

ONE HUNDRED FEMALE BURNS CASES : A STUDY IN SUICIDOLOGY

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SUMMARY

A study of one hundred consecutive female burns (aged 15-40) admissions into the Department of Plastic Surgery, Madurai Medical College and Government Rajaji Hospital, Madurai revealed 70% to be suicidal, 25% accidental, 3% homicidal and 2% non-classifiable in nature. The important causes were grouped under psychiatric disorders (23%), physical illness (15%), and marital and interpersonal problems (51%). The unreliability of dying declarations was observed. The degree of burns, previous suicide attempts and family history were analysed. Abdominal pain and marital problems in relation to suicide are discussed in detail. 5% of suicides were due to dowry related problems. Post Vention measures towards the management of the survivors of suicide attempt and family members of the suicidee were undertaken. Broad guidelines on prevention of suicidee from marital problems are indicated. The technique of 'Psycho-logical autopsy' was utilised for collection of data and reconstruction of the anatomy of suicidee.

Though there is a good sprinkling of reports in India on suicide behaviour, few have dealt with self-inflicted burns (Venkoba Rao, 1971, 1975; Nandi et al, 1978; Satyavathi & Murti Rao, 1961). Burns, a major public health problem and an important area of study in plastic and general surgical practice has not been researched on from psychosocial and psychiatric points of view (ICMR, 1987). One sixth of the survivors from burn injuries suffer from psychological sequelae (ICMR, 1987). Two-thirds of severely burned patients were found to suffer persistent psychological problems at one year follow-up in a British study (White, 1982). Psychological problems in a Burns Unit and their management have been discussed by Antebi and Ambler (1989). Recently, interest was aroused from increa-

sing reports of dowry-related homicides and suicides. The data published by the Government of India, Ministry of Home Affairs indicate deaths by fire (details not available) contributed to 7.4%-9.3% to all suicidal deaths for the years 1980-84 (Government of India). On the other hand, suicide by burning in Western countries, especially in UK and USA is rare and accounts for less than 1% of suicides (Weissman, 1974). However, 27.7% of female suicides and 2.9% of male suicides were reported to be due to burning from Israel whose suicide rate is higher (Modan et al., 1970). Persley and Pegg (1981) reported from Australia, 47% of suicide attempters by burning died during treatment. Studies on suicide while not including burns conclude that insecticide poisoning is the common mode of para-

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suicide and suicide. For example, in the ICMR Project on "A Study of Suicide Behaviour", a cohort of 250 patients had two cases of burns (ICMR, 1988). Hence a separate enquiry was addressed to the problem of burns as an off-shoot of that study in the ICMR Centre for Advanced Research on Health and Behaviour, Govt. Rajaji Hospital, Madurai. It was a collaborative one involving ICMR Centre and the Departments of Plastic Surgery and Forensic Medicine of the institution.

Aims :

The aims of the study were to analyse females admitted for burns and find out in them the frequency of suicide, homicide or accidents ; to ascertain the 'causes' of suicide with special reference to dowry related problems; to analyse and manage the problems of the survivors of suicide attempt and also of the family members of the suicidees from psychiatric and psychosocial angles ; and to evolve a broad outline of prevention of suicide based on the data.

Material and Methods

One hundred consecutive women admitted into the Burns wards of the Department of Plastic Surgery, Government Rajaji Hospital, Madurai between 16th March 1988 and 15th October 1988 formed the study material. The criteria for inclusion were the females in the age range 15-40 whose admission was necessitated by burns by fire sustained in domestic environment. Excluded from the study were those cases who were pronounced dead in the emergency department and not admitted into the wards. Burns of electrical, chemical nature were excluded. The material formed 60% of all burns admissions of both sexes and all ages (N=166) during the period of study.

Following admission, each case was examined by the project staff in the wards and all research data collected on

the specially devised proforma. Dying declarations were obtained by the magisterial authorities. The treatment was instituted by the plastic surgeons. The procedure of "psychological autopsy" (Schneidman, 1969) was employed in all fatal cases with a view to ascertain the circumstances leading to the burn injuries and to clarify the exact nature of death. This involved gathering information from key and other persons through visits by project staff to the homes of the deceased as often as necessary. None of the subjects left suicidal note. Weekly meetings were held with the project officer, research staff, and the co-investigators from the Departments of Plastic Surgery and Forensic Medicine. Each case was discussed and the decision on the nature of the burns was arrived at (accidental, suicidal or homicidal). Post Vention measures consisted of contacting the survivors of suicide attempt (N=3) and managing their post-burn sequelae. They also included contacting the survivor members of the families of the suicidees to assess psychiatric morbidity in them and offering counselling. Autopsy, a medico-legal requirement was carried out on all fatal cases and the findings were non contributory towards the aims of the study. The present report does not include detailed data and followup of accidental cases and they will form the basis of a separate communication.

Data

Socio-Demography: Age Marital & Motherhood status:

As indicated earlier, the age range of the subjects varied from 15 to 40 years. Forty seven percent were between 20-29 and 30% were below 20 ; while 22% fell between 30-39, one subject was 40 (Mean Age: 25.42; SD : 5.1). Seventy four percent were married, 25% were

single and one was separated. Twenty among the suicidal burns were married for over 7 years while 13 were married for less than a year. Others were married for 2-6 years. Among the 'accidental group', all were married for more than a year: 12 for more than 6 years, 3 for 2 years and 1 each for 3 and 4 years. Three homicidal burns cases were married for over 7 years. Considering the number of children of the subjects (excluding 13 who were married for less than a year) among the suicides, 11 had one child each, 13 had two, 10 had three, 2 had four, one subject had 5 children. In the accidental group, 5 had one each, one had 2, 6 had 3, 2 had 4 each, 2 had 5 each, one childless. All the homicidal cases had children. There was no statistical difference between different groups of burn injuries in respect of marital and motherhood status. This is of interest since there are reports on childlessness as a cause of suicide (Venkoba Rao, 1983).

Mortality and Dying Declaration

There was a mortality of 78 cases (78%) in the whole series leaving 22 survivors (22%). The nature of burns were classifiable as 'suicidal' (70%), 'accidental' (25%), 'homicidal' (3%), and unclassifiable (2%). The mortality was 96% among the suicidal burns, 25% among the accidental and 100% among the homicidal burns. The two non-classifiable burns terminated fatally. The ratio of the suicide completers (N=67) to the attempters (N=3) works out to 23:1 which is a reverse of the ratio seen in reports on suicide from non burns causes. The differences between suicide attempters and suicide tends to disappear when considering suicide behaviour from burns (Weissman, 1974).

Dying declarations (legal documents) were available in 48 out of 78 fatalities (61.5%). A discrepancy between dying

declaration and research data was evident in as many as 28 cases (58%). While 31 women indicated their burns as accidental in their dying declarations, 26 of them later confessed the suicidal intent to the project staff before death. Through psychological autopsy, one was proved homicide among fourteen with dying declarations of suicide and another turned out suicide among 3 declarations of homicide. Thus, many women concealed suicide nature of their burns apprehending ill-treatment of their children by the family or/and to avoid social stigma.

The 'causes' of suicidal burns (N=70) could be grouped as follows:

I. Psychiatric disorders were diagnosed in 16 (23%) subjects (4: depressive illness, 1: paranoid schizophrenia, 1: schizoaffective disorder, 1: mental retardation and 9: personality disorders).

II. Physical illnesses was detected in 10 subjects (15%) and their distribution was as follows (N=10, 15%):

3: chronic abdominal pain, 5: gynaecological complaints (dysmenorrhea 2, premenstrual syndrome 2 and 1 congenital anomaly of uterus treated by hysterectomy) and 2 cases of 'epilepsy'.

III. However, the major contribution was from the group with interpersonal adjustment problems as indicated below:

(A) **Marital problems** (N=36: 51%).

The conflicts were of the following type (overlapping in some)

- (i) Alcoholic husband and wife beating
- (ii) Extra marital relationship
- (iii) Adjustment problem with husband

(B) **Other stressful family and life circumstances** (N=26: 37%)

- (i) Interpersonal adjustment problems with parents, sisters and

in-laws

- (ii) Love affair and illicit relation
- (iii) Academic problems

(G) **Dowry related problems (N=5; 8%)**

Problems with in-laws related to dowry and allied problems

IV. *Inadequate information (N=2; 3%)*

Degree and Nature of Burns :

The degree of burns involving the body surface was noted in all the cases as per the criteria laid down by the Plastic Surgeons. Accidental burns were invariably restricted to less than 50% of skin surface in 21 subjects barring 4, in whom it varied from 60-90%. On the other hand, among the suicide group (N=41) 2/3rd of them sustained burns to the extent of 90-100%. There were 9 suicide cases with burns less than 50%. Among the suicide group, the areas effected were scalp, face, trunk in that order. In the accidental cases face and scalp were generally spared. Accidental burns tended to affect the anterior aspects more often, while suicidal burns affected the back of the body. Three homicidal cases sustained 50-60% of burns. The data indicated that suicidal burns were sustained mostly in kitchen and at odd hours and the subjects managed to be alone in the house with the doors locked inside. No attempt was made by them to be detected. On the other hand, the accidental burns occurred during the regular kitchen hours and some members were present nearby. They had screamed for help. The determined wish to die was evident in all suicidal cases.

The other differences between the suicidal and accidental burns were : Fifteen were currently psychiatrically ill among the suicide group, compared to 3 in the accident group (22% vs. 11%).

In the latter the accident resulted from motor retardation, carelessness and lack of insight. A far higher mortality (96%) marked the suicide group, while it was 25% in the accidental.

Post Vention

Post-vention measures were instituted for the survivors in the family of the deceased. The social and psychological impact of suicide from burns was assessed. Many expressed that they were socially affected (N=51) and others emotionally broken (shock, grief, depression, guilt, anxiety N=44). There were 3 instances, where the parents of the deceased were hostile towards their husbands' families. A sense of relief was experienced in 4 families over the demise of the subjects. All these four were chronically ill (two physically and two psychiatrically).

Psychiatric management was required in 50 cases among the survivors in the family. However, others did not require any sort of help (N=25). Among the three cases of suicide attempters with post burns sequelae, the chief complaints were pain, decline in functional capacity owing to the scar, a loss of income from working. Social withdrawal and isolation were observed. A concern over the remarriage of their husbands was marked in two and one has been abandoned by husband. All were receiving treatment for depression and one continues to be a high risk for repeat suicide.

Previous suicide attempt and family history

Among the suicide group 8 subjects had made earlier suicide attempts though not by burn injury. Two each of them were psychiatrically and physically ill respectively, while the remaining 4 had interpersonal problems. No previous suicide attempts was observed among the accident group. In all, 16 cases in the

suicide group had family history of : Psychiatric illness (6), Suicide (2), Psychiatric illness and burns (1), Physical illness and burns (1), Psychiatric and physical illness and burns (1), Psychiatric illness with suicide (2) and Burns (3).

In the accidental series, there was one instance each of physical illness, suicide, burns and psychiatric illness with burns. The family history of mental illness among the suicide group was statistically significant compared to the accident group. The family history of suicide and burn injury does not reach a degree of statistical significance owing to too few cases in the accident group. However, a higher percentage of suicide from non-burns and burns was evident in the suicide group than in the accident group. The factors of prior attempt and family history did not characterise the three homicidal deaths.

DISCUSSION

Psychological Autopsy

The procedure of 'Psychological Autopsy' introduced by Shneidman (1969) is a retrospective reconstruction of an individual's life, especially with those features which shed light on intention in relation to one's own death, offering clues to the type of death. Its principal function is to help clarify deaths that are equivocal regarding their modes—to differentiate a homicide, suicide and an accident. Others have referred to its clinical use (Litman et al., 1963), its medico-legal aspects (Curphey, 1961) and its role in the study of terminal phase of life (Weisman and Kastengau, 1968). It has been adopted in the present study and the authors are not aware of any publications in Indian literature based on this technique.

The study has revealed that domestic burns as a method of completing suicide

by young women is a common and most lethal one with a promise of a high degree of success. The ratio of attempters to completers by this method is 1 : 23 a reversal of the one noticed in reports on suicide in general in both sexes. Many cases of suicide burns are fatal. The present study has revealed the mean age of the suicides to be 25.42. That suicide is common among women below 30 of Indian origin have been reported from Malaysia (Maniam, 1988), Fiji (Haynes, 1984) and Sri Lanka (Ganesvaran et al., 1984). However, these studies have not indicated the degree of mortality from domestic burns. Burns in general have been reported in younger age groups in women (ICMR, 1987).

Marital and Dowry problems

Marital problems were to the fore in more than half of the cohort and they included alcoholism in the husbands and the latter's extra-marital relationship and wife beating behaviour. The problems also included mal-adjustment with in-laws. This observation calls for institution of marital counselling measures. Among the stresses the marital ones appear to be the most frequent in women, while there were 5 suicides from dowry related problems (5%), no homicide was encountered in the study from this cause. In the year 1985, 837 cases of dowry deaths were registered by police in the country.

It may be of interest that though dowry is not a problem among women of Indian origin in Fiji, suicide is common among them from marital mal-adjustment (Haynes, 1984).

It is held that females in India are submissive, docile and non-assertive and these traits have been built into their psyche with the result that they find themselves unable to deal with their negative feelings adequately. Amidst the hostile envi-

ronment of the families with problems of a difficult husband and dowry demanding in-laws, they feel helpless with the threat of losing their husband's sympathies with none to turn to. This results in the choice of suicide as a way out from psychological pain, anguish and suffering. This calls for measures to cultivate and improve their coping styles to face the domestic conflicts and dowry related problems. More stringent laws and social economic measures apart, far more effective coping mechanism is called for to sail through the disturbing family conflicts (Khan *et al.*, 1987; Venkoba Rao, 1987). Attempt to improve the self-esteem of the girls from very young age both in the rural and urban sectors can be expected to help coping, since a low self-esteem has been found to be associated with psychological problems of depression, helplessness, submissiveness (Luck and Heiss, 1972; Beck *et al.*, 1979; Lewinsohn *et al.*, 1981).

Among physical illnesses, chronic abdominal pain and gynaecological complaints (dysmenorrhoea and premenstrual syndrome) were common. This conforms to the pattern of the 'causes' of suicide behaviour in other studies. Mersky and Spear (1967) in their important monograph on pain hardly mention abdominal pain in the context of suicide. Intense pain either acute or chronic has been cited as an infrequent precipitant to suicide. Critchley regarded pain as a less common cause of suicide than other unpleasant sensation with a remark that more people "take their lives because of a inerable ringing in their ears than because of pain" (Critchley, 1988). However, Indian studies have listed abdominal pain among the causes of attempted and completed suicides. Satyavati and Murti Rao (1961) in their classic study on suicide in Bangalore found "stomach ache" in 86 out of 261 suicides. Thirty five (17%) patients in a series reported by Venkoba

Rao (1971) were suffering from abdominal pain, functional in 20, with dysmenorrhoea and peptic ulcer contributing to 12 and 3 respectively. In the series of 250 cases referred to earlier (ICMR, 1988) suicide behaviour was attributed to abdominal pain in 26 cases. The follow-up revealed duodenal ulcer in a male, who underwent gastrojejunostomy. Another patient, a girl who made near fatal attempt due to recurrent abdominal pain by consuming copper sulphate, underwent an emergency surgery for a twisted ovarian tumour in the follow-up period. It is banal to dismiss abdominal pain as feigning by the patient, but in practice it is not unusual to observe that these patients had earlier sought medical assistance. A recent support for 'abdominal pain' comes from Vassilas (1988). A retrospective case-note study of young women 15-35 years admitted for appendectomy showed that in those who had a normal appendix removed, significantly a higher rate of admission for parasuicide was noticed either before or after surgery compared with the patients who had an "inflamed appendix" removed. The link between abdominal pain and suicide behaviour needs further study especially from the physicians to ascertain the quantum of highrisk patients proceeding to suicide behaviour. Some cases of 'pain' may be depressive manifestation but to dismiss 'pain' as depression in the absence of other evidence of depression is a hasty clinical act.

Psychiatric Illness :

Psychiatric illness was observed in 16 subjects and no discussion on the relationship between psychiatric illness and suicide behaviour is intended here. A significant feature characterising burns cases was the suddenness and the impulsive nature of the suicide attempt. Two of them had made previous attempts at

suicide. The impulsiveness is attributable to the personality disorder, which contributed to more than 50% of the psychiatrically disordered group. The guidelines for suicide prevention in this group are similar to the ones employed in the general management of psychiatrically ill population.

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