Chapter 2: Evaluating Sexual Abuse

Reading:


Berenson A. Appearance of the hymen in newborns. Pediatrics 1991; 87:458-465

Berenson AB. A longitudinal study of hymenal development from 3 to 9 years of age. J Peds 2002; 140: 600-607


Kellogg ND, Menard SW, Santos A. Genital anatomy in pregnant adolescents: "normal" does not mean "nothing happened". Pediatrics. 2004; 113: e67-69
Child sexual abuse is not the most common form of maltreatment, making up less than 10% of reported cases. Neither is it the form of abuse with the highest likelihood of medical findings, as over 90% of evaluated cases have normal examinations and laboratory tests. In many centers, however, sexual abuse is the commonest referral for a medical assessment of suspected child maltreatment. Given this mismatch, it makes sense that the medical evaluations not focus exclusively on finding evidence of abuse. In fact, for all CHAMP assessment, the abuse assessment should be a subset of a thorough evaluation of the child’s physical health and a chance to refer for appropriate mental health evaluation and treatment.

A. The Medical History

**Background Medical History:** How much past and other history you take varies provider to provider and patient to patient. You may choose to get a complete past history, including a prenatal history; birth history; history of past illnesses, surgeries and injuries; and a review of systems, or to truncate your past history. As a minimum you will want to know whether the child has had any ano-genital symptoms, injuries, and procedures. Issues with elimination, including urinary tract infection, genital discomfort, discharge and bleeding, enuresis, encopresis, constipation, and fissures, must be elicited. For teens, a menstrual history should be collected. Some providers do this first, to cement the fact that they are a medical provider, before the history of current complaint, while others

Bays J. Genital and anal conditions confused with child sexual abuse trauma. AJDC1990; 144: 1319-1322


Sjoberg RL, Lindblad F. Limited disclosure of sexual abuse in children whose experiences were documented by videotape. Am J Psychiatry, 2002: 159: 312-314


Adams JA, et Al. Guidelines for medical care of children who may have been sexually abused. J Pedatr Adolesc Gynecol. 2007; 20: 163
follow the tradition of getting a history of current complaint, then filling in with appropriate past and other medical history. A family history should include the family constellation, the various domiciles in which the child resides and visits, and appropriate family medical history. Particularly sensitive aspects of the family and child history will be addressed later.

**Adult’s Event History:** Ultimately there are additional things that you will want to know that will have to be obtained from an adult informant, without the child hearing. You may be able to get these details from the agencies who refer you the patient. If they have not been provided, however, you may have to obtain them yourself. This information includes behavior changes, behavior disturbances, and sexualized behaviors in the child, the occurrence of domestic violence and sexually transmitted infections in the family and observations that make one adult suspicious of another. The occurrence of prior sexual abuse events, and suspicions about voluntary sexual activity are critical when interpreting an exam. When a child has made a disclosure to a parent, elaborating how that disclosure came about will help you know how much weight to give it. When a parent witnessed something, the actual observations will allow you to contextualize the observations.

**Child’s History:** Not everyone agrees on what roles physicians have in obtaining an abuse event history from the child. If possible abuse is being investigated, and designated forensic interviewers will question the child, it is best that they go first. They should share their information with the provider. The provider may then use this and ask the child for clarifications of particular medical significance. Some physicians believe that their diagnosis is more secure if they take their own history without relying on the work of others. The CHAMP physician will need to coordinate with the agencies they support, when defining the limits to taking the child’s history.

If at all possible a child’s history should be taken alone. When children will not separate from an adult, the adult should be prepared to be a neutral support, not answer questions, not reinforce answers, and not react emotionally. The adult should be seated in a way that he or she does not face the child. The child’s medical history is not a forensic interview, but should nonetheless avoid mistakes that would raise questions of leading and suggestion. A sample of questions has been provided, and will be discussed, but creativity and flexibility to different situations is required. Finally, the physician must embrace the attitude that it is better to come out with no history from the child, than to ask questions that are or create the impression of being leading. A question is considered leading, if it encourages a particular response. Many direct questions commonly asked by physicians would be considered leading by this standard.

With this in mind, if you believe that taking a child’s event history best serves the medical evaluation, we advise that you begin by re-introducing yourself to the child as a physician who takes care children. You may point out that you are not the child’s regular physician, and that the child has been brought to you for special reasons. There is some evidence that telling the child you will rely on their answers to provide proper care, and eliciting a promise to provide truthful answers is helpful. Once the groundwork is done, ask the child why they are there to see you. As a prototype question, this is a good one.
It provides the child with no significant information, and cannot be answered in one word. If this very open question produces an on topic response, requesting further elaboration or continuation is the foundation of the best history taking practice. When this does not produce a response, providing a frame of reference, from generally shared information may help the child.

If the child made a disclosure to their mother, you may ask the child if they told their mother something special, or upsetting, and what that was. Similar questions may be framed if the child told a teacher, was questioned by a police officer, or was interviewed by a social worker. Once the child is on topic, the history may progress by building on known information and requesting a narrative elaboration. Some information may be needed for medical purposes, such as use of a condom, the occurrence of bleeding and pain, the occurrence of ejaculation. These questions can be phrased in novel ways to provide the child minimal information, thereby leaving the child to demonstrate their own experiences. Once the child has told you that they were touched with a penis, you may ask “did he do anything before that”, “how did that make you feel”, “did anything get on you.” Any positive answers require elaboration.

As a last ditch effort, option posing (multiple choice) questions are used. These must be neutral, and sometimes must provide an option for an unanticipated response. For instance, if a child says she was touched, a common follow-up question would be, what were they touched with. If no answer follows you might ask “were you touched with his hand, or his foot, or something else.” The best response to any questioning is a narrative. The next best response is in response to a few options, or a framing question. Simple endorsement of a historian’s direct question is of limited utility, although it can be strengthened if the child is given an opportunity to reject some postulates, but endorse others.

Beyond details of the abuse, the child may have physical and emotional complaints not elaborated in the conjoint or adult’s portions of the history. When parent and child have been very communicative, a simple question “do you have any concerns about your health beyond what we have talked about so far” may suffice. When an adult is not present, a complete review of systems may be done with the child. For the non-disclosing child, going through the body asking two questions location by location may also create another opportunity to disclose. Asking about the head, eyes, ears, etc., including the genitalia and the anus, “how have your …. been” and “what things have happened to your …. that bothered or confused you” will produce a non-leading opportunity to hear about abuse and other health complaints. Be sure, when getting to the anus and genitals to solicit the child’s preferred names for those parts.

For the adolescent, who is reporting sexual abuse, other questions need to be asked. A child’s sexual history – consensual or not - is very important when interpreting the examination. Similarly, emotional consequences of abuse often lead to risk taking behaviors. Asking about tobacco, alcohol and drug exposure and use is important. Suicidal thoughts, plans and behaviors, self-harm such as cutting, burning and erasing, and runaway plans and activities should be elicited. The most common emotional
consequences of sexual abuse are depression and post traumatic stress disorder. Questions to screen for these outcomes may lead to referral or triage for limited mental health resources. Finally, we should not assume that the reported sexual abuse is the only, or even the most disturbing experience the child has had. Asking about other things adults have done that concerned the child, other abuse experiences, and acts of the accused abuser towards others may elicit reports of physical abuse, a second abuser, domestic violence or the sexual abuse of another child.

B. The Physical Examination

The physical examination of a possibly sexually abused child is a complete physical examination augmented by a thorough anogenital examination. There are many reason to perform a complete physical examination. Systemic signs of sexually transmitted infections, evidence of self inflicted injury, evidence of physical abuse, bites and hickeys from sexual abuse or activity are all important. Most important, however, is to cement the concept that this is a medical assessment of the child’s well being, not an inspection of the child’s hymen. Hopefully, this attitude will reinforce an approach established during the medical history.

**General Examination:** The details of a complete physical exam need not be listed here. Inspection of the skin, however, is particularly important. The neck, chest, breasts, back, buttocks, and thighs are often the target of scratches, bites and hickeys. If acute, these are not only evidence of oral contact, but may be swabbed for DNA and traces of saliva. Rashes of the palms and soles are a classic finding of secondary syphilis. Adenopathy may signal HIV, LGV, granuloma inguinale, as well as other conditions. Bruises, scars and hyperpigmented marks will be discussed in a future chapter, but may indicate physical abuse, or restraint during sexual abuse. The development of the breasts, and body hair are good evidence of sexual maturation, as many adolescents, boys and girls, shave pubic hair.

**Female Genital Examination:** In general pediatrics, a quick inspection for pubic hair is sometimes the only genital examination performed. Familiarization with basic normal genital anatomy is necessary before proceeding to genital examination. The labia majora are all that is commonly seen on simple inspection of the area. Once these are separated, the labia minora, clitoral hood, and posterior forchette are seen. In pre-pubertal girls the labia minora are poorly developed, and do not surround the introitus, meeting at the posterior forchette. In this condition, the forchette itself is not a discrete structure, but an area between where the labia majora separate and the posterior introitus. In this region, cutaneous tissue transitions to mucosa. Sometimes there is agglutination of tissues here, that may form a discrete translucent line, or an area of friability that bleeds following traumatic dehiscence. Within the introitus lies the urethra anteriorly, and the vagina posteriorly. Folds of tissue extend from the urethral area surrounding the vaginal orifice. There is great variation of these folds. Where they surround the vaginal orifice, they compose the hymen. The vagina itself, is not a simple tube, but has both transverse and longitudinal ridges that vary from child to child.
Examining these structures is usually begun in the supine position. For young girls, putting the soles of the feet together, with the thighs flexed, abducted and externally rotated, the so-called “frog leg position”, is the best way to inspect the genitals. For older girls, the use of the stirrups in traditional lithotomy position is preferred. In this position, the labia majora are inspected, then gently separated, with attention focused on the forchette region. The physician must be aware if they lyse labial adhesions producing bleeding, so that this is not mistaken for sexual trauma. Bleeding lesions of the forchette indicate recent trauma. The physician must be certain that they did not cause that trauma during the examination. Once the forchette is examined, the vestibule, including the periurethral structures, lateral vestibule, and fossa navicularis may be inspected for bruises, lacerations, abrasions, scars, vesicles, veruccae or other findings of significance. The hymen will likely be poorly seen with this technique, and the vaginal orifice may not open.

Grasping the labia majora between thumb and index finger, allows the examiner to draw them inferiorly and apart, the “labial traction” technique. Tension is carried through the tissues to the vestibule and vaginal canal, and will often open the vaginal orifice and display the folds of the hymen. With this technique, the contour of the hymen should be described circumferentially, with reference to the numbers of a clock face as an indication of location. Some hymens are circumferentially complete, or annular, but many have an anterior break, between the 11:00 and 1:00. Posterior to this break, the hymen should be uninterrupted, though it may be marked by narrowings and prominences. The area of most interest is the posterior rim, below the 3:00-9:00 line. A general sense of the dominant contour must be developed. Mounds, bumps and prominences above the dominant contour are normal, and the normal hymen between these elevations must not be mistaken for clefts, concavities, notches etc. When the hymen falls beneath the dominant contour in a focal area, a cleft, concavity or notch is present. Here we will treat these terms as synonymous. If a focal narrowing proceeds more than half way from the dominant contour to the level of the vaginal wall, it is called “deep.” If a focal narrowing proceeds to the level of the vaginal wall, dividing the hymen, a “transection” is present. At times the dominant contour of the hymen will itself
fall very close to the vaginal wall. This situation is described as a “narrow hymen.” When the hymenal rim is less than 1 millimeter wide, from the vaginal wall to the free edge, it is markedly narrow. Caution, however, should be used when assigning all dimensions. The level of the vaginal wall is often difficult to ascertain. Measurements are difficult to make. Sometimes, when the hymen is absent over an extended area, a blunt topped ridge will be present. Many examiners would also consider this an absent hymen, sometimes referred to as a “speed bump.” In very cooperative children, and adolescents, simple inspection of the hymen may be augmented by manipulation with a cotton tipped applicator. Moistening the swab with water or normal saline will lubricate it sufficiently, and reduce a burning sensation often perceived by pre-pubertal girls.

Any finding noted in the supine position needs to be confirmed with another position or technique. Though tension will tend to pull up the hymen, gravity continues to pull it down. Folds in the hymen account for much apparent contour variation, and may not be obvious as folds. Moist hymenal mucosa may stick to adjacent vaginal or introital structures, holding the hymenal rim down. Two alternative techniques attempt to resolve these issues. The first is the “prone knee-chest” position. The child is placed on her knees with the knees about shoulder width apart, and the buttocks high, above the knees. Then the upper chest is placed on the exam table, with the head turned to the side, and an ear on the table. The back should be lordotic, or “sway back”. In this position, the thumbs of the examiner are placed in the fold between the buttocks and labia majora, with the fingers extending over the buttocks. The buttocks and labia are gently pulled superiorly and apart. If relaxation can be achieved, the vaginal will fall open, and the hymen will fall downward like a drape. Inspection of the posterior hymen is very much enhanced, and inspection of the upper vagina, even to the level of the cervix, may be made. Confirmation of supine findings and evaluation for previously unrecognized variations in hymeneal contour can be made. When the hymen continues to stick to the vestibular or vaginal walls, or will not unfold, filling the vestibule with saline or water is often helpful. The child is returned to supine frog-leg or lithotomy position for the final technique. Once again using labial traction, the examiner will slide the labia majora anteriorly, pulling up the forchette area as a dam. Saline or water is dripped into the cupped introitus, floating out the hymenal membrane. If a curved meniscus is formed, optical distortion will be noted. This can be dealt with by moving the labia and by draining and refilling the introitus with water until a good sense of the anatomy is achieved.

*Male Genital Examination:* Very little is written about the male genital examination. Male genital injury is more commonly due to physical than sexual abuse. The penis should be inspected for bruises, lacerations, and abrasions. Bite marks and suction petechiae may be related to oral sex. If a foreskin is present, and retractile, it should be pulled back to examine its under surface and the glans penis. The penile shaft should be inspected circumferentially. The scrotal sack is also examined for injury, and the presence of both testes in the scrotum is assessed. Unusual swelling or tenderness of the testes may indicate impact or crush trauma.
Anal Examination:  When proceeding from the genital examination to the anal examination, careful inspection of the perineal body, and median raphe should be made. While bruises, lacerations or scars are occasionally seen, the nature of the raphe often has significant impact on the anal exam itself. The anus is best examined in one of the two “knee-chest” positions. Prone knee-chest was described in the female genital examination, and offers the best view of the anus. As an alternative, the supine child may grasp their knees and draw them to their chest, the “supine knee-chest position.” Once in the position, traction on the buttocks, just outside the peri-anal tissues, can be used to separate the buttocks and encourage opening of the anal canal. Dilation of the canal must be kept track of. Immediate wide dilation > 2.0 cm is a notable finding. The width of dilation, persistence of dilation, and presence of visible stool in the rectal ampulla should be noted. Dilation that occurs only following traction is less notable, but the same observations are germane. The tissues surrounding the anus are again surveyed circumferentially with reference to the numbers of a clock face. Bruises, lacerations, abrasions, scars, tags, and vascular changes are noted. Normal depressions of the tissues are sometimes noted at the 12:00 or 6:00 position, the so-called “diastasis ani.” The skin may seem thin, shiny and more lightly pigmented there. The median raphe may continue onto the anal verge with a mount, protuberance, or tag of tissue. These are normal structures. The condition of the verge itself will vary with relaxation. A tightly constricted sphincter will pull up deep folds, while folds will become shallow or flattened as the external sphincter dilates. If the external sphincter dilates, but inner sphincters constrict, a prominent ring at the verge or “tire sign” may develop. When sphincters dilate, the pectinate line may be exposed.

C. Assessment and Diagnosis

A diagnosis of child sexual abuse requires unequivocal medical findings and/or a clear, consistent, and credible account by the child. Greater than 90% of assessments produce no diagnostic physical findings. This does not prevent a diagnosis of child sexual abuse. A child’s disclosure, with age appropriate detail, following non-leading questions may be adequate. The support of adult observations, including unprompted disclosure, behavior changes, and contextual evidence strengthens the diagnostic reliability of a child’s statements to the physician. Physical findings may not provide independent corroboration of historical events, but should not be inconsistent with the reported abuse events. Under these circumstances, child sexual abuse is the predominant likelihood, and should be the premise directing further assessment and therapy. A diagnosis of child sexual abuse can be made.

Positive physical findings strengthen the diagnostic assessment. Acute anogenital injuries have been found to heal remarkably rapidly and completely. The presence of a bruise, laceration or abrasion, indicates trauma in the preceding days or weeks. This may support a matching history, suggest abuse that is undisclosed, or indicate other trauma. In particular, small lacerations between the peri-anal folds may be simple fissures from constipation rather than sexual injuries. Abrasions, bruises or lacerations of the labia, and forchette may be from straddle injuries. True scars are rare, and must be distinguished from normal variants. Diastasis ani in the midline has been mistaken for a scar.
Adolescents sometimes have depressed grooves in their fossa navicularis that may be mistaken for scarring. An avascular line through the mid fossa extending to the forchette commonly occurs and is called “linea vestibularis.” This has been mistaken for scarring. Structures that fall neatly in the midline are likely to be normal variants. Bands connecting the hymen to the lateral vestibule, and the attachment of intravaginal ridges to the hymen have been mistaken for scarring. Clearly abnormal tissue, with a fibrous subcutaneous component may represent true scarring, and indicate past trauma. The most common persistent finding, however, is a change in the hymeneal contour. Hymeneal transection in the posterior rim strongly indicates traumatic vaginal penetration. In most cases this will be sexual, but accidental penetration may have occurred and must be excluded. Deep notches (> 50% of the hymeneal width) posteriorly are good evidence of penetrating trauma in pre-pubertal girls. The data on post-pubertal girls supports significant concern as well, but this finding may not be as determinative. Absence of the posterior hymen clearly indicates penetrating trauma, but the significance of very narrow hymen (~1mm) is often debated.

Anal dilation that is immediate, persistent, greater than 2cm diameter and occurs in the absence of rectal stool is concerning, but debated. Venous pooling is a normal variant. It can be differentiated from bruising by having the child stand, and then repeating the exam. Bruising will persist. Very prominent focal vascular engorgement with blood, in young pre-pubertals, is controversial, and at most somewhat concerning. Tags on the anterior and posterior anal midline are common in normal children. Tags that are prominent, and away from the midline are much less common and may signal past trauma.

Sexually transmitted infections will be discussed more in the next section. A well established STI raises the possibility of sexual contact proportionally to the rate with which it is non-sexually transmitted. Outside the perinatal period, gonorrhea, syphilis, and Chlamydia are rarely non-sexually transmitted. Syphilis is a long lasting infection, so microbiological tests may remain positive for a very long time after perinatal transmission. Gonorrhea rapidly resolves following perinatal transmission, so identifying gonorrhea suggests sexual contact. The persistence of perinatally transmitted Chlamydia is incompletely understood. In the first three years of life, it is difficult to exclude perinatal transmission. Thereafter, Chlamydia is a strong indicator of sexual contact. HSV and HPV can be perinatally transmitted, auto-innoculated from non-genital sites, and transmitted during ano-genital care, as well as sexual contact. The occurrence of primary genital herpes and genital warts raises the question of sexual contact, but other avenues of acquisition must be considered. This is true for HIV as well, though the routes of non-sexual acquisition are limited and may be largely excluded during a medical history.

Beyond the diagnosis of sexual abuse, a complete medical assessment may identify other diagnoses. These need to be shared with the consulting agency, and with the child’s care provider, so that the child’s health is protected. While the CHAMP physician is unlikely to issue a mental health diagnosis, any indication of suicidality warrants an emergency mental health assessment, and indicators of significant risk taking, depression or PTSD.
should prompt referral for a formal mental health evaluation. Confidentiality may be promised to adolescents regarding their drug, alcohol, tobacco and sexual practices, but suicidality must be disclosed.

D. Diagnostic and Treatment Plan

This section completes the standard SOAP approach to medical evaluation. Tests may be obtained to complete the diagnostic work-up or look for additional problems, and identified problems may require treatment.

A common concern is whether to order STI testing, and which tests to order. STIs are not common in sexually abused children affecting approximately 2-3% of children evaluated for alleged sexual abuse. An individualized approach is recommended. The presence of one STI in the patient, the perpetrator, or their family indicates the need to test for all STIs. Historical or physical evidence of penile penetration of any orifice signals the need to test that orifice for gonorrhea and Chlamydia. Symptoms of STI require evaluation with definitive testing. The definitive tests are: culture for gonorrhea, Chlamydia and herpes virus, serological tests for syphilis, HIV and hepatitis B, and pathological tests for HPV. Usually, a visual diagnosis of HPV lesions is deemed adequate. Trichomonas may be assessed by microscopic examination of a wet prep, but culture is both more sensitive and more specific.

If the CHAMP physician believes that the child has been abused, the child is disclosing abuse, or the child displays significant behavior disturbances, referral to mental health professional is required. Many sexually abused children benefit from therapy. Occasionally a child’s history or abuse remains under question. Referral to a forensic psychologist or psychiatrist may help here. Protocols for extended forensic evaluation have been researched, and a provider specifically trained in one of these methods may be optimal.

It has been noted that past sexual abuse is common in the mothers of sexually abused children. Many of these women have never benefited from therapy themselves. Caring for a non-offending parent is a crucial part of caring for the child. Domestic violence, substance abuse, depression and past victimization must all be addressed.

The injuries of sexual abuse rarely require treatment themselves. Occasionally lacerations require suturing, and repair of a torn hymen has been attempted, but is controversial and rarely needed. Bleeding from deep in the vagina or anus must be visualized, and may require admission and examination under anesthesia. Sexually transmitted infections are treated, and their treatment is not further detailed here. Other medical problems may be identified, either from abuse, or incidentally. Appropriate treatment should be prescribed.

E. Conclusion
This chapter outlines a complete assessment of a child, who may have been sexually abused. Findings should be communicated to others to be effective. Communicating to the child and supportive adults that the child is or will be well, and steps to assure that outcome is paramount. Studies have shown that examination and discussion with the evaluating physician can leave a child feeling better about the normalcy of their body, and their well-being. Treating related and incidental physical health findings assures that well being. Appropriate mental health treatment increases the chances of long term mental health. Some people may believe that abuse is a catastrophic event that guarantees deep damage or even deviancy. This presumption must be countered, without undermining the incentive to seeking appropriate mental health help. Ending abuse, and protecting a child from repeat abuse are essential to recovery. This outcome cannot be produced by the physician alone. A well prepared written report to children’s protective agencies, still or video images of important physical findings, and participation in multi-disciplinary teams all support this outcome. When necessary, the CHAMP physician must be prepared to provide well founded, convincing testimony in court.

Keeping up with changes in the field will be necessary to be able to serve the child, agencies and court in this fashion. Reviewing current literature, and attending professional meetings on this topic will help. To the maximum extent possible, CHAMP providers should photograph or video-tape their examinations and submit them to our peer review process.