Chadwick's

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Child Maltreatment

Physical Abuse and Neglect

Encyclopedic Volume 1 of 3
Fourth Edition

STM **Learning**, Inc.
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To Jim Hmurovich, President and CEO of Prevent Child Abuse America,
who I have come to know as an effective child and family advocate
who leads by example and makes the case everywhere he can
that prevention of child abuse and neglect is possible and our collective responsibility.
— APG —

To David Chadwick, Henry Kempe, Ray Helfer, Robert Reece,
Jay Whitworth, and the other pioneers of child abuse advocacy
for deeply caring about children in a world that sometimes does not care as well as it should.
— RA —

"Every day counts in the life of a child." Thanks for the support from our families, friends, and colleagues.
— DEJ —

To my family for your patience, my colleagues for your acceptance and to all those
who have left the world a bit better, and made so many little lives breathe easier - this is to have succeeded.
— JT —

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Fourth Edition

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Foreword

An impressive group of medical and mental health investigators, lawyers, child protection agency personnel, and clinicians has combined their talents to produce this comprehensive text on all aspects of child abuse and neglect. This milestone achievement is the latest book in this field that began in 1964. That was the year that Vincent J. Fontana and Douglas J. Besharov published *The Maltreated Child: The Maltreatment Syndrome in Children: A Medical, Legal and Social Guide.* In 1968, Ray E. Helfer and C. Henry Kempe edited the first edition of *The Battered Child*. Norman S. Ellerstein published the first edition of *Child Abuse and Neglect: A Medical Reference* in 1981 and in 1982 Eli H. Newberger edited the book entitled *Child Abuse.* In 1989 Lawrence Wissow singlehandedly wrote his book *Child Advocacy for the Clinician*. *Child Abuse and Neglect: A Medical Reference* (second edition), edited by Stephen Ludwig and Allan Kornberg, was published in 1992. James A. Monteleone published *Child Maltreatment* in 1994 and the first edition of *Child Abuse: Medical Diagnosis and Treatment,* edited by Robert M. Reece, was published in that same year.

Glenn Whaley, the publisher of Dr. Monteleone's original book, said that his book began as "a 60-page manuscript that he and Dr. Brodeur wanted to publish with the title of *Tears That Never Dry*." Because of this manuscript Whaley became more conscious of the phenomenon of child abuse and saw the need for current science to inform physicians, "as they were not familiar with what to look for in identifying or interpreting child abuse." He decided to produce a more comprehensive set of books with a clinical text and atlas for all mandated reporters with Dr. Monteleone. "Dr. Monteleone provided a general table of contents, selected contributors and helped with identifying others to produce chapters." Dr. Monteleone dictated his chapters to Ms. Elaine Steinborn, GW's developmental editor, who transcribed "his notes and scribbles on napkins" into the first edition of Child Maltreatment, published in 1994. Subsequent editions, edited by Giardino and Alexander, have retained some of the most timeless images Dr. Monteleone contributed in the early works, while adding the latest in current research findings as they became available. The fourth edition builds upon Dr. Monteleone's work with more than 660 new images in the field of child maltreatment.

Before 1964 there were no medical texts devoted exclusively to child abuse and neglect. By 2013 there are countless books, manuals, CDs, DVDs and videos available to clinicians who diagnose and treat this significant cause of morbidity and mortality in children. A new subspecialty, Child Abuse Pediatrics, now exists and Fellowship programs are available in numerous advanced medical centers. Sadly, the incidence of child maltreatment has not been reduced to the degree that we can say we have overcome the problem. Indeed, the incidence figures have hardly budged and many medical clinicians opine – with no real data, but with much clinical experience – that the severity of cases seems to be getting worse.

Textbooks alone cannot solve the problem of child maltreatment. Only good clinicians and support of proven prevention strategies can move the field in that direction. But textbooks are still essential tools for education and consultation. William Osler said at the turn of the 20th century, "To study the phenomena of disease without books is to sail an uncharted sea." This book will help chart the course in the turbulent seas of child abuse and neglect diagnosis and management in hospitals, clinics, communities, and courts so that we can continue to pursue the goal of reducing this scourge. It is our responsibility to combine the knowledge in these books with a caring and analytical approach to patients and families.

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Foreword

The child maltreatment field has evolved dramatically over the past fifty years, with each new innovation building on the contributions of professionals who have endeavored to create a better world for children. It is noteworthy that this volume has been renamed for one of the visionary leaders in the field, Dr. David Chadwick, and everyone who reads and utilizes this valuable collection of work written by more than 40 experts in the field is benefitting from not only their expertise, but also the expertise of the countless dedicated professionals who were colleagues of Dr. Chadwick.

We must now view child maltreatment as more than a dedicated field of work to improve the lives of children – in a larger frame the professionals working in this field are daily working to improve the health and well-being of our world as the children we serve today will be those who will shape the future generations. Thus, this incredible collection of knowledge and resources should be viewed more expansively as a blueprint for achieving this broader goal, with guidance from wise and esteemed leaders in the field.

The multidisciplinary response to child maltreatment and awareness of the valuable contributions made by each of these disciplines is critical for an effective response to child maltreatment. Initial multidisciplinary efforts involved a limited number of professions, and we are now in an era where additional professional fields are becoming involved in this expanding multidisciplinary response to child maltreatment. This volume includes topics of dramatic importance for those working in the child maltreatment field and builds on the existing knowledge and practice base to assist professionals in the child maltreatment field to be more effective in their daily work. These outstanding contributions, in addition to updated chapters on critical topics make this volume an incredibly valuable and authoritative text that succinctly applies the knowledge gained from existing research and case studies to the direct practice for those working in the field.

The child maltreatment field, buoyed by the continued revision of these volumes, has been propelled from a practice of best efforts to a more evidence-based and evidence-informed practice which is leading to better outcomes for children and our society. Aside from being an outstanding compilation of existing knowledge related to child maltreatment prevention and intervention, these volumes also serve as a motivator for readers to promote improved practice and further evolution of the entire field.

The multidisciplinary response and value is not measured in comparison to each involved discipline. It is measured in the combined positive impact this collaboration has for each child and family served. The newly revised Fourth Edition of *Chadwick's Child Maltreatment* provides the necessary guidance for allied professionals to provide their services in a most effective manner while also increasing their understanding of their multidisciplinary partners; and this approach will continue to bring the change desired by all those who accept the challenge of child protection and well-being.

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Preface

Poverty, young parents, the use of corporal punishment, intimate partner violence and substance abuse are known risk factors for physical abuse and neglect. Fang has estimated that for 2008, the estimated annual cost of child abuse and neglect in the US is $124 billion dollars. This may be a significant underestimate.

In Jonathan Swift's *A Modest Proposal,* the author recommends that in order to deal with the plight of poor Irish children, some of them should be eaten, "*…young healthy well nursed is at a year old a most delicious, nourishing, and wholesome food…"* At first reading of this essay, one would be horrified at such a suggestion. However, his satirical piece was meant to bring attention to the actual socioeconomic environment of children in Ireland in the 1700s. There were too many children born into poverty who were often malnourished and neglected, forced to beg, or sold into slavery when they reached age twelve.

Fast forward several hundred years and examine the socioeconomic status of children in the United States today. In 2010, according to the US Census Bureau, 16.4 million or 22% of the nation's children were poor. More than 1 out of every 5 children resides in households where the pre-tax income is below the poverty threshold. There is no doubt that poverty contributes to child maltreatment. Child abuse and neglect occurs at significantly higher rates among the poor.

Both the US Department of Health and Human Services (NCANDS) and the National Incidence Study of Child Abuse and Neglect (NIS–4) report maltreatment is decreasing. Yet this may be misleading. Recently, the rate of abusive head trauma (AHT), the most serious and deadly form of physical abuse, increased significantly in 3 geographic US regions during a one and a half year economic recession. Whether decreasing or increasing, the number of maltreated children is staggering. In 2011, more than 675 000 children were substantiated as victims of abuse and neglect, or 9.1 victims per 1000 children in the population according to child protective services numbers. There were over 3 million referrals. Thus, referrals that are not substantiated do not mean that abuse has not occurred. Through surveys such as the ACEs study, it is known that perhaps half of the adult population has been the victim of some sort of abuse. This means that child protection services see only a fraction of all abuse and that children suffer most abuse silently during their childhood.

More than 75% of maltreated US child victims suffered substantiated neglect and more than 15% suffered physical abuse in 2011. A parent acting alone or with someone else maltreated 4/5 of victims. A mother acting alone maltreated 2/5 of victims. It really is no surprise that many of the perpetrators were young, 40.8% less than 29 years old. According to the CDC, there were 367 752 infants born to 15-19 years olds in 2010. But more concerning was repeat births to teen mothers – 65 770 teens with a second child and 11 056 teens with a third child. Young, single mothers are at risk for maltreating their children. They themselves may have been victims of abuse; they may be uneducated or ill-prepared for the necessary skills required to provide a safe and nurturing environment. They also may have become pregnant due to coercion or birth control sabotage by an intimate partner.

More than 25% of maltreated children had an intimate partner violence (IPV) risk factor. Children do not have to be present to suffer the consequences. They can see the aftermath of an argument such as parental injuries or destruction of property. Children in households with IPV are significantly more likely to be physically abused. They may be used as a target for actual or threatened harm for controlling the other adult. Infants may become injured while being held in a parent's arm during an altercation. Children may be injured when they try to intervene to prevent a fight. Their needs may be neglected as the battered parent expends energy trying

not to incite their intimate partner. According to UNICEF, 63% of all boys who commit murder kill the man that was abusing their mother. The Boston Marathon Bombing is a recent tragedy allegedly caused by two brothers who immigrated to the US. It was revealed during the investigation that the brothers grew up with IPV.

Unfortunately in the US, there is an attitude of tolerance of parental violence towards children. It is not uncommon to hear caregivers state "Spare the rod, spoil the child," when justifying corporal punishment. This phrase is often misquoted and misinterpreted from Proverbs 13:24 in the Bible. In the King James Version, "He who spareth the rod hateth his son: but he that loveth him correcteth him be times." Most theologians would explain that this passage's true meaning is about discipline, a word whose root is "disciple," which means teacher. Parents need to teach their children right from wrong, so that they develop a strong moral character. What does it say about society when an adult who walks in a bar and slaps another patron across the face may be charged with assault, but a parent in a supermarket who slaps their child is exercising their parental right? There is considerable evidence-based medicine detailing the harms of corporal punishment.

Many states allow a parent to physically discipline a child by striking them with an object; other states specify that the object can only strike a child's thighs or buttocks as long as it doesn't leave bruising. And some states allow for bruising as long as it is not excessive. What does that mean and who makes that decision? Corporal punishment is not effective. It teaches children that those who are bigger than you are entitled to hurt you. It encourages children to lie in order to avoid physical pain. And most caregivers are not in control when they are physically disciplining a child. They are angry and frustrated. As a result, children are injured - sometimes so severely they die. In contrast, the American Academy of Pediatrics has a guideline about when inflicted skin injuries constitute abuse – basically any bruise however small.

Nineteen states allow corporal punishment in public schools. Some do not even require parental permission. A child is smacked on their clothed buttock with a paddle. Again, who decides what misbehaviors warrant paddling? And how many whacks? This practice is both demeaning and dangerous and also has not been shown to be effective. Sometimes litigation is necessary to change behavior. With several successful lawsuits brought on behalf of children who sustained injury from paddling, some school systems are discontinuing this practice. It is worth noting that 5 out of the top 7 states with the highest rates of maltreatment deaths allow corporal punishment in schools.

Although most childhood burns result from inadequate supervision, inflicted burns are a particularly heinous form of physical abuse. Whether immersing an infant or child in scalding water or applying a hot object to their skin, one has to assume that the intent of the caregiver was purely to inflict pain. Too often, a caregiver teaches a toddler not to touch a cigarette lighter, by heating it up and pressing it into their skin. Clearly, the caregiver's blame is misplaced. One common theme of physical abuse is the caregiver's lack of understanding of normal child development. Homes should be safety-proofed as toddlers are naturally curious and love to explore their environment through hand-mouthing behaviors. A caregiver should not leave dangerous objects within reach of a toddler. Burns are not only painful but they can leave permanent scarring, a reminder of abuse. Sometimes infants and children are "tortured" by their caregivers who use restraints to control behavior, withhold food and/or water, or subject children to repeated beatings or burns.

Direct-to-consumer drug advertisement has been legal in the US since 1985 but became more popular in 1997 when the Food and Drug Administration had less stringent requirements for listing side effects. Consumers are inundated with commercials that describe medication that can cure seemingly every ailment; the

purple pill for heartburn relief, the fluorescent butterfly for nighttime sleeping, the twin bathtubs for erectile dysfunction. We are a nation that no longer "says no to drugs". Consumer consumption of prescription medications has significantly increased. Prescription medications are the fastest growing drugs of abuse. The Drug Enforcement Agency has highlighted oxycodone, an addictive painkiller, as the "pill mill" epidemic. In addition, opioid use during pregnancy is estimated to affect 5.6 per 1000 births in the US.

Not all states provided data regarding maltreatment and caregiver risk factor for alcohol and drug abuse. However, of those that did, nearly 30% had an alcohol or drug abuse caregiver risk factor. Prescription drugs - opiates, benzodiazepines, antipsychotics and hypnotics, are now replacing caregiver use of typical street drugs - marijuana, cocaine, and methamphetamine. Regardless, drug use and abuse is bad. A mind-altering drug is just that. It alters brain function. Many opiate labels state under the warnings and precautions section, "may cause somnolence, dizziness, alterations in judgment and levels of consciousness, including coma." Any mind-altering substance can interfere with a caregiver's ability to parent and provide a safe and stimulating environment. According to the Center for Substance Abuse and Treatment, children whose parents abuse drugs or alcohol are 3 times more likely to be physically abused and 4 times more likely to be neglected. A substance-abusing parent often experiences irritability. Their behavior may be erratic. They may experience periods of irrational thinking, anger, or rage. Therefore, discipline may be inconsistent, unpredictable, or abusive. Due to their addiction and drug seeking, the primary focus of a parent is obtaining and using the drug. Shelter, food, proper hygiene, safety, nurture, and medical care are often not provided for their children. Additionally, an intoxicated parent may lose consciousness and if co-sleeping, may roll over onto and suffocate their infant or young child.

A recent study from Australia is illuminating. The authors prospectively followed a birth cohort of more than 3500 children who completed Australia's version of standardized tests at age 14. Notification to the state for abuse, neglect or both, whether substantiated or not, was significantly associated with lower reading ability and perceptual reasoning compared to non-referred children.

There are preventive measures that have been scientifically proven to reduce the risk of child maltreatment. As a student in the 1970s, Dr. Olds worked at a daycare center in inner city Baltimore. He reportedly felt that it was "too little and too late" to help those 3-5 year olds who had suffered significant trauma. He therefore began focusing "on helping a mother be a better parent from the time her child was born." First instituted in Elmira, New York, Olds established a visiting nurse educational in-home intervention for high-risk mothers. Many other regions throughout the country followed his initiative and instituted their own versions. Evidence-based medicine has shown statistically significant changes in parents' attitudes and behavior, and more importantly a significant reduction in abuse and neglect.

Safe Environment for Every Kid (SEEK) is another successful prevention initiative spearheaded by Dr. Howard Dubowitz. Using pediatric practices in low risk areas versus controls, the program trained health professionals to focus on specific child maltreatment risk factors during routine health maintenance visits. This model was associated with reduced maternal psychological aggression and minor assaults, clearly risk factors for abuse. Why aren't visiting nurse programs available in every city or SEEK incorporated into every pediatric practice? Home visiting nurse education programs are viewed as expensive, despite studies that show there is a significant net gain for every dollar spent. And physicians are just not comfortable with dealing with child maltreatment. According to Dr. Cindy Christian, one of the most important factors with physician's discomfort with identifying and reporting child maltreatment is lack of education. In fact, the median hours of child abuse

instruction reported by medical students during their four-year curriculum was two hours (range 0 to 10). This definitely does not seem proportionate to the most recent reported maltreatment rate of 9.1 victims per 1000 children in the population.

This nation has a very successful past history of approaching important health issues "head-on" and instituting change. Evidence-based medicine demonstrated that cigarette smoking caused lung cancer, cardiovascular and pulmonary disease. It was also shown that second-hand smoke was almost as dangerous, causing a myriad of upper respiratory and lower respiratory tract complications as well as lung cancer. There was a concerted societal effort to change attitudes and behaviors regarding cigarettes and with the support of legislation to ensure the physical well being of the non-smoker. Cigarette advertisements were removed from television, cigarette smoking was minimized in the media, and cigarette smoking was banned in airplanes, bars, restaurants and hospitals. In addition, laws prohibiting sales to minors were enforced and both state and federal taxes were placed on cigarettes, making purchasing a pack very costly. Many US elementary schools voluntarily created and implemented curriculum regarding the dangers of smoking. Similarly, the American Academy of Pediatrics developed a school-based curriculum whereby residents taught elementary school students the health consequences of smoking.

Why can't we do the same for child abuse? We have come a long way since the New York Society for the Prevention of Cruelty to Children was established in the late 19th century. There are now serious mandated child abuse laws, there are improved mandated child abuse curricula for daycare professionals and health care providers, there is increased training on recognizing child maltreatment for law enforcement and child protective services investigators, and since 2009, there is a new American Board of Pediatrics subspecialty, Child Abuse Pediatrics. We need to recognize that child abuse and neglect is the most important health problem affecting the future of our nation. It has been said, "It takes a village to raise a child." But in order to effect change, it must take a nation to protect a child.

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Reviews of the Fourth Edition

The 4th edition of Chadwick's Child Maltreatment *once again provides a comprehensive resource regarding child abuse and neglect. It is beautifully illustrated, well referenced, and very much up to date. Readers will be well served by this essential resource. In particular, the ophthalmology sections have been put together with expertise and offer excellent photographic examples of the findings in abusive head trauma. Ocular manifestations of abuse are well covered and the reader can expect a wealth of well referenced information that will directly impact their patient care.*

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The fourth edition of Chadwick's Child Maltreatment *ensures physicians, nurses, social-workers, and law enforcement professionals have a comprehensive reference that describes the identification, evaluation and management of all facets of child abuse and neglect. Of note, in an era when abusive head trauma (shaken baby syndrome) is often fiercely litigated in courtrooms and in lay media,* Chadwick's Child Maltreatment Fourth Edition *is a reputable source of mainstream, scientific information about abusive head trauma and its ophthalmologic manifestations.*

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This Chadwick's Child Maltreatment Fourth Edition *textbook offers a comprehensive and detailed accounting of the medical, social work, and legal assessment and investigation of the alleged childhood abuse victim. It serves as an excellent resource for the multidisciplinary team responsible for the evaluation of these complex cases. Dr. Debra Esernio-Jenssen has provided the clinician with a guide for how to accurately and effectively medically interpret bruises and the mechanisms of injury for these skin findings in children and adolescents. Dr. Randell Alexander carefully addresses the standards necessary for the multidisciplinary team to photodocument abusive injury. Anyone working in the field of child maltreatment should add this publication to their annals.*

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This work is excellent! At a time when child maltreatment science is growing exponentially, the release of the Chadwick's Child Maltreatment Fourth Edition *publication by Chadwick, Alexander, Giardino, Esernio-Jenssen, and Thackeray brings scholarship and practice expertise to those who deliver care to children who have been maltreated or abused. It should be in libraries worldwide.*

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The new Chadwick's Child Maltreatment *book is a must for health care providers who are seeing children who have been abused. There are many useful tips that professionals can adopt in their practice and use as a reference. The chapters are easy to follow as well as providing pictures with great case examples. The most current and up to date references in the chapters make it easy to follow the research in each area. I will be recommending this 4th edition as an excellent resource book for all programs that deal with child maltreatment.*

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The 4th edition of Chadwick's Child Maltreatment *is a comprehensive, evidence based text that is a critical reference for healthcare professionals who provide care for children and families. The array of expert contributors has crafted a publication that provides essential knowledge of the many facets of child maltreatment and includes contemporary references, images and case studies. I would recommend this edition of Child Maltreatment as a 'must have' resource for professionals committed to curbing the epidemic of child maltreatment.*

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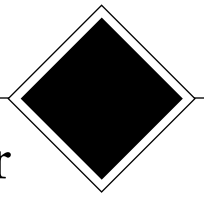
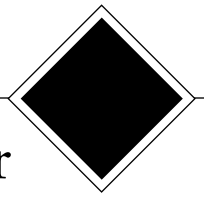


Contents in Brief



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CHILD MALTREATMENT

PHYSICAL ABUSE AND NEGLECT

Encyclopedic Volume 1 of 3
Fourth Edition

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Chapter 1

Overview of Child Maltreatment

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Since 1962, when Kempe and colleagues first described the "battered child syndrome,"[1] it has become increasingly clear that child maltreatment, including physical abuse, neglect, sexual abuse, and emotional abuse, is far too common, has profound short- and long-term effects on children and families, and is extremely costly to society. It also has become clear that much greater attention and financial support will be necessary to increase dramatically the efforts aimed at preventing child maltreatment and supporting families.

Before the article by Kempe and colleagues, observant radiologists raised important questions about how major injuries, such as fractures, occurred in young children and hesitantly proposed that these injuries were the result of actions by the caregivers.[2,3] Others, such as Adelson,[4] wrote about the killing of children.

Kempe's article, however, provided a major shift in the understanding of certain poorly explained childhood injuries that were seen by countless clinicians around the country. Whereas some clinicians had not recognized that parents and other caregivers were hurting their children, others likely had recognized the problem but had kept quiet about it because it was too painful and difficult to believe. Kempe and his coauthors provided information about both the clinical spectrum of the "battered child syndrome" and the first epidemiological study, in which 749 abused children were identified around the country. It seems very unlikely that anyone at that time could have foreseen what has been learned about the problem's extent over the last five decades.

The recognition of abused children created new problems and questions for hospitals and clinicians. What is the home like where the child was abused? Is it safe to send the child home, and, if not, where should the child go? In response to these types of questions and others and the need to protect children, state and federal legislation in the 1960s and 1970s established child protective services (CPS) agencies in each state, and laws were passed mandating that physicians and other professionals report suspected abuse to CPS.

Definitions and Epidemiology

Maltreatment of children includes neglect, physical abuse, sexual abuse, and emotional maltreatment. Neglect is defined as acts of omission and includes the failure to provide adequate nutrition, clothing, shelter, or supervision; abandonment; and failure to ensure that the child receives adequate healthcare, dental care, or education. Although neglect can be a single event, such as leaving a young child unsupervised in an unsafe setting, it often is a pattern of unsafe or inadequate care, such as a pattern of inadequate supervision or inadequate nutrition because of a serious mental health problem or substance abuse on the part of the caregiver. Clinicians must distinguish neglect from episodes of less serious failures to provide adequate care to a child, such as when a 10-month-old rolls off of a bed or a child has missed a few appointments for well-child care and has not received all of the recommended immunizations.[5]

Physical abuse is defined as acts of commission toward the child by a parent or caregiver. Such acts can result in harm to the child or they might intend to harm, although there may be no harm or only a minor injury. It can include injuries that occur when a child is physically punished severely or when a parent loses control and shakes a crying infant. Injuries that are suspicious for abuse or neglect must be distinguished from unintentional (or accidental) injuries. A specific form of child abuse, called medical child abuse, previously referred to as Munchausen Syndrome by Proxy, occurs when "a caregiver causes injury to a child that involves unnecessary and harmful or potentially harmful medical care."[6]

Sexual abuse is the involvement of adults, older children, or adolescents in sexual activities with children who cannot give appropriate consent and who may not understand the significance of what is happening to them.[7] Such activities violate family and societal taboos. Sexual abuse includes, for example, sexual touching of the genitalia, oral sex, attempted or actual sexual intercourse, including children in child pornography, or exposing children to child pornography. Although a 5-year age difference between "victim" and "perpetrator" is often used to decide whether sexual behaviors between two children should be considered sexual abuse, as opposed to "sexualized play," it is often more helpful to examine how invasive and persistent the behaviors are by the older child and whether the younger child wanted the behaviors to stop and felt threatened.

Emotional (or psychological) maltreatment is "a repeated pattern of damaging interactions between parent(s) and child that become typical of the relationship."[8] This form of maltreatment occurs when a child repeatedly feels that he or she is unwanted, unloved, or worthless. It includes denigration, belittling, and ridiculing; it can also include actively rejecting the child or ignoring the child's emotional needs. Although emotional maltreatment is likely the most common form of maltreatment, children are infrequently reported to CPS agencies for emotional maltreatment. Emotional maltreatment, however, often accompanies other types of abuse or neglect and plays a major role in the consequences of these types of maltreatment.

Much has been learned about the epidemiology of child maltreatment. Since 1976, each year in the United States, data have been collected from each state's CPS agency to track the number of reports and substantiated cases. Since 1990, these data have been collected by the National Child Abuse and Neglect Data System (NCANDS). By the early 1990s, there were over 3 million reports nationwide, and approximately one third of these reports were substantiated, meaning that the local CPS agency had enough evidence to believe that child maltreatment had occurred.

From 1990 to 2009, there was a substantial decline in the yearly number of cases nationwide of substantiated sexual abuse (61% decline) and physical abuse (55% decline) and a 10% decline in cases of substantiated neglect.[9,10] The decline in the occurrences of sexual and physical abuse is impressive and likely reflects real changes in how children are cared for in the United States. Some of the decrease in occurrence, however, may be due to other changes, such as the criteria used by CPS to substantiate reports of sexual abuse or how specific reports are categorized as abuse, neglect, or sexual abuse.[11]

In 2011, 3 million children were reported to CPS agencies nationwide, and 677000 cases were substantiated as being victims of maltreatment.[12] Thus 9.1 per 1000 children were subjects of a substantiated report of maltreatment. Of these, 78.5% were caused by neglect, 17.6% by physical abuse, 9.1% by sexual abuse, 9.0% by emotional maltreatment, 2.2% by medical neglect, and 10.3% by other types of maltreatment, including abandonment or congenital drug addiction. These percentages add to more than 100%, indicating that children can suffer from more than one type of maltreatment.

Chapter 2

Skeletal and Visceral Radiological Imaging

Megan Marine, MD
Richard Gunderman, MD, PhD

History of Child Abuse

Child maltreatment was first studied and described by French physician, Ambroise Tardieu in the mid-1800s before the use of diagnostic x-rays. Tardieu was a pre-eminent forensic medical scientist who devoted a significant part of his career to trying to unveil the inexplicable nature of child abuse. His work, *Etude Medico-Legale sur les Sevices et Mauvais Traitements Exerces sur des Enfants* (*Forensic Study on Cruelty and Ill-Treatment of Children*), published in 1860, is a classic description of battered child syndrome. He reported 32 cases, 18 of which resulted in death. A tireless advocate for children, he also published articles on the terrible working conditions children endured in factories and mines, as well as sexual abuse and infanticide. Many of his colleagues and successors did not believe his allegations of physical and sexual abuse. Unfortunately victims continued to suffer in silence for nearly another century.[1]

In 1946 John Caffey, pioneer of pediatric radiology, published the first systematic clinical and radiologic study of child abuse victims, reporting 6 children under age 2 years with extremity fractures and subdural hematomas.[2] Caffey's junior associate, pediatrician Frederick Silverman, then detailed the radiographic findings of child abuse in 1953, describing both posterior rib fractures and metaphyseal lesions, two of the most specific injuries highly associated with abuse.[3] Following Silverman's collaboration with pediatrician and researcher Henry Kempe, the landmark article "The Battered Child Syndrome," was published in the *Journal of the American Medical Association* in 1962, which led to the recognition of child abuse by the medical community.[4]

In 1972 Kempe founded The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect. Twelve years later, Kempe was nominated for the Nobel Peace Prize for his contribution to child abuse prevention and treatment, and he is now considered one of the American pioneers of the detection, treatment, and prevention of child abuse. His efforts resulted in the adoption of abuse-reporting laws in all 50 US states.[5] Currently, all 50 states, the District of Columbia, and the US Territories have mandatory child abuse and neglect reporting laws that require that suspicions of abuse be reported to a child protective services (CPS) agency.[6]

Epidemiology of Child Abuse

The Child Abuse Prevention and Treatment Act (CAPTA), as amended by the Keeping Children and Families Safe Act of 2003, defines child abuse and neglect as any recent act or failure to act on the part of a parent or caregiver that results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act that presents an imminent risk of serious harm.[6]

The Child Maltreatment Report released in December 2010 found a staggering 702 000 US children to be victims of child abuse and neglect in 2009.[6] These numbers likely underestimate the extent of the problem, as reported cases understate

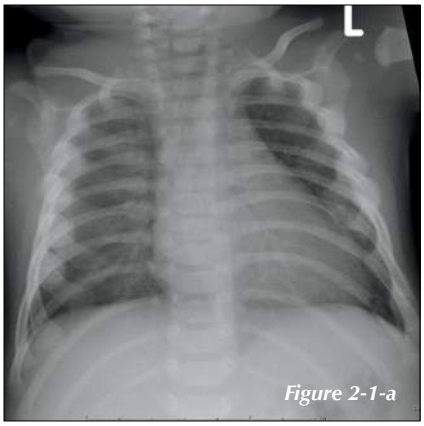


Figure 2-1-a


Figure 2-1-b

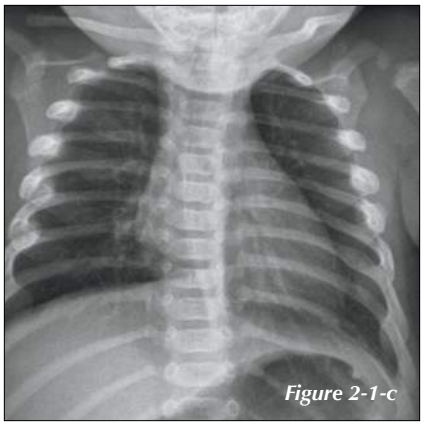


Figure 2-1-c

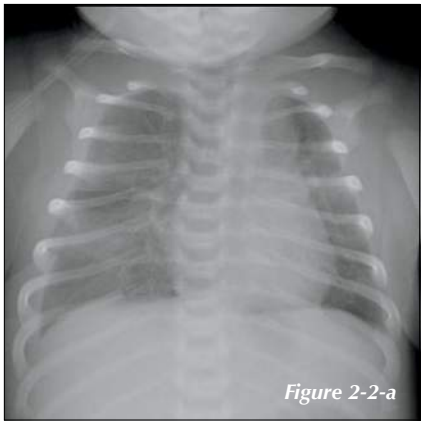


Figure 2-2-a

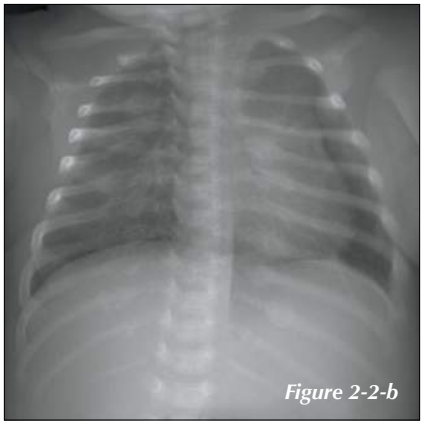


Figure 2-2-b

Figure 2-1-a. *Girl, 3 months old, with multiple bilateral posterior and lateral healing rib fractures with hard bony callus formation.*

Figure 2-1-b. *Same patient as in 2-1a, 2 days later. Technetium 99m MDP bone scan demonstrates multiple bilateral rib fractures.*

Figure 2-1-c. *Nineteen days later. Note the change in the appearance of the healing rib fractures. The proximal left humeral metaphyseal fracture now also noted.*

Figures 2-2-a *and* ***b.*** *Boy, 22 days old, with bilateral acute posterior rib fractures. On the right, 14 days later, the fractures now show bony callus formation.*

moderate specificity include multiple fractures, fractures of different ages, epiphyseal separations, vertebral body fractures, digital fractures, and complex skull fractures. Low-specificity fractures for abuse include subperiosteal new bone formation, fractures of the clavicle and long bone shaft, and simple skull fractures.[23]

Posterior and lateral rib fractures are considered to be caused by squeezing or compressive forces.[24] These fractures are not uncommonly multiple. When faced with multiple fractures, it is important to determine the ages of the fractures, as finding fractures of differing ages increases concern for child abuse. The timetable of radiographic changes include soft tissue swelling, followed by subperiosteal new bone formation as early as 4 days and always by 2 weeks, loss of fracture line and soft callus, hard bony callus, and bony remodeling peaking at 8 weeks. There is, however, considerable overlap, making the dating of fractures an inexact science relying on the radiologist's personal clinical experience.[25] (**Figures 2-1-a** and **b**).

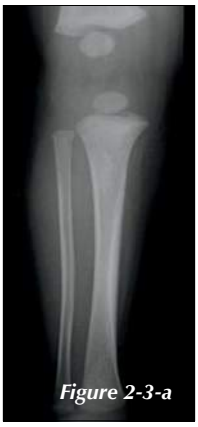
Repeat radiographs or skeletal survey performed approximately 2 weeks after the initial examination can provide additional information on the presence and age of child abuse fractures.[26] These should be performed when abnormal or equivocal findings are found on the initial study and when abuse is suspected on clinical grounds.[27] (**Figures 2-1-c, 2-2-a** and **b**).

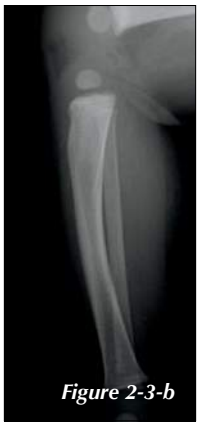
A classic metaphyseal lesion occurs when an acceleration-deceleration and/or torsional force is applied to the immature primary spongiosa adjacent to a cartilaginous growth plate, the most immature portion of metaphysis.[28] These fractures are commonly referred to as "corner" or "bucket-handle" type fractures depending on the projection of the radiograph. (**Figures 2-3-a** to **d, 2-4** and **2-5-a** to **c**).

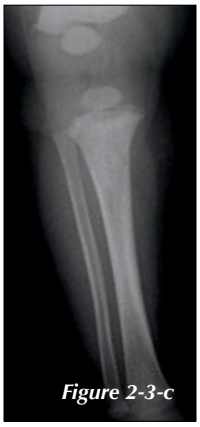
Sternal fractures have a higher specificity for child abuse but are uncommon, given the malleability of thorax at an early age. Mechanism of fracture is likely direct blow or forceful compression of chest.[29,30]

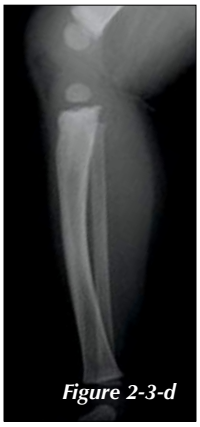
Scapular fractures are also rare, thanks to their protective surrounding muscle and connective tissue. The mechanism is typically severe, high-energetic trauma. The acromion is the most common location for a fracture, which can result from indirect trauma such as shaking or when arm is turned onto back with significant force.[30] (**Figures 2-6-a** and **b**).

The rapid growth of the spine during adolescence influences its anatomy and biomechanical properties, particularly in the lumbar area. Spinous process fractures, while more specific for child abuse, are less common than vertebral body fractures, which are only moderately specific. In a child with a thin abdominal wall, the fulcrum of a flexion injury would be at the body of the spine, which exposes it to a flexion-distraction injury (Chance fracture).[31] Compression fractures also result









Figures 2-3-a *and* ***b.*** *Girl, 5 months old, with slight irregularity of the proximal tibia metaphysis.*

Figures 2-3-c *and* ***d.*** *Follow-up radiographs 16 days later better demonstrate the healing proximal tibia classic metaphyseal lesion or "bucket handle" fracture.*

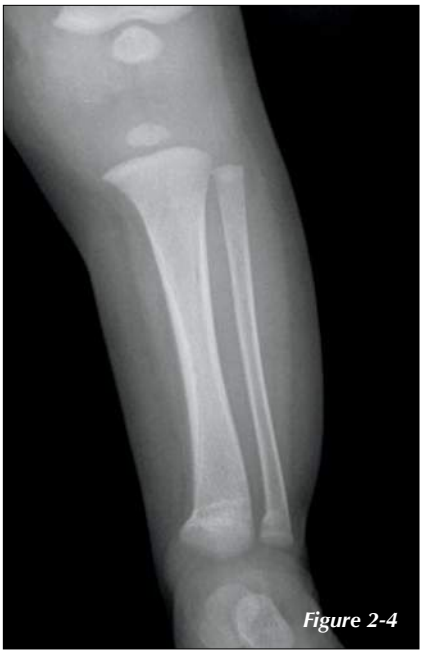
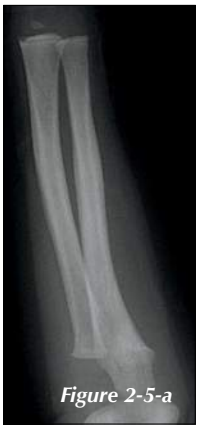
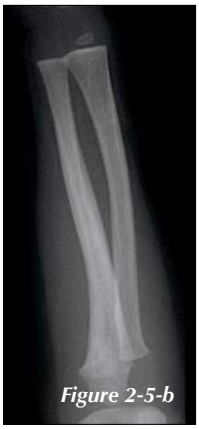
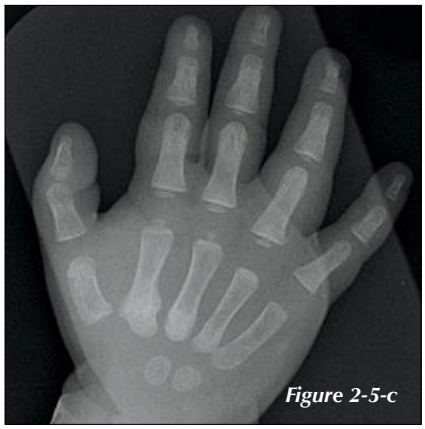


Figure 2-4. *Girl, 3 months old, with healing distal tibia and fibula metaphyseal fractures.*







Figures 2-5-a *and* ***b.*** *Boy, 20 months old, with acute distal radius CML. Normal left side is shown for comparison.*

Figure 2-5-c. *Same patient as in 2-5-b, with less commonly seen healing metacarpal fractures, moderately specific for child abuse.*

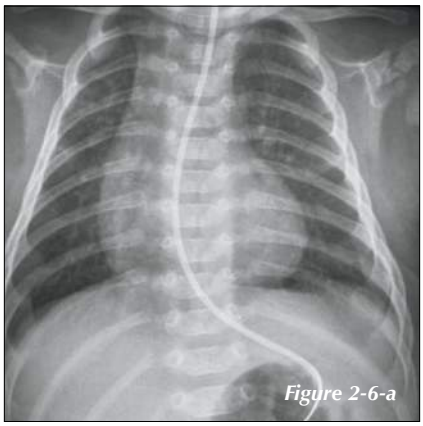
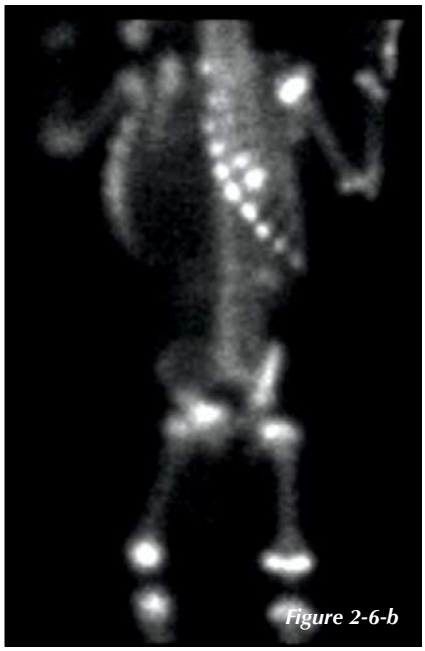


Figure 2-6-a. *Child, 2 months old, with left acromion fracture.*

Figure 2-6-b. *Three days later, bone scan demonstrates left acromion fracture and better shows left lateral rib fractures.*



Chapter 4

Burns in Child Maltreatment

Aaron Miller, MD, MPA

Burns are the third leading cause of death associated with child maltreatment[1] and pose many of the same diagnostic challenges of the two leading causes of death - head trauma and abdominal trauma. Medical professionals are asked not only about the mechanism of a burn, but also whether the manner was necessarily abuse, neglect, or an accident. With only a few burn patterns that are distinctive for abuse versus neglect and accidents, it is vital that the clinician be able to elicit the truth or identify important inconsistencies from the caregiver and patient. Clinicians must also be able to work closely with child protective services and law enforcement to further clarify findings.

Discerning Physical Abuse from Neglect and Accidents

When a child's caregiver provides a history that is not consistent with the child's injuries, significant concern arises that the child was abused or neglected[2]; however, very little research or training exists for medical professionals to learn how to ask questions of a caregiver in a way that increases the likelihood of eliciting the truth or important inconsistencies.[3,4] Listed in this section are a few steps for interviewing caregivers and then for performing the medical exam. The remainder of the chapter will discuss the various types of burns, factors that help determine the manner of the burn, and questions that must be asked of child protective services and law enforcement to assess and confirm whether a caregiver's statements are consistent with the child's injuries. Interviewing children without their caregiver present is also vitally important,[5] but this topic is discussed in great detail in Volume 2 of this text.

Interviewing Caregivers

Abusive caregivers sometimes delay in seeking medical care for their child; however, often the abuser brings the child to the hospital or a private medical office in a timely fashion and is accompanied by a partner who does not know the child was intentionally abused. The most important first step is to interview the caregivers separately. When caregivers are interviewed together, the nonabusive caregiver may answer a question that the abuser struggled with and thus raised the clinician's suspicion. The abusive caregiver may feel more guarded in the presence of a partner and less likely to admit the stress he or she is experiencing or to disclose specific actions or mistakes that contributed to or caused the injury. The nonabusive caregiver is also less likely to disclose any type of violence that may be going on in the home.

Medical providers should ask questions in open-ended fashion to elicit greater accuracy of information and greater amounts of information.[6] When discussing the present injury, a typical transition could be: "Tell me everything that happened from the beginning – where were you? Where was everyone else? What was going on right before this happened?" It is important not to interrupt the caregiver, even when he or she pauses or makes statements that are confusing. This may cut off important statements that lend greater weight to whether the history is credible or not. After the caregiver completes the narrative, further questions can be asked for clarification.

Careful attention should be paid to the child's previous state of health, including development, behavior, and the details of the incident resulting in the burn, including time, source of heat, supervision of the child, and location of others at the time of the incident.[7] Certain factors in the history should alert the examiner to the possibility of inflicted injury, including the child's age, tap water as the source of heat, and histories requiring developmental skills beyond the child's age.[8,9] Abusive scalding tap water immersion burns may occur after a toddler soils himself. The frustrated caregiver goes to clean the child in the bathtub and then forces him or her into scalding hot water.[10] Asking what happened right before the burn can help elicit a history of what may have triggered the caregiver's abuse.

If a caregiver gives an answer that does not seem plausible, the medical professional should inquire further. The caregiver might not be covering up abuse, but rather covering up a mistake or poor judgment that may have led to the child's injury. This mistake or poor judgment may be considered neglect or an accident, depending on the circumstances. The difference between these two – neglect versus accident - can lead to very different assessments by the multidisciplinary team concerning the child's safety in the custody of the caregivers.

When the child was not brought immediately to the medical provider for treatment, several possibilities should be explored, for example, the caregiver may not have had the means or money to get to the hospital or may not have a phone to call for help. Additionally, a burn may appear as a simple, superficial burn and not develop a blister until later, which may not be noticed until after a nap.

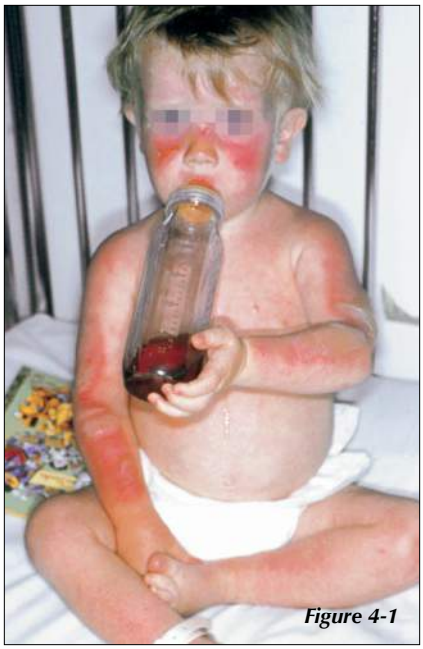


Figure 4-1. *Sunburn causing large areas of superficial burn and smaller areas of partial-thickness burn with blisters.*

When there is concern that a burn may have been inflicted, medical professionals should feel comfortable in the role of helping children and families by asking caregivers whether they hurt their child. To be clear, medical providers are not investigators and do not need to confront caregivers with all the inconsistencies in their stories. (These issues are discussed further in Volume 3, Chapter 9 "The Role of Law Enforcement in the Investigation of Child Maltreatment.") It is appropriate for medical professionals to ask sensitive questions in a supportive manner. One way to do this is to first acknowledge to the caregiver how difficult it is to care for children and then note that they can see the caregiver cares for the child. After waiting for a response and responding back, these comments can be followed by "Is it possible that with all this stress you just lost control for a few seconds and your child got hurt?"

Examining the Child

After interviewing each caregiver and the patient, a careful physical exam is needed – from the scalp and oropharynx down to the toes – to assess for additional injuries that may yield more information about the extent and cause of the child's injuries.[11]

Burns are described by the depth of the burn, the source of the heat, and the shape of the burn on the body. Superficial burns (sometimes called first-degree burns) (**Figure 4-1**) involve only the epidermal layer. Partial-thickness burns (sometimes called second-degree burns) (**Figure 4-2**) involve the dermis, causing a blister, and are further characterized as superficial partial-thickness or deep partial-thickness, the latter of which may sometimes need skin grafting. Full-thickness burns (sometimes called third-degree burns) (**Figure 4-3**) often need skin grafting, extending completely through the dermis and causing damage to hair follicles, sweat glands, and nerves. These burns can appear white and may not be painful due to nerve death. Full-thickness burns that damage tendons and muscle tissue are sometimes referred to as fourth-degree burns. Whether a burn is partial-thickness versus full-thickness can be difficult to ascertain during the initial physical exam and sometimes is not fully evident until 1 or 2 days later.

Sources of heat include thermal (scalds, flames, contact with hot object), chemical, electrical, radiation, and friction/pressure. The shape of a burn and its distribution on

the body are very important in determining the source of the heat and the manner of the burn. Scald burns, the most common type of burn in children under age 5 years, are described as a flow pattern, a splash, or an immersion burn.[12,13]

The percentage of body surface area covered by the burn is best estimated by age-corrected surface area charts such as Lund-Brower or Berkow charts. Because of the progressive nature of thermal injury, the true depth of the burn may not be fully apparent for 24 to 48 hours. If the child's injuries allow it, direct observations of the child's developmental capabilities should be made to assist in determining the credibility of the history given.

A skeletal survey should be performed in all cases of suspected abuse, as children with concerning burns have higher rates of occult fractures.[14,15]

The medical treatment of burns is outside of the scope of this chapter; however, it is important to note the short- and long-term consequences of burns in order to educate families, social services, and courts as to the challenges and needs that the child may encounter. Short-term consequences can include the need to be hospitalized, causing parents to miss significant work and risk losing their jobs; significant pain at rest and during debriding sessions; fever; infection; feeling miserable and needing a feeding tube for nutrition; needing surgery with its accompanying risks; and post-traumatic stress disorder. Long-term consequences can include death, physical impairment, contractures, and disfiguring scarring that can significantly affect mental health and self-esteem.

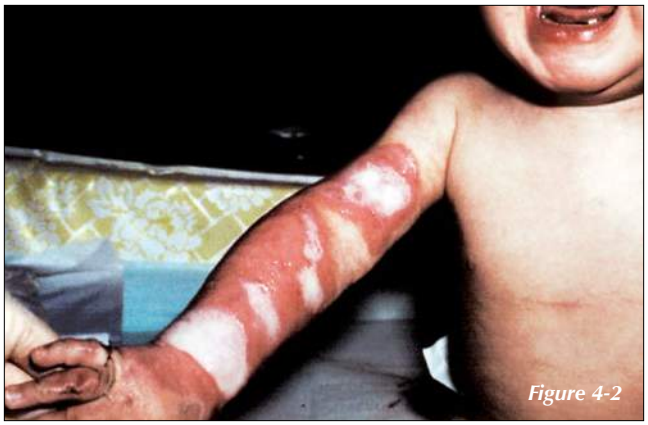
Types of Burns

Scald Burns

Scald burns have long been a plague to children's health. Felix Wurtz, a surgeon in Switzerland, described this danger in 1563 in one of the first books on Pediatrics published in western Europe: "Touching Baths of Children, it is known that they are bathed sometimes so hot, that the heat thereof is scarcely sufferable to an old bodies hand, whose skin is strong… The bodies of such little Children may be compared to a young and tender root or twigg of a Tree, which in the souch is not so grosse as an old root or branch of a Tree; take heed you cause no paines unto little Children."[16]

Most scald burns are accidents that occur in the kitchen, where even a moment's inattention allows a child's curiosity and quickness to result in pulling a hot beverage or pot off a table.[11] Spilling liquids cause burns described as a "splash" or "flow" pattern. Flow burns sometimes are further described as having an "arrowhead" shape, with the widest and deepest part of the burn at the top, or point of first contact.[17] The pattern both narrows and becomes less deep because the liquid cools as it flows down the body (**Figure 4-4**).

Thick liquids such as grease, oils, or syrups maintain their heat for longer periods and can be at a higher temperature than the boiling point of water. Thus they may produce a more extensive burn pattern. Microwaves heat food and liquids unevenly;



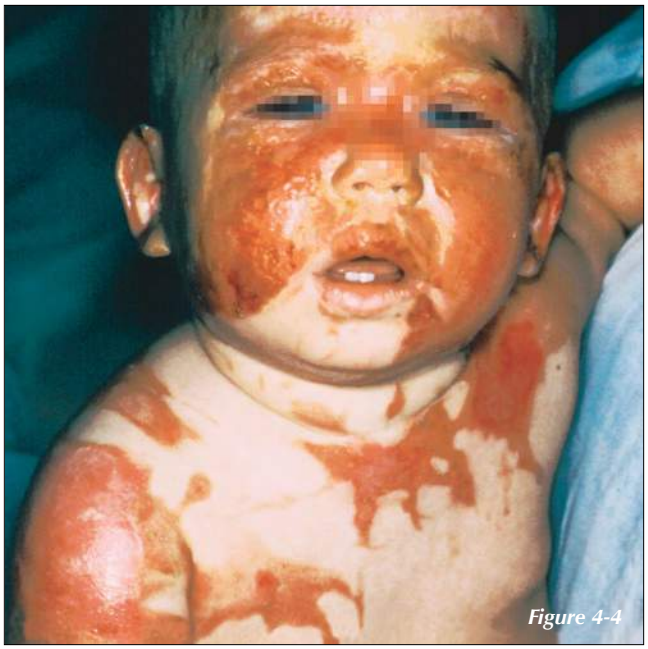


Figure 4-2. *Partial-thickness immersion burns.*

Figure 4-3. *Flame burn resulting in charred areas of full-thickness burns.*

Figure 4-4. *Note the indistinct edges and multiple inverted "arrow" shapes in this splash burn from grease.*

thus a parent or child may think that the food is a safe temperature only to get burned seconds later with a portion of the food that is much hotter.[18]

Anything that excludes water from the skin surface, like diapers, will spare that area. Children may flex their limbs, causing folds of skin that are spared.[11,19] Wearing a shirt often creates an irregular pattern on the trunk. The hot water may cause more severe burns where a thin shirt is lying flat on the body, but a less severe burn if part of the shirt was slightly folded over (like a collar), allowing less contact with the skin. However, hot water that flows under or soaks clothing may cause a more severe burn in that insulated area.

Immersion Burns

With immersion burns, the exact number of seconds or minutes needed to cause partial or full-thickness burns in children at a given water temperature is not known. Good estimates have been extrapolated from a study in 1946 in which 7-mm scald burns were inflicted on adults' skin (**Table 4-1**). It can be expected that children's skin will burn in less time.[20]

Table 4-1. Time to Partial-Thickness Burn by Water Temperature in Adults

Degrees Centigrade	Degrees Fahrenheit	Time (Seconds)
65	149	1
60	140	2
55	131	12
50	122	120
45	113	10 800

The term ***immersion burn*** simply means that the child sustained her burn in a pool of hot liquid. It does not imply whether the manner was abuse, neglect, or an accident. Scald burns with sharp margins suggest the possibility of abuse by immersion in a hot liquid (**Figure 4-5**).[21] This pattern of burn results from the caregiver holding the child in the water, whereas an accidental immersion often results in splash patterns as the child struggles to escape the water. The typical pattern of inflicted scald burn is an immersion burn with sharply demarcated borders and a uniform intensity of burn. On the extremities a stocking/glove pattern (**Figure 4-6**) (with or without buttock involvement) should cause suspicion. It is unlikely that a child will hold the extremities in hot water without splashing the water in an attempt to escape.

If the child is immediately pushed and held with the buttocks touching the tub surface, the area of buttocks that is pressing against the tub may be spared, causing a "doughnut"-shaped buttock burn with central sparing (**Figure 4-7**). Inflicted craniofacial tap water immersion burns are less common but have higher mortality.[22]

With scald burns occurring in the bathroom, a common history provided by caregivers is that they stepped out of the bathroom for "just a few seconds" to get a towel or answer the phone and then returned to see the child was burned. Rather than asking "What did you do next?", the next question should be "When you came into the room, what did you see?" This is an open-ended question that can be tough to answer for an abuser if this is not what happened. The abuser may give details about the child's comportment that are inconsistent with the medical findings.

If the caregiver states that the child must have climbed into the tub on his own, it should be kept in mind that one third of toddlers age 10 to 18 months can climb

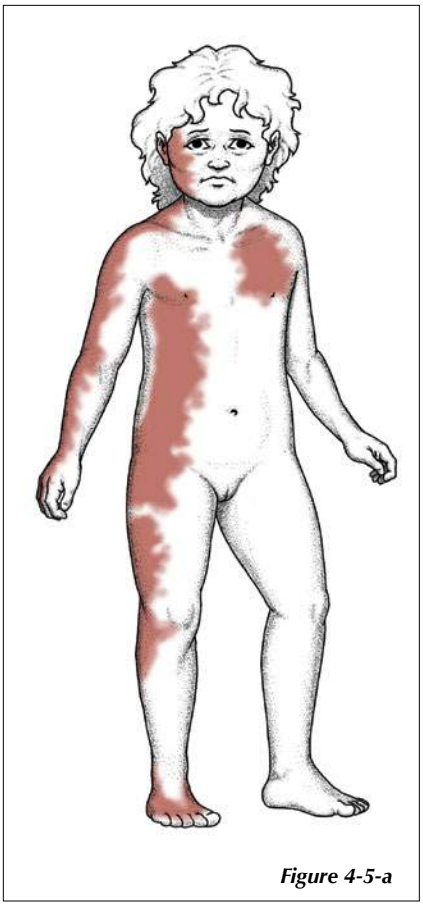


Figure 4-5-a

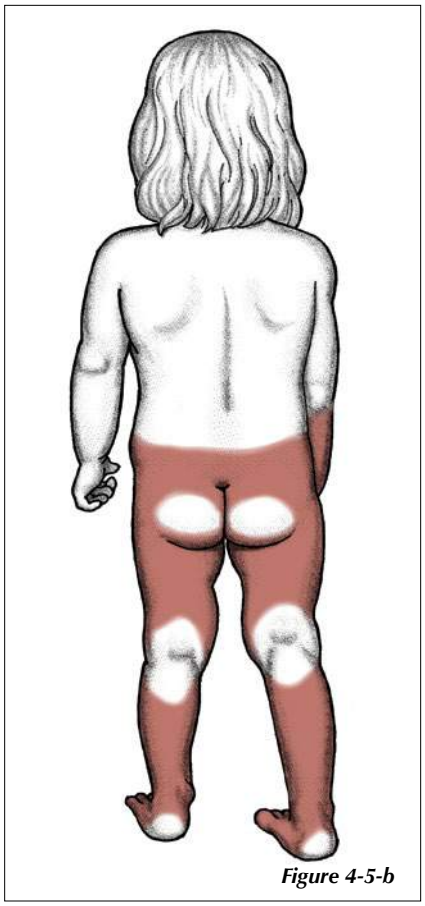


Figure 4-5-b

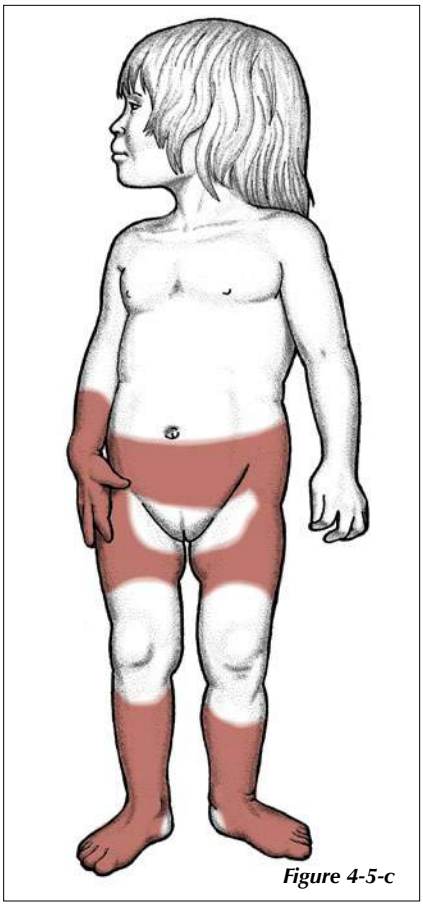


Figure 4-5-c

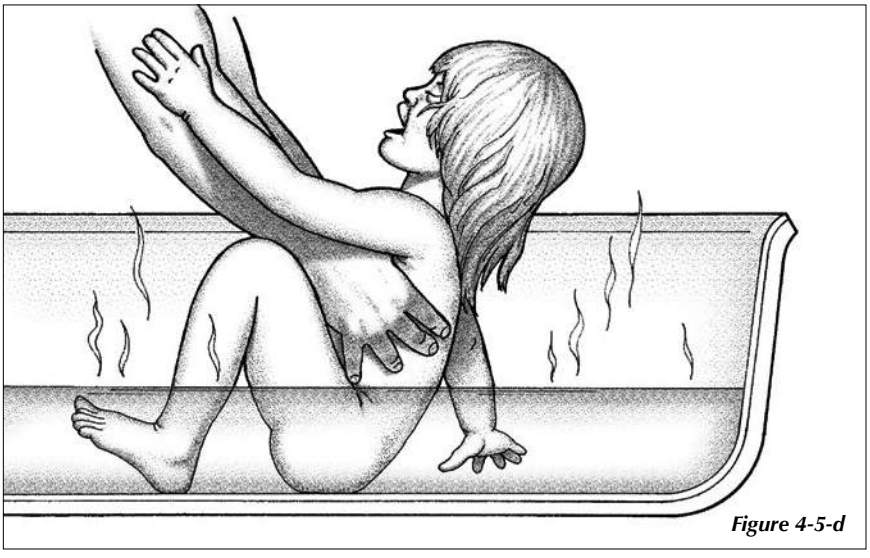


Figure 4-5-d

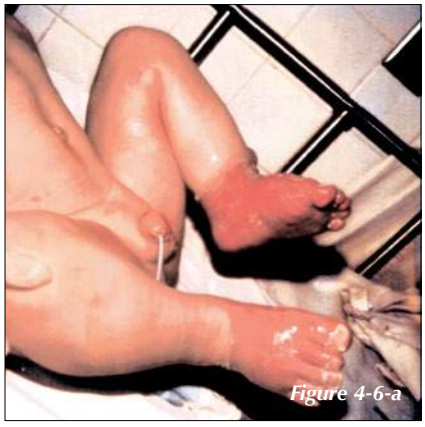


Figure 4-6-a

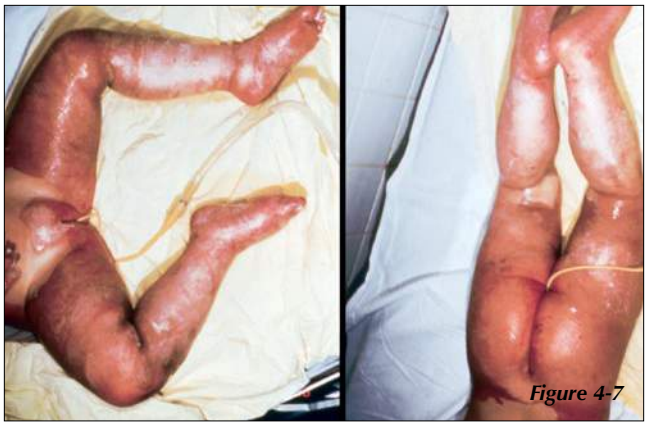
Figure 4-6-b

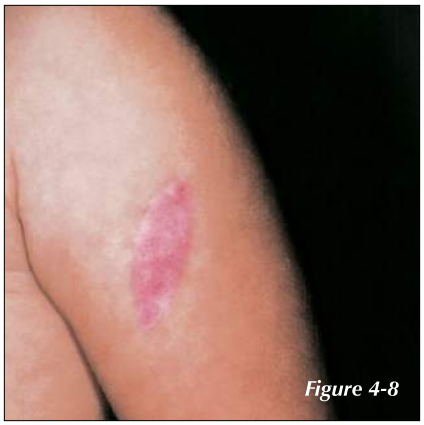
Figure 4-5-a. *Splash burn pattern.*

Figures 4-5-b, c, *and* ***d.*** *Immersion burn patterns.*

Figure 4-6-a. *Stocking pattern typical of immersion burns.*

Figure 4-6-b. *Glove pattern in immersion burn.*





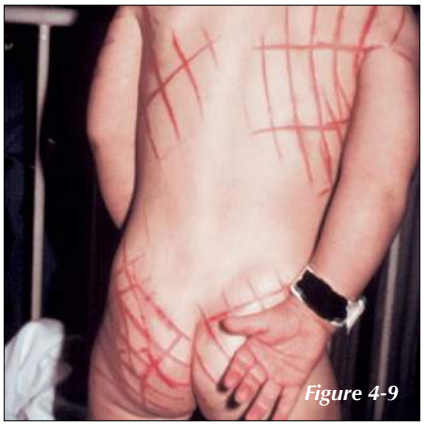


Figure 4-7. *Full immersion burn pattern. Note the spared folds and clearing.*

Figure 4-8. *Curling iron burn. Note the diffuse edges where the iron bounced/rolled down the arm.*

Figure 4-9. *Forced contact with heater grate indicated by bilateral involvement and sharp "branded" borders.*

into a standard bathtub 35.6 cm (14 inches) off the ground.[23] However, in these cases the child should have irregularly shaped splash and flow burns of different degrees, spread over a wide distribution of the arms, legs, and trunk as the child struggled to get up.[11,24]

Coordination with Child Protective Services and Law Enforcement

Medical providers should discuss with child protective services and law enforcement specific information that would help the medical team determine whether the injury was consistent with the history provided by the caregivers.[19] With scald burn injury, investigators should take a thermometer, tape measure, stop watch, and camera to the scene of the injury. A scientific thermometer provides the needed accuracy and precision to measure water temperature; these thermometers can be purchased on the internet. Meat thermometers are not sufficiently accurate.[19] The water temperature should be checked at the spigot while a watch keeps track of the time needed to reach 54° C (130° F), 60° C (140° F), etc. Attention should be paid to how much water pools in the tub or sink when the stopper is open.

Multiple photos should be taken of the room where the injury occurred. Measurements should be taken of the width, height, length, inside depth, and distance from the basin to the spigot.[19] Investigators should then check the water heater. If the home uses an electric water heater, both the upper and the lower thermostats, which operate individually, must be checked. To avoid electrocution, investigators should disconnect the power source for the electric heater before inspection.[20]

If the water heater temperature is higher than allowed by law, the landlord is libel for criminal neglect. Landlords often learn of an investigation very quickly, and they can easily change the water temperature down to the legal limit. It is therefore important to check the water temperature on the first day of the investigation.

Neglect at Multiple Levels

If a child is left alone in a bathtub and gets burned by tap water that is 60° C (140° F), this represents neglect on at least three levels – the home (caregiver), the community (landlord), and society, where political leaders ignore scientific data and calls to action to create simple laws - implemented and monitored at little cost – that have been shown to significantly decrease the number of tap water scald burns suffered by children.[25] Like any other disease where prevention is key and can help avoid pain, suffering, and death – medical providers can help prevent these injuries by educating and advocating for children at all levels, from family members to lawmakers.

Contact Burns

Contact with hot objects is the second most common cause of burns in small children.[13] In general, accidental contact burns are more likely to have indistinct margins caused by the object falling onto the child or the child's efforts to escape, while abusive contact burns are more likely to have distinct margins, grouped burn lesions, clearly inscribed patterns, and injuries on parts of the body normally covered by clothing.[5,26] Most unintentional contact burns to the hand could be expected to occur on the palmar surface as the child attempted to touch or grab the object with those exploratory surfaces.

Irons, curling irons (**Figure 4-8**), cigarettes, and furnace grates (**Figure 4-9**) are just a few of the items that cause burns from abuse, neglect, and accidents. If a hot iron is left somewhere so that a toddler can grab the dangling cord, the edges of the falling iron can cause a burn with a smeared edge.[24] If the burn is the shape of the flat surface of the iron and/or shows the steam holes, physical abuse is highly suspected.

Chapter 5

Bruises in Child Maltreatment

Naomi F. Sugar, MD

Bruises and other skin injuries are common findings in child abuse. Skin injuries are often the sentinel injury, leading to a workup that reveals other injuries, but they may be the only finding in abuse. When other, more medically serious injuries are present, the presence and character of bruises clarify whether the injuries result from abuse or accidental means.

Bruises may "look like abuse" to medical providers and lay people alike. However, a careful analytic approach to skin findings is needed to achieve the most accurate understanding of these findings. It is critical to understand other diseases, including hematologic condition that can produce easy bruising. In addition, the clinician must be able to identify the many "lookalikes"—non-traumatic causes of bruise-type marks.

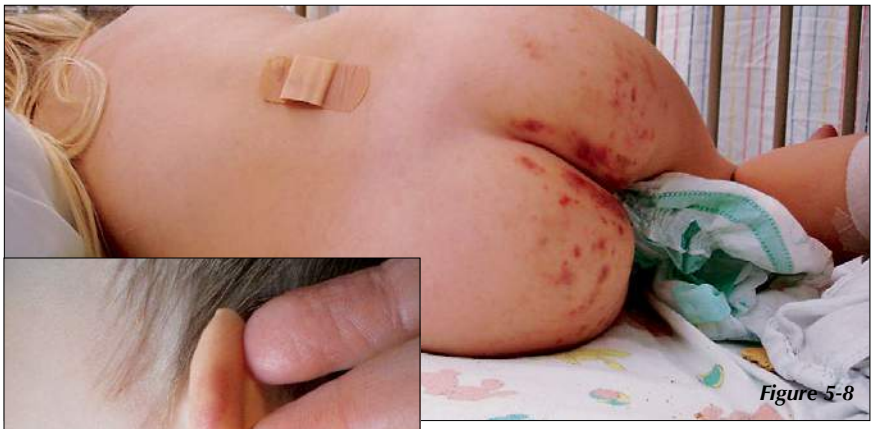
What is a bruise?

A ***bruise*** is extravasation of red blood cells across the vessel membrane into the skin, subcutaneous soft tissue, or both. Typically it is caused by blunt injury to the skin that does not break the skin surface, causing discoloration. ***Contusion*** has the same meaning as bruise, but can also apply to internal organs such as the brain or liver. ***Hematoma*** is the term commonly used to describe a large localized mass of extravasated blood. Hematomas can occur in internal tissues or on the scalp, where the injury resembles a golf ball. Hematomas may become clotted and organized. ***Petechiae*** (singular, ***petechial***) are pinpoint bruises in the skin. Petechiae may be caused by blunt force, by increased venous pressure (for example, resulting from a tourniquet or strangulation), or when disease causes vessel leakage.

With blunt-force trauma to the skin, the first visible reaction is a welt, or ***erythema.*** Redness and localized swelling are caused by a local reaction to stimulation, but resolve within minutes to hours. A bruise may become visible on the surface of the skin hours or even days after injury. Because petechiae are so superficial, they may become visible within minutes.

Dating Bruises

Bruises change through a predictable color progression: red-purple to blue to green-yellow and then to brown. Color changes in the bruise result from hemoglobin breakdown into various pigments: free hemoglobin (red), deoxygenated hemoglobin (dark red/black), biliverdin and bilirubin (green to yellow) and lastly, hemosiderin (yellow to brown). Although the order is predictable, the timing is not. Colors typical of "early bruises"—red, blue, and purple—can also be found in bruises older than 7 days. Yellow, green, and brown, colors common in bruises older than 7 days, can also be found in bruises less than 48 hours old.[1] Bruise color changes differ among individuals, with age, and even in the same person. Bruise color evolves differently depending on the nature of the underlying tissue and the depth of the bruise. There is poor inter-observer agreement in describing bruise coloration even when bruises are



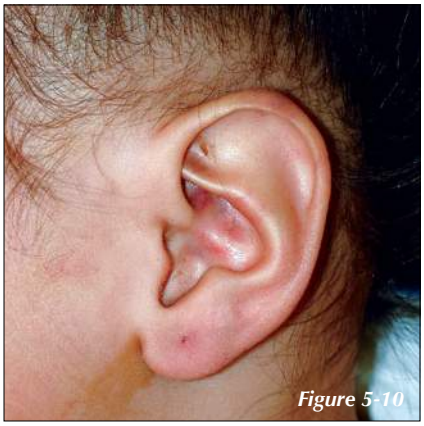


Figure 5-8. *Four-year-old girl with bilateral bruises at the gluteal cleft, caused by abusive spanking.*

Figure 5-9. *Crimp-type bruises to the upper pinna in a 4-year-old, caused by a forceful slap or strike to the side of the head. The edge of the ear is pinched between the inflicting hand and the skull. (Photo courtesy of R Wiester, Seattle Children's Hospital.)*

Figure 5-10. *Two year old boy with bruising of the antihelix of the auricle. This injury rarely occurs in normal activity, and is usually caused by a blow to the head.*

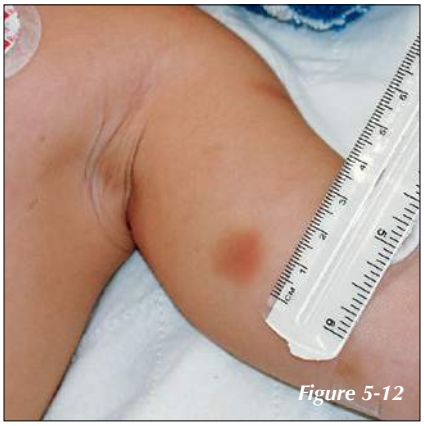


Figure 5-11. *Fifteen-month-old girl with a crimp-type bruise on the pinna and bruise on the face caused by extension of a scalp hematoma. These injuries were probably the result of two separate blows to the head.*

Figure 5-12. *Toddler with critical brain injury with a bruise to his upper medial arm, very likely to have been caused by an adult's grip.*

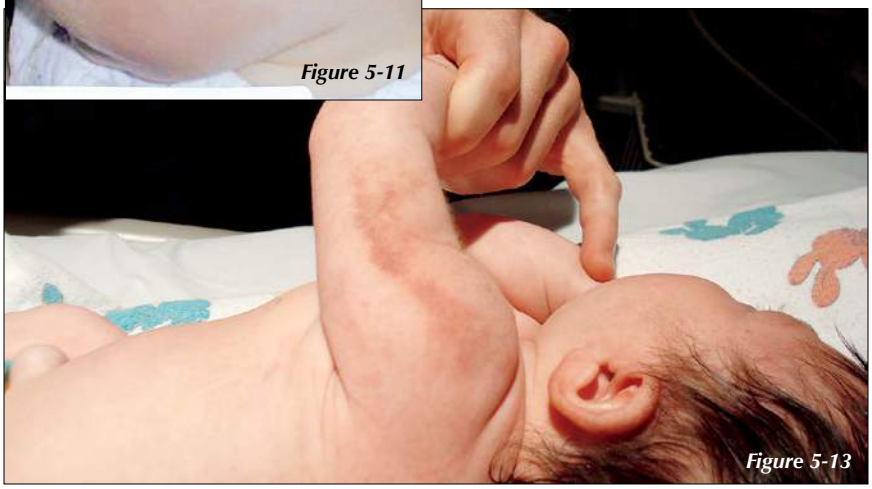


Figure 5-13. *Six-week-old with torn frenulum, several rib fractures, and this crimp-type injury to his upper arm, likely caused by a forceful grip.*

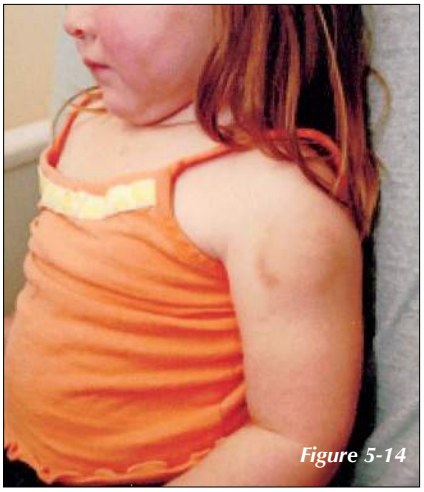


Figure 5-14. *Crescent shaped marks are typical bite marks. Careful measurements should always be taken, along with swabs for DNA identification.*

Young infants have been found to have bruises on the palm or dorsum of the hands. This is certainly not caused by the infant's own actions, but by another person's forceful compression of the infant's open hand or closed fist. Grip mark injuries may be visible on the leg or upper arm, typically as two or three small circular bruises on one side of the limb. Sometimes, but not uniformly, there is a single bruise that conforms to a thumbprint on the other side (**Figure 5-12**). In infants, bruises that are a single vertical line on one side of the limb may be caused by a grip of the limb that causes crimping and pinching of the skin (**Figure 5-13**).

Bite mark bruises appear as single or facing half circles or crescents (**Figure 5-14**). When the tooth marks are visible it is helpful to measure the space between the lateral incisors. Lateral incisor separation of less than 2.5 cm is likely to indicate that the bite is from another child. However, when there is serious concern of biting by an adult, it is more valuable to swab the area for saliva DNA, which can be used to more conclusively identify the biter. High-quality photos that include a measurement scale will allow a forensic odontologist to review in consultation later if needed.

Petechiae

Petechiae are pinpoint bruises and may be a sign of a low platelet count. Petechiae also occur with normal platelet counts in areas of direct pressure or as a consequence of increased capillary pressure from occlusion of venous return. Examples of the latter are petechiae "above the nipple line" that occur with severe vomiting, gagging, coughing, or other valsalva maneuvers. Strangulation and severe chest compression both impair venous return through superior veins and can cause petechiae of the face, conjunctiva, and upper chest. Viral illnesses or bacterial sepsis may cause relative capillary fragility, and petechiae may occur with less force than in the usual setting (**Figure 5-15**).

Differential Diagnosis of Bruises

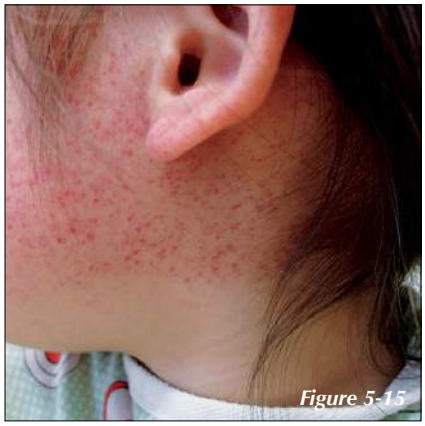
Normal Variants and Mimics

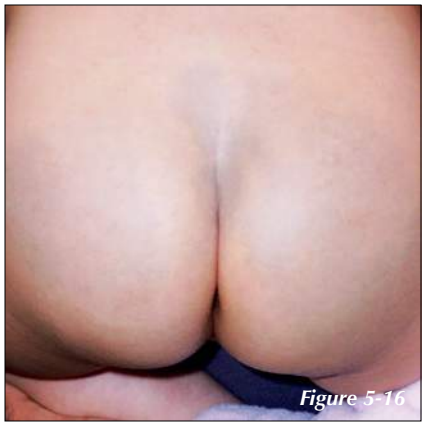
Normal variant pigment changes may be mistaken for abusive bruises. ***Mongolian spots*** (steel blue nevi) are a common birthmark in neonates and children (**Figures 5-16** and **5-17**). These pigmented patches are present in at least 9.6% of white, 95.5% of black, 81% of Asian, and 70% of Hispanic babies.[20] Mongolian spots are common over the sacrum, but can be present on most areas of the body, including the limbs, hands and feet. When there is inflammation or skin disruption, children with medium or darker pigmented skin often heal with hypopigmentation or hyperpigmentation, so scars or pigmentary changes are visible much longer than on the skin of paler children. Occasionally vascular nevi may be mistaken for bruises; the key differentiating feature is whether these marks change over a few days.

Striae (stretch marks) are normal variant skin marks that appear in adolescents at body areas of rapid growth. On girls, this is typically on the breasts and hips. In adolescent boys, striae may be present on the back as multiple parallel horizontal marks and can be mistaken for whip marks. These marks may be pink or pale, and they are usually slightly depressed.

Phytophotodermatitis is a cutaneous reaction produced by contact with a number of plant substances followed by sunlight exposure. The reaction may be inflammatory with erythema and blisters, but often is manifested by irregular hyperpigmented areas that can be mistaken for bruises. Many plants, including limes, lemons, parsley, and celery, contain psoralens (furocoumarins), the sensitizing agent. A history of plant and sunlight exposure, combined with irregular hyperpigmented marks that are not actually bruises, should suggest this diagnosis.[21]

Ligature marks at the wrists, ankles, or more proximal limbs occur when an object encircles and damages the body part. Ligatures may be caused by abusive action, such as tying a child with a string, rope, or belt. However, it is not unusual to observe





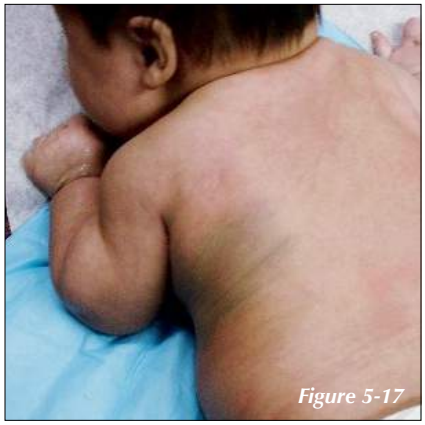


Figure 5-15. *Petechiae on the face. This 3-year-old girl said her father choked her. She did not lose consciousness. It is likely that she had a concurrent viral illness that predisposed her to developing petechiae.*

Figure 5-16. *Mongolian spot (slate blue nevus) on the upper back in a 2-month-old.*

Figure 5-17. *Mongolian spot (slate blue nevus) in an Asian infant. (Photo courtesy of R Wiester MD, Seattle Children's Hospital.)*

Chapter 13

Burns Atlas

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Children who are burned abusively are marked or branded with the outward manifestation of parental violence, emotional imbalance, impulsivity, educational and cultural deprivation, and poverty. Intentionally burning a child is controlled and premeditated.

Abusive burns cause both physical and emotional trauma at the time of the incident, and often produce long-term physical and psychological scarring. Individuals who burn children typically are educationally deprived, abuse women (if male), and may be isolated, suspicious, rigid, dependent, or immature. They often display more concern for themselves than the child, frequently show little remorse, and are evasive and contradictory. They generally do not volunteer information, seldom visit the child in the hospital, and rarely ask questions about the child's condition. By contrast, parents whose child is unintentionally burned usually blame themselves for a lack of supervision and may display a profound sense of guilt.

Burn injuries can be divided into 6 categories: flame, scald, contact, electrical, chemical, and radiation (eg, sunburn from ultraviolet radiation). Abusive burns generally cluster in the scald and contact categories, although there are reports of other types of burns. Children's skin is much thinner than adult skin, so serious burning occurs more rapidly and at lower temperatures. Electrical burns can be deceptive since trauma may not always be outwardly apparent. Electricity follows the path of least resistance, and skin is a natural resistor to electrical flow. Nerves, muscles, and blood vessels, however, are good conductors and therefore, are more susceptible to electrical trauma. Electrical flash burns are caused when the current is shorted, producing a very brief, high intensity fireball that causes thermal injury. Flash burns char the superficial layers of skin, but usually do not cause destruction of deep tissues.

The first priority for the burned victim is to medically treat the injury. Once accomplished, efforts can then be directed toward obtaining an accurate history from witnesses and family members. Specifically, the timing, nature, extent, and location where the burn occurred. Medical personnel must document the exact shape, depth, and margins of all wounds, and include all affected body parts. Immediate attention to these details may prove invaluable when ascertaining whether the burn resulted from an abusive or unintentional injury.

Medical providers may choose to interview the child victim. It is important that the child's safety is assured and that they will not be longer be harmed. General open-ended questions are preferred, such as: How did you get hurt? More detailed, specific questions may be asked after the child victim has had the opportunity to tell their story. It is also important to ascertain whether the child has been coached or threatened, if they tell.

Other important factors to consider when examining a burn victim, is the length of time it takes for a second- or third-degree burn to occur relative to the temperature of a given liquid (**Figure 13-1**), the surface temperature, and the location of the

Contact Burns

Fireworks

Case Study 13-59

This child was brought to the ER for severe burns to his upper thigh and genital area. He was carrying firecrackers in his pocket which ignited when they came into contact with sparks from other fireworks, causing the firecrackers to explode. This unfortunate incident resulted from inadequate adult supervision.

Figure 13-59. *Burn to the thigh from fireworks.*

Case Study 13-60

This infant presented with facial burns. According to the caregiver, the child was crawling in a backyard where fireworks were being thrown .A bottle rocket exploded under her chin, hitting her in the face.

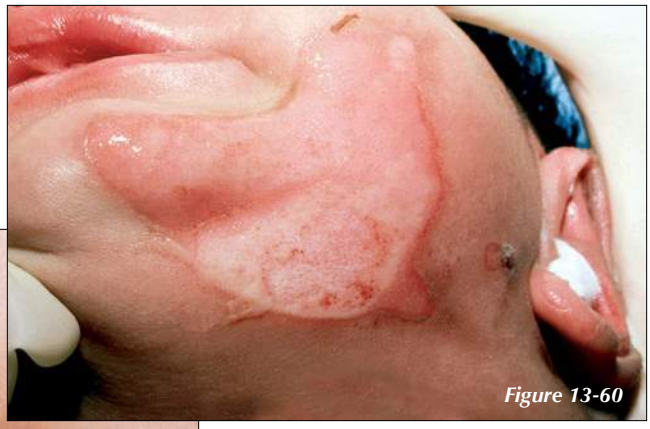


Figure 13-60. *Fireworks burn.*

Case Study 13-61

The caregivers of this 4-year-old boy reported that he was unintentionally burned when he ran into someone who was running with a sparkler.

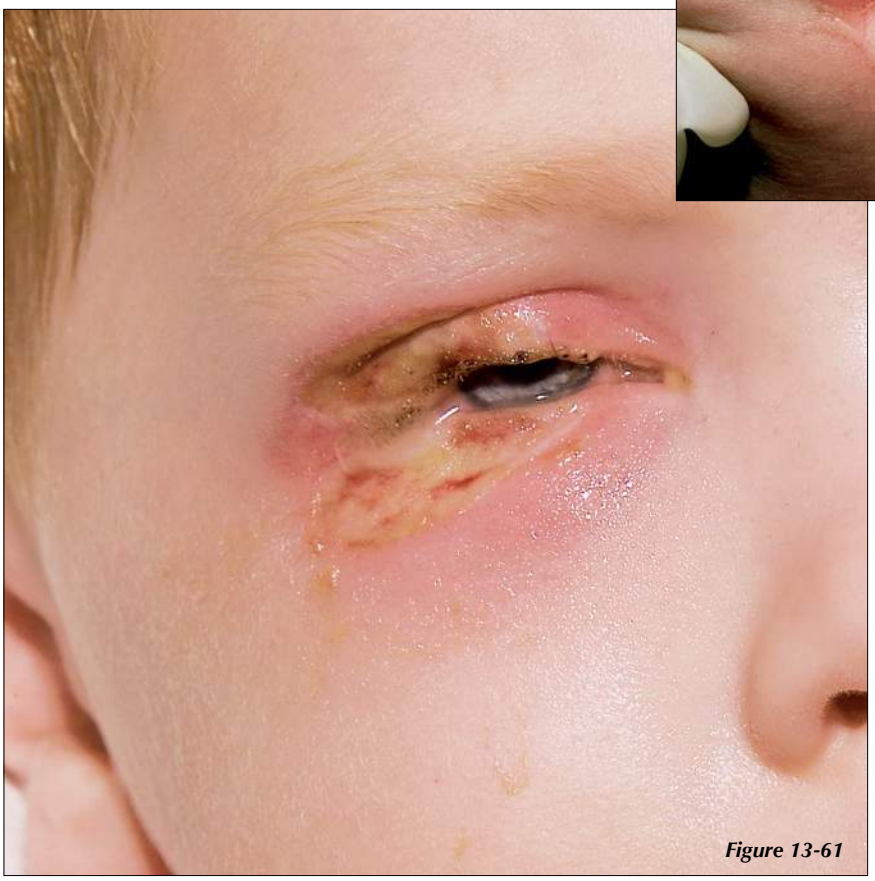


Figure 13-61. *Periorbital burns.*

Contact Burns

Space Heater/Radiator

Case Study 13-62

This 4-year-old child was taken to the ER by his parents for a burn to the dorsum of his right foot. The parents reported that the child had accidentally placed his foot on the top of a space heater. However, the injury appeared older than the alleged day of the incident, the burn was on the top of his foot, there were healed loop marks on his back, and a well-healed burn scar to his chest.

Figure 13-62-a. *Burn to the dorsum of right foot.*

Figure 13-62-b. *Healed loop marks on his back.*

Figure 13-62-c. *Well-healed burn scar on his chest.*

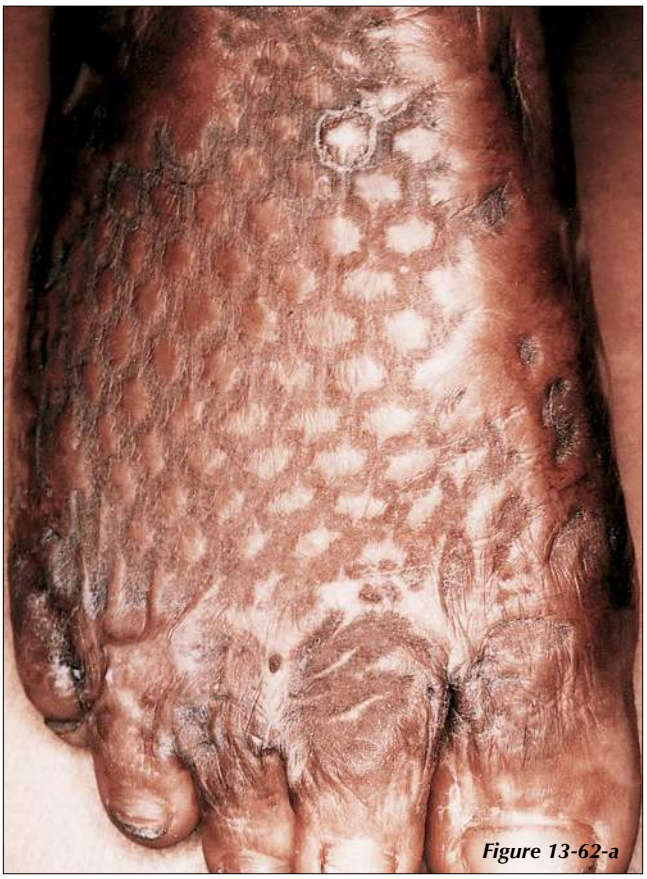


Figure 13-62-a

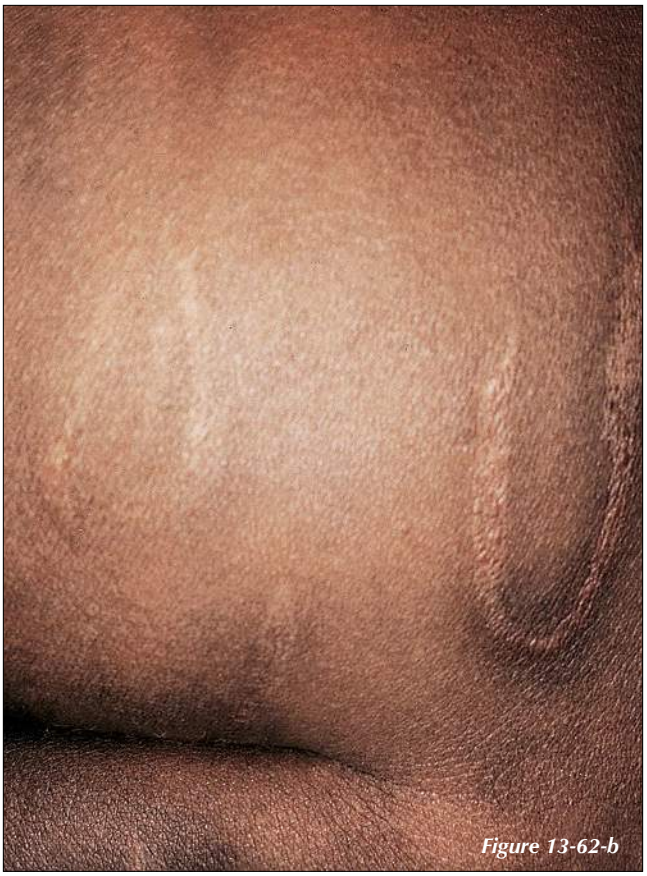


Figure 13-62-b

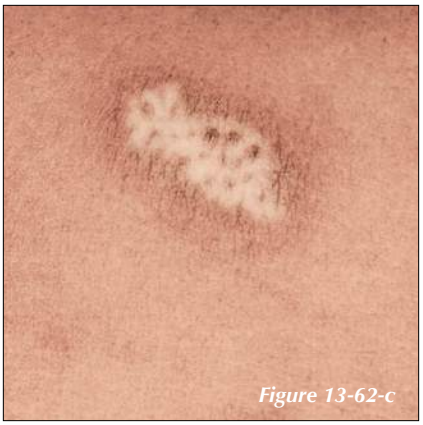


Figure 13-62-c

Mimics

Erysipelas

Case Study 13-102

This 5-month-female with symptoms of an upper respiratory tract infection developed this redness on her bottom within a 4 hour time span between diaper changes. Cultures and skin biopsy revealed that the redness was due to erysipelas, most likely group *A streptococcus*. The rash resolved with antibiotic treatment.

Figures 13-102-a, b, c, *and* ***d.*** *Erysipelas on the child's buttocks and anus.*

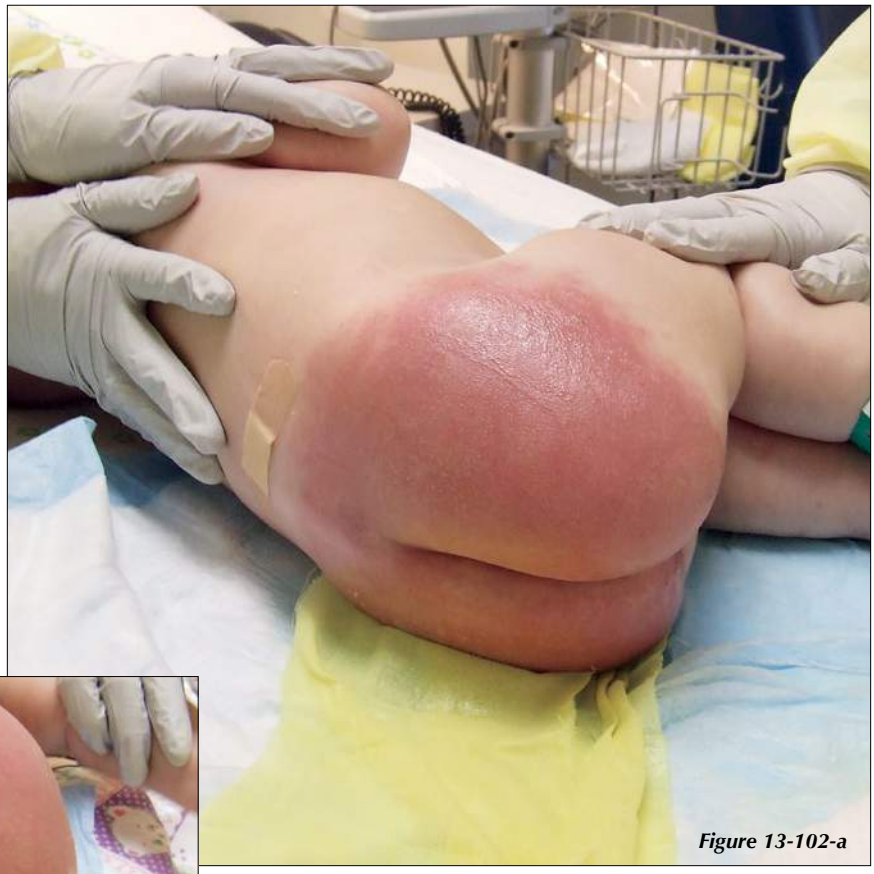
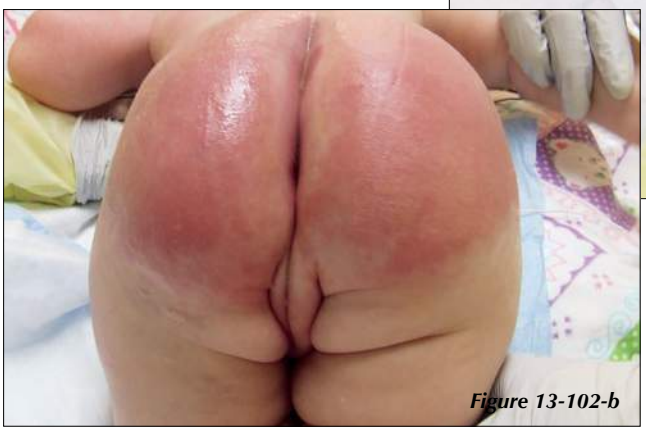


Figure 13-102-a



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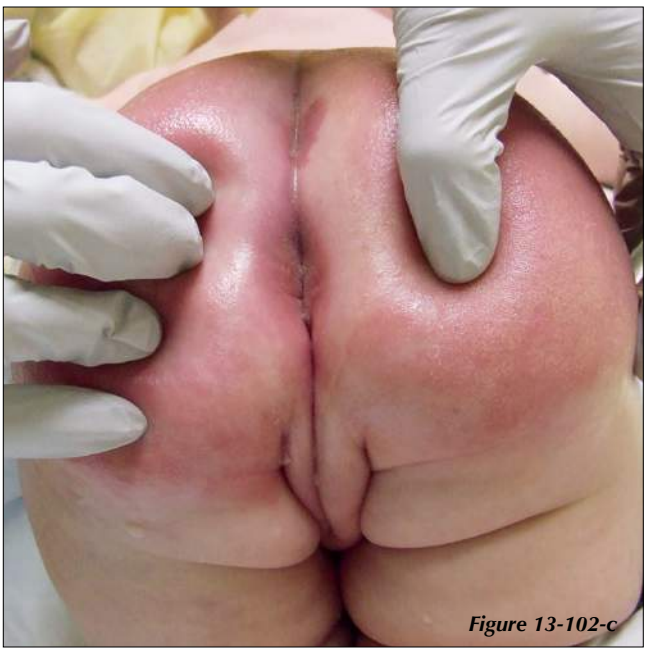

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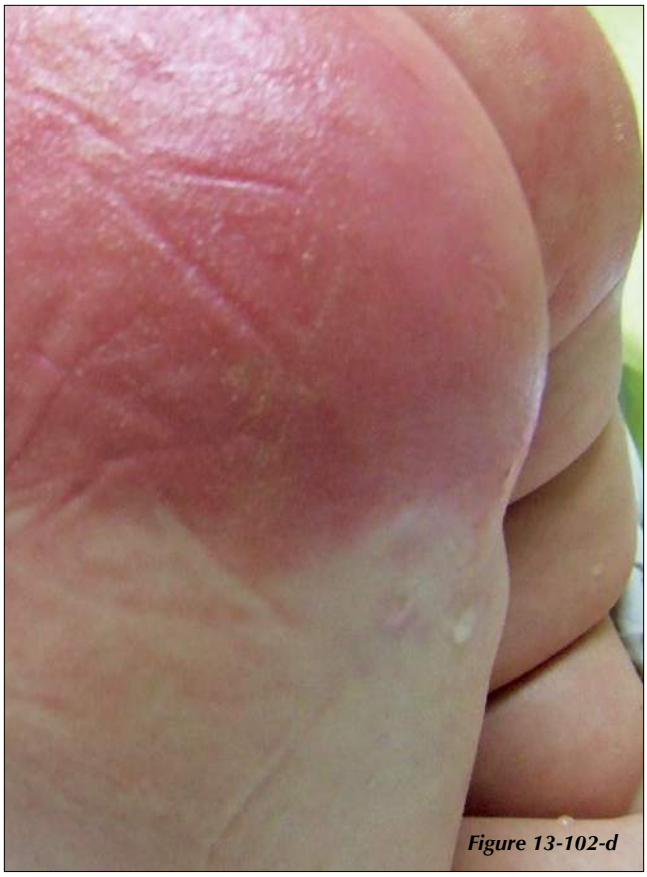


Figure 13-102-d

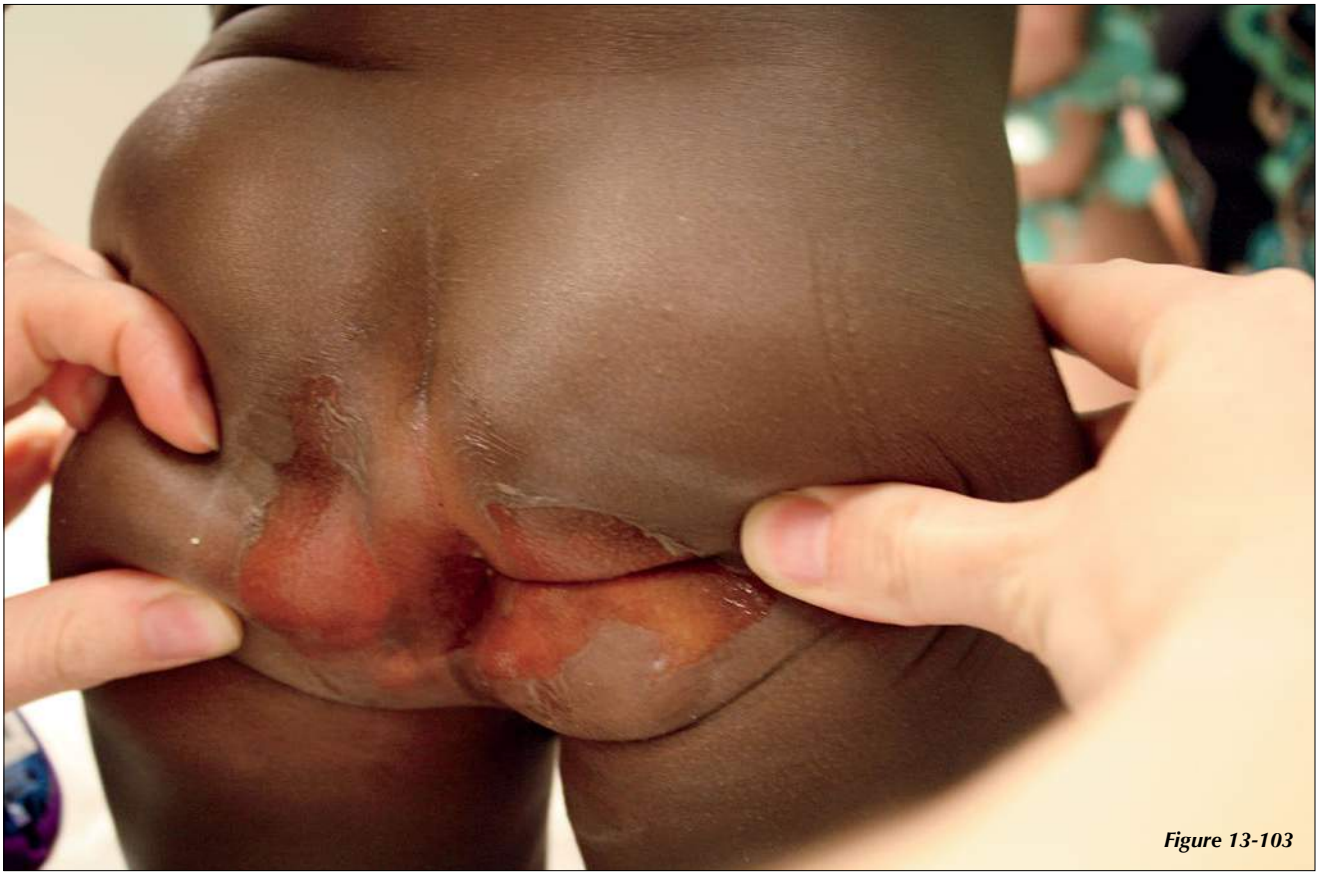
Mimics

Diarrhea

Case Study 13-103

This 18-month-old had a history of diarrhea for a week. During the night, he had a diarrheal stool in his diaper. When his diaper was changed the next morning, his parents noted that he had a blister on each buttock that wiped off. No other injury was discovered.

Figure 13-103. *The location of the injury is consistent with the case history.*



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Chadwick's

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Child Maltreatment

Sexual Abuse and Psychological Maltreatment

Encyclopedic Volume 2 of 3
Fourth Edition

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To Jim Hmurovich, President and CEO of Prevent Child Abuse America,
who I have come to know as an effective child and family advocate
who leads by example and makes the case everywhere he can
that prevention of child abuse and neglect is possible and our collective responsibility.
— APG —

To David Chadwick, Henry Kempe, Ray Helfer, Robert Reece,
Jay Whitworth, and the other pioneers of child abuse advocacy
for deeply caring about children in a world that sometimes does not care as well as it should.
— RA —

"Every day counts in the life of a child." Thanks for the support from our families, friends, and colleagues.
— DEJ —

To my family for your patience, my colleagues for your acceptance, and to all those
who have left the world a bit better, and made so many little lives breathe easier — this is to have succeeded.
— JT —

CHADWICK'S

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CHILD MALTREATMENT

SEXUAL ABUSE AND PSYCHOLOGICAL MALTREATMENT

ENCYCLOPEDIC VOLUME 2 OF 3
FOURTH EDITION

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Foreword

How fitting that this book is titled *Chadwick's Child Maltreatment*. The title is a richly deserved tribute to one of the world's leading authorities on the subject—a pediatrician cut from the same cloth as his mentor, C. Henry Kempe. David Chadwick's long and storied career may be slowly drawing to a close, but his legacy lives on in these pages, in the Chadwick Center for Children and Families that bears his name, in the San Diego International Conference on Child and Family Maltreatment, which Dr. Chadwick started nearly thirty years ago, and which is the best conference of its kind in the world, and in the hearts and minds of countless professionals. Dr. Chadwick truly has made the world a better place for children.

One gets a sense of the esteem in which Dr. Chadwick's colleagues hold him by looking at the contributors to this book. Many of the authors are leading experts in the academic world of child maltreatment. Experts like these, with years of experience and many publications to their credit, are often less than enthusiastic when asked write yet another chapter. But when David Chadwick calls and asks for a chapter, it is hard to say "no." When Chadwick says "jump," most of us simply ask "How high?"

Because Dr. Chadwick and his fellow editors have pulled together such a star-studded cast of authors, this book is an extremely valuable contribution to the literature. The chapters are well-written, up to date, and packed with information that is relevant to busy professionals on the front lines of child protection. *Chadwick's Child Maltreatment Fourth Edition* is so good, even Dr. Chadwick might learn a thing or two from its pages, although I have my doubts.

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Foreword

The multi-sectoral response to allegations or suspicions of child maltreatment is a complex and delicate undertaking that requires sensitivity and skill. At its core are health, social work and child protection, law enforcement, and court-related professionals. Each sector must function effectively to accomplish its part, and must interact with the others to share information, make decisions, and coordinate actions in order to maximize their chance of success. Together the sectors have the ability and authority to intervene at all three levels of child maltreatment prevention.

In primary prevention, health, social, and legal professionals can set up programs to give all children and families the best chance of living together in harmony. Where family or child characteristics comprise risk factors for child maltreatment, secondary prevention entails support to prevent violence from emerging. Finally, where a child has been ill-treated, the multi-sectoral response can mount a coordinated response to provide protection, support, and treatment services for the child victim and non-offending family, with sanction and rehabilitation for the offender.

The health sector is in an advantageous position to contribute to primary prevention by providing anticipatory guidance to families covering discipline and problem childhood behaviors. Similarly, it can identify families and children with risk factors for violence and offer support services to mitigate their impact. Finally, it has the knowledge and skills to examine children for signs of maltreatment, conduct a thorough evaluation of a child's physical and mental health, and determine whether the child's overall findings constitute evidence of maltreatment or another condition.

Although all physicians need to be familiar with the indicators of maltreatment so as to be able to raise the suspicion and initiate further investigation, child abuse pediatricians have the specialized training required to carry out child maltreatment evaluations. They need to be in constant touch with reference material and up-to-date evidence-based information that allow them to recognize the difference between normal variants, accidental and inflicted injury, as well as organic conditions that mimic abuse. By making reliable, valid, and defensible reports they contribute to multi-sectoral interventions that can proceed to a satisfactory and beneficial resolution with the least disruption for the child and family while making the most efficient use of resources.

The two types of maltreatment that are the focus of this volume are among the most challenging to address. Child sexual abuse can be difficult for professionals and authorities to consider or tackle. This is particularly true in societies where sex is a taboo subject, and where cultural norms require that family honor be preserved above anything else. Psychological maltreatment is often difficult to define, particularly in culturally meaningful terms, which can make identifying and protecting affected children a very challenging undertaking.

This volume furnishes reference material by leading experts for health professionals who look after children, whether as primary care providers or as child abuse pediatricians. By providing a comprehensive overview of the signs and consequences of these forms of maltreatment, case studies, and images, it will assist physicians to identify findings and to interpret them correctly so as to reach valid conclusions. The photographic atlas is particularly useful to recognizing the subtle signs that distinguish normal variants from signs of trauma, and signs of accidental trauma from those of sexual abuse. Chapter 14, Psychological Assessment and Treatment Approaches, will be of immense help when caring for children where this is an issue.

An accurate medical evaluation to identify child sexual abuse and psychological maltreatment is of critical importance and this textbook will be an invaluable resource for this to occur.

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Preface

Although clear medical descriptions of physical and sexual abuse were published in the middle of the 19th century, they were not taken seriously for about 100 years. The delay was principally due to the recantation by Sigmund Freud of his original theory that serious psychological disturbances were caused by sexual abuse of children. Having originally stated this case, he soon changed the theory to one that held that the histories of sexual abuse provided by his patients were, in fact, fantasies. As a result, the recognition of the importance of child abuse as a cause of adult problems was delayed until the middle of the 20th century.

Child sexual abuse is any form of sexual activity with a child by an adult, or by another child where there is no consent or consent is not possible. By this definition, it is possible for a child to be sexually abused by another child who is younger than they are.

Sexual abuse includes, but is not limited to, showing a child pornographic materials, placing the child's hand on another person's genitals, touching a child's genitals, and/or penetration of any orifice of a child's body (mouth, vagina, anus) with a penis, finger, or an object of any sort. Penetration does not have to occur for it to be sexual abuse.

The health harms of sexual abuse are mostly emotional, although genital injury may occur and can be diagnostic when a qualified physician examines the child. A surprising amount of sexual abuse occurs without genital injury. On the other hand, the emotional damage is often substantial and may require considerable attention.

The prevalence of sexual abuse was massively underestimated until the middle of the 20th century. Around 1950, Alfred Kinsey surveyed about 1400 women and discovered that 25% of them recalled a prepubertal sexual experience. Russell and Finkelhor confirmed this high prevalence with surveys in the 1970s.

Psychological maltreatment includes acts of commission or omission by the parents and other caregivers that could cause the child to have serious behavioral, emotional, or mental disorders. In some instances of psychological maltreatment, the acts of parents or other caregivers alone, without any harm yet evident in the child's behavior or condition, are sufficient to warrant the intervention of child protective services. For example, the parents or caregivers may use terrorizing forms of punishment, such as confinement of a child in a dark closet.

The idea that human beings might have "rights," defined as permissions that were absolutely guaranteed was first expressed by a set of English barons around 1225 when they forced a king to abide by a law. The idea was further developed in the 17th and 18th centuries by philosophers and was included in United States Declaration of Independence in 1776. Rights were stated to be granted by the deity as expressed in the Declaration or by a social contract that formed a government. In either case they were guaranteed by the local society, many members of which pledged their lives and fortunes in support of the defined rights. Rights are very powerful things, but in these early efforts they were only conferred on adult male persons with property. Later they have been extended to all humans.

Throughout most of history children were simply regarded as the property of their parents. The idea that they might be entitled to anything may have been introduced by John Stuart Mill around 1869. In his long essay, 'On Liberty,' Mill offers the statement that parents must provide their children with "an ordinary chance of a desirable existence." In 1913, the poet-philosopher, Gibran wrote that children are not the property of their parents.

"And a woman who held a babe against her breast said 'Speak to us of Children' and he said:

Your children are not your children
They are the sons and daughters of Life's longing for itself
They come through you but not from you
And though they are with you yet they belong not to you
You may give them your love but not your thoughts
For they have their own thoughts
You may house their bodies but not their souls
For their souls dwell in the house of tomorrow, which you cannot visit even in your dreams
You may strive to be like them, but seek not to make them like you
For life goes not backward nor tarries with yesterday."

The first published attempt to codify children's rights was written in 1923 by Eglantyne Jebb, an English reformer and child advocate. Her manifesto consisted of the following stipulations:

1. The child must be given the means requisite for its normal development, both materially and spiritually.
2. The child that is hungry must be fed, the child that is sick must be nursed, the child that is backward must be helped, the delinquent child must be reclaimed, and the orphan and the waif must be sheltered and succored.
3. The child must be the first to receive relief in times of distress.
4. The child must be put in a position to earn a livelihood, and must be protected against every form of exploitation.
5. The child must be brought up in the consciousness that its talents must be devoted to the service of its fellow men.

Her statement was adopted by the League of Nations in 1924.

Another important statement was made by the Polish pediatrician, Janusz Korczak. His writing and his life were interrupted in 1942 when he insisted on accompanying 150 Jewish orphans who were being transported from Warsaw to Treblinka for gassing. Neither he nor any of the orphans were ever heard from again. He did not publish his list of children's rights himself and it was later published by his biographer, Betty Jean Lifton. The list is long and both whimsical and profound. It includes the "right to be loved" and such concepts as a right to due process in delinquency situations, but Korczak extends this to require a court staffed by children. It includes optimal conditions for growth and development which poses a serious challenge to society. It includes a right to die. The lists written by Jebb and Korczak form the basis of contemporary policy statements about children's rights

Shortly after World War II the new United Nations General Assembly created an organization to assist children whose lives have been disrupted by war, called the United Nations Children's Fund (UNICEF). The initial mission was relief of starvation and dislocation but it soon broadened to the general protection of children.

In 1989 The United Nations adopted the Convention on the Rights of the Child, a human rights treaty setting out the civil, political, economic, social, health, and cultural rights of children. The Convention generally defines a child as any human being under the age of eighteen, unless a country's law recognizes an earlier age of majority.

The Convention provides that all children be registered at birth and provided with an identity. It requires participating nations to enact laws that protect children against abuse and neglect. It provides children with rights that are similar to those of adults with modifications for age and developmental status. It forbids commercial exploitation and, specifically, sexual exploitation and the abduction and sale of

children. It provides for the rights of children in delinquency proceedings. It provides rules for international adoption. It is, altogether, a very admirable document.

Nations that ratify this convention are bound to it by international law. Compliance is monitored by the United Nations Committee on the Rights of the Child, which is composed of members from countries around the world. Once a year, the Committee submits a report to the Third Committee of the United Nations General Assembly, which also hears a statement from the CRC Chair, and the Assembly adopts a Resolution on the Rights of the Child

All of the member nations of the UN General Assembly have ratified the Convention except for the United States and Somalia. In fairness it should be stated that many of the signers offer fewer real protections for children in their countries compared to the United States. Still, the refusal of the US to endorse the UN Convention is disgraceful. Despite this, as recently as 2011 the federal government enacted the Child and Family Services Improvement and Innovation Act, a program focused on preventing child abuse and neglect. In addition, it stipulates that necessary services will be provided to families once a finding of child abuse and neglect is substantiated.

The Adverse Childhood Experiences study, a collaborative effort of the Centers for Disease Control and Prevention and Kaiser Permanente's Health Appraisal Clinic in San Diego, is the largest study that assessed child maltreatment and its adverse effect on future physical and emotional health. Emotional neglect and abuse was prevalent in approximately 15% and 10% of the adult population studied, respectively. It is therefore not surprising that the American Academy of Pediatrics has recognized that psychological maltreatment may be the basis for adverse developmental outcomes to children. However, the AAP also recognizes that psychological maltreatment "may be the most challenging and prevalent form of child abuse and neglect." Health professionals that care for children are in a unique position to educate those individuals in both the child welfare and judicial systems regarding the serious consequences of psychological maltreatment and advocate for appropriate intervention.

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Angelo P. Giardino, MD, PhD, MPH, FAAP
Randell Alexander, MD, PhD, FAAP
Jonathan D. Thackeray, MD, FAAP
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Reviews of the Fourth Edition

The 4th edition of Chadwick's Child Maltreatment *once again provides a comprehensive resource regarding child abuse and neglect. It is beautifully illustrated, well-referenced, and very much up to date. Readers will be well served by this essential resource. In particular, the ophthalmology sections have been put together with expertise and offer excellent photographic examples of the findings in abusive head trauma.*

Alex V. Levin, MD, MHSc, FRCSC
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This Chadwick's Child Maltreatment Fourth Edition *textbook offers a comprehensive and detailed accounting of the medical, social work, and legal assessment and investigation of the alleged childhood abuse victim. It serves as an excellent resource for the multidisciplinary team responsible for the evaluation of these complex cases. Anyone working in the field of child maltreatment should add this publication to their annals.*

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The fourth edition of Chadwick's Child Maltreatment *ensures physicians, nurses, social-workers, and law enforcement professionals have a comprehensive reference that describes the identification, evaluation, and management of all facets of child abuse and neglect. Of note, in an era when abusive head trauma (shaken baby syndrome) is often fiercely litigated in courtrooms and in lay media,* Chadwick's Child Maltreatment Fourth Edition *is a reputable source of mainstream, scientific information about abusive head trauma and its ophthalmologic manifestations.*

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This work is excellent! At a time when child maltreatment science is growing exponentially, the release of the Chadwick's Child Maltreatment Fourth Edition *publication by Alexander, Giardino, Thackeray, and Esernio-Jenssen brings scholarship and practice expertise to those who deliver care to children who have been maltreated or abused. It should be in libraries worldwide.*

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The new Chadwick's Child Maltreatment *book is a must for health care providers who are seeing children who have been abused. There are many useful tips that professionals can adopt in their practice and use as a reference. The chapters are easy to follow as well as providing pictures with great case examples. The most current and up to date references in the chapters make it easy to follow the research in each area. I will be recommending this 4th edition as an excellent resource book for all programs that deal with child maltreatment.*

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The 4th edition of Chadwick's Child Maltreatment *is a comprehensive, evidence-based text that is a critical reference for healthcare professionals who provide care for children and families. The array of expert contributors has crafted a publication that provides essential knowledge of the many facets of child maltreatment and includes contemporary references, images and case studies. I would recommend this edition of* Child Maltreatment *as a 'must have' resource for professionals committed to curbing the epidemic of child maltreatment.*

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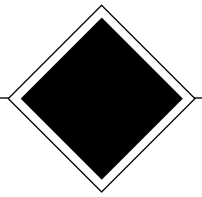

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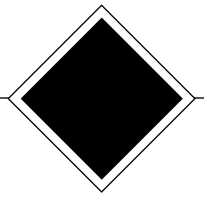

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Chapter 1

Sexual Abuse: Overview

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Joyce Wientzen, LCSW

The Epidemiology of Child Sexual Abuse

In a 1977 lecture before the membership of the American Academy of Pediatrics, Henry Kempe,[1] who in 1961 first identified and named the ***battered child syndrome***[2] defined ***child sexual abuse*** as the involvement of dependent, developmentally immature children and adolescents in sexual activities that they do not fully comprehend, to which they are unable to give informed consent, or that violate the social taboos of family roles. The sexual activities he referred to range from nontouching abuses such as exhibitionism and voyeurism to physically intrusive acts such as oral-genital, genital-genital, or genital-anal contact to or by the child. His definition, virtually at the dawn of our understanding of child sexual abuse, remains useful today in emphasizing both the nature of the sexual acts and the lack of consent. The National Center for Child Abuse and Neglect, emphasizing the perpetrator's purpose rather than the act itself, defined child sexual abuse as contacts or interactions between a child and an adult when a child is being used for the sexual stimulation of the perpetrator or another person.[3] Finkelhor,[4] combining both definitions, described sexual abuse as the exposure of a child to sexual experiences that are inappropriate for his or her level of physical and emotional development, coercive in nature, and usually initiated for the purpose of adult sexual gratification.

In recent years attention has focused on sexual abuse by same- or similar-age peers or siblings. Yates[5] has noted that sexual abuse can be differentiated from sexual play by determining whether there is a developmental asymmetry among the participants and by assessing the nature of the behavior. Paradise[3] adds that the important point is not the age of the perpetrator in relation to the child but whether the perpetrator is in a position of power and control over the victim.

According to child protective services (CPS) data, more than 3 million children were reported as abused in the United States in 1996.[6] A third of these children were confirmed or substantiated by state agencies to be victims of child abuse; 9% of the substantiated cases were for sexual abuse.[7] If the annual incidence or number of new cases of child sexual abuse is 1% of the pediatric population, as is commonly believed, the prevalence would likely be 12% to 25% for girls and 8% to 10% for boys by age 18 years.[4] Although the percentage of adults disclosing a history of sexual abuse in a number of studies ranges from 2% to 62% for females and from 3% to 16% for males, depending on the population studied and the definitions of abuse used, prevalence studies overall report that 1 in 4 women and 1 in 7 men are victims of sexual abuse at some time in their childhood.[4] In support of these figures, a respected 1985 national survey found that 27% of women and 16% of men reported having been sexually abused before age 18 years.[4]

Jones and Finkelhor[8] recently identified a profound shift in the reporting and substantiation of child sexual abuse. The increases in CPS-substantiated cases seen in the

1980s to a peak of 149 800 cases in 1992 has been followed by a significant decline in the 1990s to 103 600 cases in 1998, a decrease of 31%. This decline in number of substantiated cases was associated with a similar decrease in the number of reports to CPS from 429 000 in 1991 to 315 400 in 1998, a 26% reduction. Although cases of other types of child maltreatment have also declined—for example, substantiated cases of physical abuse declined 16%—the decrease in child sexual abuse cases has been more marked.

This decline, according to Jones and Finkelhor,[8] could represent a decline in the incidence of sexual abuse or a reduction in reporting and substantiation. Factors potentially accounting for a decrease in the incidence of child sexual abuse are prevention, incarceration, treatment of offenders, reduction in causal variables, and depletion of the reservoir of older cases. Factors potentially causing decreased reporting and substantiation include reduced vigilance, fear of retribution, changes in the definition of what is accepted by agencies for investigation, changes in policy regarding criteria to substantiate, and fear of lawsuits. Optimistically, if the decline represents a decrease in the incidence of sexual abuse, then the primary, secondary, and tertiary prevention efforts of the past 20 years would seem to not have been in vain. However, if the decline represents fewer reports and fewer substantiations in the face of unchanging incidence, then we have simply returned to the era when child sexual abuse was the hidden problem that Kempe[1] described in 1977. However, Jones and Finkelhor offer the argument that the decline is real and represents the result of prevention efforts.

Victim Risk Factors and Perpetrator Profiles

Risk factors for abuse have been difficult to identify. Race and socioeconomic status appear to have no influence on abuse risk, whereas gender and age likely do.[4] Girls are more likely to be sexually abused than boys; however, boys are less likely to report the abuse.[9] In a review of studies, Finkelhor and Barent[9] found vulnerability for both boys and girls peaks between ages 7 and 13 years. However, these numbers may reflect an overrepresentation of older children because these children are more likely to disclose.[4,10] Adolescents are at particular risk for sexual abuse. In one survey of adolescent students, 12% of males and 18% of females reported unwanted sexual activity between ages 13 and 16 years.[11]

The risk factors for sexual abuse that appear most commonly in studies are factors in the child's environment that diminish supervision and support, such as parental inadequacy, parental unavailability, and poor parent-child relationship. Children in substance abusing or violent homes are also at risk.[4] It should be no surprise that these risk factors are also reflected in studies of physically abused and neglected children.[12]

Abusers can be classified according to their relationship to the child as family, acquaintance, or stranger.[13] Children, as opposed to adults, are infrequently victimized by strangers. Intrafamilial perpetrators constitute as many as 50% of all perpetrators against girls and 10% to 20% of perpetrators against boys.[4] Even in adolescence as many as half of all sexual assaults are committed by acquaintances. In one survey, 84% of college women who reported unwanted sexual intercourse knew their assailants.[14] The perpetrators of sexual abuse of boys are most often acquaintances outside the home, for example, neighbors, teachers, coaches, religious leaders, and peers. Females may constitute as many as 10% of perpetrators of sexual abuse.

Becker[15] reported that one quarter to one third of male offenders are juveniles, many have been sexually abused as children, and many abuse more than one child. Russell[16] reported that when abused by family members, 23% of children experienced very serious abuse, such as vaginal intercourse or oral sex; 41%, serious abuse, such as digital penetration or touching; and 36%, least serious abuse, such as touching over the clothes. In the case of out-of-home offenders, there were more children abused in the very serious category and fewer in the serious and least serious categories.

Chapter 2

Sexual Abuse: Issues Related to Interviewing Children

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The interviewing of children in child maltreatment cases has evolved significantly in the course of the last 25 years. These cases are often seen as "he said/she said" dilemmas that generate much scrutiny over the information-gathering process. Because child sexual abuse cases have medical evidence only 5% to 10% of the time, in the other 90% to 95% of cases it can be difficult to take the word of a child over the word of an adult. Even when evidence is present there are many hurdles to overcome in court. The dilemma extends to jurors who feel as if they are making a choice between an adult's freedom and a child's safety. Consequently, triers of fact (judges and jurors) need information that not only seems credible but also gives them confidence in their decisions.

One set of data provided to judges and jurors can be found in the interviews of child victims. Initially called ***investigative interviews***, information-gathering sessions with children were conducted by child protection social workers and/or law enforcement. Other professionals, such as therapists or psychologists, were occasionally contracted by these entities to interview children. These interactions have been called, among other things, psychosocial evaluations in suspected child sexual abuse cases.[1,2] Psychiatrists conducting evaluations had practice parameters for cases in which they were conducting forensic assessments for children or adolescents who may have been sexually abused.[3] Although the names were different, the concepts were similar. These interactions with children were intended to gather data.

The process of these different interactions depended somewhat on the role of the interviewer. Ultimately, the goal was to gather information from the child that would assist in making a case decision. The tools used in interviews varied. Guidelines were not offered at a national level until the 1990s.[1-4] Although analogue research offered guidance to child interviewers in the early years, techniques varied based on jurisdictional practice and individual interviewer preference. The growth and accountability of the field occurred in a court of law where interviewers had to defend their practices. Major sexual abuse cases of the 1980s and 1990s spurred interviewers to determine best practices not only by looking to research but also by learning from past cases what techniques were successfully defended in court. Several national training models gained momentum at the same time these cases were being fought in the national news. These trainings offered a forum for interviewers from around the country to receive continuing education focused on child interviewing and discuss commonalities and differences among jurisdictions.

The court system began moving away from scrutinizing the child and moved toward scrutinizing the interviewer, a more palatable situation in the eyes of jurors. This process initiated an evolution in interviewing. Even the name of the skill changed. What was once investigative interviewing became known as ***forensic interviewing***. What was first identified primarily for child sexual abuse cases is now applied in allegations

of child sexual exploitation, human trafficking, physical abuse, witnessing violence, emotional maltreatment, and extreme neglect. The use of forensic interviews has been expanded beyond child maltreatment. In some jurisdictions, forensic interviewers are being asked to assist school systems in gathering information in cases of bullying.

The term ***forensic*** indicates that the interview is "for court purposes," although most cases of child abuse and witnessing violence do not go to trial.[5] Every case does have the potential for civil or criminal action at the outset, so interviewers should use forensically sound practices in every interview. However, the comprehensive forensic interview might establish that legal action is unnecessary or identify a need for other services or interventions. This is a constant balancing act: sensitively gathering the most accurate information from a child and doing so in a legally defensible way. Ultimately, the child's safety and well-being are the primary focus. Sometimes court action is a means to this end. Forensic interviews are conducted not only for prosecution but also to establish a need for protection of the child. Often protection and prosecution issues are clearer in physical abuse and extreme neglect cases because physical evidence is present. As stated previously, medical examinations in most child sexual abuse cases are normal, which has moved the field to put greater emphasis on the verbal history taken from the child. This chapter focuses on the unique aspects of interviewing children in child sexual abuse cases. However, many of the concepts presented apply to all types of child maltreatment and witnessing violence.

As a field, forensic interviewing is young. As most development progresses quickly in the early phases and levels out in the later years, interviewing is beginning to reach a leveling-out period. The body of research has grown substantially, and recent research has emerged to help build consensus among guidelines.[6] There is notable consensus of the national models, and trainers of forensic interviewing often confer. Trainers agree that for the field to continually evolve, research-informed practice and practice-informed research are required. Some trainings have changed their verbiage from "protocols" to "guidelines" with the understanding that flexibility is required in the interview as each child brings his or her unique needs into the interview process.

The forensic interview is not the only information-gathering process with children in child sexual abuse cases. Medical providers, social workers, law enforcement, advocates, prosecutors, and mental health professionals all gather data from children to obtain the information they need. These roles will be described later in this chapter.

Interviewing children is a skill that varies depending on the professional seeking the information. Although subtle differences can be found in the manifestation of the skill, the basic tenets of interviewing children remain the same. In child sexual abuse cases, several components are important in gathering data to make decisions. Each professional has a different role but works as a member of a multidisciplinary team. In over 750 communities across the United States and abroad, this type of team operates in a child advocacy center (CAC).[7] Whether this team of professionals uses a CAC or not, each profession represented on the team is responsible for a unique component of the child abuse investigation. In some CACs there is a team member whose primary role is to conduct forensic interviews and whose title is forensic interviewer or forensic interview specialist. In other CACs or multidisciplinary teams, the child protection worker, law enforcement, or other member of the team is responsible for conducting the forensic interview.[8]

The forensic interview is typically the introduction of the child to the system after a suspicion of child maltreatment has resulted in a report. However, first responders might carry the responsibility for establishing the child's safety and thus be the first to make contact with the family after the report is made. From the point of first contact, it is crucial that every professional working with the child understands the impact of the types of questions used as well as the style in which the questions are asked. If at all possible, those having contact with children should be trained on proper

Chapter 3

Sexual Abuse: The Medical Examination

Martin A. Finkel, DO, FAAP

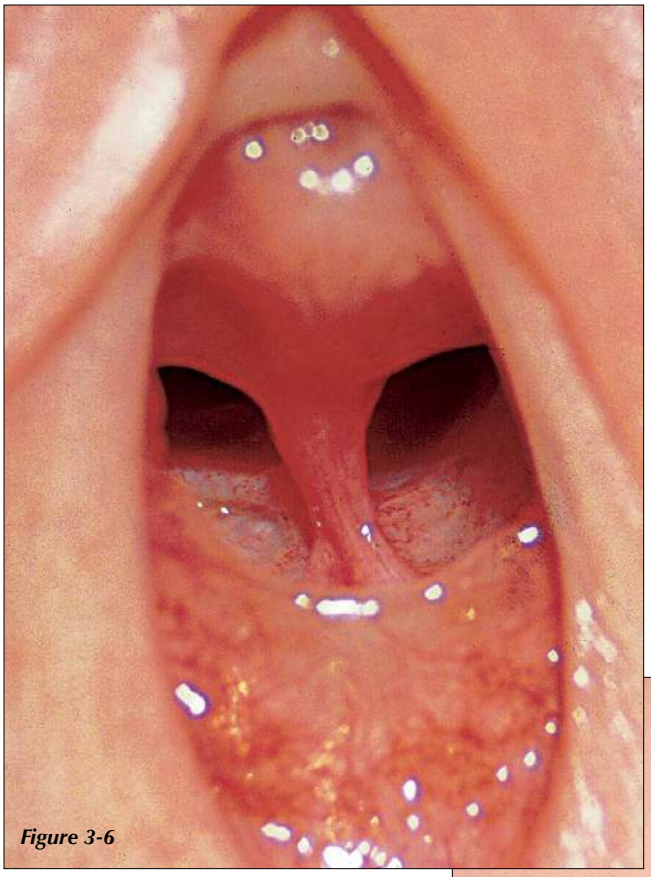
Purpose of the Medical Examination in Alleged Child Sexual Abuse

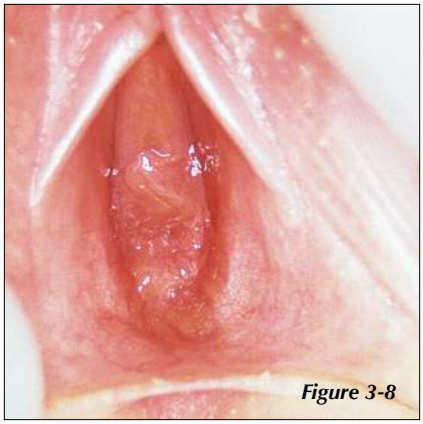
Children alleged to have experienced sexually inappropriate activities are at risk for significant medical and psychological sequelae. The health care professional can play an important role in addressing the physical and psychological impact of sexual abuse. All professionals who interact with children suspected of experiencing sexual abuse need to understand the importance of the medical examination as well as what to expect from medical professionals who conduct these examinations and how to interpret medical reports. The physical examination can be therapeutic for the child and caregiver if conducted with sensitivity and skill. The physical examination of a child alleged to have been sexually abused is much more than simply checking for anogenital or extragenital findings. The examination serves several critically important purposes, as follows:

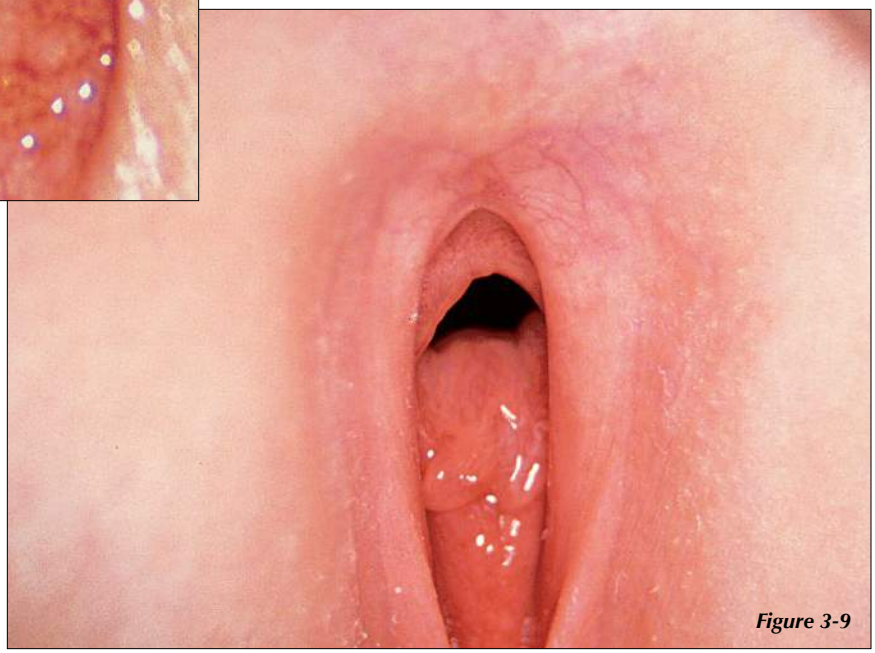
1. The diagnosis and treatment of medical and psychological residual to the alleged sexual contact. Residual signs can be found in the form of genital and anal trauma, extragenital trauma, sexually transmitted infections (STIs), and the presence of forensic evidence.
2. Addressing both anticipated and unanticipated worries and concerns that children have as a result of their experiences. This second purpose can be characterized as diagnosing "normality" to address concerns about alterations of body image and well-being.

Children should be given an opportunity to provide their medical history independent of their caregiver to the doctor prior to the physical examination. Most children will be able to separate from their caregiver. When the child is able to separate, he or she is provided an opportunity to potentially share historical details not shared with the caregiver, law enforcement (LE), or child protective service (CPS) workers in the context of being interviewed. Reluctance on the part of the child to share details with the caregiver might be attributed to (1) fear of upsetting the caregiver, (2) fear of culpability, (3) belief that the caregiver will be upset that the child did not tell sooner, (4) embarrassment or shame, and (5) free-floating anxiety regarding perceived consequences of "allowing" the sexual interaction. Reluctance to share details with law enforcement and/or CPS may occur because of preconceived attitudes toward these professionals and no frame of reference that they are helping professionals. Doctors traditionally are viewed by society as confidants, healers, and individuals who can safely be told the most personal worries or concerns.

The medical history obtained independently allows children to share in their own words what they experienced, address any worries or concerns they may have about their body as a result of their experience, and ultimately provides a contextually richer understanding of what occurred. The idiosyncratic details that the child provides to the doctor afford insight regarding whether he or she experienced physical injury and







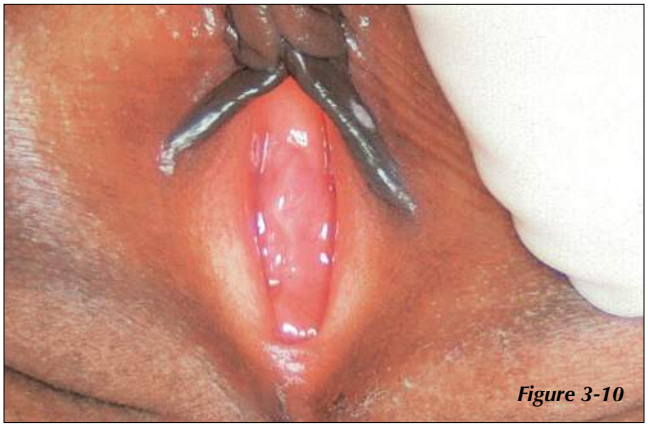


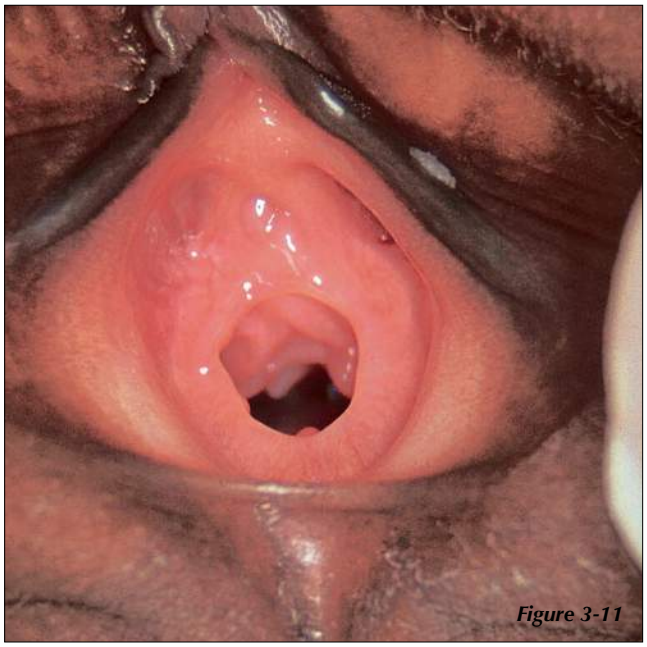
Figure 3-6. *Intravaginal longitudinal septum intersects hymenal orifice and vagina. This congenital defect may be associated with upper genital urinary tract anomalies which should be investigated in early adolescence.*

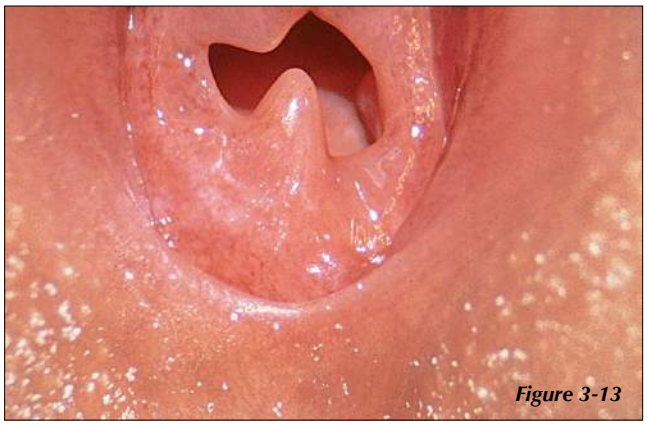
Figure 3-7. *Septate hymen bisecting hymenal orifice in the plane of the hymen without extension intravaginally.*

Figure 3-8. *Redundant tissue surrounding the hymenal orifice restricts visualization of orifice with traction and separation alone. Companion image demonstrates appearance with the use of the knee-chest position.*

Figure 3-9. *Knee-chest position allows redundant tissue to fall forward covering the urethra and allowing visualization of the crescentic shaped hymenal orifice.*

Figure 3-10. *Hymenal orifice not visualized with labial separation alone.*





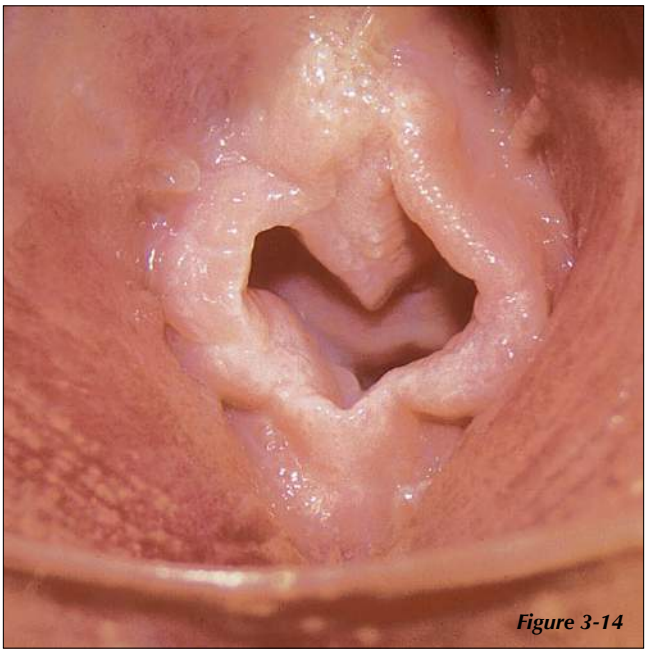


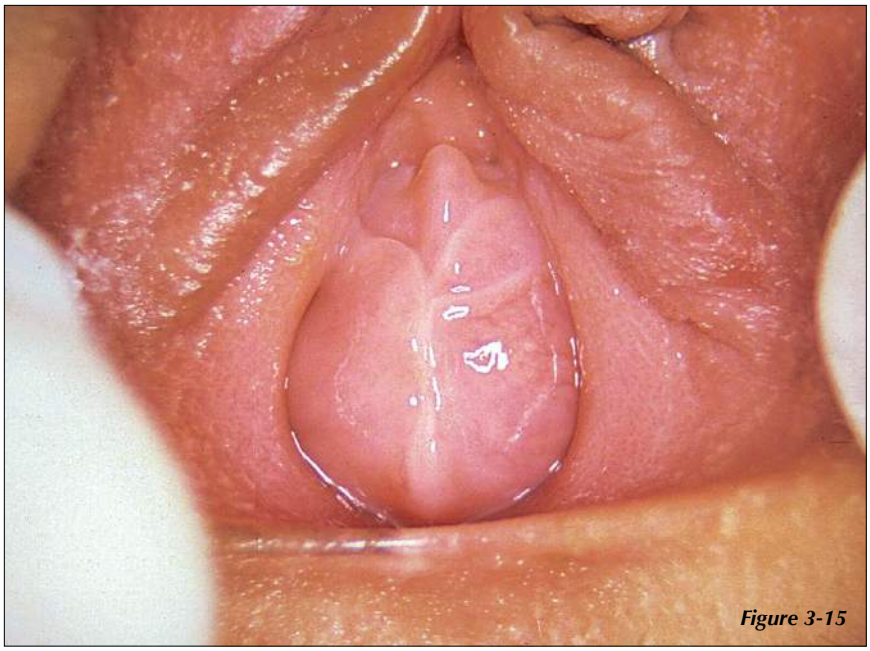
Figure 3-11. *Labial traction affords unfolding of redundant tissue and visualization of annular orifice and intravaginal content as well as the urethra.*

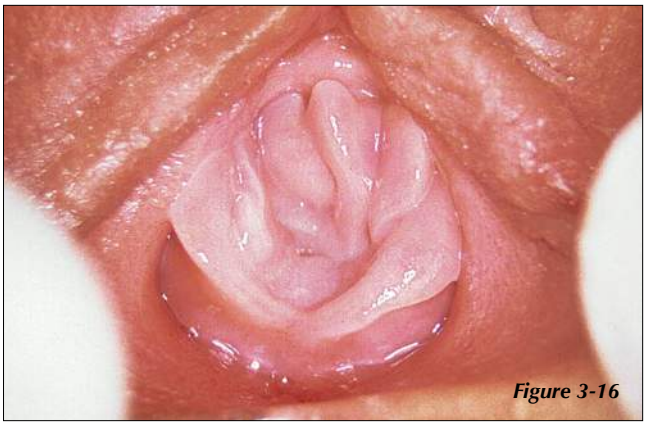
Figure 3-12. *Anterior tag present below urethra representing a normal anatomic variation.*

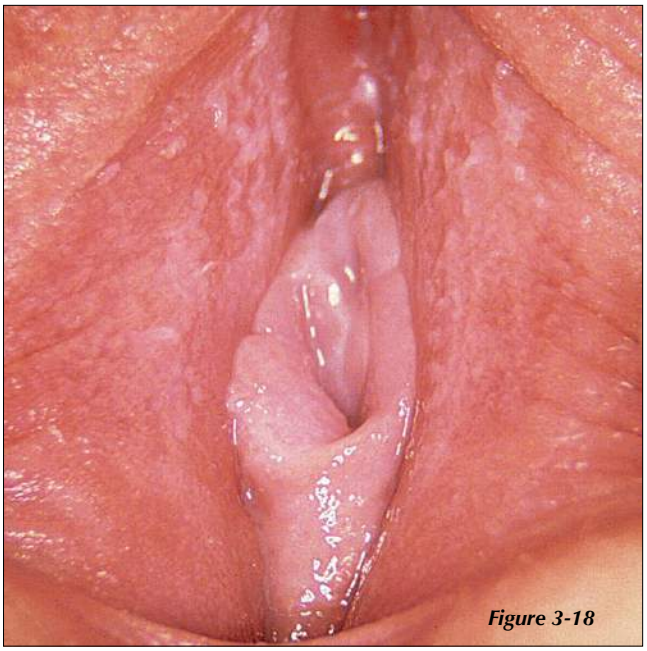
Figure 3-13. *Prominent projection of hymenal tissue at the 6 o'clock position representing an external reflection of a posterior longitudinal intravaginal column.*

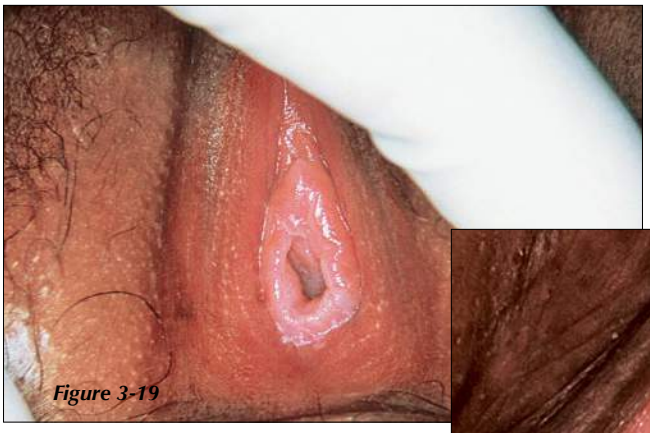
Figure 3-14. *Estrogenized annular hymen with slight redundancy and elasticity. Prominent anterior column.*

Figure 3-15. *Redundant estrogenized hymen with labial separation does not allow visualization of hymenal orifice.*









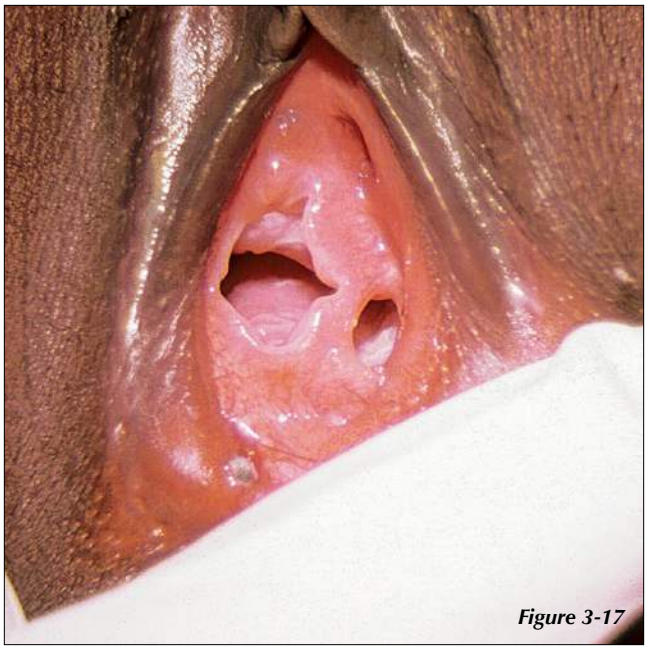


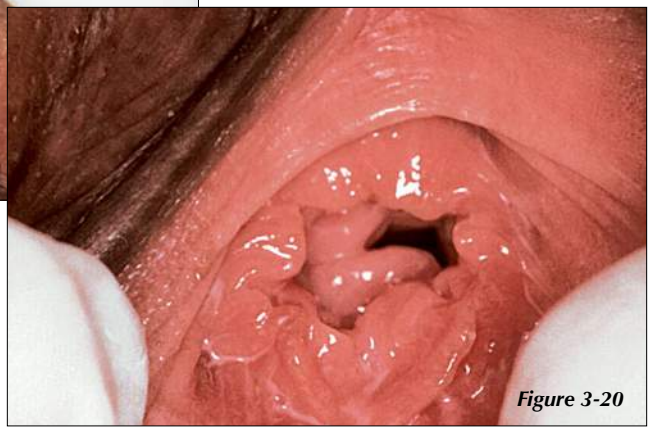
Figure 3-16. *With additional traction the cohesive forces of the moist tissues are overcome and the crescentic appearance is visualized.*

Figure 3-17. *Septate hymen in pubertal child. Tampons should not be used until septum is interrupted surgically.*

Figure 3-18. *Sleeve-like configuration of hymenal membrane in prepubertal child. Hymen demonstrates estrogen effect.*

Figure 3-19. *Annular configuration of estrogenized hymen in Tanner Stage II child.*

Figure 3-20. *Fimbriated appearance to hymenal edge with labial traction. Fimbriation or scalloping of edge circumferentially provides greater distensability to orifice. Scalloped appearance does not represent multiple small partial transections.*



Chapter 10

The Lifelong Effects of Adverse Childhood Experiences

Vincent J. Felitti, MD
Robert F. Anda, MD, MS

"*They do not want to hear what their children suffer. They've made the telling of the suffering itself taboo."*

Alice Walker, *Possessing the Secret of Joy*.

This chapter will document how adverse childhood experiences play a major and lifelong role in the difficulty, effectiveness, and cost of adult medical practice, and are the major origin of numerous important public health, medical, and social problems. In all of these areas, the relationship between adverse childhood experiences and adult well being ordinarily goes unrecognized. Our evidence comes from the Adverse Childhood Experiences (ACE) study, a collaborative effort between Kaiser Permanente and the Centers for Disease Control (CDC) involving over 17 000 adults in a major retrospective and prospective epidemiologic analysis. The ACE study reveals how 10 categories of adverse life experience in childhood have a demonstrable impact, decades later, on health risks, disease burden, social malfunction, medical care costs, and life expectancy. This chapter will show that events that are lost in time, and then further protected by shame, secrecy, and social taboos against exploring certain areas of human experience, cost us heavily in health, humanity, and dollars. Routinely integrating the inquiry about, acknowledgement, and discussion of traumatic life experiences into the medical history has major benefits to patients, and is generally welcomed by them, though it is often uncomfortable for physicians. This professional discomfort has secondary ramifications in limiting the availability of such information in medicine, social work, and in the law enforcement, legislative, and judicial systems.

Origins of the ACE Study

The ACE study had its origins in our repeated counterintuitive experiences while operating a major obesity-reduction program using the technique of supplemented absolute fasting, which allows weight to be reduced non-surgically at approximately the rate of 300 lbs per year.[1] We repeatedly found many patients fleeing their own success when major weight loss occurred. We were forced to recognize that eating has major psychoactive benefits that are obvious enough to be built into the language: "Sit down and have something to eat; you'll feel better." Many of our patients had a significant need to feel better, though these rarely surfaced spontaneously and hence were not known. Further exploration led to discovering the protective *benefits* of obesity. We slowly discovered that many of these patients had life experiences for which being obese was protective. If one has a need to de-sexualize oneself, as in a reaction to rape or childhood sexual molestation, then gaining a hundred pounds is an effective approach. A former rape victim who gained 105 pounds in the year subsequent to her rape commented: "Overweight is overlooked, and that's the way I need to be."

Similarly, being larger than others can project a sense of power, as illustrated in the common expression, "Throwing your weight around."

Interviews with our obese patients unexpectedly led to discovering myriad long-term medical effects of seriously troubled childhoods. Such histories were almost never documented in their medical records. The high prevalence of abusive life experiences in the childhoods of our obese patients ultimately led us to consider to what degree this might also be the case in a general population. The ACE study was devised to determine in a general, middle-class, adult population the prevalence of 10 categories of stressful, traumatic childhood experiences that we had found so common in our obese population. And further, to determine what, if any, the additional long-term effects of these experiences might be.

These clinical observations at Kaiser Permanente's Department of Preventive Medicine in San Diego dovetailed with new approaches to understanding the emotional underpinnings of behavior and disease that had recently emerged at the CDC among studies of nationally representative samples of US adults. Among these studies were: linking self-reported stress to the incidence of peptic ulcer disease,[2] discovering the higher prevalence of smoking and lower incidence of quitting among persons who are depressed,[3] and finding an increased incidence of coronary heart disease among persons experiencing hopelessness.[4] The combination of clinical observations at Kaiser Permanente (KP) and the public health approach using the tools of medical epidemiology at the CDC proved to be a powerful combination in designing the ACE study and quantifying and interpreting the observed long-term effects of ACEs.

The Department of Preventive Medicine at Kaiser Permanente in San Diego provided an unusual resource for carrying out such a study in its Health Appraisal division. At the time the ACE study began in 1995-1997, over 50 000 adults a year voluntarily chose to come for periodic comprehensive medical evaluation. This evaluation included detailed medical history, extensive laboratory testing, and complete physical examination. In any 4-year period, 81% of the adult members in San Diego chose to avail themselves of this service.

The ACE study consisted in our asking two groups of such adult Kaiser Health Plan members, each consisting of 13 000 consecutive individuals requesting such health appraisal, whether they would help us understand how childhood experiences might affect health later in life. We explained that we would also track their medical records prospectively to follow their clinical courses forward in time. The study was carried out in two separate waves to allow mid-point revision if necessary. Almost 70% of those asked agreed to participate in the ACE study. All persons had high-quality health insurance from Kaiser Health Plan. Average age was 57 years with a range from 26 into the nineties. Almost exactly half were men, half women. Approximately 80% were white including Hispanic, 10% black, 10% Asian; 74% had attended college. This was clearly a middle-class American population, and not one that could be dismissed as "not in my practice." This may have a bearing on the deep intellectual interest the findings of this study have generated, as well as on the resistance to using them in practice.

Approval of the ACE study was slowed by institutional review board (IRB) concern that some patients might emotionally decompensate when faced with the intrusive questions that we proposed to ask by questionnaire about childhood experiences. Colleagues assured us that patients would be furious when faced with these types of questions and they believed that patients would be unlikely to respond truthfully. IRB agreement was ultimately obtained by arranging to have a responsible person carry a cell phone 24 hours a day for 3 years to accept emergency calls from those putative persons who might decompensate when asked about the reality of their lives. However, no phone calls were received. Instead, we had a number of patient compliments and a small collection of letters, one written on lined paper by an elderly woman: "Thank

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CHILD MALTREATMENT

CULTURES AT RISK AND ROLE OF PROFESSIONALS

ENCYCLOPEDIC VOLUME 3 OF 3
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To Jim Hmurovich, President and CEO of Prevent Child Abuse America,
who I have come to know as an effective child and family advocate
who leads by example and makes the case everywhere he can
that prevention of child abuse and neglect is possible and our collective responsibility.
— APG —

To David Chadwick, Henry Kempe, Ray Helfer, Robert Reece,
Jay Whitworth, and the other pioneers of child abuse advocacy
for deeply caring about children in a world that sometimes does not care as well as it should.
— RA —

"Every day counts in the life of a child." Thanks for the support from our families, friends, and colleagues.
— DEJ —

To my family for your patience, my colleagues for your acceptance, and to all those
who have left the world a bit better, and made so many little lives breathe easier — this is to have succeeded.
— JT —

CHADWICK'S

CHILD MALTREATMENT

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Foreword

One hundred and forty years ago, in the eyes of the law, children were considered "chattels" or possessions. They were the exclusive property and domain of their parent or guardian and could be treated in almost any manner that custodian saw fit. It was an era of "spare the rod, spoil the child." A time where our legal system believed there was not jurisdiction to intervene or pierce the veil of the family government to protect an abused or neglected child. Child maltreatment was an incidental consequence to the legal shield of family immunity that sadly, our society tolerated.

In the decades since, American jurisprudence has witnessed a sea change of laws and practice that now gives voice and protection to the maltreated youth. An entire legal system of juvenile justice has since been constructed which recognizes children are deserving protection as a class. Over more recent decades, our legal system has evolved beyond merely protecting the child from harm to a realization that there must be a focus on the actual well-being of the maltreated child. Juvenile justice has moved from perceiving this as a public safety issue to recognition that it is a matter of public health as well. If a child is removed from the harm, but the impact of the maltreatment is not addressed, the outcomes for those youth are significantly compromised. Untreated, these children grow up at significantly higher risk of entering the criminal justice system, failing in education and suffering both mental and physical health disorders. This not only burdens victims individually, but society as a whole and compromises our next generation of leaders in a competitive world. In order for our legal system to properly address the well-being of a maltreatment victim it requires the collaboration of all of the systems that intersect into the life of a young victim to provide support and effective treatment. Multidisciplinary teams of specialized healthcare, legal, social service, and education professionals are now the standard of best practices in these complex legal cases. To work most effectively together, it is imperative that each professional working with child victims understand basic principles of the other disciplines involved. This medical volume serves as an indispensable tool to that spectrum of professionals to help them achieve a comprehensive understanding of child maltreatment and effective interventions.

Chadwick's Child Maltreatment Fourth Edition provides a comprehensive view of the fundamentals of best practice, across all child maltreatment disciplines. Volumes I and II will provide legal professionals with an understanding of the medical basis for diagnosis and treatment of physical abuse, sexual abuse, and neglect. Fundamentals of injuries such as burns, bruises, head injuries, or fractures are imperative for law enforcement and lawyers to understand in order to make the legal case of child abuse. Equally as important, this series can provide courts and judges an understanding of the medical basis for the diagnosis of maltreatment which legal conclusions are often drawn. Volume III provides healthcare professionals an understanding of an often complex and intimidating legal system such as in Chapter 11, Preparing a Case for Court, and Chapter 13, Preparing to Give Expert Testimony.

The American legal system plays a critical role in the protection and safety of maltreated children in our society, but this role cannot be successfully performed in the vacuum of the judicial system. It requires a fundamental understanding of, and collaboration with, other child maltreatment disciplines to successfully intervene and properly protect young victims. This volume provides legal professionals a rich resource to achieve that essential knowledge that is based in science and best practices from top child maltreatment experts across the nation.

Melodee Hanes, JD
Washington, DC

Foreword

The child maltreatment field has evolved dramatically over the past 50 years, with each new innovation building on the contributions of professionals who have endeavored to create a better world for children. It is noteworthy that this volume has been renamed for one of the visionary leaders in the field, Dr David Chadwick, and everyone who reads and utilizes this valuable collection of work written by more than 40 experts in the field is benefitting from not only their expertise, but also the expertise of the countless dedicated professionals who were colleagues of Dr Chadwick.

We must now view child maltreatment as more than a dedicated field of work to improve the lives of children in a larger frame the professionals working in this field are daily working to improve the health and well-being of our world as the children we serve today will be those who will shape the future generations. Thus, this incredible collection of knowledge and resources should be viewed more expansively as a blueprint for achieving this broader goal, with guidance from wise and esteemed leaders in the field.

The multidisciplinary response to child maltreatment and awareness of the valuable contributions made by each of these disciplines is critical for an effective response to child maltreatment. Initial multidisciplinary efforts involved a limited number of professions, and we are now in an era where additional professional fields are becoming involved in this expanding multidisciplinary response to child maltreatment. This volume includes emerging topics of dramatic importance for those working in the child maltreatment field and builds on the existing knowledge and practice base to assist professionals in the child maltreatment field to be more effective in their daily work. Of particular note are chapters on the Risk of the Internet, Risk of Sexual Abuse in Faith Communities, Child Maltreatment and Disability, Family Abduction, and Pediatric Screening for Intimate Partner Violence. These outstanding contributions, in addition to updated chapters on critical topics make this volume an incredibly valuable and authoritative text that succinctly applies the knowledge gained from existing research and case studies to the direct practice for those working in the field.

The child maltreatment field, buoyed by the continued revision of these volumes, has been propelled from a practice of best efforts to a more evidence-based and evidence-informed practice which is leading to better outcomes for children and our society. Aside from being an outstanding compilation of existing knowledge related to child maltreatment prevention and intervention, these volumes also serve as a motivator for readers to promote improved practice and further evolution of the entire field.

The multidisciplinary response and value is not measured in comparison to each involved discipline. It is measured in the combined positive impact this collaboration has for each child and family served. The newly-revised *Chadwick's Child Maltreatment Fourth Edition* provides the necessary guidance for allied professionals to provide their services in a most effective manner while also increasing their understanding of their multidisciplinary partners; and this approach will continue to bring the change desired by all those who accept the challenge of child protection and well-being.

Chris Newlin, MS LPC
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PREFACE

The correlates of child maltreatment are not independent but are closely intertwined in many ways. Nationality and locality are closely tied to wealth or socio-economic status and both are influential on the risk for child maltreatment.

Culture consists of the customary beliefs, social forms, and material traits of a racial, religious, or social group. An important component of all cultures is the set of beliefs about child rearing. In the United States, policy exists to tolerate a wide variety of child rearing practices.

In biology, the word "race" describes genetically distinguishable subsets within a single species, but this definition breaks down when applied to humans. In practice, members of different human races are arbitrarily defined. Recent advances in human genetics are providing the ability to allow a biological explanation of most human traits, but race remains a sociological concept. In the US, the present minority races are overrepresented in child welfare enrollment and in reported cases of child abuse. The linkage between race and economic status is important, and both minority race and low income are associated with increased likelihood of being the subject of a child abuse report. Race and culture are discussed at greater length in a chapter by Linda Spears.

Nationality is important in the definition and response to child maltreatment. Developed countries typically make it illegal and some have established mandated reporting systems. Some estimates indicate that over 3 billion people—half of the world's population—are the traumatized victims of child sexual, physical, psychological, and other forms of abuse and that over 1 billion as a consequence become disabled or meet a premature death. It is a pandemic.

Three nations, Australia, Canada, and the United States, have implemented reporting laws that require that cases of child abuse be made known to governmental agencies. The lack of uniform definitions and methods of ascertainment makes precise international comparisons based on reports impossible.

The fact that child maltreatment occurs in all parts of the world comes as no surprise. All cultures and societies have rules governing child-rearing practices. Organized societies may codify cultural requirements into formal laws through a political process and this has taken place for child maltreatment in most or all of developed countries and to some extent everywhere.

Eighteen studies in developed countries document a stable ecological relationship among neighborhood impoverishment, housing stress, and rates of child maltreatment, as well as some evidence that unemployment, child care burden, and alcohol availability may contribute to child abuse and neglect. Locality is closely linked to wealth.

In 1970s, the sociologist David Gil called attention to the connection between poverty and child maltreatment. He proposed that significant reduction of child maltreatment would require the reduction of poverty, and argued that a general societal acceptance of physical punishment was also an important contributing factor for physical abuse. Many other authors have made similar observations over the years. Significant reduction of child physical abuse and neglect almost certainly will require reduction of child poverty as an essential step. This observation reduces the apparent importance of individual aberration as a cause of child maltreatment while emphasizing the importance of social factors.

The connection between poverty and child maltreatment is also borne out by the international comparisons and by national incidence studies in the US. In developing countries with generally low income levels, maltreatment such as child exploitation and prostitution are much more common than they are in developed countries with greater wealth.

Periods of unemployment, especially over the long term, are known to be associated with child maltreatment. Evidence has been presented linking the 2008 economic recession to an increase in the incidence of abusive head trauma. Abusive head trauma is a very severe and conspicuous form of child maltreatment, and most cases come to light.

Child poverty in the US declined from 1970 to 2000, and has since increased steadily and affected younger and younger children. Since the recession, the proportion of wealth accruing to the already rich has increased, while poor families have experienced greater loss of wealth.

Poor children are disadvantaged in many ways. Wealth protects children. It reduces the actual incidence of child abuse and the likelihood that it will be recognized and reported. Child abuse is not unknown in wealthy families, but it may be hidden.

The effects of poverty on families include the heightened risks for maltreatment such as neighborhood decline and violence, less neighborhood support, poor quality child care, more frequent parental depression, and paucity of supportive services. Serious reduction of child maltreatment requires reduction of child poverty.

The term "social capital" describes obligations owed by one person to another that are not necessarily monetary. Social capital can include family support structure, numbers of siblings, neighborhood support, and church attendance. Children with more social capital fared better than those with less. Both social and monetary capital contribute to children's well-being, and the 2 types of assets are not disconnected.

Child maltreatment may occur in almost any setting or context involving children. "Setting" refers to a geographical locus. "Context" refers to the social forces at play. However, the most serious cases of maltreatment tend to be restricted to situations in which only 1 adult is present at the time of the abusive act.

Child maltreatment may occur in the context of institutions. When it does, powerful institutional survival instincts may dominate over the need to protect children.

More maltreatment occurs in children's homes than any other setting. However, in most of the United States, protective service workers must have an adult owner's consent or a warrant to enter a home except under exigent circumstances. The recognition of ongoing abuse in homes is often delayed by considerations of privacy.

Child maltreatment may also occur within the context of community and neighborhood settings. These include streets, parks, playgrounds and all public places. While maltreatment occurs in these settings, the general social rejection of abuse limits its incidence in public.

In a childcare setting, the greatest risk for maltreatment the situation of the lone provider. Licensed childcare centers with multiple providers are very safe compared with most other settings.

Organizations such as the Boy Scouts of America and the Boys and Girls Clubs have encountered child maltreatment when they allowed 1-on-1 contact between counselors and children. They have also launched prevention programs

Dr. Karen Terry and Laura Litvinoff wrote the chapter on child maltreatment in religious settings. Religious institutions, especially the Catholic Church, have been notable for institutional self-protection at the expense of children and their families. In many areas the Catholic hierarchy has supported institutional self-preservation over child protection.

The response of the criminal justice system in the United States is discussed in a chapter by Detective Jeff Rich and Janetta Michaels. In all states in the US all forms of child maltreatment are criminal offenses defined in state penal codes. However, only cases with serious and relatively obvious harms are prosecuted.

In 1962 C. Henry Kempe, author of *The Battered Child Syndrome*, was able to convince the United States Children's Bureau to convene a conference to discuss the possibility of mandatory reporting of suspected child abuse by medical doctors and other professionals who were likely to encounter abused children in their work. The result of this conference was the drafting of a model reporting law and its distribution to state governments by the US Children's Bureau. Within a few years every state had passed a law requiring persons who were professionally concerned with children to report the "reasonable suspicion" of child abuse to an agency of either law enforcement or social services or both. The reporting laws are typically incorporated into state penal codes.

Immunity for mandated reporters from suits for retribution or for mistakes in reporting was an important provision of the US state child abuse reporting statutes. While these provisions do not eliminate lawsuits, they greatly reduce the chances that the suits will succeed. In countries that lack reporting laws, professionals who report child abuse have been successfully sued by perpetrators. This has a chilling effect, and keeps child abuse hidden in those countries

The mandatory reporting of child abuse also provides a method for tracking the incidence of child maltreatment. However, child maltreatment reports are generally incomplete and often underestimate the numbers of cases that are actually occurring. The extent of underestimation is not consistent over time because after a reporting law is passed, reporting rises steadily for years. Still the counting of reports provides useful information.

A chapter by June Cairns, Paul DiLorenzo, and Annette Duranso describes public social services efforts in detail. Public social services operated by states or counties carry the bulk of the statutory responsibility for child protection in the United States. When cases are reported to them or recognized by their social workers they are expected to investigate and provide whatever interventions are required. Coercive social interventions require judicial approval from special dependency courts.

The Child Prevention and Treatment Act (CAPTA) sponsored by Walter Mondale provided federal guidance for the states in 1974. In addition to establishing some national standards for the practice of child protection, CAPTA has funded some research and development for innovative child protection practices. CAPTA greatly strengthened the role of Social Services in child protection.

Many authorities have expressed the view that child maltreatment is—or should be—a public health issue and managed using public health principles and methods. However, most US states still lack defined public health programs. The National Institutes of Health and the Centers for Disease Control and Prevention have just begun to address it. This anomaly is attributable to CAPTA and the national policy that emphasizes the role of public social services over that of health. Leaders in the efforts to deal with child maltreatment have come from the ranks of personal health providers rather than public health practitioners

Formal political concern for child health and welfare in the US appeared early in the 20th century, during the presidency of Theodore Roosevelt. The US Children's Bureau was born in this era, and soon initiated programs for maternal and child health. This change produced a climate in which public and professional concern about child maltreatment could grow.

In the 1970s a grass-roots organization grew from the efforts of the famous Jolly K., a woman who had been abused as a child, and who encountered problems in raising her own children. Her efforts led to Children's Bureau support for the self-help group that has continued to this day.

Some child abuse professionals have proposed that persons who have been abused

as children or otherwise adversely affected by child maltreatment could be effective political advocates for political support of prevention programs. Organizations such as Survivors' Network of those Abused by Priests (SNAP) have been influential in changing some institutions such as the Catholic Church.

Human beings occupy a niche in an ecosystem that is expanding rapidly due to their own technological innovation. Continued survival of our species may depend on our ability to sustain large and complex societies as well as function in a world where information is increasingly available via digital means.

Individual adaptation to the complexity of human society requires a long period of development during which individuals are dependent and vulnerable to intentional and unintentional damage. Some child maltreatment may be inevitable in our species, but given its profound deleterious effects and the expanding requirement for social adaptation, the species may not be able to survive its continuing high prevalence. Improving the childhood experience is likely to be essential to human survival.

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Reviews of the Fourth Edition

The 4th edition of Chadwick's Child Maltreatment *once again provides a comprehensive resource regarding child abuse and neglect. It is beautifully illustrated, well-referenced, and very much up to date. Readers will be well served by this essential resource. In particular, the ophthalmology sections have been put together with expertise and offer excellent photographic examples of the findings in abusive head trauma.*

Alex V. Levin, MD, MHSc, FRCSC
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This Chadwick's Child Maltreatment Fourth Edition *textbook offers a comprehensive and detailed accounting of the medical, social work, and legal assessment and investigation of the alleged childhood abuse victim. It serves as an excellent resource for the multidisciplinary team responsible for the evaluation of these complex cases. Anyone working in the field of child maltreatment should add this publication to their annals.*

Barbara Knox, MD
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The fourth edition of Chadwick's Child Maltreatment *ensures physicians, nurses, social-workers, and law enforcement professionals have a comprehensive reference that describes the identification, evaluation, and management of all facets of child abuse and neglect. Of note, in an era when abusive head trauma (shaken baby syndrome) is often fiercely litigated in courtrooms and in lay media,* Chadwick's Child Maltreatment Fourth Edition *is a reputable source of mainstream, scientific information about abusive head trauma and its ophthalmologic manifestations.*

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This work is excellent! At a time when child maltreatment science is growing exponentially, the release of the Chadwick's Child Maltreatment Fourth Edition *publication by Alexander, Giardino, Thackeray, and Esernio-Jenssen brings scholarship and practice expertise to those who deliver care to children who have been maltreated or abused. It should be in libraries worldwide.*

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The new Chadwick's Child Maltreatment *book is a must for health care providers who are seeing children who have been abused. There are many useful tips that professionals can adopt in their practice and use as a reference. The chapters are easy to follow as well as providing pictures with great case examples. The most current and up to date references in the chapters make it easy to follow the research in each area. I will be recommending this 4th edition as an excellent resource book for all programs that deal with child maltreatment.*

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The 4th edition of Chadwick's Child Maltreatment *is a comprehensive, evidence-based text that is a critical reference for healthcare professionals who provide care for children and families. The array of expert contributors has crafted a publication that provides essential knowledge of the many facets of child maltreatment and includes contemporary references, images and case studies. I would recommend this edition of* Child Maltreatment *as a 'must have' resource for professionals committed to curbing the epidemic of child maltreatment.*

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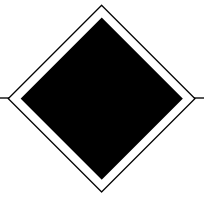
To become the world leader in publishing and information services on child abuse, maltreatment and diseases, and domestic violence. We seek to heighten awareness of these issues and provide relevant information to professionals and consumers.

A portion of our profits is contributed to nonprofit organizations dedicated to the prevention of child abuse and the care of victims of abuse and other children and family charities.



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CHILD MALTREATMENT

CULTURES AT RISK AND ROLE OF PROFESSIONALS

Encyclopedic Volume 3 of 3
Fourth Edition

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Chapter 1

Cultural Aspects

Linda S. Spears

Culture surrounds us daily. Culture shapes our understanding about our lives, how we are born, grow, age, and die. Culture provides the context within which we live each day, how we learn and play, and how we form and define social connections. Culture helps us understand what is required to fulfill the aims of life, and helps us define what we do, as well as how, why, and where we do it. In these ways, culture is critical to what happens across the life span but especially during the first stages of human growth and development—childhood.

For all children in all cultures, certain conditions are required for healthy growth and development. All children need basic care including nutritious food, safe water, adequate clothing, and shelter. Children also require protection from harm, exploitation, neglect, and other forms of maltreatment. When these conditions are met, children have an opportunity to realize their full potential. When these conditions are not met, children's physical, social, and emotional growth and development may be arrested, damaged, or reversed.

This chapter is about the cultural aspects of child maltreatment. How do culture and child maltreatment relate to each other and what are the implications for our work?

Cultures are complex and dynamic phenomena that influence the way that parents and caregivers fulfill a child's need for love, nurturance, care, and protection. A child's growth and development are intrinsically linked with the larger culture within which they and their caregivers live their daily lives. This cultural context offers a certain perspective on what childhood is, how childhood is characterized by the larger community, and how childhood is experienced through the children and their families. In most cultures, the nature of childhood is governed by necessity and by the relationships that exist between adults and children. When parents and communities struggle to meet basic needs, children may be viewed as property or as an asset that can help bolster the economic well-being of adults. In more affluent cultures, children may be seen as dependents with nominal responsibilities or as consumers of the resources provided by the adults upon whom they must rely. Without regard to economic determinants, children may also be cherished as symbols of a community's legacy and as an investment in future generations. Children may be extensions of their caregivers or independent beings with rights and privileges uniquely their own. In a given culture children may also be all of these things to some measure.

Across cultures, we assign to children attributes and influences that reflect the values and imperatives in our lives. We make determinations about how we care for children in the context of our age, geographic location, religion, gender and gender identity, sexual orientation, race, ethnicity, and social class. These aspects of our lives exist in the context of our wealth and resources, inclusion and isolation, symbols, ideas, and actions that are mediated by our own status and power. Access to and exercise of power shapes what children and their families have and how they behave. It also shapes how the lives of maltreated children are studied, identified, and altered. Thus, an understanding of the relationships of power between cultural groups, between persons, and within families, communities, and institutions is essential to an understanding of how we address child maltreatment.

Definitions

Cultures

Cultures are dynamic, large-scale human social forces that generate the structures and meanings of thought and action. Cultures enable people to define the significance of ideas, actions, experiences, places, things, and relationships.[1] Cultures are often unspoken, tacit, and below the level of consciousness. While our understanding of cultures has evolved over more than 100 years, experts today see their nature as multifaceted and broad (see **Table 1-1**). Culture may be reflected in our habitual behaviors. Selective use of culturally derived knowledge and understandings may help us navigate the decisions and activities of daily life. Cultures historical, situational and changeable dimensions allow us to accept certain culturally defined beliefs while at the same time reject others that may have a deleterious impact on our lives.[2]

Table 1-1. Definitions of Culture

Definition	Comment[3]
Cultures represent unscientific, irrational, and often innocuous but sometimes harmful beliefs and "folk practices" "done out of ignorance." (For example, see Monteleone and Brodeur.[4])	Discussion that arises from this kind of definition of culture often describes obscure practices from the ethnographic record that produce physical findings that may "mimic" child maltreatment (eg, cao gio, moxibustion or cupping, etc.).
Culture is "a set of beliefs, attitudes, values, standards of behavior that are passed from one generation to the next. Culture includes language, worldview, dress, food, styles of communication, notions of wellness, healing techniques, child rearing patterns and self-identity."	Definitions like this are oriented toward a relativist position, which rejects a developmental hierarchy of cultures and does not view other cultures as deviant or pathological. They focus on the variety and diversity of ideas and practices providers may encounter. These ideas and practices may be positive or negative, more or less successful, in their attempt to meet perceived human needs. This position typically calls for greater awareness of differences on the part of providers and for greater empathy.
Culture is a "dynamic," "learned," and "shared," "interpretive force that guides social behavior" and is "variably experienced by different members of the group (eg, according to their age or gender)."[6]	This type of definition emphasizes heterogeneity within cultures and points out how they provide a crucible for interaction between risk and protective factors; this approach describes the embedded nature of child-drearing in a larger social network. The position advocates for competence, rather than just awareness, on the part of providers.
Cultures are dynamic, large-scale, human social forces that generate structures and meanings of thought and action; they are contended, historical systems of symbolic forms that allow people to interpret the meanings of ideas, actions, experiences, places, and things in the context of political and economic relationships of power. (Definitions from this chapter synthesize many contemporary definitions.[1,6])	This type of definition emphasizes the historical, situational, and conflicting ways people use symbols to make sense of experience. This approach attends to the complex ways that ideas and practices are shaped by relations of power between groups with different positions within social structures. The study of child maltreatment requires critical analysis of relations of power between groups exercised within social institutions using formal and informal kinds.

Child Maltreatment, Abuse, and Neglect

Child maltreatment, abuse, and neglect are forms of physical or mental harm to human beings less than 18 years old that result from "proscribed, preventable, and proximate" intentional human actions by adults.[7] In other words, child maltreatment, abuse, and neglect are the physical or psychological consequences of non-accidental violence or deprivation inflicted by adults on children. Importantly, the adult behavior must be devalued or prohibited by the culture within which the adult-child relationships exist (proscribed), committed by the child's caregiver in the child's immediate temporal and physical environment (proximate), and chosen instead of an alternative, non-injurious action (preventable).

Chapter 2

Risk of the Internet

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Introduction

To say that the Internet and technological advances in digital communication devices have transformed the world is an understatement. The Internet itself has undergone radical transformation since it first came into commercial public use in the late 1980s and early 1990s. Today, access to information has become not only instant, but constant. Gone are the days of dial-up connections via a desktop computer, long waits and prohibitive costs of accessing the Web. Practically every new device that is produced today—mobile phones, laptops, tablet computers, cameras, music players, video game consoles—is Internet-ready, and Americans are heavily engaging with these devices.[1]

It is no surprise, then, that according to recent estimates, almost 2.27 billion people, or one out of every three human beings on the planet is connected to the Internet.[2] This worldwide surge in Internet use is largely caused by technological advances in mobile devices and big data, and the digital revolution is supplemented by the rise of social media sites such as Facebook, YouTube, and Twitter that connect millions of people worldwide.

The benefits of the Internet are undeniable. The digital world abounds with opportunities for learning, channels for creativity and productivity, tools to communicate with people from around the world, and even possibilities to create national and international movements for social change.[3] For individuals of all ages and backgrounds, especially children, adolescents, and young adults, the Internet is an important forum for socialization, education, and entertainment.

For all its benefits of transforming the quality of life for billions, however, this hyper-connectivity comes at a cost. Widespread use of the Internet is raising growing concerns about security, cyber-crime, privacy, the flow of personal data, individual rights, access to information, and child sexual exploitation.[4] Children are particularly vulnerable to the risks of the Internet, and any discussion about child maltreatment must address the role of the Internet and mobile technology in facilitating various forms of child exploitation and harm.

Those interested in issues of child maltreatment and Internet risks must pay close attention to numerous areas of concern. Broadly, the harms to children facilitated by the Internet and digital media fit generally into two categories: sexual and non-sexual. Sexual harms are the ones most established in public consciousness, and perhaps rightfully so. The potential for the Internet to be used as a tool for child sexual exploitation of various forms is ever-present, and crimes like child trafficking, forced pornography, and various forms of Internet-based sexual abuse continue to brutally victimize children worldwide. Other harms, however, such as cyber-bullying, sexting, and exposure to self-harm, suicide, hate, and eating disorder sites must also be addressed. Whether sexual or non-sexual, these potential harms are not to be taken lightly. Research shows that they too have serious health, developmental, and

psychological consequences, and may affect a broader population of children given the ubiquity of the Internet.[5]

Parents, service providers and law enforcement must continue to educate and re-educate themselves of the various ways in which both children and adults use the Internet, and all the ways in which it can harm children. The goal should be to stay on par with, if not one step ahead of, technological and social changes.

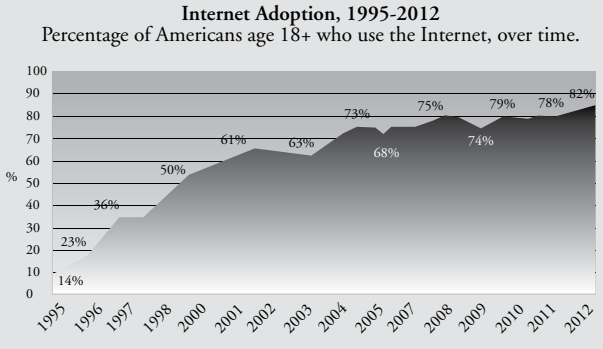
Internet Usage

Adults

Consider the transformation in Internet use within the adult population of the United States in the last decade. In the year 2000, less than half (46%) of all adults used the Internet and slightly over half (53%) owned cell phones. Almost no adults (0%) used social networking sites or connected to the Internet wirelessly. Fast forward to the year 2012, and more than 8 out of every 10 (82-85%) American adults over the age of 18 years use the Internet in some form, 88% own cell phones, 46% own smart phones, and 65% use social networking sites.[6] These changes have revolutionized the way information is accessed and shared around the world. Almost 7 out of 10 (66%) of American adults have a high-speed broadband connection at home (see **Figures 2-1** and **2-2**).

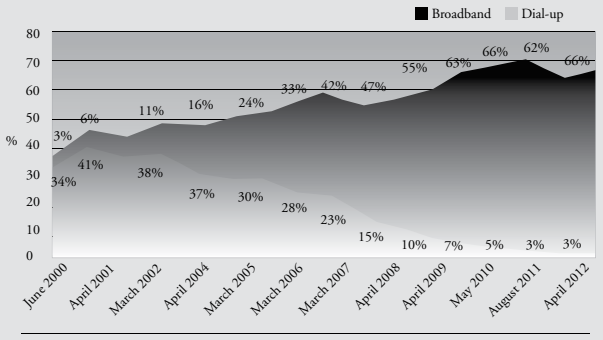
Figure 2-1. *Internet adoption, 1995-2012. (From Pew Internet and American Life Project.)*

Figure 2-2. *Broadband and dial-up adoption, 2000. (From Pew Internet and American Life Project.)*



Source: Pew Internet & American Life Surveys, March 2000-April 2012.
More: http://pewinternet.org/Trend-Data-(Adults)/Internet-Adoption.aspx

Figure 2-1



The method for measuring home internet use changed in 2011, which likely accounted for some of the seeming decline in adoption.
Source: Pew Research Center's Internet & American Life Mobile Survey, March 15-April 3, 2012. N for entire survey = 2,254 respondents age 18 older. Interviews were conducted in English and Spanish and on landline and cells.
Additional sources: Pew Internet & American Life Project Surveys, March 2000- August 2011. Question wording has changed slightly over time.

Figure 2-2

Young adults are at the forefront of the trend towards almost complete Internet connectivity. Fully 96% of all young adults (ages 18 to 29 years) use the Internet today.[7] The average use of all adults (18 to 65+ years) is 85%.[7] Other notable statistics are that people with a greater household income, in general, use the Internet more than people with a lower income.[7] Similarly, the higher a group's educational achievement, the greater their Internet connectivity.[7] (**Table 2-1)**

Older adults and seniors continue to lag behind younger adults in terms of Internet use and connectivity, but they too have made great strides in the last decade. Seniors aged 65 years and older have shown particular gains relative to other generations. Over half (58%) of that group uses the Internet.[8] E-mail is the most popular Internet service for this age group, with 86% of Internet users age 65 years and older using e-mail, and 48% doing so on a typical day.[9]

Even social networking sites are catching on with older adults. Almost one third (34%) of Internet users age 65 and older now use social networking sites such as Facebook, and 18% do so on a typical day.[9] While the youngest generations are still significantly more likely to use social network sites, the fastest growth has come from Internet users 74 years and older: social network site usage for this oldest cohort has quadrupled since 2008, from 4% to 16%.[9]

Different generations use the Internet in different ways and for different purposes. For example, young adults in the so-called Millennial generation (ages 18 to 33 years) are more likely to access the Internet wirelessly with a laptop or mobile phone.[9] They are also more likely to use the Internet for social networking sites, instant messaging, online classifieds, listening to music, playing online games, reading blogs, and participating in virtual worlds. Internet users in Gen X (those ages 34 to 45 years) and older cohorts are more likely than Millennials

Chapter 3

Risk of Sexual Abuse in Faith Communities

Karen J. Terry, PhD
Laura E. Litvinoff, MS

Introduction

Sexual abuse of minors is a widespread phenomenon. Victims of child sexual abuse almost always know the perpetrator, who may be a family member, childcare giver, acquaintance, friend, coach, teacher, or another adult with authority over the child. Child sexual abuse occurs within many organizations, particularly those in which adults form mentoring and nurturing relationships with the minors. In this context, sexual abuse also occurs within religious organizations. While such behaviors may seem shocking and unacceptable from men—and sometimes women—who hold spiritual positions of power, child sexual abusers within religious organizations are similar to child sexual abusers in any organization or society.

Most media reports about child sexual abuse within religious organizations have focused on abuse by Catholic priests. The first widespread reporting of sexual abuse in the Catholic Church occurred in 1983, when Reverend Gilbert Gauthe was accused of fondling, sodomizing, and raping young boys, engaging in oral sex in confessionals, and convincing others to engage in sexual acts with each other while he took photos. He was convicted in 1985 of sexually abusing young children between 1972 and 1983 and served less than 10 years in prison.[1] The next high-profile case in the Catholic Church came to light in 1993, when Reverend James Porter was reported to have abused over 100 young boys and girls in parishes across Massachusetts during the 1960s. In 1993, Porter was named Boston's first "predator priest" and was sentenced to 18 to 20 years in prison.[2]

On July 11, 1996, *The Boston Globe* published an article about a priest from Boston, John Geoghan, and his abuse of three boys.[3,4] As months passed, more claims of Geoghan's abusive behavior erupted across religious communities in Massachusetts. By 2002, Geoghan was believed to have sexually molested over 130 young boys between the years of 1962 and 1993. Geoghan was identified by the community and through the media as a "predator priest," "moral monster," a "pure predator" and a man of "no remorse."[5-7]

These high-profile cases were upsetting not only for their severity and duration, but also because of the men who committed them—religious leaders who had been trusted to work with and care for, unsupervised, minor children for years. In 2002 and the years thereafter, thousands of adults reported that they had been sexually abused by Catholic priests when they were minors. This explosion of reporting led to what is referred to today as the sexual abuse "scandal" or "crisis" in the Catholic Church. However, sexual abuse within religious organizations is not confined to the Catholic Church. The intensity of media reports from 2002 onward led to higher levels of reporting at a given point in time, and more news coverage of a few high profile "predatory priests." As a result, the Catholic Church commissioned in-depth studies of sexual abuse within the organization. These studies aimed to better understand the

nature and scope of the problem of sexual abuse by priests and why it happened. The key findings from those studies are reported in this chapter. Though to a lesser scope, journalists, victims, and researchers have evaluated the problem in other religious organizations as well, and this chapter provides information on what is known about sexual abuse within the various religious organizations. Based on data collected from the Catholic Church, the chapter concludes with an overview of best practices in prevention policies for sexual abuse within that and other religious organizations.

Understanding Sexual Abuse in Youth-Serving Institutions

Since 2002, much of the focus on child sexual abuse by the media has been on the Catholic Church. However, the available evidence suggests that sexual abuse in institutional settings, such as churches, schools, or childcare facilities, is a serious and underestimated problem, although it is substantially understudied. Gallagher reported that 3 percent of social service referrals are for claims of sexual abuse by an authority figure within an institution, with the most prevalent institutional abusers being teachers, clergy, scout leaders, tutors, and social workers.[8] Abusers in these settings are generally understood to be employees or volunteers who have some authority over children.[9] Data on abusers in institutional settings is limited, and most have come from social services, law enforcement agencies, advocates, and journalists rather than from academic researchers or the institutions themselves. No organization has undertaken a study of itself in the manner of the Catholic Church in the *Nature and Scope* and *Causes and Context* studies discussed later in the chapter. Moreover, most literature is theoretical in nature, and the studies that are available tend to be small in scope.

Of particular concern is the notion that some individuals choose to work in youth-serving organizations so that they can abuse children. In a study of the situational aspects of child sexual abusers, Wortley and Smallbone found that 20% of extra-familial offenders reported having accessed children via an organized activity, with some 8% having joined a child or youth organization for the primary purpose of perpetrating a sexual offense.[9] Colton, Roberts, and Vanstone found in their study that adult male abusers were attracted to particular positions within educational institutions or voluntary organizations that would afford them easy access to potential victims and allow them to maintain the abuse without being detected.[10] Sullivan and Beech, in a study of 41 so-called "professional" perpetrators, found that 15% reported having specifically picked their profession to access children while 41.5% reported that access to children was at least part of their motivation for having selected their profession.[11] Indeed, over 90% of the abusers studied were reported to have been aware of their sexual attraction to children prior to having begun their professional careers. Sullivan and Beech also found that abuse by religious leaders was more common than that committed by teachers or childcare professionals.[11] However, the authors observed considerable cross-over in roles; many religious professionals worked in a teaching capacity, while teachers worked in residential or religious settings.

Though it is arguably the most important institution to study (because of the exposure rates of minors to adults), there are few good studies of sexual abuse within schools. The most substantial report summarizing knowledge of sexual abuse by educators was written by Carol Shakeshaft in 2004, in which she stated that "educator sexual misconduct is woefully understudied."[12] Shakeshaft synthesized the statistics and results of the existing literature on sexual misconduct in schools and found that physical, verbal, and visual forms of sexual misconduct are widespread in schools. She noted that one study by the American Association of University Women (AAUW) showed that nearly 7% of students in grades 8 to 11 experienced an unwanted sexual contact, with 21% of the unwanted contact reportedly perpetrated by educators.[13]

Chapter 14

Role of the Medical Examiner in Fatal Cases of Child Maltreament

Mary E. Case, MD

Forensic pathology is a medical specialty developed to function through the office of the medical examiner. The medical examiner system is the medicolegal death investigation system that is created by state statute in each state in the United States and usually provides for a county, city, or state jurisdictional basis. Within the office of the medical examiner are forensic pathologists who perform autopsies and carry out record reviews to determine cause and manner of death on particular individuals whose death may have some impact on the well-being of others. The types of deaths that fall into the jurisdiction of the medical examiner vary by state statute but generally are those that occur suddenly, unexpectedly, by possibly unnatural causes, from accidents, homicides, or suicides, that may be related to dangers in the workplace or public place, that occur outside of hospitals or the care of a physician, or that affect certain categories of interest, such as children, individuals in custody of the law, those in the care of others, or persons at home. All states currently have specific medical examiner/coroner laws that provide for the investigation of deaths of children. For example, the Missouri statute requires that the death of any child under age 18 years must be investigated by the medical examiner or coroner. Child death laws generally provide that unless a child in a particular age group dies from a known natural disease, then a death investigation will be carried out by the medical/coroner system. These laws further provide that certain categories of these children will have autopsies and may further specify which physicians will conduct those autopsies. In most medical examiner systems, these children will be autopsied by forensic pathologists.

The forensic approach to an autopsy is significantly different from a hospital autopsy. Hospital autopsies are performed to determine why the patient has died and to evaluate the treatment modalities and the accuracy of diagnostic procedures. Forensic autopsies are performed on a select group of individuals about whom there is some concern for a possible unnatural death or harm to the well-being of society. State statutes usually allow the medical examiner to autopsy those who fall into their jurisdiction without family permission or consent.

Death Investigation

Di Maio described the following duties as falling into the medicolegal system[1]:

— To determine the cause and manner of death

— To identify the deceased if unknown

— To determine the time of death and injury

— To collect evidence including toxicology specimens from the body

— To document injuries or lack of them

— To deduce how the injuries occurred

— To document any natural disease present

— To determine or exclude other contributory or causative factors to the death

— To provide expert testimony if the case goes to trial

The cause of death is the disease or injury that creates the physiological disturbance that causes death. A gunshot wound of the chest is a cause of death. The manner of death describes how the cause of death came about. Manners of death include natural, accident, suicide, homicide, and undetermined. A gunshot wound could be an accident, a suicide, or a homicide depending on the circumstances surrounding the injury. The investigation of the death would elicit the details of the circumstances and might include accessory information from the death scene investigation, reports from police or other law enforcement agencies, and medical records. Sometimes after all information from the autopsy, toxicology, histology, and accessory investigation is gathered, the pathologist is still unable to ascertain a manner of death and the manner is then considered to be undetermined. For example, the case data from the large metropolitan medical examiner's office in St. Louis County, Missouri, documents that of the bodies autopsied by the medical examiner in 2010, 27% of the deaths were natural, 9% were homicide, 23% were suicide, 35% were accident, and 4% were undetermined.[2]

Many people, including non-forensic physicians, confuse cause of death with mechanism of death. It is not unusual to see death certificates signed by such physicians as "cardiac arrest" or "cardiopulmonary arrest." These descriptions of interruptions of vital functioning of the cardiac or cardiopulmonary systems are not causes of death. Mechanisms of death refer to the actual pathophysiological derangement that causes death. Mechanisms include exsanguination, renal failure, sepsis, and cardiac arrhythmias. A gunshot wound of the chest might cause the death through the mechanism of exsanguination. Determining the mechanism or mechanisms of death can be very helpful in child maltreatment cases. A case of liver laceration in a young child is a good example. Liver lacerations cause a problem through loss of blood. Very large liver lacerations can very rapidly cause exsanguination. Comparable injuries are seen in large liver lacerations in vehicular accidents where even adults may die within 15 to 30 minutes. This type of information is helpful in knowing what the clinical presentation of the injured child would be like. Methods of studying these mechanisms come from collections of case histories with known similar injuries and observations of the appearance and progression of these cases.

Review of Information

The death investigation begins with a death being reported to the medicolegal death investigator. Every medical examiner system has protocols for hospitals, police departments, funeral homes, hospice agencies, nursing homes, or other institutions that might have a dead body, directing them to call the medical examiner's office if a death falls into medical examiner's jurisdiction. The medicolegal death investigators' duties include taking telephone reports of deaths, responding to certain death scenes and carrying out death scene investigations, ordering medical records and police reports, and arranging transportation of bodies coming into the medical examiner office. The depth of the investigation depends on the complexity of the case but may include a very detailed scene investigation that might entail recreation of how the body was found, how the body was initially positioned, and, if there is more that one scene and a body has been moved, visiting other scenes. The death investigators work closely with the forensic pathologists and provide them with all the information necessary in a particular case. This medicolegal investigational activity is separate from the police investigation, which also generates information that is needed by the forensic pathologist to fully evaluate a case. Police evidence technicians are present at many forensic autopsies to obtain evidence and photographically document injuries and findings.

To properly evaluate the death of a child, a number of records must be reviewed. These records include the medical records beginning from birth and extending to the

marks, scars, fresh injury, healing injury, and healed injuries. Each injury is individually characterized as to whether it is an abrasion, contusion, laceration, cut, incised wound, burn, or penetrating injury, such as a gunshot wound or stab. Each injury is described by size, color, and shape. Sections of tissues from injuries are taken for microscopic examination to determine the age of the injury (**Figure 14-5**). If patterned injuries are noted, these are described and documented photographically as to the type of pattern suggested (ie, loop mark). In the case of a possible bite mark, before the area is cleaned a swab is taken using sterile saline on a cotton swab to lift possible DNA from the skin surface. Possible bite marks are examined by a forensic odontologist. The degree and distribution of livor and rigor is described and photographed. Sometimes such postmortem changes can be helpful in discerning whether historical information regarding the position of the body or time of death is consistent with the observed changes.

Figure 14-5. *Many contusions on back incised for photography and to take sections to submit for microscopic examination for aging of contusions.*

Figure 14-6-a. *Mouth of 5-year-old girl showing healed avulsion of right lower lip, fractured upper right central incisor.*

Figure 14-6-b. *Inner mucosal surface of mouth to demonstrate laceration of right lower lip.*

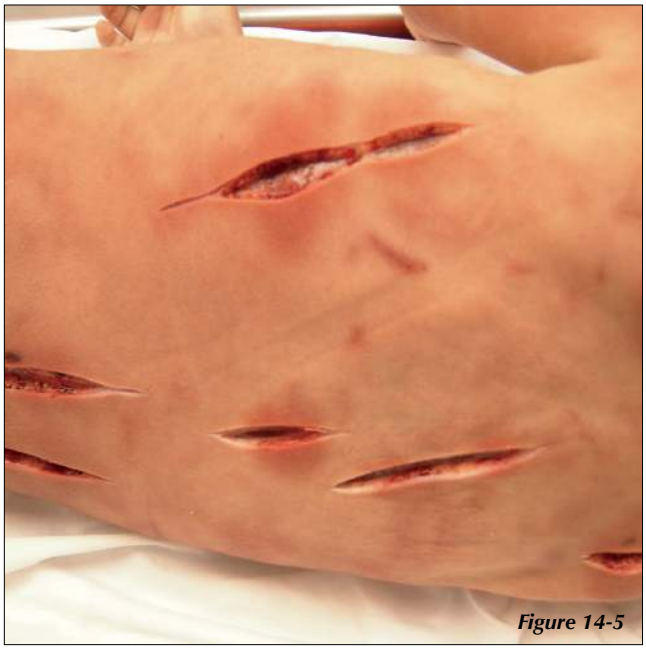


Figure 14-5

The external examination of a child includes the state of nutrition, hygiene, hair growth, unusual soiling with urine or feces, and any congenital abnormalities. Evidence of dehydration by the appearance of sunken fontanel or eyes, poor skin turgor, and dry mucosal membranes is noted. In cases of failure to thrive (FTT), external evidence may include lack of subcutaneous tissue, protruding ribs and vertebral bones, and gaunt facies.

The mouth is closely inspected for injury of the teeth, lips, gums, and frenula. Injuries to the mouth must be distinguished from injuries resulting from intubation and resuscitation efforts. Inflicted injuries of the mouth are frequently seen in association with other abusive injuries (**Figures 14-6-a** and **b**).

The genitalia is examined for any evidence of injury and, if assault is suspected, swabs are taken from the oral cavity, vagina, rectum, and penis for DNA. Injuries to the female genitalia are fairly easily recognizable if there are gross tears or contusion. There may be injuries to the genitalia that are not sexually inflicted but caused by blunt trauma (**Figure 14-7**). Rectal changes after death may be mistaken by inexperienced persons


Figure 14-6-a

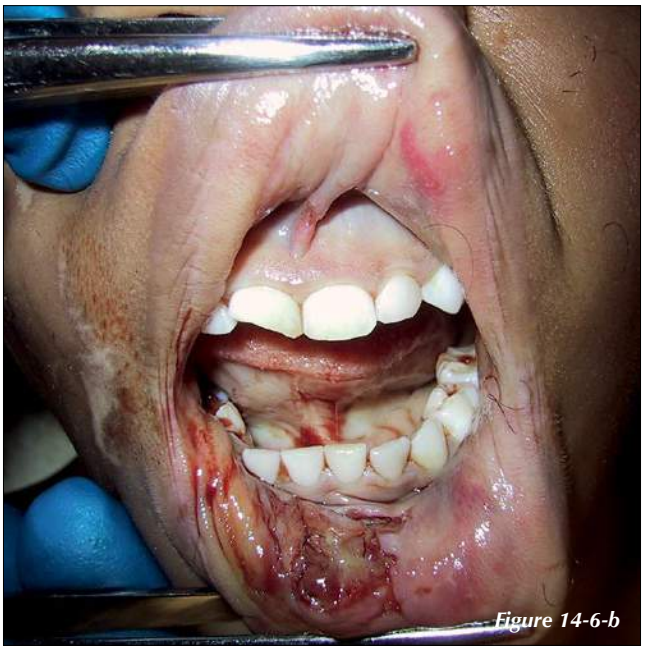


Figure 14-6-b

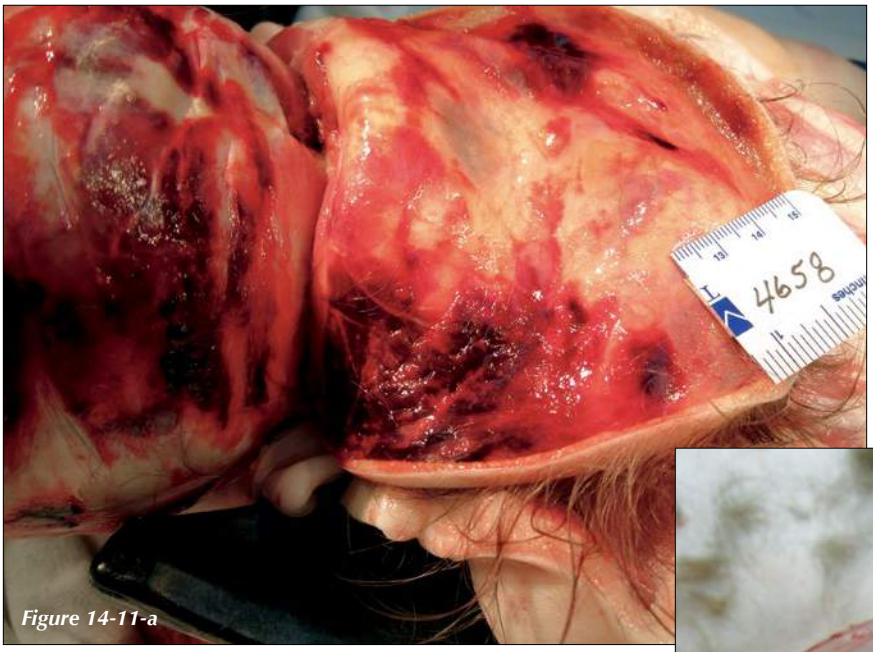


Figure 14-11-a

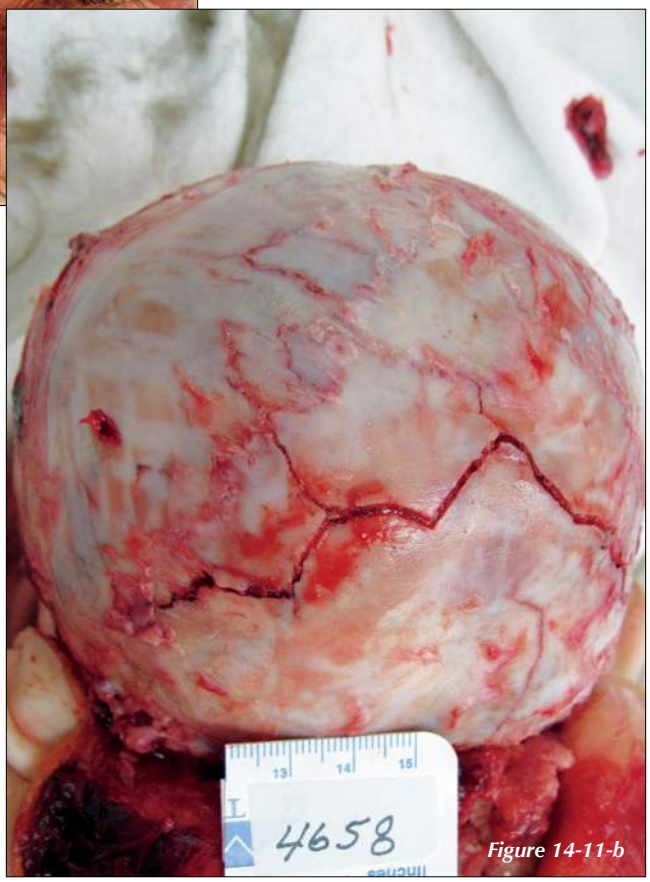


Figure 14-11-b

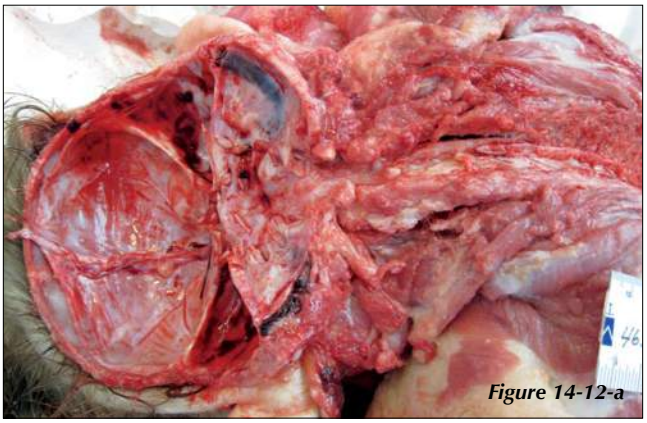


Figure 14-12-a

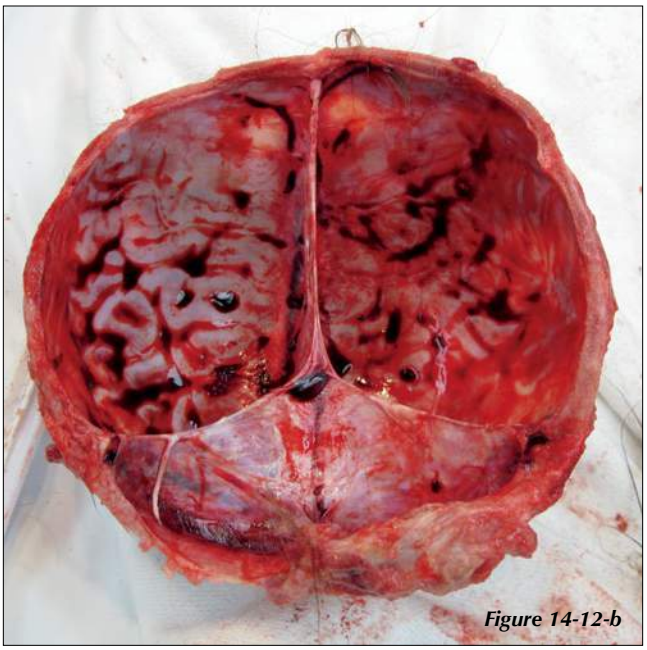


Figure 14-12-b

Figure 14-11-a. *Periosteal hemorrhage overlying fracture of occipital skull.*

Figure 14-11-b. *Periosteum has been removed to show underlying fracture of occipital skull.*

Figure 14-12-a. *Removal of brain and spinal cord together from a posterior approach.*

Figure 14-12-b. *Calvarium showing small amount of subdural blood in a case of abusive head trauma.*

Chapter 17

DNA Evidence

Valerie Mattimore Fuller, PhD
Kathryn Bell, MS, RN

Many interesting case scenarios illustrate the forensic power of DNA. The strength of forensic DNA testing to individualize forensic evidence has changed the face of forensics worldwide and has made DNA testing an essential forensic tool. The breadth of evidence samples capable of rendering amazingly probative DNA results continues to expand. Beyond a simple understanding of how DNA evidence can solve cases, it is important to understand how DNA evidence collection and testing practices have had to and must continue to constantly evolve to provide ever increasing probative, reliable, and rapid investigative impact. Since its first use in 1985, the field of forensic DNA testing has been fraught with dynamic change through its constant attempt to increase its relevance, its investigative impact, its reliability, its objectivity, and its timeliness in solving crime. Forensic DNA testing has had to adapt and change to address important public and professional issues that have arisen over the years. Although standardization diametrically opposes innovation, the forensic DNA testing community has had to address the difficult issue of standardization in its practices for two important reasons. It has had to find ways to govern its reliability and credibility by ever increasing levels of regulation, documentation, and oversight, and it has also had to commit to specific technologies in order to give testing methods the continuity upon which to build an effective database. With the ever increasing application of DNA testing to more and more types of crime and the successful testing of smaller and more sensitive types of crime-scene samples, the forensic DNA testing community has endeavored to continually train investigators and examiners to recognize important DNA evidence and to appropriately collect it so that its potential to solve cases can be fully realized. The quality of DNA case submissions has increased. With this increasingly successful use of forensic DNA testing technology comes the need for developing greater capability worldwide as well as creating greater capacity within existing DNA testing laboratories to keep pace with the demand. Each of these aspects of forensic DNA testing will be illustrated by specific actual case scenarios whenever possible as the history, application, collection, relevance, and future of forensic DNA testing is explored in this chapter.

The Historical Context of Forensic DNA Testing

Successfully solving a crime within any field of forensic science requires that one must detect evidence that will clearly and irrefutably link a victim and a suspect to a crime scene. The father of modern forensic science, Dr. Edmond Locard (1877-1966), most eloquently formulated this basic principle of forensic science by his phrase "Every contact leaves a trace":

> Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as a silent witness against him. Not only his fingerprints or his footprints, but his hair, the fibers from his clothes, the glass he breaks, the tool mark he leaves, the paint he scratches, the blood or semen he deposits or collects. All of these and more, bear mute witness against him. This is evidence that does not forget. It is not confused by the excitement of the moment. It is not absent because human witnesses are. It is factual evidence. Physical evidence cannot be wrong, it cannot perjure itself, it cannot

Chapter 25

The Medical Examiner Atlas

Thomas L. Bennett, MD

The medical examiner plays multiple roles in the evaluation of a patient's injuries and death, especially in the injuries and death of a child. The appropriately-trained forensic pathologist becomes involved with any sudden and unexpected death or any death suspected to be caused or contributed to by an injury or nonnatural condition which is reported to the medicolegal authority having jurisdiction where death was pronounced. The involvement of the medical examiner in child abuse and neglect traditionally begins at the time of death. However, with injured children maintained in our medical centers with supportive measures, the medical examiner may be notified and asked to become involved in the investigations long before death is pronounced. Because the forensic pathologist is uniquely focused on determining the cause and circumstances of an injury or death, rather than making treatment decisions, the forensic pathologist is increasingly involved in explaining injuries reported to and investigated by authorities involved in child protection, even when death is not imminent.

In cases of suspected child abuse and neglect, the medical examiner is asked to: (1) determine the cause and manner of death to a reasonable degree of medical certainty; (2) provide expert evaluation of the presence, absence, nature, and significance of injuries and disease; (3) collect and preserve evidence; (4) correlate clinical and pathological findings; (5) translate and explain the findings to the families and others involved; and (6) present expert opinions and testimony in appropriate forums. Further, with the advent of multidisciplinary child fatality review teams, the medical examiner may be part of community-wide efforts directed at preventing child injuries and deaths as well.

Medical examiners are expected to have a background in the basics of child abuse and neglect owing to their training as physicians. It is generally expected that additional training will occur as well in the areas of mechanisms of trauma and injury, dynamics of child maltreatment, and common as well as unusual presentations and manifestations of child abuse and neglect. Additionally, with the mandatory focus on death scene investigations related to possible sudden infant death syndrome (SIDS) deaths, the medical examiner typically gains experience and expertise at crime scene evidence collection and re-enactments to determine plausibility for the history provided.

Although the performance of an accurate autopsy remains central, the medical examiner's role goes beyond the autopsy room. To be most effective, medical examiners must work closely with law enforcement personnel and clinicians involved with each case. Once an opinion is rendered, they must communicate with the prosecuting attorney, law enforcement personnel, and others as appropriate. The cases included in this chapter illustrate the types of injuries and cases that fall into the jurisdiction of the medical examiner.

Suspicious Injuries

Penile Laceration

Case Study 25-10 *(continued)*

Figure 25-10-d. *Again in the en face orientation, the small contusion on the mons pubis, just superolateral to the base of the penis may be seen.*

Figure 25-10-e. *Taken from the child's left side, this photograph demonstrates the contusion right above the base of the penis near the mons pubis.*

A crushing or biting type injury was excluded as a possibility because there were no injuries to internal structures. The laceration appeared very clean. It was thought that the most likely mechanism of the injury was forcible stretching of the penile skin, stretching the skin beyond its elastic maximum. A rapid jerking motion essentially tore the skin at the base of the penis, a fresh/acute injury believed to have been inflicted by a caretaker.

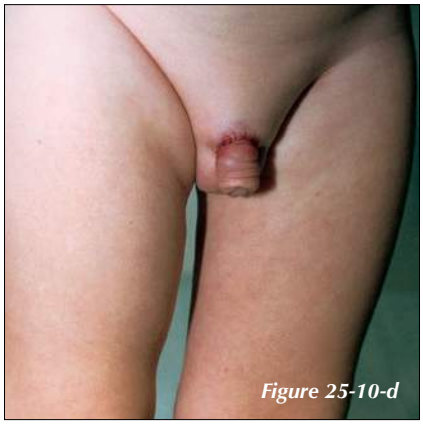


Figure 25-10-d

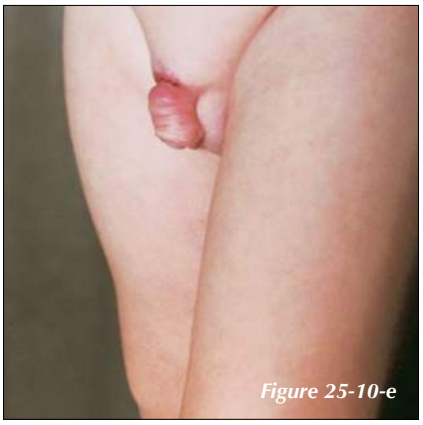


Figure 25-10-e

Bite Marks

Case Study 25-11

This 2-year-old boy was taken in for evaluation after lesions suspicious for bite marks were noted on his face, abdomen, arms, and buttocks. On evaluation, he weighed 13 kg, placing him at about the 70th percentile for weight; he was 82.5 cm tall, at about the 5th percentile for his height. He had not gained weight in about 4 months. His immunizations were current, and he was cooperative for the examination. His skin examination revealed at least 19 paired arc-shaped irregular abrasions and bruises, interpreted as bite marks that were adult in character, owing to the measurement between the canine teeth impressions and the full adult-type anterior dentition. A diagram of the bite marks was drawn, and color photographs were obtained.

Figures 25-11-a *and* ***b.*** *Diagram showing the location of the bite marks. All bite injuries appear to be of a similar character and age, judging by the coloration.*

Figure 25-11-c. *The child's abdomen had multiple bite marks with a linear abrasion on the right side. Note that bite marks are rarely, if ever, not paired arcs of irregular bruises and/or abrasions, mirroring the patterns of the inflicting teeth.*

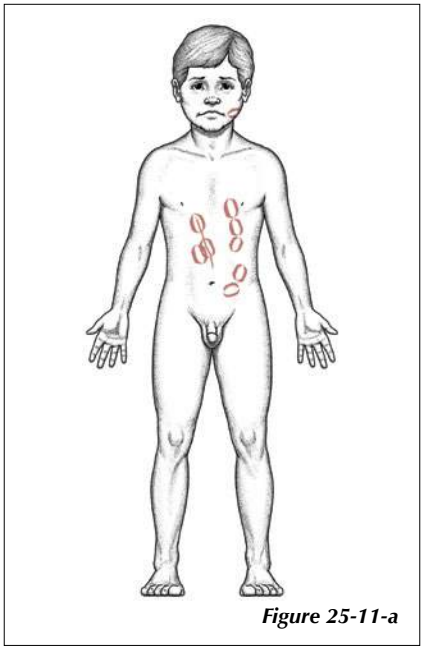


Figure 25-11-a

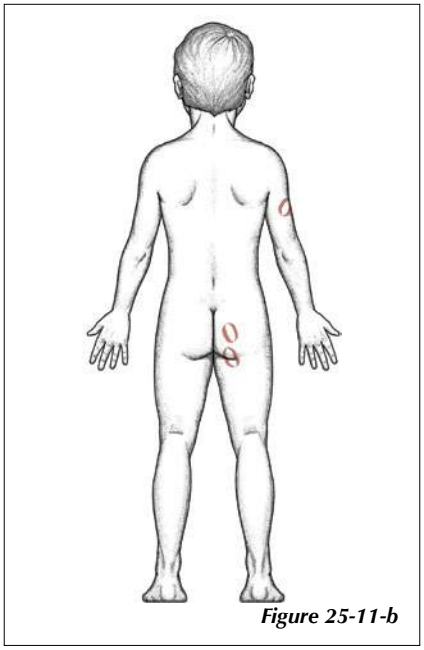


Figure 25-11-b

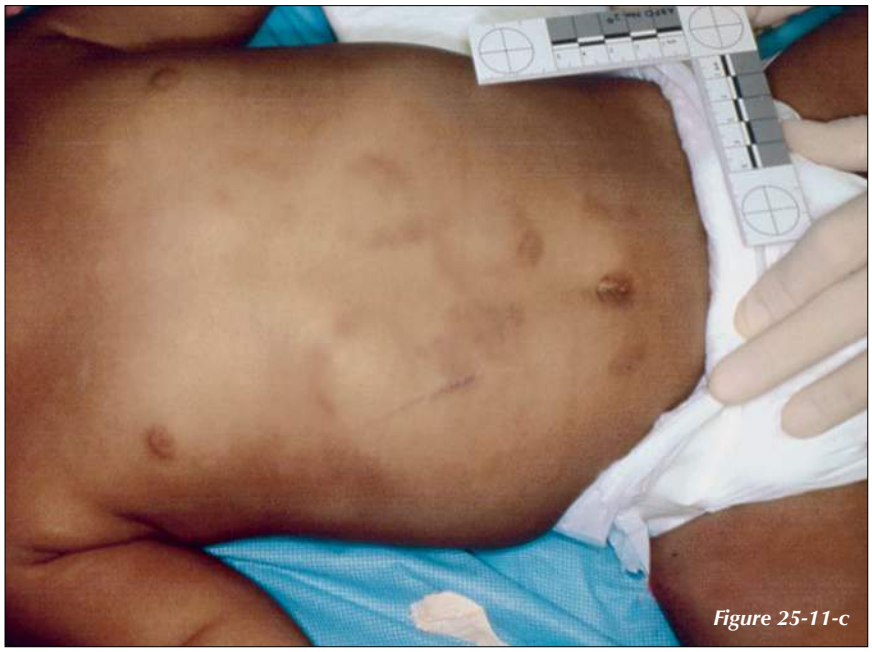


Figure 25-11-c

Suspicious Injuries

Evidence of Ongoing Maltreatment

Case Study 25-16

This 4-year-old boy sustained central nervous system injuries and had several bone fractures. There were also a number of cutaneous findings. Looking at the various injuries and providing ranges for when these injuries would have been sustained suggested that the child was subjected to an extended pattern of maltreatment.

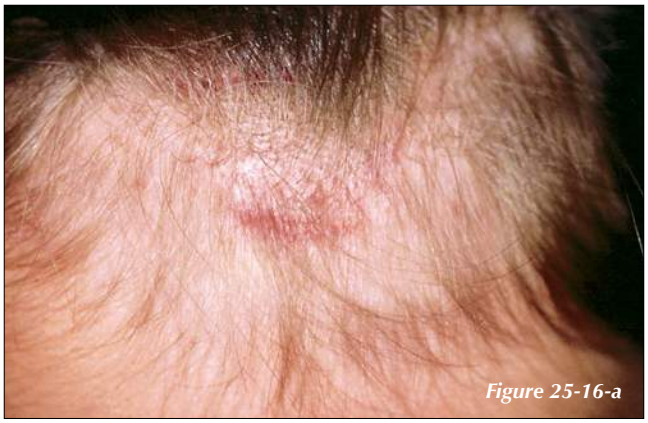


Figure 25-16-a

Figure 25-16-a. *Note the approximately 1-cm crusted abrasion at the hairline.*

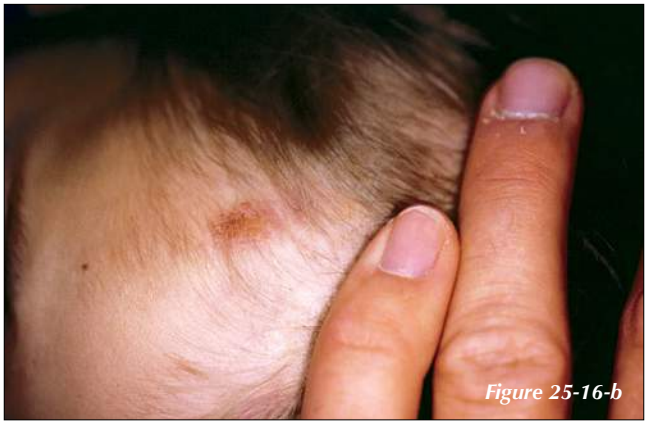


Figure 25-16-b

Figure 25-16-b. *A bruise at the hairline.*

Figure 25-16-c. *The child in the right lateral decubitus position with a number of quarter- to half-dollar-sized brownish-margined bruises.*

Figure 25-16-d. *With the child in the left lateral decubitus position, brownish bruises are seen over his buttocks bilaterally.*

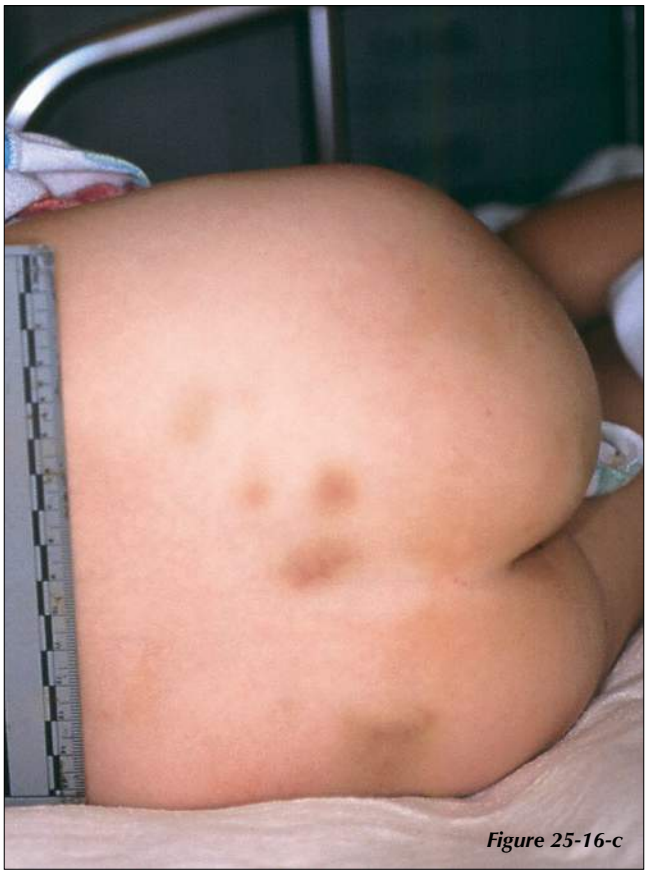


Figure 25-16-c

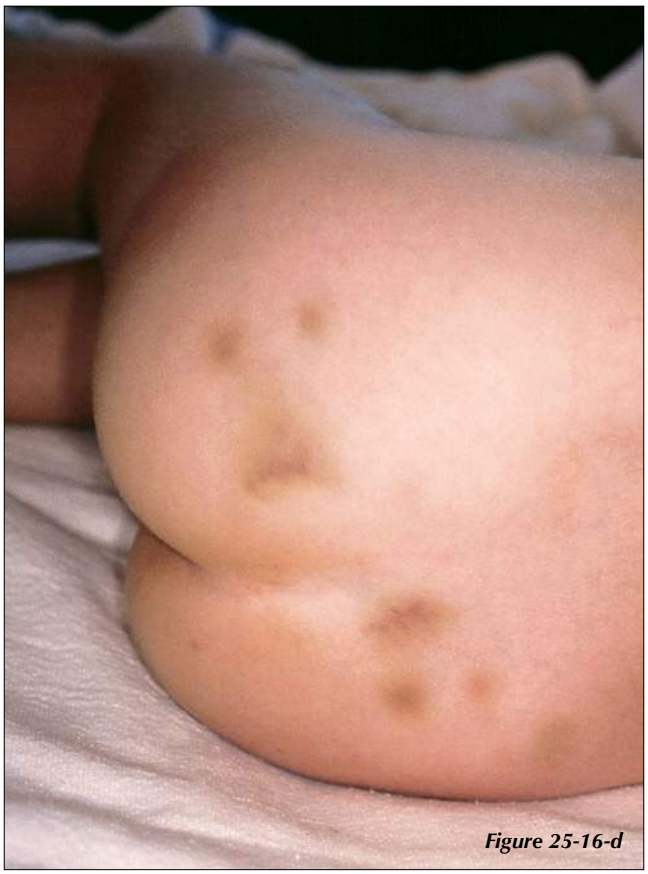


Figure 25-16-d

Chapter 26

Police Investigations Atlas

Craig Smith, BGS

The role of the police in child maltreatment cases is first to determine if a crime has been committed and then to gather evidence regarding that crime. When a child is hurt, the police work most effectively with medical personnel and child protection workers in determining if the injury is deliberate, accidental, or the result of a natural disease process. Each discipline involved brings a set of skills to the investigation that can be integrated into a multidisciplinary environment. Doctors find that certain accidental injuries and diseases can be difficult to differentiate from deliberately inflicted damage. Child protection workers may be unable to discern if a caregiver is being deceptive. A police investigation often helps to overcome these difficulties.

In cases of suspected child abuse, the police investigator interviews potential suspects and witnesses, conducts scene examinations, and collects evidence for analysis. In suspected child abuse cases, a thorough police investigation is as essential as a thorough home assessment or medical examination.

Doctors, child protection workers, and police investigators have specific duties during the gathering of information from caregivers in cases of suspected child abuse.

Doctors are responsible for understanding what the caregiver knows about the injury in order to prescribe appropriate treatment; child protection workers determine if the injured child or any other children are in an unsafe environment; and police investigators gather information in order to establish if a crime has been committed, and if so, collect evidence to support the filing of charges.

Abusers will often attempt to elicit specific information from medical personnel or child protection workers in order to tailor their explanation of the injuries suffered by the victim; therefore, it is essential that professionals refrain from discussing possible mechanisms of injury with caregivers who may in fact be abusers. It is the responsibility of the police, not the medical personnel or child protection workers, to confront suspected child abusers during an interrogation.

The most basic element of any child abuse investigation is the interview. Doctors, nurses, and ambulance personnel should be interviewed as soon as possible in order to get their version of the events while it is still fresh in their minds. Investigators usually interview people individually so as to avoid any cross-contamination. While detailed statements require a significant amount of time, they are essential to ensure that stories do not change over time. Seemingly insignificant details are frequently used to refute or support the account of an individual. If a caregiver states that he called the hospital as soon as he found his child unconscious as a result of a fall, subsequent evidence that he called two other relatives before seeking medical attention will cast his story in a negative light.

In most child abuse cases, the police should initially interview all caregivers in a nonaccusatory manner and attempt to gain as much detailed information about the child's injuries as possible (**Table 26-1**).

Offender's Purported Reasons for the Abuse

Case Study 26-2

This 18-month-old girl began crying when her mother and father were arguing. The father went into the child's room and beat her with a fly swatter. He initially admitted to "spanking" her 2 to 3 times on the diaper. He later admitted he was angry at his wife and took out that anger on his child. He told the police interviewer that he was so angry that he lost count of the number of times he hit the child.

Figure 26-2-a. *Bruising to the back.*

Figures 26-2-b *and* ***c****. Fly swatter pattern bruising to the back.*

Figure 26-2-d. *Fly swatter pattern bruising to the left thigh.*

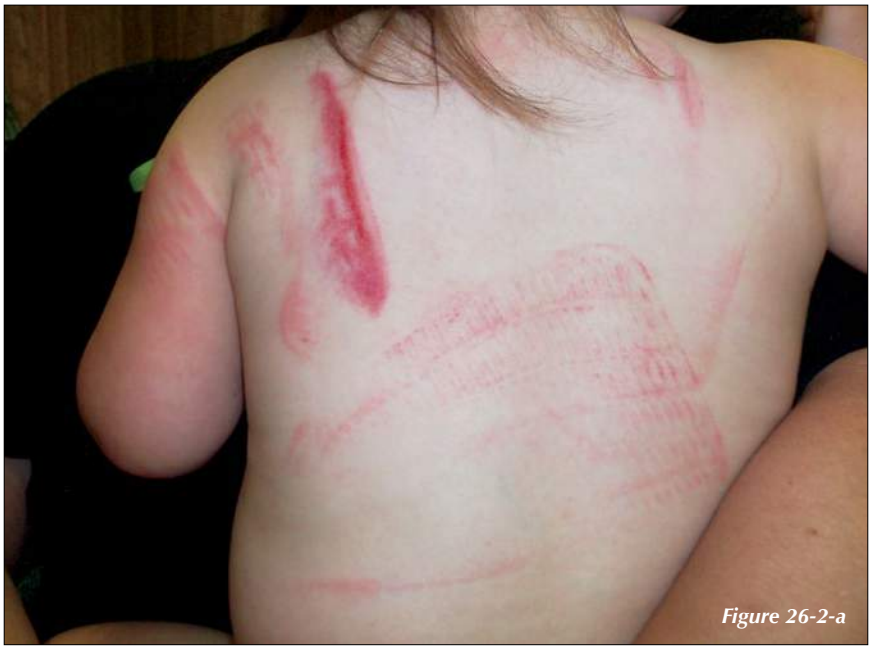


Figure 26-2-a

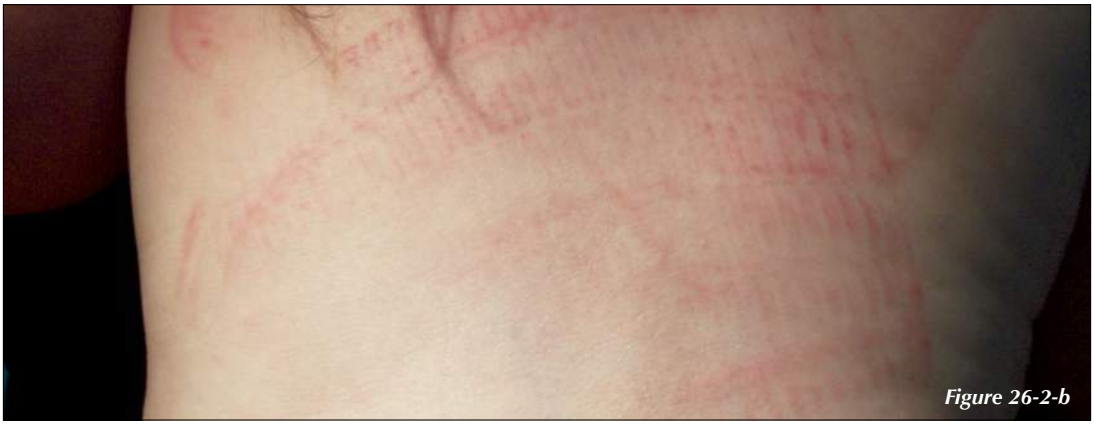


Figure 26-2-b

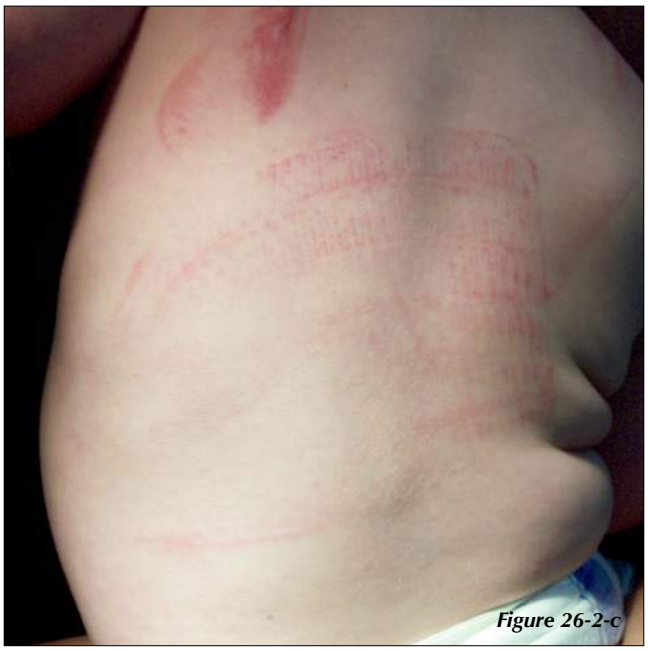


Figure 26-2-c

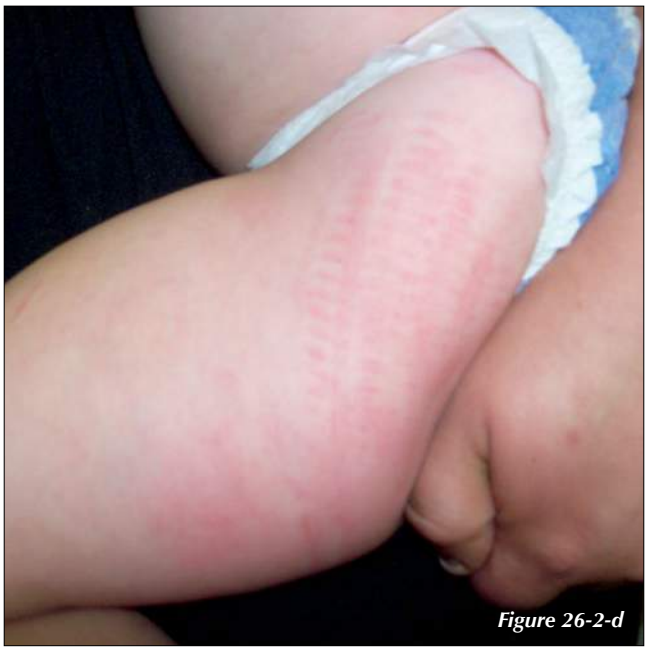


Figure 26-2-d

Offender's Purported Reasons for the Abuse

Case Study 26-3

This 7-year-old boy was disciplined by his father for wetting the bed.

Figures 26-3-a *and* ***b.*** *The bruising around the mouth resulted from the father grabbing the child's face.*

Figure 26-3-c. *Bruising to the buttocks resulted from dad spanking the child, not only by hand, but also by using a 2x4. Dad admitted that he hit the child once for each time the boy wet the bed and on this occasion he had "saved up" the hits from several bed-wetting incidents.*

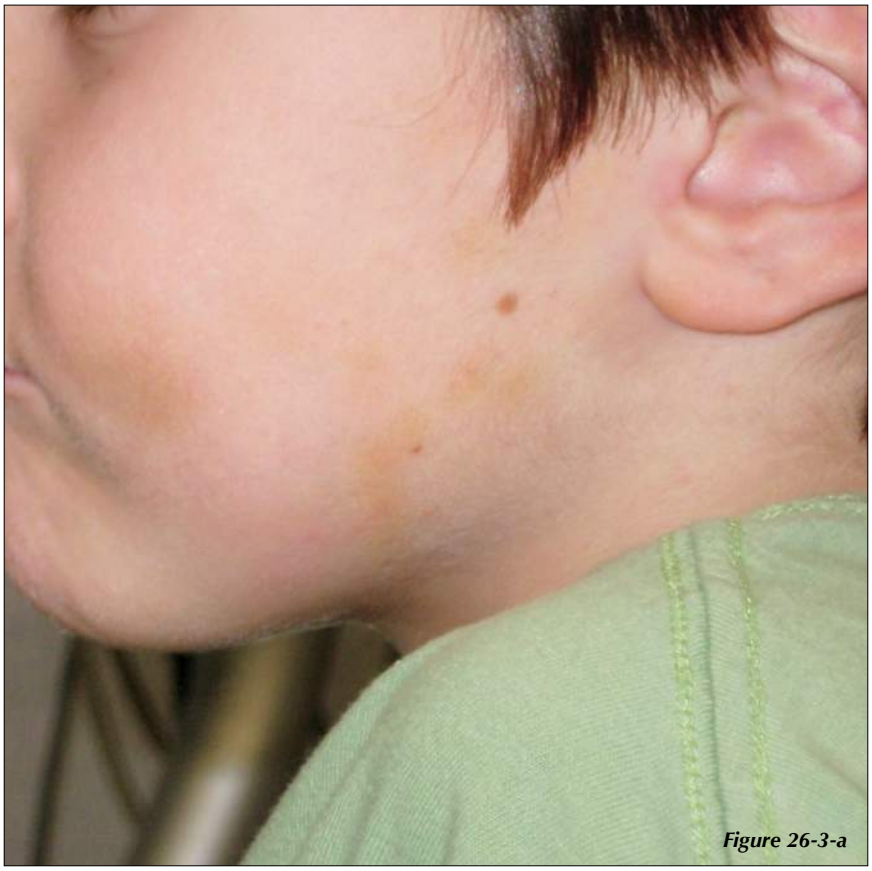


Figure 26-3-a

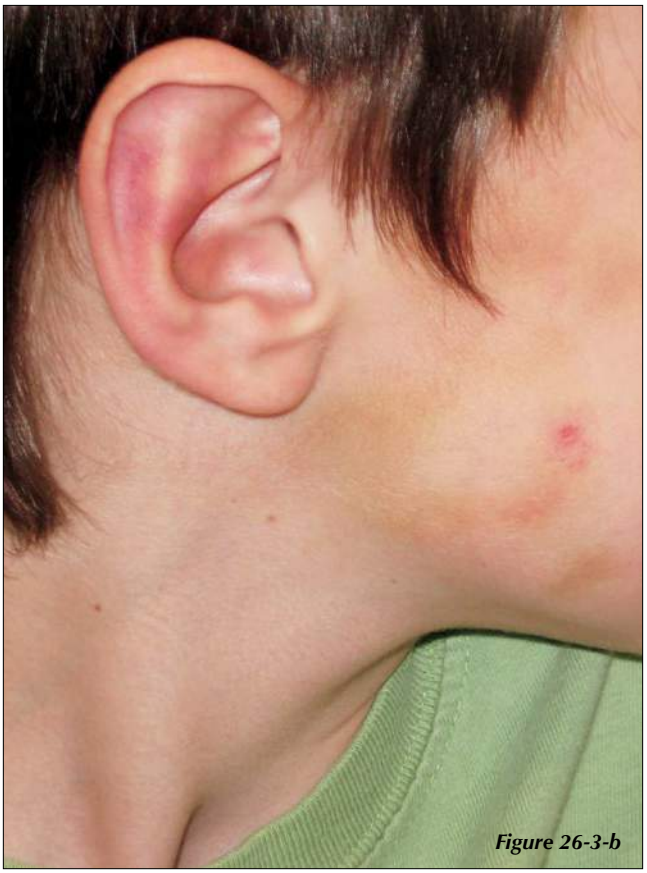


Figure 26-3-b

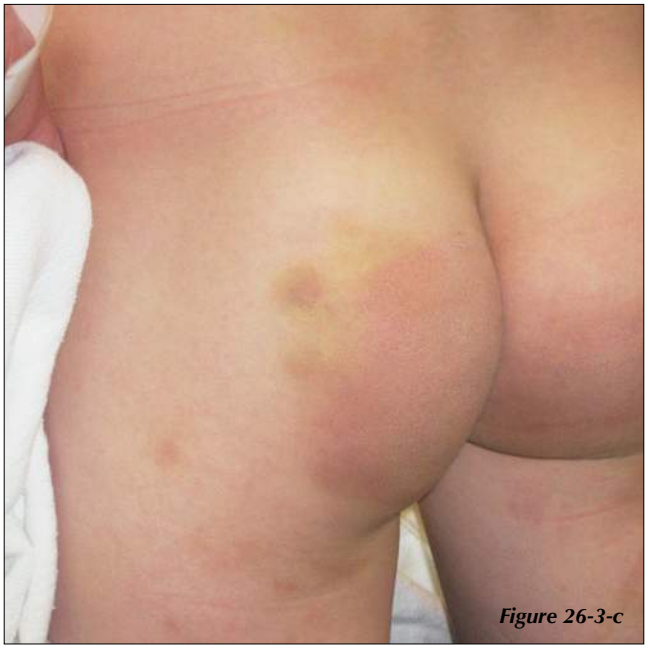


Figure 26-3-c

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