

Recent scenario on psychotropic drug usage pattern among patients attending psychiatric outpatient department of a tertiary care teaching hospital in Nepal

Vijay Raj Kaul¹, Mirza Atif Beg^{2*}, Shaktibala Dutta², Shalu Bawa², Nand Kishore Singh³, Sri Hari Dutta⁴

¹Department of Psychiatry, Nepal Gunj Medical College, Nepal

²Department of Pharmacology, SGRRIM and HS, Patel Nagar, Dehradun, Uttarakhand, India

³Department of Psychiatry, SGRRIM and HS, Patel Nagar, Dehradun, Uttarakhand, India

⁴Immunization Specialist (Supply Chain), Regional Office for South Asia, Lekhnath Marg, Kathmandu, Nepal

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***Correspondence to:**

Dr. Mirza Atif Beg,

Email: mabeg1997@gmail.com

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ABSTRACT

Background: Due to increasing burden of psychiatric illnesses, it is essential to study the psychotropic drug utilization pattern in actual clinical practice. The objective of the study was to study the psychotropic drug usage pattern among patients attending psychiatric OPD of a tertiary care teaching hospital in Nepal.

Methods: This observational retrospective study was conducted in Nepal Gunj Medical College, Nepal for a period of 6 months from January 2016 to June 2016. A total of 282 prescriptions from Psychiatric OPD were analysed for drug usage pattern. Prescriptions containing at least one psychotropic drug were included. Data was measured for number and percentage of prescriptions or drugs, using selected World Health Organization (WHO) drug use indicators.

Results: A total of 282 prescriptions from Psychiatric OPD were analysed. Patients had a mean age of 35.01±1.17 years. Male and Female %age was 41.49% and 58.51% respectively. Majority of the patients (47.52%) were in 31-45 years age group. 70.57% patients were literate. Depression was the leading psychiatric illness seen in 144 (51.06%) patients followed by Anxiety disorders which were seen in 60 (21.28%) patients. A total of 2463 drugs were prescribed which included 591 (23.99%) antipsychotic drugs followed by 462 (18.76%) antidepressants, 390 (15.83%) antiepileptics, 312 (12.67%) supplements, 276 (11.21%) antianxiety, 171 (6.94%) antacids, 165 (6.7%) anticholinergics, 96 (3.9%) drugs in miscellaneous category. Drugs prescribed per prescription were 8.73 and psychotropic drugs per prescription were 6.09. Number of oral and injectable drugs were 2313 (93.91%) and 150 (6.09%) respectively. 87 fixed dose combinations (FDCs) of psychotropic drugs were prescribed. 903 (36.66%) drugs were prescribed from WHO's 18th List of Essential Medicines.

Conclusions: Depression was the most common psychiatric illness and antipsychotics were the most commonly prescribed medicines in psychiatry OPD. Majority of the prescriptions revealed polypharmacy.

Keywords: Drug utilization pattern, Psychotropic drugs, Polypharmacy, WHO drug use indicators

INTRODUCTION

Psychiatric disorders form an important public health priority. Of the top ten health conditions contributing to the Disability Adjusted Life Years (DALYs), four are psychiatric disorders. Psychiatric illnesses are associated with high levels of health service utilization and associated costs.^{1,2}

The expanding and challenging field of psychopharmacology is constantly seeking new and improved psychotropic drugs to treat psychiatric disorders.³

Psychiatrists are continuously exposed to newly introduced drugs that are claimed to be safe and more efficacious. Newer drugs are however known to be expensive and unaffordable to the majority of patients, especially in developing countries. Although

psychotropic drugs have had a remarkable impact in psychiatry, their utilization in actual clinical practice, effectiveness and safety in the real-life situation needs continuous study.⁴⁻⁶

It is important to realize that inappropriate use of drugs represent a potential hazard to patients and an unnecessary expense. This necessitates a periodic review of pattern of recent scenario of drug utilization to ensure safe and effective treatment. To improve the overall drug use, especially in developing countries, international agencies like World Health Organization (WHO) and International Network for Rational Use of Drugs (INRUD) have recommended standard drug use indicators, which help us to know the shortcomings in our prescription writing.⁷ As there is no sufficient data on the use of psychotropic drugs in the population of Nepal, a prospective drug utilization study was conducted in psychiatry OPD of Nepal.

METHODS

This observational retrospective study was conducted in a tertiary care teaching hospital at Nepal Gunj Medical College, Nepal for a period of 6 months from January 2016 to June 2016, after the approval from the institutional ethics committee. A total of 282 prescriptions from Psychiatric OPD were analyzed for drug usage pattern using WHO drug use indicators like (1) average number of the drugs per prescription, (2) average number of the psychotropic drugs per prescription (3) percentage of injectable drugs prescribed (4) percentage of prescriptions containing psychotropic fixed dose combinations (FDCs) (5) drugs prescribed from WHO essential medicine list.

Inclusion criteria

Prescriptions of patients of both sex and all ages, suffering from a psychiatric illness and started on at least one psychotropic drug were selected. Exclusion criteria: (a) use of psychoactive substances, (b) any systemic illness, (c) lactating and pregnant women, (d) history of drug reaction. Data was entered and analyzed using Microsoft Excel 2007.

RESULTS

A total of 282 prescriptions were analyzed for drug usage pattern from Psychiatry OPD in this observational retrospective study. The number of male and female patients were 117 (41.49%) and 165 (58.51%) respectively. Mean age of the patients was 35.01±1.17 years. A total of 134 (47.52%) patients were seen in 31-45 years, followed by 99 (35.11%) patients in 16-30 years, 37 (13.12%) in 46-60 years, 7 (2.48%) in more than 60 years and 5 (1.77%) in 0-15 year age group. 199(70.57%) patients were literate and 83 (29.43%) patients were illiterate. Out of a total of 282 patients, 144 (51.06%) were suffering from depression followed by 60

(21.28%) with anxiety disorders, 42 (14.89%) with psychotic illness, 15 (5.32%) with epilepsy and 21 (7.45%) in miscellaneous category. A total of 2463 drugs were prescribed which included 591 (23.99%) antipsychotic drugs followed by 462 (18.76%) antidepressants, 390 (15.83%) antiepileptics, 312 (12.67%) supplements, 276 (11.21%) antianxiety, 171 (6.94%) antacids, 165 (6.7%) anticholinergics, 96 (3.9%) drugs in miscellaneous category. The average drugs prescribed per prescription were 8.73 and psychotropic drug per prescription were 6.09. A total of 87 fixed dose combinations of psychotropic drugs were prescribed which included a combination of Trifluoperazine + Benzhexol in 72 prescriptions and Haloperidol + Promethazine in 15 prescriptions respectively. Number of oral and injectable drugs were 2313 (93.91%) and 150 (6.09%) respectively. Out of a total of 2463 drugs, 903 (36.66%) drugs were prescribed from WHO's 18th List of Essential Medicines.

Table 1: Demographic profile.

Parameters	Number (% age)	
Age group of the patients	0-15 years	5(1.77%)
	16-30 years	99(35.11%)
	31-45 years	134(47.52%)
	46-60 years	37(13.12%)
	>60 years	7(2.48%)
Males:Female	117(41.49%):165(58.51%)	
Literates: Illiterates	83 (29.43%):199(70.57%)	

Table 2: Disease pattern.

Disease	Number (% age)
Depression	144(51.06%)
Anxiety	60(21.27%)
Psychotic illness	42(14.89%)
Epilepsy	15(5.32%)
Miscellaneous	21(7.45%)

Table 3: Drug prescribing pattern.

Disease	Number (% age)
Antipsychotics	591(23.99%)
Antidepressants	462 (18.76%)
Antiepileptics	390 (15.83%)
Supplements	312 (12.67%)
Antianxiety	276 (11.21%)
Antacids	171 (6.94%)
Anticholinergics	165 (6.7%)
Miscellaneous	96 (3.9%)

DISCUSSION

In the present study the recent trends in psychotropic drug usage pattern was observed in patients attending psychiatry OPD of a tertiary care teaching hospital in Nepal. In the present study, majority of patients were seen in 31-45 year age group with a mean age of 35 years. A similar pattern was seen in previous studies.^{3,8} Increasing use of psychotropic drugs in this age group may be due to increased incidence of mental ill health, improved mental health literacy in general population and reduction in stigma associated with mental illness.⁹ In our study female patients outnumbered male patients which was similar to previous studies.¹⁰⁻¹³ This may be due to hormonal influence, effect of childbirth and differing psychosocial stress among the women.¹⁴ Depression was the leading psychiatric illness in our study which was similar to previous studies.^{3,8,15}

Table 4: Other parameters.

Parameters	Number (% age)
Drugs per prescription	8.73
Psychotropic drugs per prescription	6.09
Oral drugs	2313(93.91%)
Injectable drugs	150(6.09%)
Fixed drug combinations (FDCs)	87
Drugs from Essential Medicine List	903(36.66%)

Antipsychotic drugs were the most commonly prescribed medicines followed by antidepressants. This has been seen in previous study.¹⁵ Amongst antipsychotics, atypical antipsychotics were more frequently prescribed than typical antipsychotics. Use of atypical antipsychotics has been seen in depression patients to as they have recently become a major focus for augmentation of traditional antidepressant therapy. The efficacy and safety of augmenting treatment-refractory or treatment-resistant depression with atypical antipsychotics has been well established in previous studies.^{16,17} They have low propensity to cause extra-pyramidal side effects, efficacy against refractory cases, better tolerance, low relapse rate, and safer adverse effect profile as compared to typical antipsychotics.¹⁸ Olanzapine was the most frequently prescribed antipsychotic in our study. Similar finding has been seen in earlier study due to the broad spectrum activity of olanzapine.³

Among the antidepressant drugs, Selective Serotonin Reuptake Inhibitors (SSRIs) were more frequently prescribed as compared to Tricyclic antidepressants (TCAs) and atypical agents. SSRIs are generally free of sedative effects, safer at higher doses and have a better tolerability, which has resulted in their growing popularity as antidepressants.¹⁴ Escitalopram was the most frequently prescribed antidepressant. This finding is similar to a previous study.³ Amongst antiepileptics, sodium valproate was the most frequently prescribed

medicine to treat epileptic patients and as a mood stabilizer. This was similar to a previous study.⁸ Clonazepam was the most commonly prescribed Benzodiazepine (BZD) which has been seen in a previous study.³ Prescription of anticholinergics with typical antipsychotic drugs are very common, to prevent extra pyramidal side effects (EPS).¹⁴

The average number of drugs per prescription is important in psychiatry as polypharmacy and misuse of psychotherapeutic drugs is common.¹⁹ In our study the average number of drugs prescribed per prescription was 8.73 which were very high indicating polypharmacy. It was higher than the previous studies.^{3,10} This may lead to increased risk of drug interactions, increased hospital cost and errors of prescribing. A total of 87 FDCs of psychotropic drugs were prescribed. Most common was Trifluoperazine (typical antipsychotic) + Benzhexol (central anticholinergic) which was similar to a previous study.³

Prescription of central anti-cholinergics with both typical and atypical antipsychotics is very common to prevent extra-pyramidal side-effects (EPS). The use of such FDCs can be considered as rational when used for maintenance therapy in patients who had earlier developed EPS because of antipsychotic alone; however, the routine use of such combination is irrational.³ 36.66% drugs were prescribed from WHO's 18th List of Essential Medicines which is comparable to a previous study.³ The primary purpose of using Essential Medicines is to promote rational use of medicines considering the three important aspects i.e. cost, safety, and efficacy. Number of oral and injectable drugs were 2313(93.91%) and 150(6.09%) respectively which is comparable to previous studies.^{3,20}

Factors such as cost, adverse drug reactions and drug interactions were not evaluated during the study period.

To summarize the findings, female patients outnumbered male patients, majority of the patients were in 31-45 years age group, depression was the most common psychiatric ailment, antipsychotic drugs were the most commonly prescribed psychotropic drugs, usage of oral drugs was high, incidence of polypharmacy was seen as drugs prescribed per prescription was high and fewer drugs were prescribed from WHO's essential medicine list.

CONCLUSION

Depression was the most common psychiatric ailment and antipsychotic drugs were the most commonly prescribed psychotropic drugs in our study. Incidence of polypharmacy was seen. Our study revealed the recent trends of prescription pattern of psychotropic drugs as part of drug utilization research in a tertiary care teaching hospital at Nepal. It will provide an opportunity for

enhancing the quality of mental healthcare for rational and judicious use of psychotropic medicines.

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