FORENSIC EXAMINATION OF CHILDREN SUBJECTED TO SEXUAL ABUSE

Essay

Submitted for fulfillment of Master Degree in Forensic Medicine and Clinical Toxicology

By
Sherif Mohamed Mahmoud Mohamed El Mahdy
(M.B.B.Ch)

Supervisors

Prof. Wafeya Abdel-Hafez Ahmed Nageeb

Professor of Forensic Medicine and Clinical Toxicology
Faculty of Medicine
Cairo University

Prof. Randa Mohye El-din El Shenawy

Assist. Professor of Forensic Medicine and Clinical Toxicology Faculty of Medicine Cairo University

Dr. Khaled Abdel Fattah Bayoumi

Lecturer of Forensic Medicine and Clinical Toxicology
Faculty of Medicine
Cairo University

Faculty of Medicine Cairo University 2008 **Abstract**

Child sexual abuse is a worldwide concern. It is an insidious, persistent, and

serious problem that, depending on the population studied and definition used,

affects 2-62% of females and 3-16% of males as victims. Sexual abuse occurs

across all ethnic/racial, socioeconomic, and religious groups. Unfortunately, sexual

abuse is considered a relatively common experience in the lives of children.

Key words: Child abuse - Child sexual abuse - Sexual abuse

Acknowledgment

First and foremost thanks are due to God the most kind and the most merciful, for helping me to achieve this work.

I would like to express my deep appreciation and profound gratitude to the supervisors of my essay. To my benefactor, **Professor. Dr. Wafeya Abdel-Hafez Ahmed Nageeb**, I owe a lot of thanks. I am also grateful to **Assistant Professor Dr. Randa Mohye El-din El Shenawy**, for her patience and enthusiasm in revising the text. Greatful acknowledgement should be extended to **Dr. Khaled Abdel Fatah Bayomi** for helping me with suggestions, ideas & needs for this study.

Thanks for all staff members of The Forensic & Clinical Toxicology Department, Faculty of Medicine, Cairo University, for every possible help & facilities offered to make this work possible.

All my thanks and love are offered to my family for their continuous encouragement and support.

<u>Index</u>

Introduction	1
Chapter I	
Child abuse	3
Chapter II	
Child sexual abuse	7
Chapter III	
Ano-genital Anatomy and Physiology	24
Chapter IV	
Forensic Medical Examination	39
Chapter V	
Forensic Sample Collection and Analysis	70
Chapter VI	
Sexually Transmitted Diseases	88
Summary	103
References	107

List of Tables

Table. 1	Perpetrator relation to the victim in a sample of 140 cases of sexual abuse in children.	P. 16
Table. 2	Tanner staging of sexual maturation in females.	P. 32
Table. 3	Tanner staging of sexual maturation in males.	P. 35
Table. 4	Significance of Anogenital Findings in the Evaluation of Sexual Abuse in a Child.	P. 66
Table. 5	Implications of commonly encountered sexually transmitted diseases for the diagnosis and reporting of sexual abuse of infants and prepubertal children	P. 102

<u>List of Figures</u>

Fig. 1	Changes in the examination position can affect the appearance of the hymen.	p. 46
Fig. 2	Frog-leg position for examination of external genitalia.	P. 47
Fig. 3	Lithotomy position for examination of external genitalia	P. 48
Fig. 4	Prone knee-chest examination position	P. 50
Fig. 5	Labial traction in the supine position	P. 53

List of Abbreviations

BV Bacterial Vaginosis

CSA Child Sexual Abuse

DFA Direct Fluorescent Antibody

EIA Enzyme Immunoassay

FISH Fish Fluorescence in situ Hybridization

HIV Human Immunodeficiency Virus

HPV Human Papilloma Virus

HSV Herpes Simplex Virus

LCR Ligase Chain Reaction

NAAT Nucleic Acid Amplification Tests

NAI Non Accidental Injuries

PCR Polymerase Chain Reaction

STD Sexually Transmitted diseases

STI Sexually Transmitted Infection

TMA Transcription Mediated Amplification

TV Trichomonas Vaginalis

INTRODUCTION

Child sexual abuse is a worldwide concern. It is an insidious, persistent, and serious problem that, depending on the population studied and definition used, affects 2–62% of females and 3–16% of males as victims. Sexual abuse occurs across all ethnic/racial, socioeconomic, and religious groups. Unfortunately, sexual abuse is considered a relatively common experience in the lives of children (Banaschak & Brinkmann, 2000).

Child sexual abuse can be defined as any sexual activity with a child before the age of legal consent that is for the sexual gratification of an adult or a substantially older child. It includes a spectrum of activities ranging from rape to physically less intrusive acts such as fondling a child's genitals, masturbation, orogenital contact, digital penetration, and vaginal and anal intercourse. It is not solely restricted to physical contact; but it could also include noncontact abuse, such as exposure, voyeurism, and child pornography (**Dong et al., 2004**).

The perpetrator in is usually a male family member or caregiver; however a female perpetrator is not uncommon. Risk factors associated with sexual abuse include a pedophilic sexual orientation of a family member, maternal rejection of the father, loss of inhibition due to alcoholism. Also the risk of abuse drastically increases if the perpetrator was subjected to abuse during his/her childhood (**Friedrich**, **2000**).

The medical diagnosis depends primarily on the history and may be supported by physical evidence such as positive physical findings, detection of Sexually transmitted diseases or isolation of forensic trace evidence. Children who have been sexually abused have specific patterns of disclosure, physical examination and forensic findings which may assist in the identification and prosecution of alleged perpetrators and assure protection from further abuse (Palusci et al., 2006).

Forensic examination is an important part of the overall evaluation of suspected victims of CSA. Examination of these children is important medically and psychologically. These examinations are performed for four major reasons (**De Jong, 2000**):

- 1. Reassure child victims and their parents or guardians that they are normal and healthy.
- 2. Detect and/or prevent medical conditions related to sexual contact.
- 3. Provide medical treatment for these conditions.
- 4. Collect and provide verbal and physical evidence for protection of the abused child, as well as, help prosecute the abuser.

Objectives and aim of work

To interpret physical findings in cases of CSA and document these findings in a report

Child Abuse

Child abuse is difficult to define, and although many definitions exist in the legal and scientific literature, there is no consensus on an absolute definition. Issues that arise in the debate include the influence and attitudes of societies and cultural differences (Martin et al., 1996).

Child maltreatment is an unfortunate aspect of clinical forensic medicine. Caffey first described child abuse in 1946, when he recognized that some patients with long-bone fractures also had subdural hematomas. Since then, health care professionals have become increasingly aware of child abuse and its manifestations, and laws have been enacted that mandate reporting of suspected child abuse by health care professionals, educators, and human service workers (Milner, 1994).

➤ Physical abuse (non accidental injuries) in children

It is characterized by the infliction of physical injury as a result of punching, beating, kicking, biting, burning, shaking or otherwise harming a child. The parent or caretaker may not have intended to hurt the child, but, the injury may have resulted from over-discipline or physical punishment (**Benbenishty et al., 2002**).

NAI in children (physical abuse or battering) includes injuries that result from deliberate actions against the child or failure to prevent injury occurring to the child. The range of NAI extends from minor (e.g., bruising) to fatal, and

younger infants are at risk of more serious injuries. The spectrum of injury includes the following: (Reece, 2001).

- Soft tissue injury.
- Thermal injury.
- Skeletal injury.
- Internal injuries (e.g. cerebral, abdominal or ocular).

Suspicion of NAI may arise in the following scenarios (Crouch and Behl, 2001):

- Delay in presentation of the injury.
- Discrepant or absent history.
- Pattern of injury suggestive of abuse.
- Repetitive injuries.
- Unusual parental behavior or mood.
- Unusual child's, behavior, unusual interaction with the parent/caregiver is unusual.
- Disclosure by child or witness.

Different types of abuse overlap. Physical abuse will often coexist with emotional abuse. Injury may occur in the context of neglect, such as leaving a child unsupervised and exposed to dangerous situations. Physically abused children are at increased risk of sexual abuse (Hobbs and Wynne, 1999).

➤ <u>Neglect and emotional abuse</u>

They can present in many ways, some overt and some subtle. Neglect is the most common form of child abuse. Over 500,000 cases were reported in 2004 in the U.K. Child neglect is responsible for more than half of the cases reported to the

British child protection services, but still may represent only the tip of the iceberg because signs and symptoms are not usually as flagrant as those seen in physical or sexual abuse (**Chaffin et al., 2005**).

The definition of neglect may include all instances in which the major needs of children as food, shelter, protection, clothing, health care, education, and emotional support are not met. It can be physical, social, medical, or emotional. Physical neglect include; inappropriate clothing for the weather, fatigue, lack or absence of food, poor hygiene, and lack of protection. Children may have signs such as severe diaper rash from poor hygiene and injuries resulting from poor supervision. Social neglect occurs when the child's educational needs are not met (**Finkelhor**, 1997).

Emotional abuse refers to the habitual verbal harassment of a child by disparagement, criticism, threat and ridicule, and the inversion of love; by verbal and non verbal means. It may be in the form of yelling, threatening, shaming, belittling, habitual blaming, negative compressions, or even lack of positive reinforcement (**Widom**, 1999).

Neglect and abuse remain under-diagnosed and under-reported, despite conditions that mandate reporting. Unless they lead to threatening medical problems or death, they are seldom addressed directly by health care practitioners. The emergency department has become the primary source of health care for many impoverished families. Neglect may be overlooked during an emergency department evaluation because of more severe, acute medical conditions (**Mullen et al., 1998**).

❖ Key features in infants and preschool children subjected to emotional abuse and neglect (Martin et al., 1996):

• Physical

Failure to thrive, recurrent and persistent minor infections, unexplained bruising, sever nappy rash, short stature and poor hygiene.

• Developmental

General developmental delay, delayed language, limited attention span and socioemotional immaturity.

• Behavioral

Attachment disorder (anxious, avoidant), lack of social responsiveness, overactivity, aggressive and impulsive attitude.

Child Sexual Abuse

Definition:

Child sexual abuse can be defined as any activity with a child before the age of legal consent that is for the sexual gratification of an adult or a substantially older child. These activities include oro-genital, genito-genital, genitol-rectal, hand-genital, hand-rectal, or hand-breast contact; exposure of sexual anatomy; forced viewing of sexual anatomy; and showing pornography to a child or using a child in the production of pornography. Viewing or touching of the genitalia, buttocks, or chest by pre-adolescent children, separated by no more than 4 years of age, in which there has been no force or coercion, is termed sexual play (Beitchman et al., 2001).

History:

Child sexual abuse has been recognized with increasing frequency since the early 1980s, a trend attributable to a number of factors. Increased public awareness has led to programs, particularly in schools, facilitating disclosure by children about abuse. Likewise, parents are more likely, now than previously, to believe allegations children make about being abused by trusted extra familial friends and advisors. Additionally, the medical community is more knowledgeable about both the behaviors that may indicate abuse and the possible physical changes in the anogenital area of sexually abused children (**Greenberg et al., 2005**).

A significant number of scientific papers indicated that the extent of sexual assaults committed on children and adolescents was far greater, both in the past and currently. Even today, it is extremely difficult to find verifiable figures documenting the incidence of criminal acts that violate the sexual rights of children and adolescents, because the number of unreported cases is presumed to be high. The scientific literature generally assumes that 150,000 to 300,000 abuse cases go unreported each year (**Dubowitz et al., 2000**).

Sexual abuse versus sexual play:

Differentiation between sexually abuse and normal sexual play is usually straightforward. Sexual abuse most often involves persons of different ages and genders; activities inconsistent with the developmental level of the children; elements of coercion, force, pressure, or secrecy; a negative victim response; and greater likelihood of physical injury. By contrast, normal sexual play typically involves children of the same developmental age and gender, includes mutual agreement to participate, causes feelings of guilt, and typically does not result in physical injury (Bays and Chadwick, 2006).

Sexual abuse can be differentiated from sexual play by determining whether there is a developmental asymmetry among the participants and by assessing the coercive nature of the behavior. Thus, when young children at the same developmental stage are looking at or touching each other's genitalia because of mutual interest, without coercion or intrusion of the body, this is considered non abusive behavior. If two 4-year-old children are found to be playing without clothes, touching each others' genitals, and giggling, there is probably little to