The Pattern of Psychoactive Drugs Abuse Among Selected Group in Basrah

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ABSTRACT

Background: Abuse of psychoactive drugs is common worldwide. The WHO has plans to halt the problems. To be effective, such plans need information on the pattern of abuse, which is scanty in Iraq.

Objectives: To study the pattern of drug abuse in Basrah by types of drugs and characteristics of abusers, to elucidate the risk factors and its relation to psychiatric illnesses and to evaluate immunoassay test for drug detection in urine.

Method: This is an observational study on patients attending psychiatric clinic in Basrah journal Hospital and hospital workers. Interview, questionnaire form, and urine samples for screening for drugs of abuse using immunoassay multi-drug panel test.

Results: Two hundreds and six subjects (59 patients, 96 health workers, and 51 volunteers for validation studies) were included. Forty-four percent of patients were manual workers, 20% were unemployed, and eighty-eight percent of them were smokers. Half of the patients have pure drug abuse, while the others have co-occurring psychiatric disorders. Personality disorder was the most commonly associated disease. Abuse of more than one drug reported by 66% of patients. Benzodiazepines abuse was reported by 78% of patients followed by opioids in 56% and centrally acting anticholinergics in 48% of patients. Fourteen percent of patients denied abuse. Sixty four percent of patients had moderate to substantial abuse severity score. Of the 96 health workers 12(12.5%) subjects were found positive mainly for benzodiazepines followed by tramadol.

Conclusions: The problem of drug abuse affects young age group and psychiatric patients and involved mainly pharmaceuticals and lead sometimes to psychiatric consultation.

نمط سوء استعمال الأدوية ذات التأثير العقلي في مجموعة مختارة من الأشخاص في البصرة

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خلفية الدراسة: **ان سوء استعمال الأدوية ذات التأثيرات العقلية شائع على نطاق العالم. وضعت منظمة الصحة العالمية وبالتعاون مع كثير من دول العالم خطط للحد من هذه المشكلة. إن هذه المعلومات ضئيلة جداً في العراق.**

الأهداف: **تهدف هذه الدراسة الى التعرف على نمط سوء استعمال المؤثرات العقلية في البصرة وكذلك دراسة عوامل الخطورة لسوء الأستعمال وعلاقتها بالأمراض النفسية المختلفة وكذلك تهدف الدراسة الى تقييم استعمال فحص الإدرار المسحي عن الأدوية باستعمال الكارت الخاص بالتحليل المناعي للكشف عن هذه المواد.**

طريقة العمل: **دراسة شهودية عن الأشخاص المتعاطين للأدوية ذات التأثير النفسي ممن يراجعون عيادة الأمراض العقلية والنفسية في مستشفى البصرة العام وكذلك تشمل العينة إجراء مسح للعاملين في المستشفى المذكور تمت مقابلة كافة المرضى والعاملين الصحيين في المستشفى، وتم ملئ استمارة خاصة لكل منهم، كما أخذت عينة إدرار من كل شخص للكشف عن الأدوية بواسطة التحليل المناعي.**

النتائج: **كان المجموع الكلي للأشخاص المشاركين في الدراسة ٢٠٦(٥٩ مريض، ٩٦ من الكادر الطبي و ٥١ متطوع سليم). كان ٧٣% تقل أعمارهم عن ٤٠ سنة و ٤٤% من المرضى هم من العمال اليدوين و ٢٠% من العاطلين عن العمل، و كان ٨٨% من هؤلاء المرضى مدخنين للسكائر وكان حوالي نصف المرضى يشكون من مشاكل سوء استعمال الأدوية فقط بينما النصف الأخر يشكون، إضافة الى سوء استعمال الأدوية، من أعراض نفسية. كانت اضطرابات الشخصية من أكثر الأعراض النفسية المصاحبة لسوء استعمال الأدوية. كان الأستعمال لأكثر من دواء واحد في نفس الوقت لدى ٦٦% من المرضى. ظهر سوء استعمال مركبات البنزودايزبين لدى ٧٨% من المرضى، يليها استعمال مركبات الأفيونات لدى ٥٦% بينما تأتي الأدوية المضادة للأستيل كولين المركزية في الدرجة الثالثة و بنسبة ٤٨%. ان حوالي ١٤% من المرضى أنكر استعمال بعض الأدوية و التي ظهرت موجبة في تحليل الأدرار. كانت شدة سوء استعمال المركبات العقلية متوسطة الى واضحة لدى ٦٦% من المرضى حسب مقياس DAST. ظهر لدى ١٢ (١٢,٥%) شخصاً من العاملين الصحيين فحصاً موجباً للأدرار كان معظمها لمركبات البنزودايزبين يليه الترامادول.**

الاستنتاجات: **ان مشكلة سوء استعمال الأدوية وبالأخص المركبات الصيدلانية ذات التأثير العقلي تؤثر خاصة على فئة الشباب، و مرضى الأمراض النفسية لدرجة من الحدة أدت الى مراجعتهم لعيادة الأمراض النفسية.**

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INTRODUCTION

Drug abuse is a common worldwide problem affecting mainly the young age group, as it was estimated that during 2010 between 3% to 7% of the world population aged 15 to 64 abuse at least one substance during the previous year.[1] The problem is affecting both the developed and the developing countries. In many industrialized countries, as the United States of America, Canada and the European Union the abuse of one substance or another ranged from 2% to 20 %.[2,3] The Middle East Countries also affected, as it's a transit area for the world illicit drugs, with many countries experiencing rapid social changes and economic constrains having many conflicts which is sometimes violent.[2-4] Many countries have high rate of dependence on many hard drugs as heroin and opium, in addition to other substances as cannabis and khat.[2,5,6] In Iraq, substance abuse have raised following 2003 war, which was driven by many factors, as violence, economic strain, social and religious conflicts.[7] According to Iraqi Mental Health Survey, carried out by the Iraqi Ministry of Health in collaboration with the World Health Organization on the prevalence of mental disorders, substance used disorders were the fourth most common among various psychiatric disorders and the second most serious after bipolar. Substance abuse among other effects, has many health problems as the increase incidence of infection among abusers as hepatitis and AIDS. [8] It also affects the central nervous system leading to many problems as seizures precipitated by intoxication or occurring during drug withdrawal, movement disorders, stroke and peripheral neuropathy.[9] Cardiac ischemia with infarction and dysrrhythmias can also occur.[8,9] Carcinogenic effect was also reported.[10] Accident, trauma, and injuries are all common among drug abusers as well as the overdose occurring intentionally or as accident during drug intake.[11] Any attempt to prevent or control drug abuse problem in a society, should aim first to explore the extent of the problem in the population and the factors that contribute to such a problem. As data on substance abuse is lacking and consist mainly of clinical observations and individual reports. The aim of the present work is to study the pattern of substance abuse among outpatients in a psychiatric clinic and a selected group of individuals in Basrah city, and to investigate the risk factors for drug abuse and its relation to various psychiatric illnesses. Also to evaluate the use of immunoassay panel cards in the screening for the detection of drugs of abuse in urine and compare this to the role of questionnaire forms in substance abuse detection.

PATIENTS MATERIALS AND METHODS

The study was ethically approved by the Ethical Committee of the College of Medicine, Basrah University. Informed verbal consents were obtained from all patients and medical staff before the study. The study was conducted in the period between January, 2012 and July 2012. The study was conducted on two populations:

I. Patients: fifty nine patients with substance use disorders attended the psychiatric unit of Basrah General Hospital for drug abuse related problems. Patients included were either asking for drug supply or demand treatment of their dependence. The patients were divided into different groups according to the type of drug they abuse and according to the co-occurring psychiatric disorders. All patients with substance use disorders including patients with psychiatric disorders and co-occurring substance use disorders were included in this study. There patients were diagnosed by a consultant psychiatrist. All patients attending the clinic during the study period were included. Urine samples were collected for drugs screening by immunoassay test. The degree of dependence was also evaluated for each patient by using Drug Abuse Screening Test (DAST) which is based on the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV).[12] issued by the American Psychiatric Association. DAST consists of 20 questions (DAST–20) and can be given in either a self-report or in a structured interview format; in our study, we performed the test by the structured interview and translation of questions to Arabic language. Patients characteristics were recorded according to a special questionnaire form which includes socio-demographical data for each patient such as age, gender, marital status, occupation and address. The

questionnaire form also includes the overall medical state of the drug abuser and any associated organic or psychiatric illness. Smoking and alcohol use were also included. Regarding drug abused by the patients, complete information were collected from each patient and this include; type of drug, dosage form, dose, starting date, escalation pattern and the source of obtaining these drugs. Urine samples were collected from each patient for screening of drugs of abuse.

II. Medical staff: a randomly selected sample of the staff of Basrah General Hospital which is a general hospital with all major specialties were included in this study as a risk group for drug abuse. Physicians, medical assistants, nurses and service workers from different departments were included. For each participanti, Information such as age, gender, social status, drug history and medical history were recorded by a special questionnaire form, and urine samples were collected to be screened for drugs by immunoassay urine test. Immunoassay multi–drugs panel test of two types were used, the 5- drug panel test (Cortez Diagnostics) USA, which can detect Barbiturates, Benzodiazepines, Opiates, Tetrahydro-cannabinol and Tramadol**)** and the 10– drug panel test (Acon) USA, which detect Cocaine, Amphetamine, Methamphetamine, Tetrahydro-cannabinol, Methadone, Morphine, Phencyclidine, Barbiturates, Benzodiazepines and Tricyclic antidepressants), used of either type was guided by patient history and the researcher suspicion.

Statistical significance has been tested using analysis of variance (ANOVA), using Statistical package for social science (SPSS) version 14. Differences between groups have been tested using t-test. $P< 0.5$ is considered significant.

RESULTS

Fifty nine patients were included in the study (58 male and 1 female); their characteristics are shown in (Table-1).

They were from different age groups, 66% of them are in the age group of 20–40 years and 57.7% of them are illiterate or have a primary school education. Most of them had low-income, 64% of them were manual workers or unemployed in addition to other occupations such as policemen (11.9%) (Table-2).

Table 1. Characteristics of drug abusers

Characteristics of patients	No. of patients (%)
Age groups (years)	
< 20	4 (6.8)
20-29	21 (35.6)
30-39	18 (30.5)
40-49	8 (13.5)
50-59	5 (8.5)
60-70	3 (5.1)
Education	
Illiterate	22 (37.3)
Primary school	12 (20.4)
Secondary school	6 (10.1)
College	19 (32.2)
Marital status	
Married	34 (57.6)
Single	22 (37.3)
Divorce	2 (3.4)
Widow	1 (1.7 %)
Smoking	
Smokers	52 (88.1)
Non-smokers	7 (11.9)
Alcohol drinking	
Alcohol drinker	15 (25.4)
Non-alcohol drinker	44 (74.6)

Table 2. Patient occupations

Occupation	No. of patients (%)
Unemployed	12 (20.3)
Manual workers	26 (44)
Policemen	7 (11.9)
Students	4 (6.7)
Health workers	2 (3.4)
Teachers	1 (1.9)
Drivers	3 (5)
Electrician	2 (3.4)
Clerical workers	2 (3.4)
Total	59

They obtained drugs from different sources such as private pharmacies, street drug dealers, black market (31 patients, who obtained them through illicit channels), and from governmental hospitals. Some patients obtained the drugs from more than one source. The patients with substance use disorders were divided into two groups; patients who had pure substance use disorders, and, patients with psychiatric disorders and co–occurring substance use disorders. Twenty nine out of 59 patients (49.2%) had pure substance use disorders; about 50% of them are in the age group of 20-30 year old. They tend to use multiple drugs at the same

time for recreational purpose in a manner of dose escalation. Patients in the second group are those with psychiatric disorder and co–occurring substance use disorders; their number is thirty out of 59 patients (50.8%). Nineteen (63.3%) out of these 30 patients are complaining from antisocial personality mood disorders in four patients, anxiety disorders in three patients and psychotic disorders in four patients as shown in (Table-3).

Table 3. Number of patients according to their psychiatric diagnosis

Diagnosis	Patient numbers (%)
Pure substance use disorders	**29(49.2)**
Co-occurring psychiatric and substance use disorders	**30 (50.8)**
antisocial Personality disorders	**19(63.3)**
Mood disorders	**4 (13.3)**
Major depression	**3**
Bipolar I	**1**
Anxiety disorders	**3 (1)**
Generalized anxiety disorder	**3**
Psychotic disorders	**4 (13.3)**
Schizophrenia	**3**
Organic psychosis	**1**
Total	**59**

The poly-drug abuse seems to be the predominant pattern of abuse, and 66% of the patients abuse two drugs or more at the same time (Table-4). As regard to the duration of abuse, 47.5% of patients had duration of abuse of less than six years, 30% had duration of abuse between 6-10 years, and lower percent had duration of abuse between 11-20 years (17%), (Table-4).

Table 4. The duration of abuse and number of drugs.

Duration of abuse (years)	Number of patients (%)
1-5	28 (47.4%)
6-10	18 (30.5%)
11-15	9 (15.3%)
16-20	1 (1.7%)
Unknown	3 (5.1%)
Number of abused drugs	**Number of patients (%)**
One drug	20 (33.9)
Two drugs	18 (30.5)
Three drugs	21 (35.6)

The most abused drugs were benzodiazepines, opiates and centrally-acting anticholinergics (Table-5). Forty-six out of the 89 patients (78%) abused benzodiazepines. The most frequently abused member of benzodiazebines group was diazepam (33 patients), and clonazepam (10 patients). The number of patients who abused opiates was 32 out of 59 patients (56%) and most abused opiates are the codeine preparations (18 patients) or tramadol (11 patients). Twenty-eight patients abused centrally-acting anticholinergic drugs, among which benzhexol was the most frequently abused anticholinergic (27 patients).The number of patients who abused centrally-acting muscle relaxant was 14 out of 59 patients (23.7%). Patients had abused drugs in a manner of dose escalation, i.e. starting with low dose and increasing the dose by time, for drugs as benzodiazepines and opiates. Other drugs are taken nearly in fixed doses such as benzhexol. Oral route of intake seems to be the predominant route for almost all patients (93.2%). Injecting–drug use is not common. There were only four injecting-drug users (6.8%) who had attended the psychiatric clinic; of those two were health workers (medical assistants), one injecting tramadol, diazepam, and the second injecting pethidine intravenously in high doses and the other two abusers injecting tramadol. Not all patients admitted taking all the drugs they abuse correctly, nine out of 59 patients (15.3%) denied using certain drugs (Table-6).

Table 5. Number of patients according to the drug of abuse and psychiatric diagnosis

Drug	Co-occurring psychiatric and substance use disorders					Pure substance use disorders	Total
	Antisocial Personality disorders	Schizophrenia	Generalized anxiety disorder	Major depression disorder	Bipolar I disorder		
Centrally-acting anticholinergics	11	3	1	__	1	12	24
Benzhexol tablet	11	3	1	__	1	11	
Procyclidine tablet	__	__	__	__	__	1	
Benzodiazepines	15	2	3	3	__	23	46
Diazepam tablet	10	2	2	2	__	17	33
Diazepam injecion	1	__	__	__	__	__	
Clonazepam tablet	4	__	1	1	__	4	
Lorazepam tablet	__	__	__	__	__	1	
Chlordiazepoxide tablet	__	__	__	__	__	1	
Opiates	12	1	__	1	__	18	32
Tramadol tablet	2	1	__	__	__	8	11
Tramadol injection	1	__	__	__	__	2	18
Codeine Preparations	9	__	__	1	__	8	14
Centrally-acting muscle relaxant	4	__	__	1	__	9	
Somadril tablet	4	__	__	1	__	8	
Baclofen tablet	__	__	__	__	__	1	
Other	4	__	1	__	__	3	
Diphenhydramine tablet	2	__	__	__	__	1	
Imipramine tablet	2	__	__	__	__	__	
Opium	__	__	__	__	__	1	
Methamphetamine	__	__	__	__	__	1	
Carbamazepine tablet	__	__	1	__	__	__	

Table 6. Characteristics of patients who denied drug abuse

No.	Diagnosis	Patient age	Denied drug	Post-urine test admission	Urine test
1	Antisocial personality disorder	41	Codeine (Cough syrup)	Admit	Positive for opiates
2	Antisocial personality disorder	26	Codeine (Cough syrup)	Admit	Positive for opiates
3	Major depression	33	Benzodiazepines	Deny	Positive for benzodiazepines
4	Antisocial personality disorder	43	Opiate	Deny	Positive for opiate
5	Drug-related disorder	47	Opiate	Deny	Positive for opiate
6	Drug-related disorder	27	Methamphetamine	Deny	Positive for Methamphetamine
7	Drug-related disorder	23	tramadol	Admit	Positive for tramadol
8	Antisocial personality disorder	30	Benzodiazepines	Deny	Positive for benzodiazepines
9	Drug-related disorder	25	diazepam	Admit	Positive for benzodiazepines

Fifty two out of 59 patients had completed the DAST test. The values were high for patients abusing opiates and for multidrug abusers (Table-7).

Table 7. The number of patients according to the DAST Score level

DAST level (Problems related to drug abuse)	Patient numbers (%)
0: no problem	0
1-5: Low	9 (15.2)
6-10: Moderate	21(35.6)
11-15: Substantial	16 (28.8)
16-20: Severe	6 (8.5)
No score obtained	7 (11.9)
Total	59

The total number of medical staff participated in the screening study was 96, of there were 12 subjects (7 males and 5 females) with a positive urine test (Table-8). Ten of the respondents, have positive benzodiazepine and two tramadol test.

Table 8. Characteristics of medical staff with positive urine tests for drugs of abuse

No.	Gender	Age	Profession	Department	Social state	Positive drug
1	Male	25	Medical assistant	Internal medicine ward	Married	Tramadol
2	Male	52	Medical assistant	Surgery ward	Married	Benzodiazepine
3	Male	36	Nurse	Surgery ward	Married	Benzodiazepine
4	Female	42	Anaesthetist assistant	Surgical theater	Married	Benzodiazepine
5	Male	31	Nurse	Cardiac care unit	Married	Benzodiazepine
6	Female	37	Nurse	Pediatric ward	Married	Benzodiazepine
7	Female	28	Anaesthetist assistant	Surgical theater	Married	Benzodiazepine
8	Female	30	Nurse	Surgical theater	Married	Benzodiazepine
9	Female	35	Anaesthetist assistant	Surgical theater	Married	Benzodiazepine
10	Male	29	Assistant pharmacist	Pharmacy department	Married	Benzodiazepine
11	Male	38	Nurse	Emergency department	Married	Tramadol
12	Male	33	Nurse	Emergency department	Married	Benzodiazepine

DISCUSSION

The problem of drug abuse is not uncommon in our society. Drug abuse in our patients occurring mainly in males, as we found only one female patient (1.7%). This is in agreement with other studies, as the abuse of drugs is considered as predominantly a male activity worldwide.[13,14] The majority of our patients (66%) are of young age group who are mainly between 20-40 years of age, which is similar to the finding of another study in Iraq.[15] The abuse of drugs occurs in young age groups in various societies and is declining with advancing age.[16] The young people may be under higher stress than the elderly people; they have more challenges in life, are emotionally liable and more ready to experiment with drugs or other substances that modify their feelings. Smoking is common among drug abuser (88%), although we do not have actual figures on the rate of smoking in our society. The association of smoking with drug abuse is common, as many studies had reported that the prevalence of smoking among drug addicts was found to be between 70-90% which probably reflects the stressful and unstable personalities of the drug abusers.[17] About one quarter of our patients are regular users of alcohol. This is lower than the incidence of alcohol abuse among people in other countries.[18] This is probably due to the recent social and religious limitation to alcohol abuse. Unemployed patients consist about 20% of our patients. Unemployment is considered a risk factor for drug abuse.[19] The link between drug use and the individual employment situation runs in two directions, i.e. lack of employment is a factor that leads individuals to more serious drug taking, whereas more serious drug involvement works against more stable and/or better employment. [20,21] Pure drug abuse occurs in about 50% of patients consulting psychiatric clinic, while drug abuse complicating various psychiatric illnesses occurs in the remaining patients. Some psychiatric disorders are more likely to predispose to drug abuse. In this study, the antisocial personality disorder was the most common psychiatric illness associated with drug abuse (32%). Psychiatric patients tend to abuse either their prescribed drug or other drugs of abuse.[19,22] In the current study, two thirds of the patients are abusing two or more drugs simultaneously, and only one third using a single drug. Multiple drug abuse at the same time is a common practice among drug abusers.[23] This is probably related to the availability of drugs and the search for different or stronger effect or the tolerance to the effect of the previous drugs. There are different rationales for mixing different drugs during one consumption episode. Drugs, when taken together can have cumulative or complementary effects; therefore they may be mixed to increase the overall psychoactive experience. Offsetting the negative effects of a drug can be another reason to take an additional substance; for example, benzodiazepines to help the user sleep after taking stimulants.[24] The use of several substances by an individual over a longer period of time might reflect the replacement of one drug by another, due to changes in price, availability or legality.[25] Numerous reports indicate that the co-abuse of opioids and benzodiazepines (BZDs) is ubiquitous around the world. Opioid abusers are also using BZDs either therapeutically to self-medicate anxiety, or insomnia, or recreationally, as the use of BZDs for enhancing opioid intoxication or.[26] Benzodiazepines and opiates are the most commonly abused drugs in our patients followed by centrally acting anticholinergic drugs. This is in agreement with other study.[27] Benzodiazepines are taking the lead over the centrally acting anticholinergic drugs due to wide availability of these drugs and the recent limitation of clinical use of centrally-acting anticholinergic drugs imposed by the Iraqi Ministry of Health. Cultural, educational, and social factors can, to a certain extent, influence the pattern of drug abuse.[28] In our society, the limited knowledge on drugs and the unavailability of illicit drugs influence the pattern. An emerging drug of abuse is tramadol which is an opioid-like substance available in hospitals and private practice in oral and injectable preparations as an analgesic drug. It is expected that after the imposed limitations on the centrally acting anticholinergic drugs, its abuse will be increased. The use of illicit (i.e. natural or synthetic drugs that has no clinical uses) drugs in our patients was rare only one patient abused opium in combination with methamphetamine, with no patient reporting abuse of cannabis. The small number may not reflect the actual abuse of these substances by

our patients as those do not expect to find these drugs in the psychiatric clinic. The urine screening test was found to be useful in detecting patients with drug abuse especially those with multiple drug abuse and those who deny the drug abuse. Because of negative consequences, many substance users engage in outright denials and marked minimization regarding their drug use.[28] In this study, 13.5% of patients denied the abuse of drugs. Reasons for this denial differ for one patient to another.[29] This might be to avoid embarrassment or they don't want to disclose the drug dealers. The majority of the patients (64%) have a moderate to substantial level of DAST score with only 8.5% had severe level. This is expected in our patients as most of them abuse pharmaceutical preparations. The DAST tended to have moderate to high levels of, reliabilities. The DAST also tended to have moderate to high levels of validity, sensitivity, and specificity. This test is easy to administer and have been used in a variety of populations.[30] Interpretation of the scores is most meaningful when considered in the context of the length of time the patient has been using drugs, the age, level of consumption, and other data collected during the assessment process.[31] The medical staff is considered as a risk group for drug abuse due to occupational exposure, stressful work, knowledge about drugs and easy access.[32] In the present study 12 (12.5%) from a total of 96 subjects used drugs for no obvious clinical indication. Of these subjects, ten were using benzodiazepines and only two using tramadol. Of the twelve positive, there were four medical staff working in the operating theater mainly in anesthesia. The anesthetists are considered at high risk for drug abuse.[33] Easy access to drugs, and stressful activities, excessive hours of work**.** In addition, anesthesiologists have almost free access to large quantities of highly addictive drugs, which makes it easier to divert particularly small quantities of these agents for personal use.[34] The exposure in the workplace sensitizes the reward pathways in the brain and promotes substance use. Sensitized neurons can be triggered by low doses of the drug which can be assumed to change the brain. Exposure could be either through aerosol particles in the air of surgical centers or through particles exhaled by patients.[33,34] More than 40% of medical staff with positive urine test were females. This is in contrast to the patients where females form only a minority this is probably due to hesitation of the female subjects to seek medical advice related to drug abuse in Basrah. The limitations in the present study are the small number of patients interviewed due to great difficulties in obtaining cooperative patients among drug abusers. The screening of urine by immunoassay requires further confirmation by additional method as high performance liquid chromatography. The result of the present study doesn't reflect the actual incidence or prevalence of drug abuse in the community, which is not known. It is concluded that patients are mainly male, young age, abusing pharmaceutical preparations with benzodiazepines, opiates preparations and centrally acting anticholinergics taking the lead. A considerable number of hospital staff abusing benzodiazepines and tramadol which is most common among the anesthesia and emergency staff. Immunoassay card test panel is a useful screening test for patients and in the community. We recommend epidemiological studies to detect the prevalence of drug abuse in the community. The application of urine drug screening test for drug of abuse as a requirement for employment and at regular interval afterword especially for risk groups as hospital workers, military and police personnel, and prisoners and for university students. Urine drug screening should also be implemented in hospital laboratories to help in the differential diagnosis of psychiatric patients or other emergency cases presented with abnormal behavior.

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