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Drug Dependent Individuals Dealt With by London Casualty Departments

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Summary. During a study of drug incidents dealt with in one month by 62 casualty departments in Greater London, 395 drug-dependent individuals were identified. The great majority of these patients were seen in hospital following an overdose, and barbiturates were the drugs used most frequently. A high incidence of multi-drug use was noted, and many individuals had obtained their drugs from an illicit source. A history of repeated overdosing was common, and one fifth of the patients behaved aggressively while they were in casualty. The implications of these findings are discussed, with particular reference to the demands that are made on casualty departments by drug-dependent individuals.

Introduction

Study of drug dependent patients who present at casualty departments may be important for a number of reasons. Firstly, something additional is learnt about the characteristics of the drug dependent population. With such a problem there is no possibility of locating a traditional 'representative sample', and repeated study of undoubtedly biased and untypical sub-groups may be the only available epidemiological method for building up a picture of the whole drug dependent population of a city. The drug addicts attending a casualty department are as untypical a group as those from any other source; however, they will supplement and correct the equally biased picture obtained by studying patients attending narcotic treatment clinics. Drug dependent patients may reach the casualty departments before they come to the notice of the drug clinics, or after they have disappeared from those clinics. Indeed, some casualty attenders may represent a sub-group of the addict population whose members never become 'registered'.

Another reason for believing that study of drug takers who present in this setting may be fruitful is the light that may be thrown on service needs and the operation of the system of health care. Valuable insight into the way in which medical services for a particular group are really operating may sometimes be gained by looking not only at the system in terms of its direct and intended workings—in this instance the drug clinics or other psychiatric services—but also at the unintended situations which arise when, for any reason, numbers of patients start to route themselves in rather unexpected directions.

Finally, this particular type of study may provide useful intelligence as to what drugs or drug combinations are currently being misused; repeated studies may perhaps contribute to a sort of 'early warning' system, or indicate the effects of control measures.

Method

Sixty-two casualty departments in Greater London, out of a total of 66, kindly agreed to participate in the London Casualty Survey, the methodology of which has been described elsewhere (Ghodse, 1976). During the month of the survey a specially designed questionnaire was filled in for each person who attended a casualty department for the following reasons:

(a) for overdose, either intentional or accidental or in the course of drug dependence;

(b) for other reasons related to drug dependence, e.g. abscesses due to self-injection, septicaemia, hepatitis, drug psychosis, etc;

(c) demanding drugs.

The questionnaire recorded the age and sex of the patient and the drugs which were used or taken as an overdose. The route of administration, the source of supply of the principal drugs and the number of overdoses in the previous year were noted. Certain physical and mental effects of the drug, such as level of consciousness and aggressive behaviour, were recorded, as was the final disposal of the patient.

The Casualty Officer was asked to assess the dependence status of each patient. Drug dependence was operationally defined as 'a state of psychic or physical dependence, or both, on a drug, arising in a person following administration of that drug on a periodic or continuous basis' (Eddy *et al*, 1965). Patients might be classified as 'definitely dependent', 'probably dependent', or 'not dependent', with a further category for 'not known'. There seems to have been considerable uniformity of response, for no patient who attended a hospital and was diagnosed as definitely or probably dependent was subsequently diagnosed as not dependent at a different hospital. This paper is concerned with all patients whom the Casualty Officer considered to be 'definitely' or 'probably' dependent. Alcoholics were not included in the survey.

In four hospitals blood and urine samples were taken from all patients (93) with drug-related problems who agreed to the procedure. Of these patients 25 were dependent on drugs, and the results of biochemical analysis are presented as a check on the patients' accounts of the drugs they had taken.

Results

Numbers

During the month of the survey 395 patients were seen in the casualty departments who were thought to be definitely or probably dependent on drugs. Altogether they accounted for 477 separate drug-related incidents, giving an incident rate per person of 1·2. Forty-four patients were responsible for 126 attendances at one or more hospitals in one month; 412 of these 477 incidents were due to overdose.

Sex and age (Table I)

Just over half these incidents were caused by males (53 per cent). The mean age of male patients was 27·5 (sd 8·1) years, and of female patients 27·7 (sd 10·8 years). In both sexes 70 per cent of incidents were caused by persons under the age of 30 years, a total of 289 incidents. Nearly one quarter of the female patients were under the age of 20 years, whereas the majority of male patients tended to be slightly older, two thirds of them being in their twenties. Only 10 per cent of patients were over 40 years of age.

Reason for overdose

The underlying nature of the overdose, whether suicidal attempt or accidental in the course of addictive drug-taking, is shown in Fig 1. Of the female drug dependent individuals who took an overdose, 35 per cent did so as a suicidal gesture or attempt, compared with 21 per cent of males; this difference is statistically

TABLE I

Age and sex distribution of drug-dependent patients ($N = 477$)

Of the 4 missing cases, 1 was aged between 20 and 24 but had no sex recorded and the other 3 had neither age nor sex recorded

Sex	Age group						Age not known	Total
	15–19	20–24	25–29	30–34	35–39	40+		
Male ..	17	74	65	25	16	18	35	250
Female ..	43	50	40	21	15	23	31	223
Total ..	60	124	105	46	31	41	66	473

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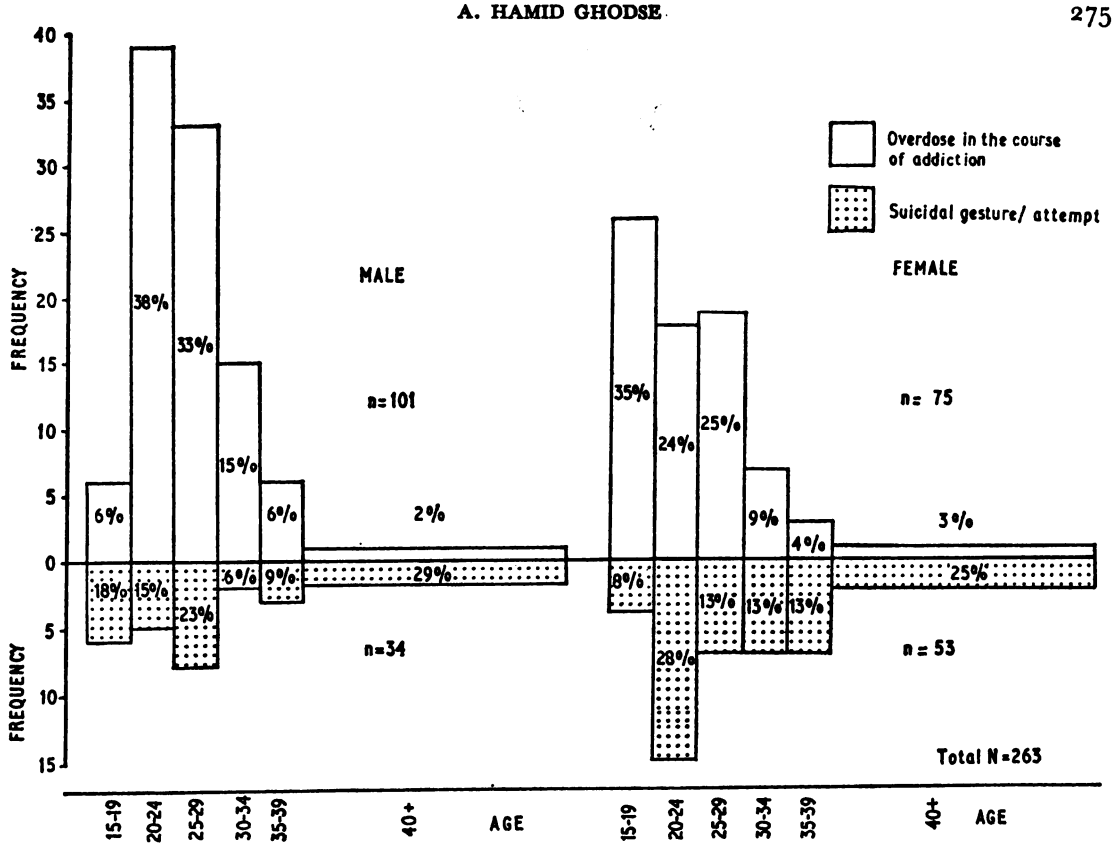

FIG 1.—Suicidal gesture/attempt and accidental overdose in the course of addiction by drug-dependent individuals.

significant ($\chi^2 = 7{\cdot}7$, 1 df, $P < {\cdot}01$). There was a peak of accidental overdose in young men in their twenties.

Drugs used

The drugs used in 412 overdoses by drug-dependent individuals are shown in Table II. Barbiturates were used by more than half of the patients and opiates by more than one quarter. There were twice as many male heroin users than female, the latter having a greater tendency to use psychotropic drugs (i.e. non-barbiturate hypnotics, major and minor tranquillizers, antidepressants and stimulants). It can also be seen that the drugs taken in these overdose incidents mirror fairly accurately additive drugs taken during the previous twelve months, although psychotropic drugs were used more frequently for overdose than regularly as drugs of dependence.

Table III shows that in 39 per cent of overdoses two or more drugs were said to have been used. Common combinations were barbiturates with methadone, barbiturates with alcohol, and psychotropic drugs with alcohol; barbiturates were an element in multi-drug overdose in 65 per cent of instances. In overdoses of one drug alone, again barbiturates were used most frequently (53 per cent). When addictive drugs used in the previous twelve months were examined, a similar pattern of multi-drug combination was observed.

Blood and urine analysis

Blood and urine samples from 25 patients were subjected to analysis; in 22 of 23 patients whose drugs of overdose were known, at least one of the drugs said to have been taken was detected. The numbers are too small and the subjects were unselected, and so it is difficult to draw any firm conclusion from these findings.

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TABLE II

Drugs taken in the present overdose and drugs of addiction taken in the last twelve months by drug dependent subjects

Drug class	Drug of overdose (N = 412)			Addictive drug taken in last 12 months (N = 477)		
	Male	Female	Total	Male	Female	Total
Opiates other than methadone ..	33	15	48	57	28	87**
Methadone	30	29	60*	49	44	94*
Cocaine	1	0	1	2	2	4
Hallucinogens	4	2	6	6	4	10
Barbiturates	120	102	223*	90	84	176**
Non-barbiturate hypnotics, tranquillizers, antidepressants and stimulants	56	65	123**	15	24	39
Analgesic/others	20	18	38	1	2	3
Alcohol	42	24	67*	6	1	7

* Includes 1 patient for whom sex was not recorded.

** Includes 2 patients for whom sex was not recorded.

Note: Some individuals used more than one class of drugs and are therefore represented more than once in the table.

TABLE III

Drug combinations used for overdose by drug-dependent individuals (N = 412)

One drug only		Two drugs			
Drug	No.	Drug	No.	Drug	No.
N	19	NM	2	HB	1
M	21	NC	1	HP	2
H	2	NB	12	BP	15
B	116	NP	1	BO	5
P	51	NO	1	BA	25
O	8	NA	3	PO	12
		MB	32	PA	23
		MP	1	OA	3
				9A	3*
Total: 217 (53%)				Total: 142 (34%)	

Of the remaining 53 cases, 22 (5 per cent) took three or more drugs, while it was not known what the other 31 (8 per cent) took.

* These three cases took an unknown drug with alcohol.

N = Narcotic other than methadone
M = Methadone
C = Cocaine
H = Hallucinogens
B = Barbiturates
P = Psychotropics
(i.e. non-barbiturate hypnotics, major and minor tranquillizers, antidepressants and stimulants)
O = Others
(e.g. analgesics including codeine)
A = Alcohol

Previous overdose

The number of overdoses taken in the previous twelve months was cross-tabulated with the drugs taken on the present occasion. It can be seen from Table IV that although much information was missing it is still clear that in a large proportion of cases there had been four or more overdoses in the previous year. About half of those on whom there was information and who took an overdose of methadone and/or barbiturates, had overdosed repeatedly. In some cases, information about previous overdoses was withheld by the patients, probably because this was a sensitive question for drug-dependent individuals.

Route of administration and source of supply of principal drugs (Table V)

Nearly a quarter of those who took an overdose of barbiturates administered the drug by injection, although the barbiturate they took was manufactured for oral and not parenteral use. The large number of narcotic users who injected their drug is not surprising, as users are supplied with injection equipment if they attend drug treatment clinics.

Table V also shows the source of supply of the drugs used in the overdose. Of those who took a barbiturate overdose 60 per cent obtained their drug illegally, as did a substantial proportion of narcotic users. Half of those who took

TABLE IV

Number of overdoses taken in the previous year according to drugs taken in the present overdose (N = 412)

Drug class	No. of overdoses						
	None (N = 40)	One (N = 28)	Two (N = 14)	Three (N = 19)	Four or more (N = 150)	Not known (N = 161)	Total (N = 412)
Heroin, morphine, etc..	3	0	1	3	18	23	48
Methadone	1	0	2	2	32	23	60
Hallucinogens	1	1	0	0	0	4	6
Barbiturates	18	13	3	14	105	70	223
Non-barbiturate hypnotics, tranquillizers, anti-depressants and stimulants	21	20	8	8	27	39	123
Analgesic/others ..	6	6	3	3	10	10	38
Alcohol	6	7	4	1	24	25	67

TABLE V

Route of administration and source of supply of principal drug(s) used by drug-dependent individuals (N = 412)

Principal drug taken	Route of administration of principal drug(s)			Source of supply of principal drug(s)			
	Oral	Injection	Not known and other routes	GP	Hospital treatment centres	Illegal	Not known and other sources
Heroin, morphine, etc (N = 44)	0	41	3	0	12	25	7
Methadone (N = 57) ..	8	48	1	3	25	18	11
Barbiturates (N = 201)	140	49	12	22	13	121	45
Non-barbiturate, hypnotics, tranquillizers, anti-depressants and stimulants (N = 113)	105	5	3	57	16	22	18
Analgesic/others (N = 28)	26	0	2	11	2	1	14

other psychotropic drugs, however, had been supplied by a general practitioner.

Level of consciousness, aggression, leaving against advice (Table VI)

More than 80 per cent of patients who took opiates and/or barbiturates showed an impaired level of consciousness. In particular those who took methadone, perhaps because of its frequent association with barbiturate use, nearly always had impaired consciousness.

Aggressive behaviour in casualty, whether verbal aggression or physical or both, occurred in a substantial proportion of cases (23 per cent), regardless of which drug was used. Alcohol and barbiturate use were particularly likely to be associated with aggressive behaviour, although 9 per cent of drug dependent individuals who came to casualty departments, not for an overdose but for other reasons, were also aggressive.

As can be seen from Table VI, in all groups a proportion of patients left casualty against medical advice, amounting to 9 per cent of the total incidents. These numbers are too small to make any statement regarding the relationship of this outcome to particular drug use.

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TABLE VI

Level of consciousness, aggressive behaviour and disposal of drug-dependent individuals according to drug taken in the present overdose

Drug class	Consciousness impaired (N = 412)			Aggression (N = 477)			Left Casualty against advice (N = 477)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Heroin, morphine, etc (N = 48)	27	12	39	7	2	9	4	2	6
Methadone (N = 60) ..	27	28	55	4	6	10	1	4	5
Cocaine (N = 1) ..	1	0	1	0	0	0	0	0	0
Hallucinogens (N = 6)	2	0	2	0	1	1	0	0	0
Barbiturates (N = 223)	103	83	186	26	24	50	11	13	24
Non-barbiturate hypnotics, tranquillizers, anti-depressants and stimulants (N = 123)	36	42	79*	14	11	25	3	4	7
Analgesic/others (N = 38)	15	13	28	7	1	8	1	0	1
Alcohol (N = 67) ..	27	17	45*	18	8	26	3	3	6
Non-overdose group (N = 65)	—	—	—	2	4	6	1	5	6
Totals, irrespective of drug(s) used ..	164	146	311*	52	47	99	18	24	42

* One case included in total for whom sex was not recorded.

Note: The numbers in each column do not necessarily sum to the totals in the final row, as some individuals took more than one class of drug.

Other reasons for casualty attendance

In 65 cases out of 477, hospital attendance was not for drug overdose but for other drug-related reasons, and in some of the 412 cases of drug overdose the patient had other problems associated with drug use. Altogether, in 28 of 477 cases (6 per cent), of whom 22 were male, an effort was made to obtain opiates, and in 18 cases (4 per cent) an attempt was made to obtain non-opiate addictive drugs, e.g. barbiturates. In 84 cases (18 per cent) there were complications of self-injection.

Discussion

The London Casualty Survey has demonstrated the magnitude of one aspect of London's drug scene—the extent to which drug-dependent individuals make contact with casualty departments. In 289 out of 913 drug incidents involving patients under 30 years of age (or approximately 1 in 3 cases), the casualty patient was thought to be dependent on drugs, and during the month of the survey a total of 395 dependent patients were identified.

This population of drug-dependent patients attending casualty departments appears to be different from that of the drug treatment clinics. According to the Home Office statistics (1974) female addicts account for less than 26 per cent of the total addict population, whereas they comprised 47 per cent of the drug-dependent patients identified during the casualty survey. Similarly, in a representative sample of addicts attending London drug treatment clinics for the first time, only 20 per cent of the addicts were female (Blumberg *et al*, 1974).

In the present study 15 per cent of drug-dependent individuals were under the age of 20 years, whereas only 3 per cent of registered narcotic addicts are in this age group. Twenty-nine per cent of the drug-dependent patients who attended casualty were over 30 years of

age, compared with only 2 per cent in Blumberg's study (1974). It appears, therefore, that there are groups of addicts, both young and old, who present to casualty departments but who do not attend drug treatment clinics. Blumberg and his co-workers (1974) also reported that most addicts had in fact been using opiates and/or drugs for several years before their first attendance at drug treatment clinics. The drug-dependent population of London casualty departments, although undoubtedly including some 'registered' narcotic addicts, also probably includes some subjects, as yet unknown to any authority, who in the years to come may approach the clinics. Casualty departments are therefore in a good position to identify individuals in an earlier stage of dependence, and may be the only agency to which some addicts, who never make contact with the drug treatment clinics, are known.

This study suggests that there must be serious doubt as to the aptness of the present system for the needs of this group of patients. It is an accident of health care evolution, rather than any intentional policy, that has handed to casualty departments the front-line responsibility for dealing with this extraordinarily complex medico-social problem.

There is a large group of people who appear to have easy access to a wide range of illicit and dangerous drugs, which they take frequently and in varying combinations. Not only are there many drug-dependent patients, but they attend one or more hospitals repeatedly, each time requiring skilled care and attention and often because of their aggressive behaviour causing disturbance and distress to other patients and staff. It is the casualty departments that are left to cope.

Just as petty recidivism is evidence not just of the 'inadequacy' of the individual but also of the ineffectiveness of imprisonment, so the repetitive way in which drug-dependent individuals take overdoses and present to hospital is an indication that the treatment they are at present receiving is not an appropriate response. The immediate medical problem, whether overdose or complications of self-injection, is no doubt usually dealt with very competently, but the system does not get to grips with the underlying problem of drug dependence. To say this is no criticism of the casualty departments concerned, but is to suggest that in their present rather unsupported position they are often faced with an impossible task. A patient who takes an overdose in a suicidal attempt in the course of a depressive illness has an identifiable pathway of referral to psychiatric help. Casualty departments appear to have ready and well established routes of referral for the medical or surgical cases, and also to some extent for the more recognizable psychiatric illnesses. The routes for referring patients manifesting a socio-medical problem like that of the young drug-dependent person are not nearly so well worked out. To give a referral letter or to make an appointment for a couple of weeks ahead may in this instance be a mere charade. Once the patient has left the casualty department, he is often lost until he reappears, unconscious, after yet another overdose.

After the physical complications of drug dependence have been dealt with medically, there ought to be available some immediate form of appropriate social intervention. Without controlled experiment it is, of course, impossible to say what form of intervention might be most appropriate, and it would be foolish to pretend that there are easy solutions. Immediate action at the moment of crisis might, however, find the patient more receptive of help than at other times. The availability to a casualty department of a person or small team familiar with the problems of drug dependency, and with access to different centres with different approaches to treatment, might prove useful.

A third area in which the London Casualty Survey provides valuable information is the picture it gives of the current drug scene. Among the casualty drug-dependent population barbiturates emerge as the main drug of misuse, either alone or in combination with other drugs. In addition, a wide range of psychotropic drugs, particularly minor tranquillizers and non-barbiturate hypnotics, often used together with alcohol, are commonly misused. This is a different picture to that obtained by studying addicts attending drug treatment clinics, who primarily use opiates.

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