7.14 in the 2020 group (6.8–7.3); and 6.89 (6.8–7.0) in the 2020/STRS group.

Treatment was given for cerebral oedema for one patient each of the 2015 and 2020 cohorts, two in the 2020/STRS group.

AKI rates were one each in the 2015 and 2020 cohorts, two in the 2020/STRS group.

Hospital length of stay was also similar across the 3 groups (means of 3.9, 5.7 and 14.5 days respectively).

Conclusions Patient numbers were too small to give robust conclusions but on this evidence, both DKA guidelines appear to be safe and did not affect hospital length of stay, acute renal or cerebral oedema complication rates.

The authors note that after this study’s conclusion, NICE published another new guideline (December 2020) offering something of a ‘middle ground’ recommendation on fluid replacement in DKA; and the debate on safest fluid management continues.

Association of Paediatric Emergency Medicine

PREDICTING SERIOUS BACTERIAL INFECTIONS IN INFANTS AGED 90 DAYS OR LESS

Background NICE sepsis guidelines advise febrile children aged ≤90 days are at higher risk of serious illness. Therefore, children undergo investigations and receive antibiotic therapy in these cases, despite limited data on actual number of serious bacterial infections (SBI). The Febrile Infants Diagnostic Assessment and Outcomes (FIDO) study, performed on behalf of PERUKI, aimed to evaluate this further.

Objectives To determine rates of SBI in children aged ≤90 days with fever ≥ 38°C.

To assess clinical features and investigations most significantly associated with SBI.

Methods Retrospective analysis of Emergency Department (ED) presentations of febrile infants was conducted across six sites (Belfast, Bristol, Dublin, Glasgow, Leicester and London) between 01.09.2018 and 31.08.2019.

The clinical features underwent univariate analysis, and those deemed to be statistically significant (p<0.2) were included in multivariate analysis.

Results 535 ED records, out of 543 identified, had complete data and were included: 70 (13.1%) participants were diagnosed with SBI – 6 with bacterial meningitis (1.1%), 7 with bacteraemia (1.3%) and 57 (10.7%) with urinary tract infections.

Table 1 shows univariate analysis of individual features. Multivariate analysis of clinical features demonstrated that appearing well was significantly associated with the infant not having a SBI (p=0.008), as was receiving a vaccination in the preceding 24 hours (p<0.0001). No well-appearing infant who received a vaccine within the preceding 24 hours had an SBI.

433 (80.9%) participants underwent blood testing, including all 70 of those diagnosed with SBI. The median CRP (p<0.0001) and neutrophil counts (p=0.011) were significantly higher for participants with SBI. There was no significant difference in median white cell count, lymphocyte count or haemoglobin.

Conclusions This study adds that appearing well and having a vaccination in preceding 24 hrs is significantly associated with not having SBI. It found CRP and neutrophil count was significantly associated with not having SBI. It found CRP and neutrophil count was significantly associated with not having SBI. Further research into clinical assessment and investigations of these children may help identify those with SBI more accurately and reduce overtreatment in low risk children.

British Association of Perinatal Medicine and Neonatal Society

BRIDGING THE DAM GAP!!

Suman Fathima, Bindu Radha. Surrey and Sussex Healthcare Trust

Background In many Neonatal clinical emergencies, endotracheal intubation procedure is life saving and forms a vital part of neonatal resuscitation. It is possible that current trainees are getting less exposure to emergency intubations in the current scenario of less invasive methods of neonatal stabilisation and surfactant administration.

Objectives To explore knowledge and awareness regarding Difficult Airway Management (DAM) in Neonates amongst neonatal practitioners in local deanship and Surrey Heartlands region.
Methods A web-based questionnaire survey was sent out to junior paediatric doctors, Advanced Neonatal Nurse Practitioners (ANNP) and consultants to determine their experience and understanding of Difficult Airway Management in Neonatal medicine clinical practice. Also assessed was their confidence level on a 1 to 5 scale on neonatal intubation. The responses were analyzed using Excel.

Results 83 responses were received which were constituted by 17% (14) Senior House Officers, 55.4% (46) Registrars, 18% (15) Consultants and 9.6% (8) ANNP. Those in run through training program were ST1–3 (11), ST4–5(21) and ST6–8 (20).

Highest neonatal hospital experience was gained in Tertiary hospital Neonatal unit by 54%(45), in District General Hospital with level 3 neonatal unit by 30% (25), level 2 by 10.8%(9) and the rest in level 1 unit.

Previous Neonatal Experience: 33.7% (28) more than 5 y experience, 3–5y experience in 14.4% (12), 31.3% (26) had 1–3 yrs, 6 mo-12 mo by 9.6% (8), 3–6 month experience in 8.4% (7), 3.6% (3) were working for the first time in NICU.

Confidence Level on Neonatal Intubation: 47% (39) reported to be very or extremely confident, 31% (26) were somewhat confident and 22% (18) were not so or not at all confident.

Nearly half (46%) were not aware of any DAM guidelines. Only 7% (6) were aware of both National and Local Guidelines. 20% (17) knew about National guidelines and 26%(22) were aware of local guidelines. Overall only 10 (21.7%) Registrars and 3 (37.5%) ANNP’s were aware of National Guidelines.

Training on DAM: 44.5% (37) had never received any training and were interested to attend training course, 24% (20) had received between 1–3 y and 12% (10) had >3y ago. Out of 45 registrars overall, 21 (47%) have never had a training session.

Difficult airway was reported to be encountered by 53% (44) and 5% (4) did not know what is meant by Difficult Airway.

Use of airway adjuncts- Supraglottic Airway Device (SAD) and Video Laryngoscope (VL): both not used by 36% (30),10.8% (9) had experience using both only 6% (5) had used SAD, only 29% (24) reported to have used VL, 16% had used each of them in simulation.

Conclusions There seems to be a wide variation in the knowledge and skills of DAM among neonatal clinicians. Only half of the clinicians who took part in the survey seemed to been aware of any DAM guidelines, only a minority seem to have received formal training in this scenario. We intend to address this locally and regionally by robust training and guidelines by working with the deanery and integrated care systems.

Paediatric Special Interest Group: British Society of Haematology

BONE MINERAL DENSITY AND CALCIUM STATUS IN CHILDREN WITH B-TALASSEMA

Magdy Fawzy, Basildon University Hospital

Background Bone disease in thalassemia in the form of low bone mass remains a frequent, debilitating and poorly understood problem, even among well transfused and chelated patients. Frequent blood transfusion has increased the life expectancy of patients with β-thalassemia major, but it causes progressive iron overload. Iron deposits saturate transferrin in the reticuloendothelial system; enter the parenchyma, causing important oxidative damage, mostly to the heart, liver and endocrine glands.

Objectives In this work we attempted to delineate calcium status and bone mineral density in a group of transfusion dependent β-thalassemic patients of both sexes.

Methods In This cross sectional study we attempted to assess Bone Mineral Density (BMD) in 50 thalassemic patients (39 major and 11 intermedia), aged 5–18 years of both sexes on regular blood transfusion and adjusted iron chelation therapy recruited from the Hematology department at a tertiary hospital, Egypt, as well as, fifteen children taken as a control group, by usage of Dual Energy X Ray Absorbtionmetry technique (DEXA) for Bone Mineral Density (BMD) of total body and lumbar spine. The effects of age, sex, consanguinity, transfusion/chelation program as well as hemoglobin, serum calcium, phosphorus, alkaline phosphatase on BMD were also evaluated.

Results Out of our 50 studied thalassemic patients, 9 patients (18%) had normal BMD (Z score >=1), 41 patients (82%) had low both total and lumbar BMD. Patients showed lower BMD of total body and lumbar region, Z-score is (−1.5 ±1.2), (−2.4 ±1.7) respectively in comparison with age and sex matched normal control (−0.2 ±0.9), (−0.1 ±1). Both parameters are correlated significantly with age of the patients, duration of transfusion and chelating therapy, serum alkaline phosphatase, Mean Height and Weight Z score. Total BMD was correlated significantly with serum calcium and phosphorus while other clinical, biochemical and hematological parameters did not influence BMD values.

Conclusions Bone mineral density is a good index of bone status in patients with Thalassemia and should be done annually. To optimize BMD in Thalassemic patients, it is important to ensure adequate iron chelation and adequate intake of calcium and vitamin D. Close follow-up and early recognition of osteopenia as well as proper management are crucial for every thalassemic patient giving him/her the right to live a better life. We recommend early routine BMD screening before puberty, which is proposed to be a sensitive predictor for early bone changes, in particularly at the lumbar spine. Osteopenia and osteoporosis should be assessed annually via Dxa scan. Bone pain and fractures should be an emphasis. Further studies on a wider scale are required to fully clarify the precise environmental and genetic mechanisms underlying bone metabolism derangement in thalassemic children.

British Association of Perinatal Medicine and Neonatal Society

FEASIBILITY OF THERAPEUTIC HYPOThERMIA IN NEONATES WITH PERINATAL ASPHYXIA USING LOW COST DEVICE IN DEVELOPING COUNTRIES AND TO EVALUATE THE OUTCOMES

1Ankur Gupta, 2Vidya Sukumar. 1Leicester Royal Infirmary Leicester UK; 2Sree Narayana Institute of Medical Sciences, Chalaka, Kochi, Kerala, India

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