

Prescribing pattern of antipsychotic drugs in the outpatient department of psychiatry in Silchar Medical College and Hospital, Assam

Abstract

Objective: To study the prescribing pattern of antipsychotic drugs in the outpatient department of psychiatry in Silchar Medical College and Hospital (SMCH) of Assam. **Methods:** It is a prospective cross-sectional study which was carried out for three months from August to November 2015 in the outpatient department of psychiatry. All patients irrespective of their ages and sexes were included in this study. Inpatients, referred patients, patients not willing to give consent, patients of epilepsy as well as those cases where diagnoses were not certain were excluded from the study. The prescription patterns of antipsychotic drugs and the occurrences of various psychiatric diseases on both the sexes were studied after taking permission from the Institutional Ethical Committee (SMCH). **Results:** A total of 112 prescriptions were analysed. The most common disease was found to be schizophrenia. Total drugs prescribed were 265 and average number of drugs per prescription was 2.36. It was seen that out of the 112 prescriptions, monotherapy was practiced in 19.64% (22) compared to polytherapy in 80.35% (90). Out of 265 prescribed drugs atypical antipsychotics were 112 (42.26%), typical antipsychotics 12 (4.52%), antiepileptics 57 (21.50%), antidepressants 29 (10.94%), antiparkinsonian 29 (10.94%), and others 26 (9.81%). Antipsychotics given orally were 122 of which olanzapine was 54 (44.26%), risperidone 40 (32.78%), chlorpromazine ten (8.19%), quetiapine eight (6.55%), aripiprazole five (4.09%), amisulpride five (4.09%) were seen. Injectable antipsychotics were two, of which only haloperidol two (100%). Antipsychotics in combination prescription with same groups were 14 (12.5%), with antidepressants, antiepileptics, antiparkinsonian were 88 (78.57%) and other agents were ten (8.92%), which included pantoprazole, multivitamins, and benfotiamine. **Conclusion:** This study shows that atypical antipsychotics are the most common drugs prescribed in patients with psychotic illness and olanzapine is the most common medication followed by risperidone. The most common disease was schizophrenia and injectable antipsychotic used was haloperidol.

Keywords: Schizophrenia. Olanzapine. Haloperidol. Combination Drug Therapy.

**Pinaki Chakravarty¹,
Parthajyoti Neog², Babul Dewan³**

¹Associate Professor, Department of Pharmacology, Silchar Medical College and Hospital, Silchar, Assam, India, ²Post Graduate Trainee, Department of Pharmacology, Silchar Medical College and Hospital, Silchar, Assam, India, ³Technical Associate, Adverse Drug Reaction (ADR) Monitoring Centre, Department of Pharmacology, Silchar Medical College and Hospital, Silchar, Assam, India

Corresponding author: Dr. Pinaki Chakravarty, MD, Associate Professor, Department of Pharmacology, Silchar Medical College and Hospital, Ghungoor, Silchar-788014, Assam, India. pinakichakravarty@gmail.com

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Introduction

As per the World Health Organization (WHO), Drug utilisation study is defined as a study of marketing, distribution, prescription, and uses of drugs in a society highlighting on the resulting medical, social, and economic consequences. Drug utilisation studies afford a baseline reference point about the effect of diverse interventions in prescribing the concerned drugs.[1] To make medical care rational and more cost-effective, drug utilisation studies are necessary as these studies monitor, evaluate, and suggest modifications to improve the prescribing habits.[2] Drug utilisation studies facilitate the appropriate use of drugs; thereby, it can reduce the potential hazards to the patients and unnecessary expenses, which is sometimes unbearable to the patients in the countries like us. So, the periodic review of pattern of drug utilisation helps to ensure safe and effective treatment.[3]

We know that several factors in different geographical areas influence the drug prescribing pattern. Amongst them patient characteristics, type of disease prevalent, cultural and environmental factors as well as the socioeconomic status, availability of newer drugs and physicians prescribing habit influences most. International organisations like WHO and the International Network for Rational Use of Drugs (INRUD) has recommended indicators of standard drug use aiming to improve the overall drug use especially in developing countries,[2,3] which ultimately help us to know the deficiencies in our prescription writing.

Antipsychotics are a class of agents or drugs which are able to reduce psychotic symptoms in a wide range of conditions like schizophrenia, bipolar disorder, psychotic depression, senile psychosis, various organic psychosis, and drug-induced psychosis.[4] Antipsychotic prescription

patterns are fundamentally diverse across countries and even regions due to variations in factors including healthcare policies, availability and cost of drugs, psychiatric training and preferred treatment modalities.[5] Although psychotropic medications have had a remarkable impact on psychiatric practice that legitimately can be called revolutionary,[6] their utilisation and consequences on real life effectiveness and safety in actual clinical practice need continuous study.[7]

To facilitate the rational use of the drugs is the principal aim of the drug utilisation research. Without the proper knowledge of how the drugs are being prescribed, it is not easy to suggest the measures to improve the prescribing habits.[8]

Severe mental illnesses are characterised by symptoms of psychosis. Psychosis in short, is defined by a distorted or non-existent sense of reality. There are different aetiologies for different psychotic disorders and each of which demands a unique treatment approach. Common psychotic disorders include mood disorders (major depression or mania) with psychotic features, substance-induced psychosis, dementia and delirium with psychotic features, brief psychotic disorder, delusional disorder, schizoaffective disorder, and schizophrenia. Schizophrenia has a worldwide prevalence of one per cent and is considered the prototypic disorder for understanding the phenomenology of psychosis and the impact of antipsychotic treatment, but patients with schizophrenia exhibit features that extend beyond those seen in other psychotic illnesses. Hallucinations, delusions, disorganised speech, and disorganised or agitated behaviour comprise the types of psychotic symptoms found individually, or rarely together, in all psychotic disorders, and are typically responsive to pharmacotherapy.[9] In India many antipsychotics were made available and some of which have stood the test of time and is still used while some are no more marketed. The drugs that are currently available and marketed are not been thoroughly studied in our country and all the research focusing the use of antipsychotics in India follows the trend in the west.[10] This study was undertaken to analyse the prescribing pattern of psychotropic medications in outdoor patients of psychiatry department of a tertiary care teaching hospital, i.e. Silchar Medical College and Hospital (SMCH), Silchar, Cachar, Assam.

Materials and methods

This study is a prospective cross-sectional study of three months duration and was carried out in the outpatient department (OPD) of psychiatry of SMCH. Permission of the Institutional Ethical Committee was obtained for conducting the study. Patients of all ages and both sexes were included in the study that came to psychiatry OPD. Admitted patients, patients referred from other departments, patients not willing to give consent, patients of epilepsy as well as those cases where diagnoses were not certain were excluded from our study. Informed consent was obtained from the patient or legal guardian (when patient was not able to give consent). One hundred and twelve prescriptions were seen and age, sex, diagnosis, drugs, dosage form, routes of administration was recorded accordingly on a customised data collection sheet. WHO drug indicators that were selected to analyse the prescribing pattern included:

- (1) Average number of psychotropic drugs prescribed per encounter,
- (2) Percentage of psychotropic drugs prescribed by generic name,
- (3) Percentage of psychotropic drugs prescribed from the essential drug list,
- (4) Frequency of psychotropic drugs usage as per indication.

Results

On reviewing the prescriptions, we have found that the most common disease was schizophrenia followed by non specific psychosis (Table 1 and Figure 1). Age-wise it was seen that the diseases were most common in 20-39 years of age group. The psychiatric diseases were found to be more common in males 68 (60.71%) compared to females 44 (39.28%) (Figure 2). Total number of drugs prescribed was 265 in which oral 263 (99.24%), parenteral two (0.75%). Average number of drugs per prescription was 2.36. Out of the 112 prescriptions monotherapy was practised in 19.64% (22) compared to polytherapy 80.35% (90) (Figure 3). Drugs prescribed along with the percentage are as follows (Figure 4):

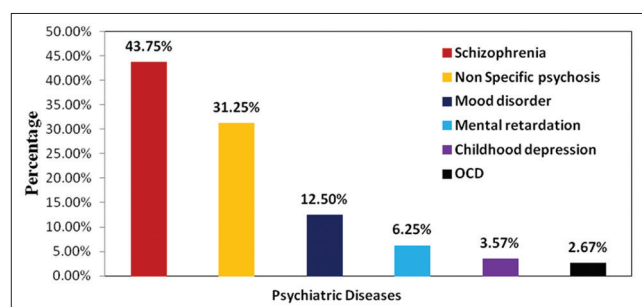


Figure 1: Distribution of psychiatric illness.

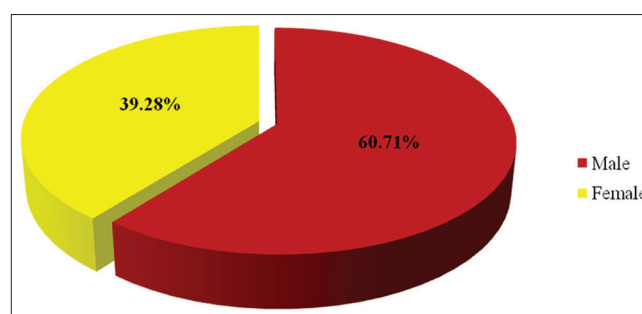


Figure 2: Sex-wise distribution of psychiatric illness.

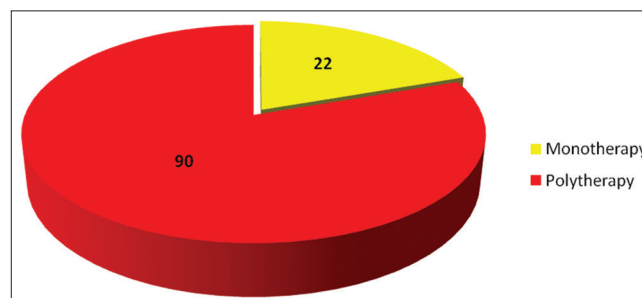


Figure 3: Monotherapy versus polytherapy.

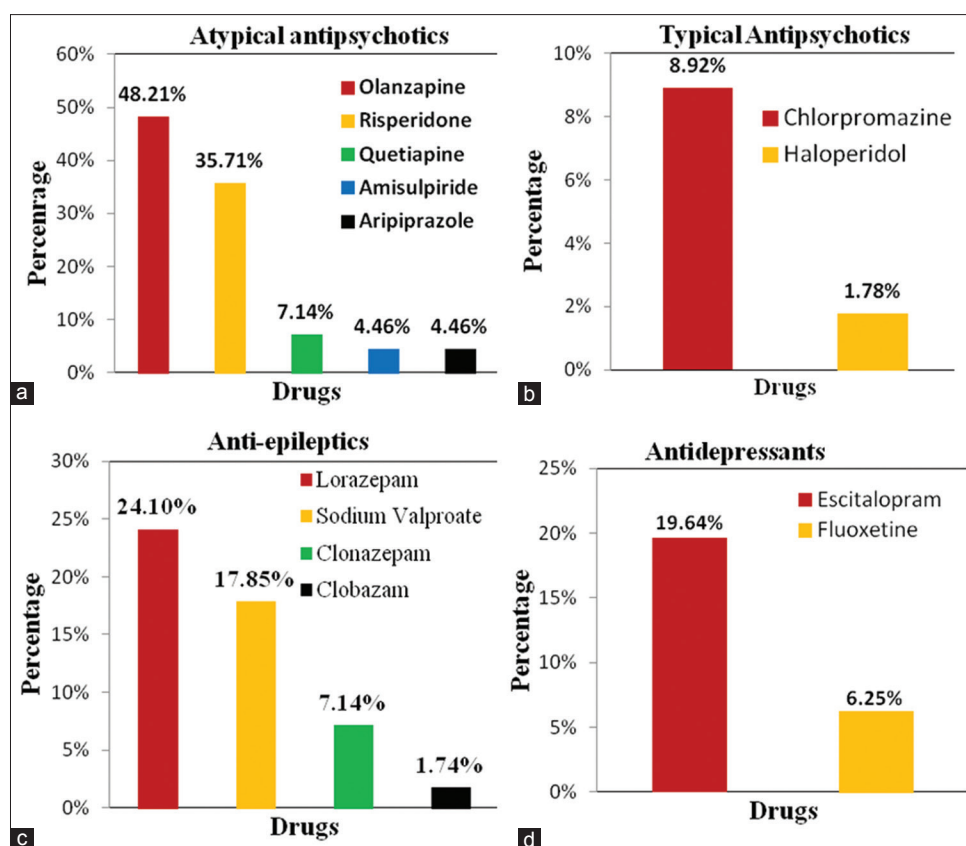


Figure 4: Distribution of drugs, (a) Atypical antipsychotics (b) Typical antipsychotics, (c) Antiepileptics (d) Antidepressants.

Table 1: The frequency of various diseases in the department of psychiatry

ICD-10	% (N=108)
F20- Schizophrenia	49 (43.75)
F29- Non specific psychosis	35 (31.25)
F34- Mood disorder	14 (12.50)
F70- Mental retardation	7 (6.25)
F42- Obsessive-compulsive disorder	3 (2.67)

ICD-10=Tenth revision of the International Statistical Classification of Diseases and Related Health Problems[11]

atypical antipsychotics 112 (42.26%), typical antipsychotics 12 (4.52%), antiepileptics 57 (21.50%), antidepressants 29 (10.94%), antiparkinsonian 29 (10.94%), others 26 (9.81%). Antipsychotics given orally were 122 of which olanzapine was 54 (44.26%), risperidone 40 (32.78%), chlorpromazine ten (8.19%), quetiapine eight (6.55%), aripiprazole five (4.09%), amisulpiride five (4.09%), were seen. Injectable antipsychotics were two of which only haloperidol two (100%). Antipsychotics in combination prescription with same groups were 14 (12.5%), with antidepressants, antiepileptics, antiparkinsonian were 88 (78.57%), and other agents were ten (8.92%) which included pantoprazole, multivitamins, and benfotiamine.

Discussion

The use of atypical antipsychotic drugs is favoured by most of the published guidelines.[12] In our study the majority

of the patients 83.92% (94/112), were receiving the atypical antipsychotic medications particularly olanzapine and risperidone. Only less than 11% (12/112) patients received the typical antipsychotics. This is in agreement with the general findings that clinical efficacy and safety of atypical new generation antipsychotic medications are shown to be more than the conventional antipsychotics.[13,14]

Our study also shows that schizophrenia is the most common psychotic illness and is more common in males (68) compared to females (44). The number of female patients was less. It is observed that female patients with psychotic disorder present with more severe mental deterioration in an advanced stage of the illness. This may be due to the lack of awareness by their family members and relatives or it may be due to higher depressive episodes in females due to increase hormonal influences. In between 20-39 years is the most commonly affected age group by any psychotic disorder.

Those patients, who were receiving the typical antipsychotic medications, were also receiving other antipsychotics. These types of two antipsychotic drug combination therapies (polypharmacy) have also been noted in other parts of our country as well as in our hospital. Prescriptions containing typical antipsychotic drugs also contained antiparkinsonian agents due to their protective action against extrapyramidal side effects of the neuroleptic drugs. As it is proved that the extrapyramidal signs and symptoms are more common with typical antipsychotic medication. The only antiparkinsonian drug prescribed by

psychiatrists in SMCH was trihexyphenidyl. In our study group, approximately 33.03% (37/112) of the patients were receiving multiple antipsychotic medications. One such study in Australia, reported that 13% of all OPD patients received more than one antipsychotic medication; ten in another study, 47% of the patients received prescriptions for two antipsychotic medications, and eight per cent received prescriptions for three medications.[15]

In this study we found that, the drugs prescribed in generic form were higher in percentage 93.75% (105/112) and majority of drugs (89.89%) prescribed were from the National List of Essential Medicines of India (NLEM 2011). The reason may be due to free supply of medicines in government hospital.

In the government sector, the majority of patients in the district of Cachar, Assam (Silchar is the district headquarter) who were receiving atypical antipsychotic medications usually report with recurrence of the same psychotic illness after a month or two. After a vigorous workup with several such patients we found out that this was not due to wrong treatment with the antipsychotic drugs rather it was due to non-compliance with the treatment schedule given by the psychiatrist. Hazarika *et al.*[16] reported the rate of non-adherence as 37% in patients with schizophrenia from SMCH.

This type of pattern of uses of atypical antipsychotic medication was not also due to the undesired action of the drug or the unavailability of the drug rather it is due to the cost of atypical antipsychotics which most patients were unable to afford. Patients often fail to buy the drug if it is not available in the hospital as a free medication.

Conclusion

This study shows that atypical antipsychotics are the most common antipsychotic drugs prescribed in patients with psychotic illness. The most common medication is olanzapine followed by risperidone. Schizophrenia is the most common disease and only injectable antipsychotic was haloperidol respectively. To see the efficacy, adverse reactions, usage of various other psychotropic medications and their rational use, it is necessary to do more detailed study in large number of populations.

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