

An Autopsy Study of Fatal Thermal Burns in Married Women: A Prospective Study

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Abstract

Death of a bride by immolation either self or by the in-laws and their family members is a well-known phenomenon since many centuries in India. Even though our country is developing in all respects, but still we are unable to prevent these deaths due to various reasons. In this study, we have made an attempt to highlight the statistics of fatal thermal deaths in married women in one year with relation to Incidence, Age, element of dowry and cause of death.

Results showed that Incidence of thermal deaths in married females was 75.2% with maximum victims in the 18-22 years age group. Further it was noted that 39% of these victims were due to alleged dowry harassment and the cause of death in majority being septic shock.

Keywords: Burns, Dowry, dowry deaths, immolation, autopsy, thermal injury.

Introduction

India has a number of homicidal deaths of women every year. It may be due to various reasons, known instances include marital infidelity, sexual jealousy and bride burning. India has a number of bride burning cases every year and most heinous of them being dowry related deaths. A majority of these cases do not get reported, invariably being disguised as a kitchen accident. When a Hindu girl gets married, parents give presents to the bride and groom based on their social and financial position. The ancient concept was that the Hindu girl could not get part of the inheritance so the father would provide her material things in lieu. Over time concept of dowry has gotten distorted with the groom's family making demand for lavish presents like cars, cash, house or gold. When the bride's family is unable to satisfy these unreasonable demands, the in-laws can take the drastic step of dousing the girl with an inflammable liquid and setting her on fire. Husbands who indulge in this act of bride burning see it as a way of getting rid of their wives so that they can remarry for a bigger dowry.¹

According to the Indian Penal Act, giving or asking dowry is prohibited. If anyone is reported, they can be arrested and tried under The Dowry Prohibition Act. According to Time Magazine the numbers of bride

burning cases have increased from 400 in early 1980s to 5,800 in 1990s. It is not known whether the bride burning cases had increased or the number of police reports have increased. A women's group located in Bangalore estimates that three to five women suffering from severe burn injuries are taken to a burns unit at Victoria City Hospital every day.

According to the statistics released by the Government of India in 2001, 7,000 women were killed by husbands and in-laws because of less dowry or inability to pay more dowries. Bride burning is a social stigma which India is trying hard to fight. However, women organizations claim that not enough is being done to protect women and women rights specially when witnesses can be intimidation or police are indifferent during investigation. Today, outdated, mythological misconceptions of women combined with the grossly manipulative practice of dowry means that bride-burning is as rampant today as it was 2,500 years ago and the Indian government and society implicitly sanction dowry murders by not adequately prosecuting it.²

A reality check is sorely needed. In this prospective study we analysed the trends and profile of fatal thermal burns cases involving married woman in around Davangere.

Methodology

A prospective autopsy study of sudden natural deaths which was conducted at JJM Medical College and Cigateri General Hospital, Davangere Karnataka, India for a period of 1 year from 1st November 2009 to 1st November 2010 formed the primary material of the study. Among them, cases of deaths due to burns in married women were selected based on purposive sampling. The objectives were to assess the Incidence, age, element of dowry, socio-economic background and cause of death among married women due to burns. Before starting the post-mortem examination, history from the relatives, police and treatment records if were obtained and recorded on a pre-made detailed proforma. In cases where the death was unwitnessed and the dead body was brought directly from site of death by the police for post-mortem examination, help of the investigating officer was sought to know the manner of death. Data was collected and analyzed statistically using appropriate statistical tools (namely Microsoft

Excel 2007 and IBM SPSS V.20) with respect to the aforesaid objectives.

Observations & Results

During this study period, 881 cases were brought for medicolegal autopsies out of which 224 (25.4%) deaths were due to burns. Out of the 224 cases, incidence of married female deaths accounted to 94 i.e. 75.2% of total deaths. Further, incidence of alleged dowry deaths due to burns was found to be 39.3% of the total. [Table 1]. Among the 94 deaths due to burns in married females, maximum numbers of cases i.e. 49%, were observed in the age group of 18-22 yrs. [Table 2]. Majority of the deceased persons (68%) died to a degree of dermo-epidermal burns. [Table 3]. 54 % of the deceased persons were from rural areas of Davangere [Table 4]. Maximum deaths were observed in females belonging to the lower socioeconomic class i.e. 62 % [Table 5]. And majority of the victims (54.2%) died due to septicemic shock [Table 6].

Table 1: Incidence of cases

S.I No	Feature	Number of deaths	Percentage (%)
1	Autopsied deaths	881	100
2	Burns deaths	224	25.4
3	Total Females	125	55.8
4	Married Females	94	75.2
5	Alleged Dowry deaths	37	39.3

Table 2: Age wise distribution of deaths

S.I No	Age group (Years)	Number of Deaths	Percentage
1	18-22	49	50
2	23-25	27	17
3	26-30	13	13
4	31-40	4	4
5	➤ 40	7	7

Table 3: Degree of burns

Degree of burns	No. of cases	Percentage
Epidermal	24	35
Dermo epidermal	68	68
Deep	8	11

Table 4: Regional Distribution

URBAN	RURAL
28	66

Table 5: Socioeconomic Status

STATUS	CASES
LOWER	62
MIDDLE	28
UPPER	4

Table 6: Cause of Death

Cause	No. of cases	Percentage
Neurogenic shock	9	9.50%
Hypovolemic shock	18	19.15%
Toxemic	16	17.02%
Septicemic	51	54.26%
Total	94	100%

Discussion

Seventy-two years after Independence, Indian woman are still searching for these ideals visualized by “framers “of modern India. Despite the enactment of laws, the formulation of reformatory legal processes, the provision of legal aid to the poor , the extensive use of the provision of legal aid to poor , the extensive use of the provision of Public Interest Litigation, and the creation of woman / family counseling centers etc., women in India still have a long way to go in converting the constitutional goals into reality .Religion, customs

and age old prejudices have put Indian woman in a subservient and exploitable position in many domains of life. Factors such as low rates of participation in education, lack of economic independence and value biases operating against them have resulted in woman being dependent on the men folk of the family. They are usually ignorant of their rights and even if they are not, they do not have easy access to justice . The system of dowry is a social practice, which, on its own, has claimed the lives of scores of women. The incidence of cases found by us is in conformity with the study conducted by Naik et al ³ and Kumar et al. ⁴

Married outnumbered unmarried in the ratio of 3:1 i.e., married cases were 94 and unmarried cases were 31 out of 125 female victims. This clearly shows the magnitude of young married females being the victims. The married outnumbered unmarried ones in burns deaths. which is also consistent with the study of Naik et al ³ and Mabrouk AR et al. ⁵

Age is one of the important factors. Maximum number of deaths 49 occurred during the study of 1 years (2009-2010) in the age group 18-22 years, and second highest deaths occurred in age group of 23-25 years i.e.,21 cases. In age group 26-30 years 13 cases. As people from 18-30 years age group are exposed to high risk, because this is the age group which is involved in cooking purpose. Dowry deaths are also common in this age group. Mabrouk AR et al observed that majority of deaths (46%) occurred in 21-30 years of age group. Naik et al in a study on trends of burn deaths it was found that most of the victims were between 11-40 years with peak at 21-30 years (47.1%). And Mabrouk AR et al 26 in his, found that maximum cases seen in 18-26 years of age group. So, the present study is in accordance with the above studies.

In the Western countries, the old people and children are the most common victims of accidental burns. In our country, this difference may be possible due to better care of young and old people by the family members.

Highest number of cases i.e., 68, showed Dermo-epidermal burns, which is followed by epidermal burns i.e., 18 cases and lastly 8 cases showed deep burns. Sharma SR ⁶ found that major incidence of death due to burns was dermo-epidermal degree of burns (40%) followed by deep (65%) and epidermal degree of burns (12.1%). So, the present study is in consistent with the other study. The diagnosis of the depth of burns is not

entirely accurate because there are no definite clinical criteria for the depth of burns. There are various gradations of injury in the extensive burns. Also, the thickness of skin varies with age and body location.

In our study maximum cases of married female fatal burns seen in females from rural area than urban area and from lower socioeconomic classes. Similar observations were made by Sharma et al and Mabrouk AR et al.

The findings of the present series noting the sepsis as the most important factor for the cause of death, as the period of survival in maximum number of cases is more than 5 days. In the present study, out of 94 cases, maximum deaths i.e., 54.26% were due to septicemic shock and minimum i.e., 9.5% were due to neurogenic shock. This is because most of the victims of burns, who survived the initial 24 hours after burns, succumb to infection of the burnt area and its complications. Burns cause devitalization of tissue leaving extensive raw areas, which usually remain moist due to the outflow of serous exudate. The exposed moist area along with the dead and devitalized tissue provides the optimum environment favoring colonization and proliferation of numerous microorganisms, which is further enhanced by the depression of the immune response. All these factors contribute towards sepsis in a burns victim. Tripathi CB et al ⁷, found 30.92% death due to septicemia, while Kumar et al found that 53% of cases died due to septicemia. So, the present study is in accordance with the above studies.

Conclusion

Accidental burns are mostly preventable by adequate safety measures and safety education. "Bridge burning" is a social evil unmatched in its cruelty and cynicism in today's civilized society. Any discussion on its etiopathogenesis and remedial measures must take into account the sociocultural and economic ramifications underlying this scourge.

Legal measures however, harsh or deterrent, cannot suffice to combat this scourge due to complete dependence of the woman on her husband and in-laws.

Following measures are recommended:

Social and Economic

1. Safety education to combat domestic and industrial burns.

2. Public and professionals should be made to realize the magnitude and gravity of the problem.

3. Discouraging dowry demands and offers.

4. Promoting education among women to make them economically free and independent.

5. Social acceptance and security measures for the single woman who is deserted or left by the dowry seekers.

6. To strive for a social transformation so that both girls and boys choose their life partners.

7. Social boycott of those boys and their families in future marital negotiations by the society.

Legal

1. More stringent laws for possession and use of explosive and implosive and inflammable materials to prevent accidents.

2. Police task force-specially trained in the subject for timely investigation of the case and should provide detailed history and sketched diagram showing arrangements in bedroom and kitchen, with special reference to place of incidence and mode of catching fire.

3. Special legal aid cells for the victims and other relations.

4. Special courts to try the cases expeditiously.

5. Inquest by a magistrate in all cases of young female burn death and strict adherence to existing laws in this regard.

6. Visit to the scene of crime should be made compulsory by autopsy surgeon along with the expert in forensic science with a well-equipped team for proper and prompt investigation with modern techniques.

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