PREVALENCE OF BURNS AMONG PATIENTS PRESENTING IN EMERGENCY DEPARTMENT

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ABSTRACT:
A burn is a type of injury to skin, or other tissues, caused by heat, cold, electricity, chemicals, friction, or radiation (like sunburn). Most burns are due to heat from hot liquids (called scalding), solids, or fire. While rates are similar for males and females the underlying causes often differ. Among women in some areas, risk is related to use of open cooking fires or unsafe cook stoves. This cross-sectional study was conducted among the patients presenting in the emergency department of different hospitals. Name, age, gender and history of causative agent and duration were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. A total of 50 patients presenting in the emergency department were included in this study i.e., 25 males (50%) and 25 females (50%). The mean age of the patients was 33.12±3.12 years. Out of these patients, six patients presented with the history of burns i.e., burn due to fire, burn due to hot water etc.

Keyword: Burn
INTRODUCTION:
A burn is a type of injury to skin, or other tissues, caused by heat, cold, electricity, chemicals, friction, or radiation (like sunburn). Most burns are due to heat from hot liquids (called scalding), solids, or fire. While rates are similar for males and females the underlying causes often differ. Among women in some areas, risk is related to use of open cooking fires or unsafe cook stoves. Among men, risk is related to the work environments. Alcoholism and smoking are other risk factors. Burns can also occur as a result of self-harm or violence between people. Burns that affect only the superficial skin layers are known as superficial or first-degree burns. They appear red without blisters and pain typically lasts around three days. When the injury extends into some of the underlying skin layer, it is a partial-thickness or second-degree burn. Blisters are frequently present and they are often very painful. Healing can require up to eight weeks and scarring may occur. In a full-thickness or third-degree burn, the injury extends to all layers of the skin. Often there is no pain and the burnt area is stiff. Healing typically does not occur on its own. A fourth-degree burn additionally involves injury to deeper tissues, such as muscle, tendons, or bone. The burn is often black and frequently leads to loss of the burned part.
Burns are generally preventable. Treatment depends on the severity of the burn. Superficial burns may be managed with little more than simple pain medication, while major burns may require prolonged treatment in specialized burn centers. Cooling with tap water may help pain and decrease damage; however, prolonged cooling may result in low body temperature. Partial-thickness burns may require cleaning with soap and water, followed by dressings. It is not clear how to manage blisters, but it is probably reasonable to leave them intact if small and drain them if large. Full-thickness burns usually require surgical treatments, such as skin grafting. Extensive burns often require large amounts of intravenous fluid, due to capillary fluid leakage and tissue swelling. The most common complications of burns involve infection. Tetanus toxoid should be given if not up to date (1-3).
MATERIAL AND METHODS:
This cross-sectional study was conducted among the patients presenting in the emergency department of different hospitals. Name, age, gender and history of causative agent and duration were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. The quantitative variables were presented as mean and standard deviation. The qualitative variables were presented as frequency and percentages.

RESULTS:
A total of 50 patients presenting in the emergency department were included in this study i.e., 25 males (50%) and 25 females (50%). The mean age of the patients was 33.12±3.12 years. Out of these patients, six patients presented with the history of burns i.e., burn due to fire, burn due to hot water etc.

DISCUSSION:
In the United States, fire and hot liquids are the most common causes of burns. Of house fires that result in death, smoking causes 25% and heating devices cause 22%. Almost half of injuries are due to efforts to fight a fire. Scalding is caused by hot liquids or gases and most commonly occurs from exposure to hot drinks, high temperature tap water in baths or showers, hot cooking oil, or steam. Scald injuries are most common in children under the age of five and, in the United States and Australia, this population makes up about two-thirds of all burns. Contact with hot objects is the cause of about 20–30% of burns in children. Generally, scalds are first- or second-degree burns, but third-degree burns may also result, especially with prolonged contact. Fireworks are a common cause of burns during holiday seasons in many countries. This is a particular risk for adolescent males.
In the United States, for non-fatal burn injuries, white males, aged <6 comprise most cases. Thermal burns from grabbing/touching and spilling/splashing were the most common type of burn and mechanism, while the bodily areas most impacted were hands and fingers followed by

head/neck. At temperatures greater than 44 °C (111 °F), proteins begin losing their three-dimensional shape and start breaking down. This results in cell and tissue damage. Many of the direct health effects of a burn are secondary to disruption in the normal functioning of the skin. They include disruption of the skin’s sensation, ability to prevent water loss through evaporation, and ability to control body temperature. Disruption of cell membranes causes cells to lose potassium to the spaces outside the cell and to take up water and sodium.

In large burns (over 30% of the total body surface area), there is a significant inflammatory response. This results in increased leakage of fluid from the capillaries, and subsequent tissue edema. This causes overall blood volume loss, with the remaining blood suffering significant plasma loss, making the blood more concentrated. Poor blood flow to organs such as the kidneys and gastrointestinal tract may result in kidney failure and stomach ulcers (4-6).

REFERENCES:


