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AN EVALUATION OF PRESCRIPTION PATTERN OF ANTIPSYCHOTICS AND IT'S IMPACT ON QUALITY OF LIFE IN PATIENTS WITH PSYCHIATRIC DISORDERS -A PROSPECTIVE OBSERVATIONAL STUDY

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ABSTRACT

Background: Antipsychotics are the primary therapeutic intervention in the treatment of patients with psychiatric disorders. Prescribing trends of antipsychotics has modified with accessibility of atypical antipsychotics. The assessment of current life skills, quality of life, medication adherence of the patient and subsequent intervention becomes necessary forcomprehensive rehabilitation of people with mental illness. Hence continuous studies on antipsychotics are needed to provide most upgraded, effective and rational treatment of psychoses.

Methods: A prospective observational study of patients receiving antipsychotics was carried out in Psychiatry Department of Pushpagiri Medical College Hospital, Thiruvalla for a periodof six months. All relevant data of the enrolled patients was collected from various data sources and was documented in a suitably designed data collection forms to evaluate the pattern of medication use, ADL and IADL, quality of life and medication adherence.

Results: A total of 91 patients was enrolled in study. Male predominance (58.24%) was observed in the study. Among typical antipsychotics, Chlorpromazine (60%) and among atypical antipsychotics,

Risperidone (45.07%) was most commonly prescribed antipsychotic. Higher inclination towards atypical antipsychotics was observed than typical antipsychotics. The WHO Core Prescribing indications corresponded with the optimal values, suggesting rational drug therapy. The quality of life of patients after taking antipsychotics was improved by score of 87.187. Medication adherence was improved by 51.65% after patient counselling.

Conclusion: Clinical Pharmacist-led collaborative counselling treatment have helped the patients in understanding about their condition and developing a positive attitude towards their disorder and reduced the risk of relapse.

Keywords: Antipsychotics, Prescribing pattern, Activities of daily living, Instrumental activities of daily living, Quality of life, Medication adherence

INTRODUCTION

Anti-psychotic medications, also referred as Neuroleptics are adopted since 1950s in the clinical setting for the management of psychiatric ailments such as psychoses, schizophrenia, schizoaffective and bipolar disorders **[1, 2]**. These newer medicines, such as risperidone and olanzapine, have efficacy that is at least similar to that of older treatments like chlorpromazine and haloperidol, while having a small number of side effects **[3, 4]**. Psychiatric disorders are deleterious, complicated diseases that affect mood, cognition, and behaviour and are also known as mental illnesses synonymously. **[5]**. The study of psychiatric drug prescription patterns provides an image of drug preference and medication rationality. Psychiatric medications play an important role in the treatment of a variety of mental illnesses **[6]**.

ADL is used as an indicator of a person's functional status. Measurement of an individual's ADLis important as these are predictors of admission to nursing homes, need for alternative living arrangements, hospitalization, and use of paid home care. Instrumental activities of daily living (IADL) are those activities that allow an individual to live independently in a community. Although not necessary for functional living, the ability to perform IADLs can significantly improve the quality of life **[7, 8]**.

Quality of life is defined by the WHO as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". It is a broad concept that encompasses a person's physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationships to salient features of the environment in a complex way **[9]**.

Patients' attitudes towards medications may be relatively independent of their

demographic and clinical characteristics, or they may differ depending on age and illness-related factors such as the severity and course of the illness, comorbid substance use, and medication side effects **[10]**.

MATERIALS AND METHODS

A single centered, hospital based, prospective observational study was conducted in the Department of Psychiatry, Pushpagiri Medical College Hospital, Thiruvalla, Kerala, India for a duration of 6 months including a total of 91 patients.

INCLUSION CRITERIA

Both male and female patients admitted in the psychiatric department prescribed with antipsychotics.

EXCLUSION CRITERIA

Patients/Bystanders who are not willing to give consent, below 18 years and above 65 years of age, as well those patients with mental retardation, substance abuse, pregnant and lactating women.

The sample size obtained was n=91 using the formula;Sample size, $n = [Z\alpha]^2PQ/d^2$

STUDY PROCEDURE

A prospective observational study was conducted in the Department of Psychiatry at Pushpagiri Medical College Hospital on the topic: **"An Evaluation of prescription Pattern Of Antipsychotics And It's Impact on Quality Of Life In Patients With Psychiatric disorders-A Prospective Observational Study''**. It was a 6- month study conducted after getting ethical committee approval. Patients' demographic data and drug therapy were collected using patient data collection form. Prescribing pattern of antipsychotics was collected from the medical records and was assessed. Activities of daily living and Instrumental activities of daily living was assessed using Katz scale and Lawton Brody Scale respectively. Quality of life was assessed using WHOQOL-BREF Scale and Medication adherence were assessed using the MARS-10 questionnaire and patient counselling was provided in order to improve medication adherence and the impact was assessed.

STATISTICAL ANALYSIS

The information collected on the data collection forms were uploaded in an excel sheet and data was analysed using IBM SPSS VERSION 20. Paired t test was used to test if there are any significant difference between the values.

RESULTS AND DISCUSSIONS

1. Prescription pattern of Antipsychotic drugs in psychiatric disorders.

Out of 91 prescriptions analyzed, atypical antipsychotics (57.14%) is the most prescribed drug in the antipsychotics. Out of 91 prescriptions analyzed, Chlorpromazine (60%) is the most prescribed drug in the typical antipsychotics, Risperidone (45.07%) is the most prescribed drug in the atypical antipsychotics, Risperidone

+Trihexyphendyl) (56.52%) is the most prescribed drug in the antipsychotic combinations. Atypical drugs are recommended as preferable medicines due to their high effectiveness, lower incidence of extra pyramidal side effects, reduced negative symptoms, cognitive impairment, and ability to bring response in patients who have failed to respond to traditional antipsychotics.

2. The changes in "Activity Of Daily Living (ADL)" & "Instrumental Activity Of Daily Living (IADL)" in psychiatric patients after taking anti-psychotics.

The comparison of Activity of Daily Living (ADL) and Instrumental Activity of Daily Living(IADL) scores before and after taking antipsychotic drugs revealed no significant difference even after the use of antipsychotics.

3. Quality of life of patients (QOL) after taking anti-psychotics.

About 79.73% of patients showed improvement in the Quality of life due to clinical pharmacist involvement and patient counselling.76.93% of patients showed improvement in the Domain 1, 83.51% of patients showed improvement in the Domain 2, 75.82% of patients showed improvement in the Domain 3, 83.51% of patients showed improvement in the Domain 4 after taking antipsychotics. This is due to clinical pharmacist led collaborative treatment approach counselling was provided even to their bystanders which helped in increasing their understanding about the disease condition and developing a positive attitude towards the patient and their treatment.

4. The impact of pharmacist based intervention on medication adherence before and after patient counselling.

About 68.13% patients showed a score of ≤5 (poor adherence) and 31.86% patients scored >5(high adherence). On their follow up visits, 16.48% patients scoring ≤5 (poor adherence) and 83.5% patients scoring >5 (high adherence). Medication adherence was improved by 51.65% as a result of clinical pharmacist led collaborative treatment approach.

Table 1: Distribution of patients based on prescribing trends of antipsychotics

ANTIPSYCHOTICS	FREQUENCY (n=140)	PERCENTAGE (%)
ATYPICAL	80	57.14%
TYPICAL	60	42.85%

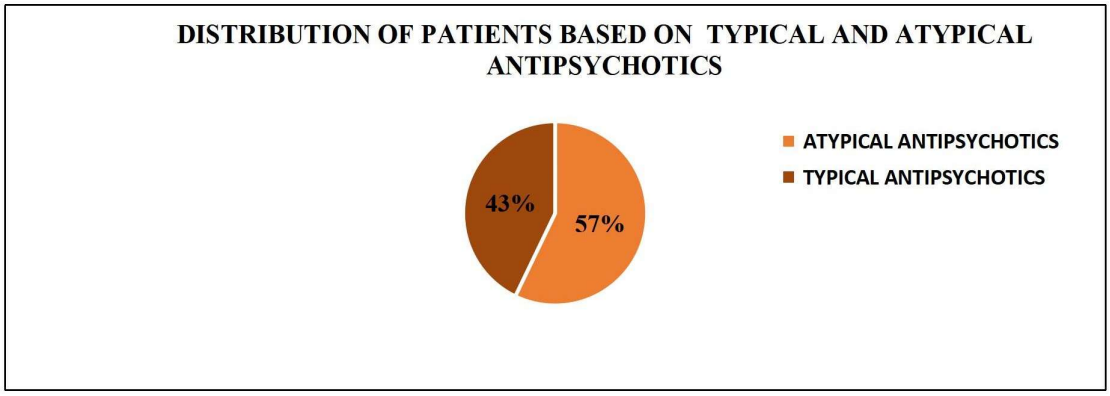

Figure 1: Distribution of patients based on prescribing trends of antipsychotics

Table 1.1: Distribution of patients based on prescribing trends of typical antipsychotics

TYPICAL ANTIPSYCHOTICS	FREQUENCY (n=60)	PERCENTAGE (%)
CHLORPROMAZINE	36	60%
HALOPERIDOL	24	40%

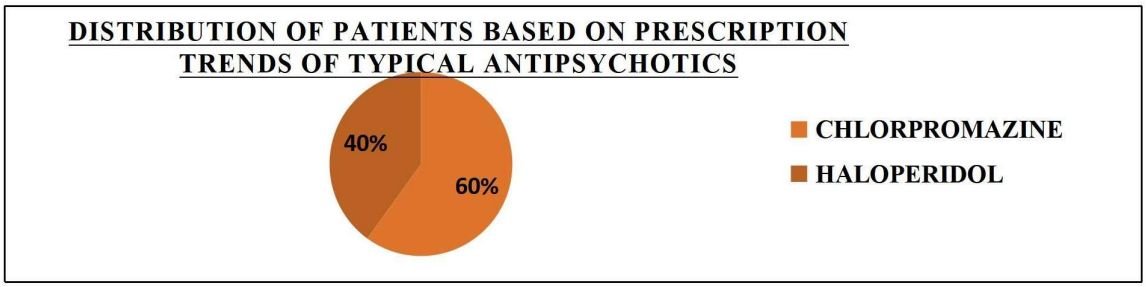

Figure 1.1: Distribution of patients based on prescribing trends of typical antipsychotics

Table 1.2: Distribution of patients based on prescribing trends of atypical antipsychotics

ATYPICAL ANTIPSYCHOTICS	FREQUENCY (n=71)	PERCENTAGE (%)
RISPERIDONE	32	45.07%
OLANZAPINE	25	35.25%
QUETIAPINE	10	14.08%
ARIPIPRAZOLE	1	1.25%
CLOZAPINE	2	2.25%
AMISULPRIDE	1	1.25%

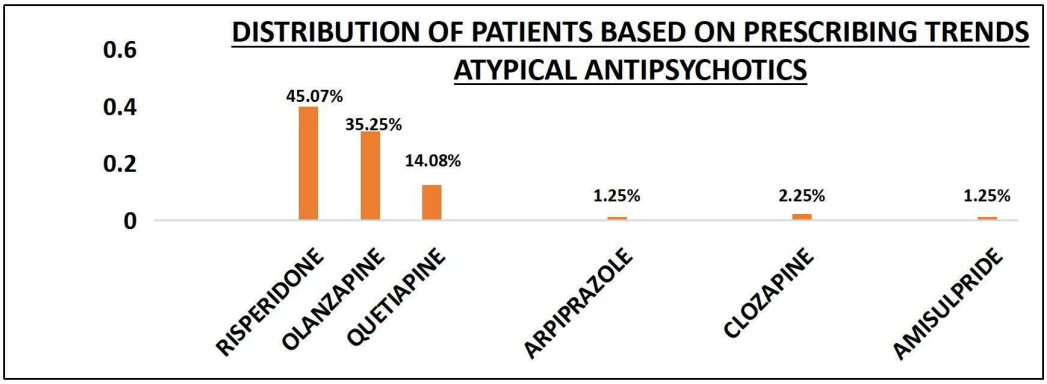

Figure 1.2: Distribution of patients based on prescribing trends of atypicalantipsychotics

Table 2.1 Comparison of mean score of Activity of daily living before and after takingantipsychotics

PARAMETER	TIME	MEAN SCORE	SD	TEST STATISTIC &P VALUE
ADL SCORE	BEFORE	5.37	1.314	t=0.267p=0.960
	AFTER	5.34	1.416	

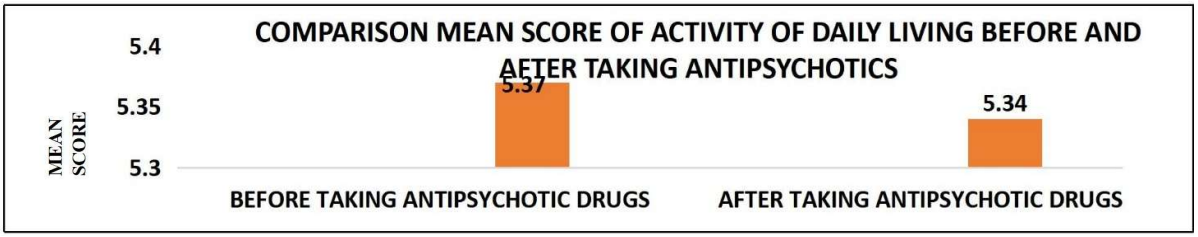

Figure 2.1: Comparison of mean score of Activity of daily living before and after takingantipsychotics

Table 2.2: Comparison of mean score of Instrumental activity of daily living before andafter taking antipsychotics

PARAMETER	TIME	MEAN SCORE	SD	TEST STATISTIC &P VALUE
IADL SCORE	BEFORE	5.53	2.566	t=0.637p=0.525
	AFTER	5.35	2.282	

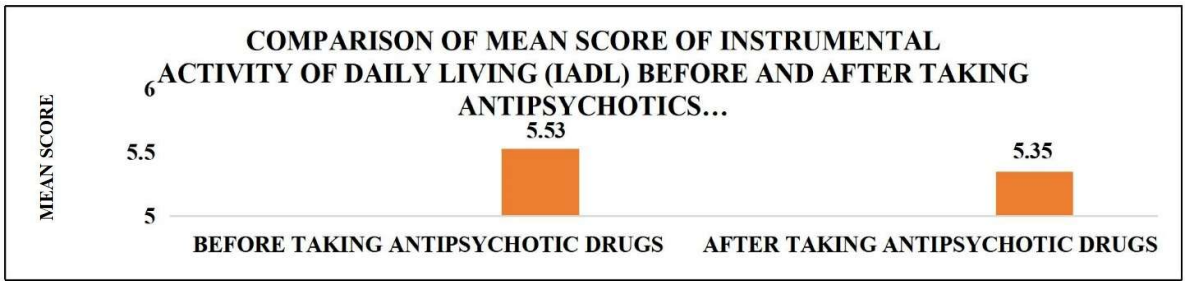

Figure 2.2 Comparison of mean score of Instrumental activity of daily living beforeand after taking antipsychotics

Table 3: Distribution of patients based on Quality of Life after taking antipsychotics

QUALITY OF LIFEAFTER TAKING ANTISPCHOTICS	FREQUENCY (n=91)	PERCENTAGE (%)
NOT IMPROVED	19	20.27%
IMPROVED	72	79.73%

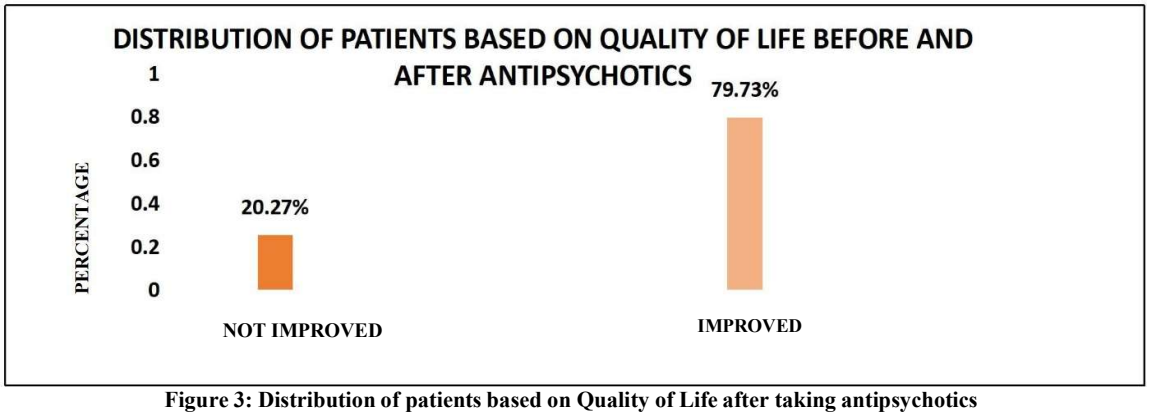

Figure 3: Distribution of patients based on Quality of Life after taking antipsychotics

Table 4: Distribution of patients based on Mars-10 scale before and after patientcounselling

MEDICATION ADHERENCE	PATIENTS BEFORE PATIENT COUNSELLING		PATIENTS AFTER PATIENT COUNSELLING	
	FREQUENCY(n=91)	PERCENTAGE(%)	FREQUENCY(n=91)	PERCENTAGE(%)
LOW (≤5)	62	68.13%	15	16.48%
HIGH (>5)	29	31.86%	76	83.5%

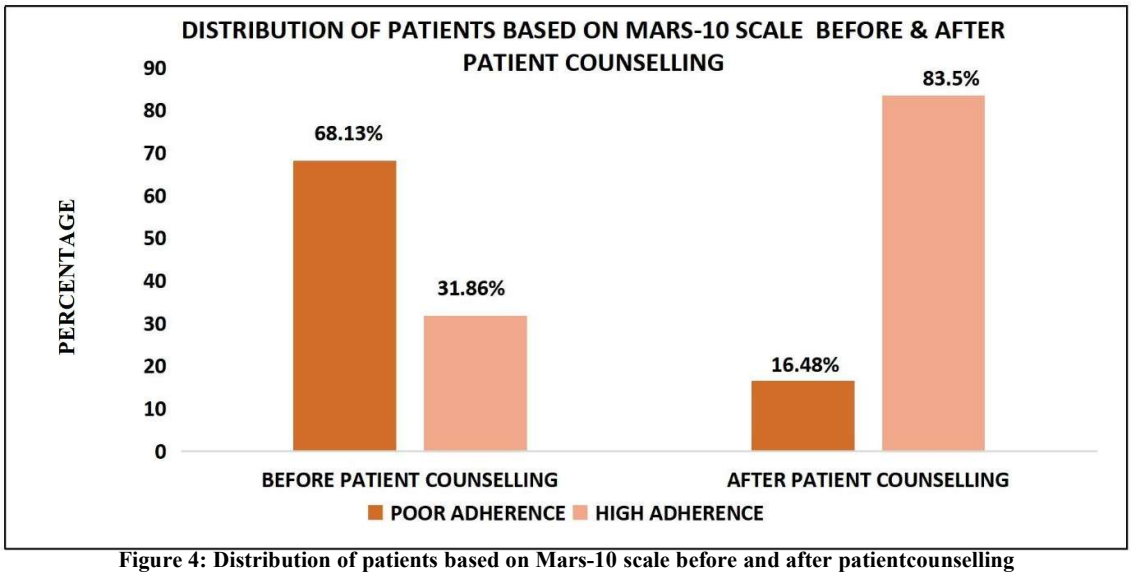

Figure 4: Distribution of patients based on Mars-10 scale before and after patientcounselling

CONCLUSION

The diversity in prescription patterns underscores the complex nature of psychiatric treatment, reflecting the necessity for personalized approaches tailored to individual patient needs. The correlation between specific antipsychotic medications and improvements in quality of life highlights the importance of selecting appropriate medications based on both clinical efficacy and tolerability. Patient counseling plays a pivotal role in enhancing medication adherence by addressing patient concerns, providing clear instructions, and fostering a supportive patient- provider relationship. Moving forward, continued research and innovation in patient counseling techniques and technology-driven solutions will be essential for addressing the multifaceted challenges of medication non-adherence and promoting better health outcomes for patients worldwide.

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CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorshipand/ publication of this article.

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