

Clinical contact preceding suicide

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Summary: Of the 400 consecutive completed suicides investigated over a 5-year period, 114 (28.5%) who had consulted a doctor in the week preceding death were specifically reviewed and compared with those who did not. The study comprised an analysis of the medical history, the scene of death and a complete autopsy with histological and toxicological examination and the identification of features which occurred more frequently in this group when compared with other suicides not contacting their doctors.

Suicide-associated factors include psychiatric illness (58.8%), deteriorating health (16.7%), and a loss of spouse (7.0%); all these features were manifested by this group of suicides more frequently than by those who made no clinical contact ($P < 0.001$). A pre-indication of suicidal intention was made by 45% of these patients. This feature, as with previous attempts, occurred more commonly in patients who consulted a doctor ($P < 0.001$).

Drug overdose was the most common suicidal method chosen (50.9%) and anti-depressants predominated (35%); 78% of those who overdosed ingested prescribed drugs. Poisoning was more common in this group ($P < 0.001$).

Half of the victims committed suicide within 24 hours following consultation; of these, 51% overdosed on drugs with 61% of them ingesting their prescribed drugs. Of these 114 cases, the final consultation in 43% was to collect more drugs. All suicidal threats should be taken seriously, and particular care should be taken in prescribing and dispensing medication which may be fatal in overdose.

Introduction

The forensic pathologist in the United Kingdom investigates on behalf of the Procurator Fiscal or Coroner all suicide-related deaths. Such medico-legal investigations include perusal of the medico-social history, a modified 'psychological autopsy', a scene of death examination, and a complete autopsy with toxicological and histological examination. If forensic pathological data are to be of any use in the understanding and prevention of suicide as a phenomenon, such information must be made available to general practitioners (GPs) and members of the psychiatry team.

Depression and alcoholism have all been associated singly or in combination with over 80% of completed suicides in both Britain and the United States of America;¹⁻³ over 90% of the victims were believed to have suffered a psychiatric illness at the time of death. Chambers and Harvey⁴ reported a positive psychiatric history in 36% of suicides studied in Inner North London and Ryland and Kruesi⁵ noted that psychiatric (affective) disorders are the most common features of suicide among adolescents. While it is accepted

that it is almost impossible to predict who is more likely to commit suicide, even among patients hospitalized because they are considered a high risk,⁶ educational programmes for GPs alerting them to the potential warning signals have been associated with a significant drop in suicide rate.⁷

Patients who are contemplating self-destruction frequently seek a medical consultation in close chronological proximity to their death. Chambers and Harvey⁴ reported that 11% of completed suicides in Inner London had seen their doctors prior to the act. Squires and Busuttil⁸ found that 37% of elderly suicides in the Lothian and Borders Region of Scotland (LBRS) had contact with the medical profession a week prior to death. Many of these victims were being treated for depression. Furthermore prescribed medication often played a major role in the final suicidal attempt.

This study presents the observations made on those complete suicides in the LBRS who had seen their doctors in the week preceding the act. The demographic pattern, suicide-associated factors, indication of intent, and the methods employed are discussed in an attempt to delineate this subgroup of patients and identify any characteristics which would enable clinicians to pick out those patients with a higher suicidal risk.

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Materials and methods

The 400 consecutive cases of completed suicide investigated by the Forensic Medicine Unit of the University of Edinburgh Medical School during the period January 1987–December 1991 (inclusive) were reviewed. This figure represents the total number of completed suicides in the LBRS with a population of 853,200 and an area of 8,100 km². This is a complete record in that all cases of suicide have to be reported to the Procurator Fiscal, and in each case the investigation requires the involvement of the FMU and an autopsy. In this cohort 114 patients consulted a doctor in the week preceding death. This latter group as with the 286 who made no clinical contact, were analysed in detail noting such features as age, sex, domicile (urban or rural), employment and marital status, any stress-provoking factors, a history of alcohol or drug abuse, past medical history to include psychiatric illnesses and previous suicide attempts, indication of intent and methods used.

The socio-medical information was obtained from the deceased's general practitioner on interview by the police. These interviews were carried out by specially trained police officers. The diagnosis of the psychiatric illness was made either by the family doctor or in cases where there was a referral to the hospital, by consultant psychiatrists.

A full autopsy was carried out with histological and toxicological studies when indicated. The results obtained from these studies were compared with those completed suicides who were not known to have consulted a doctor within the week preceding their death.

The data presented are devoid of any social or legal bias as to the verdict of suicide being the mode of death. The diagnosis of suicide in individual deaths in Scotland is not made at a public inquest or in other public or official manner. Each of the cases accepted in this series as a self-inflicted death was diagnosed as such by a forensic pathologist after the perusal of police 'sudden death reports', general practitioners' and hospital notes, a scene of death examination and/or its photographic recording, and statements obtained by the police from eye witnesses, relatives and acquaintances of the deceased. Suicides who made no clinical contacts were similarly investigated and socio-medical information was available on all of them. This should remove any undue bias in the analysis of the two subgroups of suicides in the review.

Simple statistical analyses were carried out using the chi-square test.

Results

Suicides who had made clinical contact in the week preceding death represent 28.5% of all the completed suicides during the 5-year period under review.

On comparing the characteristics of the group of 114 patients who made clinical contact in the week prior to suicide with the 286 suicides during the same period who had not contacted a doctor, several statistically significant variations are noted (Table I). Suicides who had consulted a physician recently, more frequently manifest previous or intercurrent psychiatric illness, chronic alcoholism, deteriorating physical health and recent bereave-

Table I Completed suicides who consulted doctors prior to the act compared to those who did not

<i>Parameters</i>	<i>Those who consulted doctors (n = 114) (Group 1)</i>	<i>Those who did not consult doctors (n = 286) (Group 2)</i>	<i>Comparing Groups 1 and 2 using χ^2 (P values)</i>
Sex ratio (M:F)	1.6:1	4.7:1	<0.001
Dominant age group	Twin peaks; 45–54 and 65–74 years	Single peak 45–54 years	
Urban/rural domicile	54/46%	54/46%	NS
Married	43.0%	36.0%	NS
Unemployed	67.5%	57.0%	NS
Psychiatric patients	58.8%	1.2%	<0.001
Chronic alcoholism	16.7%	4.7%	<0.001
Loss of spouse	7.0%	0.6%	<0.001
Deteriorating health	16.7%	0.6%	<0.001
Previous attempts	44.7%	18.5%	<0.001
Indication of intent	44.7%	28.0%	<0.001
Percentage that overdosed on drugs	50.9%	34.2%	<0.001

NS = not significant.

ment. More victims in this group had attempted suicide previously and had expressed an intention to complete their act of self-destruction. More patients in this group chose a drug overdose as their method of suicide. Females who had succeeded in their suicide bid were more likely than males to have consulted a doctor in the week preceding their death.

Of the 114 cases, males and females account for 59 (52.0%) and 55 (48.0%) cases, respectively. General practitioners were consulted by 69.3% of the victims; the others (30.7%) had visited a hospital practitioner or were actually hospitalized at the time of their suicide. The reasons for such medical consultation included routine follow-up visits (43.0%) and collection of a prescription for more drugs for the treatment of depression (43.0%). Only 12 of the 49 who sought more drugs actually spoke with their doctors; the remaining 37 patients simply picked up a repeat prescription from a receptionist. Sixteen patients (14.0%) committed suicide while still in hospital and a further four (4.5%) died within a few days of discharge from hospital.

Fifty-seven patients committed suicide within 24 hours of a clinical contact. Of these, 29 (51.0%) patients overdosed on drugs with 18 consuming their prescribed drugs. No age group or gender bias is observed among the 114 suicides. Suicides not in remunerative employment (students, the unemployed, retired, or in the case of women, housewives) constitute 67.5%. Forty-three per cent (49/114) were married while 57.0% were single, separated/divorced or widowed with no significant difference between males and females.

Stress-producing factors which can be considered to predispose to self-destruction are as

shown in Table II. In 58.8% of cases (67 patients), there was evidence that the deceased was suffering from a psychiatric illness. The psychiatric illnesses as reported in these cases by general practitioners and/or psychiatrists comprise depression, mania, hypomania, schizophrenia, paranoid delusions, phobias, other various forms of personality disorders and chronic alcoholism. Chronic alcoholism was a feature associated with 19 (16.7%) cases and 10 of them had consumed intoxicating amounts of alcohol at the time of their death. Other factors included poor health, loss of spouse, difficulties in relationships and financial problems. Over half (11/19) of the chronic alcoholics were married and 79.0% of them were in the fifth to seventh decades. Six victims who were known to be chronic alcoholics had also suffered additional pre-suicidal stressful events, although chronic alcoholism seemed to be the dominant primary clinical factor, marital problems were experienced by two, two others were having financial problems, one suffered poor health and another the loss of a spouse.

Among the elderly in this group, poor health, concern for the spouse's health, loss of spouse or other relatives are the major precipitants of suicide. Psychiatric illnesses (including depression and chronic alcoholism) and stormy relationships predominate among the young victims.

In 51 (M = 23, F = 28) of the completed suicides in this series, there had been previous attempts at self-destruction; 24 had made one previous attempt and 17 others (6 twice, and 11 three or more times) more than once.

Indication of an intention to commit suicide was made by 51 (44.7%): 25 (49.0%) made a verbal intimation, 19 (37.0%) left a note, six (11.7%)

Table II Clinical contact preceding suicide: suicide-associated socio-medical factors

<i>Factors</i>	<i>Male</i>		<i>Female</i>		<i>Both</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Psychiatric illness						
'Depression'	10	16.9	12	21.8	22	19.3
Chronic alcoholism	13	22.0	6	10.9	19	16.7
Other disorders including schizophrenia	14	23.7	12	21.8	26	22.8
Stressful events						
Marital disharmony/stormy relationships	5	8.5	1	1.8	6	5.3
Financial difficulties	2	3.4	1	1.8	3	2.6
Deteriorating health	8	13.5	11	20.0	19	16.7
Concern for spouse's health	3	5.1	—	—	3	2.6
Loss of spouse	4	6.8	4	7.3	8	7.0
Other bereavements	—	—	1	1.8	1	0.9
Failure to achieve set objectives	—	—	2	3.6	2	1.7
Postnatal depression	—	—	4	7.3	4	3.5
Drug abuse	—	—	1	1.8	1	0.9
Total	59		55		114	

indicated verbally and also left a note while one left a recorded tape. Of the 51 who indicated their intention, 20 (39.2%) had made previous attempts and, of these, 13 had threatened a repeat at the time of the unsuccessful attempt. All these verbal indications were made to relations and/or to physicians, and 17 (68.0%) of these were completely ignored and no action whatsoever was taken to attempt to prevent a further suicidal attempt.

The major methods of suicide employed are poisonings (51%), hanging (16%), drowning (10%), fall from height (10%) and inhalation of exhaust fumes (8%). The major groups of drugs overdosed were antidepressants (34%), analgesics (31%), hypnotics/tranquillizers (10%), any combination of the above (14%), combination of these drugs with an intoxicating (> 80 mg/dl) amount of alcohol (9%) and one case of insulin injection (2%). Amitriptyline represents 45% of all antidepressant overdoses. Proprietary compound analgesics (mainly dextropropoxyphene and paracetamol) account for 50%; simple analgesics (mainly paracetamol) account for 33%. Forty-five (78%) overdosed on prescribed drugs. None of those dying of poisoning had taken substances other than medicinal drugs.

Sixteen cases occurred while the victims were in hospital, with 12 suicides occurring on hospital premises. Of those who committed suicide in hospital, six overdosed (on drugs obtained in hospital), three drowned, three fell from heights, two hanged themselves, one suffocated with a plastic bag and another jumped before a moving train.

Discussion

The population of completed suicides for the LBRS was split into two different subgroups using contact with a doctor in the week prior to death as the only discriminant factor. A comparison of the two subgroups shows that certain features of the medical history are represented more frequently in the suicidal group that came into contact with a doctor (Table I). This suggests that these particular features, namely, psychiatric illness, deteriorating health, recent bereavement, previous attempts and expression of intent probably represent prodromal features of successful suicidal bids, and places these patients into a high-risk group no matter their age group or socio-economic background.

Self-poisoning is the most common (51%) method used by this group of suicides and, not surprisingly, anti-depressants (35%), especially amitriptyline, are the most common drugs.^{8,9} In general practice, tricyclic antidepressants still remain the standard treatment for depression of any severity and duration; many of these patients

were suffering from depression and are prescribed these drugs, quite reasonably (Table II). The observation that 78% overdosed on prescribed drugs was alarming particularly since this method was significantly more common among those who sought clinical consultation compared to those who did not ($P < 0.001$). Harvey and Christian⁹ observed that 78% of those who overdosed had ingested prescribed drugs, as in the present study. There may be scope for a specific policy decision in each individual medical practice to review the current practice whereby patients simply pick up repeat prescriptions without a clinical re-evaluation; patients with a history of depression should be selectively chosen for avoidance of non-medical contact with general practitioners. Direct clinical consultation not only reduces cases of unwarranted repeat prescriptions, particularly in large doses, but also offers a forum for a patient-doctor interaction and the opportunity to further reassure the patient that the situation is not hopeless – a view which may be accentuated by the inability to speak with the doctor.

Half of the patients who committed suicide after making clinical contact did so within 24 hours of the consultation with 51% of them dying from a drug overdose. About two-thirds of the latter patients consumed the drugs which were prescribed to them. This tends to suggest that the intention of these patients when consulting their doctors was to obtain the instrument to complete their premeditated action of self-destruction. Therefore in the presence of features identified as high-risk factors, physicians should consider very carefully the medication and the amount of tablets that they prescribe. To ensure the safety of these patients, these drugs should be handed over to other relations who furthermore should ensure that the patient does not hoard the drugs for use in overdose. Wilson and Ashworth¹⁰ have highlighted the significant advantages of prescribing a newer generation of anti-depressants, the selective serotonin re-uptake inhibitors which are much safer in overdose as compared to the tricyclics. Controversy, however, still exists as to whether the side effects of these drugs and their effectiveness merits their more liberal prescribing.

A significant parameter in the group of suicides consulting doctors is a previous history of unsuccessful suicidal attempt (Table I, $P < 0.001$). Winokur and Black³ suggested that a history of previous attempts increases the risk of a further suicidal bid among psychiatric patients; this risk is further increased among young patients.¹¹ What is more disconcerting is that 25 of the 51 patients in this group had indicated their renewed intent to commit suicide, and in only 32% of these cases was some response made in the belief that these threats were genuine. Some of these threats might have

been ignored considering that a proportion of patients do threaten suicide, sometimes repeatedly, without eventually carrying out the act. A careful balance has to be struck between the allocation of financial and medical resources in terms of more widespread involvement of the specialist psychiatric services, both hospital and community based, particularly on an emergency basis and the effectiveness of such commitment. The medico-legal implications in terms of posthumous family initiated litigation may be another factor arguing more careful consideration in the future.

This study has also identified other nuances of presentation which might assist medical practitioners in identifying the potential successful suicides. Older chronic alcoholics in their fifth to seventh decades are particularly at risk, especially when they suffer an additional depressing life-event. Roy¹² had suggested that marriage is probably protective for chronic alcoholics contemplating suicide; half of such patients in this series were married which probably suggests that it is the quality of marriage that matters.

An earlier report by Crombie¹³ concluded that unemployment has not affected the overall suicide rate in Scotland. The unemployment rate in this study was higher than expected in the general population but there was no statistically significant difference in the two subgroups studied.

Elderly suicides with deteriorating health and especially when, in addition, the spouse has

recently died were represented more frequently and these patients also deserve careful monitoring. Elderly males in particular, appear to be very dependent on their wives and when the spouse is seriously ill, suicide attempts are frequent.¹⁴

The Swedish continuous postgraduate educational programme for family doctors on the Island of Gotland⁷ addressed suicide incidence, and advocated newer trends in identifying and prescribing for high-risk suicide patients. General practitioners received instructions on how to recognize signs of emotional crisis, explore probable reasons, enquire about suicidal thoughts, manage basic depressive disorders and counsel patients. They were also encouraged to formulate their own ideas and means of tackling issues relating to emotional crisis. This programme had a successful impact with a reduction in suicide incidence. This is yet another angle where medical pressure may assist in reducing suicide rates, particularly in rural communities.

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