

PO-0302 **PROGNOSTIC FACTORS AND OUTCOME OF TRAUMATIC BRAIN INJURY IN CHILDREN TREATED IN PICU**

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Background Prediction of outcome based on certain prognostic factors is still challenging in paediatric traumatic brain injuries (TBI). Purpose of our study is to evaluate prognostic factors and outcome in children with TBI admitted in PICU.

Methods The sample was 252 children with TBI who were admitted to PICU of Hippokraton General Hospital of Thessaloniki from 1999 to 2012. The statistical analysis was performed with the statistical package SPSS 17 and the application of statistical tests χ^2 -test, anova, Mann Whitney test, t-test and Pearson Correlation. Age, sex, Glasgow Coma Scale (GCS), Paediatric Risk Index of Mortality (PRISM score), days of mechanical ventilation, hypotension and need of inotropic support as well as late hyperglycemia were correlated to outcome.

Results Age groups, sex and mechanism of injury showed no correlation to outcome. Patients who died had statistically significant higher mean PRISM score ($25,7 \pm 8,4$), compared with patients with good outcome ($7,5 \pm 4,7$). The application of Pearson Correlation showed that the increased rating of PRISM score, as well as the low grading GCS were positively correlated to death, late hyperglycemia, haemodynamic instability, use of inotropes, poor outcome and disabilities ($p < 0,001$).

Conclusion A high PRISM score, a low GCS, hypotension and hyperglycemia after the first 48 h, are directly associated with poor outcome and death. Knowledge of these prognostic factors may help neurocritical care specialists to improve outcome in paediatric TBI.

PO-0303 **TRAUMATIC BRAIN INJURY IN PICU**

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Background Traumatic brain injury (TBI) still remains the most common cause of morbidity and mortality in children all over the world. The purpose of this study is to specify the demographic and epidemiologic characteristics of all TBI cases treated in the PICU of Hippokraton General Hospital of Thessaloniki, over a 12-year period.

Methods A retrospective chart review was conducted of all patients admitted to PICU from 1999 to 2012 with TBI. Age, sex, mechanism and severity of injury, Glasgow Coma Scale (GCS), Paediatric Risk Index of Mortality (PRISM) and outcome were recorded.

Results TBI cases accounted for 14,5% of total admissions (252 patients). The mean age was $6,9 \pm 3,6$ with a predominance of boys 69,4%. The most common cause of injury was falls (34,9%), followed by car accidents (33,7%) and pedestrian road accidents (19,8%). A total of 71% were classified as severe TBI (GCS < 8). Mean PRISM score was $10,6 \pm 7,9$. The rate of operative intervention was 33%. Good recovery was observed in 68,7%, poor recovery in 20,6% while death in 10,7%.

Conclusion TBI consists a common cause of admission in PICU and despite the advances in medical and surgical care remains the leading cause of death and disability for children in all age groups expect from infants < 1 year of age. The majority of TBI, in our series, were severe in nature and almost one third of them resulted in severe disability or death.

PO-0304 **SAFETY OF THE MANCHESTER TRIAGE SYSTEM IN PAEDIATRIC PATIENTS: DOES IT RECOGNISE THE CRITICALLY ILL?**

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Background Triage is an important method to manage patient flows safely at the Emergency Department (ED), by prioritising patients according to their clinical urgency. To date, no studies have assessed the safety of the Manchester Triage System (MTS) to identify critically ill children.

Objective To determine how well the MTS identifies critically ill children as reflected by ICU admission, and to identify areas for improvement.

Methods In this observational study, we collected routinely available electronic data of all children < 16 years visiting the ED in a Dutch university hospital between 2006 and 2012. Under triage was defined as patients triaged to low MTS urgencies (level 3 to 5, indicating 60, 120 and 240 min maximum waiting time) who were admitted to ICU. Patients with low MTS urgencies and ICU-admission were compared with low urgency patients who were not admitted to ICU, to identify risk factors for under triage.

Results During the 7-year study period, data on 44 476 ED-visits were collected of which 837 (1,9%) were from patients admitted to ICU. Of all ICU admissions, 251 (28,3%) were assigned to low MTS triage categories. Risk factors for under triage were young age, non-surgical presenting problem and general illness, gastrointestinal or respiratory complaints (all $p < 0,001$). Moreover, under triaged children were more often referred by a medical specialist, possibly indicating that co morbidity is a risk factor too.

Conclusion The MTS under triages an impressive amount of paediatric patients. Adaptations of the MTS based on risk factors for under triage are needed to improve the safety of the MTS.

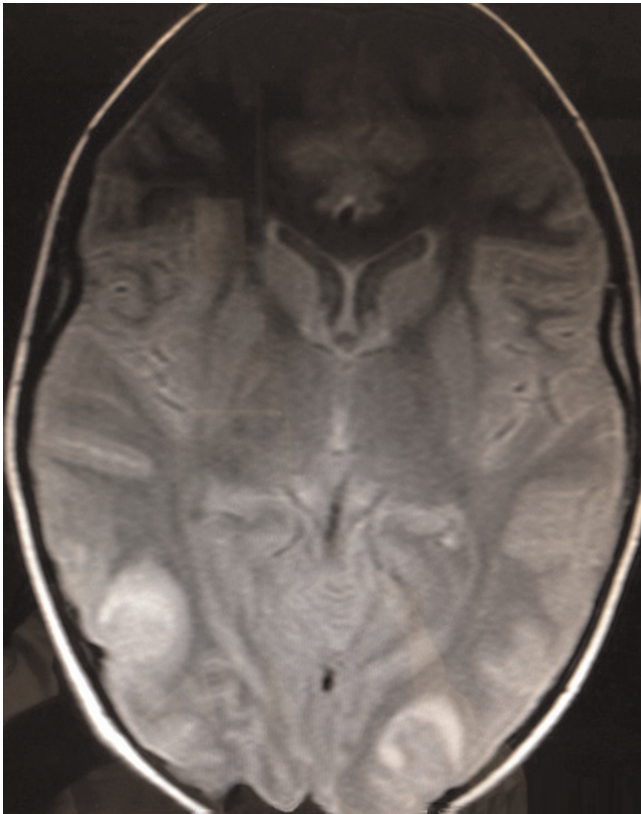
PO-0305 **THREE CASES OFF PRES-POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME**

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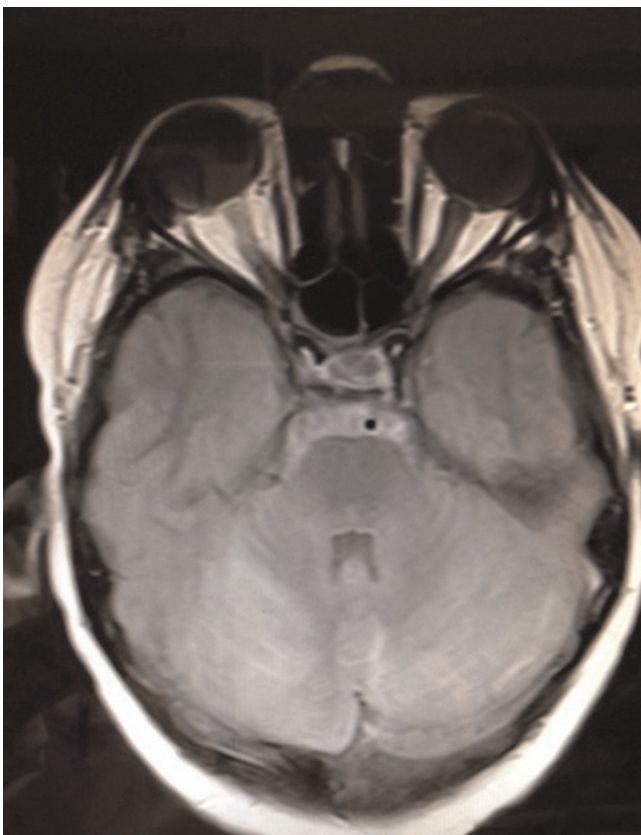
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PRES is characterised by headache, seizures, nausea, vomiting and visual disturbance due to severe hypertension. The clinical course is reversible without neurologic sequel after hypertension has been controlled.

A four-year-old boy, with Lymphoblastic Lymphoma. He was in course of hydrocortisone in high doses-20 mg/Kg/day, and developed Hypertension, focal seizures and bilateral amaurosis. We treated the hypertension with captopril, furosemide and



Abstract PO-0305 Figure 1



Abstract PO-0305 Figure 2

nifedipine. After control of hypertension the patient recovered all the neurologic symptoms.

A cranial Magnetic Resonance (CMR) was performed one week after the event, which showed no sign of vascular damage but ventricular augment.

A thirteen-year-old girl with lymphoblastic Leukaemia and febrile neutropenia received Hydrocortisone, given by anaphylactic reaction caused by vancomycin. She started with headache, hypertension, and generalised tonicoclonic seizures. We started mechanical ventilation, midazolam, fentanyl and captopril plus furosemide for hypertension. The CMR showed increased signals of occipital lobes. After four days she was discharged from the critical care unit without any neurologic symptoms.

An eleven-year-old girl with anaplastic lymphoma, developed hypertension, lethargy and tonicoclonic seizures after methotrexate use. The CMR showed increased signal in occipital and parietal lobes.

The hypertension was treated with furosemide and captopril. She has recovered without neurologic symptoms.

These cases highlighted PRESS syndrome in the oncologic patient. It's remarkable that, in this small series, no patient had renal damage. It's worth to emphasise the role of Hydrocortisone and the methotrexate in these cases.

A high index of suspicion and the prompt treatment of hypertension is of paramount importance in the treatment.

PO-0306 WITHDRAWN

PO-0307 **PAEDIATRIC CARBON MONOXIDE POISONING IN THE ILE DE FRANCE REGION, LINK BETWEEN HBCO LEVEL AND CLINICAL PRESENTATION**

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Introduction Carbon monoxide poisoning remains a threat for children. Clinical severity and presentation of carbon monoxide (CO) poisoning are dependent of COHb level. Our aim was to describe the children hospitalised in our department for CO poisoning and to compare HbCO level to clinically reported symptoms.

Methods We are a secondary care centre hospital with hyperbaric oxygen therapy facilities and represent the reference centre for Ile De France region for CO poisoning. The medical records of patients aged between 0 and 16 years with a confirmed diagnosis of CO poisoning, defined as the presence of a COHb level of more than 5%, were evaluated. Relevant information such as age, sex, source of CO, coaffected family members, month of presentation, time of presentation and presenting symptoms, duration of oxygen treatment in the emergency department, need for admission to an inpatient ward or intensive care unit, Glasgow Coma Scale scores was recorded for each patient on preprepared forms.

Results The records of 50 patients were included. 26 (57.1%) of which were female, and 24 (42.9%) were male, with a median age of 7.0 years (range, 1 month to 16 years) and a mean COHb level 7%. Thirty two patients (64%) had a COHb between 1.5% and 10% on presentation, whereas the remaining 28 patients (36%) had a presenting COHb of greater than 10%. Neurologic symptoms such as headache, syncope, seizures, and