

Burns in Married Women: An Autopsy Based Study

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Abstract

Background: Burns are a global public health problem, accounting for an estimated 265,000 deaths annually. Most of these happen in low- and middle-income countries and nearly half happen in the WHO South-East Asia region. Burn injuries involve both developing and developed nation. Goldman describes burns as “*the silent epidemic*”. **Material & Methods:** A Prospective study was conducted from Jan 2013 to December 2013 in which 87 autopsy cases of burn deaths were taken out of 976 autopsies conducted in the mortuary of Raichur institute of medical sciences, Raichur. **Results:** The maximum incidences of burn deaths in married females were in 21-30 years age group (40.3%). Majority of the victims were educated below 10th (55.3%). The most common place of death was kitchen (71.3%) and the most common manner of death was accidental (51.8%). **Conclusion:** Burns represent an extreme stressful experience and are complex devastating conditions. Public awareness should be increased regarding the social problem and importance should be given to education which can be achieved by different medias of mass communication.

Keywords: Burns; Married Women; Manner of Death.

Introduction

Burns are a global public health problem, accounting for an estimated 265,000 deaths annually. Most of these happen in low- and middle-income countries and nearly half happen in the WHO South-East Asia Region [1]. Burn injuries involve both developing and developed nation. Goldman describes burns as “*the silent epidemic*” [2].

Burn is an injury which is caused by application of heat or chemical substance to the external or internal surface of the body, which causes destruction of tissues. Each year, a considerable

proportion of deaths in India occur owing to burn injuries. Burns are among the leading causes of disability-adjusted life-years (DALYs) lost in low- and middle-income countries. In India, approximately there are 6 million burns cases annually of which around 0.7 million cases require hospitalization of which approximately 0.12 million die annually. Survival rate for burns patients in developing countries like India is around 50% for burns less than 40% while those in developed countries it is around 75-90% for 50% burns. Burn injuries cause significant morbidity and mortality and have considerable physical, psychological and economic effects on the patients, their families and society [3].

Burning of married females is very common in our country. These cases have increased probably due to marital disharmony, dowry harassment, humiliation, issues of property and land, depression aroused from physical torture and domestic violence. They are regarded as the commonest cause of unnatural deaths in India. Most of these cases are accidental or suicidal in nature [4].

A detailed knowledge of various factors associated with burns in married women in that particular geographical area is very much necessary. Keeping

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this in mind we conducted a prospective study at Raichur to focus on the various factors associated with burns in married women with a view to identify the areas of intervention. Thus burns in married women needs a careful and refined approach so as to study the factors related to it, the causes and if possible to find ways to prevent such tragedies.

Materials and Methods

A prospective study was conducted on 87 victims subjected to medico-legal autopsy at mortuary of department of Forensic medicine, Raichur institute of medical sciences, Raichur over a period of one year from January 2013 to December 2013. The study design comprised of thoroughly scrutinized information gathered from the police and the relatives of the deceased, hospital records and laboratory report of viscera and their contents. Unmarried female, children, unknown cases and decomposed burned cases were excluded.

Statistical Methodology

The results were analyzed using Statistical Software Package SPSS version 2.0. Statistical analysis was done for frequencies, percentages, proportions & ratios and results were interpreted.

Results and Discussion

A total of 976 dead bodies were brought for post-mortem examination at Raichur institute of medical sciences, Raichur during a period of one year from January 2013 to December 2013. After post-mortem examination and correlating with the history received from the police and relatives of the deceased, it was confirmed that in 87 cases (8.9 %), the victims had died due to burns. These 87 cases were the part of our study.

Table 1 shows the age wise distribution of deaths due to burns. The largest group was found to be in 21-30 yrs(40.3%) followed by 11-20 yrs(24.1%) which was in consistent with the study done by Piyush T et al. [5], Ambade VN et al. [6], Sharma BR et al. [7], Agarwal S et al. [8]. The above findings can easily be explained by the fact that 21-30 years of age group is the common age for marriage, most active, entrusted with responsibilities of family, susceptible to frustration in life, inability to cope with the physical and psychological stress of marriage and harassment from parents in law.

Table 2 shows that the education wise distribution of death which shows the maximum predominance in the victims who were educated below 10th (55.3%) which was in consistent with the study done by Piyush T et al. [5] who reported 51% of the victims were educated below 10th standard, Dasgupta et al⁹ and Kumar V et al. [10]. This high incidence of death among married females could be attributed to illiteracy or decreased education which makes them economically dependent on their spouse which can be a triggering factor for burns and also to having limited and unsafe knowledge about cooking measures.

Table 3 shows that the familial disharmony was present in 40.2% cases which was in consistent with the study done by Piyush T et al. [6] and Jha SS [11]. The family disharmony may involve domestic quarrels, marital disharmony, Infidelity etc.

Table 4 shows that the maximum victims sustained burns in kitchen (71.3%) which was in consistent with the study done by Piyush T et al. [8] and Kumar et al. [12]. This high incidence may be due to various socioeconomic factors in which females still use firewood and kerosene stoves for cooking.

Table 5 shows that majority of the victims (73.6%) sustained 80 to 100% of burns which was in consistent with the study done by Piyush T et al. [6] and Shaha KK et al. [13]. It indicates that the burn

Table 1: Age wise distribution of cases

Age group	Number	Percentage
0-10 yrs	0	0%
11-20yrs	21	24.1%
21-30yrs	35	40.3%
31-40 yrs	18	20.7%
41-50 yrs	05	5.7%
51-60yrs	03	3.5%
>60 yrs	05	5.7%
Total	87	100%

Table 2: Education wise distribution of cases

Education	Number	Percentage
Below 10th	48	55.3%
10 th -12th	36	41.3%
Degree	03	3.4%
Total	87	100

Table 3: Familial disharmony

Familial disharmony	Number	Percentage
Present	35	40.2%
Absent	52	59.8%
Total	87	100%

Table 4: Place of occurrence

Place of occurrence	Number	Percentage
Kitchen	62	71.3%
Bedroom	18	20.7%^
Bathroom	05	5.7%
Outside house	02	2.3%
Total	87	100%

exceeding 80% of TBSA are usually fatal and mortality is higher in such cases though better care and treatment are provided to the patient.

Table 6 shows that the common cause of death was shock (41.4%) followed by toxemia (27.6%) which was consistent with the study done by Piyush T et al. [6].

Table 7 shows that the accidental (51.8%) was the most common manner of death followed by suicidal (26.4%) which was consistent with the study done by Piyush T et al. [6] and Bullar DS [14]. The cooking activities involving fire associated with wearing of loose synthetic materials lead to accidental burns and it is also one of the commonest manner of suicidal in married females.

Table 5: Percentage of total body surface area (TBSA) of victims involved

TBSA	Number	Percentage
<10	00	0%
10-20	00	0%
20-30	01	1.2%
30-40	02	2.3%
40-50	02	2.3%
50-60	04	4.6%
60-70	09	10.3%
70-80	05	5.7%
80-90	26	29.9%
90-100	38	43.7%
Total	87	100%

Table 6: Cause of death

Cause of death	Number	Percentage
Shock	36	41.4%
Toxaemia	24	27.6%
Septicaemia/ Sepsis	27	31%
Total	87	100%

Table 7: Manner of death

Manner of death	Number	Percentage
Suicidal	23	26.4%
Homicidal	19	21.8%
Accidental	45	51.8%
Total	87	100%

Conclusion

Burns represent an extreme stressful experience and are complex devastating conditions. Public awareness should be increased regarding the social problem and importance should be given to education which can be achieved by different medias of mass communication. Importance should also be given to safety precautions to be adopted to prevent domestic accidents. The cause of death profile is an important set of public health information and forms the cornerstone of the health information system. At provincial level it is needed for deciding on intervention strategies and an effective coordination should be sought between the government, nongovernment and law enforcing agencies.

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References

1. World Health Organization. *Burns*. Available at: <http://www.who.int/mediacentre/factsheets/fs365/en/> (last accessed on August 5, 2015).
2. Goldman AS, Larson DL, Abstan S. The silent epidemic. *JAMA*. 1972;221(4):403.
3. Batra AK. Burn mortality: recent trends and socio-cultural determinants in rural India. *Burns*. 2003; 29(3):270-5.
4. Reddy KSN. The essentials of forensic medicine and toxicology. 31st Ed, pp: 296-306.
5. Piyush T, Paria M, Roychowdhury UB. *Journal of Indian Academy of Forensic medicine*. 2017;39 (2):131-35.
6. Ambade VN, Godbole HV. Study of burn deaths in nagpur, central india. *Burns*. 2006;32(7):902-8.
7. Sharma BR, Harish D, Singh VP, Bangar S. Septicemia as a cause of death in burns: an autopsy study. *Burns*. 2006;32(5):545-9.
8. Agarwal S, Agarwal SN. Analysis of causes of fatal burns. *J Ind Acad Foren Science*. 1967;6:40-3.
9. Dasgupta SM, Tripathi CB. Burnt wife syndrome. *Annal Acad. Med*. 1984;13:37-42.
10. Kumar V, Tripathi CB, Kanth S. Burnt wives: a circumstantial approach. *J For Med Toxicol*. 2001; 18(3):9-14.
11. Jha SS. Burns mortality in Bombay. *Burns*. 1981; 8:118-22.

12. Kumar V, Tripathi CB, Kanth S. Burnt wives: a sociological study. *Int J Med Toxicol Legal Med* 1999;2(2):24-27.
13. Shaha KK, Mohanthy S. Alleged dowry death: a study of homicidal burns. *Med Sci Law*. 2006;46(2):105-10.
14. Bhullar DS: Profile of unnatural female deaths between 18-30 years of age. *J For Med Toxicol*. 1997;13(3):5-8.
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