Substance use disorders among treatment naïve first-episode psychosis patients

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Abstract

Objectives: To examine the prevalence of substance use among treatment naïve patients with first episode psychosis presenting to a psychiatry outpatient clinic in India.

Methods: The study sample consisted of 139 first episode treatment naïve patients with psychosis from in and around Bangalore, a city in South India. Self as well as informant-reported data on type, use and duration of substance use as well as the severity of psychotic symptoms were collected using structured instruments. Urine toxicology screen was also conducted for six common drugs of abuse. Breath alcohol analysis was performed in all patients.

Results: Acute and transient psychosis was the most common diagnosis (42.4%). Overall, 20% of the population reported current substance use disorder (excluding nicotine). Current alcohol dependence was diagnosed among 17.3%, whereas cannabis dependence in 3.6%. Life time as well as current use of cannabis was less than 6%. While one patient reported inhalant abuse none reported use of amphetamine or opioids. There was very high concordance between reported drug use and urine toxicology screen.

Conclusion: The use of illicit drugs is substantially less among first episode drug naïve patients with psychosis in an Indian urban clinical setting compared to rates reported from developed countries like North America, Canada and UK.

1. Introduction

Substance use among patients with psychotic disorders is reportedly higher than in the general population. Studies done in North America, Canada and UK have reported substance misuse in 20–50% first episode psychotic disorders [1–5]. Cannabis, LSD, alcohol, amphetamine, cocaine etc. can induce psychotic symptoms. Cannabis and alcohol misuse have been found to be consistently higher among patients with first episode psychosis. High prevalence of smoking has also been reported [5]. In view of such a common association between substance use and psychosis, it is recommended that all first episode psychosis patients undergo thorough medical as well as neurological investigations and urine toxicological testing for drugs of abuse [6]. Standard guideline and text books recommend routine medical history of substance use along with urine toxicology screen as a part of initial assessment [7–9].

The outcome of schizophrenia is reported to be better in developing country like India. Such a relatively better prognosis is attributed to a host of socio-cultural factors like lower expressed emotions, good social support as well as low prevalence of comorbid substance use disorder [10–12]. Whether this holds true for psychosis in general or not, is a matter of debate.

There is a marked variation in the use of substances across different parts of India. A large scale epidemiological study had reported alcohol as the most common substance of use followed by cannabis (3%) and opioids (0.7%). This study also reported about one third of alcohol users fulfilled the ICD 10 criteria for dependence [13]. A study specific to this area i.e. Karnataka has reported higher prevalence of alcohol use i.e. among men was 23% in rural areas and 41% in urban areas [14]. Thirty five percent of adults in India use some form of tobacco. Among them 21% adults use only smokeless tobacco, 9% only smoke and 5% smoke as well as use smokeless tobacco. Smokeless tobacco use is more common than smoking both in male and females [15]. In

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recent time, there is an increase in abuse of pharmaceuticals i.e. opioids, benzodiazepine in India as well as Southeast Asia [16]. Although India is reported to be one of the major exporters of amphetamine type stimulants (ATS), the reported use in the general population as well as clinical settings is very low.

Presently, there are no data available on the prevalence of substance use among patients with first episode psychosis in clinical settings in India. Hence the current study was planned to look at prevalence of substance use among first episode, treatment naïve patients presenting with psychosis. To strengthen the study finding as well as to find the utility, we have included urine toxicological screen [17] for substance along with the routine assessment.

2. Methods

The study was conducted over a six month period (January 2010 to June 2010) at an outpatient clinic of a neuropsychiatry hospital in South India after taking approval from institute ethics committee.

We followed a two-stage diagnosis method. In the first stage, a psychiatrist examined the patient and made a clinical diagnosis of a psychotic disorder as per the International Classification of Diseases, 10th revision. After obtaining written informed consent, a trained researcher then applied the Mini International Neuropsychiatric Interview (MINI) [18] and re-confirmed the diagnosis. All subjects who fulfilled the criteria for acute psychosis (F23.xx), schizophrenia (F20.xx), schizoaffective disorder (F25.xx), other specified psychoses (F28), unspecified non-organic psychosis (F29) and affective psychosis according to ICD-10 DCR criteria and who had not received any prior psychiatric treatment were included for further evaluation. Patients diagnosed as having a psychosis due to substance withdrawal or intoxication were excluded from the study. Patients having substance induced psychosis were included in the study.

One hundred forty-five eligible drug naïve first episode psychosis patients were screened. Six were excluded i.e. two of them were in catatonia and the other four patients were uncooperative, and consent could not be obtained. There were no patients in the sample with a diagnosis of psychosis due to substance withdrawal or intoxication. The remaining 139 patients were interviewed regarding the use of any substance during their life time. In each case, the history was corroborated by an accompanying family member. Parents, spouse or children had accompanied 70% of the patients and all the remaining were either accompanied by close relatives or friends. To facilitate proper reporting, the locally available names of the substances were used. Further details regarding substance use for the last 12 months were collected by applying the substance use section of MINI [18]. This section is in two parts and allows the diagnosis of alcohol abuse or dependence and non-alcohol substance abuse or dependence. The non-alcohol section deals with stimulants, cocaine, narcotics, hallucinogens, phencyclidine, inhalants, cannabis, tranquilizers and miscellaneous. The MINI questions are based on ICD 10 criteria for dependence. The severity of smoking was measured by Fagerstrom Test for nicotine dependence (FTND) [19]. Breath analyzer (Alco-Sensor IV, Intoximeter, Inc., St Louis, Missouri) was used in all patients to detect recent ingestion of alcohol. The severity of psychosis was assessed on the Positive and Negative Symptom scale (PANSS) [20].

Drugs of abuse can be detected in saliva, urine, sweat, nail, semen and hair depending on time and duration of use. Hair can be positive for drugs from a few months to years depending on length of the hair [21]. The disadvantages of hair analysis to validate drug use include irregular growth, labor-intensive sample preparation, chemical dying/bleaching and excessive cost [22,23]. Urine testing for the various drugs of abuse has been standardized, easy to perform and highly sensitive and specific [23].

For the current study, urine testing was carried out by immunoassay based cassette method for six common substances, namely cannabis, benzodiazepine, morphine, amphetamine, barbiturates and cocaine. Immunoassay drug testing is based on the principle of competitive binding and uses antibodies to detect the presence of a particular drug or metabolite in a urine sample. It helps in detecting the drug as either present or absent depending on a predetermined cut off score. The cut off score for the sample to be positive for the drug under study was for cannabis 50 ng/ml, benzodiazepine 300 ng/ml, morphine (opiate metabolite) 2000 ng/ml, amphetamine 1000 ng/ml, barbiturate 200 ng/ml and cocaine 300 ng/ml [24]. Detailed history of any recent intake of medication was obtained to check for cross reactivity resulting in a false positive result in immunoassay method [23]. High performance thin layer chromatography (HPTLC) was performed in 20% of the random urine samples to minimize false positivity.

3. Results

There were 54% males and the mean age of the patients was 35.09 (SD 13.6) years. The mean duration of symptoms before presentation to the clinic was 72.95 (SD 56.9) days. None of the patients were on any treatment at the time of evaluation. One patient was 20 weeks pregnant.

3.1. Psychiatric diagnosis

The breakdown of the psychiatric disorder subtype is provided in Table 1. Acute and transient psychosis was the most common diagnosis (n = 59; 42.4%) followed by unspecified non-organic psychosis (n = 35; 25.2%) There were six patients who received a provisional diagnosis of substance induced psychosis. The mean scores on Positive, Negative and General psychopathology were 20.00 (SD 5.12), 17.59 (SD7.27) and 27.52 (SD6.63) respectively. The