Heroin users in general practice: ascertainment and features

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Abstract

A case-control study of heroin users in general practice showed a prevalence of roughly two per 1000 of the urban population or four per "average" general practice list of patients. A method of studying heroin users who attend general practice was used that has advantages over existing techniques. Thirty six heroin users had a statistically significantly higher yearly doctor-patient consultation rate than a group of matched controls. More heroin users also failed to attend appointments than controls. When consultations directly related to heroin and its effects were excluded, however, the consultation rates in the two groups were similar. The heroin users did not have an excess of psychiatric disorder or disturbed family background compared with controls but had a noticeable history of dishonest and violent behaviour towards medical staff.

A high proportion of heroin users in the study were antibody positive for the human immunodeficiency virus. General practitioners should take advantage of their frequent contacts with heroin users and their families to give them support and counselling about the acquired immune deficiency syndrome.

Introduction

Throughout the 1980s the number of people misusing heroin in the United Kingdom has steadily risen,¹ with profound effects on the health services, law enforcement agencies, and the social services. The study of heroin users and their medical problems has been largely based on the experiences of specialised addiction clinics and referral centres. Though general practitioners and the resources of primary care have a central role in the care of heroin users, there has been until recently little published work from general practice.²⁷

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Thus the lack of data on the extent of the heroin problem makes it difficult to draw up guidelines for managing patients and planning resources in primary care. The current guidelines from the Department of Health and Social Security for managing drug abuse⁸ may be remote from the needs of general practitioners.³

Robertson² and Glanz⁵⁻⁷ have both studied heroin users who consult in general practice. Robertson carried out an "in depth" study of one unique practice in Edinburgh, whereas Glanz carried out a national (England and Wales) postal questionnaire survey which gives valuable data on the breadth of the heroin problem. But there is still a need to study heroin users, their problems, and their pattern of consulting from the viewpoint of a typical urban practice to give a balanced view of the heroin problem so strategies for management can be developed.

One method for the study of heroin users in a particular locality is the "multiagency enumeration technique," recently used in Merseyside.⁹ The response to this, however, can be disappointing as general practitioners sometimes perceive such projects as a threat to patient confidentiality. We have attempted to investigate heroin users and their problems in a typical urban general practice setting by (i) developing a simple method for calculating the prevalence of heroin users in contact with general practice, and (ii) studying the medical and social backgrounds of a group of heroin users and comparing their consultation rates with those of a group of matched controls. The design was intended to be simple, inexpensive, and reproducible so that other general practicioners could relate the findings to their own practices. This is particularly relevant because intravenous heroin users can spread the human immunodeficiency virus.

Method

Dundee, like virtually all urban centres in the United Kingdom, has a "drug problem." Among the population of drug abusers in east Scotland is a high proportion of intravenous heroin users. We studied three urban general practices. Each has a catchment area covering the whole city and an age, sex, and social class distribution typical of the city. None has an established policy for managing heroin users or actively encourages or discourages users registering with the practice. The combined list size of the practices is about 18000 people, representing about one tenth of the population of Dundee.

Over one year the participating general practitioners, with the help of members of the primary health care team, established the names of all patients on their lists whom they thought were heroin users. In the absence

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of a standard definition of heroin use, misuse, or addiction all patients whom the general practitioners considered, or had reasonable grounds to suspect. were addicted to heroin-that is, people who should be notified to the Home Office Drugs Branch, under the terms of the Misuse of Drugs (Notification of and Supply to Addicts) Regulations 1973¹⁰ were studied. Reasonable suspicion can mean clinical evidence of withdrawal syndrome, signs of injection marks, or attempts to obtain controlled drugs for illicit self use on prescription. Most heroin users, however, volunteer information concerning their habit to their own general practitioner. In addition, the general practitioners inspected the local district and sheriff court registers and the local paper for reports of convictions in the local law courts, had discussions with the regional medical officer of the Scottish Home and Health Department and the drugs squad of the local police about the drugs problem in the city, visited the local drug problems clinic, studied hospital letters and notes sent to the practice from casualty departments, and had discussions with the local representative of the Home Office Drugs Branch. Painstaking care was taken throughout to ensure that conventional guidelines on medical and on criminal confidentiality were rigidly adhered to.11 Names of patients were not mentioned when talking or corresponding with non-medical agencies. Any general practitioner in any city could investigate drug misuse in his or her area in this way.

Then towards the end of the calendar year 1986 a list of heroin users registered with each practice was compiled. A "one year period prevalence" was thus estimated. Case-control subjects were obtained as follows. For each heroin user or "index case" a control was selected from the same practice, of the same sex, age (the practice age-sex registers based on the Tayside master patient index¹² were used to identify a person whose date of birth was within 12 months of the index case), and social class (Registrar General's classification). Control subjects were excluded if they had a history of suspected illicit drug abuse.

In 1987 the available case records for each index and control case were scrutinised for the following information: marital state; area of city where living; family background; past medical history of hepatitis; human immunodeficiency virus (HIV) antibody state; past and current contact with the psychiatric services; history of alcohol and tobacco use; history of violent behaviour; history of threatened or actual violence to medical staff; consultation details over the previous five years (including failure to attend for appointments and attendance at casualty departments). This information was checked and supplemented by each doctor's personal knowledge of the patients and their families.

General practice consultations were further classified as routine general medical care; heroin related medical problem; specifically for counselling, withdrawal treatment, or patient attempts to obtain drugs.

For heroin users the following additional information was sought: whether notified to the Home Office or not; the agency to whom they first presented with a heroin problem; use of other controlled drugs; attendance at the local drug problems clinic (and the referring agency); whether there was a close family member registered with the same general practitioner.

Estimates of prevalence were then compared with those from other sources. A comparison between index and control cases was made using the χ^2 statistic with Yates's correction where appropriate.

Results

IDENTIFYING HEROIN USERS

A list of 29 names was compiled from the three practices over 1986, and from pooled information from all other sources 11 names were added to the list. The 40 subjects in this study almost exclusively used the intravenous route of administration, in keeping with the pattern of drug users of most of east Scotland.

Law court reports in the local paper over one year provided information on nine of the heroin users, all of whom were known to the general practitioners as heroin users. The local court daily register proved unhelpful, particularly as not all court cases concerning inhabitants of Dundee are tried in Dundee. The regional medical officer service, though willing to help and carrying out medical examinations of people of working age claiming "long term" sickness benefit, was not a fruitful source of further cases. A meeting with the police drugs squad, set up through the chief constable, helped us to appreciate the extent of the drugs scene locally, but because to maintain confidentiality no patients' names were used, no new cases or information relating to any known cases was uncovered from police sources.

The drug problems centre in Dundee contacts general practitioners if one of their patients attends. Such letters were a valuable source of information on heroin users, but not all patients known to the practitioners as heroin users were either attending or had previously attended the centre. To protect confidentiality the list of users known to the general practitioners could not be compared with the list of those attending the centre. Reports from local casualty departments and letters to the practice from hospitals were an occasional source of information on previously unidentified or suspected users.

The Home Office register of controlled drug users may be used to ascertain if a patient's name appears, but it is not permissible to link the Home Office data bank with a general practice age-sex register.

PREVALENCE ESTIMATES

The total number of heroin users registered with the three practices (list size 18 000) during at least part of 1986 was 40, which corresponds to a period prevalence rate of $2 \cdot 2$ per 1000 population. This represents four heroin users per average list of patients in an urban general practice. The group contained 32 men and eight women, and the mean age was 26.3.

The rate of 2·2 per 1000 is higher than estimates based on the numbers attending the local drug problems centre (1·5 per 1000) (M Lee, personal communication) or on Glanz's postal survey of general practitioners (1·0 per 1000),⁵ Home Office figures (0·1 per 1000),¹ or Tayside police figures for drugs related convictions (0·05 per 1000)¹³ but is lower than Robertson's figures (9 per 1000)² or those of Parker *et al* (6 per 1000).⁶ The local police drugs squad "unofficial" estimate for the extent of heroin use in the city of Dundee is two per 1000.

Nine of the 40 patients in the study left the practice lists during 1986 because of changing to another doctor in the Tayside region (five), moving outside Tayside (two), and custodial sentence of over six months (two). There were no deaths among the heroin users during 1986. Theoretically the minimum point prevalence estimate during 1986 was 31 patients (1·7 per 1000). During control matching and scrutiny of case notes, however, the point prevalence is higher than the average figures on patient turnover in general practice.¹⁴ Despite this, 24 of the 36 patients in the case-control study were known to have remained with the same general practitioner since before their drug use began.

CASE-CONTROL MATCHING

Matching heroin users (index case) with a control of the same age, sex, and social class was straightforward. One unsuspected heroin user was found among the controls, who was reclassified as an index case and matched with a further control. The validity of this simple matching system is borne out because the social markers or "tracers" selected—namely, marital state and geographical area—correspond closely in the index and control groups (see table I). The geographical comparison was made by superimposing a map of postal code districts on a map of the patients' addresses. The corresponding maps for index and control cases by area of residence are virtually identical and are representative of the areas of the city associated with social deprivation. What is known of the family background of both groups shows them to be remarkably similar. There was evidence of major family disruption during childhood—divorce, separation, psychotic or alcoholic parent—in 13 index and 12 control cases (table I).

CHARACTERISTICS OF HEROIN USERS

Data on heroin users are confined to the 36 cases whose case records were held by the practices at the time the controls were matched. Twenty six (72%) of these 36 heroin users first presented to their general practitioner with a problem related to heroin; three were self referrals to a casualty department; two were self referrals to drug addiction clinics; two were discovered at medical outpatient departments; and the first contact with medical services was not known for three.

Twenty six (72%) of the 36 index cases had attended a drug problem clinic or centre at some time: 18 had been referred by their general practitioner, four were self referrals (including the two cases mentioned above), one was referred directly from a psychiatric outpatient clinic, and the referral agency was uncertain in three cases. Twenty nine (81%) of the 36 index cases had used other illicit drugs apart from heroin, although no apparent trend or progression from the use of one substance to another was apparent. Thirty (80%) of the index cases had been notified or renotified to the Home Office Drugs Branch in the past year. The Home Office Register represents only a small proportion of all heroin users.

Twenty one (58%) of the index cases had a close family member registered with the same general practitioner, so the general practitioner could be regarded as the patient's family doctor.

Twelve index cases had a history of jaundice, and in 11 instances this was documented as being hepatitis B.

TABLE I-Comparison of index cases (heroin users) and matched controls

Details	Heroin users index (n=36)	Control (n=36)	Significance*
Marital state:			
Single	20	21	NS
Married	9	9	NS
Divorced	1	0	NS
Separated	2	2	NS
Cohabiting	4	4	NS
Medical problems:			
Past history of hepatitis B	11	1	p<0.01
HIV antibody positive (40 matched pairs)	12	0	p<0.01
Past contact with psychiatric services			
(excluding drug addiction clinics)	9	6	NS
Other addictive behaviours:			
Alcohol abuse	14	2	p<0.01
Tobacco use	9	8	NS
Family background:			
Full details unknown	12	13	NS
Stable	11	11	NS
Parents divorced or separated	7	4	NS
Alcoholic or psychotic parent	3	3	NS
Death of a parent during patient's			
childhood	3	5	NS
Antisocial behaviour:			
Criminal record	20	3	p<0.01
Evidence of dishonesty to doctors	12	1	p<0.01
History of violent behaviour	6	0	
History of threatened or actual violence			
to doctors or their staff	3	0	

*Comparison using χ^2 with Yates's correction.

†Index cases are more likely to have been asked about their drinking and smoking habits than controls.

Throughout 1986 a sizable proportion of Dundee's intravenous heroin users seroconverted for HIV antibody in a pattern similar to that described in Edinburgh.¹⁵ The results of HIV antibody tests on patients are not routinely made available to general practitioners for reasons of confidentiality,¹⁶ and thus information on this is not necessarily documented in case records. The HIV antibody results for all 40 of the study group were obtained from public health sources in statistical form (thereby protecting confidentiality of individual results). Sixteen patients had tests performed in Tayside, of whom 12 were positive for HIV antibodies. The general practitioners were aware of the result in 11 of the 12 positive cases, despite having initiated the test in only three. The remaining positive test results had been performed by a genitourinary clinic (five), local hospitals (three), and a police surgeon (one). None of the control patients were positive for HIV antibodies.

COMPARISON OF INDEX CASES AND CONTROLS

In 1986 the heroin users consulted significantly more often than controls (table II), but consultation rates for general medical care (excluding consultations specifically for a heroin problem) were similar in the two groups (table II). Seven of the index cases had consultations in connection with a heroin related medical problem—that is, abscesses at injection sites, infectious hepatitis, and so on. Twelve of the heroin users had some specific treatment in general practice, such as withdrawal treatment or counselling sessions, during at least part of 1986. Three of these patients had 37, 28, and 20 such consultations each during 1986 and thus are largely responsible for the apparent high overall consultation rates of the index group.

Heroin users had significantly more "did not attend" episodes than controls (table II). Home visit rates (a subset of total consultations) and casualty department attendances were similar in both groups (see table II).

If contact with the psychiatric services directly as a result of drug abuse is excluded then the number of patients in each group with a documented psychiatric history is similar: nine index v six controls (table I). Few patients in either group could be formally "labelled" or classified as psychotic or neurotic—the commonest reasons for using the psychiatric services were emotional disturbance or suicidal gestures.

There appears to be a higher prevalence of alcohol abuse in index cases compared with controls (14 v two). More information relating to alcohol use might be expected in the case records of index cases than in those of controls, however.

There is a noticeable difference between heroin users and controls with respect to threatened violence to doctors or their staff, history of violent attacks on other people, and evidence of dishonesty to doctors (table I). Twenty of the heroin users had a known criminal record (predominantly convictions for theft rather than under the Misuse of Drugs Act), although this information was reported by the index cases themselves and in local TABLE II—Consultation rates for index cases (heroin users) and matched controls in 1986

Consultation rates	Heroin users (index)	Controls	Comparison*
General practice	consultation rates	s:	
All consultations (36 matched pairs):			
No (%) of patients from group consulting	27 (75)	25 (69)	
Total No of consultations	252	117	
Mean (SD)	7.0 (9.61)	3.25 (3.75)	p<0.02
Median	3	2	
Interquartile range	0-11	0-6	
General medical care only (34 matched pairs)†			
No (%) of patients from group consulting	17 (50)	25 (74)	
Total No of consultations	76	114	
Mean (SD)	2.24 (3.43)		NS
Median	1	2	
Interquartile range	0-4	0-6	
Heroin related medical problem [†] :			
No (%) of patients from group consulting	7 (21)		
Total No of consultations	13		
Mean $(n=34)$	0.38	_	
Counselling, withdrawal, or patients' attempts to gain drugs†:	5		
No (%) of patients from group consulting	12 (35)		
Total No of consultations	144		
Mean $(n=34)$	4.2		
General practitioner home visit consultations:			
No of patients receiving a home visit	8	5	NS
Total No of home visits	12	9	
Mean $(n=36)$	0.33	0.22	
Did not attend general p	ractitioner appoi	ntments:	
No of patients	15	5	p<0.02
Total No of patients not attending	31	5	•
Mean $(n=36)$	0.91	0.12	
Casualty departs	nent attendances	:	
No of patients attending	11	12	NS
Total No of attendances	18	11	
Mean $(n=36)$	0.53	0.32	

*Using χ² with Yates's correction where appropriate

†Qualitative consultation data were available on only 34 of the 36 index cases.

newspapers. Thirty one of the 36 index cases claimed to be unemployed compared with 27 of the controls (actual unemployment is unlikely if an individual is spending upwards of $\pounds 80$ a day to sustain his or her habit).

Discussion

The results of our case-control study of heroin users suggests that at least two per 1000 of the population of Dundee are misusing heroin. The method we used to ascertain heroin users was simple and inexpensive and may have advantages over more elaborate methods used to calculate the extent of the heroin problem. For example, large scale postal questionnaires can have low response rates and require elaborate data processing. Selecting representative or "typical" practices and pooling figures helps to minimise individual doctor bias from single in depth studies. It would be interesting to see the results from other localities using the techniques from this study.

One of the problems that besets any study of heroin users is the difficulty of obtaining control data.¹⁷ By using age, sex, social class, and general practice list an excellent match for two key variables in behavioural science research—area of residence and marital state—can be achieved.

The general practice prevalence of heroin users calculated here may still be an underestimate of true prevalence. The prevalence of opioid dependence is notoriously difficult to estimate.¹⁸ We may have overlooked cases in our three practices, as one case came to light as a result of the case-control matching. Perhaps urine testing for opiates ought to have been carried out as a screening procedure, although this might have compromised the opportunistic and "low cost" case finding method. The prevalence estimates given here are higher than those of the local drug problems centre. The estimate of the extent of heroin use in Dundee that most closely matches the figures from this study is the "unofficial" calculation of the police drugs squad.

General practice case records, which in theory represent the sum total of a person's contact with the medical profession from birth onwards, are underused as a resource.¹⁹ There are, however, problems in trying to describe a "disease" or behaviour with a relapsing and remitting course²⁰ and an uncertain date of onset if using case records alone. The data in this study were from case records that were checked and supplemented by the general practitioners from knowledge of the patient, which is different from a person from outside a practice trying to interpret case records unaided. In using general practice patient lists one assumes that virtually the entire population is registered with a practice and that no one can be registered with more than one practice. Some of the patients in this study may have consulted other practitioners under the guise of being "temporary residents," although any person living in Tayside should have only one set of Tayside general practice medical records. Caution must be exercised when using routine data to draw research conclusions, particularly when based on a small number of cases.

The total general practice consultation rate for the heroin users (the index group) is high, but the rate for routine or general medical care is lower than expected. This may be because heroin use can be intermittent and the index patients might consult infrequently when "in remission" but more often when "in relapse." Or the heroin users studied here may represent "mild cases" with few medical problems who, in keeping with many young adults in the age range 18 to 35, rarely seek medical advice. The major determinant of consultation rate may be the doctor rather than the patient and his or her symptoms. In other words a small group of users consult for "counselling" or "withdrawal treatment" but are really attending because their addictive behaviour (heroin use) has been "medicalised" and they are receiving formal medical treatment. Practitioners may have considerable influence on how often heroin users consult and the extent to which they use up medical resources. The results suggest that most heroin users consult their general practitioner in much the same way and for much the same reasons as their contemporaries who do not use heroin. Only a few heroin using patients have high consultation rates and make heavy demands on their general practitioners.

The importance of studying heroin use from the standpoint of general practice is borne out by the high proportion (26 out of 36) of users who initially presented to the general practitioner rather than to other medical agencies.

Though our data are based on small numbers, they support the view that the general practitioner provides some continuity of care for most heroin users, whether for heroin related problems, general medical care, or family support.^{17 21 22} The finding that over half of the study group had a close family member registered with the same general practitioner is important. Twenty four of the 36 heroin users had remained with the same general practitioner since presentation. Although a subgroup of heroin users go off the list or change doctor frequently, most seem to remain loyal to their own doctor. Presumably, this commitment is reciprocated by those family doctors who help and support the heroin users on their practice lists, and do not look on heroin users as undesirables or outcasts.

The similarities between index and control groups with respect to major family disruption in childhood-that is, parental divorce or separation, death of parent, alcoholic or psychotic parent-does not support the popular stereotype that heroin users tend to come from "unstable" or "broken" homes,²³ although the statistical power of the study and the possible underestimate of alcohol abuse by parents must be borne in mind.

What implications have the results of this study for managing such patients? In favour of planning round the primary care team are the relatively small costs of using existing resources, high doctor-patient contact rates, patient trust in the family doctor, and opportunities to involve other family members in management.²⁴ It can be argued that referral of heroin users to the specialist services is of no benefit.²⁵ It seems sensible for recognition, management of the patient, and management of the family to be closely interlinked. Against using general practice as the focus of care are the difficulties of combining the roles of counselling and prescribing, the difficulties that threats of violence and dishonest behaviour pose to doctors and their staff, and the higher than average doctor-patient turnover of some heroin users.

Intravenous drug users are at risk of contracting the HIV virus, leading to its spread in the wider heterosexual community, and thus no general practitioner can ignore the extent and pattern of heroin use in his or her locality. The data on the prevalence of heroin use (principally by the intravenous route) together with the extent of seroconversion for HIV antibody is therefore cause for concern. General practitioners must become concerned in trying to contain the acquired immune deficiency syndrome epidemic,²⁶ and trying to modify the behaviour of heroin users who are registered with their practices is an integral part of this process. If the "average" practitioner with an "average urban practice list" containing at least four heroin users could persuade at least one to stop using heroinor, at the very least, not to inject with contaminated equipment -then this would make an important contribution to health care in the next decade.

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