Background Head injury is a common presenting complaint to emergency departments and can generate clinical concern regarding non accidental injury (NAI) in young children. Clinicians are wary of exposing young children to unnecessary radiation but must balance this risk with their duty to protect the child and recognise abuse.

Objective To review all radiological imaging for trauma related head injuries in under-2 year olds with the aim of establishing the incidence of non-accidental injury and identify associated features that may aid clinical decision making.

Design A single-centre retrospective note review was conducted over a 3 year period (01/01/12 – 01/01/2015) of children<2 years of age who presented to a tertiary paediatric hospital (RHSC, Glasgow) and received cranial imaging. Cases were identified using the PACS reporting system.

Results 75 cases were identified as trauma related neuroimaging over the study period and were subject to a detailed case note review. Median age was 39 weeks. There was a male predominance of 65%. All 75 patients underwent CT head as their primary mode of trauma imaging. Abnormal findings were reported in 79% with the most common finding being unilateral parietal skull fracture. 44% of those with positive findings on CT underwent a skeletal survey and 36% had ophthalmology review. 31% had a social work strategy meeting prior to discharge. 17% of patients with positive findings on CT head were deemed to have sustained their injury secondary to abuse. None of these injuries were witnessed. Median age was 16 weeks. 70% of inflicted injuries had a complex skull fracture compared to 18% for those deemed accidental. 20% of the NAI group were previously known to social work compared to 3% in the accidental group.

Conclusion CT is the modality of choice for suspected skull fracture in RHSC, Glasgow. Younger age, unwitnessed injury, existing social work support and complex skull fracture were all associated more commonly with abusive injuries in this 3 year review. Our data has contributed to a larger UK study aiming to determine national variation in practice and deriving a clinical decision making tool to exclude/diagnose NAI as the cause of skull fracture.

Stage 2 – Peer review forms were evaluated from January 2016 to December 2016 to compare the effectiveness of the new form and to look for any further improvements in peer review.

Results From August 2014 to July 2015, peer review forms were insufficiently completed. Following the redesign of the form the documentation of peer review meetings improved (table 1).

Conclusion The simple measure of changing the peer review form has improved the documentation of peer review meetings. Following Stage 2, there have been further improvements to the peer review form regarding patient documentation. This change will be evaluated in two years time.

REFERENCE

G145 AN AUDIT OF ADEHERENCE TO SKELETAL SURVEY GUIDANCE IN SUSPECTED NON-ACCIDENTAL INJURY IN CHILDREN UNDER TWO YEARS OR AGE

Aim To audit compliance with local policy and RCPCH/RCR recommendation that all children under the age of two year who have a skeletal survey as part of a child protection investigation have follow up radiological imaging (either a full skeletal survey or chest x-ray with oblique view of ribs) two weeks after initial imaging. In addition we aimed to assess the value of the skeletal survey in terms of identifying new injuries in children in our busy paediatric hospital.

Methods A five year (2012–2016 inclusive) retrospective analysis of radiology records and electronically archived in-patient notes was performed for all children under the age of two who underwent skeletal surveys as part of a child protection investigation. Reports of all skeletal surveys were analysed and cases where new injuries were identified were recorded. The standard was that all children had repeat imaging at 14 days
and electronic records were checked to see if this imaging took place.

Results 246 children had a skeletal survey as part of a child protection investigation in our hospital. 41 of these were excluded as they were referred from another health board to tertiary services in the hospital and follow up notes could not be accessed. Of the remaining 205 children 170 (83%) received either a follow up skeletal survey or chest X-ray at 14 days. A new injury was identified in 28 (13.7%) of children who underwent recommended imaging as part of a child protection investigation. The initial skeletal survey identified a new injury in 23 (11.3%) children, a further 5 (2.4%) children had injury demonstrated on secondary imaging with negative first skeletal survey. Of the 170 children that underwent follow up imaging a new fracture was found in a total of 11 (6.5%) cases (5 where original skeletal survey was negative; 6 where original skeletal survey was positive).

Conclusion Adherence to local and national standards could be improved, with 35/205 (17%) of children not having had follow up radiological imaging. The positive results from skeletal survey (13.7%) and follow-up imaging (6.5%) suggests that these investigations have an important role in the assessment and identification of potential abuse.

Following the consultation only 14% of GPs identified asking the vulnerable child in the scenario about his relationship with his father. Negative responses ranged from comments such as ‘No, I thought the ‘agenda’ item was the letters’ to ‘I could/should have asked him directly if everything was ok at home’ to ‘I wasn’t sure that I should ask Tom questions without a parent present as he is only 6’.

Conclusion The fact that 73% of participants identified the safeguarding element shows that it was identifiable within the consultation and highlights the usefulness of immersive reality as a training tool.

However, it also demonstrates a need for further training to increase the recognition rate. The range of interactions with the child demonstrates that some GPs are clearly skilled at interacting with children and others less confident. Their videoed virtual reality consultations would be a useful safeguarding training tool.