Analysing current practice in the assessment of Paediatric Chest Pain

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**Background:** Chest Pain is a common presenting complaint to general practitioners, paediatricians and the emergency department, often resulting in a paediatric cardiology referral. However, unlike adult chest pain, paediatric chest pain rarely has a cardiac aetiology, often resulting in high levels of unnecessary testing and associated anxiety. Currently there is no UK guidance for paediatric chest pain assessment. Aims: To assess the outcome of referrals to a paediatric cardiology department with primary symptom of chest pain.

**Methods:** A cross-sectional observational study was conducted of paediatric patients aged 4-18 years referred to the paediatric cardiology department of Southampton General Hospital (SGH) with the primary symptom of chest pain. Prospective and retrospective data was gathered in paediatric cardiology clinics and from patient notes at SGH between October 2016-July 2017. Data was collected regarding presenting symptoms, patient and family history, physical examination, diagnostic testing and eventual diagnosis.

**Results:** A total of 100 patients were included in the study (84 retrospective, 16 prospective) 47 patients were female and 53 males, with an average age of 12.09 years (+/- 3.64). Chest pain aetiologies included 65% non-cardiac/idiopathic, 27% musculoskeletal, 3% gastrointestinal, 4% psychogenic and 1% respiratory. No patients were identified to have cardiac chest pain. Patients had an average of 2.9 diagnostic tests.

**Conclusions:** Paediatric chest pain rarely has a cardiac aetiology. Practice variation and unnecessary resource use is a concern and a standardized approach to assessment could potentially improve patient care. A detailed history, physical examination and ECG are usually sufficient for diagnosis.

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