58%; p = 0.001).

Conclusions Although 68% of patients who suffered a CA attained ROSC only 40% of them survived. Ethiology of CA, type of initial arrest and previous treatment with inotropics influence survival in PICU cardiac arrest.

810 MORBIDITY AND MORTALITY IN CRITICALLY ILL CHILDREN WITH SPONTANEOUS INTRACEREBRAL HEMORRHAGE

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Background and Aims Spontaneous intracerebral hemorrhage (ICH) accounts for approximately half of stroke in childhood with