Female perineal injuries in children and adolescents presenting to a Paediatric Emergency Department

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Abstract

This retrospective case series determined documentation quality and likelihood of safeguarding issues in females aged 0-15 years with perineal and genital injuries presenting to a Paediatric Emergency Department (ED).

Between 2002 and 2010 cases were identified and clinical information recorded. Cases were cross-referenced against the hospital's safeguarding unit's records up to 2011.

181 case notes were available for review with 76.2% of patients discharged home from the ED. Fewer than 50% of case notes contained clear anatomical description of the injuries. In 51 (28.2%) cases child safeguarding issues were considered, with specific referrals made to safeguarding services in 20 of these (11.0%). Only one case involved subsequent child safeguarding proceedings.

Clear documentation of injury patterns by medical staff was poor but medical and nursing staff should not be anxious about dealing with this cohort of patients as they are no different from other accidental injuries needing diligent levels of child safeguarding awareness.

Introduction

Perineal and genital injuries in both male and female children are a relatively small proportion of all injuries [1] which present to Emergency Departments (EDs). In females the majority of injuries are 'straddle' type accidents and generally result in relatively minor injuries [2]. Unlike in males where it has been suggested that sexual abuse is a common cause [3] there is no evidence that this is so in girls presenting to an ED.

There were two aims to the study. Firstly, anxiety is often high amongst staff when female patients present to EDs with perineal and genital injuries, partly out of fear that the injury may be abusive. There is no good evidence of the incidence of abusive injuries in an unselected UK ED population, so we set out to cross-correlate ED attendees with subsequent child protection concerns. Secondly, we set out to determine how accurately examination findings were documented as we know that junior staff are usually unfamiliar with describing examination findings in this part of the body.

Methods

Leicester Royal Infirmary is a tertiary hospital with a Children's Emergency Department seeing children and young people up to 15 years of age with attendances of approximately 38000 per year. This case series was performed with the appropriate permission from the hospital audit and effectiveness team who determined this to be a service evaluation. .

In our department, safeguarding concerns identified by medical or nursing staff result will result in discussion with senior staff, an inpatient investigation if appropriate and a referral to the hospital's children's safeguarding unit. For children subsequently discharged from the department this referral may simply be held on record or (more frequently) the safeguarding team will investigate further depending on the clinical details and information from other agencies. In our area concerns regarding sexual or physical abuse would be handled by a community team so that alleged assaults or injuries with prior social care involvement do not commonly need to present to our Emergency Department.

The ED Information System (EDIS) was interrogated from Nov 2002 (when full computer records were established) to 2010 for all females under the age of 16 who presented to the Emergency Department with any injury to the genital, perineal or groin region with wide search terms.

All identified patients were cross-referenced against the hospitals safeguarding database for dates both prior to and for 1-8 years post-attendance. There are close links between the hospital's database and that of the county and city. Information provided from the safeguarding team was limited to stating whether child protection interventions and criminal prosecutions were undertaken, for the same child. Medical information was not supplied to or from the safeguarding team.

Available case-notes were obtained and reviewed by three of the authors using a pre-determined proforma agreed by all the investigators. Reviewers were Paediatric Emergency Medicine doctors with at least 3 years experience in recognising and assessing safeguarding and minor injuries in children and young people. The proforma recorded the documented nature and site of the injury. Safeguarding concerns were classified as considered (documented clearly as positive or negative

findings) or not. Patients for whom case notes were not available were reviewed separately to record their basic demographic information only.

Results

261 visits with perineal injuries were initially identified through EDIS with 31 (11.9%) found to be non-traumatic or non-perineal. 49 (18.8%) case notes were not available or missing (primarily pre-2007 when the storage of written records altered). For all 230 cases (i.e. for those with and without available notes) there were no other safeguarding concerns identified for up to 8 years following their initial presentation (Figure 1)

[Figure 1]

Table 1 demonstrates the demographic details via age, arrival time, day of week, seniority of initial reviewing clinician, and outcome for patients whose case notes were available (181 presentations). The mean age of the children with missing notes was not significantly different (6.75) than those with notes available (6.25).

The most common injury was to labia although the location was not documented at all in 34 (18.8%) of cases and there was no diagram in 94 (51.9%). Of those admitted 18 underwent an operative exploration or surgical repair of their injury.

51 children (28.2%) had case notes that specifically documented consideration of safeguarding concerns, and 18 were referred (Table 2). An additional 8 cases had safeguarding referrals made where safeguarding issues had not been clearly identified in the notes (this is generally a result of retrospective review of the notes by seniors or discussions following handover) resulting in 26 presentations referred for case review. In the cases where safeguarding follow-up occurred, intra-vaginal injuries (n=12, 60%) were the most common type of injury although in the 4 cases of suspected sexual abuse no abnormality was documented in 2 cases and a perineal laceration documented in the others. 20 cases were formally investigated by the team. These related to 14 individuals (7%). There was only one de novo formal investigation resulting in child protection proceedings in this cohort of patients. Six of the 14 presentations related to deliberate self-harm from one individual who was already known to the safeguarding team and had a care plan in place.

Table One – Demographics of patients with available notes

Demographics		Included Cases (n=181)
Mean Age (Median)		6.25 (5)
Arrival Time	0801-1600 1601-0000 0001-0080	60 (33.1%) 115 (63.5%) 6 (3.4%)
Day of Week	Weekday Weekend	109 (60.2%) 72 (39.8%)
Location of Incident	Home School/Nursery Outdoors/Public Place Other/Not clear	124 (68.5%) 11(6.1%) 33 (18.2%) 13 (7.2%)
Seniority of Initial Clinician	Junior doctor (resident) Registrar (fellow) Consultant (attending) Unclear/Unknown	105 (58.0%) 65 (35.9%) 10 (5.5%) 1 (0.6%)
Mechanism of Injury	Straddle - Bike - Climbing Frame - Other Fall Foreign Body Insertion Penetrating Trauma Other/Not clearly defined	85 (46.9%) - 14 - 14 - 57 49 (27.1%) 18 (9.9%) 7 (3.9%) 22 (12.2%)
Type of Injury	Bruising/Abrasion Laceration No abnormality detected Not recorded/Other	50 (27.6%) 93 (51.4%) 33 (18.2%) 5 (2.8%)
Location of Injury	Labial Peri-vaginal Intra-vaginal Anal Perineum Not Recorded	72 (39.8%) 38 (20.1%) 28 (15.5%) 8 (4.4%) 1(0.6%) 34 (18.8%)
Outcome	Admitted Discharged	43 (23.8%) 138 (76.2%)

Table 2 – Outcome of cases where safeguarding issues considered

	Evidence in notes of safeguarding issue considered	
	Yes (51)	No (130)
Safe guarding referral made from ED		
Yes	18 (35.3%)	8 (6.2%)
No	33 (64.7%)	122 (93.8%)
Safeguarding Concern		
Welfare/Unexplained injury	7	5
Child Sexual Abuse	4	0
Deliberate Self Harm	6 ^A	1
Outside Agency Request	1	2
Subsequent Safeguarding team follow up		
Yes	14 (27.5%)	6 (4.6%)
No	35 (68.6%)	124 (95.4%)
Unclear/Not available	2 (3.9%)	0 (0%)
Final Outcome of Safeguarding team review		
No action required	7	6
Known case with ongoing support in place	6 ^A	0
Child Protection proceedings instigated	1	0

^AThe same individual presented for all these cases and represented 6 of the 14 safeguarding follow ups

Discussion

This retrospective review represents the largest published case series of undifferentiated perineal, genital and anal injury in females presenting to a Paediatric Emergency Department. Previous studies have quoted very similar findings in terms of mechanism of injury [4].

The majority of injuries were labial or per-vaginal (110/181 60.8%) and these type of injuries are likely to have a clear and consistent mechanism. The absence of significant child protection concerns should reassure staff that although vigilance is important, this cohort of patients should be treated no differently at first contact than other injuries.

Our findings suggest documentation is often inadequate and therefore the potential to miss child safeguarding issues therefore exists, since intra-vaginal injury correlates with abuse. Previously an un-validated scoring system to describe the adequacy of documentation in the case of female straddle injuries has been described [5].

In terms of study limitation, we are unable to tell if any child presented with child safeguarding issues at other locations. However this is not a common scenario in our region. In addition a relatively high proportion of case notes were not available for review (30.6%) however none of these patients were registered on the hospital's child protection database.

As a result of our findings, we created a stamp for use in the notes (figure 2), with anatomical representation of the female perineum, in the same way as the body stamps we use for injuries of other parts of the body. This helps improve accuracy of description, and the next stage of a quality improvement programme will be to see if the use of diagrams improves.

[Figure 2]

In conclusion we have found that in cases of female perineal and genital injury presenting to an emergency department the frequency of identified child safeguarding concerns is low and should be handled no differently from any other type of injury presenting to the emergency department if there is no suggestion of abuse in the history. Description of the findings on examination should be equally good as for other injuries, and an anatomically correct body stamp may aid documentation.

Conflicts of Interest

The authors report no conflicts of interest

The authors would like to acknowledge the assistance of Sue Mckinley from the University Hospitals of Leicester Children's Safeguarding team

What is known about this topic

Perineal and genital injuries represent a small proportion of presentations to children's emergency departments but can cause a large amount of anxiety in staff

The majority of injuries to females are accidental injury

What this study adds

The documentation of perineal and genital injuries may be poor and departments should facilitate methods to provide accurate anatomical descriptions

The frequency of children protection issues in females presenting with perineal injuries is small and although staff should not be complacent they should not be unduly hesitant about handling these cases differently from others causes of trauma.

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