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A STUDY ON DRUG PRESCRIBING PATTERN FOR PSYCHIATRY DISORDERS IN TERTIARY CARE TEACHING HOSPITAL IN KADAPA AT ANDHRA PRADESH

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ABSTRACT

Background: Psychotropic drugs have been majorly used for treating psychiatric diseases in all hospitals all over the world. The present study aims to assess the drug prescribing pattern for psychiatric disorders in a government general hospital (GGH-RIMS), in Kadapa at Andhra Pradesh. **Method**: We have conducted a prospective observational study in the psychiatry department of tertiary care hospital in Kadapa for over 6 months. A total of 80 patients were involved in the study and the data were extracted from a medical case sheet. **Results:** Among 80 patients 269 drugs were prescribed. The most commonly prescribed psychotropics were atypical antipsychotics (34.20%) followed by anticholinergics (18.95%), benzodiazepines (14.86%), Antidepressants (10.78%), anticonvulsants (9.66%), Typical antipsychotics (7.06%), mood stabilizers (2.60%), beta-blockers (1.48%) and multivitamin (0.37%). **Conclusion**: This study observed that atypical antipsychotics were the most common drugs prescribed in patients with psychiatric illness, and as per the essential drug list.

KEYWORDS: prescribing pattern, antipsychotics, psychiatric illness.

INTRODUCTION

Prescription pattern monitoring studies are drug utilization studies with the main focus on the rational use of drugs in populations. The definition of rational use of medicines is "Patients receive medications appropriate to their clinical needs, in doses that meet their requirements, for an adequate period, and at the lowest cost to them and their community". The WHO core indicators help to improve the prescribing patterns and thus promote the rational use of drugs in a healthcare facility. It is needed to assess the rational prescribing skill of the clinicians, and this can be done by conducting the periodic prescription audit.[1]

Prescription Patterns explain the extent and profile of drug use, trends, quality of drugs, and compliance with regional, state, or national guidelines like standard treatment guidelines, usage of drugs from essential medicine list, and use of generic drugs.[2]

To improve the prescription quality and rational prescription pattern promotion there is an inevitable need to investigate the factors that affect doctor's prescription patterns. Studies have shown that there is a correlation between prescription patterns and gender, age, educational status, work experience, economic situation, and physician's specialty. Defining drug prescription and consumption pattern provides advantageous feedback to prescribers to improve their prescribing behavior. Prescription analyzing studies help the policymakers to set the priorities to promote the rational use of medicines nationwide.[3]

METHODOLOGY

The present study is a prospective observational study. This study was conducted in a Psychiatry department of government general multispecialty hospital (GGH-RIMS), Kadapa, for over 6 months. Patients who are diagnosed with psychiatric diseases and age groups between 18-75 years admitted to the psychiatry department were included in our study. Patients who are not willing to participate in the study and patients aged below 18 years were excluded from the study. The data was collected from patient's case sheets. The study had conducted after getting approval from the ethical committee. The study had initiated after getting consent from the patient's representatives. The first analysis was made using Microsoft Excel 2007 manually and the collected data from the respondents were analyzed using Graph Pad Prism. The data from the data collection sheet

were analyzed for different parameters. For the analysis of the data descriptive statistics such as frequencies, percentages, mean were used.

RESULTS
Among 80 patients of 26 were male and 52 were female. The most of patients were between the age group of 25-30 years (28.75%). Majority of patients were diagnosed with schizophrenia 38 (47.5%) followed by BPAD 22(22%), Depression10 (12.5%), Mania 5(6.5%), Anxiety 3(3.75%), Insomnia 1(1.25%), and Mental retardation with behavioral problems 1 (1.25%).

The most commonly prescribed class of drugs was atypical antipsychotics (34.20%) followed by anticholinergics (18.95%), benzodiazepines (14.86%), Antidepressants (10.78%), anticonvulsants (9.66%), Typical antipsychotics (7.06%), mood stabilizers (2.60%), beta-blockers (1.48%) and multivitamin (0.37%) as shown in fig.1 and Table.1.

Table 2 shows the analysis of prescription patterns according to the WHO drug use indicators. A total of 80 prescriptions containing 269 drugs were analyzed. Drugs prescribed in their generic name constituted 99 % while the prescriptions with injectable drugs accounted for 2% and 0.01% of the prescription contained psychotropic fixed- dose combination (FDC). 27.98% of the psychotropic drugs were prescribed from the essential drug list. The percentage of drugs prescribed from the WHO drug list was 33.45% and the average no. of drugs per prescription was 3.33.
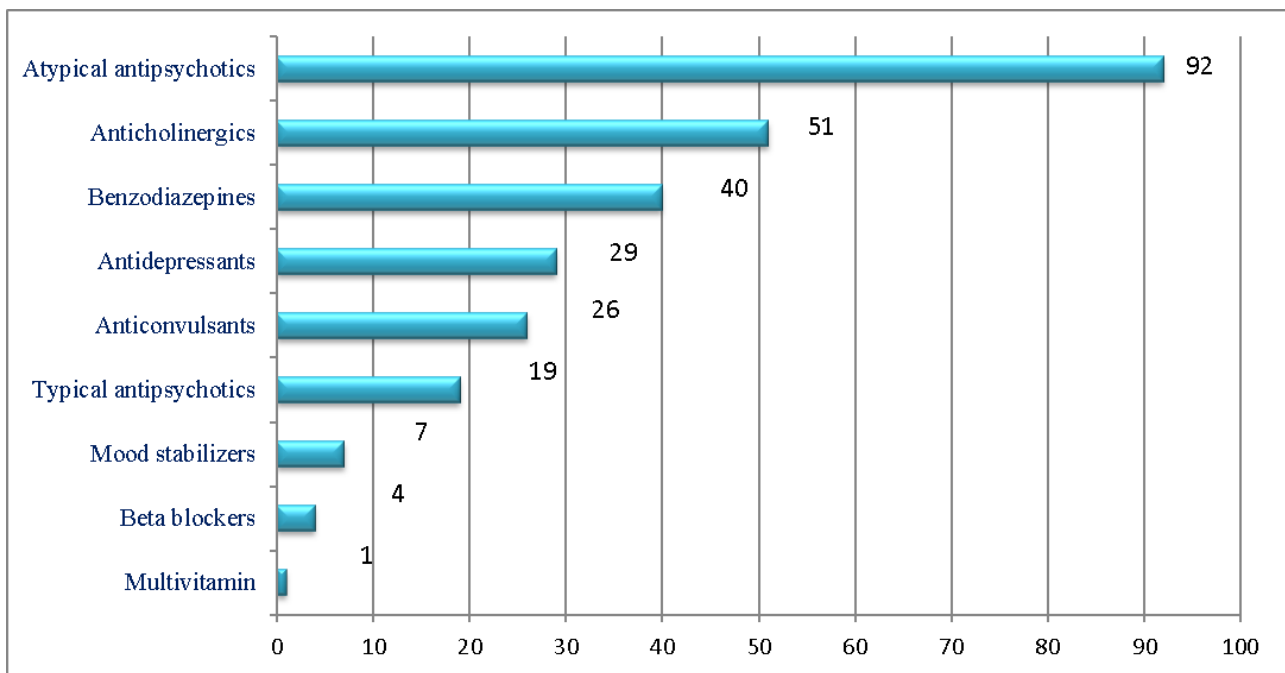

Figure 1: Classes of drugs prescribed in psychiatry department.

Table 1: Drugs prescribed in a psychiatry department, GGH- RIMS, 2020-2021.

Drug names	No. of drugs	Percentages
Atypical antipsychotics		
Risperidone	30	11.15
Olanzapine	36	13.38
Clozapine	6	2.23
Amisulpride	6	2.23
Quetiapine **Anticholinergics**	14	5.20
THP	37	13.75
Phenargan	14	5.20
Benzodiazepines		
Diazepam	30	11.15
Lorazepam	7	2.60
Clonazepam	3	1.11
Antidepressants		
Fluoxetine	1	0.37
Amitriptyline,	6	2.23
Escitalopram,	16	5.94

Sertraline	6	2.23
Typical antipsychotics		
Haloperidol	16	5.94
Chlorpromazine	1	0.37
Fluphenazine	2	0.74
Anticonvulsants		
Carbamazepine	5	1.85
Sodium valproate	19	7.06
Topiramate	2	0.74
Beta-blockers		
Propranolol	4	1.48
Mood stabilizers		
Lithium	7	2.60
Multivitamin		
Opti neuron	1	0.37

Table 2: Evaluation of drug as per WHO indicators.

DRUG USE INDICATORS	RESULTS
Total no. of prescriptions	80
Total no. of drugs prescription	269
Percentage of drugs prescribed by generic name	99%
Percentage of drugs prescribed in injection form	2%
Percentage of psychotropic drugs ad FDCs	0.01%
Percentage of drugs prescribed from essential drug list	27.98%
Percentage of drugs prescribed from WHO drug list	33.45%
Average no. of drugs per prescription	3.33%

DISCUSSION

Psychosis or psychotic disorder is a symptom of mental illness characterized by a distorted or non-existence sense of reality It indicates the presence of hallucination, delusions, or a limited number of severe abnormalities of behavior. Psychotic disorders have different etiologies, each of which demands a unique treatment approach. Hallucinations, delusions, disorganized speech, and disorganized or agitated behavior comprise the types of psychotic symptoms found individually, or rarely together, in all psychotic disorders, and are typically responsive to pharmacotherapy.

In the present study out of 80 patients analyzed, more female patients are visited the psychiatric OPD than male patients. These findings are similar to many other studies. According to Karan B. Thakkar et al,[4] estimated that more female patients affecting than male patients. Which shows that psychiatric illness is more common in females. However, this is contrary to the study done by Sonali B. Rode et al,[5] analyzed that more male patients visited the psychiatry OPD than female patients.

In our study from the WHO drug list the Risperidone 36(4.12%) and diazepam 30 (4.12%) are more commonly prescribed drugs followed by valproic acid 19(2.60%) and Haloperidol16 (2.19%), this study is similar to the following studies. According to Shankar kumar et al,[6] Risperidone had been the most commonly prescribed antipsychotic (44.71%) followed by olanzapine (34.81%) and aripiprazole (7.12%). Other antipsychotics like clozapine (5.32%), quetiapine

(2.95%), trifluoperazine (2.67%), haloperidol (2.5%), amisulpride (1.34%), and fluphenazine (0.45%) were prescribed in fewer patients. According to Ghosh Sidharth et al,[7] the study is analyzed that the most commonly prescribed drugs are Atypical antipsychotic drugs like Olanzapine 420 (77.06%) Risperidone 45 (8.26%) and Quetiapine 10 (1.83%) followed by Typical antipsychotics such as Haloperidol 60 (11%) Trifluperidol 10 (1.83%) and Anticholinergic such as Trihexyphenidyl 60 (11%)

According to H.K. Sushma et al,[8] the study evaluated that among single antipsychotic with Anticholinergic, risperidone (20%) was most commonly used, followed by trifluoperazine (7%). Use of Anticholinergic drug, trihexyphenidyl accounts for 94% of the total prescriptions. Olanzapine 125(45.13%) was the most common antipsychotic drug prescribed followed by haloperidol 9634.66%), and risperidone 20(7.22%). The study conducted by Sabu et al,[9] wherein prescribing pattern of antipsychotics in their study showed increased usage of atypical antipsychotics (18.8%) compared to typical antipsychotics (2.02%). Risperidone (42.5%) was the most commonly prescribed antipsychotic followed by olanzapine (23.33%). Prescriptions consisting of typical antipsychotics were found to be less, wherein chlorpromazine and haloperidol being the only drugs prescribed (5% each).

This study found that most (30) of the patients received diazepam, followed by 7 patients receiving clonazepam and 3 patients receiving lorazepam. The study conducted

by Sonali B et al,[5] in that among benzodiazepines (328) most of the patients (170) received clonazepam followed by lorazepam in 106 patients and others in 52 patients.

Among antidepressants mostly escitalopram was prescribed in 16 patients, Amitriptyline in 6 patients, sertraline in 6 patients, Fluoxetine in 1 patient. The study conducted by Rode SB et al,[5] in which among antidepressants (278) mostly Escitalopram had given in 109 patients, followed by Amitryptiline was given in 67 patients, Imipramine was given in 46 patients and remaining were others.

In the present study among mood stabilizers, mostly sodium valproate was prescribed followed by lithium and carbamazepine. In a study conducted by Sabu et al., [9] among the mood stabilizers, lithium and sodium valproate were commonly prescribed, followed by carbamazepine.

CONCLUSION
This study concludes that among psychotropic drugs atypical antipsychotics were the most commonly prescribed, and as per the WHO prescribing indicators. This study also establishes a baseline regarding prescribing indicators such as the average number of medicines per prescription and the percentage of the psychotropic drugs prescribed from the essential drug list.

CONFLICT OF INTEREST: The authors declare they have no conflict of interest.

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