

- Number of ET done over a 6 yr period.
- Patients demographics, time of ExT, Indications.
- Number of Babies who have had Inutero ExT.
- Maternal details: Blood group, antibodies.
- The level of bilirubin at which transfusion took place.
- Prior treatment pre-ExT: In-utero Tx, Intravenous Immunglobulin (IVIG) use; use of albumin infusion.
- The ExT-related complications: Any complication not present prior to the ET which occurred within 48 hrs after the ET: Defined as follows- platelet count <150, hypocalcaemia, ionised Calcium <0.8, fits, raised INR.

Methods

- Setting: Level 3 NICU.
- Retrospective notes review of patients who underwent ExT.
- January 2008–March 2014 (6.25 yrs).
- Exclusion criteria: Those for which notes were not obtained.

Results

- Total admissions to the NICU over the period = 5,000.
- Number of exchange transfusions done = 15 in 14 patients.
- 0.3% of admissions over the period.
- Table of cases.
- Total number of request made to the Blood transfusion department for blood product for exchange.

Conclusion

- Average ExT/yr in a Level 3 NICU = 2.4/yr.
- ExT is currently being used for a variety of causes.
- There were no complications related to the procedure itself.
- Complications post-ExT were all biochemical (hypocalcaemia in 13 cases) or haematologic (low platelets 13 cases)
- Use of IVIG: Given pre-Ext to all ABO, Rh cases except 2 and to the Non-immune hydrops secondary to Parvovirus.
- 1st documented case of ExT use in hyperbilirubinaemia secondary to accidental Hyperlipidaemia from TPN-Lipid infusion and Haemolysis with Anaemia post-Octenisan wash treatment for MRSA-colonisation treatment in a preterm baby.

PO-0327 IS THE GLASGOW COMA SCALE SCORE IN THE EMERGENCY DEPARTMENT LOWER DURING THE NIGHT?

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Background The body clock may through stimulation of melatonin secretion influence the Glasgow Coma Scale Score. The aim of this study was to investigate whether the time of presentation of children in the emergency department influences Glasgow Coma Scale scores.

Methods Retrospective review of 6649 records of children presenting to an Emergency Department in a District General Hospital from August to December 2012 with comparison of patients with a GCS of <15 seen during daytime (0700 to 1900) and night time (1900 to 0700) with regards to diagnosis, disease severity (Paediatric Early Warning Score), Glasgow Coma Scale Score, age, gender and ethnic group.

Results Out of 4034 patients attending during daytime 25 had a GCS <15 and 34 out of 2592 during night time (p = 0.005). There was no difference in age, gender, ethnicity or disease

severity between groups of patients attending during day or night time. The most common condition presenting with reduced GCS both during day and night time in children were seizures (31.6%) followed by a viral respiratory tract infection (16.6%), miscellaneous other infections (20%), trauma (13.3%) and other miscellaneous conditions (18.3%). The only group of diseases with significant difference in frequency between groups were viral respiratory tract infections, which were significantly more common in children presenting with low GCS during the night (p = .017).

Conclusion Presentation of children with low GCS was more common during the night. Children with reduced GCS and viral respiratory tract infections presented more frequently during the night.

PO-0328 MONITORING OF SYSTEMIC HAEMODYNAMIC (MSH) IN CHILDREN WITH SEVERE TRAUMA BRAIN INJURY IN PAEDIATRIC INTENSIVE CARE UNIT (PICU)

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Background and aims SPTBI is frequently associated to acute circulatory failure (hypovolemia, vasoplegia, myocardial depression or tamponed). The haemodynamic systemic management objective in SPTBI is an haemodynamic stability, normal cardiac output, and assessment of blood volume status. In this way MSH has an important role to guide the management (volume expansion, vasopressor or inotrope).

The aim of this study is to improve the interest of systematically integration of MSH for management of cerebral perfusion pressure (CPP).

Method Thisprospective study was conducted between April 2013 and April 2014. For each patient with cerebral systemic oligohemia, alteration of the CPP, acute circulatory failure, the assessment of the cardiac output, mean artery pressure, blood volume status were obtained by : echocardiography, estimated continuous cardiac output (esCCO), Oesophageal doppler, NIBP. **Results** on a total of 20 patients with SPTBI, 41 measures were realised.

- Cardiac Index was normal (> 3 l/min/m²) in13 patients with cerebral systemic oligohemia in transcranial doppler (TCD).

- Cardiac Index was abnormal < 3 l/min/m² » in 7 patients.

- All patients was treated: o Noradrenaline was introduced in 14 patients with objective of CPP, 2 of them had a profound vasoplegia « DAP < 40 mmHg »: o Volume expansion in 18 patients « fluid responsiveness based on the respiratory variation aortic flow peak velocity, SV, and inferior vena cava »

Conclusion Assessment of CO, blood volume status, vascular resistance based on a systemic monitoring allows the optimisation of PPC evaluated with TCD.

PO-0329 MULTIMODAL HAEMODYNAMIC MONITORING (HSM) FOR THE MANEGEMENT OF ACUTE CIRCULATORY FAILURE (ACF) IN PAEDIATRIC INTENSIVE CARE UNIT (PICU)

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Background and aims Multimodal haemodynamic monitoring has an important role in PICU, because that can aid the intensivist to perform the management of children with acute circulatory failure.

The aim is to improve the interest of haemodynamic management with multimodal parameters to answer to the 3 most commonly asked questions: Complete clinical diagnosis, guide therapeutics, and repeat measures for evaluation.

Methods In this prospective study, between January 2012 and April 2014, the assessment of haemodynamic was obtained progressively by NIBP, TTE, and estimated continuous cardiac output (esCCO), and/or Oesophageal Doppler, an/or pleth variability index (PVI) for each patient with ACF.

Results On a total of 33 patients with ACF, all patients was treated:

- Volume expansion in 31 patients « fluid responsiveness based on the respiratory variation aortic flow peak velocity $\Delta V_{peak\ ao}$, SV, and inferior vena cava, and/or PVI, FTc, ΔV_{peak} by OD .

- 29 responder ($\Delta SV \geq 10\%$ by TTE, esCCO and/or OD).
- 2 non responder ($\Delta SV < 10\%$).

- Norepinephrine was introduced in 14 patients (objective MAP and or PPC for SPTBI), 2 of them had a profound vasoplegia « DAP < 40 mmHg.

- Dobutamine was introduced in 2 patients with LVEF < 45% (TTE).

Conclusion MHM allows optimisation of systemic haemodynamic: assessment of CO, blood volume status, vascular resistance and contractility.

PO-0330 HEALTHCARE-ASSOCIATED INFECTIONS IN A PAEDIATRIC INTENSIVE CARE UNIT

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Introduction Healthcare-associated infections (HAI) are a common cause of higher morbidity, mortality and longer stay in PICU.

Objective Characterisation of HAI: tracheobronchitis, pneumonia, bloodstream infection (BSI) and urinary tract infection (UTI) in our PICU, for a 12 month period (2013).

Methods Retrospective review of clinical data from patients admitted >48 h, using a modified patient-based HELICS protocol. HAI was defined according to the Centre for Disease Control.

Results From a total of 450 admissions, 233 patients were included. Mean age was 6,7 years (0–18), mean length of stay was 6,6 days (3–67), and the majority had antibiotic on admission (87%). Seventy one patients (31%) were mechanically ventilated, 41% had CVC and 33% a urinary catheter.

Fifteen children had a total of 21 HAI (9%): 16 respiratory infections - 13 pneumonias and 3 tracheobronchitis (19,8 and 4,6/1000 days of ventilation, respectively), 2 primary BSI – one related to CVC (1,4/1000 days of CVC) and 3 UTI (2,9/1000 days of urinary catheter). The most common pathogens were *Pseudomonas aeruginosa* and *Enterobacter cloacae* in respiratory infections. *Staphylococcus hominis* and *Candida parapsilosis* were identified in BSI and *Escherichia coli*, *Enterococcus faecalis*, *Candida parapsilosis* in UTI. Mean length of stay was 26,9 days

in the HAI group versus 5,2 days in non HAI group. There was no HAI related mortality.

Discussion The incidence of HAI was similar to other European Units. We found a higher rate of respiratory infections than that of a previous study in our PICU, emphasising the importance of monitoring and preventive measures.

PO-0331 THE EFFECTS OF INCREASED AWARENESS ON MEDICATION ERROR DISCLOSURES

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Background Communicating medication errors is a crucial part of patient care. Children are exposed up to three times the rate of potentially dangerous adverse drug events. A previous evaluation of disclosure of medication errors identified barriers in communicating these errors.

Methods Two presentations on medication errors and how to improve their communication with patient/family were presented to the PICU team. A Medication Error Data Entry Form was used to collect the number and type of medication errors (only type C through I require immediate notification to the MD). Communication to family was documented in a separate form.

Results Thirty-four medication errors were recorded over a 4-month period (2 months before and 2 months after education). Fifty-three percent were type A errors (circumstances or events that have the capacity to cause error) while the remaining were type C (an error occurred that reached the patient but did not cause patient harm) (Table 1).

Abstract PO-0331 Table 1

Group	Type A Error	Type C Error	MD Notified	Family Notified
Before Education	46.7%	22.2%	100.0%	50%
After Education	20.0%	75.0%	91.7%	31%

While the fellows did not participate in the communication of errors to patient/family before education, they did in 60% of the notifications afterwards. The two barriers to communication were “family was not available” (43%) and “error did not cause side effects” (57%).

Conclusion This study demonstrates that despite the effort to increase awareness of medication errors disclosure there was not an improvement in communicating of medication errors to the patient/family. A more systematic and aggressive approach to education on communication may be required to properly address and improve the disclosure of medication errors.

PO-0332 BARRIERS TO DISCLOSURE OF MEDICATION ERRORS

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Background Medication administration error is the most frequent error in paediatrics and one of the leading causes of death. Adverse event reporting is critical to improving patient