

PHARMACOLOGY IN SCHIZOPHRENIA

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Abstract

Background: Schizophrenia is a chronic debilitating major psychiatric illness which is characterized by a decreased ability to understand reality, strange speech and abnormal behavior.

Aims: To find out pharmacological patterns in schizophrenic patients.

Materials & Methods: The present observational cross-sectional study involved prescription of 150 schizophrenic patients and was conducted in the outpatient department (OPD) of tertiary care hospital, Jammu over a period of two months. Data like name, number, combination of drugs etc of psychotropic medications were collected

Results: Average number of drugs per prescription was 2.26. Among prescribed antipsychotics, 87.9% were atypical antipsychotic drugs. Single antipsychotic was used in 57.3% patients whereas combination of antipsychotics were used in 42.7% patients. Olanzapine was the most commonly used antipsychotic drug and was prescribed in 72.7% patients. Benzodiazepines were the most commonly used comedications and were prescribed in 62% patients.

Conclusion: From present study, it has been concluded that atypical antipsychotic drugs were the most frequently prescribed among schizophrenic patients. The most common medication to be used was olanzapine whereas the most common comedications used along with antipsychotics were benzodiazepines.

Keywords: Antipsychotics, Olanzapine, Schizophrenia.

Introduction:

Schizophrenia is a chronic debilitating major psychiatric illness which is characterized by a decreased ability to understand reality, strange speech and abnormal behavior.¹ It poses significant challenges in its management and consequences², and may require life long treatment.¹ It puts significant burden on caretakers and society due to frequent hospitalizations, cost of treatment and long term need for economic support.²

With the discovery of antipsychotic medications outcomes in persons with schizophrenia has improved through control of symptoms.³ Till now pharmacotherapy remains the cornerstone of treatment in these patients.¹ Over the years, almost all the newer antipsychotics are available in India which had broadened the antipsychotic

pharmacopeia.⁴ With the availability of such a variety of antipsychotic drugs, it becomes difficult to select a particular antipsychotic drug on rational basis. At present these drugs are used for variety of indications.¹ Keeping these factors in mind we conducted this study with the aim to find pharmacological patterns in schizophrenic patients.

Methodology:

The present observational cross-sectional study involved prescription of 150 schizophrenic patients and was conducted in the outpatient department (OPD) of tertiary care hospital, Jammu over a period of two months. Before selection for the study, patients were diagnosed by the consultant psychiatrist according to DSM 5 diagnostic criteria.⁵ The first 3 alternate patients who were diagnosed as schizophrenia were selected for the study. Data like

name, number, combination etc of psychotropic medications were collected.

Statistical analysis:

Analysis of data was done using statistical software MS Excel / SPSS version 17.0 for windows. Data presented as percentage (%) as discussed appropriate for quantitative and qualitative variables.

Observation and results:

Table 1 shows that 339 drugs were prescribed to 150 patients with average number of drugs per patient was 2.26. 63.1% of the prescribed drugs were antipsychotics whereas 36.9% were other psychotropic drugs.

Table 1: shows drug usage pattern in schizophrenia.

Total number of patients	150
Total number of drugs prescribed	339
Antipsychotics	214(63.1%)
Psychotropic drugs other than antipsychotics	125(36.9%)
Average number of drugs per patient	2.26

Table 2 shows that 87.9% of the prescribed antipsychotic drugs were atypical compared to 12.1% which were typical antipsychotics.

Table 2: shows pattern of prescribed antipsychotic drugs

Class of antipsychotics	Number of patients	Percentage
Typical	26	12.1
Atypical	188	87.9
Total	214	100

Table 3 shows that single antipsychotic was prescribed in 57.3% patients whereas combination of antipsychotics was prescribed in about 42.7% patients. Moreover olanzapine was the most commonly prescribed antipsychotic which was prescribed in 72.7% patients followed by amisulpride in 20.7%, quetiapine in 18.7%, haloperidole in 11.3%, aripiprazole in 7.3%, trifluoperazine in 6%, clozapine in 3.3% and resperidone in 2.7% patients respectively.

Table 3: shows number and name antipsychotic drugs prescribed

	Number of patients	Percentage
Number of antipsychotic drugs		
Single	86	57.3
Combination	64	42.7
Name of the antipsychotic drugs		
Olanzapine	109	72.7
Amisulpride	31	20.7
Quetiapine	28	18.7
Resperidone	4	2.7
Clozapine	5	3.3
Aripiprazole	11	7.3
Haloperidol	17	11.3
Trifluoperazine	9	6

Table 4 shows that benzodiazepines as comedication was prescribed to 62% patients whereas anticholinergics were prescribed to 8%, antidepressants to 7.3% and other psychotropic drugs were prescribed to 6% patients respectively.

Table 4: shows comedication prescribed along with antipsychotics

Name of the co medication	Number of patients	Percentage
Benzodiazepines	93	62
Antidepressants	11	7.3
Anticholinergic	12	8
Others	9	6

Discussion:

In the present study 339 drugs were prescribed to 150 patients with the average number of drugs per patient was 2.26. Although as per WHO guidelines the average number of antipsychotics per prescription should be between 1.6-1.8 but it may varies across different cultures.⁶ Various Indian studies shows that average number of antipsychotics per prescription can range from 1.07 to 2.8.^{1,4,6,7,8,9}

Out of 339 prescribed drugs 63.1% were antipsychotics and 36.9% were psychotropic drugs other than antipsychotics. The treatment of choice for schizophrenia is antipsychotic medications¹⁰ resulting in highest percentage of antipsychotics in this study. Our finding is in accordance Rode SB et al who observed that 56.22% of prescribed drugs in

schizophrenic patients were antipsychotics.⁴ Similarly Dutta SB et al and Paul PK et al had observed that majority of the drugs prescribed to schizophrenic patients were antipsychotics.^{1,6}

Among total prescribed antipsychotic drugs 87.9% were atypical and only 12.1% were typical antipsychotics. This is as per with the recent guidelines which recommends the use of atypical antipsychotics as the first line of treatment for schizophrenia.^{4,11} Moreover atypical antipsychotics are associated with lesser extrapyramidal symptoms, are better tolerated and hence are prescribed more as compared to typical antipsychotics.¹² The finding of ours is similar to Nukala S et al had found that 95.96% of the prescribed antipsychotic drugs to the schizophrenic patients were atypical antipsychotic.⁹ Our finding can further be supported by Rode SB et al and Siddharthe G et al who observed that 80.09% and 87.15% of the prescribed antipsychotics were atypical antipsychotics respectively.^{4,7} Similar observations were also made in other studies.^{1,13}

42.7% patients were taking combination i.e. more than single antipsychotics. For the treatment of schizophrenia antipsychotic polypharmacy is a common practice despite the consistent recommendations of antipsychotic monotherapy.¹⁴ Various Indian studies had observed that antipsychotic polypharmacy in schizophrenic patients can range from 6% to 47%.^{1,4,7,13,15}

In the present study maximum percentage of patients i.e. 72.7% were taking olanzapine followed by other drugs. Olanzapine is a newer atypical antipsychotic with minimal of side effects, has better tolerance, needs less dose adjustment and can be administered as single dose on daily basis which can even increases patients compliance.^{4,11} Our finding is in accordance to Siddharthe G et al who observed that olanzapine was prescribed in about 77.06% of schizophrenic patients.⁷ Other studies had also observed that olanzapine was prescribed in majority of the schizophrenic patients.^{1,4,6,16}

The most common comedications prescribed along with antipsychotics to the schizophrenic patients was benzodiazepines which was prescribed in about 62% patients followed anticholinergics in 8% patients, antidepressants in 7.3% and other psychotropic drugs in about 6% patients. The reason for this could be that the schizophrenic patients may face difficulty in sleep and use of benzodiazepines in these patients may help to improve sleeping patterns. Our finding is

in agreement with Grover S et al. who observed that benzodiazepines as comedication was prescribed in about 68.3%.¹⁶ Similarly Oommen S et al had also found that benzodiazepines were the most common comedication prescribed among the schizophrenic patients.⁸

Conclusion:

From present study, it has been concluded that atypical antipsychotic drugs were the most common drugs prescribed among schizophrenic patients. The most medication to be used was olanzapine followed by amisulpride followed by quetiapine. Also benzodiazepines were the most common comedications used along with antipsychotics among schizophrenic patients.

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