G72

WHO IS MOST AT RISK FROM CORONARY ARTERY ANEURYSMS IN KAWASAKI DISEASE IN A UK POPULATION?

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Background The increasing incidence of Kawasaki disease (KD) in the UK is associated with increasing numbers of children with coronary artery aneurysms (CAA) as sequelae (24% of children despite immunoglobulin, IVIG). We wish to determine a system of recognising those at presentation who may need additional therapy since it has been shown that systems in Japan (eg Kobayashi) do not apply to the UK or USA.

Methods All children with KD presenting to any hospital in our region over a time period of 16 years were reviewed, presenting from 2001–2017. Only children with postcodes in our region were included, to avoid any sample bias. Demographic and laboratory characteristics were obtained and the correlation with CAA was noted. The data were analysed for sex, age at diagnosis, clinical features of KD and laboratory parameters (full blood count, CRP, liver function tests, albumin, and sodium).

Results 493 children were seen without case selection during this time period. Of these 105 had CAA and 388 did not. The rate of diagnosis increased during the time period, as did the numbers with CAA. Demographic data showed the overall incidence of children with CAA was 22%, two-thirds were male and those with CAA were younger compared to those without: median 823 vs 1478 days, $p=0.01$. If there was a lower platelet count 323 vs $419 \times 10^9/L$, $p=0.02$, higher neutrophil count 9.3 vs $6.6 \times 10^6/L$, $p=0.0001$, and higher CRP 181 vs 102 mg/L, $p=0.005$, but not serum sodium or liver function tests, these were associated with CAA. It was noted that patients with KD were more likely to come from rural than urban areas. Younger children under 6 months were more likely to have giant aneurysms and to have atypical KD. **Conclusions** In this large defined catchment area, we have demonstrated risk factors that are typical of children in a UK population. Although not a prospective study, this data suggests those who are most likely to develop CAA and to be resistant to IVIG therapy. More formal analysis is needed to determine if this is consistent with multi-variate analysis but seems a good early indicator.

G73

A SURVEY OF UK PAEDIATRICIANS' AWARENESS AND ENQUIRY REGARDING ADVERSE CHILDHOOD EXPERIENCES (ACEs)

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Aims The publication of the pioneering Adverse Childhood Experiences (ACEs) study,¹ has resulted in an increasing body of evidence demonstrating that exposure to ACEs has a significant impact on adult health outcomes. Our aim was to evaluate the level of awareness and enquiry regarding ACEs amongst paediatricians in clinical practice in the UK.

Methods An electronic questionnaire was distributed to a sample of hospital and community based paediatricians in practice in the UK. Details of the original ACE study were provided including the 10 ACEs:

Abuse:

- Physical
- Emotional
- Sexual

Neglect:

- Physical
- Emotional

Household Member:

- Mental illness
- Substance Misuse
- Incarceration
- Maternal Domestic Violence
- Parental Divorce or Separation

Questions were subsequently posed regarding the current level of routine enquiry and management of ACEs in paediatric clinical consultations.

Results The survey resulted in 74 completed questionnaires. Prior to this survey, 50% of the respondents were not familiar with the findings of the original ACEs study whilst 16.7% reported being very familiar with the findings.

Enquiry related to ACEs in paediatric clinical consultations (table 1):

Abstract G73 Table 1 Percentage frequency of enquiry regarding aces in paediatric consultations

	When relevant to clinical presentation	Usually	Sometimes	Rarely	Never
Physical Abuse	71.6	5.4	18.9	2.7	1.4
Emotional Abuse	66.2	5.4	18.9	6.8	2.7
Sexual Abuse	74.3	1.4	9.5	13.5	1.4
Physical Neglect	62.2	13.5	16.2	6.8	1.4
Emotional Neglect	67.6	8.1	14.9	5.4	4.1
Mental Illness in a Household Member	39.2	24.3	32.4	2.7	1.4
Substance Misuse in a Household Member	44.6	16.2	31.1	6.8	1.4
Incarceration of a Household Member	35.1	8.1	17.6	23	16.2
Maternal Domestic Violence	52.7	12.2	20.3	14.9	0
Parental Divorce or Separation	18.9	60.8	16.2	2.7	1.4

Conclusion Whilst knowledge of the ACEs study appears to be relatively low amongst the sampled group of UK paediatricians, it is reassuring that enquiry related to specific ACEs is already embedded in clinical practice. This is supported by the presence of an excellent and established range of allied services available for onward referral and definitive management. The American Academy of Paediatrics (AAP) has published a position statement supporting routine screening for ACEs in the USA.² This has resulted in a gathering of momentum with an ACE focussed approach to paediatrics supported by the National Paediatric Practice Community (NPPC).³

The findings of this survey represent a significant opportunity. A compelling case is made for child advocacy and an evidence base for sustained investment in all allied services which

positively impact on ACEs. The future health of the nation rests on our collective response to the findings of the ACEs study.

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G74

FROM DOORWAY TO DISCHARGE: A MULTI-DISCIPLINARY QUALITY IMPROVEMENT INNOVATION TO IMPROVE THE CAMHS PATIENT JOURNEY

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Background Mental health problems are increasingly common among children and young people (CYP) with 1 in 8 reporting symptoms.¹ Our service experienced 3 presentations per week within 2016 which further increased by 60% this year. From doorway to discharge each patient will see 7 different healthcare professionals. This may result in frustration at perceived lack of communication between staff, lack of knowledge² and need to repeat their story.

Aims

- Create a multi-disciplinary mental health pro-forma for CYP presenting to hospital with mental health difficulties.
- Assist staff to complete appropriate, informed assessments.
- Improve patient experience by reducing need for story repetition.

Methods Plan: 2 independent retrospective case-note analyses of 27 presentations to the Emergency Department (ED) over a 4 month period of patients aged between 14 and 15, and 24 admissions to the ward over a 3 month period of patients aged under 16.

Do: Implemented a pro-forma encompassing the patient journey including key aspects identified for improvement from data analysis; risk assessment, safeguarding, physical and mental state examination (MSE).

Study: Second data-analysis followed a 6 week pilot period. A further retrospective case-note analysis of 19 admissions to the ward via the ED.

Abstract G74 Figure 1 Page 1 and 2 of the paediatric mental health admission document

Results Within ED there was improvement regarding risk assessment (92.9% vs 10%), safeguarding (100% vs 52.9%) and MSE (92.9% vs 51.9%).

Ward data demonstrated a lack of engagement with the pro-forma, no change to those fully completing risk assessment (0%) and deterioration in MSE (57% vs 35.7%) and physical examination (70% vs 57.1%).

Discussion and future direction

The mental health pro-forma resulted in clear improvement in outcomes within ED assessments across many aspects. These improvements may be replicated on the wards by increasing staff engagement with the pro-forma. Suggestions to achieve this aim, as well as other improvements, make up the 'act' aspect of our PDSA cycle:

- Multi-disciplinary education on mental health presentations and use of pro-forma.
- Pro-forma colour coding according to discipline for clearer access.
- Patient experience analysis.

Further data analysis is planned for early 2018.

G75

PRESCRIBING AMOXICILLIN FOR BABIES UP TO 3 MONTHS OF AGE: DEFINITELY TIME FOR CHANGE

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Background and objectives In the United Kingdom, the National Institute of Health and Care Excellence (NICE) guidelines recommend that amoxicillin is prescribed for suspected sepsis or meningitis in infants under 3 months of age to cover for *Listeria monocytogenes* infection. However, this infection is rare, particularly outside the neonatal period. We evaluate current evidence and propose that routine amoxicillin use be limited to infants under 1 month of age, as is currently practiced in other countries.

Methods We critically evaluate the need for this practice by reviewing current literature, NICE guidelines and the literature cited within. Epidemiological data from the last decade was gathered and analysed from Public Health England. Data was collected over a 12 month period regarding the prescription of intravenous amoxicillin in infants under 3 months of age at Chelsea and Westminster Hospital, London.

Results

- Over the last decade, only 120 cases of confirmed listeria were reported in infants throughout England and Wales. 97.5% (n=117) presented within the first month, and the remaining after 3 months of age. Thus routine intravenous amoxicillin treatment for those between 1–3 months of age was futile.
- Extrapolating data over 12 months from our own hospital to represent national figures, 9316 infants aged between 1–3 months might have received at least 24 hours of intravenous amoxicillin. This equates to at least 28,000 excessive doses of intravenous amoxicillin.
- NICE guideline evidence is out-dated and unconvincing. Changing current recommendations would result in significant time, resource and financial savings for hospitals, contribute to a reduction in antibiotic resistance and promote antibiotic stewardship.

Conclusion Given the above evidence, reducing the routine age for empirical amoxicillin use in suspected sepsis and/or meningitis from 3 months to 1 month is appropriate and overdue.