

DOI: 10.4274/tpa.46.1616

Is it enough just to cure the trauma in children admitted to an emergency room?

To the Editor,

We believe the study with the title "Evaluation of pediatric subjects presenting to the emergency department of our university hospital because of trauma" is a significant research emphasizing pediatric traumas. In this study, 1293 subjects evaluated in the emergency department in a university hospital in one year were addressed. Since not a single diagnosis of child abuse was made in the emergency department where the study was conducted and no diagnosis of child abuse was found in similar previous studies, we think that attention should be paid to this fact and this subject should be discussed.

Although child abuse is considered as one of the causes of pediatric traumas in the first order, the rates found in studies show significant differences. While the rate of physical child abuse was reported to be 33.5% in a study performed by Bilir (1) in 16100 children in Turkey, no diagnosis of child abuse was found in a study which examined the 3-year records of the emergency departments of 6 large hospitals in İstanbul (2). While child abuse was stated to be in the first order among causes of pediatric traumas, the fact that no diagnosis of child abuse was made was not discussed by the authors.

Child abuse is a coded diagnosis in ICD!

Child abuses are coded as 995.5 in ICD-9 ranging from simple injuries to traumas leading to severe physical trauma, death, emotional pathology and growth/developmental delay. Although child abuse is emphasized to be a severe trauma in researches and basic sources, the rates found in researches are very low and at the phenomenal level (3). When the child's high benefit is considered, it is clear that diagnosing child abuse is a necessary step to prevent child abuse and conduct studies in terms of preventive medicine.

It is important to address common approaches in terms of child abuse:

a) Since trauma and violence are not classified in a categorical integrity, the diagnosis of child abuse is located in other categories.

Trauma can be classified separately according to the affect it creates in the victim, the way of application, the place of application and legal, medical and social states. Since legal and

medical classifications are used together, the diagnosis of child abuse is omitted. For example, "battery" which was considered among the types of trauma in the research (though a term which is assumed to be used in forensic practice) is a clinical picture which should be evaluated in terms of child abuse in any condition.

b) No differential diagnosis is made in cases which can be qualified as child abuse.

In events which are qualified as accidents (traffic accident, falls from a high level, crushing, indoor accident, etc.), the event should be interrogated again in terms of child abuse and assessed with high discipline considering that the victim is a child.

In cases of child abuse, the caretaker or parents who bring the child to a healthcare institution may claim that the injury was made by the child himself/herself, by a sibling or another third person or the fall or crushing occurred accidentally. When the trauma types were examined in the research, it was observed that crushing and falls occurred with the highest rate (44.3% crushing-fall, 16.4% falls from a high level). In the secondary evaluation of these cases, it can be understood that a part of them may be qualified as child abuse. These cases are treated without making a diagnosis of child abuse.

c) The diagnosis of child abuse is difficult for clinicians.

It is a stressful process to decide if an injury is the result of child abuse both for the family and for the clinical team (4).

The work load and the organizational structure in emergency departments may prevent investigation of trauma causes in children. The first step for the diagnosis of child abuse in emergency departments is the physician's consideration of the possibility of child abuse. Ecchymosis is the most common finding in child abuse. Ecchymoses can indicate the point where the trauma hit and additionally can give significant clues about the mechanisms of occurrence of injuries. In injuries occurring as a result of accidents, ecchymoses around the eye, in the ears, cheeks and neck are observed very rarely. Ecchymoses observed in the internal side of the elbow region, external side of the thigh, abdominal region, parietooccipital areas of the occipital region, the external side of the forearm, posterior side of the shoulder, the region of the upper extremity binding to the trunk, interscapular region, lumbar region, gluteal region and posterior

side of the knee suggest child abuse. In addition, shaped ecchymoses indicating an object or gun also suggest child abuse (4). Ecchymoses due to accidents are most commonly observed on the knee and anterior part of the tibia, the forehead, nose, chin, vertebrae, the middle part of the occipitoparietal region and prominent regions of the bones in the forearms (4,5). When assessing ecchymoses, differential diagnosis should include coagulation disorders (5). In addition to the localization of the ecchymoses, it should be evaluated if they are compatible with the history and if they occurred on different dates.

Evaluation of bone fractures shows difference depending on the age and developmental state of the children. 80% of bone fractures due to child abuse are observed in children younger than 18 months (5). The possibility of accidental fracture in long bones is very low in children who can not walk (5). Localization of fractures and type of fracture are not pathognomonic (6). Metaphysic fractures, costal fractures localized posteriorly, fracture of the scapular prominence, fractures of the spinous processes of vertebrae and sternum fractures have high specificity (5,6). Especially bilateral multifractures, fractures at different ages, epiphyseal separation, fractures or subluxation of the vertebral corpus, finger fractures, complex skull fractures and pelvis fractures are moderately specific for child abuse (6,7). A diagnosis of child abuse can not be made only considering fractures (5,6).

In the case of a child exposed to trauma, the physician should interrogate the etiologic factors appropriate for child abuse and personal and familial medical history and observe the attitude and behavior of the child and the relationship between the family and the child. In children exposed to trauma, detailed history and the properties of the trauma may provide suspicion of physical abuse. Healthcare workers in the emergency department should have adequate fund of knowledge about child abuse. Cases of injury are reported to be diagnosed as abuse after detailed evaluation (3).

Legal outcomes should not be a cause for avoiding the diagnosis of child abuse

Child abuse leads to outcomes which arouse anxiety for physicians and families. Physicians are anxious that the family will suffer because of an erroneous diagnosis and will be put on trial and punished unfairly. It is not appropriate for the physician to avoid reporting the case or undertake all outcomes of the problem because of his/her anxiety. The legal system and law enforcement officers also have significant responsibility in terms of diagnosis and evaluation of child abuse. With the legal adjustment it is aimed to prevent violence against children instead of punishment.

However, instead of urgent physician notification in suspicious cases, the right of the patients for health and treatment has priority according to the ethic rules defined in the "Biomedical Agreement" which has a higher level of assurance and weight compared to the present laws. Since clinical diagnosis is achieved at the end of a process in which all medical possibilities are addressed, a comprehensive examination and evaluation is made and other specialties are involved, the diagnostic process should be waited to be

completed in cases where there is no risk of a new trauma. However, reabuse of the child who is treated and sent home without making a diagnosis of child abuse can lead to more severe injury and death.

Child abuse is a clinical picture which requires expertise and collaboration of multiple disciplines

It is known that many cases of abuse are kept hidden. Although it is not possible to determine the definite frequency of child abuse, it is proposed that it reaches high levels. The diagnosis can generally be made after assessments of multiple disciplines performed together. In recent years, teams and centers which include experienced experts from different disciplines who work in collaboration in the diagnostic process have been created. In Turkey, Pediatric Protection Centers/Units are being founded in university hospitals (7). In addition, Pediatric Follow Up Centers have been started to be founded by the Ministry of Health. In units where there is no center related to pediatric protection, the subjects should be referred to a specialist of forensic medicine, pediatric psychiatrist, pediatrician interested in abuse and pediatric surgeon. In a study, significant difference was shown between cases evaluated by physicians working in pediatric protection centers and cases evaluated by other physicians in terms of diagnosis of physical abuse (8).

On the other hand, the American Board of Medical Specialties approved the child abuse pediatrics subspecialty (pediatrician) in 2006 with the objective of recognizing child abuse (8).

Since it is significant to draw the attention of researchers in terms of recognizing and preventing child abuse and to interrogate the findings in terms of child abuse, this letter was written based on the related study.

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