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Sudden onset unresponsiveness and seizure in an infant – don't forget battered baby syndrome!

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Abstract

Child abuse has long been recognised as a menace to the society. Physical abuse or battered baby syndrome is the predominant form of child abuse with not only immediate physical damage but long term psychological and behavioral implications. We report a male infant presenting with sudden unexplained unresponsiveness, unusual facial injury, complex partial seizure and hemiparesis. On evaluation, he was found to have retinal hemorrhage and subdural hematoma. The child improved completely with aggressive management. We also discuss the available guidelines to help fellow pediatricians when faced with such cases.

Keywords

intracerebral hemorrhage; retinal hemorrhage; shaken baby syndrome; child abuse

Abbreviations

AAP: American Academy of Pediatrics; IAP: Indian Academy of Pediatrics; LSCS: Lower segment cesarean section; WHO: World Health Organization

Introduction

The term ''Battered Child Syndrome'' was coined by Kempe et al [1] in early 1960s; since then it has been termed differently as battered baby syndrome, shaken baby syndrome, Caffey's syndrome, non-accidental injuries of childhood, etc. All variants of child abuse but a single outcome – the child is injured at the hands of an adult, often a caretaker [2]. Child abuse refers to all forms of physical and/or emotional ill-treatment, sexual abuse, neglect 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, trust or power [3]. The World Health Organization (WHO) estimates that 40 million children are subjected to abuse and neglect around the world [4]. Physical abuse represents approximately 70% of child abuse cases [5]. The consequences are not only restricted to immediate physical suffering alone but extend much beyond into adulthood affecting cognition and behavior [6]. Physical abuse should be considered for all pediatric patients attending the emergency services with inexcusable conditions [7]. The reported incidence of child abuse in emergency department is approximately 2-10%, however only half of these are actually reported [8].

Here we report an infant with sudden onset unresponsiveness and complex partial seizure

subsequently diagnosed as a case of battered baby syndrome. We also discuss the role and responsibility of the medical practitioner in such cases.

Case Report

A three and a half months old baby boy was brought with complaints of sudden onset unresponsiveness and abnormal movements of right side of body. The informants were parents but they were not present at home at the time of onset of the symptoms. The child was apparently well when he was found unresponsive by the house maid; was not responding to call, no spontaneous eye opening, no cry and minimal movement of limbs. Respiration was slow and shallow for which he was given steam inhalation by the maid resulting in burn on the cheek. There was no history of fever, rash, cough cold, fast breathing/ noisy breathing, history of fall or other trauma, excessive cry or irritability prior to this episode, vomiting, loose stools or choking while feeding or bleeding from any site. The child was 2nd product of a non-consanguineous marriage, born at term by elective LSCS (in view of previous LSCS) with a birth weight of 3.5 kg. There were no perinatal concerns (e.g. neonatal sepsis, respiratory difficulty, icterus, etc.) and he was exclusively breast fed. The child was immunised appropriately till 2 ½ months. He received intramuscular vitamin K at birth and there was no history of prolonged bleeding from umbilical stump or any family history of bleeding diathesis. The elder female sibling was alive and healthy. There was no family history of sudden infantile death.

On arrival at the casualty, he was found to have poor sensorium with modified Glasgow coma scale of 8 (eye opening only to pain – 2, moaning verbal response – 3, abnormal flexion to pain – 3). Weak and shallow respiratory efforts and focal seizures involving right upper limb. There was moderate pallor but no icterus, rash or bleeding from any site. There was scald on the right cheek measuring 4 X 3 cm (Image 1a). On neurological examination, there was a bulging but pulsatile anterior fontanel, no apparent cranial nerve palsy and decreased movement of right upper and lower limbs. Examination of other systems was non-contributory. There was no neurocutaneous marker or any other external trauma. Anthropometry: weight 5.1 kg, length 56 cm, head circumference 39 cm. He was started on emergency supportive measures and also given a bolus of Inj. Phenobarbitone @ 20 mg/kg body weight following which the seizures subsided.

Investigations showed only anemia (hemoglobin 7.4 gm/dl) but rest of the blood counts, coagulation profile, arterial blood gases, serum electrolytes, renal and liver function test were within normal limits. Fundus examination revealed both optic discs to be hyperemic with retinal hemorrhages (Image 1c and 1d). An infantogram was within normal limits but a non-contrast computed tomogram (NCCT) of brain showed a left fronto-parietal subdural hemorrhage. Therefore, a possible diagnosis of child physical abuse was considered. On questioning, the maid admitted to her crime. Her psychiatric evaluation revealed that she was in severe depression secondary to adverse familial circumstances. Medico-legal reporting was done and human rights groups were involved. The child was managed with emergency evacuation of hematoma and other supportive measures. The elder sibling screened for any evidence of abuse was found to have no evidence of the same. On follow up after 1 year, he is completely asymptomatic, off antiepileptics and gaining developmental milestones normally.

Discussion

According to WHO, in 2002 an estimated 31000 deaths were attributed to homicide among children less than 15 years of age. Infants and very young children are at greatest risk as a result of their dependency, vulnerability and relative social invisibility. Again, the risk of fatal abuse is two to three times higher in low-income and middle-income countries such as India [7]. In 2007, India published a report on one of the largest surveys done on child abuse and found that two out of every three children were physically abused [9]. But this is expected to be an underestimation as the survey included children >5 years of age.

The most common cause of accidental death in children is head injury. Child abuse is now recognized as a major cause of serious head injury in children [6]. Intracranial injury in child abuse occurs primarily by the following two mechanisms: direct impact and "shaken-baby syndrome." Direct impact is more likely to result in cerebral contusion [10]; while infantile subdural hematoma is often a consequence of "whiplash-shaken baby syndrome" [11], as in our case. Mortality among abused children with head injuries ranges between 10% and 27% [6] but fortunately our patient survived with early diagnosis and aggressive management. Our case also re-emphasizes on the importance of a good ophthalmological examination in cases of suspected shaken baby syndrome.

The cases of child abuse presenting to the healthcare facility is expected to represent only the tip of the iceberg. On the other hand, the management of child abuse is one of the most challenging responsibilities in pediatric practice. Pediatricians' perception of self-efficacy and approach to abuse were also found to be highly variable [12]. Guidelines are available from American Academy of Pediatrics (AAP) [6] and Indian Academy of Pediatrics (IAP) [3] regarding approach of a Pediatrician when faced with a child with suspected abuse.

Child abuse should be suspected when there is: 1. No or a vague explanation given for a significant injury; 2. Denial of trauma in a child with obvious injury; 3. Change of details and explanations on repeated enquiry; 4. Explanation provided is inconsistent with the pattern, age, or severity of the injury or with the child's physical and/or developmental capabilities; 6. An unexplained or unexpected notable delay in seeking medical care; or 7. Different witnesses providing markedly different explanations for the injury. Examination findings that suggest abuse include the following: 1. Any injury to a young, perambulatory infant; 2. Injuries to multiple organs; 3. Multiple injuries in different stages of healing; 4. Patterned injuries; 5. Injuries to non-bony or other unusual locations, such as over the torso, ears, face, neck, or upper arms; 6. Significant injuries that are unexplained; and 7. Additional evidence of child neglect [6]. The scald over the cheek in our case raised the possibility of physical abuse coupled with the non-compatible history.

The response of the pediatrician in such cases should be child centered and child friendly, family supportive, according to the law of the land and safe for the pediatrician with impeccable management and documentation [3]. It is broadly classified into: (1) Urgent response as required for safeguarding the child; (2) Admission to the hospital in all cases of serious injuries; (3) Social Services like Child Welfare Committee and Child Helpline (Phone No.1098 for India) or local NGOs (Non-Government Organizations) are contacted if the parents refuse to follow the treatment plan or if there is an immediate

threat to safety of other sibs [3]. Though there are regional differences regarding mandatory reporting of suspected child abuse [13], it is highly advocated. The importance of follow up of such children can never be over-emphasized as many of them after discharge suffer repeated abuse [2].

Figure

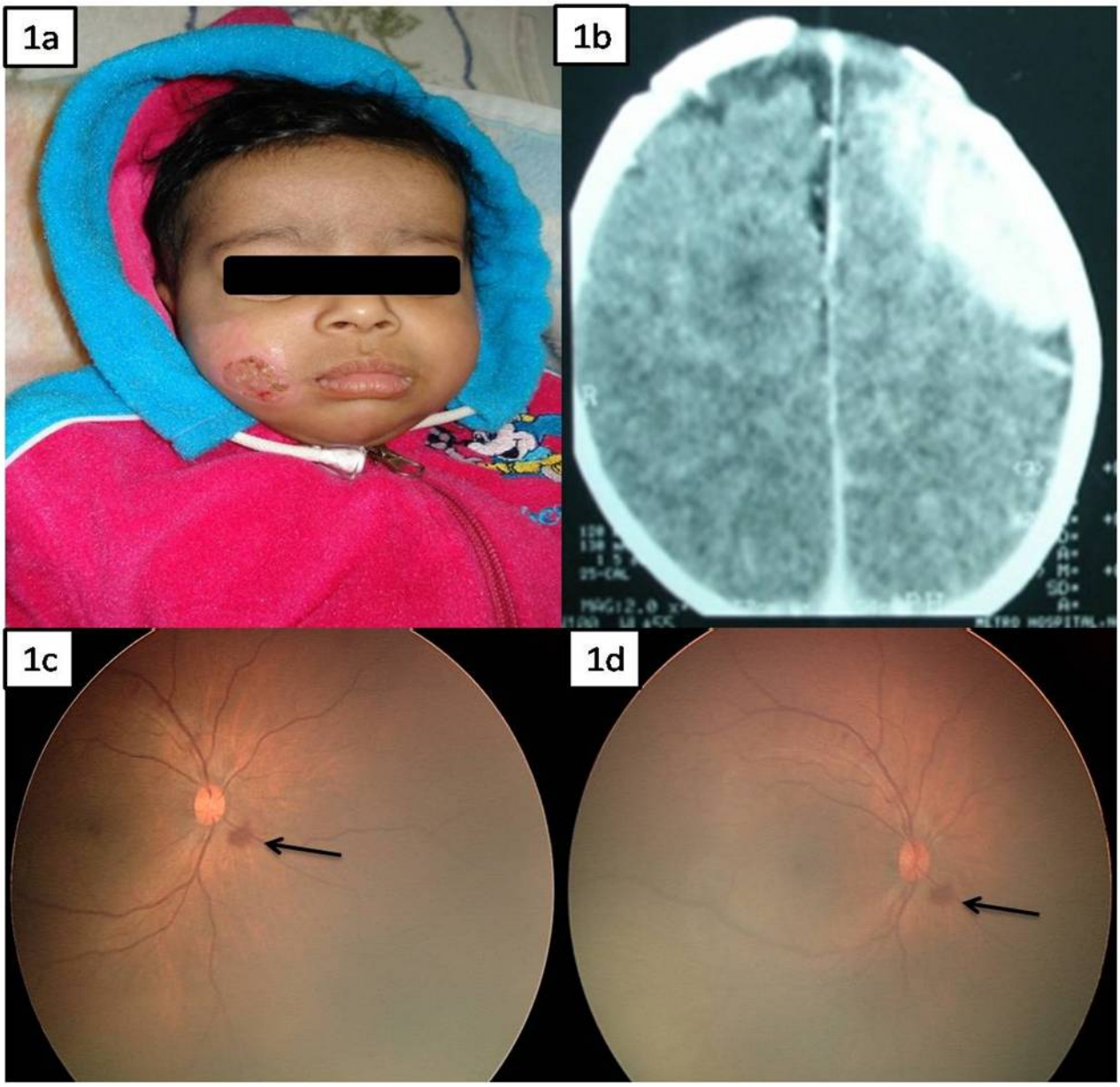

Figure 1: Image 1a – Male infant with a scald on right cheek; 1b – NCCT brain showing left fronto-parietal hemorrhage; 1c – Fundus of right eye with retinal hemorrhage (arrow); 1d – Fundus of left eye with retinal hemorrhage (arrow)

References

1. Kempe CH, Silverman FN, Steele BF, Droegemueller W, Silver HK. The battered-child syndrome. JAMA 1962;181: 17-24.

2. Subba SH, Pant S, Senthilkumaran S, Menezes RG. Battered child syndrome: Is India in dire straits? Egyptian Journal of Forensic Sciences 2011;1: 111-3.

3. Aggarwal K, Dalwai S, Galagali P, Mishra D, Prasad C, Thadhani A; Child Rights And Protection Program (CRPP) of Indian Academy of Pediatrics (IAP). Recommendations on recognition and response to child abuse and neglect in the Indian setting. Indian Pediatr. 2010;47: 493-504.

4. World Health Organization 1999 Report of the Consultation on Child Abuse prevention, 29-31 March 1999. Geneva: WHO, 1999. Document number WHO/HSC/PVI/99.1.

5. Elkerdany AA, Al-Eid WM, Buhaliqa AA, Al-Momani AA. Fatal physical child abuse in two children of a family. Ann Saudi Med. 1999;19: 120-4.

6. Christian CW; Committee on Child Abuse and Neglect, American Academy of Pediatrics. The Evaluation of Suspected Child Physical Abuse. Pediatrics. 2015;135: e1337-54.

7. Butchart A, Harvey AP. WHO Department of Injuries and Violence Prevention. Preventing child maltreatment: a guide to taking action and generating evidence/ World Health Organization and International Society for Prevention of Child Abuse and Neglect. 2006.

8. Sedlak AJ, Mettenburg J, Basena M, Petta I, McPherson K, Greene A, et al. Fourth National Incidence Study of Child Abuse and Neglect (NIS–4): Report to Congress. 2010. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

9. Kacker L, Varadan S, Kumar P. Study on child abuse: India Delhi: Ministry of Women and Child Development; 2007.

10. Duhaime AC, Alario AJ, Lewander WJ, Schut L, Sutton LN, Seidl TS, et al. Head injury in very young children: mechanism, injury types, and ophthalmologic findings in 100 patients younger than 2 years of age. Pediatrics 1992;90: 179-85.

11. Caffey J. The whiplash-shaken infant syndrome: manual shaking by the extremities with whiplash-induced intracranial and intraocular bleeding linked with residual permanent brain damage and mental retardation. Pediatrics 1974;54: 396-403.

12. Gül H, Yürümez E, Yaylalı FH, Gül A. The perceptions of the pediatricians regarding their self-efficacy in child neglect and abuse. Turk J Pediatr 2015;57: 475-81.

13. Stephenson T. Safeguarding children is everyone's responsibility: UK government statement on the duties of doctors. Arch Dis Child 2007 92: 833-4.

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