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The frequency and pattern of substance use in outpatients of general hospitals

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Abstract

Background: Patients with addictions have many acute and chronic medical illnesses, both related and unrelated to their addictions. In spite of high incidence of substance-related disabilities, substance abuse is usually underdiagnosed in general hospitals. The objective of the present study was to investigate the frequency and pattern of substance use in patients with different medical complaints.

Methods: In this descriptive cross-sectional study , 1000 outpatients, aged 17 and older with various medical complaints were participated. The patients were attending neurology, ENT, nephrology, ophthalmology, cardiology, orthopedic, gastroenterology, surgical and dermatology clinics of four selected general hospitals. A 93 item clinicians-made scale, Rapid Situation Assessment of Drug Abuse in Iran, was used in this survey, and 30 items which focused on drug use were selected.

Results: 8.7% of the patients reported lifelong or recent substance use and Opium was the most used substance, reported by 65.5% of the patients. Patients of neurology ,ophthalmology and orthopedic clinics showed the highest consumption . Smoking and injestion were the most frequent routes of substance used and the most reported pattern of use were 2 or 4 times a day and once a week.

Conclusions: The current cohort of substance users were relatively young, and many had reported detectable nervous system and orthopedic complications. Further research must investigate -their outcomes in the long term.

Keywords: substance use, general hospitals, outpatients, opium, pattern of substance use

Introduction

Substance abuse problems are a serious medical and public health issue responsible for increasing levels of morbidity and mortality as well as a considerable burden of disease in worldwide [1]. Drug addiction is a psychologic disease affecting many young adults. Although initial drug use might be voluntary, drugs of abuse have been shown to alter gene expression and brain circuitry, which in turn affect human behavior. Once addiction develops, these brain changes interfere with an individual's ability to make voluntary decisions, leading to compulsive drug craving, seeking and use [2]. The impact of addiction can be far reaching and patients with addictions have many acute and chronic medical illnesses, both related and un-

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related to their addictions [3,4]. Cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis and lung disease can all be affected by drug abuse [5] Addicts also tend to use more costly episodic care for medical needs such as the emergency department [5]. Diverse physical problems accompany and complicate substance abuse in a way that requires the physicians to be aware and well-informed.

The overall incidence rate of substance abuse problems presenting in primary care settings has been noted to be generally between 7% and 8% [1]. Research had demonstrated substance abuse rates as high as 11%-16% in low-income immigrant patient population [6]. In a cross-sectional study among alcohol, heroin or cocaine dependent persons without primary medical care admitted to an urban inpatient detoxification unit, 45% reported being diagnosed with a chronic illness and 80% had prior medical hospitalizations [2].

In spite of high incidence of substance-related disabilities, substance abuse is usually underdiagnosed in general hospitals and when substance abuse is not the principle problem, its role- often ignored [7]. The study of Reynold and his colleagues [8] shows that a general hospital can be a suitable place for primary diagnosis and initiation of intervention for substance use. They have reported a rate of 8% substance use among patients of a general hospital in London. Because regular medical care has been shown to have benefits, the need to improve linkage of addicted persons with primary medical care has become more urgent [9].

Adults with substance-abuse related medical conditions to receive regular primary medical care , integrated with their addiction care were more likely to be abstinent and less likely to be hospitalized [10]. Other theoretical benefits are more efficient use of health services, opportunity for preventive health interventions and better health [11]. There are a few reports on the prevalence of substance use in general hospitals of Iran and the majority of these studies have targeted a single disease or a single ward and the sample sizes were small.

The focus of the present study was to investigate the frequency and pattern of substance use in patients with different medical complaints. This article assessed the burden of medical illness and identified substance characteristics associated with poor physical health .

Method

This was a descriptive cross-sectional study on 1000 outpatients aged 17 and older with various medical complaints. The study was conducted over 9 months period. The patients were attending neurology, ENT, nephrology, ophthalmology, cardiology, orthopedic, gastroenterology, surgical and dermatology clinics of four selected general hospitals (Emam khomaini, Rasoul Akram, Milad and Shahid Rajai) within a nine month period. The sampling method was convenient and the sample size - calculated according to the estimated number of patients attending the above clinics in a week. Patients who agreed to participate and gave oral consent were included. Illiteracy, below 17 years old age, history of psychiatric disorders and physical and cognitive disability were exclusion criteria(all were obtained by an intake interview with patients by two trained students of clinical psychology). A clinicians-made scale, Rapid Situation Assessment of Drug Abuse in Iran, developed and validated by Razaghy et al and National Group of Research [12] was used in this survey. The 93 self-report items include general demographics plus a multiple item format for recent or lifetime substance (including tobacco) and alcohol use, the related problems and the route and pattern of use. The questionnaire was reviewed by two experienced psychiatrists, specialized in addiction field, and 30 items which focused on drug use with high consistency between raters, were selected. The data were gathered by two trained MS students of clinical psychology who attended the selected hospitals every two days a

Table 1. The frequency distribution of the type of substances used by addicts.

Type of substance	Frequency of use	% of use
Cannabis	10	11.49
Opium	57	65.51
Shireh	2	2.29
Heroin	3	3.44
Other substances	3	3.44
Multiple Substances including cannabis, opium, Heroin,etc	12	13.79
Total	87	100

week and completed the questionnaires over a 9 month period.

Statistical analysis carried out using SPSS 16 for windows and descriptive statistics was calculated for categorical variables.

Results

Of the total 537 (53.7%) were men and 463 (46.3%) women, who participated in the study. The age range of the patients was between 17 to 86 with the mean age of 42.17±18.29 years. 79 (91%) men and 8 (9%) women reported substance abuse. The frequency of substance use was highest in the age range of 30 to 45 years (32.18%).

Table 1 shows that 87 patients (8.7%) reported lifelong or recent substance use. Opium was the most reported substance abuse (57, 65.51%) followed by multiple substances (12, 13.79%)and cannabis (10,11.49%).

The frequency of type of substances in separate clinics showed the highest consumption of substances particularly opium in patients of neurology clinic (25.28%) followed by ophthalmology (22.98%) and orthopedic (14.94%) (Table 2).

Table 3 shows that smoking and ingestion were the most frequent route of substance use (42.52% & 27.58 respectively) in the studied addicts.

The most reported pattern of use were 2 or 4 times a day and once a week.(27% &27%) which are shown in Table 4.

Discussion

The present data indicated that people who abuse substances are seen each month in surveyed general hospitals. Inevitably, general practitioners in urban areas are being faced with increased numbers of patients having problems with a range of illicit drugs [13]. 8.7% of the participants of this study , mostly male, 30 to 45 years old and outpatients of neurology, ophthalmology and orthopedic clinics, reported substance use, particularly opium. Electroni-

Table 2. The frequency distribution of substances abused in separate clinic

Clinic	Cannabis	Shireh	Opium	Heroin	Other substances	Multiple substances	% of use
ENT	1		5		1	2	10.34
Nephrology			5				5.74
Neurology	3	1	12	1	1	4	25.28
Ophthalmology	2		15		1	2	22.98
Cardiology	2		3	1			6.89
GI			2			2	4.59

Table 3. Routes of substance abuse in clinics

Route	Frequency of use	% of use
Smoking	37	42.52
Ingestion	24	27.58
Injection	2	2.29
Sniff	1	1.14
Inhaling	15	17.24
different routes	8	9.19
Total	87	100

Table 4. Periodic pattern of substance use in clinics

Pattern	Frequency of use	% of use
4 times or more in a day	9	10.34
2 or 3 times a day	27	31.03
Once a day	14	16.09
2-6 time a week	6	6.89
Once a week	27	31.03
Once a month	4	4.59
Total	87	100

cally we searched for the relevant references on the topic. In the most comprehensive and similar study [8], the authors reported 12% substance use in medical patients which is higher than our figure. The findings of a cross-sectional study on heroin and cocaine abusers [2] showed that, 45% of the abusers suffered from chronic medical conditions. In another study on prevalence of common medical problems in alcohol and substance-dependent patients [14], the authors found the presence of the majority of studied medical conditions in substance abusers. In Iran, two studies on chronic renal failure and cardiovascular patients[15,16] and a study on patients who were undergoing coronary artery bypass graft and valve surgery [17] show 41% ,38% and 54% substance use (14.1 % , 9% and 12% opium use) respectively. In another study in Iran which focused on opium use in hospitalized patients of 12 wards [18], the authors reported 11.7% lifetime opiate use, mostly in neurosurgery and orthopedic wards. The present study showed a total of 2% lifetime substance use in nephrology and cardiovascular outpatients , which was significantly lower than the above-mentioned studies. Differences in settings (inpatient versus outpatient), - abuse dichotomy and sample size may accounted for these inconsistent findings.

The findings of this study showed the highest percent of substance use, mostly opium was mainly found in patients of neurology clinics, followed by ophthalmology and orthopedics.

There is growing evidence that chronic exposure to toxic substances can cause subtle neuropsychological deficits that may precede to neurological deficits. Opium affects all body organs and may cause diverse physical or mental disorders and CNS, digestive and cardiovascular systems are most affected [19]. Cognitive impairment may reflect brain damage among opium misusers and haemorrhagic stroke and small scattered lesions have been found in the brains of opiate-dependent patients. [20,21]. Opiates are pain relievers that act on central nervous system, but if used over a long period of time, they turn into habit-forming substances. Opiates are also used to relieve pain in a growing number of conditions, including chronic LBP and the use of opiates in the long-term management of chronic low-back pain (LBP) appears to be increasing. Despite this trend, the benefits and risks of these medications remain unclear. The trials that do exist suggested that a weak opiate could reduce pain but has minimal effect on organ function [22]. Also, patients who use opiates may be at higher risk for BMD (bone mineral density) due to several reasons. First, direct opiate effected -bone metabolism may occur through inhibition of osteoblast function-, the cells responsible for new bone formation. Moreover , hypogo-

nadism, a potential side effect of opiates is an important secondary cause of osteoporosis [23, 24]. Researchers also found that pain-related diagnosis, including arthritis, headache and lower back pain were more prevalent among substance abuse patients, particularly those dependent on narcotic analgesics [14]. Finding in pain-related diagnosis among patients dependent on narcotic analgesics, may explain the higher incidence of opium use in our neurology and orthopedic patients. It seemed that there were two sides to the opiates coin. On one side, recreational use poses clear individual and community risks. And on the other -, opiates have a therapeutic potential in pain, palliative care and spastic disorders.

The routes and pattern of substance use were also investigated in the present study. Smoking and eating were the most reported routes of substance use. Opium smoking among Asians has often been stereotyped as a benign folk nostrum or a culturally accepted habit isolated to the elderly [25]. Some studies suggest the destructive effects of opium are related to the route of administration [26]. Different outcomes have been mentioned for various routes of opium administration. For example, it has been reported that orally administered addictive substances such as cannabinoids have a slower onset of action, but are more addictive when smoked., due to the rapid delivery to the brain. Hence the onset of action is more rapid after smoking , however the duration of action is longer after oral ingestion [27]. Smoking as the most frequent route of substance use in our study accompanied with a pattern of 2 to 3 times daily use of opium, strongly suggested substance (opium) abuse in a proportion of our surveyed population. These results warrant rapid screening for substance abuse in medical patients and highlight the need for linkages between primary care and substance abuse treatment.

Limitations

These results should be interpreted recognizing several limitations. We used a single self-report questionnaire for collecting our data. Patient self-report of substance abuse has been the means used by many institutions to screen for substance abuse; however, the reliability and validity of self-reports are questionable A body of evidence suggests that screening questionnaires alone may not be adequate in identifying substance-abusing patients as a result of discrepancies in patient self-report and drug use underreporting. Studies using a biological criterion of validity, including urine toxicology and hair analysis are needed [28]. The unequal number of patients recruited from each clinic was another limitation of this study which may accounted for underestimation of cardiovascular and nephrology patients who abused substances. The cross-sectional nature of the study also prevents making any cause and effect relationship between substance use and certain physical illnesses.

Conclusion

The current heavy users of these study were relatively young (30-45 years old), and many had reported detectable nervous system and orthopedic complications. Further research must investigate their outcomes in the long term.

The problems presented by substance misuse are of a multidisciplinary nature and general practitioners need to know that they can draw upon the expertise of a variety of professionals when needed.

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Statement of Interest

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