British Association of Perinatal Medicine and Neonatal Society

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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

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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.