Role of Forensic Medical Expert in a Case of Suspected Child Abuse- Case report

Dr. S Peranantham[1], Dr. G Manigandan[2]

ABSTRACT

Child abuse is defined as any act of omission or commission that threatens or impairs a child's physical or emotional health and development. Such acts include physical, sexual abuse, as well as inadequate supervision, neglect and emotional deprivation. Examination by a paediatrician is required in suspected child abuse cases. The collective expertise of a skilled forensic medical expert in all types of abuse cases is a powerful scientific basis for courtroom conclusions. Hereby the authors reported a suspected child abuse case of one-year-old baby with multiple ante-mortem injuries. The role of forensic medical expert in suspected child abuse case is about explaining how the child was injured and when the child was injured.

Keywords: ante-mortem injuries, child abuse, courtroom, forensic medical expert

[1,2] Senior Resident,

Department of Forensic Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry, INDIA

Corresponding author mail: perambbs@gmail.com

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INTRODUCTION

Child abuse or maltreatment and neglect includes all patterns of physical and emotional ill-treatment, sexual abuse, neglect, and exploitation that results in individual or potential harm to the child's development and health[1]. Child abuse is classified into five subtypes – physical, emotional, sexual, negligent treatment or neglect and exploitation[2]. Physical abuse of children is a common problem worldwide. The definition of physical abuse may vary from one culture or community to another. With increased awareness and changing definitions of child abuse and neglect, the medical profession has recognized additional physical findings and syndromes suggestive of non-accidental injuries. In India, 70% of child abuse cases are un-reported; the younger children (5-12 years of age) have reported bigger levels of abuse than the other age group[3].

Child abuse accounts for almost 25% of all children admitted to the hospital below the age of two and were second only to car accidents[4]. Child abuse is second to Sudden Infant Death Syndrome (SIDS) as the dominant cause of mortality in children under one year of age[5]. Child sexual abuse is the use of a child below eighteen years of age as an article of gratification for adult sexual needs or desires[6]. An intimate relationship among a child and adult in which there is no coercion is also regarded as abusive because the child lacks the capacity to consent to sexual activity. This article will address the general principles in the diagnosis of child abuse, including history taking, performing physical examinations, recommended radiologic examination, photo documentation, and autopsy examination.

CASE REPORT

A one-year female child was brought to our tertiary care hospital with the complaints of fever, cough and respiratory distress for three days. History revealed that the child had poor feeding and decreased urine output for two days. Initially, patient is admitted as a case of aspiration pneumonitis and on general examination patient was febrile, pulse rate 160 per minute, respiratory rate 64 per minute and spo2 98%. On anogenital examination external genitalia appear normal, posterior fourchette shows minute abrasion, hymen intact, perineal skin and mucosa congested, and sphincter integrity entirely lost. Vaginal swab and anal swab were taken and sent for analysis. Skeletal examination, including chest and skull x-rays, was normal. Coagulation profile (prothrombin time and (international normalized ratio) was 44 sec and 4.0. Blood sugar was 196 mg%, urea 46 mg%, creatinine 1.1mg%, sodium 144 mEq/L and potassium 5.1 mEq/L. The child was treated with mechanical ventilation and supportive care. The infant finally died on the third day of admission. The deceased was taken to the department of Forensic medicine for post-mortem examination. On external examination the following injuries were present over the body (figure 1), left side black eye, an abraded contusion over an area of (4cm X 3cm) found over the right chest region, contusion of size 1cm X 1cm found over the right side of upper lip, contusion of size 5cm X 3cm found over the antero-

medial aspect of the left thigh and dermo-epidermal burn injuries over the anterior aspect of middle 1/3rd of the right thigh. On dissection internal organs including genital organs, were found to be intact. Swabs taken from vagina and anal region sent for DNA analysis and reported as negative. The routine viscera sent for toxicological analysis and report came as negative.

DISCUSSION

Child abuse and neglect means the harm, experienced by a kid as a result of the actions of an adult who has a responsibility for the child[7]. Child abuse is a complex area in which frequently there are repeated incidents of unwitnessed trauma, and the pattern of injury is not consistent with the history as given by the carers. Sexual abuse is when a child has been subjected to sexual behaviours that are exploitative and inappropriate to her/his age and developmental level[8]. When children come into emergency care in situations in which non-accidental injury and abuse or neglect is suspected, a meticulous record should be made and as thorough an explanation as possible sought from carers. Often, the child is taken to the doctor or hospital emergency room, and the parent may claim that the hurt was the result of a fall or other unintentional injury. Careful examination of the injuries may show them to be inconsistent with the "accident" described. In this case, the parent's stories sounded suspicious and did not account for all the injuries to the child. The examination of a child when abuse has been alleged or is suspected has two components, therapeutic and forensic. The examining doctor must take both into consideration when gaining consent. Documenting suspected cases of child abuse sometimes includes photographic records. Although parental consent must be sought, if such clinical illustration is required for legal purposes. As a general rule, a child should not be examined without parental consent as well. In suspected child abuse cases, it is important to perform a relatively extensive X-ray examination, involving the entire skeleton. If clothing is available from a recent assault and has not been laundered, it should be collected.

The most common patterns of sexual abuse encountered by girls are exhibitionism, fondling, genital contact,

masturbation, and vaginal, oral or anal intercourse by a male perpetrator[9]. Finkelhor has distinguished between contact and non-contact sexual abuse[10]. Contact sexual abuse is touching of the sexual parts of the child's body (anus or genital) or touching the breasts of pubescent females, or the child's touching the sexual portions of a partner's body. It can involve penetration (penile, digital and object penetration of the mouth, vagina or anus) or not (fondling, touching or kissing). Non-contact sexual abuse includes exhibitionism, voyeurism, verbal sexual propositions, or harassment.

Green[11] described the typical history of a case of child abuse as follows:

- There is an unexplained delay in bringing a child for treatment following an injury.
- History is incompatible with the physical findings.
- There is a history of repeated suspicious injuries.
- The parent claims that the injury was self-inflicted, or blames it on a sibling or third party.
- The child had been previously taken to different hospitals for the treatment of injuries.
- The parent has unrealistic and premature expectations of the child.
- The parent demonstrates a lack of concern about an injury or minimizes it.

Physical examination should be performed by a skilled paediatrician who has received training and experience performing medical evaluations involving child sexual abuse. These specially trained medical examiners will identify evidence that may be missed by non-specialized paediatricians and even emergency room physicians[12]. The usual physical findings of child abuse include lacerations, hematomas, petechiae, oedema and contusions of genital areas. Signs of penile penetration include hymenal tears, scar tissue and adhesions that distort the shape of the hymeneal membrane, clefts or bumps in the hymeneal membrane, labial adhesions, widening of the hymenal orifice and rounding of the hymenal edge. Signs of anal trauma include hematomas, prolapse of anal tissue, fissures, anal skin

tags, pigmentation and scar tissue. Penetration can also produce changes in the tone of the anal sphincter. The recognition and documentation of abusive injuries are needed in cases involving living children as well as in child homicide cases. During autopsy, in cases of deaths following suspected child abuse, long incisions should be made down the back, buttocks, and extremities to reveal underlying soft tissue haemorrhage.

A sexual offences kit must be used and, unless the clothes have already been acquired by the police officer, the examinee undressed on a paper sheet as with the victim. The clothes should be cautiously packaged, and the genital area can be examined thoroughly with the child in the knee-chest position. In this position, the important posterior border of the hymen can often be seen more obviously than when a child is lying supine position on the couch[13]. The genital investigation should be as gentle as possible but accurate. The area, as including the rest of the body should be viewed under Ultraviolet light for fluorescence, and any stain noted must be swabbed. The anal and peri-anal area should be examined in more accurate depending on the allegations and findings.

The Colposcopy is used for sexual examination, but in the absence of colposcopy, a magnifying glass or optical loupes are an alternative. Glaister's globes are glass rods used to visualize the hymen. It can be inserted gently behind the hymen to exhibit its edges over the glass. In this way, apparent folds and indentations often smooth out, and minute nicks and tears can be more easily identified. Gaensslen, Harris, and Lee states that the semen, vaginal fluid, saliva, and urine are secreted bodily fluids that are common among rape cases that are reported[14]. If swabs have been taken for forensic investigation purposes, or to carry out tests for STD, then it is essential to show the child an unused swab.

Samples taken during the examination are

- Dental impression
- Sample of blood
- Pubic hair
- Sample of semen any other tissue fluid
- Urine
- Swab from a natural orifice other than the mouth

Early identification and treatment is essential to minimize the long-term consequences of abuse. The most important information for a forensic expert asked for precise an opinion as to when an injury occurred is often examination of the behaviour of the child over the last several days before the significant injury or death. There is limited information available from international or national research on how perfect to deliver medical and forensic examinations for children where child abuse or neglect is suspected. It also includes prevention of abuse by counselling and teaching, training, supervision, and education of the community to heighten awareness about the problem

CONCLUSION

Forensic medical experts have escorted in a novel era for attorneys tasked with proving all forms of child abuse in the courtroom. It is often of importance for the investigating officers to have information obtained in the medical examination before they interview the suspect. Child abuse is a crime that is difficult to prosecute because in utmost cases the only witness is the victim. Suspected child abuse overrides our concern with confidentiality. The police surgeon must carefully assess the facts, decide on what procedures need to be undertaken, make valuable records and be prepared to justify those decisions under cross-examination in court. It is difficult to understand the normal from the abnormal. It is not improper for the medical officer examining the suspected case, to discuss, by telephone, any characteristic findings with the police surgeon examining a complainant.

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