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Underdetection of comorbid drug use at acute psychiatric admission

AIMS AND METHOD

The ability of routine clinical practice to detect drug use at acute psychiatric admission was assessed by comparing the results of urinalysis with information on drug use extracted from patient records ($n=112$).

RESULTS

Urinalysis detected drug use in 23% of the sample. Cannabis was the drug most frequently found. Of the cases of drug use positively identified by urinalysis, 54% were not identified in the notes. Some information on drug use proximal to

admission was found in 40% of patient records. Patients asked about proximal drug use were younger than those not asked.

CLINICAL IMPLICATIONS

All patients should be asked about drug use.

Drug use among psychiatric patients frequently goes undetected (Ananth *et al*, 1989; Shaner *et al*, 1993; Condren *et al*, 2001), the rate being as high as 72% at acute admission (Galletly *et al*, 1993). Lack of detection can lead to misdiagnosis, inappropriate medication and failure to use appropriate interventions (Drake & Mercer McFadden, 1995). As there is little or no published data in the UK, the aims of the study were to identify the incidence and types of drug use proximal to acute psychiatric admission to a district general hospital acute psychiatric unit; and to determine the ability of routine in-patient clinical practice to detect drug use, as compared with urine drug screening, which has been shown to detect drug use that is not revealed by patients (Ananth *et al*, 1989).

Routine clinical practice in UK psychiatric hospitals incorporates aspects of diagnostic interview, clinical examination and collateral reports (Goldberg, 1997). On the basis of previous research, the following predictions were made: (a) routine clinical practice would fail to detect a sizeable proportion of cases found by urinalysis; and (b) cannabis would be the most common drug detected.

The study

Following ethical approval and a 2-week pilot, the study was conducted at the acute in-patient psychiatric unit for South Devon Healthcare Trust, Torquay, Devon. All acute admissions were eligible apart from planned admissions for drug detoxification, patients transferred from another hospital and patients who stayed for less than 24 hours. Informed consent to participate in the research and a urine sample were sought within 24 hours of admission.

A 20–30 ml urine sample was analysed by enzyme immunoassay, testing for amphetamines, barbiturates, benzodiazepines, cannabis, cocaine, methadone and opiates. Staff were unaware that the patient records would be providing data for the study.

Data extraction from patient records

The medical and nursing records for the relevant admission were examined by the authors, who were blind to the laboratory test results. The medical records include the psychiatric admission interview routinely used by clerking doctors, which has a question on drug history to be asked of all patients (Goldberg, 1997). The nursing notes summarise details about the patient's admission and also record daily care, conversations and events. Data were extracted from both of these sources on whether or not a lifetime drug history and drug use proximal to admission had been recorded. Any specific drugs mentioned were noted, as were age, gender, ICD-10 diagnosis (World Health Organization, 1992), prescription of opiates and/or benzodiazepines at admission; source of information on drug use (e.g. patient report or other source); and police involvement, violence and use of the Mental Health Act.

Data were analysed using SPSS for Windows, version 10. Age was compared using an independent *t*-test. Associations between categorical variables were examined with either Pearson's χ^2 (using exact tests in cases with small cell counts) or Fisher's exact test. Confidence intervals (CIs) were calculated to estimate the sensitivity of the notes in detecting drug use.



Findings

Response

There were 173 admissions during the research period. Of these, 25 admissions were ineligible. Of the eligible sample of 148, there were 20 refusals. For 16 admissions, the person was not asked to take part because of staff non-compliance with the survey.

One hundred and twelve urine samples were collected and analysed (response 112/148=76%). There was no significant difference in age between the sample and those who refused or those who were not asked to take part, nor any association with gender, use of the Mental Health Act or diagnosis. However, a greater proportion of women than men were not asked to take part ($\chi^2=8.68$, d.f.=1, $P=0.01$).

Sample

The achieved sample of 112 had a mean age of 38 years (s.d.=12 years) and 58% were male. The primary diagnoses were affective disorders (32%); schizophrenia and related disorders (23%); mental and behavioural disorders due to substance use (18%); personality disorders (18%); neurotic disorders (4%); organic mental disorder (3%); and other (3%). Police were involved in 21%, violence was recorded in 5% and the Mental Health Act was used in 13% of admissions.

Results of urinalysis

The results of the laboratory analysis are shown in Table 1. Overall prevalence and the figures for opiates and benzodiazepines exclude cases where there was evidence that these drugs were prescribed and taken on or around admission. Table 1 shows that our prediction for the predominance of cannabis use was confirmed. There was no association between the detection of drug use and the four largest diagnostic groups (Table 2). There was no significant difference between patients where a drug had been detected and those where a drug was not detected for any of the variables collected from the notes.

Routine clinical practice in recording drug use

Drug history was indicated in 82 records (73%). In 78% of those cases, the information had been recorded in both the medical and nursing notes. In a further 13% the information came from the medical notes only and in 6% (5 cases) drug history was indicated only in the nursing notes. The primary source of information on drug use was patient report (98%). Of the 82 records with some information, 41 (50%) indicated illicit drug use at some time during the patient's life. Proximal drug use was indicated in 45 records (40% of the total sample). Of these 45, 19 records indicated that the person had used drugs recently. Those who were asked about any drug history were significantly younger than those who were not asked (mean age 35 v. 45 years: $t=-3.83$, d.f.=110,

$P=0.001$). Similarly those who were asked about proximal drug use were younger than those who were not asked (mean age 33 v. 41 years: $t=-3.54$, d.f.=110, $P=0.001$). There was no association between gender and any recorded drug history but for proximal drug use the analysis approached significance, with fewer women being asked ($\chi^2=3.64$, d.f.=1, $P=0.056$).

Differences between laboratory detection and information from patient records

In 17 of the 26 cases (65%) where a drug was detected in the urine, there was an indication that the patient had been asked about drug use proximal to admission. Of those 17, there were five instances where drug use was denied by the patient. Table 3 indicates drug use detected by the laboratory and proximal drug use identified in the notes. More than half (54%) of the cases of drug use positively identified by the laboratory were not identified in the notes. The 95% CI demonstrating the sensitivity of the notes in detecting actual drug users was 27.0–65.3%.

Table 1. Drugs found by urine analysis

Drug	Detected n=112 (%)
Any drug	26 (23)
Cannabis	16 (14)
Benzodiazepines	7 (6)
Any opiate	3 (3)
Barbiturates	3 (3)
Any amphetamine	1 (1)
Cocaine	1 (1)

Table 2. Laboratory detection and diagnosis (four main groups only)

Diagnosis	Drug detected (%)	Not detected (%)
Mental and behavioural disorders due to substance use (including alcohol)	6 (30)	14 (70)
Schizophrenia and related disorders	3 (12)	23 (89)
Affective disorders	8 (22)	28 (78)
Personality disorders	4 (20)	16 (80)

Table 3. Drug use detected by the laboratory and proximal drug use identified in the notes

	Notes (proximal drug use answer)			
	Yes	No/not recorded	Total	
Laboratory (drug in urine)	Yes	12	14	26
	No	7	79	86
	Total	19	93	112

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Discussion

Study limitations

There may be an underestimate of drug use owing to unsupervised urine samples and the use of urine analysis, which can detect cannabis within 3 weeks of use but cannot detect other drugs after 48 hours. To compensate for this problem we required the urine to be taken within 24 hours of admission. Clinical staff did not know that the patient records would be used in the study. However, it is possible that awareness of the study increased staff attention to drug use, which in turn influenced routine history taking. If this was the case, then the levels of detection in the notes may be an overestimate of normal practice. Pre-study base rates of recording drug history and recent drug use would have given some indication of routine practice, but was beyond the scope of this study.

Prevalence

On the basis of the urinalysis, the prevalence of 23% for any drug of misuse in our sample of in-patients is similar to that reported by other UK surveys of recent drug use in community samples, for example Menezes *et al* (1996) 21%; Cantwell *et al* (1999) 20%; and Weaver *et al* (2001) 24%. Two studies conducted in the US and Ireland on current misuse/dependence among in-patients both reported rates of 19% (Fischer *et al*, 1996; Kamali *et al*, 2000). All the above studies were of patients with psychotic disorders, whereas the prevalence rates from our study cover a wider range of diagnoses. We did not find elevated rates of drug use among those with a diagnosis of schizophrenia, lending support to arguments put forward by Farrell *et al* (1998) and Modestin *et al* (1997) that more attention should be paid to substance use among those with other diagnoses. The preponderance of cannabis is consistent with the research cited above and with patterns of drug use in the general UK population (Ramsay & Spiller, 1997; Farrell *et al*, 1998).

Underdetection

The main analysis shows that routine practice was poor at detecting drug use in an acute psychiatric in-patient setting. The drug use of 54% of patients with positive urines was not detected, confirming the major concern of this study. For 35% of these undetected cases, there was a statement in the notes that there had been no drug use. This may be because clinical signs of drug use were missed or because of patient confusion or denial on questioning. For the remaining 65% of undetected cases no information had been recorded, a similar proportion to that of the whole sample, despite prompts in the admission schedule and numerous opportunities during the patients' stay to do so. It may be that some hospital staff are not alert to the issue of substance use or do not consider substance use to be important in psychiatric care (Appleby *et al*, 1997). In addition, we found evidence of a bias operating. Those who were not asked were significantly older and a higher proportion were female, although this did not quite reach significance.

Implications for practice

All patients should be asked about drug use, as detection is a necessary precursor to the identification of misuse through further specialised assessment. We found that where there was information in the notes relating to drug use, this was accurate for 73% of cases, indicating that recording recent drug use in the notes is worthwhile. However, the wide CIs show that current practice should be improved by closer adherence to the psychiatric admission interview (Goldberg, 1997) and the possible inclusion of screening questionnaires (Appleby *et al*, 1997).

Implications for future research

This study could be replicated at other in-patient units. Base-rate recording of normal practice in recording drug use would strengthen the design and provide the basis of audit of the effectiveness and clinical usefulness of routine detection of recent drug use by psychiatric in-patients.

Declaration of interest

None.

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MIDAS: a new service for the mentally ill with comorbid drug and alcohol misuse

AIMS AND METHOD

To describe the work and patient characteristics of one of the first combined mental illness and drug and alcohol services (MIDAS) in the UK. We examined MIDAS as an assertive community service, for individuals receiving long-term community care. We selected the case files of the first 80 patients accepted over a 10-month period and examined variables including demographic details, diagnosis, associated substance use and length of engagement with the service.

RESULTS

Our findings show that there was no relationship between responders to the service and basic demographic data. Patients with bipolar affective disorder and personality disorders were more likely to use the service than patients with unipolar disorder or schizophrenia. Despite the use of an assertive service, there was difficulty engaging patients with schizophrenia and comorbid drug use. These same patients also had a high level of criminal convictions as well as a trend towards using alcohol and cannabis

as their main substances of misuse. At 18 months 38% of patients had failed to remain engaged with the service.

CLINICAL IMPLICATIONS

This specialist type of service may be more useful than other services in engaging patients with comorbidity. Systematic research is required in the UK to explore the effectiveness of this type of new service. More innovative resources need to be identified to specifically deal with patients with severe mental illness and comorbid substance use.

There is an accumulation of evidence suggesting that mental illness with comorbid drug use requires specific targeting (Teague et al, 1995) and, further, should be a determinant of health authority spending on mental health (Appleby et al, 1999: p.11, Recommendation 7). Crome (1999) suggests that the relationship is complex as there are 10 ways in which mental illness and substance misuse interact. Moreover, substance misuse in dual diagnosis patients is associated with non-compliance with psychotropic medication. It may also lead to prescribed medication being inadequate to maintain remission. Both may lead to an increase in service use (Menezes et al, 1996). There is often a gap in the provision of services to these individuals when the mental health and addiction services try to treat these patients independently (Appleby, 2000). Despite this, there has been only sporadic funding of mental health initiatives for this challenging group.

The mental illness and drug and alcohol services (MIDAS) in East Hertsmere represents one such initiative involving the West Hertfordshire Health Authority. The remit of this service is to target patients with a severe mental illness who show evidence of drug and alcohol use that significantly interferes with the health of these individuals. An assertive outreach posture is frequently required for this group because of their lack of reliable

contact with conventional mental health services. It may also be needed because of paucity of social networks, or poor compliance (Drake & Wallach, 1989).

The current service

MIDAS provides a wide-ranging and specialist service for the 16–65-year age group. The team is based in a mixed urban and rural setting in Hertfordshire, covering a population currently estimated at 68 000. The base for this service is a semi-detached house in the town centre, 3 miles from the main hospital. Assessments are completed outside of a ward environment, in a relaxed and patient-friendly atmosphere. Staffing consists of three community psychiatric nurses, two drug and alcohol workers, two care support workers and one administrative worker. There are two sessions of staff grade psychiatric time and consultant cover during the week. Staff provide cover from 9 a.m. to 5 p.m. 5 days a week. After-hours cover is provided by a 24-hour crisis intervention team.

The service provided by MIDAS has four components:

- (a) a comprehensive initial assessment within 1 week of accepting a referral