

ORIGINAL ARTICLE

Assessment of burn cases reported to surgery department

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ABSTRACT:

Background: Burn injury remains one of the biggest health concerns in the developing world. The present study was conducted to assess cases of burn admitted to surgery department. **Materials & Methods:** The present study was conducted on 74 cases of burn of both genders. Etiology, total body surface area (TBSA), degree/depth of burns and any associated illness was recorded. **Results:** Out of 74 patients, males were 30 and females were 44. Etiology of burn was flame burn in 23 cases, hot object in 21, scald burn in 14, electrical burn in 10 and chemical burn in 6 cases. The difference was significant ($P < 0.05$). Maximum number of patients (22) had 10-20% involvement followed by 21-30 % in 17, 31-40% in 15 and 41-50% in 12 patients. The difference was significant ($P < 0.05$). 52% had second degree, 35% had first degree and 13% had third degree burns. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that maximum cases of burn were of second degree seen in females.

Key words: Burn, second degree, total surface area

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INTRODUCTION

Burn injury remains one of the biggest health concerns in the developing world and is a formidable public health issue in terms of mortality, morbidity, and permanent disability. Ninety percent of the burns are reported from low-and middle-income countries (LMIC), of which 50% are from South and Southeast Asian countries.¹ Burn injuries which are a well-known health problem since ages continue to increase in incidence in spite of improved healthcare facilities and awareness among the masses. It is estimated that 1% of the world population will suffer from a serious burn injury sometime in their life.² The etiological factors of burns vary in different countries and within various regions of the same country. Consequently planning and implementing preventive programs can be made more successful if data can be accumulated from most parts of the country.³ Advances in the management of burn patients have contributed to significant improvements in morbidity and mortality over the last century. The physiologic insult from this injury pattern, however, still requires extensive surgical intervention, resuscitation and multidisciplinary care.⁴ Advances in resuscitation, operative care and grafting techniques, infection prevention and treatment, and mitigation of hypermetabolism have all improved survival and recovery. In spite of these advances, however, questions and controversies regarding best practices are still prevalent, and numerous burn centers and laboratories across the United States continue to research various aspects of burn care, from the

resuscitative phase to the reconstructive and recovery phase.⁵

The present study was conducted to assess cases of burn admitted to surgery department.

MATERIALS & METHODS

The present study was conducted in the department of general surgery. It comprised of 74 cases of burn of both genders. All patients were informed regarding the study and written consent was obtained. Ethical approval was obtained from institutional ethical committee prior to the study. General information such as name, age, gender etc. was recorded. Etiology, total body surface area (TBSA), degree/depth of burns and any associated illness was recorded. Routine hemogram, serum electrolytes, urea, creatinine, random blood sugar, urine albumin, urine sugar etc. was performed. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I shows that out of 74 patients, males were 30 and females were 44. Table II shows that etiology of burn was flame burn in 23 cases, hot object in 21, scald burn in 14, electrical burn in 10 and chemical burn in 6 cases. The difference was significant ($P < 0.05$).

Table I Distribution of patients

Total- 74		
Gender	Males	Females
Number	30	44

Table II: Etiology of burn

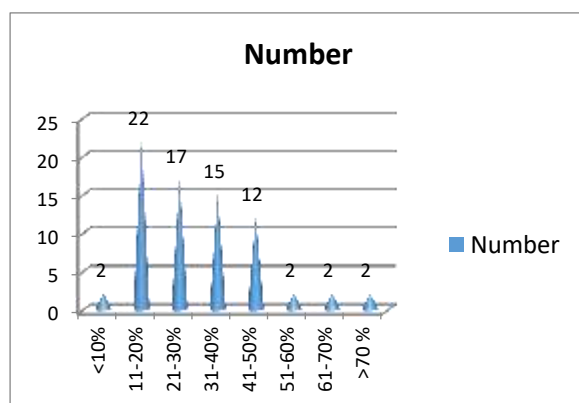
Etiology	Number	P value
Flame burn	23	0.041
Hot object	21	
Scald burn	14	
Electrical	10	
Chemical	6	

Table III: Body surface area involved in burn

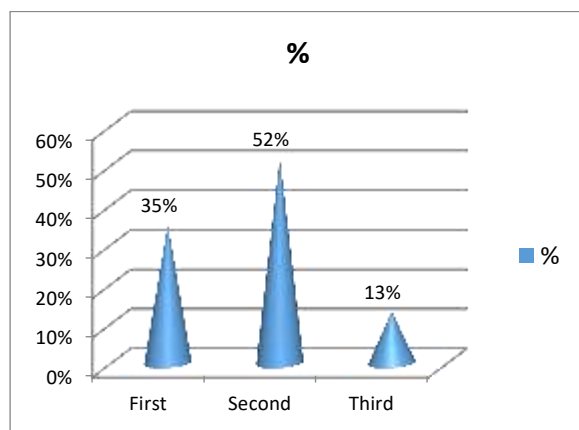
Body surface area	Number	P value
<10	2	0.02
10-20	22	
21-30	17	
31-40	15	
41-50	12	
51-60	2	
61-70	2	
>70	2	

Table III, graph I shows that maximum number of patients (22) had 10-20% involvement followed by 21-30 % in 17, 31-40% in 15 and 41-50% in 12 patients. The difference was significant (P< 0.05).

Graph I Body surface area involved in burn



Graph II Degree of burn



Graph II shows that 52% had second degree, 35% had first degree and 13% had third degree burns. The difference was significant (P< 0.05).

DISCUSSION

Burn is one of the most severe injuries. The treatment is rather difficult and is frequently prolonged. Burn injury is a common potential risk to people during war and the burn threat has ranged from simple missiles to high technology nuclear weapons.⁶ The people with severe injury of burns encounter with handicaps and serious psychological implications from burns for the rest of their lives. Serious burns at the battlefields are superficial burns to exposed skin, most often on the face, neck, forearms, and hands different from burns at civil life. These burn cases are additional injuries from multiple fragment wounds with a high rate of infection and long periods of hospitalization.⁷ The present study was conducted to assess cases of burn admitted to surgery department. In present study, out of 74 patients, males were 30 and females were 44. Etiology of burn was flame burn in 23 cases, hot object in 21, scald burn in 14, electrical burn in 10 and chemical burn in 6 cases. da Silva et al⁸ conducted an epidemiological study from the burn care unit. A total of 1975 burn patients were admitted in the BCU in this 5-year period. The mean age of all the patients included in the study was 29.16 years. There was a slight female predominance in this 5-years period. The overall male to female ratio was 1:1.05. The mean percentage total body surface area (TBSA) burn of all the patients over the period of 5 years was 42.5%. Flame burns were the most common form of burn, accounting for 65.16% of all burns. The overall mortality of the patients over 5 years was 40.8%. If the data are further classified, the overall mortality of patients up to 30% burns was 3.45%, with 30-60% burns was 42.3%, and above 60% burns was 91.8%. We observed that maximum number of patients (22) had 10-20% involvement followed by 21-30 % in 17, 31-40% in 15 and 41-50% in 12 patients. 52% had second degree, 35% had first degree and 13% had third degree burns. Khongwar et al⁹ in their study burn victims noted in last 3 years males (55.47%) outnumbered females (44.52%). The most common age group affected is older children, adolescents, and young adults (between 11 and 30 years). Flame (38.3%) and scald (25.3%) burns contributed to most of the injuries. Females (52.30%) are the major victim of flame burns. Electrical and chemical burns affected only the males suggesting work-related injuries. Trunk (30.8%) is the most severely affected site in all cases. Depression (6.8%) and power line workers (4.7%) seem to be important risk factors in our study. Inability to complete treatment (26.7%) was a major concern in our study. This study highlights the need for proper burn care that could be provided at the primary health-care level. The majority of burns were accidental in nature in school going children, young adults, and females. Flame and scald burns were the

most common cause. Preventive measures directed toward burn safety and first aid measures may improve the outcome in burn injuries. Goswami et al¹⁰ in their study forty-three patients with burns were analyzed in a retrospective study. Most of our patients were in major burn classification (93%; 40/43) and most of them had burns >15% total on body surface area. Most of them were admitted to our center late after first management at centers with improper conditions and in cultures of these patients unusual and resistant strains specific to the battlefield were produced.

CONCLUSION

It is found that maximum cases of burn were of second degree seen in females. Maximum cases had 11-20% body surface are involvement.

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