



Socio demographic profile and pattern of opioid use in patients with opioid use disorders attending the de-addiction center of a tertiary care hospital in north India

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Abstract

Background and objectives: Opioids are the major drugs of potential harm and health consequences with more and more people getting involved in it, especially from rural areas. One of the concerns with opioids is the injecting route used for their administration. The objective of our study was to assess the socio-demographic profile and pattern of opioid use in patients with opioid use disorders.

METHODS: This was a cross-sectional descriptive study conducted among the opioid use disorder patients ≥ 10 years of age, diagnosed as per DSM-5, who visited the drug de-addiction center for treatment. A semi-structured proforma was used to record socio-demographic profile. Opioid use disorder and psychiatric co-morbidity were diagnosed as per DSM-5 after a thorough clinical assessment.

Results: A total of 74 patients were included in our study. Mean age of our patients was 27.55 years (SD 7.26) with majority of patients (83.78%) between 20 and 40 years of age. Most of the patients were males (97.5%), from

nuclear families (75.68%) and from rural background (62.16%). Majority of patients (48.65%) had started using opioids in 20-29 year age group with heroin as the most common opioid used in 62.16%. Majority of our patients (43.24%) were using intravenous route. Psychiatric co-morbidity was present in 41.88% with ADHD (24.32%) as most common

Conclusion: Rural areas and students are increasingly involved in opioid use disorders. Heroin use has increased significantly when compared with previous study particularly via intravenous route.

Keywords: Opioid, Heroin, Rural, ADHD

Introduction

Although the illicit use of opiates and prescription opioids, with an estimated 33 million illicit users, is not as widespread as the illicit use of cannabis worldwide but the opioids are the major drugs of potential harm and health consequences.[1] One of the concerns with opioids is the injecting route used for their administration. People, who use this route for drugs, face a large number of health

related problems associated with unsafe use of drugs including a higher chance of drug overdose and a greater risk of premature death.[2] The overall poor health outcome in them is further worsen by poor access to services for the prevention and treatment of infectious diseases, particularly HIV, hepatitis B, hepatitis C and tuberculosis.[3] In India also, a fairly large problem of opioid use exists. The estimation on prevalence of drug abuse in India through a national household survey has shown the prevalence of ever opium use as 0.6% and that during last 30 days as 0.4% with prevalence of heroin use in both , ever use and last 30 days, as 0.2%.[4] Although the prevalence of people injecting illicit drugs in India is low relative to west with an estimate between 0.18 and 1.1 million and a slowly declining trend of illicit use of opium and heroin worldwide, but the injecting route of heroin and synthetic opioid analgesics in India has shown a rapid growth in past two decades.[5-7] this rapid growth in population of injection drug users poses new challenges in management and care of these patients.[8] The characteristic injection drug user in India is typically a male, between 15 and 35 years of age, illiterate, and unemployed.[9] Opioid dependence has become one of the most prevalent psychiatric illnesses during recent years but there is scarcity of literature which has looked into the profiles of opioid-dependent patients in this part of the world.[10] In Kashmir, hospital prevalence of use of opiate based preparations increased from 9.5% in 1980 to 73% in 2002 and has worsen now.[11] The geographical location of Jammu and Kashmir makes easy transit of drugs possible across the state. The prevailing socio-political upheaval in Kashmir has worsened the drug abuse scenario.[12] The objective of present study was to assess the socio-demographic profile and pattern of opioid use in patients with opioid use disorders attending the de-addiction center of department of psychiatry,

Government Medical college, Srinagar, a tertiary care hospital.

Methods

This was an hospital based cross-sectional descriptive study conducted among the opioid use disorder patients who visited the drug de-addiction center of Department of Psychiatry, Government Medical College, Srinagar from March 2018 to June 2018. All the patients with a diagnosis of opioid use disorder made as per the Diagnostic and statistical manual of mental disorders-5 (DSM-5) diagnostic guidelines and treated on both in- and out-patient basis were considered.[13]The study was approved by the institute's Ethical Committee. Written informed consent was taken from the patients when >18 years old and from the parents when \leq 18 years old. Patients who fulfilled the criteria for opioid use disorder as per the DSM-5 and who were willing to participate in the study were taken. Those patients who were currently fulfilling criteria for other substance use disorders (except tobacco use disorder) and who refused to give consent were excluded from the study. A thorough clinical assessment was done to diagnose opioid use disorder at first encounter with the patient and a second assessment for psychiatric co-morbidity was also done in the study population using DSM-5 diagnostic guidelines after detoxification. Both diagnosis, opioid use disorder and psychiatric disorder (if present) were confirmed by consultant psychiatrist. A semi-structured proforma was used to assess the socio-demographic status and pattern of opioid use among the patients included in the study. The semi-structured proforma for socio-demographic variables covered details regarding age group, sex, residence, family type, education, occupation and path of referral. The proforma for pattern of opioid use in patients covered the details regarding prior course of drug use, age of initiating opioid use, route of opioid use and type of opioid used.

The data about various parameters was entered into Microsoft Excel. Descriptive analysis was carried out with Statistical Package for the Social Sciences version-21 software. The information thus generated was presented in tables as frequencies and percentages.

Results

Over a period of four months (March 2018 to June 2018), a total of 74 patients with opioid use disorder were included in the study. Mean age of our patients was 27.55 years (SD 7.26) with majority of patients (83.78%) between 20 and 40 years of age. Most of the patients were males (97.5%) and from nuclear families (75.68%). 62.16% of patients were from rural background. In occupation, most of patients were either businessmen (37.84%) or students (29.73%). Most of the patients were accompanied by their family members (33.78%) or referred by friends (31.08%) whereas 32.43% of patients reported on their own. **(Table I)**

Over three quarter (89.19%) of patients had started substances of abuse (prior to opioids) in the age group of 10 to 19 years. substances of abuse (prior to opioids) used were tobacco in 97.30%, cannabis in 45.96%, Alcohol in 40.54%, solvents in 18.92% and benzodiazepines in 10.81%. About one half (48.65%) of patients started using opioids in 20-29 year age group and about one third (32.43%) in 10-19 year age group. Heroin was the most common opioid used in 62.16% of patients followed by Tramadol (13.51%), Propoxyphene (5.41%) and Codeine (2.7%). Combination with (8.11%) and without (8.11%) heroin was used by 16.22%. Majority of our patients (43.24%) were using intravenous route either alone (18.92%) or in combination (24.32%). Inhalational route alone was used by 32.43% and oral route alone by 27.03%. About one third of patients (32.43%) had experienced overdose of opioids. **(Table II)**

Psychiatric co-morbidity was present in 41.88% with Attention deficit hyperactivity disorder (ADHD) in 24.32%, Major depressive disorder (MDD) in 10.81%, Panic Disorder in 04.05%, Obsessive compulsive disorder (OCD) in 1.35% and personality disorders in 1.35%.

(Table III)

Table I – Socio-demographic profile

Age in years	Number of patients (%)
10-19	08(10.81%)
20-29	40(54.05%)
30-39	22(29.73%)
40-49	04(05.41%)
Sex of patient	Number of patients (%)
Male	72(97.30%)
Female	02(02.70%)
Family Type	Number of patients (%)
Nuclear	56(75.68%)
Joint	18(24.32%)
Residence	Number of patients (%)
Rural	46(62.16%)
Urban	28(37.84%)
occupation	Number of patients (%)
Unemployed	10(13.51%)
Student	22(29.73%)
Employee	04(05.41%)
Business	28(37.84%)
Farmer	02(02.70%)
Skilled worker	08(10.81%)
Source of referral	Number of patients (%)
Family	25(33.78%)

Friend	23(31.08%)
Self	24(32.43%)
Other	02(02.70%)

Table II-Pattern of opioid use

Age(in years) of initiation any prior drug	Number of patients (%)
10-19	66(89.19%)
20-29	6(08.11%)
Prior drugs	Number of patients (%)
Tobacco	72(97.30%)
Cannabis	34(45.96%)
Alcohol	30(40.54%)
Benzodiazepines	8(10.81%)
Solvents	14(18.92%)
Age(in years) of initiation opioid drug	Number of patients (%)
10-19	24(32.43%)
20-29	36(48.65%)
30-39	10(13.51%)
40-49	04(05.41%)
History of overdose	Number of patients (%)
Present	24(32.43%)
Absent	50(67.57%)
Type of opioid used	Number of patients (%)
Heroin	46(62.16%)
Tramadol	10(13.51%)
Propoxyphene	04(05.41%)
Codeine	02(02.70%)
Combination with heroin	06(08.11%)
Combination without	06(08.11%)

Route of opioid use	Number of patients (%)
heroin	
oral	20(27.03%)
Inhalation	24(32.43%)
Intravenous	14(18.92%)
Combination	18(24.32%)

Table III- Psychiatry co-morbidity

Psychiatric disorder	Number of patients (%)
ADHD	18(24.32%)
MDD	08(10.81%)
OCD	01(01.35%)
Panic Disorder	03(04.05%)
Personality disorders	01(01.35%)

ADHD- Attention deficit hyperactivity disorder, MDD- Major depressive disorder, OCD- Obsessive compulsive disorder

Discussion

In our study, the average age of patients was 27.55 years (7.26) with 54% of patients in 20-29 years age group and 30% of patients in 30-39 years age group. Only 16% of patients were less than 20 years old or greater than 40 years old. It has been found that opioid use disorders have higher prevalence in young adulthood (22-28 years).[14] A study by Samina et al from the same center also found most of their patients in 20-40 year age group.[15] With regard to age, similar findings have been shown by previous studies from India.[12,16,17] 97.3% of our subjects were males whereas 2.7% were females. This is consistent with other studies which have males predominantly visiting the de-addiction centers in India.[15,18,19] About 76% of our subjects were belonging to nuclear families and 24% to joint families. The previous studies on substance use disorders from our state have also found predominance of nuclear families

but a study on opioid use by Mohanty et al found equal distribution of joint and nuclear families in their de-addiction center.[18-20] 62% of our subjects were from rural background and 38% from urban background. The previous studies from our state as well as from outside have either found urban predominance or a slight rural predominance.[18-21] Whether the opioid use has increased in rural areas or more patients have turned for de-addiction from rural areas can't be comprehended in absence of prevalence studies from our state. Although it is traditionally accepted that the illicit use of drugs is a problem with urban areas but an increase in substance use disorders in rural areas in past decade has been recognized globally, both in developing and industrialized countries.[22] About 38% of our subjects were businessmen, 30% were students, 13.5% were unemployed, 11% were skilled workers predominantly drivers, 5% were employed and 3% were farmers. Our results are in contradiction to the previous study from our de-addiction center and in which 64% of subjects were in employment and 36% were unemployed and from a study from Ranchi in which 50% of subjects were employed, 28% were unemployed and 2% were students.[15,19] Regarding the referrals, 34% were brought by family members, 31% were referred by friends and 32% reported by themselves. A study on substance abusers by Yasir et al in our center showed about 68% of visitors were referred by family and friends.[18] In our patients, most of them had been abusing some other drug before starting opioids. About 89% of our patients had started a drug prior to opioids when they were below 20 years and about 8% had started between 20 and 30 years of age. Only 2 patients had used opioid as their first drug. Prior to opioids, tobacco use was present in 97% of our patients, Cannabis in 46%, Alcohol in 40%, Solvents in 19% and Benzodiazepines in 11% of our subjects. About 32% of our patients started opioids in 10-19 year age group and

about 49% in 20-29 year age group. About 14% and 5% started opioids in 30-39 year and 40-49 year age groups respectively. Mohanty et al in their study found that the age of initiation was 10-19 years 32% of patients and 20-29 years in about 50% of patients.[19] A study from west on patients receiving methadone replacement therapy also found results consistent with our study on age of initiation of opioids.[23] Heroin was the most often used drug in 62% of our patients followed by Tramadol, Propoxyphene and Codeine in 13.5%, 5.4% and 2.7% respectively. Combination with and without heroin was present in about 16% of patients. Our results are in contradiction with the study of Samina et al who found only 13% of patients with heroin and combination of many drugs in 53% of patients.[15] Mohanty et al also found different results with 33.8% of patients using heroin and 47.6% using combination of drugs.[19] Majority of our patients were intravenous drug users with 43.24% using this route, either only intravenous (18.92%) or combination of intravenous route with oral, and/or inhalation route (24.32%). 32.43% of our patients used only Inhalational route whereas 27.03% of our patients used only oral route. The major route of drug administration in previous study by Samina et al from our center was oral.[15] They justified it because in their study the diverted pharmaceutical products were used by their patients which are mainly available in oral preparations.[15] In our patients, 32.43% of patients reported experiencing of drug overdose in the form of slow difficult breathing and extreme drowsiness. Mohanty et al in their study found similar results with overdose history in 27.5% of their subjects.[19] Psychiatric co-morbidity was present in 42% of our study subjects. Other Indian studies have found an higher co-morbidity of psychiatric disorders in opioid use disorders.[19,24] Varying but higher rate of psychiatric co-morbidity has been found in studies outside India as

well.[25,26] Most of these studies found personality disorders as co-morbid to a varying extent. In our study, ADHD was the most frequent disorder present as co-morbidity in 24.32% followed by MDD in 10.81%, OCD in 1.35%, Panic Disorder in 4.05% and personality disorder in 1.35%. A recent retrospective chart-based review of 11 years by Basu et al. in addiction patients reported that mood disorders were the most common co-morbid disorders with personality disorders reported less frequently.[27] A prospective study on association of childhood ADHD and substance use disorders showed that ADHD children are more likely to have ever used nicotine and other illicit substances other than alcohol and are also more likely to develop substance use disorders.[28] Furthermore, in a recent survey on 1057 heroin dependent patients who were on opioid substitution treatment, 19.4% of the patients screened positive for concurrent adult ADHD symptoms.[29]

To conclude our study, opioid use disorders have shown a significant rising trend as compared to previous study from the same center in the form of more patients representing the rural population as compared to urban population, involvement of students in opioid dependence as compared to more employed people, increase in use of heroin as compared to pharmaceutical agents and increase in use of intravenous route as compared to oral.

Despite the limitation of being a cross sectional hospital based study and not representative of community, this study provides us glimpse of opioid dependence in Kashmir. Increasing use of heroin and intravenous route suggests us a trend in opioid dependence which was seen in west. Although department of psychiatry has started this only hospital based de-addiction center of Kashmir valley, from where this study was conducted, but it is very unfortunate that to tackle the problem of substance use disorders in general and opioid use disorders in particular in this center, there is poor infrastructure and

lack of specialized staff. Both the government and policy makers should make efforts to improve this center at an earliest to combat the increasing drug menace in our valley.

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