

G173(P) HOW SIGNIFICANT ARE ECGS AND 24 H HOLTER RECORDINGS IN CHILDREN PRESENTING WITH PALPITATIONS AND CHEST PAIN?

¹PS Siddhi, ²M Babu, ²M Alsaffar. ¹Neonatology, Birmingham Heartland Hospital, Birmingham, UK; ²Pediatrics, Mid Essex Hospital Trust, Broomfield, UK

10.1136/archdischild-2015-308599.168

Aim We aim to identify the diagnostic significance of ECGs and 24 h Holter monitoring in children with palpitations and chest pain.

Methods We retrospectively analysed all children presenting with palpitations and chest pain to the emergency department and to out-patient clinics between 2008–2013. Data was collected through detailed review of case-notes. ECGs and Holter results were classified as abnormal if a significant cardiac arrhythmia was identified. Isolated ectopic beats (ventricular or supraventricular) were not considered as abnormal.

Children with previously diagnosed heart conditions were excluded.

Results Palpitation was the predominant symptom 71% (n = 42) with remainder 29% (n = 17) presenting with chest pain. 8% (n = 5) were infants, 46% (27) were aged between 4–12 years and 46% (n = 27) were over 12-years. 20% (n = 12) presented to the emergency department, whilst 80% (n = 47) were referred from the general practitioners.

ECG was performed in 97% (n = 57) of cases during the initial assessment, of which 10% (n = 6) were noted to be abnormal. 86% (n = 49) of those who had ECGs underwent Holter monitor, of which, 18% (n = 9) were abnormal (the presenting history was palpitations in all these cases).

	ECG	24hrs Holter
Sensitivity	28%	56%
Specificity	97%	100%
Positive predictive value	83%	100%
Negative predictive value	74.5%	82.5%

43% (n = 18) of the children with palpitations were diagnosed with a significant cardiac arrhythmia (12 with SVT, 3 with WPW, 3 with heart block). 57% (n = 24) were non-significant sinus tachycardia.

88% (n = 15) of children with chest pain were diagnosed to have non-cardiac cause. However, 12% (n = 2) were closely monitored due to a strong family history of cardiac arrhythmia.

Children with significant cardiac arrhythmias were referred to tertiary centre for further management.

Conclusion Palpitations and chest pain are not uncommon symptoms of presentation in the paediatric age group. The study demonstrates that ECGs are less sensitive compared to the 24-hour Holter, but in combination they are useful non-invasive diagnostic tools. Chest pain in children is probably of little concern as compared to palpitations and further investigations should only be requested if clinically indicated.

G174(P) INTRODUCING PULSE OXIMETRY AS A SCREEN FOR CRITICAL CONGENITAL HEART DEFECTS IN THE DISTRICT GENERAL HOSPITAL SETTING

MR Abumehdi, U Srirambhatia, K Jada, C Cane, T Wickham. *Neonatology, Barnet General Hospital, Barnet, UK*

10.1136/archdischild-2015-308599.169

Aims Critical congenital heart defects (CCHD's) are associated with significant mortality and morbidity. Early diagnosis and treatment could reduce this significantly. Currently there is a diagnostic gap in identifying CCHDs even after prenatal screening and postnatal examination. Pulse Oximetry as part of newborn examination is increasingly being used to minimise this gap. There is a growing body of evidence to suggest that it is a valid screening tool for identifying CCHDs, which is reflected by its uptake in many neonatal units.

Our aim was to demonstrate the feasibility of implementing pulse oximetry screening in a busy DGH setting and outline the financial and practical considerations.

Methods All newborn examinations performed by paediatricians in July/August 2014 included pulse oximetry screening. A portable pulse-oximeter with disposable wraps was used to measure pre-ductal and post-ductal saturations. Outcomes were divided into three groups. Those with both readings $\geq 95\%$ were deemed negative. Those with either reading between 90–94%, or $>2\%$ difference of saturations were deemed as a borderline positive test. These required re-measuring after 2 h if the child remained asymptomatic. Three borderline positive tests, or a positive test (either saturation $<90\%$ or a symptomatic child) required comprehensive assessment and echocardiography where clinically indicated. Exclusion criteria were: Midwife performed newborn examinations, pre-term infants (<37 weeks gestation), infants admitted to the neonatal intensive care ward.

Results 170 infants had their pre and post ductal saturations measured over a 1-month period. Average time to testing was 38.6 ± 27.5 h. The average duration of the test was 3.98 (± 3.41) minutes. All tests done over the trial period were negative. There was no increased burden on the echocardiography workload or SCBU beds. Feedback from doctors, nurses and parents was positive.

Conclusion Implementing pulse oximetry screening for CCHD is a simple and cost affective strategy, without significantly increasing the time taken for newborn examination. It has a reassuring effect on doctors performing newborn examination. As reported in other studies, delaying the screening until after 24 h maximises the specificity, which may explain all tests being negative. There was no increase in demand for echocardiograms or admissions onto the neonatal unit.

Paediatric Education Special Interest Group

G175 "LEARNING TOGETHER": DO INTEGRATED CHILD HEALTH CLINICS EDUCATE AND IMPROVE OUTCOMES?

¹CP Macaulay, ²E Sherwood, ³W Riches, ³M Lakhanpaul, ⁴J Spicer. ¹Paediatrics, Evelina London Children's Hospital, London, UK; ²Paediatric Emergency Department, Kings College Hospital, London, UK; ³Children's and Young People Programme, UCL Partners London, UK; ⁴Primary Care Education, Health Education South London, London, UK

10.1136/archdischild-2015-308599.170

Background A significant number of children seen within secondary care, both in emergency departments, and also in out-patients, could be seen within a primary care setting (Saxena 2009, Milne 2010). Currently general paediatric postgraduate training programmes are focused on training paediatricians almost exclusively in hospital-based systems.

RCGP data (2012) reports that fewer than half of general practitioners (GPs) in training currently have an opportunity to gain experience of acute childhood illness in a specialist-based

training placement, while RCPCH data (2007) suggests that only 50–60% of qualified GPs have had any formal paediatric training. The educational model of Learning Together clinics was therefore developed to address these challenges and improve training in community child health for GP and Paediatric trainees.

Intervention “Learning Together clinics”: child health clinics within a primary care setting, were launched in 40 sites across London. Each clinic site provided joint training with Paediatric and GP registrars seeing children together.

Patients were discussed after the clinics in multidisciplinary practice team meetings to allow for clinical continuity and cascading learning to other health professionals.

Evaluation A combination of methods were used including:

Pre and post intervention registrar surveys (n = 300)

Case log analysis (n = 683)

Surveys with families after clinics (n = 351)

Follow up phone surveys with families (n = 125)

Registrar focus groups (n = 19)

Audit of practice notes (n = 22)

Results Over the 6 month pilot funded by HECL through UCLP, 848 children were seen in 145 LT clinics

37 Paediatric Registrars and 40 GP Registrars made up 44 pairs in 40 GP practices

99% of 351 parent forms said they had a good experience of care.

87% of parents reported increased confidence to manage their child's health.

Trainees reported a good learning experience and change in behaviour as a result of the clinics

Trainees reported that 55% of Learning Together appointments resulted in an avoided referral or A&E visit

A notes audit of 22 practices before, during and after the clinics suggests that there is better adherence to National Guidance for common childhood conditions as a result of the clinics.

Implications Learning together clinics are a valuable educational training model: they are feasible and economically viable.

A further study is being led by South London to broaden the impact of the programme and further evaluate clinical outcomes

G176

A NATIONAL UNDERGRADUATE CHILD HEALTH CURRICULUM: WHAT ARE THE CORE COMPONENTS?

¹HC Jacob, ^{1,2}CR Fertleman. ¹Institute of Child Health, University College London, London, UK; ²Department of Paediatrics, Whittington Hospital, London, UK

10.1136/archdischild-2015-308599.171

Aims There is a pressing need to improve health outcomes for our nation's children and young people. This, together with the considerable variation in child health teaching across UK medical schools, has led to increasing support for a national undergraduate curriculum for child health. This study aimed to establish clinicians' views on what the core components of an undergraduate child health curriculum should be.

Methods This study comprised three rounds. During Round 1, a range of clinicians involved in child health were asked what should be included in the child health curriculum. They included paediatricians, general practitioners, paediatric and general practice trainees, specialist nurses and medical students. All suggestions were treated equally and collated into a single list of key knowledge, skills and attitudes. In Round 2, participants ranked each of the suggestions using a Likert scale (1–5). The mean, median and interquartile range for each time was calculated. In

Round 3, these pooled results were shared with participants, who were then invited to re-rank the items, using the Delphi methodology.

Results 80 people contributed to Round 1 within the allocated timeframe. Every UK medical school was represented. 56/80 (70%) participants voted on the collated suggestions in Round 2. 48/56 (86%) voted again for Round 3. Items scoring highly (mean >4) included knowledge of normal development and growth, recognition and initial management of the sick child and prescribing. Knowledge of global health outcomes and NHS structures for child health had a mean of <3. There was a wide range of opinions about whether the curriculum should include more generic items with relevance to child health such as performing a literature search to answer a clinical question and quality improvement.

Conclusions This study identifies core knowledge, skills and attitudes in child health deemed essential for all medical students. These components will form the basis for the national undergraduate curriculum in child health. The items were generated by a wide range of clinicians, academics and students and involved all UK medical schools, helping to maximise the curriculum's utility.

G177

DO THE NEW FORMATIVE WORK BASED PLACED ASSESSMENTS IMPROVE EDUCATIONAL IMPACT?

H Race, D James, C Fertleman. London Deanery, London, UK

10.1136/archdischild-2015-308599.172

Aim To compare trainer and trainee experience when using the new Safeguarding Case Based Discussion (CbD) and Discussion of Correspondence (DoC) work place based assessments in comparison with the previous assessments.

Methods A collaborative trainee led group designed new formative work based place assessments that were launched by the RCPCH in September 2013. The aim of these reforms was a shift toward formative assessment, focusing on feedback and the removal of the more summative scoring system, with hypothesised improvement in their educational impact. An online survey was sent to all college tutors and London Deanery trainees to evaluate their experience of the new safeguarding CbD and DoC.

Results Responses from 161 trainees were evenly distributed throughout the training years. The majority of safeguarding CbDs took 15–20 min to perform. Trainees reported that 68% were filled out in person with the trainer, whereas college tutors reported 94% were filled out with the trainee present. The most common barriers encountered when performing a safeguarding CbD were inadequate time or a neonatal rather than general paediatrics placement. 70% of trainees and 90% of tutors felt the new CbD better assessed the trainee's knowledge, application and clinical skills. 52% of trainees and 81% of tutors felt it stimulated learning more than the old style assessment. 64% of trainees and 87% of tutors felt learning objectives were clearer. Generally, a specific safeguarding CbD was seen as a useful tool.

On average, DoC took 5–10 min to complete. The majority of trainees and trainers found no barriers to completing a DoC. The majority of trainees did not feel that DoC stimulated their learning more than the old style Sheffield Assessment Instrument for Letters, however 76% of trainers felt it did allow better assessment of written correspondence.

Conclusion The new formative CbD assessment appears to improve the educational impact from both a trainer and trainee