excluded. Articles exploring the effect of CHD on arterial stiffness measures were included.

Results 13/1084 identified studies were included. 7 studies measured PWV, 4 studies measured SIx of the ascending or descending aorta, and 6 studies measured distensibility as measures of arterial stiffness; methods included MRI, M-mode ultrasound, and oscillometry. One study performed FMD assessing endothelial function.

Patients with hypoplastic left heart syndrome following surgical correction had lower ascending aorta distensibility than healthy controls and those with other single-ventricle anatomy ($3.5 \pm 2.9 \times 10^{-3}$ vs $7.8 \pm 3.7 \times 10^{-3}$ mmHg⁻¹, $p=0.004$). Toddlers with single-ventricle pathologies had lower brachial artery FMD ($2.4 \pm 3.7\%$ vs $11.3 \pm 6.0\%$, $p<0.0005$) but similar carotid-femoral PWV than those with double-ventricle circulations. In a similar cohort, aortic PWV was higher in patients with dilated aortic roots, suggesting that PWV may be an independent determinant of aortic dilatation.

Thoracic aorta PWV was higher in children with Tetralogy of Fallot (TOF) than controls in three studies, both before and after surgery. PWV was an independent determinant of aortic dilatation in TOF too.

Neonates with coarctation of the aorta had reduced ascending aortic distensibility and increased SIx pre- and postoperatively compared to controls: findings persisted three years post-surgery. Similar results were reported in asymptomatic school-aged children: higher SIx compared to healthy controls at rest (4.87 ± 1.94 vs 3.57 ± 1.19 , $p=0.021$) and after exercise (4.33 ± 1.91 vs 3.2 ± 1.26 , $p=0.034$). However, the method of CoA repair may affect stiffness: 6-year-olds had higher right-arm PWV and systolic blood pressure following subclavian flap repair than end-to-end anastomosis.

Aortic SIx was higher in patients with PDA requiring transcatheter closure compared to healthy controls. The delayed closure (>1y) group had higher SIx before (9.4 ± 2.7 vs 6.7 ± 2.8 ; $p<0.05$) and after closure (6.3 ± 2.4 vs 3.8 ± 1.4 ; $p<0.05$), than the early closure (<1y) group.

Ascending aorta distensibility was reduced in 36 children who had previously undergone arterial switch operations for transposition of the great arteries.

Conclusions CHD can significantly increase arterial stiffness; the method or timing of correction may have an influence. Proposed mechanisms include damage to vasa vasorum due to surgery, and hypoxaemia-induced endothelial dysfunction. Differences in conditions studied, techniques used, and demographics may explain inter-study variability. Increased aortic stiffness causes premature reflected waves, leading to hypertension and increased cardiovascular disease risk. Therefore, CHD patients might benefit from arterial function monitoring. Longitudinal studies examining the progression of arterial stiffness in different forms of CHD would be beneficial.

British Association of General Paediatrics

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A RETROSPECTIVE STUDY OF URINALYSIS IN THE PROLONGED JAUNDICE CLINIC

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Background Urinary Tract Infections (UTIs) are common in the paediatric population and can cause life-threatening illness and significant morbidity. Clinical diagnosis remains a challenge owing to non-specific symptoms and clinical overlap with other common paediatric conditions. Prolonged jaundice may be the only clinical manifestation of an underlying UTI, and the National Institute for Health and Care Excellence (NICE) recommends that all neonates with prolonged jaundice should have a mid-stream urine (MSU) sample sent for culture. However, the evidence base behind this guidance remains unclear and has been challenged in recent literature.

Objectives

1. To assess the local incidence of positive urine cultures in neonates with isolated prolonged jaundice.
2. To compare the local incidence of positive urine cultures in neonates with isolated prolonged jaundice to published literature.
3. To review how asymptomatic neonates with a positive culture were managed by our service.

Methods The clinical records of all neonates seen in our prolonged jaundice clinic over an 8-month period in 2020 were retrospectively analysed. MSU samples were reviewed for significant pyuria (≥ 10 white blood cells per cubic millimetre) or significant organism growth ($>100,000$ colony-forming units). Patient records were reviewed to assess for symptoms of UTI at the time of, and shortly after, MSU sampling. Clinic notes, discharge summaries, electronic prescribing interfaces and radiology reports were analysed to establish the subsequent management and any significant sequelae.

Results Fifty-nine neonates met the inclusion criteria, of whom 57 (96.6%) had an MSU sample collected. Of these, 10 (17.5%) had single organism growth, 5 (8.8%) had mixed growth, and 42 (73.7%) had no growth. No patients with mixed growth met the criteria for diagnosis of a UTI as defined by NICE guidelines. The incidence of significant growth in neonates attending the prolonged jaundice clinic was 17.5% locally, compared to 0.21% reported in the literature.

All 10 samples that cultured an isolated organism had growth $>100,000$ colony-forming units. Organisms included Coliform Species (40%), E. Coli (20%), Enterobacter Cloacae (20%), Enterococcus (10%), and Group B Streptococcus (10%). Two (20%) also had significant pyuria. Records showed that 4 (40%) of the patients with isolated organism growth were treated with antibiotics.

Of the 6 patients (60%) with single organism growth that did not receive antibiotics, none developed symptoms of a UTI or required admission. Three (30%) had a repeat MSU sample, all of which showed no growth.

Conclusions Within our sampled population there was a significantly higher number of positive urine cultures in neonates attending the prolonged jaundice clinic compared to published rates. The management of patients with significant single organism growth was variable, and in most instances was not in line with current NICE guidance. Despite this, we found no significant illness or admission to hospital in patients with positive MSUs who were not treated with antibiotics.

It remains unclear if a proportion of neonates with single organism growth may represent contamination or asymptomatic bacteriuria. Further research is required to establish the

risk of significant single organism growth in neonates presenting with isolated prolonged jaundice.

Quality Improvement and Patient Safety

1422 IMPROVING THE QUALITY AND SAFETY OF THE PAEDIATRIC TEAM HANDOVER

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Background Guidance on clinical handover states that handover of care is one of the most perilous procedures in medicine and can be a significant contributory factor to subsequent error and harm to patients if done improperly. Following a local departmental paediatric quality and safety meeting in June 2020, concerns were raised about team handover; it was often rushed and disorganised, with lack of verbal or visual aides to support a structured handover. Ultimately there was concern that salient pieces of information relating to patient care risked being overlooked or missed in handover.

Objectives The aim of this quality improvement project was to assess the quality and structure of daily paediatric team handovers from July to September 2020 on one paediatric ward.

Methods As a result of the concerns raised in the quality and safety meeting, discussion was generated amongst two paediatric trainees about current handover practice. A fishbone diagram was completed, highlighting the potential causes, and contributing factors as to why handover was deemed unsafe. The RCPCH handover assessment tool (HAT) was used to make handover assessment sheets and handover practice was assessed. Following the collection of baseline data the extent of the problem was shared with the ward doctors at another quality & safety meeting. The decision was made to add safety points to the bottom of the handover list, comprising key areas including, safety briefing, ward management, and interesting/complex cases.

Results Baseline measurement showed a median percentage compliance of 36% with safe handover points. Safety briefing points were added to the bottom of handover lists, following this intervention, reassessment of handovers showed an increase in compliance to 45%. Shortly after this there was a noticeable drop in compliance, which was felt to be attributed to a changeover of staff. An active reminder given by the senior incoming clinician to the doctor leading handover to use the safety briefing points, saw the compliance increase to 95%, with consistency. During this process, key issues were highlighted, including patients with the same forename, transfers out to paediatric intensive care and staff shortages amongst doctors and nurses. Of particular importance, patients with the same forename were moved away from each other on the ward to prevent any errors when delivering care. Using the safety handover points also generated group discussion and learning, particularly from cases transferred to intensive care.

Conclusions Assessing several factors within the paediatric team handover was an ambitious task but clearly highlighted the problem that safety points were not delivered or conveyed

in a safe or structured manner. Introducing safety briefing points at the bottom of the handover lists helped to provide a structured handover and ensured that the team were well informed when sharing the care of patients and transferring clinical responsibility. However, it was difficult to maintain consistency with the rotational nature of staff and emphasis on the use of the safety briefing points may often be needed.

Child Protection Special Interest Group

1423 THE IMPACT OF COVID-19 ON CHILD SEXUAL ABUSE REFERRALS SEEN AT AN URBAN SEXUAL ASSAULT REFERRAL CENTRE

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Background Medical professionals working within child sexual assault and safeguarding have publically raised concern regarding the hidden harm children and young people (CYP) are exposed to during the COVID-19 pandemic lockdown. This retrospective review of cases seen at a CYP sexual assault referral centre (SARC) analyses the impact of the pandemic on case numbers, type of assaults seen and suspect demographics, and considers whether lockdown has impacted on the nature of cases referred.

Objectives To compare the impact of COVID-19 on child sexual assault cases seen at a SARC during 2020, with the non-pandemic period in 2019.

Methods Case notes were analysed between March and December 2019 and March and December 2020 for a direct comparison of the impact of lockdown and restricted activity due to the COVID-19 pandemic on case characteristics seen at a CYP SARC. Cases were seen for either a Forensic Medical Examinations (FME's); defined as cases seen within a forensic timescale or Child Sexual assault medicals (CSA); those seen outside of forensic timescale. All children seen were under 13 years of age as this is the cut off for referral into the service.

Results The analysis of cases seen by CYP SARC in 2019 and 2020 demonstrated a decrease in absolute numbers in 2020 (n=59) compared to 2019 (n=99). The mean age of cases were the same in 2019 and 2020 (6 years vs 7 years). Approximately 30% of total cases seen in either 2019 or 2020 involved an alleged perpetrator who was under 16 years of age. Further analysis demonstrated a 75% decrease in peer on peer (extrafamilial) assault seen. Conversely, the proportion of alleged perpetrator who was under 16 years old and a sibling increased to 44% in 2020 from 28% in 2019.

The nature of assaults changed from 2019 to 2020 with a significant decrease in vaginal rape from 25 cases in 2019 to 9 in 2020. There was also a decrease in anal rape from 22 cases in 2019 to 9 in 2020.

Conclusions The decrease in cases seen at the SARC from 2019 to 2020, given the restrictions of lockdown is unlikely to be surprising. The NSPCC report a decline in calls from adults with concerns regarding child sexual abuse. The 75% decrease in peer on peer assault is likely to reflect the