British Association of Perinatal Medicine and Neonatal Society

1601

THE CHANGING APPROACH TO MANAGEMENT AND OUTCOME AFTER PATENT DUCTUS ARTERIOSUS CLOSURE IN TWO COHORTS OF PREMATURE INFANTS IN THE EAST OF ENGLAND

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Background Patent ductus arteriosus (PDA) is a major cause of morbidity and mortality in preterm neonates. Surgical ligation (SL) and device occlusion (DO) are important treatment options for PDA closure, if medical management is unsuccessful or contra-indicated. Surgical options usually involve the transfer of the neonate to a cardiac centre (CC).

Objectives This study aimed to review the clinical practice and outcomes of preterm neonates born across the East of England (EoE) who underwent surgical closure of PDA between Cohort A (2015 – 2019) and compare these findings with a previous study which looked at cohort B between 2004 and 2009 (Kang et al, ADC 2013).

Methods This retrospective study was conducted across neonatal units in the EOE network to review the outcomes of premature infants who underwent surgical closure of PDA. All infants born at less than 37 weeks gestation who were referred to the Acute Neonatal Transport service (ANTs) for transfer to CC between January 2015 and December 2019 for PDA surgical closure were included. They were identified from the ANTs database. Babies who did not undergo surgical closure after referral to ANTs were excluded from the study final analysis.

Results Of the 85 babies identified 75 infants underwent PDA closure in Cohort A (60 months) compared to 92 in Cohort B (52months) a reduction of 18.5%. On cohort A, babies were born at a gestation of median 25+5(22⁺⁶-33⁺⁵) weeks with birthweight 730 (490–2010) grams. There were no differences between the two cohorts with regards to birth and procedure demographics. PDA closure was performed at 34 (18–154) days at a weight of 1090 (515–3835) grams. 56 (74.7%) underwent SL and 19 (25.3%) underwent DO. Surgical complications occurred in 10 infants (13.3%), which included pneumothorax (2), lung collapse (2), limb thromboembolism post catheterisation (3) and infection (3). Limb ischaemia occurred in 3 of 19 (15.8%) of babies undergoing DO. In terms of morbidity: 65 (86.7%) had chronic lung disease (CLD), with 46(70.8%) discharged on home oxygen. 23 (30.7%) had intraventricular haemorrhage (IVH) with 1 baby needing shunt insertion. 18(24%) had necrotizing enterocolitis (NEC), with 3 of these (16.7%) undergoing a laparotomy. The incidence of morbidities was lower than reported in the previous cohort B, which were CLD 88%, IVH 49% and NEC 39% respectively. 44 of 73 (60.3%) babies in cohort A who qualified for screening had retinopathy of prematurity (ROP) of whom 21(47.7%) required intervention. This was higher than the incidence of 42% reported in previous study. There were no deaths in Cohort A after the procedure prior to hospital discharge compared 4 (4.3%) in the previous study.

Conclusions This study shows that fewer premature infants are undergoing 'surgical' PDA closure. More catheter based procedures are being performed. There was a reduction in mortality rates. Morbidity rates remain high but have improved. 'Surgical' closure of the PDA is a safe procedure for the small numbers of babies who fail to respond to medical treatment.

Young People's Health Special Interest Group

1604

A BIOPSYCHOSOCIAL MODEL OF CARE FOR CHILDREN AND YOUNG PEOPLE (CYP) WITH PERSISTENT, UNEXPLAINED, PHYSICAL SYMPTOMS (PUPS) J PALES*, K STREET, R HOWELLS

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Background Aims: PUPS are common, reported by 10–25% of CYP.¹ Symptoms can lead to poor function, overuse of medical resource and reduced school attendance. Co-morbid mental health problems often go unrecognised. Longer term outcomes include adult chronic physical/mental ill-health, reduced employment, high health/welfare costs.^{2 3}

Objectives We established a pilot multi professional assessment/support service to meet the needs of these CYP.

Methods

Methods Weekly multiprofessional meetings including paediatrician, psychiatrist, CAMHS worker, psychologist and education wellbeing advisor (EWA) to discuss cases referred by health professionals. Patient/parent consent given. Outcomes included holistic paediatric assessment, joint appointments (paediatrician and CAMHS worker/psychologist), advice and guidance (A&G) to referrer such as signposting/facilitated referral to community services. Some were offered short-term therapeutic intervention with CAMHS worker/psychologist and/or psychiatric assessment. In all cases clear communication with school was facilitated by EWA who supported school attendance; assisting re-integration and improved attendance/wellbeing at school.

Results

Results Over 18 months we discussed 180 patients: 74 male, 104 female, 2 transgender. Average age 14 years. Common PUPS were musculoskeletal pain, fatigue, headaches, abdominal pain and unexplained episodes. All had reduced school attendance. 111 cases referred by Paediatricians/Allied Health professionals, 56 new GP referrals, 13 presented acutely. 106 were offered paediatric appointments. >50% were discharged with recommendations/advice to primary care/education. 25 had joint appointments. 38 were seen by psychiatrist/CAMHS worker/psychologist for assessment/therapeutic intervention. Remainder received A&G and EWA support.

Cost analysis demonstrated average savings of £2600/patient in secondary care. School attendance improved for the majority with reintegration plans and reduction in use of out of school provision with associated cost savings. Referrals to tertiary services for chronic pain/fatigue were reduced and joint working with these services was developed. Linked case examples show significant improvement.

Conclusions

Conclusion Multiprofessional assessment using a biopsychosocial approach to CYP with PUPS leads to better recognition of underlying mental illness, improved short-term functional outcomes, reduced medical costs and improved school attendance. The challenge is securing longer term funding.

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British Paediatric Neurology Association

1605

PAEDIATRIC CEREBRAL VENOUS SINUS THROMBOSIS (CVST): A SINGLE-CENTRE AUDIT AND DISCUSSION OF BEST PRACTICE

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Background Cerebral venous sinus thrombosis (CVST) is a rare but serious condition that typically affects children and young adults. Its presentation is variable and non-specific, making diagnosis difficult. Systemic anticoagulation is the first-line treatment, but many patients deteriorate despite this and there is a lack of clear guidance on the management of these patients.

Objectives To characterise the patient population at our institution and evaluate their diagnosis, management and prognosis.

Methods We performed a retrospective, single-centre audit of 29 patients with CVST who were aged between 1 month and 16 years at diagnosis between 2014 and 2021. Patients' time of admission/discharge, presenting symptoms/signs, diagnostic imaging, treatment modalities and follow-up outcomes were recorded via review of electronic patient records. These were compared to a set of standards based on the American Heart Association/American Stroke Association and the British Journal of Haematology guidelines for paediatric CVST.

Results 29 patients (15 female, 14 male) were identified with a mean age at diagnosis of 7.5 years (range 30 days to 15.8 years). 12 presented acutely within 4 days, 10 subacutely and 6 chronically after 14 days of symptoms. The most common signs and symptoms were nausea/vomiting (18/29), decreased responsiveness (14/29) and headache (14/29). The most common risk factor was anaemia (15/29). 11/29 patients had thrombophilia testing with 1 testing positive. Most patients were diagnosed with CT venography and the sigmoid sinuses were most commonly involved. 24/29 patients underwent heparinisation, with 19 of these receiving a full-dose for 7 days. Some patients deteriorating despite anticoagulation were treated with decompressive craniotomy (3/29) and/or endovascular interventions (2/29). Average follow-up time was 19.6 months. 17 patients (59%) achieved full symptom resolution

and 5 had complete radiological recanalisation. 1 patient had a recurrence and 4 patients died.

Conclusions Children with CVST at our institution were a heterogeneous population. Most patients received and fully recovered on systemic anticoagulation with heparin. Efforts should be made to switch patients to warfarin once stable and to de-escalate anticoagulation after resolution of thrombus or risk factors. Patients not responding to anticoagulation may be offered decompressive craniectomy or endovascular treatment, but the precise indications for these are undefined.

Association of Paediatric Emergency Medicine

1606

WHAT'S IN THERE? ACCIDENTAL INGESTIONS AND INSERTIONS PRESENTING TO A CHILDREN'S EMERGENCY DEPARTMENT DURING COVID LOCKDOWN

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Background During the COVID-19 pandemic, concerns surrounding safety in the home have been highlighted, as parents have had to manage additional challenges including working from home while simultaneously providing childcare and education. The peak age for accidental insertion of objects or liquids is between 6 months and 3 years of age, and it has been hypothesised that given the additional roles parents have taken on, there may be rise in such incidents due to a reduction in structure and supervision. We therefore reviewed attendances with these complaints over a 6 month period in order to determine whether this occurred, and to prioritise public health and safety messaging from our Children's Emergency Department (CED).

Objectives To describe the epidemiology of presentations with accidental insertion of foreign bodies and hazardous liquids, including demographics, and type of hazard. The secondary objective was to evaluate the possibility of any increase in presentations compared to the previous year.

Methods Retrospective chart review study of patients attending a tertiary urban CED between 23rd March and 23rd September 2020. Patients were identified, and data abstracted, using electronic tracking systems and hand searches of notes. Data abstracted included characteristics of the patients, and the objects ingested/inserted, clinical pathway, and outcomes. Results are provided using descriptive statistics. A secondary analysis compared the frequency of attendance with nasal/aural insertions between 1st June – 31st August 2019, and 2020.

Results We identified 330 eligible attendances; 166 (50.3%) were male, median age was 3 years 8 months (IQR 26–69 months). There was no difference in attendance between days of the week, and the time of incident was equally split between 0800–1559, and 1600–2359. Median CED length of stay was 90 minutes (IQR 45–145 minutes), and 254 (77%) were discharged from CED with no follow up. 22 (1.6%) were had pre-existing social care involvement.

Ingestion accounted for 153 (55.4%) presentations, with solid objects most commonly metal (67; 23.3%), food (40;