Child Abuse

Our brains are sculpted by our early experiences. Maltreatment is a chisel that shapes a brain to contend with strife, but at the cost of deep, enduring wounds. **TEICHER, 2000 .**

A 6-month-old male infant is seen in his physician's office for decreased appetite and irritability. The physician notes that the infant's upper lip is swollen on the left and that there is a small bruise of the right temple. The physician accepts the offered explanation from the mother, that the infant had "slipped in the bathtub" the previous evening. One week later, the infant is dead from abusive head trauma (AHT). The father of the child admitted that he shook the baby and hit his face and head, resulting in his death.

"Child maltreatment is a deceptive and easily disguised entity" (Jenny et al., 1999), the diagnosis of which is very challenging. Many of these children are seen by health care providers in the weeks leading up to their deaths; often the injuries they present with are diagnosed as "accidental" (King et al., 2006). The early recognition of child abuse is critical to preventing further injury or death of a child. The risk of recurrence of abuse is approximately 50% (Alexander et al., 1990 ; McDonald, 2007), neglect being the type of maltreatment associated with the highest risk for future abuse (Hindley et al., 2006).

Child abuse and neglect are major causes of morbidity and mortality in the United States (U.S. Department of Health and Human Services [HHS], 2012).

- ▪ In 2011, the national estimate of child abuse and neglect victims determined by child protective services (CPS) was 681,000 (9.1 victims per 1000 children).
- ▪ A total of 79% were victims of neglect, 18% of physical abuse, and 9% of sexual abuse.
- ▪ More than 1500 children died from abuse and neglect in 2011.
- ▪ A total of 82% of all the fatalities were in children younger than 4 years old, and the majority (78%) were caused by one or more parents.
- ▪ Child abuse is the leading cause of injury-related deaths among infants and the second leading cause of injury deaths

in older children (Jenny and Isaac, 2006).

- ▪ The total lifetime economic burden of child maltreatment in the United States is approximately $124 billion (Fang et al., 2012).

As the family's health care provider, family medicine physicians are in an ideal position to detect, assess, diagnose, and intervene for children experiencing child abuse and neglect. When suspicions of child maltreatment arise, many physicians are uncomfortable confronting or blaming parents and possibly disrupting the family unit. Under-standing the devastating effects of child maltreatment, becoming familiar with evidence-based indicators of abuse and neglect, and adopting strategies for assessment and management can help the physician have a positive, meaningful impact on the lives of children and families.

Physicians are required by law to report suspected or confirmed child abuse and neglect to CPS or law enforcement or both. Table 24-1 defines the different types of child abuse.

Table 24-1
Definitions of Child Maltreatment

	Definition	Comments
Child maltreatment (Leeb et al., 2008)	Any act of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child; harm does not need to be intended	More than 80% of perpetrators were parents (Child Welfare Information Gateway, 2013)
Physical abuse	The intentional use of physical force against a child that results in or has the potential to result in physical injury Includes acts that do not leave a physical mark as well as those causing permanent disability, disfigurement, or death (Barnett et al., 1993)	Physical acts can include hitting, kicking, punching, beating, stabbing, biting, pushing, shoving, throwing, pulling, dragging, dropping, shaking, strangling or choking, smothering, burning, scalding, and poisoning

Sexual abuse	Any completed or attempted sexual act, sexual contact with, or exploitation (i.e., noncontact sexual interaction) of a child by a caregiver	Includes substitute caregivers (e.g. teachers, coaches, clergy, and relatives) **Sexual acts:** involve penetration, no matter how slight, between the mouth, penis, vulva, or anus of the child and another individual; also penetration of anal or genital opening by a hand, finger, or other object **Sexual contact:** includes intentional touching, either directly or through clothing, of the genitalia, anus, breast, or buttocks (excluding contact required for normal care) **Noncontact sexual abuse:** exposure to sexual activity, filming, or commercial sexual exploitation
Psychological (or emotional) abuse	Intentional behavior that conveys to a child that he or she is worthless, flawed, unloved, unwanted, endangered, or valued only in meeting another's needs (APSAC, 1995)	Continual or episodic (e.g., associated with caregiver substance abuse) May include blaming, belittling, degrading, intimidating, terrorizing, isolating, restraining, confining, corrupting, exploiting, spurning, or otherwise behaving in a manner that is harmful, potentially harmful, or insensitive to the child's developmental needs or that can potentially damage the child psychologically or emotionally
Neglect	Failure to meet a child's basic physical, emotional, medical or dental, or educational needs; failure to provide adequate nutrition, hygiene, or shelter; or failure to ensure a child's safety	Includes failure to provide adequate food, clothing, or accommodation; not seeking medical attention when needed; allowing a child to miss large amounts of school; and failure to protect a child from violence in the home or neighborhood or from avoidable hazards

APSAC, American Professional Society on the Abuse of Children.
Adapted from Gilbert R, Widom CS, Browne K, et al. Burden and consequences of child maltreatment in high-income countries. *Lancet* . 2009;373:68-81.

Implications and Long-Term Outcomes

The long-term impact of traumatic childhood stressors on health risk behaviors, disability, disease, and premature mortality has been extensively studied (Felitti et al., 1998). The Adverse Childhood Experiences (ACE) Study assessed more than 17,000 adult members of an HMO and collected histories of various forms of child maltreatment, exposure to domestic violence, parental substance abuse and mental illness, and parental loss. (A complete bibliography of ACE Study publications listed by topic area is available at http://www.cdc.gov/ace .) “Adverse childhood experiences” are common, highly interrelated, and strongly associated with multiple enduring health and social problems impacting adolescents and adults (Anda et al., 2006 ; Larkin et al., 2012), including ischemic heart disease, cancer, chronic lung disease, liver disease, multiple mental health diagnoses, and premature death.

Experiences during infancy and early childhood affect brain development and create the basis for the expression of intelligence, emotions, and personality (Butchart et al., 2006). Children who have suffered chronic abuse and neglect during the first few years may experience hyperarousal or dissociation, difficulty with attachment, limited capacity for empathy, and various mental health problems, including depression, posttraumatic stress dis-order (PTSD), attention-deficit hyperactivity disorder, and sensory integration disorder (National Clearinghouse on Child Abuse and Neglect Information, 2001).

Neglect

KEY POINTS

- ▪ Neglect is the most common form of child maltreatment.
- ▪ Child neglect has been associated with worse outcomes and the highest risk for future abuse compared with other forms of child maltreatment.
- ▪ There is a strong association of substance abuse with child maltreatment.
- ▪ Child maltreatment commonly occurs in homes with domestic violence.

Child neglect is common, complex, and insidious. Although difficult to clearly define and identify, neglect is the most common form of child maltreatment, accounting for 78% of substantiated cases in 2011. Neglect has been associated with worse outcomes than other forms of child abuse over a range of cognitive, developmental, psychosocial, and physical parameters (American Professional Society on the Abuse of Children, 2008 ; Perez and Widom, 1994 ; Teicher, 2000).

Child neglect is often defined by child welfare agencies and in state law as an act of omission by a parent or caretaker, specifically the failure to provide for a child's basic physical, emotional, or educational needs or to protect a child from harm or potential harm (Table 24-2). Neglect includes isolated incidents as well as a pattern of failure over time by a parent or caretaker (Butchart et al., 2006).

Table 24-2
Types of Neglect

Types of Neglect	Definition	Comments
Failure to Provide		
Physical neglect	Caregiver fails to provide adequate nutrition, hygiene, or shelter; fails to provide clothing that is adequately clean, of appropriate size, or adequate for the weather; includes abandonment or expulsion from the home	Inadequate food may present as failure to thrive or repeated hunger Inappropriate food or poor nutrition may present as obesity Other examples: Child may be dirty or smell bad; living arrangements unstable for 2 weeks or more; home may be

		infested with insects or vermin; animal feces on floor and bedding; unsafe, dirty sleep environment
Emotional neglect	Caregiver ignores the child or denies emotional responsiveness or adequate access to mental health care	Includes constantly belittling the child, withholding affection; exposing the child to domestic violence; allowing the child to use drugs or alcohol
Medical or dental neglect	Failure to provide appropriate health care for a child (although financially able to do so), thus placing the child at risk of being seriously disabled or disfigured or dying	Includes nonadherence with health care recommendations; delay or failure in getting health care Religious beliefs: the AAP strongly opposes these exemptions for medical care
Educational neglect	Failure to provide access to adequate education	Includes chronic truancy; failure to enroll a child in school, to provide adequate home schooling, or to attend to special education needs
Failure to Supervise		
Inadequate supervision	Failure to ensure that the child engages in safe activities and uses appropriate safety devices; to ensure that the child is not exposed to unnecessary hazards; or to ensure appropriate supervision by an adequate substitute caregiver	Includes lack of supervision appropriate for developmental needs (e.g., infant left unattended in bathtub; toddler left home alone) Inappropriate caregiver: knowingly leaving child in the care of a sexual offender Abandonment is an extreme form
Exposure to a violent environment	Caregiver fails to take available measures to protect the child from pervasive violence within the home, neighborhood, or community	Exposure of child to criminal activities (e.g., illicit drug trade, allowing bullying of child without intervention). Exposure to domestic violence is associated with psychological harm, increased risk of abuse, and neglect.

Inadequate protection from environmental hazards	Avoidable exposure to environmental hazards in and out of the home	Examples include toxic substances in reach of children; smoking in the presence of children with asthma; and access to loaded firearms
Drug-exposed newborns and older children	In utero exposure to substance abuse; direct and indirect (e.g., ingestion, passive inhalation) exposure of older children	Includes exposure of children to illicit manufacturing of drugs, drug trafficking, parental alcohol and substance abuse, and prescription narcotic abuse or misuse

AAP, American Academy of Pediatrics.
Adapted from Leeb RT, Paulozzi L, Melanson C, et al. *Child maltreatment surveillance. Uniform definitions for public health and recommended data elements* . Version 1.0. Atlanta: Centers for Disease Control & Prevention; 2008.

A broader *child-centered* view of child neglect, however, describes neglect as occurring when a child's basic needs are not met; recognizing that multiple factors contribute, including individuals, families, communities, and society; and focusing interventions on multiple levels (DePanfilis, 2006 ; Dubowitz, 2009) (Table 24-3).
Table 24-3 Risk Factors for Child Maltreatment

Individual factors	**Child Characteristics**	**Caregiver or Parent Characteristics**
	• Low birth weight • Prematurity • Chronic disability or illness • Genetic abnormalities • Personality or temperament perceived by parents as difficult (e.g., infant cries persistently, not easily soothed; child hyperactive, impulsive, aggressive) • Child with symptoms of mental ill health	• Substance abuse • Mental health problems, especially depression • Cognitive delay • Impulsive, poor judgment • Lack of nurturing or empathy toward child • Involved in criminal activity • Unrealistic expectations of child • Poor parenting skills
Family characteristics and relationship factors	• Parent–child relationship adversarial or lacks attachment • Domestic violence • Social isolation • Criminal involvement • Chaotic lifestyle (e.g., frequent moves, unstable housing) • High levels of stress (e.g., poverty, unemployment)	
Community factors	• Tolerance of violence • Inadequate housing • Poverty • Few resources or support services • Poor access to health care • Easy availability to alcohol; illicit drug trade	

Societal factors	• Poverty • Limited access to health care • Poor access to mental health care for adults or children • Inadequate educational system • Social and cultural norms that promote violence; support rigid gender • roles; diminish the status of the child • Conditions that enable commercial sexual exploitation of children

Adapted from American Professional Society on the Abuse of Children. *Psychosocial evaluation of suspected psychological maltreatment in children and adolescents. Practice guidelines* . Chicago: American Professional Society on the Abuse of Children; 1995 and Ondersma SJ . Predictors of neglect within low-SES families: the importance of substance abuse. *Am J Orthopsychiatry.* 2002;72(3)383-391.

The approach toward neglect management is varied and depends on the identified causes of the neglect as well as an assessment of urgency. The goal of management is to assist the family in providing a safe and healthy environment for their children. A review of these management principles and steps can be found in the article by Dubowitz (2013) .

Drug-Exposed Newborns and Older Children

A strong association of substance abuse with child maltreatment has been well documented (Wells, 2009). Children in homes with adults who abused drugs and alcohol were found to have a nearly threefold increased risk for child abuse and fourfold risk for neglect (U.S. Department of HHS, 1998).

Prenatal substance exposure increases the vulnerability of the infant to poor caretaking, partly because of the cognitive and behavioral effects on the newborn (Zuckerman and Bresnahan, 1991). Additionally, studies have shown that children exposed prenatally to illicit substances have two to three times increased risk for abuse and neglect compared with children in the same socioeconomic class and neighborhood (Jaudes et al., 1995).

Drug-endangered children have a markedly increased exposure to interpersonal violence, traumatic events, child maltreatment, toxic chemicals in their immediate environment, and significantly higher rates of PTSD compared with other children (Sprang et al., 2008). Passive inhalation, accidental ingestion, and exposure of drugs and alcohol through breast milk or intentional administration are all risk factors for children in homes with substance abuse.

Domestic Violence and Children

Assaultive, aggressive, coercive, or threatening behavior within the home between intimate partners victimizes not only the adult target of the violence but the child witnesses as well, whether the violence is seen or overheard. Co-occurrence rates of domestic violence and child maltreatment have been found to be between 30% and 60% (Appel and Holden, 1998 ; Edleson, 1999). A study of at-risk parents with firstborn children revealed that domestic violence during the first 6 months of child rearing more than tripled the likelihood of physical abuse and more than doubled the likelihood of psychological abuse and neglect occurring during the child's first 5 years of life (McGuigan and Pratt, 2001). Children exposed to domestic violence are at risk for difficulties with behavioral, emotional, and cognitive functioning, as well as dysfunctional attitudes about violence and conflict resolution (Edleson, 1999).

Physical Abuse

KEY POINTS

- ▪ Children from all socioeconomic groups may become victims of physical child abuse.
- ▪ Child abuse should be considered in all preambulatory children with injuries.
- ▪ Dating of bruises is often an inexact practice in the absence of history.
- ▪ A skeletal survey can provide key information regarding the likelihood of child abuse in children younger than the age of 3 years.

Recognizing physical abuse can be lifesaving and will prevent further trauma to the child. Recognizing children at risk before abuse has occurred offers an opportunity to prevent child abuse through early intervention. The family physician can support parents by helping them become more effective at parenting, advocating for their basic living needs such as food and shelter, and encouraging quality childcare.

Presentations of Physical Abuse
Bruises
The most common presentation of child physical abuse is bruising. Although accidental bruising is common in ambulatory

children, it is rare in the nonambulatory infant and when found should trigger an evaluation for nonaccidental injury. Bruising in the ambulatory child is suspicious for abuse if the history does not explain the location, number, or pattern of bruising; if the history is developmentally inconsistent with the child's abilities; or if the bruising patterns or locations indicate that abusive trauma is likely. Bruising found over the trunk, abdomen, cheeks, ears, and buttocks are all concerning for abusive injury, although this list is not exclusive. Patterns of injury caused by belts, cords, hands, and paddles must be recognized. Dating of bruises is very inaccurate because of the tremendous variability in healing, from 1 day to many weeks. Bruises that are raised, tender, and abraded are likely recent, but color change within the bruise is an inaccurate method of dating. Bites are a common abusive injury in children, and recognition requires a high index of suspicion. Look for impressions of individual teeth and upper and lower arch-shaped trauma. The most common bruise mimics include coagulopathies (e.g., von Willebrand disease, vitamin K deficiency, leukemia, and hemophilia); Mongolian spots; traditional therapies such as cupping, coining, and moxibustion; Henoch-Schönlein purpura; idiopathic thrombocytopenic purpura; and accidental bruising.

Fractures

Fractures are a strong indicator of current or past child abuse. Abusive fractures are most often identified through the skeletal survey or those with fractures for which there is no satisfactory explanation. Similar to bruises, fractures in nonambulatory children are always concerning for abuse. Multiple occult fractures, fractures demonstrating different ages of healing, rib fractures, classic metaphyseal lesions (CMLs or corner fractures), and vertebral compression fractures are most often associated with child abuse. Abusive fractures can involve any bone. The clinical signs of fracture may be absent when abuse has occurred because of a delay or absence in seeking care. In addition, the history of trauma may be withheld and a history of pain or disability not disclosed. Rarely is there bruising over the site of fracture after accidental or abusive injury. It is possible to determine if a fracture is recent or healing based on the clinical presentation and radiographic appearance, but exact dating is difficult. Signs of radiographic callous are expected to first appear at about 10 days after the fracture, although the appearance may be a few days earlier in very young infants. Lack of immobilization after fracture may result in an exaggerated callus response. Skull and vertebral fractures heal without callus formation. Remodeling may take up to 2 years to complete. The most common fracture mimics include accidental fracture, bone fragility, osteopenia, birth trauma, Menkes syndrome, neoplasms, infection, rickets, and normal radiographic variants.

Burns

Hot water burns are most often diagnosed in abusive burns, but cigarette burns, burns from irons, and lighters are also frequently seen. Hot water scalding is often associated with toileting accidents and punishment. The pattern of scald burns, coupled with a detailed history of the incident from which the burn occurred, is usually required to differentiate abusive from accidental burns. The depth of burn depends on the temperature of the water or object, the length of contact

time, and the degree of skin thickness. Young children sustain deeper burns than adults; areas of thick skin such as the palms and soles may demonstrate more superficial burning. As the burn evolves over a few days, the burn pattern and depth may change, which should be considered when differentiating accidental from inflicted burns. The most common burn mimics include diaper rash, accidental burn, impetigo, and varicella.

Abusive Head Trauma

Abusive head trauma can result in serious mortality and morbidity. Terminology for AHT includes shaken baby syndrome, shaken impact syndrome, inflicted head injury, and nonaccidental head injury. Severe shaking is often involved in AHT, but even when there is no sign of contact injury to the scalp or skull, impact cannot be excluded. Victims of AHT are most often younger than 1 year old, and a history of crying is often identified as an important reason for the escalation to shaking. AHT can occur in any socioeconomic group, although it is seen more often when the social risks factors for abuse are present (see earlier discussion). The most common anatomic injury is subdural hemorrhage (SDH), although skull fractures, subarachnoid hemorrhage, and intraparenchymal injuries are also seen. The most common locations for SDH are frontoparietal and interhemispheric. Dating of SDH is difficult and should only be estimated. A mixed-density subdural density does not necessarily indicate two separate injuries because acute bleeding frequency causes this radiographic picture. Surgical intervention is not commonly required. In addition to other physical indications of child abuse, retinal hemorrhages are seen in about 85% of AHT cases. Retinal hemorrhages are also caused by birth trauma, hypertension, vasculitis, and increased intracranial pressure. Symptoms of AHT include altered mental status, difficulty breathing or apnea, seizures, vomiting, and irritability. The clinical presentation is varied and includes mild vomiting or irritability on one end of the spectrum to cardiac arrest on the other. A history to explain the child's abusive intracranial injury is typically absent or minor, such as a fall from a couch or bed. Some reports include “rescue trauma” in which the child is shaken in response to choking or a seizure. The most common perpetrators of AHT are the child's father or the mother's boyfriend. Outcomes are typically poor and include death, significant developmental delay, seizures, or vision and hearing impairment. Some children, however, have a relatively good outcome after AHT. The most common head injury mimics include accidental injury, birth trauma, vascular malformations, and glutaric aciduria type I.

Diagnosis and Evaluation of Suspected Child Physical Abuse

A careful history and physical examination direct the assessment and often determine whether child physical abuse should be considered. When abuse is suspected, a *skeletal survey* should be obtained in all children younger than 2 years old (Duffy et al., 2011). Recent studies suggest that the age for skeletal survey should be extended to age 3 years. The skeletal survey includes 19 images of the entire skeleton (Table 24-4). A “babygram” is not sufficient for evaluation (Figure 24-1). After the evaluation is completed, if abuse is confirmed or still suspected, a follow-up skeletal survey should be obtained in 2 weeks (Harper et al., 2013). The follow-up survey often identifies fractures not recognized on the initial survey or

clarifies questionable findings. Children younger than 6 months of age should have intracranial imaging even when neurologic symptoms are absent. A *head computed tomography (CT) scan* is typically most readily available, but in the asymptomatic child, brain magnetic resonance imaging is an acceptable alternative. In children for whom a diagnosis of AHT is being considered, a *dilated retinal examination* should be completed using indirect ophthalmoscopy. Retinal photography should be obtained whenever possible to document findings. The location, depth, and number of any retinal hemorrhages should be recorded. *Photographs* of any cutaneous findings should be obtained along with documentation showing the locations and measurement of injuries. When bruising or bleeding is present, serum should be obtained to *rule out a coagulopathy* . In addition, abdominal trauma is often occult in children, and an *abdominal CT* should be obtained whenever abdominal bruising is present or *liver function test* results are elevated (Lindberg et al., 2013). When bites are present, *swabs for DNA analysis* should be collected from the center of the bite mark. Siblings and household contacts of abused children should be evaluated for abuse (Lindberg et al., 2012).

Table 24-4
Complete Skeletal Survey

Appendicular Skeleton Views	Axial Skeleton Views
Humeri (AP)	Thorax (AP, lateral, right and left oblique to include ribs, thoracic, and upper lumbar spine)
Forearms (AP)	Pelvis
Hands (PA)	Lumbosacral spine (lateral)
Femurs (AP)	Cervical spine (lateral)
Lower legs (AP)	Skull (frontal and lateral)
Feet (AP)	

Adapted from the American College of Radiology. *Society of Pediatric Radiology practice guideline for skeletal surveys in children* . 2011, available at http://www.acr.org/~/media/9bdcdbee99b84e87baac2b1695bc07b6.pdf .

Open full size image

Figure 24-1

Babygram. This should never be obtained to substitute for a full skeletal survey (see Table 24-4).

Sexual Abuse

KEY POINTS

- ▪ The majority of children and adolescents who have been sexually abused have no findings of physical trauma on examination.
- ▪ The medical evaluation for suspected child sexual abuse (CSA) should occur urgently if there was sexual contact in the past 72 to 96 hours that might have left biologic material such as semen or blood or the child is having symptoms of injury or infection.
- ▪ In most cases, the person responsible for sexually abusing a child is known to the child and family. Delays in disclosure of CSA are common because of manipulation, coercion, deception, and threats by the abuser.

The prevalence of CSA in the United States may be as high as 7.5% in boys and 25% in girls (Pereda et al., 2009). The term *child sexual abuse* is often used to describe acts in which a child is used for sexual stimulation by an adolescent or adult and includes exposure to pornography, sexual fondling, or penetration. *Sexual assault* is a term usually reserved for acute cases in which the offender is not a caretaker of the victim. *Rape* refers to either an acute or past act(s) in which there was oral, vaginal, or anal penetration (whether the victim is a child, adolescent, or adult).

There are several important differences between CSA and adolescent or adult sexual assault, but overlap does occur. Knowledge of these differences is helpful to understanding why the disclosure of CSA is often delayed and why there are typically no physical examination findings in cases of CSA. CSA typically involves a period of "grooming" when the offender builds trust with the child by spending time with the child, providing gifts, and making the child feel special. This grooming then progresses to sexual contact. Because the child trusts the perpetrator, the sexual contact may be permitted without any physical or emotional violence. However, as the sexual advances continue, coercion, manipulation, and threats of harm to the child or the child's family may occur (U.S. Department of HHS, 2006). Disclosure of the abuse by the child victim is frequently delayed because of intimidation or guilt. Furthermore, when children do finally disclose it, their disclosure is frequently not believed. This is particularly true when a child is abused by a relative or other adult with a respected community position. Children who are abused by a relative, compared with children abused by strangers or acquaintances, are more likely to blame themselves for the abuse (Ullman, 2007) and may have more significant psychological distress. Almost one third of CSA victims reach adulthood without disclosing it, and almost half delay their disclosure for more than 5 years (Smith et al., 2000).

Clinical Evaluation of Sexual Abuse

History

Best practice in the evaluation of alleged or suspected CSA involves a multidisciplinary (MDT) response that includes the local child protection agency, law enforcement, and medical team operating collaboratively. This team approach minimizes the child's psychological trauma from the time of disclosure through prosecution and therapy. Children's Advocacy Centers (CACs) are community-based MDT entities that work to promote a coordinated, trauma-focused approach to child abuse (National Children's Alliance, 2014). CAC protocols minimize the number of times a child will be interviewed about his or her abuse, use forensic interview techniques to increase the validation of a child's disclosure, and may video record the interview for future investigative uses. The CAC MDT model has been shown to result in more effective investigations, increased satisfaction by the caregiver and child, and higher referral rates for victim medical and mental health services (Farst, 2013).

The specific history regarding CSA includes the type of contact (what body parts contacted by what object or body part); under or over clothing; history of ejaculation, licking, or kissing; where the abuse occurred; the time since last contact; the identity of the alleged perpetrator(s); and the relationship to the victim. In older children, the last menstrual period and any history of consensual intercourse should be asked. The history should include an assessment for changes such as diet, sleeping, school performance, bowel or bladder symptoms, and behavioral changes. Although physical injury is uncommon in evaluations for sexual abuse, behavioral changes are common after the trauma of CSA. The child should be asked open-ended, nonleading questions during the interview, such as: “Tell me how that felt to you” rather than “Did it hurt?” Docu-mentation of the interview should be precise. In CACs, the interview is often audio or video recorded. If recording is not possible, the documentation should include the exact questions asked as well as the child's responses.

Examination

The medical examination should occur emergently if there was sexual contact in the past 72 to 96 hours that might have left semen, saliva, blood, or other biologic material on the child or child's clothing. In this situation, the examination must include collection of forensic evidence specimens while maintaining the chain of custody, and most typically is completed in the emergency department or a facility equipped for this procedure. Other factors that dictate the need for an emergent or urgent evaluation include symptomatology or assessment of child safety (Table 24-5). Most disclosures present beyond this 72- to 96-hour time frame and should be scheduled with an experienced provider in a timely manner after safety issues are addressed.

Table 24-5

Timing of the Medical Evaluation for Suspected Child Sexual Abuse

Emergent (without delay)	The alleged assault may have occurred within the previous 72-96 hr (or other state-mandated time interval), and the transfer of trace evidence may have occurred, which will be collected for later forensic analysis (i.e., a sexual assault evidence kit should be collected because of suspected transfer of semen, blood, saliva or other DNA material).
	The need for emergency contraception (morning-after pill)
	The need for postexposure prophylaxis for STIs, including HIV (antibiotic or antiviral therapy)
	The child complains of pain in the genital or anal area.
	There is evidence or complaint of anogenital bleeding or injury.
	The child is experiencing significant behavioral or emotional problems and needs evaluation for possible suicidal ideation or plan.
Urgent (scheduled within 1-2 days)	None of the emergent criteria are met, but there was suspected or reported sexual contact occurring within the previous 2 weeks.
Non-urgent (scheduled)	None of the emergent or urgent criteria are met, but the child has disclosed abuse or sexual abuse is suspected by MDT or there is a family concern for abuse.

MDT, Multidisciplinary; *STI,* sexually transmitted infection.

Floyed RL, Hirsch DA, Greenbaum VJ, et al. Development of a screening tool for pediatric sexual assault may reduce emergency-department visits. *Pediatrics* . 2011;128:221-226 and Christian CW . Timing of the medical examination. *J Child Sex Abus* . 2011;20:505-520.

The physical examination for CSA, in addition to an overall assessment of the child, includes the collection and documentation of forensically significant findings. An examiner must be knowledgeable in anogenital anatomy, examination techniques, interpretation of examination findings, and the diagnosis of sexually transmitted infections (STIs). Although primary care providers may not have the time, expertise, or equipment available to perform an in-depth

assessment, they should know what local recourses are available to them for referral. The examination is well tolerated by most children when performed by an experienced clinician (Marks et al., 2009 ; Palusci and Cyrus, 2001). The two factors that have been shown to positively correlate with accuracy in interpreting examination findings are experience within the field of CSA and participation in expert peer review of examination findings (Adams et al., 2012). Studies have demonstrated that inexperienced clinicians are unable to identify normal female genital structures and misinterpret examination findings as indicative of abuse (Hornor and McCleery, 2000 ; Ladson et al., 1987 ; Makoroff et al., 2002). The adolescent female anogenital examination is performed in the customary fashion using stirrups and, if indicated, a speculum. The prepubertal female genitourinary examination is always limited to an external-only examination. The most typical prepubertal examination position is supine with the soles of the feet approximated and thighs abducted. The genital area is visualized by placing gloved fingertips on the labia majora and inguinal area and gently separating the labia majora (“supine separation”). If the hymen orifice is not well visualized by this maneuver, then the labia majora are grasped by the examiner's thumb and forefingers, and traction is applied out toward the examiner and downward toward the medial thighs (“labial traction”). If further techniques are needed to better visualize the inferior hymen, the knee–chest position can be used (Berkoff et al., 2008). A cotton-tipped swab can be used to assist with visualization of an estrogenized hymen (postpubertal), but not before puberty because touching an unestrogenized hymen is very painful. A speculum may be needed to identify a source of vaginal bleeding or to assess for a vaginal foreign body in a prepubertal girl, but only when used with sedation. The anogenital examination should be photo-documented with magnified digital still or video capture for the purposes of peer or forensic review.

Examination Findings of Sexual Abuse

Fewer than 10% of CSA victims have physical findings present on examination that can be attributed to acute or healed trauma (Anderst et al., 2009 ; Berkoff et al., 2008 ; Heger et al., 2002 ; Kellogg et al., 2004). Examples of specific findings diagnostic of healed genital trauma in girls include transections and missing segments of hymen in the posterior rim (inferior to the 3 to 9 o'clock locations). Many nonspecific findings (seen in studies of both abused and nonabused children) such as variations in hymen configuration, “gaping” of the hymen orifice, and reflexive anal dilation are not indications of sexual abuse but if misinterpreted as such are misleading and potentially harmful to the child and family (Adams, 2011) (Table 24-6). For a more detailed description of the medical evaluation of CSA, please refer to the Guidelines by Adams et al. (2007 2011) .

Table 24-6

Classification of Anogenital Findings (“Adams Classification”)

Normal variants and conditions mistaken for abuse	• Congenital variations in hymen configurations (annular, crescent, redundant) • Hymen notch or cleft in superior hymen (above 3 to 9 o'clock in the supine position) • Hymen bumps or mounds • Erythema of anogenital tissues • Labial adhesions • Perianal venous pooling • Diastasis ani • Urethral prolapse • Failure of midline fusion and perineal grooves
Indeterminate findings (no expert consensus)	• Deep notches or clefts at the 3 and 9 o'clock position of the hymen in postpubertal girls • Anogenital condyloma • Anogenital herpes simplex virus
Diagnostic of trauma or sexual contact	• Acute lacerations of the anogenital tissues • Healed transection of the hymen between the 4 and 8 o'clock positions • Missing segment of hymen tissue • Confirmed diagnosis of gonorrhea, Chlamydia, trichomonas, or syphilis (when perinatal transmission excluded) • Confirmed diagnosis of HIV (when perinatal, blood product, or needle-stick transmission has been excluded) • Pregnancy • Sperm from child's body

Adapted from Adams JA, Kaplan RA, Starling SP, et al. Guidelines for medical care of children who may have been sexually abused. *J Pediatr Adolesc Gynecol* . 2007;20:163-172.

Sexually Transmitted Infection Testing for Sexual Abuse

Testing for STIs should be considered in all cases of sexual abuse and assault of children when mucosal skin contact between the alleged perpetrator and victim has occurred (Centers for Disease Control and Prevention [CDC], 2010). Although symptoms such as discharge or dysuria may be present in the infected child, genital *Trichomonas vaginalis* and *Chlamydia trachomatis* are well known to reside in infected individuals without causing overt symptoms, and cases of

asymptomatic genital gonorrhea have been documented. Whereas testing by culture methods for trichomonas, gonorrhea, and Chlamydia provides direct identification of the involved organism, nonculture testing by nucleic acid amplification tests (NAATs) offers advantages in test sensitivity (especially for Chlamydia) and patient comfort (CDC, 2010). All positive test results should be confirmed by use of a method different than the first test, either by culture or a second NAAT that uses an alternate or different genetic target (Hammerschlag, 2011) if the infection will be significant in investigative or legal proceedings. This can be expected to occur if the test results are positive in a young child or an adolescent who has had no peer-consensual sexual activity. In prepubertal children, unless clinical indications prohibit waiting, confirmatory testing should be obtained before they are treated with antibiotics. Serologic testing for HIV, syphilis, and hepatitis should be obtained when indicated (Table 24-7).

Table 24-7

Relationship of Sexually Transmitted Infections to Diagnosis of Child Sexual Abuse

STI Confirmed	Relationship to Sexual Abuse *	Suggested Action by Provider
Gonorrhea	Diagnostic	Report
Chlamydia	Diagnostic	Report
Trichomonas	Diagnostic	Report
HIV	Diagnostic	Report
Syphilis	Diagnostic	Report
Condyloma acuminata (anogenital warts)	Suspicious †	Report ‡
Anogenital herpes simplex virus	Suspicious †	Report ‡
Bacterial vaginosis	Inconclusive	Medical follow-up

Adapted from Kellogg N; American Academy of Pediatrics Committee on Child Abuse and Neglect . The evaluation of sexual abuse in children. *Pediatrics* . 2005;116:506-512.

* If transmission by perinatal or peer age, consensual encounters are excluded.

† Transmission can occur from perinatal spread, sexual contact, or nonsexual skin-to-skin contact.

‡ Nonsexual transmission is more feasible in young children, but a thorough medical evaluation by a provider experienced in evaluation of child sexual abuse is still needed.

Management of Sexual Abuse

Medical management for CSA and sexual assault victims is directed toward treatment or prophylaxis for conditions that could result from the sexual contact (infection and pregnancy), referral for other medical issues discovered in the course of the evaluation, mental health intervention, and reporting and collaboration with law enforcement and protective services. Postpubertal girls who have been acutely assaulted and have had genital-to-genital contact should receive antibiotic prophylaxis for gonorrhea, Chlamydia, and trichomonas after the assault because of their risk for ascending pelvic infection (CDC, 2010). Oral gonorrhea transmission as well as postexposure prophylaxis for HIV, hepatitis, and syphilis should be considered. Emer-gency contraception should be offered to postpubertal girls. Prepubertal girls and boys should have follow-up testing in 2 to 3 weeks after the assault without provision of postassault prophylaxis when indicated. Although management focuses on the needs of the child, many cases of CSA involve trauma and stress to the entire family unit and should be addressed. Many caregivers of children who have been sexually abused have been victims of abuse themselves and never disclosed or had the opportunity to have treatment. The abuse of their child can trigger posttraumatic stress symptoms. Other sources of stress and trauma in the child's home should also be screened for and addressed at this time. Domestic violence, caregiver substance abuse, and depression should be recognized as significant adverse childhood experiences that, if left unaddressed, may have cumulative long-term negative health effects on the child's physical and emotional well-being (Felitti et al., 1998). Evidence-based or evidence-informed treatment should be offered to all victims of CSA.

Finally, CSA must be reported to the local mandated agencies. The report should be made immediately by phone and followed by a written report. Health Insurance Portability and Accountability Act (HIPAA) exclusions provide for the sharing of relevant information with children's services and law enforcement if child abuse is suspected.

Sexual Abuse Myths

Cultural myths and societal expectations create an expectation that examination findings will prove penetration after sexual abuse and assault or that the lack of findings proves abuse did not occur. However, the majority of CSA victims have no physical evidence of the abuse. There are several reasons for this: (1) Delays in disclosure make it less likely to discover superficial injuries that heal quickly, (2) the mucosal skin of the anus and genitalia is elastic and can accommodate penetration without tearing, (3) injuries and tears to mucosal skin heal quickly and typically without scars, (4) a young girl's description of painful genital penetration may reflect painful contact with her unestrogenized hymen without further penetration, and (5) it is uncommon to recover trace biologic evidence from the bodies of young children but more likely to recover biologic evidence from clothing and bedding (Anderst et al., 2009 ; Heppenstall-Heger et al., 2003 ; Thackeray et al., 2011) (Table 24-8).

Table 24-8
Common Myths and Misconceptions About Child Sexual Abuse

Children usually tell right away after abuse has occurred.
Physical or laboratory findings should be abnormal if penetration has occurred.
The hymen is commonly injured by activities such as gymnastics and bicycle riding.
Something has to “pop,” break, or bleed the first time a girl has a sexual encounter.
Sexually transmitted infections in young children are common from casual contact or fomite spread.
Family members do not sexually abuse their own children.

Summary

KEY TREATMENT

- • Health care workers are mandated reporters and must report all reasonable concerns for child maltreatment to county authorities. Early recognition of child abuse can be lifesaving.
- • Child neglect can result in serious developmental deficits and must be treated by placing the child in an attentive and supportive environment.
- • Treatment for certain STIs should be delayed until confirmatory testing has been completed.
- • Children who have been abused or neglected should be screened for the need for referral for trauma-focused cognitive-behavioral therapy.