



A STUDY ON DEMOGRAPHIC AND CLINICAL PROFILE OF BURN PATIENTS IN A TERTIARY CARE TEACHING INSTITUTE OF NORTH INDIA

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ABSTRACT

Burn injuries are one of the most devastating injuries resulting into higher morbidity and mortality rates. Higher incidence in developing countries like India is creating a formidable health problem.

Objective: To study the pattern of distribution of burn injuries in relation to various epidemiological, demographic and socio-cultural aspect.

Methods: It was a prospective 1-year study conducted in Accident and Emergency Department of Sher-i-Kashmir Institute of Medical Sciences, SKIMS, Srinagar, a tertiary care teaching centre from October 1st 2014 to September 30th 2015. The data regarding sex, age predisposition, geographical origin, mode and nature of injury were obtained. Clinical assessment was done in the form of depth and extent of injury.

Results: A total of 104 burn patients were received during the study period. Majority of the victims were females and belonged to age group 15-29 years. Most of the victims belonged to the rural areas and were from lower socio-economic strata of the society. Flame burn was commonest mode of burn. House wives were most common occupational group involved.

Conclusion: Majority of the cases were of young females belonging to the rural areas. Preventive measures should be coordinated and multidisciplinary.

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INTRODUCTION

Burn injury is the third leading cause among the total accidental deaths in India. Developing countries especially like India have a higher incidence of burn injury creating a formidable health problem. In India with a population of over 1 billion, there are about 3 million admissions of burn patients annually. Burn injury is being presented now as an endemic hazard. Burn injury is a multidimensional injury involving all the systems of body and deranges all functions in one way or other depending on extent of injury resulting in higher morbidity and mortality. Because of the dramatic physical effect of burn injury, deleterious psychological complications occur to patient and family. It also affects the patient, financial condition of the family adversely.¹

The treatment of burn injury patients remains a challenging problem due to poor medical facilities, lack of public awareness, safety measures, lack of trained professionals, lack of specialized burn units at many centres and long course of illness and high incidence of short- and long-term complications. Prevention is still the best mode of treatment.

Hence, this study was planned with the purpose to know the magnitude, pattern of distribution, socio-cultural aspect of burn injuries, various risk factors associated and to identify high risk group to know mortality associated with burns and factors affecting mortality and morbidity. So that a better prevention program could be suggested, planned and implemented for reducing the incidence of fatal burns.¹

Objective

To study the pattern of distribution of burn injuries in relation to various epidemiological, demographic and socio-cultural aspect

MATERIAL AND METHODS

A prospective study was conducted in Accident and Emergency department of Sher-i-Kashmir Institute of Medical Sciences, SKIMS, Srinagar, a tertiary care teaching centre from October 1st 2014 to September 30th 2015. All the patients with burn injury presenting to Accident and Emergency Department were included in the study. The information regarding the cases was collected from the medicolegal

register and case sheets of the patients. Additional information was gathered from by interviewing patients and attendants of the patients. Demographic variables, (residence, socio-economic status), cause of the injury, source of heat, manner of incident were recorded as per pretested and predesigned proforma. Details of clinical examination like general condition, TBSA (Total Body Surface Area), clinical assessment of depth and associated illness were also noted. For defining the extent of burn, Wallace "Rule of Nine." was used. Data was entered over Microsoft excel sheets. Statistical analysis of various epidemiological parameters was done with SPSS software version 20.

RESULTS

A total of 104 burn patients were received in Accident and Emergency Department during the study period.

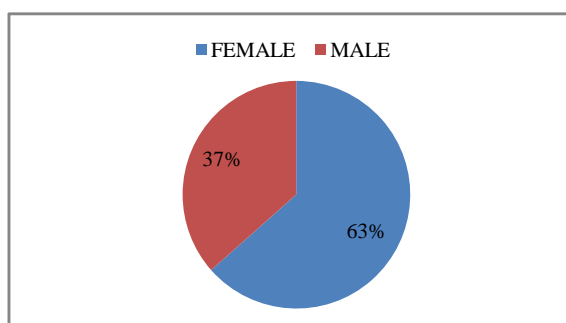


Figure 1-Showing Genderwise Distribution of Burn Victims.

Table 1-Showing Age wise Distribution of Burn Victims

Age in years	Frequency	Percentage
<5	10	9.61%
6-14	8	7.7%
15-29	48	46.15%
30-45	24	23.07%
46-60	6	5.7%
>60	8	7.7%
Total	104	100.0%

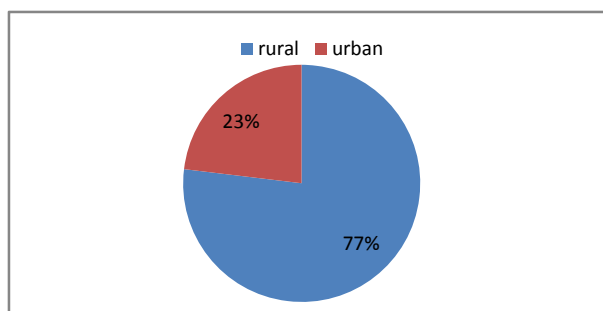


Figure 2-Geographical Distribution of Burn Victims

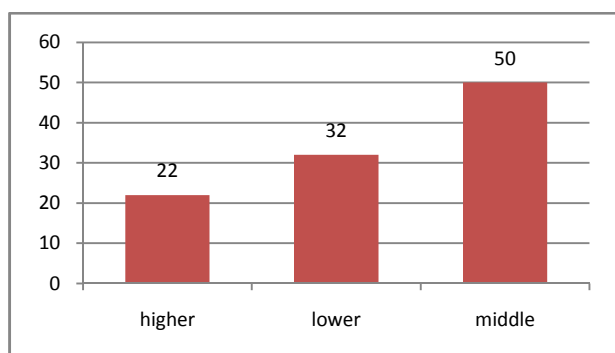


Figure 3-Showing Socioeconomic Status wise Distribution of Burn Victims

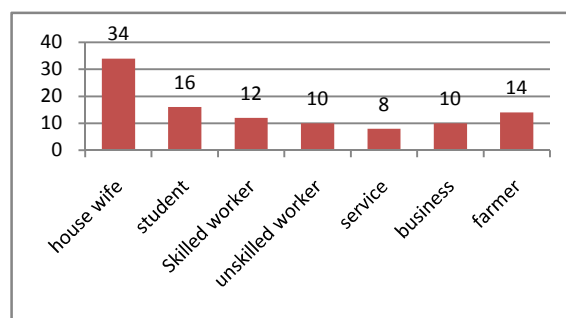


Figure 4Showing Occupation of Burn Victims

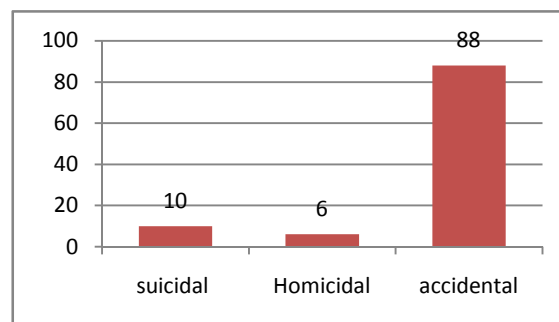


Figure 5 Showing Mode of Burns

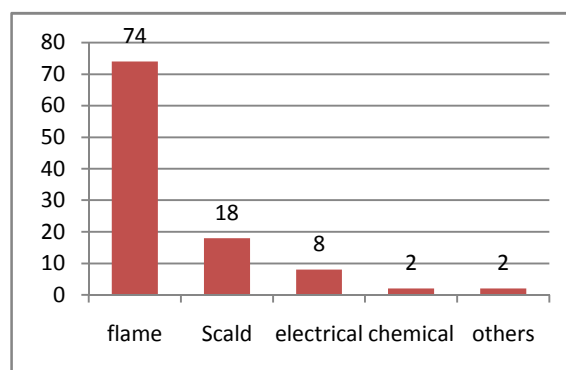


Figure 6 Showing Cause of Burns

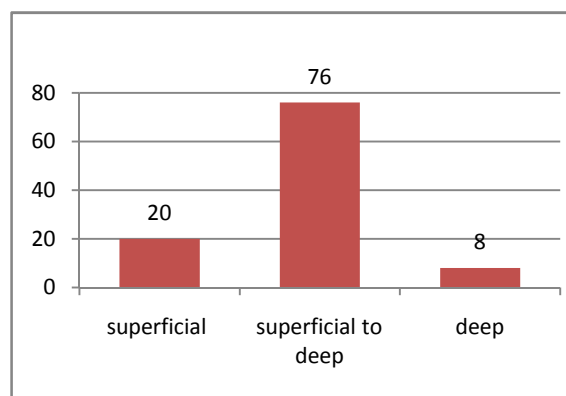


Figure 7 Showing Depth of Burns

Table 2 Showing Percentage of Burns

TBSA	Frequency	Percentage
1%-25%	10	9.61%
26%-50%	56	53.84%
51%-75%	22	21.16%
75%-100%	16	15.38%
Total	104	100.0%

DISCUSSION

In present study maximum number of patients were females (63%), because females are usually involved in domestic works like cooking, etc. Domestic responsibilities of females

plays important role in female predominance. Results are consistent with previous studies Chakraborty *et al.*^[2] reported 61.5% females. Deshpande.^[3] reported 59% females. Highest incidence of burn patients was in young adults (15-29 years) age group, which involved 48 cases (46.15%), which indicate greater exposure to burn agent in these age groups. P. Kumar (1997).^[4] and Gowri Shankar (2000).^[5] reported similar results. Majority of patients belonged to lower socioeconomic strata of the society (48.08%). Because of lack of basic facilities like safe cooking devices, electricity and education level lead them to contribute largely. In our study, patient from rural population (77%) contributed for larger proportion of burn patients. Majority of Indian population lives in villages (About 80%) and still lacking basic facilities like electricity, LPG chulha, modern cooking appliances, etc. and also the poverty and illiteracy. M. J. Akhtar (2003).^[6] and M. Mir (2012).^[7] reported similar pattern. In present study, accidental burns were maximum accounting for 84.61% of all cases recorded. As most of other studies done in various demographic areas shows that the accidental mode of burn was commonest because of hurry, lack of safety devices in occupational set ups, multitasking behavior. In our study, TBSA was randomly distributed. It ranges from 1-100%. Among percentage groups commonest group was TBSA 26%-50% accounted for 54.9% of cases. Occupationally housewives were most common victims because of lack of safe cooking facilities, loose synthetic garments, multitasking, social ignorance, domestic violence and social stigma of dowry are also major factors for intentional burn injuries in housewives. The findings are consistent with the findings of other researchers^[1,2].

SUMMARY AND CONCLUSION

The treatment of burn injury patients remains a challenging problem due to poor medical facilities, lack of public awareness, safety measures, lack of trained professionals, lack of specialized burn units at many centers and long course of illness and high incidence of short- and long-term complications. Prevention is still the best mode of treatment. Hence, this study was planned with the purpose to know the magnitude, pattern of distribution, socio-cultural aspect of burn injuries, various risk factors associated and to identify high risk group to know mortality associated with burns and factors affecting mortality and morbidity. So that a better prevention program could be suggested, planned and implemented for reducing the incidence of fatal burns.¹

A total of 104 burn patients were received during the study period. Majority of the victims were females and belonged to age group 15-29 years. Most of the victims belonged to the rural areas and were from lower socio-economic strata of the society. Flame burn was commonest mode of burn. House wives were most common occupational group involved.

The mortality, morbidity and disability related to burn injuries to burns can be reduced to a great extent by educating the people about the safety measures, implementing good health and safety regulations, legislations, proper appliance designing, prompt treatment of cases and appropriate referral services. The social aspect of burns could be taken care by increasing literacy rates, empowering women, counseling, appropriate legislations and their proper implementation.

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