

Battered Child Syndromes*: What Should a Physician Know About It?

Pages with reference to book, From 20 To 24

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Introduction

Child abuse in some countries is reported to have reached an epidemic level. Every year, in the U.S.A., about one million children under the ages of 6 years are physically abused and brutally beaten and neglected. About three thousand of them are killed by their parents or other care giver (Fontana, 1978). Battered child syndrome is considered by some authors as a reportable disease with a 3 to 4% mortality rate and 25 to 30% permanent morbidity rate (2). This paper deals with the historical aspects of this syndrome, and discusses some characteristics of the abused and the abusers. It also describes signs, symptoms and diagnostic procedures necessary to identify this syndrome.

Definitions:

Gill (1968) defined child abuse as “a non accidental physical attack or physical injury inflicted upon children by person caring for them”. Since then the definition has been broadened to include other problems which arise as the result of lack of reasonable care and protection of the children.

Consequently emotional battering is considered to be a common concomitant of physical injury. The public law 93-247 passed by the congress of the United States in 1974 as “Child Abuse Prevention and Treatment Act” defines child abuse and neglect as, “The physical or mental injury, sexual abuse, negligent treatment, or maltreatment of the child under the age of 18 by a person who is responsible for the child’s welfare under circumstances which indicate that the child’s health or welfare is harmed or threatened thereby.” *presented at 3rd Psychiatry Conference of Pak Psychiatry Society held at Karachi Feb. 5-8, 1981.

Historical Perspectives:

Man has abused his off-spring since antiquity. The earliest evidence of child abuse in history is found in Greece several thousand years ago when it was a common practice in Sparta to throw deformed infants and children over a cliff, “to protect the race from being contaminated by an inferior stock”. They used “grasp reflex” as a sort of early developmental screening test. Although the neurophysiology of the grasp reflex is understood only recently, the Spartan knew that the absence of this reflex in infants is associated with neurological illness. This reflex as we all know is present at birth and can be elicited until the age of four months when it disappears. The Spartan law givers used to suspend the infant across a bar placed over a precipice. If the child held on his grasp to the bar he was considered fit for survival.

The attitude of ancient Greek and until recently of the western world was pretty much influenced by the Aristotelian dictum “to a father a son is property and there can be no injustice to one’s own property.”. In pre-Islamic Arab Peninsula the female infants used to be buried alive “to save the parents from future humiliation and degradation.” The Bible has many stories of slaying of children, the first born son, particularly when a ruler was angry.

There has been mutilation of children, sometimes for cosmetic reasons. The Chinese used to bind the feet of their females. The Maya of Central America and some other races deformed the forehead of the infant by putting the head between two boards and applying pressure; because a slanted forehead is considered a thing of beauty by them. Also, for many years children have been mutilated for begging purposes. Limbs twisted and eyes gorged out to create sympathy in order for parents or guardians to obtain some means of charity. Most recently, some child advocates in the western world considered cir-

cumcision a form of child abuse. However; this, initially a religious ritual, has many medical proponents who enumerate numerous justifications of this operation for hygienic reasons.

The children have been abused under the pretence of educating them. Ancient philosophers often beat their pupils mercilessly. Flogging the children without provocation was common practice in colonial America, in order to “break them of their willfulness” and make them tractable ostensibly for the good of their soul. “Spare the rod and spoil the child” still reflects the attitude of many educators towards their pupils in Pakistan and many other countries.

The legislators also kept abreast with the wider community and made laws which facilitated the abuse of children. The Massachusetts Stubborn Children Act enacted by commonwealth of Massachusetts in 1654 A.D. provided for the disobedience of children punishable by penalties up to death. This law was only repealed in 1973. In the famous case of Mary Ellen in New York in 1874, the only way to initiate some protective action by the court was to prove that Mary Ellen was an animal and required protection. Mary Ellen was a child who was physically abused and neglected by her adoptive parents. The authorities were powerless since there was no law against child abuse. However, there was the American Society for the prevention of cruelty to animals and some laws regarding protection of animals.

Child Abuse in Medical Literature:

The first allusion to child abuse was perhaps a report of “Periosteal Swelling” presented to the Medical Society of London in 1888. According to this report several young members of a family suffered from this condition while the cause of the illness was not clear. A diagnosis of possible rickets was assigned because there was no other discernable cause present. Retrospectively now in the light of the work of Caffey and others one could say with some certainty that those cases could have been of child abuse. Caffey (1946) a pediatrician and a radiologist wrote a paper in 1946 about cortical thickening of the bones and tender swelling deep in the soft tissues with an onset in the first 3 months of life. In a later paper the same year he reported radiological findings of six infants with chronic subdural hematoma associated with multiple fractures of long bones. In the absence of a history of trauma reported by parents he raised several diagnostic possibilities including intentional ill treatment and thus concealing the fact of trauma. Silverman (1953) was probably the first one who directly suggested that parents might inflict trauma on their own children and then proceed to deny this in giving the case history. Wooley et al (1955) in a study of all cases of infant injury between 1946 and 1954 at Children’s Hospital of Michigan identified 12 cases which he felt showed characteristics of inflicted multiple skeletal lesions in infants. He pointed out that parental abuse and not the metabolic and structural abnormality was the etiological factor.

Kempe and his group (1975) from the University of Colorado, however, were the first to put the pieces together. In 1962 they surveyed reports from 71 hospitals and 77 district attorneys and collected records of 749 cases of recorded battering. The clinical picture of multiple skeletal fractures, subdural hematoma, multiple soft tissue injuries and neglect was termed “Battered Child Syndrome” by Kempe. Since then, numerous reports have appeared identifying additional cases, further refining the characteristics, identifying the abused child and stressing the need for reporting cases to proper agencies. Caffey in 1947 described “Whiplash-Shaken Infant Syndrome”. Manual shaking of the extremities with induced whiplash causes intracranial and intra ocular bleeding. This causes residual permanent brain damage and mental retardation.

Who are the abused:

Abuse may occur at any age, but it is the young non verbal child, unable to escape and totally dependent on his caretaker, who is at the highest risk for abuse. The following characteristics are generally present (Shaheen et al., 1975).

1. About one third of abused children are under six months of age, one third from six months to three years and one third over 3 years of age.
2. Premature infants are three times at a greater risk than full term babies.

3. Approximately 10% of injuries seen in a hospital emergency room in children under the age of five years are most likely inflicted.
4. If the child is returned to his parents without any intervention approximately 5% are killed and 35% are seriously injured.

Who are the abusers:

No consistent ethnic, religious, or cultural pattern stands out in surveys made of large numbers of parents. The following generalization can be obtained:

1. The perpetrator of abuse is always someone responsible for the child.
2. 90% of abusing parents are neither psychotic nor sociopath.
3. A large number of these parents have experienced physical abuse themselves when they were children.
4. They come from all socioeconomical classes but lower socioeconomical group is over represented.
5. A significant number of mothers are unmarried and some of them have rejecting attitude towards their children.
6. Broken homes, unemployed fathers, adolescent mothers and social isolation can be contributing factors.
7. Abusing parent is the one who usually spends the most time with the child.
8. The spouse, usually knowledgeable of abuse, passively allows it to continue by ignoring or denying its existence.
9. These parents very frequently show a very poor self image.

Diagnosis of Child Abuse and Neglect:

When even a small child presents with trauma, the history of child abuse must be considered. All suspected children should be admitted to the hospital. The parents should not be confronted with the possibility of child abuse in the emergency room. The recommendation for admission should be truthfully explained as need for further treatment and diagnosis. Very few parents will refuse the physician's request for hospitalization unless they have been frightened.

The following are the helpful criteria. A. History: Child abuse should be considered when the parents:

1. Present history which conflicts with the nature of the injury.
2. Are inconsistent or contradictory
3. Appear to be mentally ill, or under the influence of drugs or alcohol.
4. Over or under react to the seriousness of the situation.
5. Are out of control or fear loss of control.
6. Appear to behave inappropriately with the child or complain about unrelated problems.
7. Have unrealistic expectation of the child.
8. Give history of repeated accidents.
9. Refuse to cooperate with the physician
10. Hospital shop,
11. Perceive the child as different or,
12. Expect the child to meet the parents needs.

Physical Features:

One factor of significance to look for is the number of multiplicity of lesions. The abuser repeatedly strikes the child so that the body may show bruises, abrasions and burns at different stages of injury and healing.

Physical examination should include the examination of:

1. Body surface: for bruises, burns, human bite marks etc.
2. Abdomen: for abdominal masses from lacerations, signs of peritoneal irritation from ruptured organ following blows and kicks.
3. Skeletal System: for tenderness, swelling and limitation of motion of an extremity. Periosteal

thickening of long bones, old fractures.

4. Eyes: for subconjunctival hemorrhage papilledema, retinal detachment.

5. C.N.C. for neurologic signs from brain damage.

Radiological Examination:

All suspected cases should have a trauma survey consisting of X-rays of long bones, skull, ribs and pelvis. Often multiple bone injuries at different stages of healing are seen implying repeated injury.

Lab Data:

A bleeding screen which includes a bleeding time, platelet count, prothrombin time and partial thromboplastin time, is required to exclude "easily bruising child."

The nurse and social worker can provide valuable information regarding family history, such as family composition, current living condition, existing crises and previous contacts with the community agencies. As psychiatric evaluation of the abusers and the abused child may reveal valuable information about the ego weaknesses, coping mechanisms and defense mechanism in difficult cases.

Differential Diagnosis:

The diagnosis of Battered Child Syndrome should be made with caution to avoid unnecessary grief to the parents. The diagnoses should be made following the participation of physician, social worker and other persons involved who have accumulated supportive data. A complete physical examination with X-ray examination of long bones and skull and a full psycho-social history by a social worker will in most cases provide the information to make the diagnosis.

In the differential diagnosis, organic or accidental causes of the bodily injuries and skeletal manifestations should be ruled out. Fractures and injuries during infancy may be associated with a prolonged and difficult labor resulting in complications during delivery. Scurvy, syphilis, infantile cortical hyperostosis osteogenesis imperfecta and infectious osteitis, as well as accidental trauma must be considered and ruled out by a complete diagnostic work up.

Traumatic injuries to the bones seen on radiological examination are most frequently confused with Scurvy because of the presence of ossified subperiosteal haemorrhages. In Scurvy, there are characteristic changes that are usually diagnostic. A ground-glass osteoporosis, cortical thinning and epiphyseal ringings are prominent findings in Scurvy. It is also important to remember that Scurvy almost never occurs during the first five months of life, whereas the traumatic injuries due to child abuse are most commonly noted during this period.

In infantile cortical hyperostosis, one notes tender swellings deep in the soft tissues associated with cortical thickening in the skeleton. This disease is usually seen during the first three months of life. On X-ray hyperostosis, usually involves the mandible, clavicles, scapulae, ribs and tubular bones of the extremities.

In osteogenesis imperfecta, the manifestations are usually generalized with evidence of the disorder present in bones throughout the body. The fractures are commonly of the shafts. The presence of multiple fractures associated with blue sclera, skeletal deformities and a family history of similar abnormalities usually will confirm the diagnosis.

Neurological signs associated with child abuse will include exaggerated startle and stretch reflex changes with retardation of development and growth, and may simulate signs and symptoms resulting from trauma usually disappear, while the findings of organic brain and nervous system disease do not.

Management:

Child abuse is a medical emergency. If untreated, the mortality and morbidity rate is very high. A recent study reports that 30% of parents studied were said to have seriously reabused or neglected their children while they themselves were receiving treatment services, and more than half of the parents treated reabused or neglected their children. These findings emphasize the importance of proper and immediate management of the case of Battered Child Syndrome. The goals of the management are as follows:

1. Care of the injuries incurred.

2. Protection of the child.
3. Prevention of further abuse.
4. Keeping the family intact.

Ideally the management involves a multidisciplinary team including pediatrician, social worker, public health nurse and with consultation of child psychiatrist and other medical subspecialists.

Frequently hospitalization of these children is fully justified and provides time for the physician, not only to treat the injuries inflicted, but also to mobilize resources within the extended family and the community to ensure the protection of the child from further abuse.

The goal of the intervention plan with the parents should aim at improving their capacity to “mother” the child in a more nurturing environment. The following guidelines are found to be useful.

1. Eliminate or diminish the environmental stresses precipitating abuse.
2. Reduce the demands on the mother to a level which is within her capacity to handle.
3. Teach appropriate responses to her child through role modeling.
4. Provide emotional support, encouragement, sympathy and empathy.
5. Develop for the parents within their community a human network of support that could be available during the times of crisis.

Prevention:

1. Twenty-four hour hot lines, where a parent feeling an urge to abuse child may call anonymously to solicit help, are found to be effective in aborting abuse.
2. Crisis nurseries are established where parents under stress may keep their children temporarily until the critical period when abuse might occur has passed.
3. Education of the child care professionals (physicians, teachers, social workers, etc.) and the public to enhance their awareness about this illness would help identify the high risk situations.
4. Legislative actions providing for the protection of the child and appropriating funds to establish child advocacy agencies are of most primary importance in the prevention of the abuse.

Summary

Battering of young children is reaching an epidemic level in most of the countries. The mortality and morbidity rate of this disease is very high and requires a physician to become sensitive to the seriousness of the diagnosis and to the acute needs of the battered children. One should recognize that a complete and thorough diagnostic evaluation is as important for these children as it is in uncovering the cause of a fever of undetermined origin or in making the diagnosis of diabetes, cancer, or other illnesses. The education of the public about this disease is as important for prevention as in communicable diseases. The legislative and community supports play an extremely important role in the eradication of this illness and should be sought.

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