

peripheral or intraosseous line(s) and full non-invasive monitoring, ensuring patients are well oxygenated and have an adequate BP may also improve transfer times.

1483 BURTON PAEDIATRIC EARLY WARNING SYSTEM SCORE

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Background Early warning scores compliment clinical decision making and can identify trends depicting deterioration in patient's condition. Age appropriate Burton Paediatric Early Warning System (BPEWS) score charts were developed in 2011 using nine indicators which included physiological parameters, therapeutic intervention and doctor/nurse concern.

Aim To assess the usefulness of BPEWS as a reliable and valid indicator for all children in need of urgent medical assessment and intervention.

Methods A retrospective analysis of all children transferred to paediatric intensive care setting over the preceding 12 months was carried out to validate BPEWS charts. Detailed case notes review was undertaken to evaluate if BPEWS could have been useful to alert us of patients' deterioration in the 24 hour period prior to transfer. Each case note was assessed by two reviewers.

Results An average of 8.7 sets of observations per patient was recorded in the 24 hours period prior to intensive care transfer. Of the 200 sets of observations recorded in 23 patients, 93% sets would have triggered based on BPEWS. 44% sets of observation scores were in amber (4–7) while 35% were in red (>7) category. Average highest BPEWS score was 9.5 (range: 4–19). In 43% and 57% of patients, highest BPEWS score fell in amber and red category respectively.

Conclusions BPEWS score charts are effective in identifying children at risk of sudden deterioration. Timely identification is likely to enable early action to reduce the risk of death or serious morbidity thus improving the outcome of care given to hospitalised children.

1484 ACCURACY OF A SEQUENTIAL APPROACH TO IDENTIFY YOUNG FEBRILE INFANTS AT LOW RISK FOR INVASIVE BACTERIAL INFECTION

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Introduction Nowadays it is possible to manage as outpatients selected young febrile infants with low risk criteria for serious bacterial infection. A sequential approach, evaluating, firstly, the appearance of the infant, secondly, the urinalysis, and, finally, the results of the blood biomarkers, including procalcitonin, may identify better low risk febrile infants suitable for outpatient management.

Objective To assess the value of a sequential approach ("step by step") to febrile young infants in order to identify low risk patients suitable for outpatient management and compare it with other ones previously described (Rochester criteria and Lab-score).

Methods A retrospective comparison of three different approaches ("step by step", Lab-score and Rochester criteria) was made in 1123 febrile infants less than 3 months of age attended in seven European Pediatric Emergency Departments.

Results Of the 1123 infants (Invasive Bacterial Infection - IBI-, 48; 4.2%), 488 (43.4%) were classified as low risk criteria for IBI according to the "step by step" approach (vs 693–61.7%- with the Labscore and 458–40.7%- with the Rochester criteria). The prevalence of IBI in the low-risk criteria patients was 0.2% (95% CI 0–0.6%) using the "step by step" approach (vs 0.7%–95% CI 0.1–1.3% with the Labscore and 1.1%–95% CI 0.1–2%- with Rochester). Using the "step by step" approach, 1 patient with IBI was not correctly classified (2.0%, CI95% 0–6.12) vs 5 using the Labscore or Rochester (10.4%, CI95% 1.76–19.04%).

Conclusions A sequential approach to young febrile infants including procalcitonin identifies better patients more suitable for outpatient management.

1485 ENDOSCOPIC ASPECTS OF INHALED VEGETABLE FOREIGN BODIES IN CHILDREN

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Inhaled foreign bodies are very serious problem in the pediatric pulmonology since they increase the rate of morbidity and mortality. Aim of this study was analysis of endoscopic changes caused by vegetable foreign bodies (VFB) in correlation with their long - standing in the bronchial tree.

Material and Methods In ten years period (2002–2011) inhaled foreign bodies were removed in 219 children (age 6 mths-14 yrs), 60.27%-male and 39.73%-female. Most of the children (57.50%) belong to the youngest group of age (1–2 yrs). The inhaled foreign bodies were from organic origin in 208 (94.97%). Of these, 203 (92.69%) were with vegetable origin. The most commonly found grains were peanuts (57.14%). Inhaled foreign bodies were single object in 123 (56.16%) while in 96 (43.80%) they were multiple.

Results Endoscopically we found: Insignificant inflammation (some hours presence of VFB) in 48 (23.64%) Significant inflammation - vulnerable mucous membrane (VFB with presence more than 3 days) in 78 (38.42%) Severe inflammation - manifest inflammation (VFB more than 7 days presence) in 77 (37.93%). In this group of children we detected:- granulomatous formations 57 (82.60%)-decubital changes 28 (40.57%)- mucopurulent secretion 41 (59.42%).

Conclusion Severity of the endoscopic changes was closely correlated with the quality of the foreign body (vegetable ones), the period of lodgement and the age of the patients. Timely broncoscopic extirpation of VFB decreases the percentage of complications and represents the most successful and only logically carried out therapeutically procedure.

1486 VALIDATION OF ADVANCED PAEDIATRIC LIFE SUPPORT FORMULAS FOR WEIGHT CALCULATION IN A MULTI-ETHNIC POPULATION

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Background In 2011 the advanced life support group (alsg) of the United Kingdom introduced a new formula for calculation of weight from age for paediatric emergencies. We present the first study validating this formula in a multi-ethnic population and comparing its performance to the formula currently used by the European Resuscitation Council (ERC) and other formulas.

Methods Prospective audit of weight versus calculated weight comparing alsg formula with ERC guideline, the Luscombe, Argall and Best Guess formulas analysed for gender, age and ethnic groups.

Results We included prospectively 599 children aged 1 month to 12 years of age. There were 157 Asian, 268 Caucasian and 174

children from other and mixed ethnic origin. In infants (n=184) there was no significant difference between actual weight and also formula calculated weight. Between the age of one to ten years the ERC formula underestimated the weight significantly by a progressively larger amount with advancing years in both Asian and Caucasian children with the Luscombe formula performing best. In the 6–10 year age group the ERC formula underestimated the weight by a mean of 6.6 kg (22.2%, $p < 0.001$) with the alsj and Luscombe formulas performing best. In this age group female Asian children's weight was underestimated most (mean of 9.5kg, 29.1%). In 11–12 year old children the alsj formula fitted well.

Conclusion In one to ten year old children the Luscombe formula provided a better weight estimate than alsj and European Resuscitation Council formulas in a multi-ethnic population in the United Kingdom.

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AUDIT OF LEVEL OF TRAINING AND EXPOSURE OF STAFF TO PAEDIATRIC EMERGENCIES IN A PAEDIATRIC HOSPITAL

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Background The level of training and exposure to paediatric emergencies may vary between health care individuals within any hospital providing care to children. Various recognised training courses are designed to help all staff achieve and maintain good resuscitation skills and these courses need to be revalidated to ensure high quality of patient care.

Objectives To audit the level of training and exposure of staff to paediatric emergencies in a paediatric hospital.

Methods All staff (Consultants, Non Consultants Hospital Doctors (NCHDs, and Staff nurses) were asked to fill in an anonymous questionnaire related to their training and exposure to various paediatric emergencies within the previous year.

Results 44 questionnaires were completed. 4 Consultants, 12 NCHDs, 28 Nurses. All consultants had attended paediatric emergencies, all had up to date courses. 10/12 (83%) NCHDs had attended paediatric emergencies, 6/12 (50 %) had up to date courses. 2/12 (16%) had not revalidated their training, 4/12 (33%) had no training course. 21/28 (75%) nurses had attended paediatric emergencies, 6/28 nurses (21%) had up to date courses. 3/28 nurses had not revalidated their training and 19/28 nurses (67%) had no training course. 0.9/44 (20%) of all staff were not exposed to any paediatric emergency, 35/44 (80%) of all staff had attended a paediatric emergency, yet 23 (52%) of them had no training course.

Conclusion Regular audits reviewing the level of training and exposure of staff to paediatric emergencies are recommended to encourage all staff to maintain and revalidate their training, enabling the provision of high quality of patient care and ensuring patient safety.

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PAEDIATRIC HEAD INJURIES: A LONDON TRAUMA CENTRE PERSPECTIVE

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Aims Our aim was to determine the demographics, mechanism of injury and immediate outcome of a specific group of paediatric head injury patients: those who triggered 'trauma calls' and were initially managed in the emergency department (ED) resuscitation room due to either abnormal vital signs or a significant mechanism of injury. We also reviewed presentation times to assess the service provision implications.

Methods A retrospective review of all paediatric trauma patients managed initially in the resuscitation room over a three-year period. Data were collected from trauma notes and intensive care discharge summaries.

Results The total number of patients was 340. Of these 72% were male. The age breakdown was as follows: 31% less than 5 years, 33% aged 5 to 12 years and 35 % adolescent. The most common mechanisms of injury were road traffic accidents (RTA) with an incidence of 55%, and falls (31%). However in the pre-school group falls accounted for 53% of cases whereas in the 5–12 year group the incidence of RTAs was 70%. Assault caused 23% of presentations in the adolescent group.

Regarding admissions, 63% were admitted for overnight observation, 27% required critical care and 0.1% died in the emergency department. Only 7% were discharged home from the ED. Peak presentation occurred from 15:00 to 21:00 hours.

Conclusions There are ongoing public health concerns regarding the mechanisms of injury. RTAs remain the leading cause of serious head injury but of note is the high number of pre-school children falling from significant heights at home.

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RECIDIVE LARYNGITIS EPISODES AND ITS CORRELATION WITH ALLERGIC CONSTITUTION IN CHILDHOOD

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There is still opacity in aetiology of laryngitis episodes, especially those repeated. Laryngitis can result from exposure to allergens like pollen, dust, smoke and other irritants. The aim of this study is to determine the degree of correlation between repeated laryngitis episodes and allergic component.

Material and Methods In this study were included 561 children with treated laryngitis for the period of 5 years (2006–2011). From them, 104 (18.53%) patients have had medical history about repeated laryngitis episodes, with hospital treatment. The emphasis of our investigation was made on these patients. In addition to other clinical investigations, skin prick tests about allergy predisposition were performed in all of them. Personal and familiar evidence about allergy was assessed, too.

Results Positive results from allergologic skin prick tests were confirmed in 53 (50.96%) patients. From them, in correlation with this basic disease, allergic constitution (asthma, allergic dermatitis, and allergic rhinitis) was determined in 39 (73.58%) patients. The most positive allergen causes were: pollens –24 (45.28%), Dermatophagoides ptt.-19 (35.84%) patients etc. From those 39 patients with negative results on allergic skin prick tests, 17 (43.58%) had positive anamnesis of personal/familiar allergy, allergic dermatitis in 8, asthma in 6, recidivate broncho-obstructive episodes –5, positive asthma anamnesis –3. Allergy was not evidenced in only 12 (11.53%) patients.

Conclusion Repeated laryngitis episodes have high degree of significant correlation with allergic constitution in childhood. Allergy is appeared as very important factor in repeated laryngitis episodes etiology. The underlying cause of repeated laryngitis episodes necessarily have to be diagnosed and treated.

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THE CHARACTERISTICS AND OUTCOMES OF FOREIGN BODY INGESTION AND ASPIRATION IN CHILDREN DUE TO LODGED THE AERODIGESTIVE TRACT

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