Sexual Abuse: Are These Findings Due to Recurrent Abuse?
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Dr. Botash has nothing to disclose.

Objectives
- Differentiate between normal and abnormal child abuse examination findings.
- Identify the key factors for quality documentation of child abuse cases.
CASE

- A 10-year-old female presents with suspicion of abuse by mom’s boyfriend’s 15-year-old son.
- Mom witnessed the 15 year old leaving the patient’s room early in the morning.
- Police were called and patient brought to ED.
- The girl disclosed penis to vagina contact that had been ongoing since she was 8 years old.

CASE

- History of menarche one year ago with regular menses, last period one month ago.
- History of LLQ pain and dysuria 3 weeks ago.

Emergency Department

Video recording of findings
Report of findings

- Tanner IV
- No tears
- Greyish discharge
- Hymen fimbriated with decreased tissue at 6 o’clock and notch at 5 o’clock
- Evidence collected

CARE Follow-up Visit

New tissue growth
Documentation

- Tanner IV
- Hymen fimbriated
- New growth of tissue along the hymen at 5 to 8 o'clock in the supine position
- White vaginal discharge noted

Four Months Later

- Pt became “obsessed” with the older brother of the prior perpetrator (16 year old).
- Disclosed sexual activity with him x2 approximately 1 month prior to a new CARE appointment.
Close up of posterior hymen

Documentation

- Tanner IV
- Thin clear white vaginal discharge
- Hymen is showing signs of early fimbriation with slightly decreased tissue at 6 o'clock in the supine position.

Appearance of Hymen Four Months After the Initial Event

- Notch at 6 o'clock
- Swab & notch at 6 o'clock
Follow-up from initial event and then 4 months later

What is this finding? Can we define it?

Findings Diagnosed of Trauma and/or sexual contact:

- Acute trauma
- Residual (healing) injuries
- Injuries indicative of blunt force penetrating trauma (or abdominal compression)

The following findings support a disclosure of sexual abuse, if one is given, and are highly suggestive of abuse even in the absence of a disclosure, unless a clear, timely, plausible description of accidental injury is provided by the child and/or caretaker.
Hymenal transaction (healed).

An area between 4 and 8 o'clock on the rim of the hymen where it appears to have been torn through, to or nearly to the base, so there appears to be virtually no hymenal tissue remaining at that location. This finding has also been referred to as a “complete cleft” in sexually active adolescents and young adult women.

Injuries indicative of blunt force penetrating trauma

Missing segment of hymenal tissue:

Area in the posterior (inferior) half of the hymen, wider than a transection, with an absence of hymenal tissue extending to the base of the hymen, which is confirmed using additional positions/methods.

Indeterminate findings:

Deep notches or clefts in the posterior/inferior rim of hymen, between 4 and 8 o'clock, in contrast to transections.
Critical Question...

Deep or Shallow Notch versus Transection?

Figure 3. Hymenal Membrane Characteristics

Fig 6. Transaction at 6 o'clock in 7-year-old abused Hispanic girl (knee-chest view).

A notch that extended to the vestibule was termed a transaction (Fig 6).
Fig 5. Superficial notch at 6 o’clock (arrow) in 6-year-old white girl without history of abuse (knee-chest view).

The extent of a notch was classified as **superficial** (less than or equal to half of the width of the membrane) or **deep** (more than half of the width).

- **Normal:** Shallow or superficial in the inferior rim of the hymen
- **Indeterminate:** Deep notches
- **Diagnostic:** Transection or missing hymen

Is there agreement between published research?

### Table 1. Accuracy Studies

<table>
<thead>
<tr>
<th>Source</th>
<th>Study Quality</th>
<th>No. of Participants</th>
<th>No. of Aged</th>
<th>Age Range</th>
<th>Reference Standard</th>
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</table>
| Berkoff, M. C. et al. 2008 | 3             | 300                 | 150         | 3-6      | Child protection

How accurate is this?
A systematic review of the literature on the diagnostic utility of nonacute physical examination findings for identifying sexual abuse in prepubertal girls.

- The accuracy of most genital findings to predict abuse is poor.
- Because the number of prepubertal girls with genital findings is low ("extremely infrequent findings"), there is a large confidence interval and therefore the absence of a finding (notch, transection, perforation) in the posterior hymen has little impact on the likelihood that a child has been abused.
- The presence of these findings supports the disclosure of sexual abuse but the rarity of the findings limits the ability to use the findings alone to make a diagnosis of abuse.

Non-acute examinations

**Results**

- Posterior hymenal notches and clefts were more common among girls admitting past intercourse (13/27 [48%]) than in girls who denied intercourse (2/58 [3%]; \( P = .001 \)), but the mean width of the posterior hymenal rim was not significantly different between the 2 groups (2.5 mm vs. 3.0 mm; \( P = .11 \)).
- Two subjects who denied intercourse but had posterior hymenal clefts described a painful first experience with tampon insertion.
Posterior Hymenal Findings

What can we say?

- Posterior hymenal findings are rare in prepubertal girls (abused and more rare in non-abused).
- A history of tampon use should be obtained because one comparative study suggests there may be an association with posterior hymenal findings.
- The presence of posterior hymenal findings is consistent with a history of sexual abuse.

Healing of hymenal injuries in prepubertal and adolescent girls: a descriptive study.

FIGURE 1 Case 1: An 8-month-old, assaulted 3 days before, has a V-shaped deep hymenal laceration at the 6 o'clock position (arrow) and fossa navicularis and posterior fourchette lacerations.

FIGURE 2 Case 1: Twenty-four days after assault.
Notch at 6 o’clock
Is this different from the follow-up?

1. Hymen fimbriated with decreased tissue at 6 o’clock and notch at 5 o’clock
2. New growth of tissue along the hymen at 5 to 8 o’clock in the supine position
3. Hymen is showing signs of early fimbriation with slightly decreased tissue at 6 o’clock in the supine position.

Review the video
Is this different from the follow-up?

Documentation at Visits
What we can say about this case:

- There is a posterior hymenal finding that is consistent with the history of sexual abuse.
- The finding appears unchanged since the initial examination although the exam midway through showed evidence of new tissue growth.
- Lack of consistency in documentation contributed to confusion over the findings and consistency might have helped to alleviate this.
- Photographs/video were key to further review.
- It is not possible to determine based on the physical findings alone whether the girl was re-abused.

References