Socio-demographic and clinical profile and utilization pattern of antipsychotic drugs among psychiatric out-patients

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Abstract

Background: Drug prescribing pattern varies in different geographical areas as it is influenced by patient characteristics, type of disease prevalent, cultural and environmental factors, available drugs and prescribing habit of physicians. **Aim:** To find out the socio demographic details utilization pattern of antipsychotic drugs among psychiatric out-patients in Department of Psychiatric Diseases Hospital, Government Medical College, Jammu. **Material and Methods:** A total of 700 prescriptions of psychiatric outpatients were evaluated. Each patient's demographic and clinical profiles, disease classification, pharmacological class of drug prescribed was noted down. **Results:** Mean age of the study population was 37.26 years and maximum patients were young in the age group of 21 to 30 years (29.86%) with male to female ratio of 1.26:1.Rural to urban ratio was 1.68:1.There were 54.43% unemployed subjects and 63% patients had monthly income in the range of Rupees 5,000 to 10,000.Most of the patients were either educated less than high school (38.86%) or were illiterate (37.28%) and were unmarried (51.29%).History of smoking and alcohol consumption was present in 34.71% and 23% respectively. Most of the patients came from nuclear family (58.86%).1752 psychotropic drugs (range 1-5) were prescribed, average being 2.50. **Conclusion:** The current study calls upon the authorities to make more availability of psychiatric specialists in the rural areas and even the literacy rate should be improved to tackle these disorders which are over looked in their set up.
Key Words: Psychiatry, Jammu, Antipsychotics, Drug utilization.

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INTRODUCTION

Psychiatric disorders form an important public health priority and constitute a wide spectrum ranging from sub-clinical states to very severe forms of disorders. Available data from the Indian studies suggest that about 20% of the adult population in the community is affected with one or the other psychiatric disorder.[1] Jammu and Kashmir State has witnessed the twin problem of terrorism and migration, resulting in rising trend of psychiatric morbidity.[2,3] Drug prescribing pattern varies in different geographical areas as it is influenced by patient characteristics, type of disease prevalent, cultural and environmental factors, available drugs and prescribing habit of physicians. Economic aspect reflects on the prices and the applicable health benefits of a given drug. This includes the drug prices, import verses local products and the costs of drug treatment verses non drug treatment. Without knowledge of how drugs are being prescribed and used, it is difficult to initiate a discussion on rational drug use and to suggest measures to improve prescribing habits. The objective of the present study was to find out the socio demographic details utilization

pattern of antipsychotic drugs among psychiatric out-patients, especially in view of current prevailing situation in Jammu and Kashmir state, badly hit by militancy which predisposes the local population to psychiatric illnesses.

MATERIAL AND METHODS

This cross-sectional, study was conducted in the Postgraduate Department of Pharmacology and Therapeutics in collaboration with Department of Psychiatric Diseases Hospital, Government Medical College, Jammu. Study was conducted after necessary approval from the Institutional Ethics Committe. All the principles of bioethics were adopted, informed verbal consent of the patient or Legally Acceptable Representative (LAR) was taken as the present study falls under Category C, with no risk to the patient and was an observational study. Prescription was collected by an independent person by clicking its picture with mobile phone outside the OPD of Psychiatric Diseases Hospital without the knowledge of prescriber to avoid any bias. The name of the drug was used by generic name. Name of the prescriber and name of the patient was coded for all practical purposes to avoid any conflict of interest.

Inclusion Criteria
- Aged 18 to 60 years
- Patients of both genders
- Patient/LAR who gives consent
- No organic disorder

Exclusion Criteria
- Age group < 18 years or > 60 years
- Revisit was excluded
- Organic disorders
- Indoor psychiatric patients

A total of 700 prescriptions of psychiatric outpatients which fulfilled the inclusion criteria were evaluated. Data collected from the prescriptions was entered in the predesigned proforma especially prepared from the World Health Organization (WHO) guidelines on how to investigate drug use in health facilities.[4] Each patient's demographic and clinical profiles, disease classification, pharmacological class of drug prescribed, dosage, route of administration, frequency, duration, over-prescribing, banned drug formulations, generic versus brand drugs, fixed dose combination (FDC) prescribing rate, average number of drugs per prescription was noted down. Basic indicators referred to as core indicators were used as measure of performance in three general areas related to rational use of drugs.[4]

RESULTS

The mean age of the study population was 37.26 years with a range of 18 to 60 years, with median age being 36 years. Maximum patients were young in the age group of 21 to 30 years (29.86%), followed by age group of 31-40 years (23.28%). There were more male patients (55.86%) with male to female ratio of 1.26:1. Demographically, most of study population was from rural area (62.71%) with rural to urban ratio of 1.68:1.There were more unemployed subjects (54.43%) in the study population as compared to employed (45.57%).More patients had monthly income in the range from rupees 5,000 to 10,000 (63%), followed by rupees 10,000 to 25,000 (11.29%) and <5,000 (10.57%). Around 8.57% patients did not reveal their monthly income. Most of the patients were educated either less than high school (38.86%) or were illiterate (37.28%). Most of the patients were unmarried (51.29%), followed by married (32%) and divorced/widowed/separated (16.71%).

Table 1: Socio-demographic characteristics of Study Population (n=700)

Characteristic	No. (%)
Age group (years)	
≤20	54 (7.71)
21-30	209 (29.86)
31-40	163 (23.28)
41-50	147 (21)
51-60	127 (18.14)
Mean ± SD	37.26 ± 12.40
Sex	
Male	391 (55.86)
Female	309 (44.14)
Residence	
Rural	439 (62.71)
Urban	261 (37.29)
Occupation	
Unemployed	381 (54.43)
Employed	319 (45.57)
Monthly Income (Rupees)	
<5,000	74 (10.57)
5000-10000	441 (63.00)
10000-25000	79 (11.29)
>25000	46 (6.57)
Did not reveal	60 (8.57)
Education	
Illiterate	261 (37.28)
Less than High School	272 (38.86)
Upto or beyond High School	167 (23.86)
Marital status	
Unmarried	359 (51.29)
Married	224 (32.00)
Divorced/Widowed/Separated	117 (16.71)
Family type	
Joint	288 (41.14)
Nuclear	412 (58.86)

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History of smoking and alcohol consumption was present in 143 (34.71%) and 161 (23%) respectively. Most of the patients came from nuclear family (58.86%) as compared to joint family (41.14%).

Table 2: Distribution of Patients According to Diagnosis (DSM IV Classification)

Diagnosis	N (%)
Schizophrenia	323 (46.14)
Bipolar Disorder	168 (24.00)
Major Depressive Disorder	130 (18.57)
Brief Psychotic Episode	15 (2.14)
Substance Related Disorders	15 (2.14)
Panic Disorder	11 (1.57)
Obsessive Compulsive Disorder	9 (1.28)
Adjustment Disorder	7 (1)
Post-traumatic Stress Disorder	5 (0.71)
Generalized Anxiety Disorder	5 (0.71)
Conversion Disorder	4 (0.57)
Postpartum Psychosis	3 (0.42)
Sleep Disorder	3 (0.42)
Schizoaffective Disorder	2 (0.28)
Total	**700 (100)**

According to DSM IV classification, schizophrenia was diagnosed in 46.14% patients, bipolar disorder in 24% and major depressive disorder in 18.57% (Table 2).

Table 3: Total Number of Prescriptions and Drugs Prescribed

Total Number of Prescription Studied	n=700
Total Number of Drugs Prescribed	1839
(Range)	(1 – 6)
Average Number of Drugs Prescribed per prescription	2.63
Total Number of Psychotropic Drugs Prescribed	1752
(Range)	(1 – 5)
Average Number of Psychotropic Drugs Prescribed per prescription	2.50
Percentage of Drugs Prescribed by Generic Name	7.83%
Percentage of Patient Encounters with an Injection	2%
Percentage of Psychotropic Drugs Prescribed from Essential Drugs List	22.09%

A total number of 1839 drugs with a range of 1 to 6 were prescribed in 700 prescriptions studied. In all prescriptions dosage form, route of administration, frequency, dose and duration of drug was mentioned. Average number of drugs prescribed was calculated to be 2.63. Total number of 1752 psychotropic drugs with a range of 1 to 5 were prescribed, average being 2.50. Drugs prescribed by generic name were 7.83%. Two per cent patients had encounter with an injection. Percentage of psychotropic drugs prescribed from EDL was 13.53% (Table 3).

DISCUSSION

Study of prescription patterns is an essential tool to study rational use of drugs. WHO developed core prescribing indicators that allow researchers to make basic comparisons between situations in different areas or at different times. These indicators include prescribing indicators, patient care indicators and healthcare indicators.[4] In the present study, the mean age of the study population was 37.26 years with a range of 18 to 60 years, with median age being 36 years. This is consistent with the study by Chakrabarti S and Kulhara P, who also recorded maximum patients between 20 to 39 years.[5] Grover S et al, also found maximum patients between 20 and 29 years (27.79%) and 30-39 years (25.37%).[6]Tripathi A et al, in a multicentric study assessed the pattern of antidepressant use. The study included 312 patients. The mean age of the patients was 39 ± 14.28 years, which is similar to our study.[7] There were more male patients (55.86%) with male to female ratio of 1.26:1. This finding is similar to many other studies.[7-9] However, Chakrabarti S and Kulhara P found that psychiatric illness was more common in females (58%).[5] Grover S et al found nearly equal gender distribution.[6] Most of the patients were from rural area (62.71%), with rural to urban ratio of 1.68:1. There were more unemployed subjects (54.43%). More patients had monthly income in the range from rupees 5,000 to 10,000 (63%), followed by rupees 10,000 to 25,000 (11.29%) and <5,000 (10.57%). Most of the patients were either educated less than high school (38.86%) or were illiterate (37.28%) and most of the patients were unmarried (51.29%). History of smoking and alcohol consumption was present in 34.71% and 23% respectively. Most of the patients came from nuclear family (58.86%) as compared to joint family (41.14%). Roopadevi HS, reported 71.4% patients from rural areas, which is similar to our study.[10] Grover S et al found equal representation of patients from rural and urban areas, majority of them were married (67.32%), educated upto or beyond high school level, were employed, were earning less than rupees 7322 and belonged to nuclear families.[6]A study by Chakrabarti S and Kulhara P had more families (56%) with incomes of Rs. 3000 per month or more, which is similar to our study.[5]Banerjee I et al also found large number of unemployed patients (86.7%).[11] A total number of 1839 drugs with a range of 1 to 6 were prescribed in 700 prescriptions studied. Average number of drugs prescribed was 2.63. In a study by Lahon K *et al*, the average number of drugs per prescription was 2.32.[12]Odo HO et al reported an average of 2.88 drugs prescribed per encounter. The results of both these studies are in agreement with the present study.[13] However, Schorr SG et al reported an average of 4.6 drugs per prescription.[14]Salman S et al reported an average of 3.34 drugs prescribed per prescription.[15] The results of both these studies are in contradiction with our results because of the selection of studied subjects. These studies were

conducted on chronic and indoor patients. In the present study, a total number of 1752 psychotropic drugs with a range of 1 to 5 were prescribed, average being 2.50. Piparva KG et alreported psychotropic drugs prescribed per patient to be 2.96.[16]Rode SB et al observed average number of psychotropic drugs per prescription to be 2.1.[17]The results of these studies are in consonance with our study. However, Thakkar KB et al conducted a study on patients with psychiatric disorder and reported average number of psychotropic drugs per prescription to be 1.79, which is on lower side as compared to our study.[18]

CONCLUSION

The current study has highlighted that patients reporting to OPD with psychiatric illness were more from the rural areas, unemployed and below high school education level. Schizophrenia constituted bulk of psychiatric disorders followed by bipolar disorder. Trend was towards prescription of atypical antipsychotics. The current study calls upon the authorities to make more availability of psychiatric specialists in the rural areas and even the literacy rate should be improved to tackle these disorders which are over looked in their set up.

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