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Pattern of Drugs Misuse among Patients attending Iftikhar Psychiatric Hospital, Peshawar

Ghaazaan Khan¹, Mian Mukhtiar ul Haq², Aimal khan³, S. M. Naeem⁴, Mian Iftikhar Hussain¹, Shafiullah³

ABSTRACT

Background: Drug addiction is a very common issue in Khyber Pakhtunkhwa due to easy availability of drugs on account of sharing border with Afghanistan, illiteracy and lack of implementation of laws to deal with drug trafficking. There is need to study the pattern of misuse of illicit drugs in this region.

Objectives: To determine the pattern of drugs misuse among patients attending Iftikhar Psychiatric Hospital, Peshawar

Material and Methods: It was a descriptive study, carried out on 135 persons, with history of drugs misuse, who were presented to Iftikhar Psychiatric Hospital, Peshawar, from January 2019 to December 2019. Urine samples of every subject were screened for various drugs using immune chromatography technique.

Results: The most frequently misused drug in the study was Opiate (84%) followed by Marijuana(76%), Benzodiazepines(43%), Methamphetamines(8%), Tricyclic antidepressants(4%) and cocaine(0.74%). Out of the total 135 patients, 133(98.5%) were males while 2(1.5%) were females. Poly substance misuse was more predominant in the study.

Conclusion: Drug addiction is a very serious public health issue globally including Pakistan. Male addiction predominance and opiates overuse is observed high in the present study. There is need to take all necessary steps to curb the curse of drug abuse.

Key Words: Pattern, Drugs misuse, Immune chromatography

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INTRODUCTION

Humans have been using drug in some form since prehistoric era. Wine was under use from the time of early Egyptians; narcotics had been used as drugs since 4000B.C; and marijuana was used for medicinal purpose in ancient China¹.

Drug misuse is the continuous consumption of a substance despite evidence of damage to the user's physical or mental health². Addiction is the compulsive use of psychoactive drugs at the cost of ignoring socially important activities³. According to the United Nations Office on Drugs and Crime June 2018 world drug report, the non-medical use of drugs has been a serious hazard to community health⁴. Drugs misuse is a social disorder producing many physical and psychosocial problems with enormous health care costs⁵.

Dependence is repeated intake of a drug owing to development of a strong desire to do so, ignoring alternative sources of satisfaction due to involvement in substance taking activities, developing tolerance to the specific drug and getting withdrawal symptoms while suddenly

stopping it. Tolerance is the condition in which a drug dependent patient tends to use higher doses of drug to get the same effects which it used previously to get with smaller doses of the same substance⁶. Substances commonly misused are alcohol, psycho stimulants, tobacco, cannabis, opioids, inhalants, hallucinogens and physician prescribed sedatives⁷.

The peak age of onset of substance misuse is adolescence. Risk factors include easy availability of illicit drugs, male gender, poor social status, family history of drug misuse, peer pressure, parental conflicts/separation, poor parenting styles, history of childhood abuse/neglect, positive cultural norms about illicit substances, illiteracy etc⁸. In Pakistan, almost 5.8% of adult population is misusing drugs, mostly cannabis followed by opiates. About 0.4 % of our population injecting drugs^{1,9}.

Being a part of the Golden Crescent and subject of the 21st millennium Great Game, Pakistan is not only involved in the curse of illicit substance trafficking, specially cannabis and diacetyl morphine (heroin), but also a victim of the same menace^{10,11}

In Khyber Pakhtunkhwa, we see diverse responses related to medical treatment of drug abuse. Many people don't bother about substances like tobacco, some may conceal it for its illegality or social disapproval¹², while a few are

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subjected to treatment on their own or by their families. The pattern of drug abuse observed in patients seeking treatment is somewhat different from the pattern of drug abuse found in general population and needs consideration.

The drugs of abuse can be detected in samples of urine, blood, saliva etc by various simple, rapid and economical screening methods like thin layer immune chromatography. High performance chromatography and mass spectrometry may be used to confirm the results. Urine is the sample of choice for its easy collectivity and higher content of drugs¹³.

The present study was carried out to explore the pattern of drug misuse in patients attending psychiatric facilities for treatment purposes.

MATERIAL AND METHODS

It is a descriptive cross sectional study which was conducted on 135 persons at Iftikhar Psychiatric Hospital, Peshawar, a private institution with in- and out- patient facilities, well equipped laboratory as well as detoxification center. The study duration was from 1st January 2019 to 31st December 2019. Patients who attended the out-patient department with history of drug abuse for the purpose of treatment to get rid of the drug taking habit or its co-morbidity, were included in the study. They and their nearest relatives/attendants were briefed about the study to take their consent.

The urine samples of the subject patients were analyzed in the hospital laboratory by immune-chromatography for nine drugs, namely marijuana (THC), cocaine, methamphetamine, benzodiazepines, tricyclic antidepressants, barbiturates, phencyclidine, morphine and methadone. After collecting urine in a dry, clean container, 03 drops of urine were added to the test device. Result was observed in the form of colored lines, after five minutes. A colored line in the

control line region(C) and a colored line in the test line region (T) for a particular drug exhibited negative result. A colored line in the control line region (C) but no line in the test line region (T) for a certain drug indicated positive result.

Test principle is based on competitive binding. Drug present in the test sample compete against the drug conjugate for binding site on the antibody. The test sample migrates through capillary action on the test device. Sample with sufficient concentration of the analyte saturates antidrug antibodies and produce no colour line in the test region, while drug negative specimen or containing lower concentration of analyte than the cut-off, generates no colour line in the test region. Amazon EZ 12 panel multi drug test kit was used for drug testing.

Quantitative variables like age were presented as mean and standard deviation (SD). Qualitative variables like gender, positive results for each drug and number of drugs of misuse were presented in the form of frequencies and percentages. All collected data was entered and analyzed using Software SPSS (Version 20).

RESULTS

Out of total 135 patients,133(98.5%) were males while 2(1.5%) were females. The two females in our study were addicted to an opioid drug, tramadol. Age ranged from 16-60 years and the mean age of the sample was 31.69(SD 11.48). Misused drug included opiate (84%), Marijuana (76%), Benzodiazepines (43%), Methamphetamines (8%), Tricyclic antidepressants (4%) and cocaine (1%); Barbiturates and Phencyclidine were not detected in any patient in our study. Out of total 135 patients, 121(89.62%) were using two or more drugs while 14(10.38%) were addicted to single drug.

Table 1. Age wise distribution of the subjects

Age ranges(years)	No. of patients (frequency)	%ages
16-24	42	31%
25-39	64	47%
40-60	29	22%
Total	135	100%

Table 2. Drug wise frequency distribution.

Drugs of misuse	No. of patients(frequency)	%ages
Opiates	114	84%
.Marijuana	103	76%
Benzodiazepines	58	43%
Methamphetamines	11	8%
Tricyclic antidepressants	6	4%
.Cocaine	1	0.74%

Table 3. Frequency of patients misusing single/multiple drugs

Single/poly drug users	No. of patients (Frequency)	%ages
Single Drug users	14	10.38%
Poly Drug users	121	89.62%
Total Drug users	135	100%

DISCUSSION

Drug addiction is a global issue¹⁴. Illicit drug use accounts for heavy economic loss, disability and mortality globally¹⁵. Suicide is a major cause of death in youth, its risk being 3-9 times higher in drug addicts¹⁶. Substance abuse not only increases the risk of developing various mental disorders but also upturns their severity and chronicity, sometimes termed 'dual diagnosis'¹⁷. Drug overdose, especially prescription opioids, is one of the alarming and leading cause of deaths in US and has attained the form of an epidemic¹⁸. Illicit drug use is also associated with various crimes and unlawful behaviors like robbery, theft, rape, violence, kidnapping and even murder. Illicit drugs produce their addictive effects on CNS, firstly by excitation of mesolimbic area, also called reward pathway, producing pleasurable feelings and secondly by inhibition of brain regions responsible for perception of pain sensations¹⁹.

Out of the total 135 patients, 133(98.5%) were males while 2(1.5%) were females. These findings are comparable to the findings of another local study by Farhan et al wherein drug misuse is more common in males than females²⁰. Another study conducted by Oche Joseph Otorokpa in Nigeria, a developing country, also reported increased drug misuse in men as compared women²¹.

Less number of females in our study reflects actual paucity of female drug abusers in our general population, probably related to our cultural values, subordinate socio-economic status of woman in our setup and their limited access to illicit drugs in general. However, a local study conducted in KP educational institutions

revealed that about every 4th substance abuser was a female. Most of the subject students were boarders²². This could be due to lack of family constraints and poor institutional controls in these environments, giving even females the chances of drug abuse. More comprehensive studies are needed to confirm or refute such a claim of high female drug abuse in KP educational institutions.

The mean age of subjects in our study was 31.69 ranging from 16 to 60 years with the highest frequency of drug addicts seen in the age range of 25-39 years which is comparable to the findings in UNODC report in Pakistan (2013)²³. These findings are also comparable to the studies of Farhan et.al and Datta et.al. in which the mean age of participants were 30 and 27 respectively^{20,24}.

Excluding tobacco, whether used in smoked (cigarette) or smokeless (Naswar) forms, cannabis is the most common substance of abuse even in developed countries like US²⁵. In Khyber Pakhtunkhwa, Pakistan also, cannabis is the most common substance of abuse followed by opiates, particularly heroin²⁶. The most common drug of abuse detected in our study belonged to opiate group (heroin/opium). Two female patients in our study were addicted to tramadol which also belongs to opiate group. Although tramadol has minor abuse potential, there have been similar reports in other international studies²⁷.

Even with high incidence of cannabis use in the population, our study reveals lesser number of such patients attending our psychiatric facility for treatment purposes as compared to opiate addicts. This is likely due to more severe adverse effects related to opiates in comparison to

cannabis with more social pressure on opiate users for treatment. Such perception is also evident at international level where opiate addiction is considered as epidemic while state policies are changing towards cannabis wherein the population of its users is not only rapidly increasing²⁸, its sale and use are becoming legalized even for recreational use in some US states and Canada²⁹. Such lenient attitude towards cannabis use is developing on the face of established association between cannabis use and psychosis³⁰ rather it is considered that such legalization may reduce opiate related harms³¹.

Afghanistan is the largest opium producing country and due to high degree of drug trafficking to Pakistan through Pak-afghan border there is high frequency of opiate misusers in Pakistan³². In 2014, Pakistan was declared as the largest heroine addicted country of the world³³.

The 3rd most frequently abused drug in our study was benzodiazepines (43%) which is comparable to the findings in another study conducted in Pakistan by Syed Ahmer et.al in which the frequency of benzodiazepines in psychiatric outpatients was 45%³⁴. The findings in our study are different from another study conducted in Karachi by Saleem P.Iqbal et.al which may be due to difference in the study populations³⁵. The relatively high frequency of benzodiazepines abuse may be due to their increased prescription by physicians and psychiatrists on long term basis for the treatment of anxiety and insomnia and due to their over the counter availability in Pakistan^{36,37}.

The misuse of methamphetamine (commonly called ice), which is a synthetic psychostimulant, is rapidly increasing among youngsters and students throughout the world including Pakistan. It causes addiction by increasing dopamine production through its effects on limbic system leading to symptoms of euphoria, delusions, hallucinations and feeling energetic³⁸. The frequency of methamphetamine users in our study was 8% which is comparable to the findings of study conducted in Cape Town by Andreas Pluddemann et al in which the frequency of methamphetamine use was 9%³⁹. The number of patients misusing multiple drugs (two or more) is 89.62%(n=121) as compared to single drug users 10.38%(n=14). This is comparable to the findings in a local study by Aqsa Iqbal et.al in which poly drug misuse was more common than single drug

use¹³. The findings are also comparable to a study in India by Sau manabndra et.al in which multiple drug misuse was more predominant⁴⁰. The high number of poly drug abusers in our study may probably be due to over the counter availability of drugs in Pakistan, drug trafficking across Pak-Afghan border and improper implementation of laws to curb drug mafia involved in drug production, trafficking and sale.

LIMITATIONS OF STUDY: The potential for false positives/ negatives and adulteration or sample substitution are possible.

CONCLUSION

Drug addiction is an alarming and serious public health issue globally including Pakistan. The present study reflects higher percentage of drug abuse in males than female in our society, which may be because of exposure. Secondly Opiates are observed to be the predominantly addictive agents. There is need to take all necessary steps to curb the curse of drug abuse.

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