Child sexual abuse: A physician's introduction to historical and medical validation

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The investigation and validation of an allegation of child sexual abuse is difficult and time-consuming. In sexual abuse cases, the usual indications of physical maltreatment—bruises, abrasions, and lacerations—are generally not present. Thus, to adequately evaluate allegations of sexual abuse, the physician needs a different set of skills. In this paper, I present an introduction to the historical and medical validation of child abuse and provide a clinical approach to the child victim. This article will serve as an introduction to (1) understanding victimization and historical documentation, (2) preparing the child victim for an examination, (3) the forensic medical examination, (4) sexually transmitted diseases in victims and, (5) formulating a conclusion. The selected bibliography supplements this introduction.

For a child, the purposeful disclosure of sexual abuse is extraordinarily difficult. Usually the sexual victimization does not occur in a capricious manner but rather follows a well-documented sequence of events. Essential to an effective intervention process is understanding the conceptual framework in which children are victimized. The same history-taking skills used by the physician in making a medical diagnosis must be applied to validate an allegation on an historical basis.

Most sexually abused children are abused by family members or by people in a trusted supervisory capacity. Most perpetrators have little desire to harm their victims, since injury to the child would decrease their chances of reengaging the child in the activity. The age-inappropriate sexual activity is generally represented to the child as an accept-

able and special activity, and the child is betrayed, deceived, and coerced into a spectrum of sexual activities to which he or she is incapable of giving informed consent. The dynamics are much different from those in physical maltreatment, where the intent is to harm the child. Few child sexual abuse cases involve actual rape.

Reporting

All 50 states have laws that make it mandatory for all professionals and nonprofessionals to report suspected cases of physical or sexual child abuse. All the statutes require that if a "reasonable belief" exists that a child has suffered abuse, the case must be reported "promptly" or "immediately" to the child protective service of the community. All the statutes provide immunity from civil suits for noncapricious reports; and all include provisions for prosecution for failure to report.

All physicians who care for children should familiarize themselves with state statutes and reporting mechanisms. The structures of the child protective systems may vary among states, but in each state the system allows for 24-hour reporting and, depending on the nature of the allegation, a timely response by the agency.

The statutes do not require that the reporting professional have "proof" but "reasonable belief." This belief may be based on observations of sexually stylized acting-out behaviors, on spontaneous statements made by the child, or on specific medical symptoms referable to the genitourinary or gastrointestinal system.

It requires special skills to talk to children of varying ages and developmental stages concerning their possible victimization. The evaluation process requires the observations and talents of many professionals. The physician should be clear about his or her role in the validation process. Frequently,

physicians feel frustrated by the child protective system because their contact with it is limited to reporting. Physicians should seek to participate more actively with the agencies in their communities and to work as members of the social work, mental health, and law-enforcement teams. Their awareness of the difficulties involved in investigation and their adoption of a less peripheral role will ultimately benefit the children and families that they care for.

Actively participating with the local child protective system will help the individual physician define the level at which he or she wants to be involved in the validation process. Not all physicians will feel comfortable in dealing with sexually abused children. Physicians, however, must recognize this difficulty and compensate for it by becoming knowledgeable about the resources in the community to which they can refer sexually abused children for the sensitive and specialized care they need.

Investigating an allegation

Historical validation is dependent on one or more interviews in which the following questions are addressed:

- What access did the alleged perpetrator have to the child in order to engage the child in the age-inappropriate sexual activity? In particular, how was the activity represented to the child?
- How did the activity progress over time and with what frequency did it occur?
- How was secrecy maintained throughout the duration of activity? Particularly, what use was made of threats, bribery, or intimidation?
- How and why did disclosure occur? Was it purposeful or accidental?
- What are the child's expectations now that the disclosure has occurred?
- What are the observations of caretakers and school professionals concerning the child's behavior?

To obtain the necessary information, the interviewing must be conducted in a nonthreatening environment and in an empathetic and nonjudgmental manner. The style of the interview will depend on the child's age and developmental level. If the child is verbal, then all questions should be posed in a facilitating, nonleading, and nonsuggestive manner. Leading and suggestive questions should be avoided. In most civil court proceedings, statements made to the physician can be exceptions to the hearsay rule and entered as evidence. Therefore, it is extremely important

that the interviewer document his or her questions as they were presented and the child's responses in the child's own terminology. Equally important are observations on the emotional congruence of the child's responses.

Whether the physician will complete a full interview or a clarifying interview after reviewing information provided by the child protective services will depend on the individual case. It is difficult for children to recount the details of the sexual activities. It is essential to try to avoid repeated interviewing. Depending on the child's age and verbal skills, the interviewing process may be facilitated by the use of drawings or anatomic dolls.

The purpose of an interview should be not only to gather information but also to provide certain therapeutic messages to the child victim. For example, it is never the fault of the child that an adult touches him or her in a sexually inappropriate way. Frequently, the child feels intensely responsible for having allowed the activity to occur and for having failed to stop it. Children are incapable of giving consent to sexual abuse activities, and they need to be made aware of the fact.

A child needs to be given information concerning what will happen to him or her and to the alleged perpetrator now that a disclosure has occurred. The process of giving control back to the victim by providing the child with this information and by giving the child an opportunity to make decisions when it is appropriate may have considerable therapeutic value.

Few children can foresee the cascade of events that will follow on disclosure. In a purposeful disclosure, all the child wants is for the abuse to stop; he or she does not know that disclosure will trigger an investigation. If intervention and historical validation are not carried out appropriately—and these must include addressing the mental health impact of the victimization—many children will recant the allegation. Recantation is particularly common among older children who are being pressured by a nonoffending parent, the perpetrator, or both. Recantation is minimized by following effective intervention procedures.

Accidental disclosure generally occurs under one of two sets of circumstances: a third party observes the activities, or the child has specific genital, urinary, or gastrointestinal complaints, which may include a sexually transmitted disease or anogenital trauma. When an accidental disclosure occurs, neither the child nor the per-

petrator is prepared for it. An accidental disclosure is more likely to precipitate a crisis and thus complicate the validation process by minimizing the time for planned intervention.

The impact of sexual victimization is primarily psychological; the urgent issue, therefore, is the mental health aspects of the case. Under most circumstances, a forensic medical evaluation—although important—is secondary. Sgroi and colleagues¹ have made significant contributions to the understanding of the way children are victimized and the impact of abuse on the victim. (See the suggested readings for a more detailed appreciation of the complex issues surrounding victimization.)

Medical validation

A complete medical examination is indicated in all cases in which a child has allegedly suffered sexual abuse. The purpose of the examination is not only to document the residual of the alleged activity and to collect forensic specimens but also to address the child's psychological concerns regarding physical intactness and body image. A thorough and sensitive examination can be very reassuring to the child and caretaker(s).

The physician plays an important role in determining the urgency of the examination. Because most children disclose their abuse long after the last event, when they feel it is safe to do so, the opportunity to observe acute residual or to collect forensic specimens or both is infrequent. However, if the abuse has occurred within 72 hours, the child should be seen immediately. During this time interval, the opportunity to identify acute signs of injury and collect forensic specimens is optimal. Superficial trauma to the genitalia and anus can heal without residual in less than 72 hours. More serious trauma heals with the formation of scar tissue and will be apparent long after the last event. If the last event occurred longer than 72 hours before disclosure and the child has no physical symptoms, the examination can be deferred until the historical validation and mental health issues have been addressed.

A successful physical examination is dependent on the appropriate preparation of the child, for only a completely cooperative child can be examined. No force should be used to hold the child during the examination. The following are essential preliminary steps to the examination:

- Allow the child to select the adult who will accompany him or her throughout the examination.
- Determine the child's terminology for his or her

body parts and use this terminology in talking to the child.

- Explain to the child that he or she will be examined from head to toe, providing the message that all parts of the body are important.
- Explain the purpose of the examination.
- Select the examination position(s) in which the child will feel most comfortable; a very young child may prefer to sit in the mother's lap.
- Encourage the child to participate in the examination by assisting. This assistance could consist of holding the cotton swabs or culture materials. Demystifying the examination will decrease the anxiety that is often experienced by the abused child.

Genital and anal examination

Most physicians have limited experience in examining the genitalia of children. The genital examination should be part of all health-maintenance examinations of children. Incorporating the genital examination into the routine physical examination will increase the physician's confidence in recognizing normal variance and the residual of trauma. A review of genital and anal anatomy will provide the examining physician with the appropriate descriptive terminology. The Figure is a stylized drawing delineating normal female anogenital anatomy.

When fondling of or oral contact with the genitalia is the only allegation and the disclosure takes place longer than 72 hours after the last event, the results of the examination are likely to appear normal. In a forensic medical examination of a child, however, the word *normal* is not appropriate, considering the wide variations in hymenal membrane. It is essential to document the appearance of the hymenal membrane even if no acute or chronic signs of injury are apparent. The documentation of the "uninjured" genitalia serves as a particularly helpful reference in those cases in which abuse is suspected and the child is thought to be at risk, but in which insufficient historical, behavioral, or medical findings exist to substantiate an allegation. This baseline documentation will serve as an important reference if a new allegation surfaces.

During the examination of the genitalia, the female child may be in either of two positions: the supine frog-leg or the knee-chest position. I prefer the supine frog-leg position; however, if the tissues cannot be fully viewed, the use of the knee-chest to supplement is appropriate. The knee-chest position is particularly helpful if there is a lot of redundancy to the tissues surrounding the hymenal

Figure. Normal female anogenital anatomy. (Reprinted with permission from Finkel, MA: *The medical evaluation of child sexual abuse*, in Schetky D, Green AH (eds): *Child Sexual Abuse: A Handbook for Legal and Medical Professionals*. New York, Brunner/Mazel, Inc, 1988, p 88.)

orifice. The effect of gravity will make it easier to view the orifice edge and possibly the cervix.

When the child is in the frog-leg position, exerting downward and lateral traction on the perineum will separate the labia and facilitate examination of the vestibular surface of the hymenal membrane, hymenal orifice, fossa navicularis, and posterior fourchette. In addition, by gently grasping the labia majora with posterior and lateral traction, the physician can appreciate and measure the variability of the transverse diameter, which is dependent on the state of relaxation of the child.

In the medical literature, a transverse diameter of greater than 4 mm is considered abnormal for prepubertal children. However, this criterion cannot be the sole basis on which to judge whether a child has been penetrated. In any given child, there is considerable variability in the transverse diameter, depending on (1) the age and the state of relaxation of the child, (2) the elasticity of the membrane, (3) the position of the child when measurements are obtained, and (4) the method used to obtain the measurements. A maximum transverse diameter would be useful; but to obtain

the measurement, an object might have to be placed through the orifice and the orifice stretched. In most children, this is not feasible.

The transverse diameter is one criterion that must be considered along with other stigmata of trauma and corroborated with a history of the allegations to provide a basis for an opinion on whether an object has been placed through the hymenal orifice. Frequently, there is a discrepancy between the child's impression of "in" and the physical examination findings. *Penetration* in a legal sense is defined as "between the labia." Digital penetration or vulvar coitus is frequently perceived as in when in fact an object was not placed through the orifice in the adult sense of penetration. Conversely, a transverse diameter of less than 4 mm does not mean that the child was not abused.

The hymenal membrane orifice may have a variety of configurations: crescentric, annular, septate, fimbriated, microporforate, or imperforate. In addition, there may be congenital bumps, clefts, and tags. The membrane itself may vary in thickness, elasticity, and redundancy. All these characteristics must be noted in the record.

Acute signs of injury to the genitalia are the classic signs of trauma, namely, abrasions, erythema, edema, contusions, and lacerations. They are relatively easy to recognize and generally follow a pattern associated with a history of nonpenetrating or penetrating injuries. Acute injuries, if superficial, may be short-lived. Penile penetration injuries are most likely to result in trauma to the most posterior portion of the hymenal membrane orifice, the fossa and fourchette. Digital penetration injuries most frequently occur in the most superior quadrants. Accidental straddle or crush injuries most commonly occur between the 9 o'clock and 3 o'clock positions in the labia majora, labia minora, and clitoral hood. Accidental straddle injuries are unlikely to traumatize the hymenal membrane, since the membrane is recessed within the vaginal canal.

Without knowledge of the premorbid state, the chronic residuals of trauma are more difficult to interpret. These residuals may include healed lacerations of the hymenal membrane, fossa, and posterior fourchette; proliferative scar tissue; synechiae distorting the hymenal membrane orifice configuration; attenuation of the membrane edge; and alterations in the vascular pattern of the vestibular surface and fossa. Unless other stigmata of penetration exist, the opinion that rounding of the edge of the hymenal membrane is due to repeated introduction of a foreign body through the orifice is subjective.

My experience in studying the healing chronology of acute genital trauma has shown that genital trauma may heal with unanticipated distortion when formation of granulation tissue is involved. Obvious acute injuries that heal through the regeneration of labial cells have no associated residual.

Chronic irritation and inflammation associated with genital fondling or vulvar coitus may result in labial agglutination. However, labial agglutination may also result from other causes. Thus, when labial agglutination is the sole indicator of abuse, historical and behavioral indicators must be carefully considered before a conclusion is drawn.

Instrumentation of the genitalia is generally not indicated in prepubertal children. Little useful information has been obtained by the examining physician's completing a digital examination in the prepubertal child. Visual examination generally suffices when the presence of a foreign body is suspected. An optic speculum inserted through the orifice may facilitate observation. Under most circumstances, a good light source and good positioning

will provide a view that is sufficient for the removal of a foreign body by irrigation.

A colposcope is an excellent instrument for observing the genital and anal tissues under magnification. Colpophotography can be used to document the appearance of the tissues and provide a permanent record. Alternatively, a good light source and a magnifying glass can be used for observation. A hand-held 35-mm camera with a macrofocusing lens and a ring flash is a less expensive means of photodocumentation.

In completing an anal examination, the physician should avoid examining the child in the position in which the child was victimized. Thus, the external anal tissues should be examined with boys in the lateral decubitus position and with girls with the legs flexed onto the abdomen. The residual of anal trauma will be dependent on a number of variables, including (1) the presence or absence of force, (2) the use of lubricants, (3) the size of the object introduced, (4) the number of episodes, and (5) the cooperativeness of the child. Not surprisingly, many children who have had digital anal or penile anal penetration have little residual. Children can frequently pass without trauma to the sphincter large bowel movements that exceed the transverse diameter of an erect adult penis. When residual is present, it can be observed as perianal excoriation, erythema, swelling of the external anal tissue, loss of the fine symmetric rugal pattern, prolapse posttraumatic tags, venous congestion, rectal fissures, and scar tissue. An abnormal response to the separation of the buttocks is the spontaneous dilatation of the anus greater than 15 mm. This response reflects the loss of the reflexive protective constriction. This response has been described in various terms, but is most commonly referred to as a buttocks-separation test.

The male victim may have injury to the glans, shaft of the penis, or scrotum. Common male genital injuries include superficial abrasions, edema and erythema of the glans and shaft, and bite marks to the shaft and scrotum. Suction injuries to the penis or scrotum may also be present in the form of petechiae and ecchymosis. If the alleged perpetrator forcibly masturbates the child victim, there may be superficial injuries to the glans and shaft of the penis.

Both male and female victims who are forcibly engaged in performing fellatio on a male perpetrator may have petechiae of the palate, tears of the labial frenulum, and loose teeth, depending on the amount of force that is used. Most victims who have either fellatio performed on them or who are co-

erced into performing fellatio on the perpetrator will not have signs of injury.

Sexually transmitted diseases

A discussion of each of the sexually transmitted diseases as it is manifested in children is beyond the scope of this paper. However, when examining a child for sexually transmitted diseases, the physician should keep in mind the following points:

- Consider all sexually transmitted diseases in children as having been transmitted in a sexually inappropriate manner. There is little evidence to support the nonvenereal transmission of sexually transmitted diseases through inanimate objects. Only after a complete investigation of the possible historical and behavioral indicators of abuse are reviewed should alternative explanations be considered.
- Do not under any circumstance use rapid diagnostic tests, such as chlamydiazyme or gonozyme tests, for sexually transmitted diseases; they have a high potential for giving false-positive results. These tests were designed for and are indicated only for high-risk adult populations. For *Chlamydia*, an appropriate medium such as modified Thayer-Martin in an enriched carbon dioxide environment should be used for specimen collection. For *Neisseria gonorrhoeae* species identification, the cell culture should be made in a carbon dioxide-enriched environment. All cultures for *N. gonorrhoeae* should have a second confirmatory test; the use of sugar fermentation as the sole confirmatory test is inadequate and may give a false-positive result.
- Use clinical judgment in determining the appropriateness and extent of culturing and serologic testing.
- Collect specimens in an atraumatic manner. Use cotton or Dacron swabs moistened in sterile water. Moistened urethral swabs are sufficiently small to be introduced through a hymenal orifice of greater than 2 mm in diameter without discomfort to the child. An alternative is to irrigate the vagina with a sterile feeding tube and saline solution and then plate the secretions obtained directly into the medium.
- Use laser surgery, the treatment of choice, in removing perianal warts. Before laser removal, excisional biopsy and serotyping are appropriate.
- Initiate appropriate treatment, based on weight, following Centers for Disease Control guidelines and schedule appropriate follow-up to reassess response to therapy.

Forensic specimen collection

It is not often necessary to collect forensic specimens such as seminal products; however, it is extremely important to collect them correctly when the need arises. Not only is it imperative that the evidence be collected in an appropriate fashion for crime-laboratory processing, but all specimens should be properly labeled, and a chain of custody should be maintained. When provided with a "rape kit," most physicians find it intimidating and so "official" that they either collect nothing or collect everything. The examining physician must use common sense in determining which of the many kit components to use. Bearing in mind that the kit was designed primarily for adult rape victims, take time to become familiar with the components of the rape kit before using it.

So as to prevent the rapid degradation of the specimen, use the following precautions when collecting seminal products. To lift dried seminal products, use a swab barely moistened with sterile saline solution. Thoroughly air dry all collected specimens for at least 1 hour before placing them in cardboard containers. Wet swabs will degrade rapidly and make the specimens useless. Air-dried specimens will remain stable at room temperature for weeks.

It is not often necessary to collect reference specimens, such as plucked hairs, from a child victim for the purpose of comparing them with specimens from the suspected perpetrator. Under most circumstances, the perpetrator is known to the child, and his or her identity is not an issue. All specimens should be placed in a paper bag, since plastic bags do not "breathe" and will contribute to the rapid degradation of forensic evidence. Always wear gloves when collecting specimens so as not to contaminate the specimen and to protect yourself.

The examining physician can become informed of the evidentiary procedures preferred in his or her locale by contacting the crime laboratory. For a review of such procedures, the California Medical Protocol reference² on sexual assault is an excellent resource.

Formulating a conclusion

The physician plays an extremely important part in the overall assessment and care of the child who has allegedly been abused sexually. In legal proceedings that arise from an allegation, the physician's opinion is generally given significant weight. Therefore, it is imperative that the examining physician provide a clear clinical description, one that lays

the foundation for the clinical impression and affords as many options as possible for the child victim and the opportunity for the physician to further explain his or her clinical impression. For example, a conclusion of "no evidence of sexual abuse" or "normal" is not appropriate in a case in which a child does have historical or behavioral or both indicators of abuse but does not have signs of acute or chronic injury or sexually transmitted disease. A more appropriate conclusion is that the physical examination neither confirms nor disproves the allegation or that the examination is consistent with the history that has been provided.

Any specific findings of trauma or of a sexually transmitted disease should be delineated. Such conclusions afford the child victim the greatest number of options.

The physician is an important member of the team of professionals necessary to adequately validate the sexual abuse and treat the child victim. Physicians are encouraged to extend their involvement in their communities and to meet with child protective service workers and mental health and law enforcement professionals. Sexually abused children need our expertise and commitment to help them begin the healing process.

The suggested readings will provide overviews of various studies related to the evaluation of sexually abused children. I believe that these will prove helpful to physicians who have taken an active role in the care of abused children.

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Suggested readings

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