Objectives

• To define sexual abuse
• To review epidemiology of sexual abuse
• To review general anatomy and the importance of a comprehensive evaluation and exam
• To discuss the types of sexual abuse and the physical findings that may result
• To understand the importance and limitations of a forensic evidence collection kit

Definition

• Sexual abuse
  • involvement of dependent, developmentally immature children and adolescents in sexual activities which they do not fully comprehend and to which they are unable to give informed consent
History

- Used to be considered a taboo issue
- People didn’t believe incest was real
- In 1970s, child sexual abuse report increased associated with the women’s movement
- Similar issues in other countries
  - Cultural reasons
    - e.g. female genital mutilation

Epidemiology

- Comprises 10-15% of child maltreatment reports made in US
- Prevalence: 20% of females, 10% of males report having been sexually abused by age 18
- Sexual assault prevalence: females 3-16%, males 2-6%
- Mean age at time of onset of sexual abuse is 9-10 years
- Unknown exactly how many cases actually occur each year

Sexual Abuse Data

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>NC</th>
<th>SC</th>
<th>GA</th>
<th>VA</th>
<th>TN</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of cases</td>
<td>8.3</td>
<td>2.0</td>
<td>5.2</td>
<td>3.4</td>
<td>1.1</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Percent of the total number of child victims including physical abuse, neglect, etc.
In NC: 1595 sexual abuse cases out of 14856 children abused
Types of Sexual Abuse

- Contact
  - Actual or attempted intercourse/contact (oral, genital, rectal)
  - Fondling
  - Finger manipulation or penetration, or masturbation
- Noncontact
  - Exhibitionism
- Exploitation
  - Child pornography, prostitution/CSEC, cyberenticement

Risk Factors for Sexual Abuse

- Divorce
- Intimate partner in the home
- Parental substance abuse
- Unavailable parents
- Child disability – 2x greater risk

Perpetrators

- Men > women
- Unknown what percent of men/women that find children sexually attractive
- <3% of men report children as focus of interest
- Men who molest out-of-home girls report average of 20 victims
- Men who molest out-of-home boys report average of 150 victims
- Small numbers of men with thousands of victims

https://www.d2l.org/the-issue/statistics/
## Perpetrators

- Child molesters on a continuum
  - Some find children sexually attractive, but haven’t acted upon this
  - Some involved in noncontact
    - Exhibitionism
    - Voyeurism
    - Photography
    - Obtaining/disseminating child pornography
  - Some involved in full sexual contact with children

## Perpetrators

- Victim access
  - Occupation, hobbies, neighborhood, etc
- Grooming
- Characteristics (Starling, *Perpetrators of Child Abuse*)
  - Over 25, never married
  - Lives alone or with parents
  - Limited dating
  - Limited peer relationships
  - Excessive interest in children
  - Associates and friends are young
  - Age and gender preference for victims

---

**History is the most important part in diagnosing abuse**
Child Advocacy Centers

The Forensic Interview

- Child-friendly way to interview regarding allegations of abuse.
- Physical abuse, sexual abuse, neglect and other typologies
- DSS/LE/medical provider can watch live
- Recorded

Disclosures of Abuse

- Purposeful (active)
- Accidental
- Delayed
- Immediate
- Tentative/reluctant
- Recantation – rates reported from 4-27%
Disclosures of Abuse

- Failure to report victimization, even when asked, is common
  - In one study of 529 children with gonorrhea, only 43% disclosed
- Delayed disclosures are common
  - In one study of 336 children aged 8-15 years, 75% failed to disclose their victimization within the year after it occurred
- 2/3 of adults reporting sexual abuse as children had never reported to anyone prior

Why Disclosures Change

- Family not believing
  - Lack of support from family
- Child afraid of being removed from home
- Child feels guilty or embarrassed
- Child still has visitation with alleged perpetrator

What happens next after a child discloses sexual abuse?
Acute Sexual Assault

- SANE kit (can take 2.5+ hours)
  - Performed within 72 hours to obtain evidence
  - Some states will collect evidence up to 5 days after alleged assault

SANE exam and kit

- Focused history
- Medical clearance from ED
- Photographs
- Toxicology screening
- Examination
- Evidence collection

Process of kit collection

- Consent signed
- Examiner wears gloves
- Clothing collected
- Swabs
  - Oral, buccal, etc
- Skin exam
  - Bite marks, hickies, etc
  - Alternative light source
- Hair (head and pubic)
- Nail scrapings
Forensic Evidence Findings in Prepubertal Victims of Sexual Assault

- Studied 273 children <10 years s/p acute sexual assault evaluation
- >90% of children with positive findings – within 24 hours
- No swabs positive for blood after 13 hours; sperm/semen 9 hours
- 23% had genital injuries
- Clothing/linens yield majority of evidence

Forensic Evidence Collection and DNA Identification in Acute Child Sexual Assault

- Retrospective chart review of kits processed ages 0-20 years
- 97/388 (25%) positive
- 63/388 (65%) produced identifiable DNA
- 3 children with positive body samples after 24 hours, 1 positive after 54 hours
- Should evidence be collected after a longer period of time based on rarities?
Physical Exam and Findings

Top Contenders

Purpose of Medical Examination

• To ensure the health of the child after an alleged abusive act
• To document any injuries or other evidence that may support the allegation of child sexual abuse (Jenny)
• Not to prove something truly happened…
Nonacute Examination
• After the acute period (>72 hours)
• Usually at a Child Advocacy Center (CAC)
• Occurs when disclosures is outside of timeframe to collect forensic evidence
• Law enforcement/DSS investigation

Female External Genital Anatomy
• What we examine in office:
  • Labia majora/labia minora
  • Urethral opening
  • Hymen
  • Vaginal tissue if visible
  • Anus

  • If concern for trauma or cannot see bleeding source, may use speculum in adolescents; if young child, may need anesthesia/sedation

Male External Genital Anatomy
• What we examine in office:
  • Penis
  • Urethral opening
  • Scrotum
  • Anus
Case example

- 2 young girls sexually abused by their father over the course of 1-2 years
- Acts were video recorded by him
- Both had normal exams, no STIs
- Both disclosed sexual acts; camera corroborated their story
- Why no physical findings?

Normal exam after sexual abuse?

- As reported in studies since 2000, the percentage of children giving a history of abuse who have abnormal physical examination findings is about 4% to 5% in most clinical settings — Adams (Medical eval of suspected child sexual abuse 2011 update)
“The Virginity Exam”

- Systematic review of 17 studies
- Hymen exam not accurate or reliable to predict/diagnose virginity status
- “The hole is too big”
  - Hymen expands/contracts with normal breathing

Examination Findings in Legally Confirmed Child Sexual Abuse: It’s Normal to be Normal

- Studied notes and photos of 236 children with perpetrator conviction for sexual abuse
- Mean age of patients – 9 years (8 mos to <18 years)
- Genital exam findings rated
  - 28% normal
  - 49% nonspecific
  - 9% suspicious
  - 14% abnormal
- Anal findings – abnormal in 1%
 Examination Findings in Legally Confirmed Child Sexual Abuse: It's Normal to be Normal

Joyce A. Adams, MD; Katherine Harper, PA-C; Sandra Noshoven, FNP; and Juliette Revilla, FNP

- Nature of assault may not cause injury
- Perception of penetration
  - Error
  - Intralabial
  - Partial
- Tissues are stretchy, heal well and fast
  - Like inside of mouth
- Disclosure may be delayed days to years after assault
- The hymen can "grow" as puberty progresses, masking prepubertal injuries

Genital Anatomy in Pregnant Adolescents: "Normal" Does Not Mean "Nothing Happened"

Nancy D. Kellogg, MPD; Shirley W. Menard, RN, PhD, CFNP, FAAN; and Annette Santos, RN, SAMR

- 36 pregnant adolescents with sexual abuse evaluation, average age 15 yo
- 1 pregnant with 2nd infant (1st product of rape, born via c-section) - normal
- 1 miscarriage with D&C 2 weeks pre exam – normal
- 1 abortion 2 months pre-exam – normal
- Exams: 64% normal/nonspecific, 22% inconclusive, 8% suggestive, 6% definite evidence of penetrating trauma
- Average 3 months from sexual encounter in normal/inconclusive; 2 mo for suggestive and 1 mo for definitive group

Normal exam after alleged sexual abuse

- Multiple other studies
- Conclusions:
  - Hymen is recessed and protected by labia majora/minora
  - Labial penetration not painful
  - Hymen is elastic and stretches
  - Not possible to tell if penetration occurred without video or third party witness
  - Anus designed to open or dilate to allow stool to pass
    - Will also dilate to allow object to enter
    - Example: finger manipulation to aid newborn in stooling
  - 90-95% of exams will be normal
Other factors

- Size of penetrating object
- Force
- Use of lubricants
- Degree of cooperativeness
- Number of occurrences
- Time interval since last contact/assault
- Type of sexual abuse i.e. fondling

Adams Guidelines

Recently updated in 2016

Adams Guidelines

- Guidelines
  - Findings documented in newborns or commonly seen in nonabused children
  - Findings commonly caused by medical conditions other than trauma or sexual contact
  - Conditions mistaken for abuse
  - Findings with no expert consensus
  - Findings caused by trauma and/or sexual contact
Findings documented in newborns or commonly seen in nonabused children

Normal variants:
1. Normal variations in appearance of the hymen
2. Perineal hymenal tissue present all around the vaginal opening including at the 12 o’clock location
3. Commonly seen hymenal tissue situated at some point above the 3 to 9 o’clock locations
4. Imperforate hymen: hymen with no opening
5. Matsutake hymen: hymen with one or more small openings
6. Squared hymen: hymen with one or more angular across the opening
7. Hymenal flap: hymenal flaps, finding each other
8. Hymen with fold or bump on the rim
9. Hymen with vascular or bumpy on the rim at any location
10. Angioma of the hymen
11. Superficial lesions of the hymen, at or below the 3 and 9 o’clock locations
12. Smooth anterior rim of hymen that appears to be relatively narrower along the entire rim

Findings commonly caused by medical conditions other than trauma/sexual contact

10. Erythema of the genital tissues
11. Inflamed connective tissue of vestibule and hymen
12. Labial adhesions
13. Fissures of the posterior Bartholomeus
14. Vaginal discharge
15. Nonspecific conjunctivitis
16. Axial fissures
17. Venous congestion or venous pooling in the perineal area
18. Axial dilatation in children with predisposing conditions, such as cancer, rickets or history of constipation and/or enemas, or children who are abused, under anesthetics or with impaired muscular tone for other reasons, such as post-mania.
Conditions mistaken for abuse

23. Sudden weight loss
24. Marked abdominal pain
25. Vomiting

Findings caused by trauma and/or sexual contact

26. Anus or vaginal tear or laceration
27. Intrauterine contraceptive device presence
28. Perineal bruising or ecchymosis
29. Perineal or anal swelling
30. Perineal or perianal infection
31. Perineal or anal skin lesion
Sexually transmitted infections

Infections transmitted by sexual contact, unless there is evidence of perinatal transmission or clearly, reasonably and independently documented rare nonsexual transmission

- Genital, rectal or pharyngeal Neisseria gonorrhoeae infection
- Syphilis
- Genital or rectal Chlamydia trachomatis infection
- Trichomonas vaginalis infection
- HIV, if transmission by blood transfusion has been ruled out
- Pregnancy
- Semen identified in forensic specimens taken directly from a child's body

Sexually Transmitted Infections

- Chlamydia
- Gonorrhea
- Trichomonas*
- HIV
- Syphilis
- Hepatitis B
- Hepatitis C

What about males?

- Penile bruising, scrotal bruising
- Anal findings
- Sexually transmitted infections
Physician’s role in the courtroom

• To explain and describe the clinical picture and provide medical testimony that is accurate and objective.
• A careful physical examination and excellent documentation will aid the physician when he or she is called upon to present evidence.

Summary

• Child sexual abuse may be underreported.
• Many reasons why children do not disclose or change/recant their disclosure.
• Acute sexual assault examinations within 72 hours, nonacute exams after 72 hours.
• Most children who disclose sexual abuse will have a normal exam. (~90-95%)
• Multiple factors contribute to normal exam.
• If there are injuries, they typically heal quickly and do not need repair.

Questions?
References


