



ANTIPSYCHOTIC PRESCRIBING PATTERN IN ELDERLY PATIENTS WITH SCHIZOPHRENIA IN BIHAR.

Psychiatry

Dr. Navneet

Kumar Choudhary

Senior Resident, Department of Psychiatry, AIIMS, Patna.

Dr. N P Singh*

Associate Professor, Department of Psychiatry, PMCH, Patna. *Corresponding Author

Dr. P K Singh

Professor, Department of Psychiatry, PMCH, Patna.

ABSTRACT

Antipsychotic prescription patterns are fundamentally different across countries and even regions due to variations in factors including health care policies, availability and cost of drugs, psychiatric training, and preferred treatment modalities. **Aims and Objectives:** The objectives of this study were to evaluate the prescribing pattern of antipsychotic drugs and its conformance. **Materials and Methods:** A cross sectional study at 4 governmental primary psychiatric healthcare centers in Bihar was carried out. Patients' medical files were used to obtain demographic, medication and clinical information. **Results:** A total of 250 patients were included in the analysis. The prevalence of antipsychotic combination was 50.4% (n = 126). There was no significant difference in positive (P=0.3), negative (P=0.06) and psychopathology (P=0.5). **Discussions and Conclusions:** Antipsychotic combination was common and has no clinical benefits or economic drawbacks.

KEYWORDS

Antipsychotic, Schizophrenia Elderly Patients.

INTRODUCTION:

Schizophrenia is a devastating mental illness that impairs mental and social functioning. In the Arab world and in many other cultures, most people with mental disorders face stigma, discrimination and marginalization [1]. The stigmatization of people who have a mental illness adds to difficulties in their daily life, prevents them from getting access to treatment and care [2], increases the probability that they will not be offered the treatment they need, or will be offered services that are of inferior quality and insensitive to their needs [3]. Mental health nurse can play an important role in the effective treatment of schizophrenia because they are in a position to recognize the early signs of illness, make referrals to appropriate mental health professionals, help patients and their families cope with the devastating effects of schizophrenia, and encourage a multidisciplinary approach to address all dimensions of the illness.

In India Bihar, mental health services are far away from optimum. There is an urgent need for increased mental health education of the public, psychiatric services, improvement of professional training and the development of mental health services, legislation and policy. To improve psychiatric services, a large number of countries throughout the world have developed their own guidelines for the treatment of schizophrenia [4]. Such guidelines generally acknowledge that there is a lack of evidence to support the routine use of combined antipsychotics except when switching from one antipsychotic to another or augmenting clozapine in treatment-resistant illness [5]. However, there is an increasing prevalence of antipsychotic drug combination with increased risk of adverse drug reactions [6]. To identify the status of antipsychotic prescribing in Palestine, prescription pattern of antipsychotics is needed. The need to analyze the prescribing patterns of antipsychotic drugs is not to find blame but to identify areas where regulatory policies can improve prescribing patterns and outcomes. The current study draws a sample of patients with schizophrenia to examine the conformance of antipsychotic drug prescribing in Palestine with international guidelines. Particularly, frequency of antipsychotic combination and maintenance dose will be examined. Furthermore, factors associated with antipsychotic combination, and the clinical and economic impact of antipsychotic combination will be investigated. A study of the prescribing pattern of antipsychotic drugs will serve as a baseline data to help policy makers to implement safe and cost effective treatment protocols in Palestinian authority. A review of the literature failed to show studies carried out in Palestine or even in the Arab world regarding antipsychotic drug prescribing in primary care settings. Actually studies and published research in the field of mental health are few in the Arab world. Therefore, a study on the prescribing pattern of antipsychotics will be one of the few in the Arab world. Studies on antipsychotic drug combination have concentrated on institutionalized patient populations where patients are being monitored closely for adverse effects compared to patients in outpatient settings. A study in the

primary health care will shed light on the practices made in outpatient basis where monitoring for adverse effects is mostly lacking.

Materials and Methods:

A cross sectional study was conducted between August 2019 and February 2020 at governmental primary psychiatric health care centers in Bihar. Sampling Method and Sample Size A convenience, non-probability, sampling method was used. To collect the sample, visited and stayed 2 weeks in each center and collected data from patients who met the inclusion criteria. In order to estimate with sufficient precision the prescribing pattern, particularly, antipsychotic combination, it was hypothesized a worst-case scenario level of antipsychotic combination of about 70%, to be estimated with a 95% confidence interval of 15 percentage points. Therefore, a sample size of at least 134 patients was needed.

Inclusion Criteria: All patients attending governmental primary psychiatric health centers during the study period were invited to participate. Patients who fulfilled the following inclusion criteria were included in the analysis:

1. Their age was above 16 years old,
2. They were diagnosed with schizophrenia.
3. They had not been suffering from an acute attack of illness during the past year,
4. Their drug regimen had not been changed in the past 6 months as evident in their medical files.

Exclusion Criteria :

Patients who had the following characteristics were excluded from the study:

1. Newly diagnosed patients
2. Schizophrenic patients who are not on any antipsychotic medication

Data Collection Data collection forms was developed to cover all data items needed. The form covered the following areas: socio-demographic details, employment, length of psychiatric history, antipsychotic medications currently being used, and history of psychiatric hospitalization in the past. Descriptive statistics for all study variables were computed. These descriptive statistics included frequencies and percentages for all categorical variables in addition to means, standard deviations and ranges for all normally distributed continuous variables while median and inter quartile range for continuous variables that were not normally distributed. Variables were tested for normality using the Kolmogorov-Smirnov test. Non-parametric binomial t-test was used to test the difference in the prevalence of antipsychotic combination obtained in this study with those published elsewhere. Statistical significance for intergroup differences was assessed by the Student's t-test for continuous variables. The conventional 5 percent significance level was used throughout the study. Univariate analysis and multiple logistic

regression was used to find significant factors associated with antipsychotic combination. All statistical analyses were conducted using Statistical Package for Social Sciences SPSS (PASW version 19.0; IBM, Somers, NY) statistical packages for Windows. Ethical Consideration Approval to perform the study was obtained.

RESULTS:

During the study period, 250 clients were included in the study; 68 (27.2%) were female and 182 (72.8%) were male. The mean age of the patients was 41.9 ± 11.8 [95% CI: 40.5 – 43.4] years. No significant difference in age was found between male and female patients (40.3 ± 12.4 for females versus 42.5 ± 11.5 years for males; $p = 0.2$). More than half of the patients came from villages (145, 58%) while the remaining (105, 42%) came from cities or camps. The majority of the patients [213 (85.2%)] had less than school education and more than half (153; 61.2%) were smokers. The majority of the patients (197; 78.8%) were unemployed. More than half (138; 55.2%) of the patients were either unmarried or divorced. The median duration of illness was 15 years (Q1 – Q3: 9 – 20). The median number of psychiatric hospitalization of the patients during their lifetime was 1 years (Q1 – Q3: 0 – 3). Based on normal values for waist circumference (WC); 56 (82.4%) female patients had WC above the normal value while only 58 (31.9%) male patients had a WC above the normal value. It showed that antipsychotic combination was a significantly associated with the following variables: smoking ($P = 0.04$), duration of illness ($P = 0.01$), number of psychiatric hospitalization ($P = 0.001$), use of depot antipsychotic agents ($P < 0.01$). Multiple logistic regression was used by including all significant variables into the model analysis. Results showed that the following variables are significant predictors of antipsychotic combination: use of depot medications, use of anticholinergic agents and use of total CPZeq > 600 mg show Table . Factors that were significantly and positively associated with antipsychotic combination were using anticholinergic agents .

DISCUSSION:

This study aimed at investigating the prescribing pattern of antipsychotics in governmental primary psychiatric healthcare centers. The results of the study showed that antipsychotic combination and use of supra-therapeutic doses are common. Furthermore, the study showed that clinical benefits of antipsychotic combination are not significantly different from those of monotherapy. Predictors of prescribing antipsychotic combination include use of depot antipsychotic medications, use of anticholinergic drugs and receiving a CPZeq dose > 600 mg. Interestingly, one study examined previous clozapine prescription in those on polypharmacy and surprisingly found that only 4% had been given a trial of clozapine before being commenced on combination (Miller and Craig 2002).[7] This finding suggests that antipsychotic combination is being considered earlier in a patient's management plan and is not being reserved for truly treatment-resistant cases. In the US, rates of antipsychotic combinations used to vary between 13% in outpatient clinics and 50% in inpatients (Freudenreich, Henderson et al. 2007). Another study in USA indicated that about a third (35.7%) of the patients were treated predominately with monotherapy (>300 days), 26.9% were treated predominately with combination (>300 days) and 30.2% had a mix of both substantial monotherapy and combination treatment periods (61–300 days of each) [7]. In United Kingdom 17.4 % of the antipsychotic prescriptions were in the context of combination [10]. These discrepancies in prevalence of antipsychotic combination across studies may be accounted for by differences in the definition of antipsychotic combination. Although most studies defined combination as any time with more than one antipsychotic[9]. Some studies have shown clinical benefits of combination therapy. One such trial compared clozapine alone versus combination of clozapine and risperidone in the management of severe treatment-resistant schizophrenia. Forty patients were studied over a 12- week period and an improvement in negative and positive symptoms of 55 schizophrenia without increased rates of agranulocytosis, weight gain or seizures was seen. The authors concluded that the 'combination appeared to be safe and well tolerated' while also 'improving the overall symptoms – both the positive and negative' [9]. However, the rates and severity of hyperprolactinaemia were similar to those seen in studies looking at sulpiride alone, and were therefore not thought to be related to the addition of clozapine. A further study looking at combination of FGA and SGA found that there was little evidence of an improvement in outcome and there was a significant increase in adverse effect burden [11]. Another study found that use of combination 56 antipsychotic agents was associated with an increased

incidence of metabolic syndrome, although the increased incidence could not be solely related to antipsychotic usage and was also linked to clinical and demographic factors [12]. These studies have all added to the uncertainty regarding the efficacy of antipsychotic polypharmacy, and the BNF states that the 'prescribing of more than one antipsychotic at the same time is not recommended and may constitute a hazard' (British Medical Association 2008). However, there are risks beyond the continuous use of anti-cholinergic agents such as memory impairment, delirium and reverse the effect of atypical antipsychotics on cognitive deficit [12]. Our finding concerning the association of antipsychotic combination with overutilization of depot conventional antipsychotic was also proofed by other studies.

CONCLUSION:

Conclusion and recommendation Finally, in conclusion, a gap exists between national treatment recommendations for schizophrenia and current practice in community mental health centers, and prescribing pattern in this study was not in accordance with guidelines. Guidelines are designed to improve quality of care, thus educational interventions are important for physicians working in psychiatry regarding current guidelines for schizophrenia treatment. Concern over the use of antipsychotic combination strategies is both a clinical and a political dilemma as policy maker struggle with the lack of evidence base for justifying the effectiveness and cost effectiveness of these combinations.

Table 4.1 General characteristics of the study sample

Variable	N (%) or Median (Q1-Q3) or Mean $\pm$ SD
Gender	
- Male	182 (73.8%)
- Female	68 (27.2%)
Age (years)	41.9 $\pm$ 11.8
Age category	
- Less than 30	43 (17.2%)
- 30 – 40	76 (30.4%)
- 40 – 50	80 (32%)
- > 50	51 (20%)
Residence	
- City	105 (42%)
- Village/ Camp	145 (58%)
Education	
- School education or less	213 (85.2%)
- College education	37 (14.8%)
Marital Status	
- Married	138 (55.2%)
- Single/ Divorced	112 (44.8%)
Smoker	
- Yes	153 (61.2%)
- No	97 (38.8%)
Occupation	
- Not working	219 (87.6%)
- Working	31 (12.4%)
Duration of psychiatric illness (years)	15 (Q1 – Q3: 9 – 20)
- $\leq$ 10 years	89 (35.6%)
- > years	161 (64.4%)
Number of psychiatric hospitalization	1 (Q1 – Q3: 0 – 2)

Abbreviations: Q1-Q3= lower quartile-upper quartile; SD= standar deviation.

Table 4.2 Antipsychotic and adjuvant medications used in the treatment of schizophrenia

Antipsychotic Medications		Adjuvant medications	
Medication	N (%)	Medication	N (%)
Chlorpromazine Tablet	128 (31.5%)	Anticholinergic/ Anti-Parkinsonian	177 (71.1%)
Fluphenazine Depot	125 (30.8%)	Anti-depressants	29 (11.7%)
Haloperidol Tablet	74 (18.3%)	Mood stabilizers/ anticonvulsants	26 (10.4%)
Clozapine Tablet	35 (8.6%)	Anxiolytics/ Hypnotics	17 (6.8%)
Olanzapine Tablet	15 (3.7%)	Total	247 (100%)
Haloperidol Depot	11 (2.7%)		
Risperidone Tablet	8 (2.0%)		
Trifluoperazine Tablet	7 (1.7%)		
Zuclopenthixol Depot	2 (0.5%)		
Thioridazine Tablet	1 (0.2%)		
Total	406 (100%)		

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