

Pediatric Vulvo-vaginal Lacerations in a Community-Based Population

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BACKGROUND

- Genital trauma in girls is generally uncommon.
- It is commonly caused by direct blunt trauma to a highly vascular area which is then crushed against osseous planes.
- Several mechanisms of injury have been described previously, including “straddle” injuries, accidental penetration, and sexual abuse.
- Injury severity is generally influenced by the mechanism as well as known female physiologic characteristics, such as elasticity of the perineum and vagina.
- The aim of this study was to describe the mechanism, injury pattern, treatment, and the outcome of lacerations to the female genital tract in children and adolescents presenting to the emergency department (ED).

METHODS

- This was a retrospective, cohort analysis of consecutive children and adolescents (1-15 years) diagnosed with vulvovaginal lacerations.
- Patients were seen at seven EDs over an eight-year study period
- Spanning 13 counties in Michigan, affiliated institutions included three rural medical centers, three university-affiliated hospitals and a children’s tertiary care facility.
- Mechanism of injury, clinical findings, treatment in the ED, and final disposition were recorded using standardized abstraction forms.
- All patients were examined by board-certified emergency clinicians, trained to perform medicolegal examinations.
- Procedure or operative notes were reviewed to define the extent of vulvovaginal injuries and time and type of definitive treatment.



RESULTS

- During the study period, 912 children were evaluated for genital trauma; 201 (22.0%) had vulvovaginal lacerations.
- The mean patient age was 6.3 ± 6.8 6.4 years; mean time to presentation was 5.7 ± 4.0 hours
- Straddle injuries were the most common mechanism of injury (76.6%), followed by falls (8.0%), blunt trauma (5.0%), and accidental penetrating injuries (3.5%). Lacerations due to sexual assault were documented in four patients (2.0%).
- Overall, wounds were located on the labia majora and minora (68.7%), posterior fourchette or perineum (18.9%), and hymen/vagina (12.4%).
- The majority were superficial wounds (56.2%) with a mean length of 1.1 cm (range 0.5-6 cm).
- Although gynecologic consultation was obtained in 74/201 (36.8%), deeper lacerations were repaired in the ED using procedural sedation (34.8%).
- Nine children (4.5%) were taken to the operating room for surgical repair.
- Uncontrolled bleeding, young age, poor visualization of injury, or a combined injury to the vulva and vagina increased the need for operative intervention.
- Postoperative course in all patients was uneventful.

CONCLUSIONS

- Most vulvovaginal lacerations in children are minor and result from straddle injuries.
- In this community-based population, 35% had lacerations that were repaired in the ED; only 4% required operative intervention.
- Uncontrolled bleeding, young age, poor visualization, or a combined injury to the vulva and vagina increased the need for surgery