

## Postmortem Detection of Child abuse at a Premier Hospital: Two Case Reports

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### Abstract

Physical Child abuse also known as Battered baby Syndrome (BBS) or Non Accidental Injury (NAI) occurs when the child suffers repetitive physical injuries by a parent or guardian. It can cause severe injuries to the children and even death. We report two autopsy cases in which both the children were brought dead in the All India Institute of Medical Sciences (AIIMS), New Delhi by the guardians with no complaint of foul play. During autopsy the characteristic findings of physical abuse were found and were reported to the investigation officer. It led to the arrest of the guardians and legal proceedings were initiated. The western countries have developed a centralized reporting system for child abuse but the cases of physical and mental abuse of children mainly at their home from parents or guardian are highly under-reported in India. The authors intend to highlight the importance of interpreting such injuries not only during autopsy but also in clinical setups so that perpetrators of child abuse are not spared. The authors have given recommendations about the steps which could be taken to detect child abuse at an early stage and save the life of a child.

**Keywords:** Physical Child Abuse; Battered Baby Syndrome; Non Accidental Injury; Child Neglect; Torn Frenulum.

### Introduction

Child maltreatment is the abuse and neglect that occurs to children under 18 years of age, which includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power [1].

Physical Child abuse is also known as Battered baby Syndrome (BBS) or Non Accidental Injury (NAI) and occurs when the child suffers repetitive physical injuries by a parent or guardian [2].

The western countries have developed a centralized reporting system for such cases [3,4] with many

studies and cases also being reported in Medical Literature [5-11].

In India, the protection of children is ensured through 'The Juvenile Justice (Care And Protection Of Children) Act, 2015' [12] and 'The protection of children from sexual offences act, 2012' [13] but the cases of physical and mental abuse of children mainly at their home from parents or guardian are highly under-reported.

We report two cases in which both the children were brought dead in the All India Institute of Medical Sciences (AIIMS), New Delhi by the guardians. Police did not report any foul play as there were no complainants. During autopsy the characteristic findings of physical abuse were found and were reported to the investigation officer. Subsequently the guardians were immediately arrested and legal

proceedings were initiated. The authors intend to highlight the importance of interpreting such injuries not only during autopsy but also in clinical setups so that perpetrators of child abuse are not spared.

### Case 1

An eight year old male child, who was living with her step mother, was brought to emergency department, Trauma centre, AIIMS, New Delhi, by his step mother with alleged history of fall from chair. The child was found brought dead and a medicolegal case was registered. The mother and father of this child had been divorced and married to different persons again and presently this child was staying with his step mother.

Autopsy examination revealed multiple old and fresh injuries all over the body in the form of Patterned abrasions, contusions and laceration (Image 1,2,3). Infected dermatitis was present over face, lips, forearms, ears and neck (Image 2). Burn injury was present over gluteal region (Image 4) and penis suggesting cigarette butt burns (Image 5). Multiple bruises were present over the forehead. Subdural



**Image 1:** Multiple Imprint abrasion, contusion and Laceration over the back of child



**Image 2:** Patterned abrasion and Infected dermatitis over right forearm



**Image 3:** Patterned abrasions and contusions over lower limbs in various stages of healing



**Image 4:** Burn marks in different stages of healing over gluteal region.



**Image 5:** Burn marks, abrasions and contusions in different stages of healing over genitalia and right thigh



**Image 6:** Electric iron used to inflict burn marks on child as per Investigating Officer

haemorrhage was present over both the parietals and occipital regions of the brain. During the course of investigation, the investigating officer (IO) produced an electric iron (Image 6) that was allegedly used to burn the gluteal region of child for correlating the burn marks.

### Case 2

A three year old male child, who was brought to emergency department AIIMS, New Delhi with alleged history of fever and unconsciousness. The child was found brought dead and a medicolegal case was registered. The IO gave the history that the child was sold by his biological parents to a lady in Jharkhand State, who came to Delhi and started working as a household maid through a couple working as placement agent. She was not allowed to bring the child along with her and usually handed him over to the above mentioned couple. This lady went missing for about a month and the child was



**Image 7:** Multiple Patterned abrasion, contusion and Laceration over the body

left with this agent couple who brought the child to emergency department of AIIMS.

Autopsy examination revealed multiple old and fresh injuries all over the body in the form of Patterned abrasions and contusions (Image 7A&B). Infected dermatitis was present over face, lips, ears and neck (Image 7, 8). The left ear had Cauliflower appearance indicative of repeated slapping (Image 8).



**Image 8:** Cauliflower appearance over left ear



**Image 9:** Recent fracture of left Humerus and old fracture of Radius bone



**Image 10:** Subdural haemorrhages over cerebrum

On radiological examination recent fracture of lower end of shaft of left Humerus and old fracture of shaft of left radius bone were found. Liver was lacerated, and spleen and kidney were showing hematoma in the parenchyma. Diffuse subdural haemorrhage was present over right parieto-occipetal region of brain (Image 10).

### Discussion

The child abuse can be diagnosed clinically by the following classical sign and symptoms, in different stages of healing [2,14,15]:

1. Bruises may be patterned, particularly on back, buttocks, genitals, ears and back of hands.
2. Multiple abrasions and lacerations.
3. Fractures in long bones.
4. Burns reflecting the pattern of object or method of injury.
5. Torn Frenulum-considered as a reliable indicator of child abuse.
6. Eye injuries such as bleeding into vitreous humour, dislocation of lens, retinal detachment, and retinal haemorrhages.
7. Dislocation and injuries of teeth and gums.
8. Bite marks.
9. Scars.
10. Pulling of scalp hair.

The head injury is the most common cause of death as evident in both of the cases. Both the cases had multiple injuries at different stages of healing. Skin infection was present indicating the neglect of children. In case no 2, the child had Intra-abdominal injuries also, which are the second most common cause of death in battered children [2,14]. His whole body X-ray revealed fractures of long bones of different age. In cases of suspected child abuse, radiological investigations are vital in identifying bodily fractures and head injury [10]. The child abuse is more prevalent in males and children are more likely to cause severe injuries as seen in our cases [11]. The burn injuries on the penis and gluteal region of child in case no1 by cigarette and electric iron show the brutality the child was subjected. We can clearly infer by the autopsy findings in both the cases that the children were subjected to physical abuse, which was also confirmed by the police investigations into the cases.

In united Kingdom, National trauma audit is performed by the Trauma Audit Research Network

(TARN), which includes data from 96% of acute hospitals in England and Wales reported severe injury (ISS >15) due to NAI in 9.7% of children below 2 years with Mortality rate of 7.8% and in 2.1% of children above 2 years with Mortality rate of 27.6% [4]. This indicates the urgent need of a similar Trauma registry network in India for children. In the reported cases the culprits would have gone scot free with dead children getting no justice if the autopsy surgeons had not diagnosed child abuse.

### Recommendations

1. The Emergency doctors, Paediatricians and doctors in trauma management like Orthopedician, Surgeons, Neuro-surgeons etc should trained and sensitized to diagnose the cases of child abuse properly so that it can be identified at an early stage and the life of the child could be saved. But care should also be taken to prevent any misdiagnosis which could cause the harassment of innocent parents or guardians.
2. Private family practitioners should be given training and professional to interpret the sign and symptoms of child abuse and report it to the police or child welfare committee.
3. Whole body X-ray should be mandated in all the autopsy cases of children dying with no clear history.
4. A Paediatric Trauma registry network should be started by Government of India which could connect with the major district hospitals all across the country.
5. The same can be implemented by starting initially at the central govt hospitals and then gradually involving hospitals at state level, then district level and so on.

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