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Case Study
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Child abuse or self-immolation? A case report

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Abstract

Background: Non-accidental burns may not be detected unless a complete history of the accident and a detailed physical examination is obtained. Self-inflicted burns are a regular source of admission to burn units.

Case presentation: An 11 year old boy with multiple localized burn injuries was brought to the emergency department of burn hospital by his mother. The lesions were in different symmetrical shapes on the posterior forearms. The grade of burn injury was 2B-3 and the injuries had happened 12 hours ago. The mother claimed that his son decided to punish himself following frequent blame from the family because of lying; thus he made knife blade and spoon hot over the stove and put them on his forearms for several times. In further history taking the mother said that his son is a case of attention deficit and hyperactivity disorder (ADHD).

Conclusion: Self-immolation in psychotic children happens with different motivations, thus appropriate history taking, physical examination and psychiatric evaluation can lead us to correct diagnose and take the best decision. Children who suffer from a diagnosable mental illness can benefit from an appropriate treatment and be protected from further injuries.

Keywords: Self-immolation, Burn injuries, ADHD, Child abuse.

Introduction

Although specific pattern burns are usually diagnostic of abuse in children, they are rarely seen in adults. The back of the hand is an important site in cases of abuse as well as legs, buttocks and feet (1).

Non-accidental burns may not be detected unless a complete history of the accident and a detailed physical examination is obtained (2).

Self-inflicted burns are a regular source of admission to burn units. These patients generally fall in two distinct groups: those who display a self-mutilating behavior and have no intention of dying and those who attempt suicide (3).

Attention deficit hyperactivity disorder (ADHD) is a neurobehavioral problem that reflects pervasive inattention or hyperactivity. Reasons for the higher risk of injuries among ADHD persons are not fully understood. It may be that a person with ADHD is more likely to be inattentive, distracted, impulsive, or not foresee consequences of certain behaviors as readily as non-ADHD persons (4).

Case presentation

An 11 year old boy with multiple localized burn injuries was brought to the emergency department of burn hospital by his mother. The lesions were in different symmetrical shapes on the posterior forearms. The grade of burn injury was 2B-3 (Fig 1.a-c).The injuries had happened 12 hours ago. According to the boy's mother, his son decided to punish himself following frequent blame from the family because of lying; thus he made knife blade and spoon hot over the stove and put them on his forearms for several times. The boy stated that it was such an enjoyable act and he did not feel any pain. In further history taking the mother said that his son is a case of attention deficit and hyperactivity disorder (ADHD. Diagnosis of ADHD was confirmed during our psychiatric evaluation.

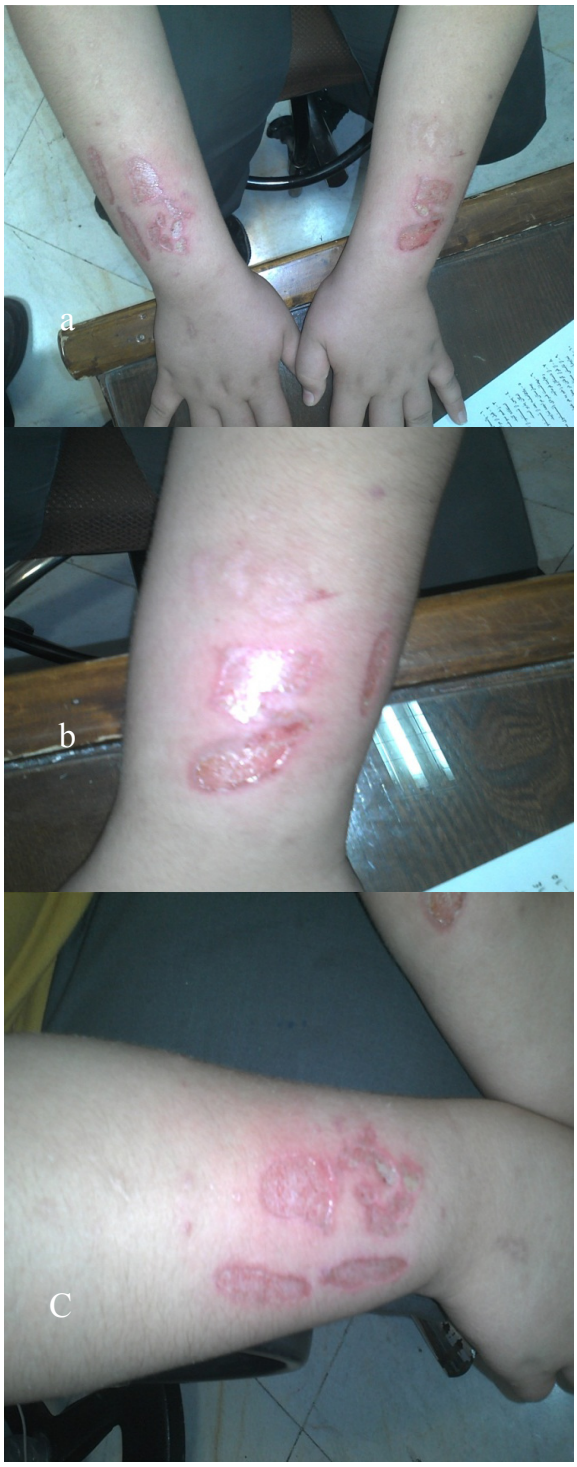

Fig 1. (a-c). Self-immolation burn injuries with hot knife and spoon in an ADHD child.

Discussion

It is our responsibility to maintain a high index of suspicion and have legal obligations to report suspicious or deliberate injury [5].

Hight et al established criteria for the diagnosis of a child victim of a non-accidental burn. "The diagnosis is made when one or more of these criteria is identified: 1. History: (a) Burn attributed to a brother/sister; (b) When an adult, not related to the child, seeks medical assistance; (c) Controversy in the history of the accident; (f) Delay in seeking for medical assistance of more than 24 h; (e) Report of previous accidents; (f) Lack of interest of parents or caretakers; (g) Passive, introverted or terrified child; 2. Physical examination; 3. Burn history, incompatible with the physical findings; 4. Burn history, incompatible to the age and development of the child; 5. Burns isolated to the perineum, genitals and buttocks; 6. Identified burn scars older than the reported one; 7. Other non-related injuries: scars, lacerations, etc; 8. Long bones or skull fractures" (2).

Adjustment disorders are the most prevalent psychiatric predisposing factor in Iranian and other non-western surveys. Western studies tend to report major depressive disorder, psychoses, and addictions as the psychiatric conditions most related to self-immolation (6).

The age of children sustaining intentional burns provides more consensuses, with most studies placing the mean age of children suffering inflicted burns between 2 and 4 years (7).

Studies have suggested a higher injury rate among ADHD-children. ADHD-children suffering burn injury do differ from non-ADHD-children with respect to their pattern and extent of burn injury. ADHD-children are more likely than non-ADHD-children to suffer a thermal or caustic burn injury than a flame-related injury (8).

Self-immolation injuries are usually multiple, localized, with the same pattern and can be seen in the available sites of body; while child abuse injury are usually multiple, in different sites of body that occur in different times with various mechanisms. Accidental burn injury in children is presented with specific pattern of scald or hot food burning. It is very important that who brought the child to the hospital and when injury had been happened. It is also important that no conflict is detected in history which is taken from the child and his parents. Significant attention to legal physical examination is needed since previous self-immolation scar or suicide intention may be exist in patients and their family.

Seeing a child who has been burned, we usually think about abuse, neglect or accidental burning. Suspicious pattern of the mark especially takes us to cigarette or a hot spoon burn. Rule out of child abuse is sometimes very difficult. Wrong diagnosis of child abuse can cause trouble for his parents or caretakers. In addition another possible differential diagnosis is self-immolation which depends on the child's age and other fac-

tors such as psychiatric disorder. Self-immolation in psychotic children happens with different motivations, so appropriate history taking, physical examination and psychiatric evaluation can lead us to correct diagnose and take the best decision. Children who suffer from a diagnosable mental illness can benefit from an appropriate treatment and protected from further injuries.

Conflicts of interest: None declared.

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