

SELF-POISONING: A STUDY OF FEMALE PATIENTS HOSPITALISED IN A GENERAL MEDICAL DEPARTMENT IN ONE YEAR

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SYNOPSIS

In the year 1982, 85 out of 1527 (5.5%) female admissions to a general medical department were for self-poisoning. Only 80 cases were analysed in this report. The majority were young and single Chinese but there appeared to be a disproportionately high number of Indian females. Thirty three (41.3%) expressed suicidal intent; none was successful. Twenty four (30.0%) took poison to express their "cry for help". Girl-boy/woman-man relationships were the common predisposing factor, this root cause being in several instances fuelled by the in-laws and family members joining in the fray. Benzodiazepines were the most popular group of drugs ingested. Ten patients took paracetamol with no disastrous sequelae despite 19 grams being taken by one. Hospital stay was short, less than 4 days in 81.3% of cases. Further referrals to the social worker (42 patients) and the psychiatrist (14 patients) were deemed necessary.

INTRODUCTION

For 1982 there were 1527 female admissions to the Department of Medicine III, Tan Tock Seng Hospital (1) of which 85 (5.5%) were admitted for the management of self-poisoning. Attempted suicides in 1980 had a female to male ratio of 2.2 to 1 with self-poisoning accounting for 75% of the cases in Singapore (2). The non-therapeutic use of psychoactive drugs is a modern epidemic in America (3, 4). In a study from New Zealand, psychotropic drugs were the most commonly used drugs in self-poisoning (5). Most Americans who commit suicide shoot themselves. Depression and chronic alcoholism are the preconditions (6). The pattern of drug abuse in males for intended suicide in Singapore was analysed recently (7). The purpose of this paper is to analyse the same in females over the same period.

MATERIAL AND METHOD

Subjects studied comprised the eighty female patients admitted to this department in 1982 for self-poisoning from the Accident and Emergency Department of this hospital. Records showed a total of 85 patients but the records of five patients were unavailable for analysis. From a careful history, each patient's intent for ingesting the poison was ascertained (unless she refused to disclose), also the type of substance(s) taken. Where possible, toxicological analyses were carried out on stomach washout contents, blood and/or urine samples. The reasons for self-poisoning were evaluated with the help of the medical social worker where necessary.

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RESULTS AND DISCUSSION

1. Demographic characteristics

Table 1: Age Distribution

Table 1: Ethnic Group Distribution

The majority were Chinese (consistent with the national ethnic composition) and the peak age group 20 to 29 years old. Forty four (55%) were single and all were Singaporeans except for six Malaysians. The number of male admissions for the same period of time to the same department of medicine was 28 giving a female to male ratio of almost 3 to 1, much higher than the 2.2 to 1 ratio reported in 1980 (2). For both sexes, increasing age after 29 years correlated with declining self-poisoning rates, more so for the females than the males. The high percentage of women aged 20 to 29 years in this study is similar to that elsewhere (8). The figure for the Indians seems to suggest that they are more prone to self-poisoning than the male counterparts (21.3% versus 14.3%). The oldest woman of 79 years took potassium permanganate solution by mistake rather than for suicide. The youngest patients were two girls aged 12 years, one a Malay student, a foster child, who drank eradicating ink because her school teacher scolded her while the other, also Malay, was a patient of the Child Psychiatric Clinic on follow-up for epilepsy after a road traffic accident. She showed temper tantrums and took 30 tablets of her prescribed anticonvulsant phenobarbitone. Twelve of these 80 patients were warded for their second or more attempt at suicide. Five of them were single. In addition to ingesting poison, four slashed their wrists and one tried to jump from a multistorey building.

2. Patient's intention and reasons for selfpoisoning

Table 3: Patient's intent for self-poisoning

By suicidal intent is meant the expressed desire to want to die but as shown later the mode of self-poisoning did not always bear this out. Parasuicide is used to classify those "crying for help". The non-suicide patients took the drug(s) wrongly or in excessive dose. These are arbitrary definitions for the purpose of this study. Other authors have defined cases of self-poisoning if they entailed "deliberate acute self-administration of a drug with the intention of causing or risking death or harm, or in order to give the impression of such intention" (9). Here, self-poisoning was taken to apply to all cases who ingested the poison for whatever reasons even if by accident.

Although 41.3% expressed suicidal intent, none succeeded. Two gave cause for concern. One Chinese patient aged 27 years came in deep coma and was observed in the intensive care unit. She developed hypotension but no hypoventilation. With supportive therapy she recovered to tell us that she took an overdose of Mogadon (nitrazepam). The other, a single Indian of 22 years, took an organophosphorus weed killer. Her serum cholinesterase level was 16 units (normal 90-110 units). This was her second attempt at suicide. She had been seen by the psychiatrist after her first attempt and was still being followed up there. She stayed 17 days in hospital.

Four of the five accidental self-poisoning cases mistook chlorox for water. One other took Listerine thinking it was thymol gargle, so she said. Surprisingly four of these five were non-Chinese and three of them were below 20 years old. The one young girl who refused to say the reason for taking a cocktail of valium, Ponstan and other drugs was 18 years old, single. She was a store clerk and strongly denied suicide.

TABLE 1 AGE DISTRIBUTION

Age Group (years)	Number (%)
Less than 20	14 (17.5)
20 -	40 (50.0)
30 -	17 (21.3)
40 -	6 (7.5)
50 & above	3 (3.7)
Total	80 (100.0)

TABLE 2
ETHNIC GROUP DISTRIBUTION

Ethnic Group	Number (%)
Chinese	53 (66.3)
Malay	8 (10.0)
Indian	17 (21.3)
Others	2 (2.4)
Total	80 (100.0)

TABLE 3
PATIENT'S INTENT FOR
SELF-POISONING

Intent	Number (%)
Suicide	33 (41.3)
Parasuicide	24 (30.0)
Non-suicide	17 (21.3)
Accident	5 (6.2)
Refused to disclose	1 (1.2)
Total	80 (100.0)

TABLE 4
PREDISPOSING FACTORS TO
SELF-POISONING

Predisposing factor	Number (%)
Marital/in-law relationship	24 (30.0)
Girl-boy/family relationship	21 (26.2)
Personal psychiatric illness	11 (13.8)
Other illnesses — personal/family	6 (7.5)
Accident	5 (6.2)
Others	13 (16.3)
Total	80 (100.0)

Table 4: Predisposing factors to self-poisoning

In contrast to the males where personal psychiatric illnesses were the commonest predisposing cause, relationships between the patient and boy-friends, husbands and immediate relatives were the major reasons for self-poisoning (56.2%). Psychiatric illness as a factor was the third common reason. To what extent did the sour relationships precipitate suicidal intent? Among the single

girls, six cases out of 21 were suicidal, 13 para-suicidal and two nonsuicidal. Among the married women, ten cases out of 24 were suicidal, 11 parasuicidal and three non-suicidal. It would suggest that the single girl was less prone to suicide than parasuicide as compared to the married women whose marital woes either directly with their husbands or in-laws caused them to act thus. Eleven females poisoned themselves for the second time in their lives and one for the fifth time. The latter was a 33 year old married Chinese with cranial meningioma removed in 1973 and since then has been on anticonvulsants. She was assaulted by her husband and took an overdose of phenobarbitone. She was already on followup by the counselling and advice section of the Social Welfare Department and was referred back there. Only four out of this total of twelve females with more than one attempt at self-poisoning were single. Out of these four, one was a schizophrenic from Woodbridge Hospital, another, a bartender took nail varnish with liquor, another a typist took chlorpromazine and the last, a 21 year old factory worker took organophosphorus after a quarrel with her mother. She was seen by the psychiatrist who found her to be emotionally immature.

3. Types of Poisons

Table 5: Types of poisons taken

As expected there was a wide array of poisons and most were not potentially lethal. The two who were serious enough to be in the intensive care unit took Mogadon and organophosphorus weed killer respectively. In contrast to the poisons taken by males where benzodiazepines was the third commonest, for the females it was the most common poison. The other significant difference was that paracetamol was taken in these attempted suicides among females where as no male patient ingested them. Ten patients took paracetamol either alone or in combination with other substances. Five patients ingested more than five grams of paracetamol. The maximum number taken by any one patient was 38 tablets (19 grams). Two were classified as suicidal attempts with paracetamol, three as nonsuicide and five as parasuicide. These facts indicate that paracetamol overdose is not a common poison despite its free availability and eight of the ten patients did not in fact want to die. Paracetamol is known to cause acute hepatic necrosis with encephalopathy and death although no such sequelae occurred. In contrast to paracetamol, the popularity of benzodiazepines as a means of suicide is more often than not a cry for help because of their tremendous index of safety. Fatal overdosage with a benzodiazepine taken alone is almost unheard of (10).

Paracetamol is used therapeutically in doses up to four grams daily. In the five cases where this dose was exceeded, their clinical condition throughout the period of observation was good and treatment was supportive. Only recently has intravenous N-acetylcystein and plasma paracetamol concentration estimation become available locally. Liver function tests including the transaminases were normal in three patients who said they ingested six, eight and 12 grams of paracetamol respectively. The two patients who took more than 20 and 38 tablets of paracetamol had raised transaminase levels only. The patient who ingested 19 grams had the highest SGPT level of 831 IU (normal being 9-36) while the other had a level of 260 IU in the acute phase. In both patients the levels normalised by one month and they seemed none the worse for it.

TABLE 5 TYPES OF POISONS TAKEN

Poison	Number of patients who ingested it (%)
Benzodiazepines	25 (28.5)
Analgesics (salicylates paracetamol)	15 (16.9)
Washing detergent	12 (13.6)
Alcohol	8 (8.9)
Barbiturate	5 (5.6)
Insecticide	3 (3.4)
Solvents	2 (2.2)
Chlorpromazine	2 (2.2)
Others	17 (19.1)
Total	89* (100.0)

* some ingested several poisons

TABLE 6 LENGTH OF HOSPITAL STAY

Days	Number of patients (%)
0 -	65 (81.3)
4 -	13 (16.3)
10 & above	2 (2.4)
Total	80 (100.0)

In a study of paracetamol self-poisoning in Melbourne where 103 patients taking 4 to 50 grams of paracetamol was reported, one died and three cases were complicated by liver failure. The authors found a male to female ratio of 1:2 and the mean age of their patients was 28 years (11). Our ten patients with an age range of 16 to 30 years had a mean of 22 years.

4. Hospitalisation

Table 6: Length of hospital stay

The majority stayed three days or less. They were usually admitted in the night, stayed the whole of the next day and were discharged the following day. Medical cases to this department stayed on average 7.8 days (12). There were no deaths. Most self-poisoning attempts are impulsive (13) as borne out in the present study. Only among the males was there one planned successful suicide (7).

The ten cases who took paracetamol stayed from one to 12 days with a mean of 3.9 days. In the Australian study (11), about 35% of cases were discharged after observation for 24 hours or less (there were two such cases in the present study) because they had low plasma paracetamol levels (none was done locally). The median duration of hospitalisation in that study was 4 days.

5. Discharge and Followup

Table 7: Management of patients on discharge from the ward

Referral of patients to the Medical Social Worker was not routine. The major causative factors in the referred patients appeared to be interpersonal and marital conflicts contributed by financial stress and problems with the in-laws. Other factors were physical threats and violence from husbands, increased suspicion regarding the wife's activities by the husbands who themselves may have had a distorted personality. For the healthy resolution of the emotional and social crises, psychological support was given. Time was spent listening to patients verbalise their conflicts and helping them overcome their problems. Joint interviews with spouses, boyfriends and other relatives were often successful as they were receptive to counselling. In eleven cases, no cooperation was forthcoming and social intervention was not pursued.

Crises intervention by the Social Worker was deemed successful in fourteen cases. Three patients were referred to the Social Welfare Department for followup of their marital problems. Fourteen patients needed further psychiatric assessment and help although only in eleven was the personal psychiatric problem assessed to be the predisposing factor to self-poisoning (Table 4). One was transferred directly to Woodbridge Hospital; the others were referred as outpatients to continue followup or as new cases. Two were being managed by private psychiatrists all along. One patient had had a sex change and although 25 years old had two previous attempts at suicide. The interview showed her to be depressed over conflicts with colleagues and family members. There was inability to adjust and adapt successfully after the operation. She was referred back to the psychiatrist.

SUMMARY

1. In 1982, 5.5% of all female medical admissions to this department were for self-poisoning. The corresponding figure for males was 1.5%. Self-poisoning is a major public health problem accounting for 11% of all medical admissions to hospital and for 30% of the emergencies in one area in England (14). If this department is representative of the four departments in Tan Tock Seng Hospital, it does not appear to be as large a problem as elsewhere. In this report no patient died as a result of self-poisoning.
2. The majority (67.5%) were below 30 years old and 55% were single (44 patients). There appeared to be a disproportionately high number of Indian females with self-poisoning.
3. Thirty three patients (41.3%) expressed suicidal intent and another twenty four (30.0%) took poison as a means of crying out for help.
4. Marital/in-law discord was the commonest predisposing factor identified (30.0%) followed closely by girl-boy/family disharmony (26.2%) for self-poisoning in these patients although there were more single than married females in this group. Personal psychiatric illness still accounted for 13.8% of the cases.
5. Poisons consumed were all freely available and the almost non-lethal benzodiazepines were the commonest drugs ingested (28.1%). Ten patients took paracetamol but

TABLE 7
MANAGEMENT OF PATIENTS
ON DISCHARGE FROM THE WARD

	Number
Referred to social worker	42
Referred to psychiatrist	14
No follow up	29
At own risk discharge	1
Total	86*

* six patients were seen by the social worker and also referred by the psychiatrist, one as an inpatient

in five was more than four grams swallowed. Two of these had abnormal liver transaminases while in the ward, returning to normal levels within a month.

6. Hospital stay was short – less than 4 days in 81.3% of cases. The two long stay patients had a period in the intensive care unit because of ingestion of organophosphorus weedkiller and nitrazepam respectively.

7. Forty two patients were sent to the Medical Social Worker for further assessment of whom eleven proved non-cooperative, but fourteen were successfully helped. Fourteen other patients needed psychiatric management.

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