

Physical signs of child abuse

K. Archana¹, K. R. Don^{2*}

ABSTRACT

Physical abuse is nonaccidental physical injury (ranging from minor bruises to severe fractures or death) as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting (with a hand, stick, strap, or other object), burning, or otherwise harming a child, which is inflicted by a parent, caregiver, or other person who has responsibility for the child. Such injury is considered abuse regardless of whether the caregiver intended to hurt the child. This article reviews the causes, physical signs and symptoms, risk factors, exams and tests, and prevention and treatment of child abuse.

KEY WORDS: Identification, Physical child abuse, Prevention and treatment, Signs and symptoms

INTRODUCTION

Child abuse or maltreatment constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, and trust or power.^[1]

Child maltreatment is a considerable social and public health problem in the United States. In 2004, data collected from child protective services determined approximately 900,000 children in the United States were victims of child maltreatment and about 1500 children died due to abuse or neglect.^[2] Child maltreatment is a devastating social problem in American society. In 1990, over 2 million cases of child abuse and neglect were reported to social service agencies. In the period 1979 through 1988, about 2000 child deaths (ages 0–17) were recorded annually as a result of abuse and neglect.^[3]

The four major categories of child abuse are neglect, physical abuse, psychological or emotional abuse, and sexual abuse.^[1]

Physical abuse involves physical aggression such as hitting, shaking, throwing, poisoning, burning or scalding, drowning, suffocating, or otherwise causing physical harm to a child.^[4]

Sexual abuse is defined as any sexual act, overt or covert, between a child and an adult (or older child, where the younger child's participation is obtained through seduction or coercion). Irrespective of how childhood sexual abuse is defined it generally has significant negative and pervasive psychological impact on its victims.^[5,6]

Emotional abuse includes the failure of a caregiver to provide an appropriate and supportive environment and includes acts that have an adverse effect on the emotional health and development of a child. Such acts include restricting a child's movements, denigration, ridicule, threats and intimidation, discrimination, rejection, and other nonphysical forms of hostile treatment.^[1]

Neglect is the failure of a parent, guardian, or other caregiver to provide for a child's basic needs.^[1]

CAUSES

Physical abuse tends to occur at moments of great stress. Many people who commit physical abuse were abused themselves as children. As a result, they often do not realize that abuse is not an appropriate discipline.

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¹Graduate Student, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai, Tamil Nadu, India, ²Department of Oral and maxillofacial Pathology, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: K. R. Don, Department of Oral and Maxillofacial Pathology, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, 162, Poonamallee High Road, Chennai - 600 077, Tamil Nadu, India. Phone: +91-9443215893. E-mail: drkrdon@gmail.com

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Often people who commit physical abuse also have poor impulse control. This prevents them from thinking about what happens as a result of their actions. The rate of child abuse is fairly high. The most common form is neglect.^[7,8]

RISK FACTORS

The major risk factors for child abuse include:

- Alcoholism
- Domestic violence
- Drug abuse
- Being a single parent
- Lack of education
- Poverty.

However, it is important to note that cases of child abuse are found in every racial or ethnic background and social class.^[7,8]

SIGNS AND SYMPTOMS

Face

- Black eyes (raccoon eyes)
- Retinal hemorrhage.

Lips

- Bruises
- Lacerations
- Angular abrasions (gag marks).

Nose

- Fractures
- Displacement.

Head

- Skull injuries
- Bald spots (traumatic alopecia)
- Bruises behind ears (Battle's sign).

Intraoral

- Frenulum tears
- Palatal bruising (forced fellatio)
- Residual tooth roots.

Maxilla and Mandible

- Fractures of improperly healed
- Malocclusion from previous fractures.

Teeth

- Fractured, mobile, avulsed, or discolored teeth in the absence of reasonable explanations
- Untreated rampant caries
- Untreated obvious infections or bleeding.^[7,8]

IDENTIFICATION

Physically abused children might have unusual injuries to particular sites on their bodies that are

not usually subject to injury, such as wounds on the genitals, on the thighs, or around the eyes. Physical abuse might even manifest as serious trauma without adequate justification, such as fracture with minimal trauma. In clinical practice, physically abused children might stare at their parents or caregivers and appear apprehensive, as if they are waiting for the next abusive event to occur.^[9]

The followings are the factors which help in the identification of physically abused children:

- Broken bones that are unusual and unexplained.
- Bruise marks shaped such as hands, fingers, or objects such as iron, kitchen implement, cigarette, belt, and bite marks-teeth.
- Bruises in areas where normal childhood activities would not usually result in bruising.
- Bulging fontanelle (soft spot) or separated sutures in an infant's skull.
- Burn (scalding) marks, usually seen on the child's hands, arms, or buttocks.
- Choke marks around the neck.
- Cigarette burns on exposed areas or the genitals.
- Circular marks around the wrists or ankles (signs of twisting or tying up).
- Human bite marks.
- Lash marks.
- Unexplained unconsciousness in an infant.^[7,8]

SIGNS AND TESTS

Typical injuries in abused children include:

- Any fracture in an infant too young to walk or crawl.
- Bleeding in the back of the eye, seen with a shaken baby syndrome or a direct blow to the head.
- Collection of blood in the brain (subdural hematoma) without good explanation.
- Evidence of fractures at the tip of long bones or spiral-type fractures that result from twisting.
- Evidence of skull fracture.
- Fractured ribs, especially in the back.
- Internal damage, such as bleeding or rupture of an organ from blunt trauma.
- Multiple bruises that occurred at different times - especially in unusual areas of the body or in patterns that suggest choking, twisting, or severe beating with objects or hands.
- Other unusual skin damage, including burns or burn scars.

The following tests can reveal physical injuries:

- Bone X-ray: All of the child's bones, including the skull, are x-rayed to look for unseen fractures or old, healing fractures.
- Magnetic resonance imaging or computed tomography scan of the head or abdomen is done if there is a skull fracture; bleeding in the eye; unexplained vomiting; severe bruising of the face,

skull, or abdomen; unexplained nervous system (neurological) symptoms; headaches; or loss of consciousness.

The following medical conditions have symptoms similar to those of physical abuse:

- Osteogenesis imperfecta - almost all children with this condition have an abnormal (blue) coloring of the whites of the eyes. These children may have spontaneous fractures or break bones after accidents that would not harm the bones of a normal child.
- Undetected bleeding disorders such as hemophilia, Von Willebrand's disease, or liver disease can lead to abnormal bruising patterns. The doctor can test for these disorders.
- Unusual bruising and scarring patterns can also be caused by folk medicine or oriental medicine practices such as coin rubbing, cupping, and burning herbs on the skin over acupuncture points (called moxibustion). The doctor should always ask about alternative healing practices.^[7,8]

EFFECTS OF CHILD ABUSE

The immediate physical effects of abuse or neglect can be relatively minor (bruises or cuts) or severe (broken bones, hemorrhage, or even death). In some cases, the physical effects are temporary; however, the pain and suffering they cause a child should not be discounted. Rib fractures may be seen with physical abuse, and if present may increase suspicion of abuse but are found in a small minority of children with maltreatment-related injuries.^[10,11]

Meanwhile, the long-term impact of child abuse and neglect on physical health is just beginning to be explored. The long-term effects can be:

Shaken Baby Syndrome

Shaking a baby is a common form of child abuse that often results in permanent neurological damage (80% of cases) or death (30% of cases).^[12] Damage results from intracranial hypertension (increased pressure in the skull) after bleeding in the brain, damage to the spinal cord and neck, and rib or bone fractures.^[13]

Battered Child Syndrome

It is characterized by a group of physical and mental symptoms caused by long-term physical violence against the child. The abuse takes the form of cuts, bruises, broken bones, burns, and internal injuries from hitting, punching, or kicking. Nearly half of the victims of this type of abuse are under the age of one. Parents who bring their abused children to an emergency room frequently offer complicated and vague explanations of the child's injuries. Medical personnel must be trained and knowledgeable of the causes of various types of injuries.^[14]

Impaired Brain Development

Child abuse and neglect have been shown, in some cases, to cause important regions of the brain to fail to form or grow properly, resulting in impaired development.^[15,16]

Poor physical health and Adults who experienced abuse or neglect during childhood are more likely to suffer from physical ailments such as allergies, arthritis, asthma, bronchitis, high blood pressure, and ulcers.^[17]

TREATMENT

A number of treatments are available to victims of child abuse.^[18] However, children who experience childhood trauma do not heal from abuse easily.^[17] There are focused cognitive behavioral therapy (CBT), first developed to treat sexually abused children, is now used for victims of any kind of trauma. It targets trauma-related symptoms in children including post-traumatic stress disorder, clinical depression, and anxiety. Several studies have found that sexually abused children undergoing trauma-focused - CBT improved more than children undergoing certain other therapies.

Abuse-focused CBT was designed for children who have experienced physical abuse. It targets externalizing behaviors and strengthens prosocial behaviors. Offending parents are included in the treatment, to improve parenting skills/practices. It is supported by one randomized study.

Rational cognitive-emotive behavior therapy consists of 10 distinct but interdependent steps. They are:

1. Determining and normalizing thinking and behaving
2. Evaluating language
3. Shifting attention away from problem talk
4. Describing times when the attachment problem is not happening
5. Focusing on how family members "successfully" solve problematic attachment behavior
6. Acknowledging "unpleasant emotions" (i.e., angry, sad, and scared) underlying negative interactional patterns
7. Identifying antecedents (controlling conditions) and associated negative cognitive-emotive connections in behavior (reciprocal role of thought and emotion in behavioral causation)
8. Encouraging previously abused children to experience or "own" negative thoughts and associated aversive emotional feelings
9. Modeling and rewarding positive behavior change (with themselves and in relationships) and
10. Encouraging and rewarding thinking and behaving differently. This type of therapy shifts victims'

thoughts away from the bad and changes their behavior.^[9]

ORGANIZATIONS

The National Child Protection Council is particularly concerned with developing primary and secondary prevention strategies to reduce the incidence of child abuse and neglect. It recognizes that the protection of children is closely linked to the concept of strengthening families. This, in turn, is associated with the need for a general change in community attitudes to reflect the value and importance of children, as well as the need for improvements in income, health, and housing so that parents' ability to care for children can be enhanced. A detailed national strategy with these objectives for preventing child abuse has been developed for the National Child Protection Council.^[19]

The U.S. Army Dental Command's Health Promotion and Disease Prevention Program's newest initiative is a family violence awareness program called Prevention of Abuse and Neglect through Dental Awareness.^[20]

NICHD, also known as the National Institute of Child Health and Human Development, is a broad organization but helps victims of child abuse through one of its branches. Many individuals and organizations have taken important steps to prevent child abuse and neglect.

CONCLUSION

Child abuse is a serious global health problem. Although most studies on it has been conducted in developed countries, there is compelling evidence that the phenomenon is common throughout the world. Much more can and should be done about the problem. In many countries, there is little recognition of child abuse among the public or health professionals. Recognition and awareness, although essential elements for effective prevention, are only part of the solution. Prevention efforts and policies must directly address children, their caregivers and the environments in which they live to prevent potential abuse from occurring and to deal effectively with cases of abuse and neglect that has taken place. The concerted and coordinated efforts of a whole range of sectors are required here, and public health researchers and practitioners can play a key role by leading and facilitating the process.

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