

the PICU of the regional university hospital of Caen between January and December 2010 (PICU group). Planned admissions from a treating PICU physician and transfers from neonatology were excluded.

Results 118 AICU stays were compared to 346 PICU stays. Mean age was higher in the AICU group ($16,2 \pm 1,8$ vs $6,5 \pm 6,4$, $p < 0,001$). The AICU group were subject to more invasive monitoring (4,2% vs 0,3%, $p = 0,005$), intubation (34,8% vs 25,1%, $p = 0,044$) and vasoactive agents (12,7% vs 6,7%, $p = 0,035$). When controlled for age (13–18 years) no statistical difference was observed. Discharge planning was better in the PICU group ($p < 0,001$).

Conclusion Given that most paediatric AICU patients were teenagers, the medical care was comparable in between AICU and PICU. Follow-up care, however, was better planned for PICU patients.

PO-0315 WITHDRAWN

PO-0316 INCIDENCE OF ACUTE KIDNEY INJURY IN NEONATES UNDERGOING EXTRA-CORPOREAL MEMBRANE OXYGENATION

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Background and aims The incidence of AKI in critically ill neonates is estimated at 6–24% with 10–61% mortality. Whilst the incidence of AKI in neonates undergoing ECMO is unknown, its presence independently predicts mortality. We audited the incidence of AKI in neonates on ECMO in our centre against the published incidence of AKI in a similar cohort of neonates undergoing congenital cardiac disease surgery with cardiac bypass.

Methods All neonates who underwent ECMO due to respiratory disease in one year were included ($n = 24$). The case notes, fluid balance charts and laboratory data were reviewed. AKI was graded based on published RIFLE criteria.

Results Twenty five percent of neonates developed AKI; 1 (4%), 2 (8%) and 3 (13%) were graded as “Risk”, “Injury” and “Failure” respectively based on creatinine rise alone. If reduced urine output and rise in creatinine were used the number of infants with AKI was 9 (38%). The number of neonates with “Risk”, “Injury” and “Failure” was 3 (13%), 2 (8%) and 4 (17%) respectively.

Conclusions The incidence of AKI in our cohort was lower than the published cohort used as the audit standard. Nevertheless, there was a higher proportion of more severe AKI in our cohort. This may be accounted for by the emergent rather than elective admissions of our cohort. Recent data suggests a threshold of <0.5 mL/kg/hr is too low for the neonatal population, thus our data may represent an underestimate. Nevertheless this data illustrates the need for close monitoring of renal function and urine output.

PO-0317 MALIGNANT PERTUSSIS IN INFANTS: FACTORS ASSOCIATED WITH A POOR OUTCOME

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Background Malignant pertussis (MP) affects young infants and is characterised by respiratory distress, associated with permanent tachycardia and hyperleukocytosis up to $50 \times 10^9 L^{-1}$ leading to multiple organ failure and death in 75% of cases. Leukodepletion aims to improve prognosis.

Method This study aimed at identifying factors associated with death and evaluating the impact of treatment on the outcome. We reviewed the records of the infants ≤ 3 months, hospitalised in 7 French paediatric intensive care units (PICUs) from January 1, 2008 to November 13, 2013 with a diagnosis of pertussis, admitted for respiratory distress, with or without white blood cell count (WBCC) $>50 \times 10^9 L^{-1}$. Treatment modalities (Leukodepletion and/or ECMO) were compared to Rowland's proposition (Rowlands *et al*, paediatrics 2010).

Results Twenty three infants were included, 17 were intubated. Nine of 23 (40%) died: they presented more frequently cardiovascular failure (100% vs 36%, $p = 0.003$) and pulmonary hypertension (PHT) (100% vs 29%, $p = 0.002$) than survivors. Fatal cases presented CRP level at emergency >20 mg/l (85% vs 14%, $p = 0.003$) and increased their WBCC three times faster than survivors ($15 \times 10^9 L^{-1} pd$ vs $5 \times 10^9 L^{-1} pd$, $p = 0.013$). Leukodepletion was performed in 10 cases (43%), 7 survived. For 15/23 patients, the treatment followed Rowland's protocol, resulting in a 73% survival rate (11/15).

Conclusion A CRP level over 20 mg/l at hospital admission and an increase of WBCC $>15 \times 10^9 L^{-1} pd$ were associated with death. Early determination of CRP, early monitoring of WBCC every 12h, and determination of PHT by echo should be helpful in predicting the prognosis of MP and initiating Leukodepletion.

PO-0318 TEAM-FAMILY CONFLICTS IN DECISIONS TO FORGO LIFE-SUSTAINING TREATMENT (LST) IN PICU

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Background and aims Many sources of conflict exist in intensive care units between family's members, team-family, or within the ICU team. These conflicts are frequent (48%) in adults ICU, and most are in relation to end-of-life decisions especially with decisions to forgo LST. In PICU, no study has previously reported the prevalence, characteristics and effects of these conflicts.

Methods We conducted a retrospective observational study of children admitted to PICU of Lyon, France, for whom a meeting to forgo LST had been held between October 1st 2010 and February 28th 2014. We searched in medical record if conflict or disagreement were noticed and we interviewed the referent physician about conflict. We distinguished simple disagreement (quickly resolved), continuing disagreement (parents refuse recommendations with communication still possible), and conflict (communication impossible).

Results For 72 children (31 girls, 41 boys), 91 decision-making meetings were organised. We identified 27.7% (20/72) disagreements or conflicts: 4 simple disagreements, 12 continuing disagreements and 4 conflicts. Five children had acute disease and 15 children had chronic disease. Source of disagreements was continuing LST in 19 cases (families wanted to continue aggressive treatment). In 1 case, the family wanted to stop treatments despite medical opinion (refusal of tracheotomy). Consequences of these disagreements were continuation of treatments despite LST decisions in 12 cases. For 3 cases a compromise solution was found.

Conclusion Disagreements are frequent in decisions to forgo LST (27.7%) and most of the child undergo treatments that are medically futile.

PO-0319 IS THERE SUFFERING IN CHILDREN FOUR YEARS AFTER A PICU ADMISSION?

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Background and aims In a previous study on suffering of children during admission to a paediatric intensive care unit (PICU), we found that parents described suffering of their child mainly in relation to physical symptoms. In this study we evaluated if these children still have signs of suffering four years after the PICU admission and if the symptoms of suffering, as perceived by the parents, are different compared to the PICU period.

Methods A structured audio taped interview with 15 parents of children four years after admission to a 20 bed level III PICU of a university teaching hospital to assess whether their child perceived to suffer and to identify perceived aspects of suffering.

Results About 50% of the parents experienced 4 years after PICU admission suffering in their child. Parents of 8 children did not perceive suffering in their child. Parents indicated that the suffering during the PICU admission was due to physical and psychosocial factors. Psychosocial factors were related to the disease causing the admission to the PICU, the treatment and the hospital stay. Four years later the signs of suffering are related to communication, physical and mental retardation and being different from mates.

Conclusions A child's admission to a PICU and its suffering not only cause suffering in the child during admission, but often suffering is still present four years after admission. Caregivers in paediatrics need to be aware of these perceived symptoms. In long-term follow up of critically ill children this phenomena needs attention.

PO-0320 SUFFERING OF PARENTS FOUR YEARS AFTER PICU ADMISSION OF THEIR CHILD

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Background and aims Admission of a child to a paediatric intensive care unit (PICU) is a very stressful event for the child, but also for the parents. This might not only lead to suffering during

admission, but also might have lasting effects. Little is known about the long term effects. In a previous study done during the stay of a child in a PICU we saw that a child's admission to a PICU causes suffering of parents. In this study we evaluated if there are still feelings of suffering in parents four years after PICU admission.

Methods A structured audio taped interview with 15 parents of children four years after admission of the child to a 20 bed level III PICU of a university teaching hospital to assess whether parents still have feelings of suffering and to identify aspects of suffering.

Results Four years after PICU admission about 50% of the parents indicated that they still have feelings of suffering. Parents of 6 children didn't suffer themselves. Parents describe mainly physical and psychosocial causes for the suffering. Reasons for suffering are experiencing changes in the physical and mental situation of the child. Also, the uncertainty of the future, effects on the family and problems in the organisation of healthcare contribute to the suffering.

Conclusions A child's admission to a PICU causes long term suffering in the parents. Caregivers in paediatrics need to be aware of these phenomena and should give attention to these aspects in the follow up support.

PO-0321 NONINVASIVE VENTILATION AND ALVEOLAR RECRUITMENT MANOEUVRE IMPROVE RESPIRATORY FUNCTION DURING INDUCTION OF ANAESTHESIA OF NEWBORN WITH HIGHER LEVER INTRA-ABDOMINAL PRESSURE

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Background Morbid obesity predisposes patients to lung collapse and hypoxemia during induction of anaesthesia. The aim of this prospective study was to determine whether noninvasive positive pressure ventilation (NPPV) improves arterial oxygenation and end-expiratory lung volume (EELV) compared with conventional preoxygenation, and whether NPPV followed by early recruitment manoeuvre (RM) after endotracheal intubation (ETI) further improves oxygenation and respiratory function compared with NPPV alone.

Methods 24 patients with higher lever intra-abdominal pressure (15.2 ± 2.4 cm H₂O) were randomised to receive 5 min of either conventional preoxygenation with spontaneous breathing of 100% O₂ (CON), NPPV (pressure support and positive end-expiratory pressure), or NPPV followed by RM (NPPV+RM). Gas exchange was measured in awake patients, at the end of preoxygenation, immediately after ETI, and 5 min after the onset of mechanical ventilation. EELV was measured immediately after ETI and 5 min after mechanical ventilation. The primary end-point was arterial oxygenation 5 min after the onset of mechanical ventilation. Intra-abdominal pressure (IAP) was controlled by Cron Results are presented as mean \pm SD.

Results At the end of preoxygenation, PaO₂ was higher in the NPPV and NPPV+RM groups (382 ± 68 mmHg and 362 ± 71 mmHg, respectively; both $p < 0.001$) compared with the CON group (297 ± 49 mmHg) and remained higher after ETI (234 ± 90 mmHg and 206 ± 94 mmHg, in the NPPV and NPPV+RM groups, respectively; both $p < 0.01$ compared with the CON