

THE ROLE OF TRADITIONAL HABITS IN CHILDHOOD BURN INJURIES IN TURKEY: A BURN INJURY CASE

TÜRKİYE'DEKİ ÇOCUKLUK ÇAĞI YANIKLARINA YAKLAŞIMDA GELENEKSEL ALIŞKANLIKLARIN ROLÜ: BİR YANIK OLGUSU NEDENİYLE

Dilek DİLLİ, İlknur BOSTANCI, Yıldız DALLAR*

ABSTRACT

Some traditional habits may enhance the risk for household accidents in childhood. This is a case report of two years, six months boy with drug poisoning and burn injury. He was attended to the hospital with poisoning with ibuprofen which has been given for pain relief of burn injury. Burn injury was caused by hot tea located on the "sofra", a traditional special cloth serving as a kind of table in rural area. A month ago, he had also burnt by hot tea while having breakfast. This case was presented to emphasize the role of traditional habits on household accidents where traditions continue to have major effects upon people.

Key words: Burn, child, traditional habits

ÖZET

Bazı geleneksel alışkanlıklar çocukluk çağında görülen ev kazaları riskini artırabilir. Bu yazıda, ilaç zehirlenmesi ve yanığa bağlı yaralanma nedeniyle izlenen iki yaş altı aylık bir olgu sunuldu. Olgu, yanığa bağlı yaralanma sonucunda ortaya çıkan ağrının giderilmesi için kullanılan ibuprofenle zehirlenme sonrası hastaneye getirildi. Yanığa, kırsal kesimde masa yerine kullanılan geleneksel bir örtü olan yer sofrasındaki sıcak çay neden olmuştu. Hastanın bir ay önce yine sofrada kahvaltı yaparken sıcak çay ile yandığı öğrenildi. Bu olgu, geleneksel yaşam biçiminin hakim olduğu toplumlarda ev kazalarında geleneksel alışkanlıkların rolünün vurgulanması amacıyla sunuldu.

Anahtar kelimeler: Yanık, çocuk, geleneksel alışkanlıklar

INTRODUCTION

Household accidents are responsible for majority of accidental injuries in children under age five years old (5). Falls, drowning, drug poisoning, electrical burn, scald and house fire amongst the most common types of household accidents seen in childhood.

Because of its frequency and potential toxicity, drug poisoning in childhood is a significant public health problem (11). Ibuprofen is available without prescription. Although ibuprofen is often a benign drug in over dosage, the development of serious toxic effects has been reported. According to a study, seventy three percent of antipyretic poisonings had occurred in children aged one to three years and poisonings were considered serious in 9.4 % of those produced by acetaminophen, two percent of those produced by acetylsalicylic acid and one percent of those produced by ibuprofen (3). Another study examined factors associated with clinicians' concerns about abuse and

neglect and reporting hospitalized children to Child Protective Services. Concerns about neglect in children with toxic ingestion were 12.3%. Low income was significantly associated with clinicians' concerns about neglect (10).

Home, most of the time, kitchen is recognized as a hazardous place for young children. Hot water is the main cause of pediatric scald injuries as used in making coffee, tea, hot drinks (1). In Turkey, eating habits on a "sofra" which every household spreads out on the floor to set the plates contributes to increased risk for scald injuries in childhood.

It has been shown that abuse or neglect is related to pediatric burn admissions. The researchers reported that up to 20% of admissions might be due to abuse or neglect because of that unstable social factors and chronic medical problems may be more common among those with inflicted burns (8). It appears that many children who have non-accidental burns also have prior history to child for other types of abuse or neglect (2).

Date received/Dergiye geldiği tarih: 28.09.2007 - Dergiye kabul edildiği tarih: 16.04.2008

* Ankara Eğitim ve Araştırma Hastanesi, Pediatri Bölümü, Ankara
(İletişim kurulacak yazar: dilekdilli2@yahoo.com)

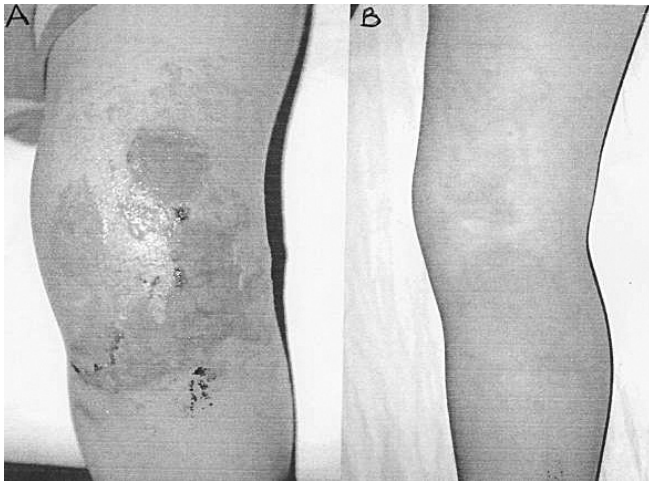


Figure 1. (A) Scald injury to his left leg began at the knee and extended to one third of the dorsum. (B) A burn scar on the dorsum of the right knee. (A written permission to use photograph was taken from his mother.)

In this article we present a toddler who suffered from drug poisoning and two episodes of burn injuries in a short of time indicating neglectful parenting.

CASE

A two years, six months old child was presented to the Pediatric Emergency Room with complaint of drug ingestion. The parent reported that, he was found with an empty bottle of ibuprofen (100mg/5 ml, total 150ml) two hours before presentation. He had ingested as much as 1,2 grams (100 mg/kg) by himself when he was not under supervision. The mother revealed that he suddenly pulled the teapot over himself and got scalded while having breakfast on the sofra two days ago. Therefore, the mother was giving him ibuprofen for pain relief.

The patient was living in a poor rural area with seven family members. Their house was small and only had two rooms. The parents' educational level was low

On physical examination, he weighted 12 kg (10th centile) and his height was 85 cm (10th centile). He had normal developmental milestones. At presentation, he was alert and active. Burn injury on his left leg began at the knee and extended to one third of the dorsum, sparing the popliteal crease (Figure A). The burn covered three percent of body surface area. The patient also had a burn scar over the right knee due to scald with the same manner that occurred a month ago (Figure 1-B). The margins and depth of the burns were irregular. Other physical findings and laboratory data were normal. National Poison Control Center has defined the toxic dose for ibuprofen as 200mg/kg. Therefore, the patient was given supportive treatment including gastric lavage followed by administration of active charcoal. The burn was treated conservatively with bacitracin and daily dressing changes. A week later, he was discharged after full recovery.

The patient was considered as a child neglect case because of

three accidents in a month indicating the lack of supervision. To prevent another injury, we contacted the Social Affairs Bureau and the parents were given counseling on accident prevention.

DISCUSSION

Household accidents could occur in a variety of ways in childhood. Because of their frequency and potential toxicity, drug poisoning in childhood is a significant public health problem. Among the antipyretics available in the market, Ibuprofen is the agent with the most published data on overdose, probably because it is available without a prescription in many countries (3).

Ibuprofen overdose is usually characterized by gastrointestinal upset, dizziness, and mild sedation. On rare occasions, severe complications such as respiratory failure, metabolic acidosis, renal failure, coma, and death have been reported in children. Symptoms are unlikely after ingestion of 100 mg/kg or less, and are usually not life-threatening unless more than 400 mg/kg is ingested (9). Treatment of ibuprofen overdose is entirely supportive including gastric lavage, followed by administration of activated charcoal. Since this patient ingested ibuprofen at a maximum dose of 100mg/kg, he was given supportive treatment.

Burns are among the most devastating injuries because they can have long-term physical, psychological, and economical ramifications. In Turkey, despite its potential severity, burn injury has been ignored for many years regarding its significance for child neglect. Scald burns are the leading cause of pediatric burn admissions and hot water is the main causal agent. In a study on 638 pediatric patients with burn injuries, it was reported that the most common causes of the scalds were hot liquids (hot water, milk, meal and oil up to 66.4%) (7). Similarly, Günay et al. studied on 985 patients with burn injuries admitted to the emergency surgery department during a period of 7 years. They reported that the most common cause was scald with hot liquids (54%) (6). This patient had scalded with hot tea.

Some traditions related to ethnic background may contribute to the potential hazards without being disrespectful of ethnic traditions. Pediatricians must educate parents on risk factors associated with cultural practice.

In Anatolia, despite the modernization of Turkey, some people still live the traditional lifestyle. In a study from Turkey, 15 preschool children who got severely scalded in kitchen by hot milk, which was heated in cheese making process, were reported (13). Eating on the sofra is a custom in crowded families living in rural areas. The sofra is set onto the floor and meals and beverages are served on a big tray, which is placed on the sofa. Generally, hot objects (kettle, pan etc) are placed on the sofra. Unfortunately a child can easily reach these objects. This patient was living in a poor and crowded family living in a rural area. While the family was having breakfast, our patient got scalded with hot tea.

Scald burns are relatively common under four years. It is usually assumed to be caused by the stage of development of motor and cognitive skills, associated with incorrect assumptions

about these skills by parents. Their motor skill development outpaces their cognitive development, so they can perform physically, but do not understand the associated risks of injury (14).

Scald burns may result from either accidental or inflicted trauma. Two most common scald injury patterns were reported as (1) The child reaching to pull a pot of hot liquid off the stove or other elevated surface and (2) The child grabbing to overturn and spill a container of hot liquid onto him or herself (12). Our patient had reached up and pulled a pot of hot tea over himself during breakfast.

Approximately 18% of burn injuries occur as a result of child abuse. Both the history provided by the caregivers and the physical capabilities of the child play important roles in assessment of burn cause. Injury inconsistent with the history provided by the caregiver is one of the most predictive factors for inflicted injury. Patterns of burns are useful in evaluating of injury. Burns to the hands, legs, feet and buttocks have been described as predominant sites of abuse. Glove or stocking burns of hands and feet; single area, simultaneous scald burns to the buttocks, perineum and feet, full-thickness burns in young children should raise a suspicion of child abuse. The irregular margin and depth of injury are indicative of accidental burn rather than an inflicted one. In contrast accidental injuries often demonstrate indistinct borders or multiple areas of burn as the patient struggles to escape from the hot liquid (8). We evaluated this case as an accidental one due to the fact that the history and pattern of the scald injury was consistent and burn margins were irregular.

Neglect is defined as acts of omission and includes the failure to provide adequate nutrition, clothing, or supervision; abandonment; and failure to ensure that the child receives adequate health care. Although neglect can be a single event, such as leaving a young child unsupervised in an unsafe setting, it often is a pattern of unsafe or inadequate care, such as a pattern of inadequate supervision or inadequate nutrition.

In this case, the child had been burnt in the same way previously and had ingested a drug. This raised the concern that the child had been significantly neglected. We contacted with Social Affairs Bureau to prevent another injury so that the parent was poor and not well educated.

Parents must be educated to prevent household accidents, which may occur within a few minutes (4). Keeping all medicines reach of the out of the children, creating some kind of physical barrier between hot objects (teapot, pan, stove etc.), placing cups filled with hot beverages where child cannot reach them, keeping child out of the kitchen during food prepara-

tion, avoiding drinking hot beverages with child on one's lap may be effective preventive measures.

Increasing public awareness about the potential hazards of some traditional habits may be benefited. We have presented this case to emphasize effective education of caregivers and health care workers regarding the critical importance of household accidents to avoid all the hazards associated with child neglect.

REFERENCES

1. Ali SN, O'Toole G, Tyler M. Milk bottle burns. *J Burn Care Rehabil* 2004; 25:147-149.
2. Andronicus M, Oates RK, Peat J Spalding S, Martin H. Non-accidental burns in children. *Burns* 1998; 24 :552-558.
3. Conejo Menor JL, Lallana Dupla MT. Antipyretic poisoning. *An Esp Pediatr* 2002; 56:318-323.
4. Corrarino JE, Walsh PJ, Nadel E. Does teaching scald burn prevention to families of young children make a difference? A pilot study. *J Pediatr Nurs* 2001; 16, 256-262.
5. Draço DA. Kitchen scalds and thermal burns in children five years and younger. *Pediatrics* 2005; 115:10-16.
6. Günay K, Taviloğlu K, Eskioğlu E, Ertekin C. Yanıklı Hastalarda Epidemiyoloji ve Mortalite Çalışması (A Study of Epidemiology and Mortality in Burn Patients). *Ulus Travma Acil Cerrahi Derg* 1995; 2:205-208.
7. Haberal M, Ucar N, Bilgin N. Epidemiological survey of burns treated in Ankara, Turkey. *Burns* 1995; 21:601-606.
8. Ruth GD, Smith S, Bronson M, Davis AT, Wilcox RM. Outcomes related to burn-related child abuse: A case series. *J Burn Care Rehabil* 2003; 24:318-321.
9. Smolinske SC, Hall AH, Vandenburg SA, Spoerke DG, McBride PV. Toxic effects of nonsteroidal anti-inflammatory drugs in overdose. *Drug Safety* 1990; 5:252-274.
10. Thyen U, Leventhal JM, Yazdgerdi SR, Perrin JM. Concerns about child maltreatment in hospitalized children. *Child Abuse Negl* 1997; 21:187-198.
11. Titchen T, Cranswick N, Beggs S. Adverse drug reactions to nonsteroidal anti-inflammatory drugs, COX-2 inhibitors and paracetamol in a paediatric hospital. *Br J Clin Pharmacol* 2005; 59:718-723.
12. Titus MO, Baxter AL, Starling SP. Accidental scald burns in sinks. *Pediatrics* 2003; 111;191-194.
13. Turegun M, Celikoz B, Nisanci M, Selmanpakoglu N. An extraordinary cause of scalding injury in childhood. *Burns* 1997; 23:170-173.
14. Van Rijn OJ, Bouter LM, Meertens RM. The etiology of burns in developed countries: review of the literature. *Burns* 1989; 15: 217-221.