

OBSERVATIONAL STUDY TO EVALUATE PRESCRIPTION PATTERNS IN SCHIZOPHRENIA INPATIENT DEPARTMENT OF PSYCHIATRY UNIT

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ABSTRACT

Background: Polypharmacy in psychiatry is becoming the rule rather than the exception. Using more drugs at same time usually occurs where single drugs are considered insufficiently effective. **Subjects and methods:** The sample consisted of 106 patients from inpatient psychiatry department of a tertiary care teaching hospital. All schizophrenic patients hospitalised during the six month period in 2012 were included in the study. The following data was collected for each patient: age, sex, type of drug prescribed second generation antipsychotics (SGA), first generation antipsychotics (FGA), anticholinergics, anxiolytics, antimaniac, antidepressant and any other concomitant medication. **Results:** In present study polypharmacy was

given in 56 (52.83%) cases. Combinations of FGA and SGA was Prescribed in 71% patients Receiving antipsychotics combinations. Most commonly prescribed combination was Olanzapine and Haloperidol in 57%. **Conclusion:** Polypharmacy is the inevitable approach in the treatment of schizophrenic psychosis. A multi - drug therapy trend was observed & shift towards the use of atypical antipsychotic agents was evident. Concomitant anticholinergic were used only in 12% of the patients reflecting its reduced usage with increasing use of newer atypical antipsychotics.

Keywords: age, sex, olanzapine and haloperidol.

INTRODUCTION

Schizophrenia is a chronic, debilitating, major psychiatric disorder that may require life-long treatment. Treatment of such patients at an early stage may improve the rates of morbidity and mortality, as well as productivity. Till date, Antipsychotic medication is the mainstay of

treatment for schizophrenia and other psychotic disorders. Typical antipsychotics are short in two important performances: poor effect in the treatment of negative schizophrenia symptoms and tendency to cause extrapyramidal side effects (Svjetlana Loga-Zec et al 2011). It is considered that 20-30% of schizophrenic patients did not respond to treatment with typical antipsychotic medications.

The prescription of two or more antipsychotics simultaneously, also called antipsychotic polypharmacy, has no empirical foundation. ^[1] However, in the past antipsychotic polypharmacy with two conventional antipsychotics was frequently practiced with reported frequencies ranging from approximately 10–69% ^[2] In the last few years the conventional antipsychotics are increasingly replaced by the atypical antipsychotics. ^[3] Antipsychotic polypharmacy is associated with more frequent use of adjunctive medications such as anticholinergic drugs and underutilization of atypical antipsychotic medications. ^[4, 5, 6]

Despite a substantial difference in the direct cost of these medications compared with the conventional antipsychotics, several researchers have found the atypicals to be as cost effective as the conventional antipsychotics. These medications also provide advantages in terms of decreased extrapyramidal side effects such as drug-induced parkinsonism, tardive dyskinesia, and akathisia and improved efficacy in treating negative symptoms of schizophrenia such as avolition and flat affect. Therefore, there should be less need for anticholinergic co-medication to be prescribed with the atypicals. Also, the newer agents have shown advantages in terms of improvement in health-related quality of life. ^[7,8,9] Previous studies of the prescription patterns of antipsychotic drugs in patients with psychotic disorders including schizophrenia have revealed widely variable rates (13–90%) of antipsychotic polypharmacy, defined as the use of more than one antipsychotic (1–5). We carried out a pharmaco-epidemiological study to evaluate the antipsychotic polypharmacy co-prescription of other drugs and included data from inpatient psychiatry department of tertiary care teaching.

SUBJECTS AND METHODS

The sample consisted of 106 patients from inpatient psychiatry department of a tertiary care teaching hospital. All schizophrenic patients hospitalised during the six month period in 2012 were included in the study. The study was approved by the institutional Ethics Committee. Patients of both sexes, 18- 60 of age and on antipsychotic treatment with an established diagnosis of schizophrenia by the treating psychiatrist were included in the study. The

prescription pattern was analysed. The following data was collected for each patient: age, sex, type of drug prescribed second generation antipsychotics (SGA), first generation antipsychotics (FGA), anticholinergics, anxiolytics, antimaniac, antidepressant and any other concomitant medication (miscellaneous). Patients then were categorized as either receiving one or more than one antipsychotic combinations of SGA and FGA.

AIMS AND OBJECTIVES

The aim of the study was to analyze the prescribing pattern of drugs in schizophrenic patients and to correlate the availability of newer medicines in the market and its usage or impact on psychiatric practice in the present scenario.

RESULTS

Results showed that the total number of patients included were 106 from inpatient psychiatry department of a tertiary care teaching hospital. the Paranoid schizophrenia accounted for 60% of total number of patients while other different types of schizophrenia includes disorganized, catatonic, undifferentiated, residual, episodic i.e. interepisodic residual symptoms with prominent negative symptoms and episodic with no interepisodic symptoms or continuous with prominent negative symptoms. As per demographic data there were 67 (63.20%) males and females 39 (36.79%) (figure 1). 62(57.79%) patients belonged to age group 18-30 followed by 36(33.76%) in age group 31-50 and 8(7.5%) were above 50 years of age (Table1).

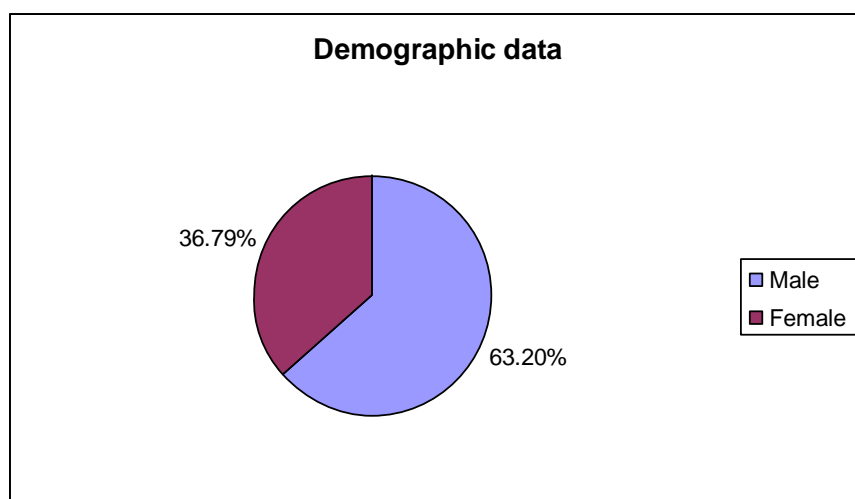


Figure 1: Demographic data.

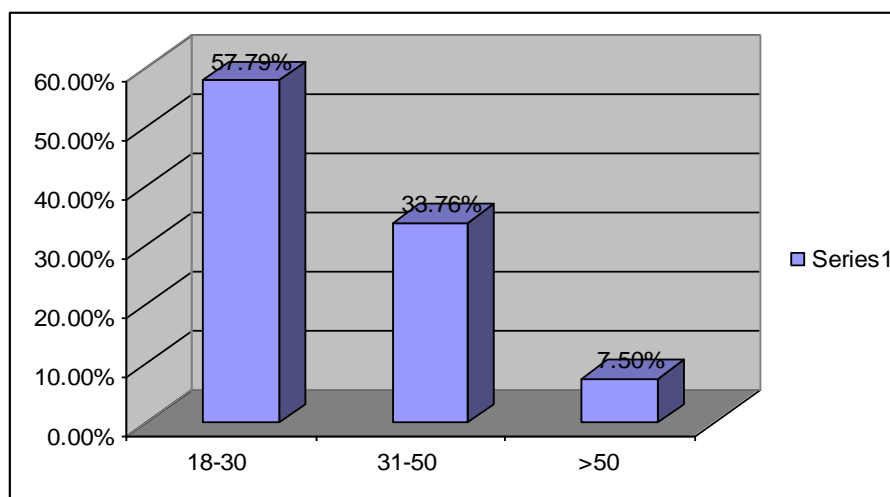


Figure 2: Age wise distribution of patients.

Drug use indicators in patients suffering from schizophrenia

A total of 311 drugs were prescribed, out of which 244(78.4%) were used orally and 67(21.5%) given parenterally. Most commonly used injectable preparations are clonazepam, lorazepam, olanzapine & Haloperidol. Amongst the total 311 drugs prescribed, 2.9 was average number of drugs per prescription (Table 1).

Table 1: Prescribing pattern in patients of Schizophrenia

1. Total number of prescriptions (n)	= 106
2. Total number of drugs used	= 311
3. Average number of drugs per prescription	= 2.9
4. Total number of oral drugs prescribed	= 244
5. Total number of Parenteral drugs prescribed	= 67
6. Most commonly prescribed	
Anxiolytics	= Lorazepam & Clonazepam
Anticholinergics	= Trihexiphenidyl & Promethazine.
Antimaniacs	= Divalproex & carbamazepine

Concomitant drug prescribing

Antipsychotics were prescribed to 165 (53%) patients. Anticholinergic were used in 38 (12.21%), as an anticholinergic, Trihexiphenidyl was prescribed to 25 and Promethazine to 13 patients. 70(22.50%) patients were prescribed Anxiolytics and most commonly used was lorazepam 53 (17%) and clonazepam 17 (5.4%). Antimaniac and mood stabilizers were used

in 17(5.46%) patients. Divalproex 12(3.8%) and carbamazepine 5(1.6%) was the adjunctive therapy used. Miscellaneous therapy (6.10%) included use of antibiotics, anti-inflammatory and Vitamin B complex. (Figure 3).

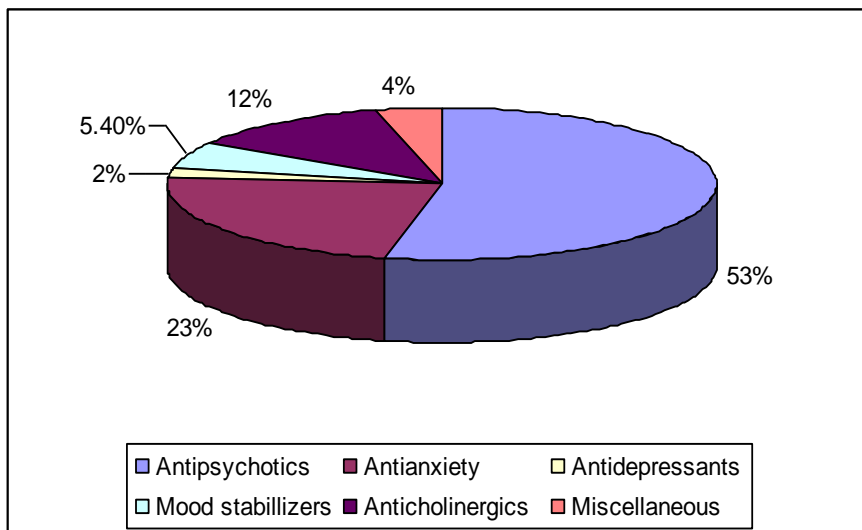


Figure 3: Concomitant drug prescribing.

Antipsychotic prescribing

Of the total 106 prescriptions with antipsychotic treatment, monotherapy was prescribed in 50(47.16%) and 56 (52.83%) cases with polypharmacy (Figure 4). Amongst the patient receiving monotherapy 35 (70%) were treated with SGAs. Most commonly used antipsychotic was olanzapine 24(48%) followed by Haloperidol 12(21.1%), Aripiperazole 04(8%), Risperidone 03(6%), Quetiapine 03 (6%), Ziprasidone 01(2%), Trifluoperazine 03(6%) (Figure 5).

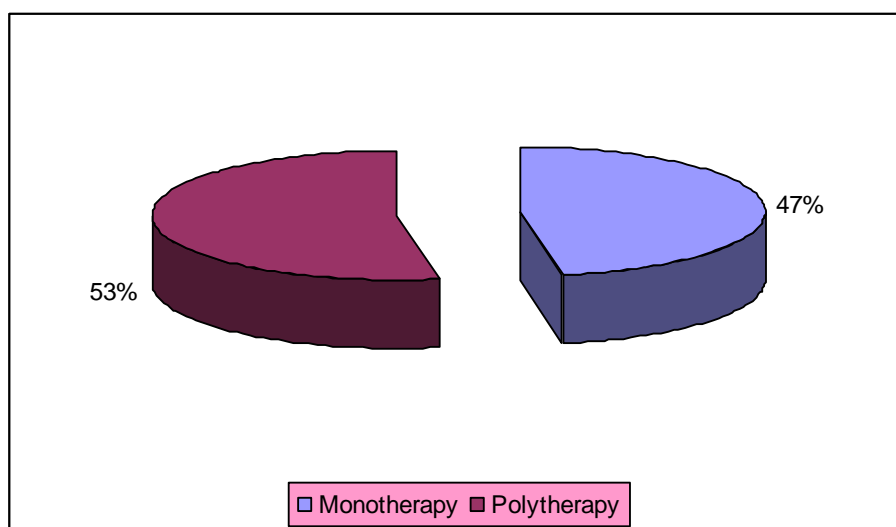


Figure 4: Antipsychotic polypharmacy.

Among the 56 (52.83%) cases with polypharmacy, a combination including both FGA and SGA was prescribed in 40 (%) patients and most commonly prescribed combination is Olanzapine and Haloperidol 32(%) while 13(%) patients received combination of two SGA. Other combinations used in descending order of frequency are: Olanzapine + Risperidone 05 (%), Olanzapine+Aripiprazole 05(%), Olanzapine+Trifluromazine 03(%), Olanzapine+Ziprasidone 03(%), Ziprasidone+Haloperidol 02(%), Risperidone + Haloperidol 02 (%), Aripiprazole+ Haloperidol 01(%). 3(%) were treated with combination of more than two antipsychotics (Figure 6).

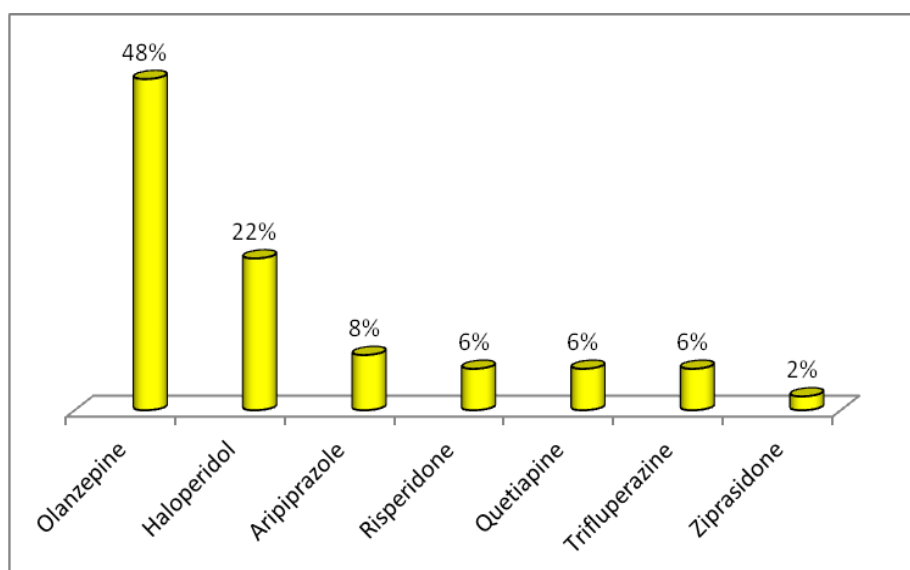


Figure 5: Prescribed antipsychotic monotherapy in schizophrenia.

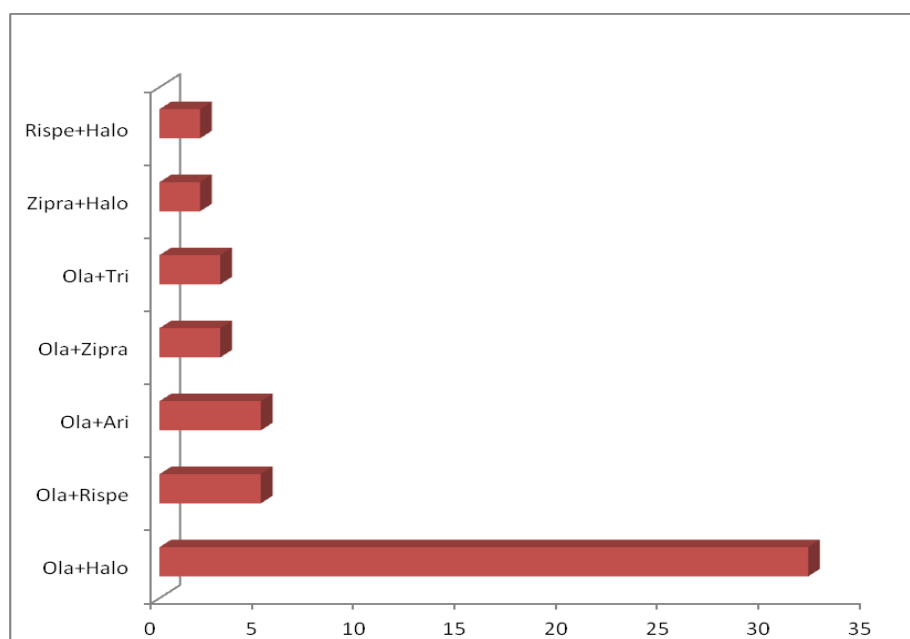


Figure 6: Commonly prescribed combinations in patients of schizophrenia.

DISCUSSION

Drug utilization studies in Psychiatric disorders are few in Indian populations. In the past antipsychotic polypharmacy with two conventional antipsychotics was frequently practised with reported frequencies ranging from approximately 10–69%.^[15] In the last years the conventional antipsychotics are increasingly replaced by the atypical antipsychotics. Few studies from the UK and the US have focused on antipsychotic polypharmacy with atypical antipsychotics and reported frequencies ranging from 13% to 68%.^[16, 17, 18] We carried out a pharmaco-epidemiological study to confirm the practice in Indian population and included data from the inpatient department of tertiary care teaching hospital. Additionally, we also focused on the co-prescription of anticholinergic drugs as atypical antipsychotics cause fewer extrapyramidal side effects than conventional antipsychotics.^[8] Therefore, there should be less need for anticholinergic co-medication to be prescribed with the atypical. Present study reveals that 56 (52.83%) cases with polypharmacy, a combination including both FGA and SGA was prescribed in 40 (%) patients which is in accordance with previous study by *Shakti bhalla et al.* and Lack of efficacy of monotherapy was the prime reason for prescribing antipsychotic combinations, as was reported by two studies of combined antipsychotics in out-patients (Taylor et al, 2002; Tapp et al, 2003). Low-potent antipsychotics may be added to an atypical antipsychotic mainly because of their sedative, anxiolytic and anticholinergic properties, rather than because of their antipsychotic properties. In present study most commonly prescribed combination in polytherapy is Olanzapine and Haloperidol. Thirdly in our study Olanzapine was the most frequently prescribed drug (48.0%) this is in accordance with Rune A Kroken et al, followed by Haloperidol (22%) this is matching with *Shakti Bala Dutta et al.*

CONCLUSION

The applied rule is that more drugs in the treatment of schizophrenic psychosis and using polypharmacy is the inevitable approach to treatment. This is worldwide trend and practised widely. A multi - drug therapy trend was observed. A shift towards the use of newer atypical antipsychotic agents was evident. Concomitant anticholinergic were used only in 12% of the patients reflecting its reduced usage with increasing use of newer atypical antipsychotics.

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