

### H61 Severe Anogenital Injuries in Prepubescent Girls: Accidental Trauma Versus Sexual Abuse

*Monica D'Amato, MD, SC Medicina Legale - AOU Città Salute e Scienza, C So Bramante 98, Torino 10121, ITALY; Caterina Petetta, MD\*, Sezione di Medicina Legale DSSPP, C So Galileo Galilei N 22, Torino 10121, ITALY; Luca Gastaldo, MD, Dept. Pediatric Emergency, Turin, Corso Bramante 88, Turin 10126, ITALY; Francesco Lupariello, MD, Corso Galileo Galilei 22, Torino, ITALY; Serena Maria Curti, MD, Sezione Medicina Legale DSSPP - Univ. TO, C So Galileo Galilei N 22, Torino 10121, ITALY; and Giancarlo Di Vella, MD, PhD, University of Torino, Dept Public Health Sciences, Sezione di Medicina Legale, Corso Galileo Galilei 22, Torino 10126, ITALY*

After attending this presentation, attendees will better understand the importance of recognizing the unique characteristics that distinguish accidental trauma from trauma associated with sexual abuse.

This presentation will impact the forensic science community by increasing understanding of the variables that are important for clinicians who evaluate anogenital injuries and who must provide input for confirming or refuting acts of sexual abuse.

The diagnosis of child abuse is based on the child's narrative associated with a general and anogenital inspection by a specialized medical provider. The genital examination, using a colposcopy and a camera, is performed with a separation and traction technique, while the young patient is in a supine and knee-chest position. The examiner tries to identify the most suggestive patterns of abuse, such as those described in the 2016 Adams Classification: (1) the complete hymen absence or the loss of posterior hymenal tissue; (2) hymenal lacerations; (3) external genitalia bruising; and, (4) scars of the posterior fourchette.<sup>1</sup> This presentation includes a brief review of the literature and describes two cases of severe genital wounds in prepubescent girls, each with a different etiology.

A review of the literature on anogenital traumatic injuries was conducted. The research was performed using the PubMed® electronic database with the following algorithm: accidental genital trauma and hymenal injury. Only five articles were found, underlining that traumatic hymenal injuries, such as lacerations or lacerated and contused wounds, are considered nearly pathognomonic of child sexual abuse. This seems to be the apparent conclusion, despite the unintentional genital traumas, such as straddle injuries, which can involve anogenital and perineal areas or external genitalia; however, injury of the hymen is felt to be a very rare event since this structure is well protected. Moreover, since it is shrouded by the labia and is essentially internal, the hymen is extremely unlikely to be injured during a straddling fall.

In this presentation, two suggestive cases of children's genital traumatic wounds were observed in the dedicated child abuse unit called "Bambi," which is located within Ospedale Infantile Regina Margherita, a pediatric hospital in Turin, Italy. Because of the severe wounds, both of these female children required surgery. The first case involved a 7-year-old girl who was brought to the emergency department with perineal bleeding. Her mother explained that her child slipped and fell astride the shampoo bottle while she was showering. During the examination, normal prepubertal genitalia were observed, with no evidence of vaginal trauma. The annular hymen was intact. The anogenital area was void of apparent injury, but was contaminated by fecal material. The wound was at the left-side margin of the perineal raphe, at about 1cm from the posterior labial commissure, and displayed a continuous oval appearance; it was approximately 4cm in length. The lesion was posteriorly extended up to the anal canal; wound margins appeared linear and close to this wound. There were also irregular ecchymosed injuries. The second case concerns a prepubescent girl who was presented to the emergency department with vaginal bleeding,

needing surgery. In this case, the genital inspection revealed the near-total absence of hymenal tissue, a posterior vaginal wall tear that extended from the vaginal vestibule, also affecting the fork toward the inside of the vaginal canal, and continuing externally towards the median raphe for a length of approximately 10mm-13mm, without affecting the anal margin. Confirming the literature and the Adams Criteria, in the first case the perineal injury exhibits characteristics consistent with an accidental cutting wound (net margins, front tail) with perineal and rectum implications, but without the hymenal involvement.<sup>1,2</sup> In the second, instead, the genital wound refers to penetrating vaginal trauma after sexual abuse, with apparent hymenal and fourchette lesions.

### Reference(s):

1. Adams JA et al.: Updated Guidelines for the Medical Assessment and Care of Children Who May Have Been Sexually Abused. J Pediatr Adolesc Gynecol 2016; 29: 81-87.
2. Al-Abdallat EM, Al-Ali RA, Salameh GA: Accidental genital trauma in the female children in Jordan and the role of forensic medicine. Saudi Med J. 2013 Oct;34(10):1043-7.

### Genital Trauma, Child Abuse, Hymenal Injuries