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AN EPIDEMIOLOGICAL SURVEY OF PATIENTS SUFFERING FROM SCHIZOPHRENIA IN GUJARAT

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ABSTRACT

Schizophrenia, a psychiatric illness is a 4th leading cause of disability among adults. It is estimated to affect 1% of the general population. Aim of the present study was to conduct epidemiological survey of patients suffering of schizophrenia in Gujarat. This retrospective study was conducted on patients visiting Santvan Hospital Nadiad, Gujarat. Data were collected by the case report forms and analyzed for age, sex, symptoms of schizophrenic patients and prescribed drugs. Male and female patients (n=55) with age > 15 years and < 50 years, who had informed consent were included in this study. Patients with severe diseases along with schizophrenia, pregnant and lactating women, and age < 15 years and > 50 years were excluded from this study. Analysis of the data revealed that females and males affecting schizophrenia were almost equal. This disease appeared earlier in men usually in early twenties than in women who were affected in the twenties to early thirties. Female patients were suffered from irritable mood more than males. Male patients suffered from apathetic mood more than females. All cases studied were had negative symptoms of schizophrenia. Polypharmacy was observed in drug prescription as on an average drugs prescribed per patient was 3 to 4. Olanzapine (98%) was most prescribed drug followed by clozapine (64%), lorazepam (64%), escitalopram (50%) and risperidone (32%).

Key words: *Atypical antipsychotics, epidemiology, polypharmacy, schizophrenia*

INTRODUCTION

Schizophrenia, a psychiatric illness is a 4th leading cause of disability among adults. It is estimated to affect 1% of the general population but it occurs in 10% of people who have a first degree relative with the disorders. Evidence from nearly a century of epidemiological research indicates that schizophrenia occurs in all populations with a prevalence in the range of 1.4 to 4.6 per 1000 and incidence rates in the range of 0.16-0.42 per 1000 population.[1] Positive symptoms such as disturbance of thinking, delusions and hallucinations and negative symptoms such as apathy, alogia, avolition, and anhedonia are observed in schizophrenic patients. Dopamine and serotonin theory holds that positive symptoms and negative symptoms of schizophrenia result from excessive activity of dopamine and serotonin in brain respectively. First generation antipsychotics known as neurleptics or typical antipsychotics such as chlorpromazine, haloperidol, thioridazine, loxapine, thiothixene, molindone are used for positive symptoms of schizophrenia. Their ability to diminish psychotic symptoms was convincingly shown to be initiated by blockade of dopamine D_2 receptors in mesolimbic nuclei, especially the nucleus accumbens, stria terminalis, and the extended amygdale.[2-5] Typical antipsychotics produce extrapyramidal side effects e.g., acute dystonic reactions, subacute parkinsonism, akathisia, and, after chronic use, tardive dyskinesia or dystonia as a direct or indirect result of blockade of dopamine D_2 receptors in the dorsal striatum, in vulnerable individuals.[2] Atypical antipsychotic drugs are those antipsychotics that achieve an antipsychotic action with quantitatively less extrapyramidal side effects in humans or a clear distinction between doses that affect mesolimbic and striatal dopaminergic function in rodents. Atypical antipsychotics like clozapine, risperidone, olanzapine, quetiapine and ziprasidone were reported to cause potent serotonin (5-hydroxytryptamine) receptor subtype 5-HT_{2A} relative to dopamine D_2 receptor blockade.[6-8] Atypical antipsychotic drugs might also be effective in some patients with schizophrenia whose positive symptoms do not respond to neuroleptic-type agents and to improve negative symptoms, cognitive impairment, depression, and possibly suicidality of schizophrenia and other psychotic disorders as well.[9-11] Aim of the present study was to conduct epidemiological survey and drug prescribing pattern of patients suffering from schizophrenia in Gujarat.

METHODOLOGY

This retrospective epidemiological study was conducted on 54 schizophrenic patients visiting Santvan Hospital Nadiad, Gujarat. Patient included who had informed consent, male and female patients > 15 years and < 50 years. Patient excluded who had suffering from severe diseases along with schizophrenia, pregnant and lactating women, age < 15 years and > 50 years. Data were collected by specialized case report forms and analyzed for age, sex, symptoms of schizophrenic patients and drugs prescribed. The data collected were subjected to descriptive statistical analysis.

RESULTS

A total of 54 case records of schizophrenic patients were included in this study. Out of this 26 (48.2 %) were males and 28 (51.9 %) were females. Distribution of patients based on age groups is shown in Figure 1 and 2. The maximum number of cases occurred in males between the ages of 15 and 20 years and in females between the ages of 20 and 25 years.

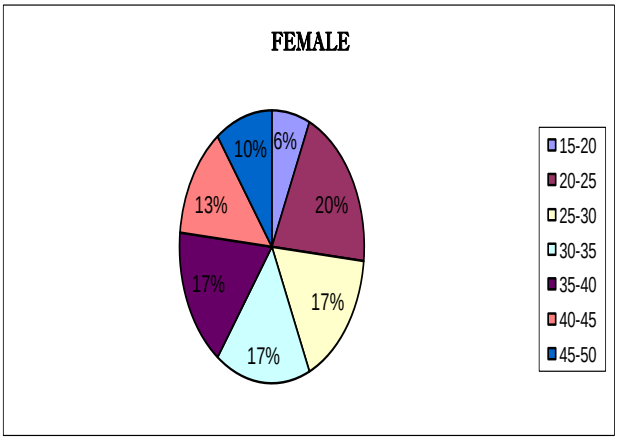

Figure 1: Epidemiological Distribution of Female Patients Suffering From Schizophrenia Based on Age Groups.

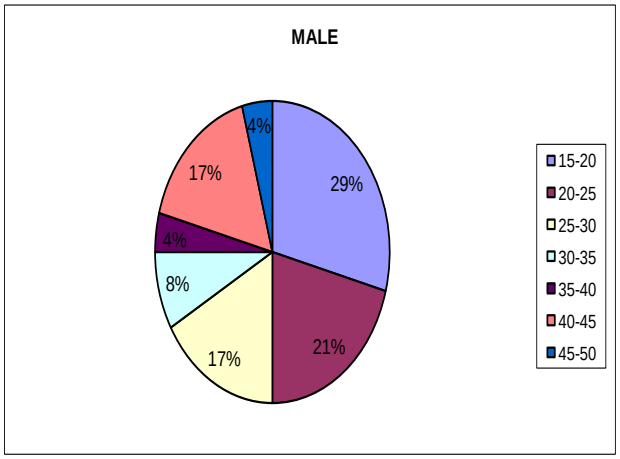

Figure 2: Epidemiological Distribution of Male Patients Suffering From Schizophrenia Based on Age Groups.

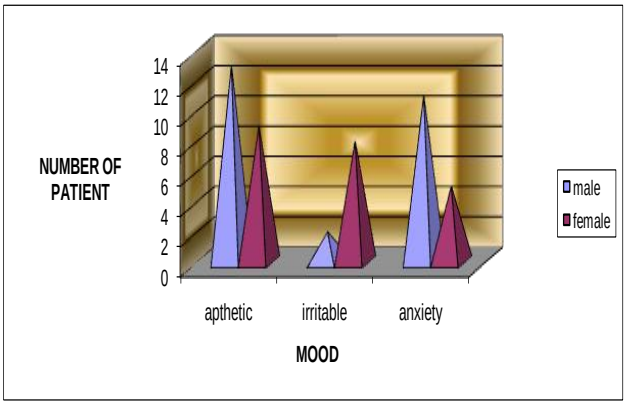

Figure 3: Epidemiological Distribution of Patients Based On Symptoms of Schizophrenia.

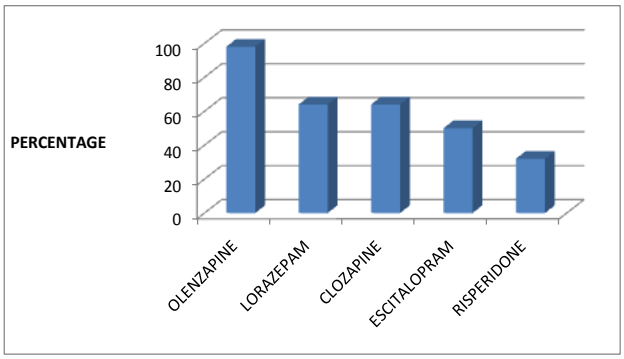

Figure 4: Distribution of Drugs Prescribed in Schizophrenia.

Distribution of patients based on symptoms of schizophrenia is shown in Figure 3. All patients were suffered from prominent negative symptoms of schizophrenia. Among that 22.2 % of males and 16.6 % of females had apathetic symptom. Male patients had more reported apathetic depression than female. 3.7 % of male patients and 12.9 % of female patients had irritable mood. Female patients had more irritable mood than male patients. 18.5 % of male patients and 9.2% of female patients had anxiety. Male patients had more anxiety symptom than female patients.

All patients were prescribed with atypical antipsychotic agents. No one was prescribed with 1 antipsychotic agent and 98 % of patients were prescribed with 2 or more than 2 antipsychotic agents. 43 % of patients were prescribed at least one non-antipsychotic agent. On an average antischizophrenic drugs prescribed per patient was 3-4. Figure 4 shows different atypical antipsychotic prescribed to number of patients. This result showed that olanzapine (98%) was most utilized drug followed by clozapine (64%), lorazepam (64%), escitalopram (50%) and risperidone (32%).

DISCUSSION

The epidemiological survey was conducted on 54 schizophrenic patients. Results of the study revealed that females and males affecting schizophrenia were almost equal which was also supported by literature.[12] Tandon et al. (2008)[13] was reported that this disease appeared earlier in man usually in early twenties than in woman who were affected in the twenties to early thirties. Ali (2009)[14] was also reported that peak age of on set of schizophrenia is 15-30 years. Results of the present study were correlated with the reported studies.[13,14] A study was reported that while men tend to display more negative symptoms, schizophrenic women tend to display more affective symptoms.[15] In our study also male patients have more apathetic depression and anxiety while female patients have more irritable mood.

Despite consistent exhortations and recommendations to avoid antipsychotic polypharmacy[16] and the lack of a convincing pharmacological rationale, co-prescribing antipsychotics has remained a common and widespread practice.[17] In our study all patients have prescribed 2 or more atypical antipsychotic agents. This analysis was also supported with earlier Indian studies.[18,19] Audits and surveys consistently reveal relatively high levels of prescription of combined antipsychotics internationally, in Australia,[20] Belgium,[21] Canada,[22] France,[23] Germany,[24] Israel,[25] Italy,[26] Japan,[27], the US[28] and the UK.[29] Data from the US suggest that an apparent increase in the prescription of antipsychotics since the introduction of second-generation antipsychotics[30] has been accompanied by a significant increase in the prevalence of second-generation antipsychotic polypharmacy.[31]

In the present study, the most prescribed antipschotics were olanzapine, clozapine and risperidone. Antianxiety agent, lorazepam, and antidepressant agent, escitalopram were also prescribed in patients of schizophrenia in our study. Findings of our survey are in line with the findings of recent prescription surveys of Grover and Avasthi (2010)[32] and Piparva et al. (2011)[33] in India. Olanzapine appears to be used more often for schizophrenia patients with comorbid mood symptoms.[34]

CONCLUSION

It is concluded from our study that onset age of schizophrenia is early in male than female and currently atypical antipsychotics given in combination for the treatment of patients having negative symptoms of schizophrenia in Gujarat.

LIMITATION OF STUDY

It is important to consider the limitations of this survey. Considering that there are large numbers of psychiatrists in India, this survey does not reflect the true prescription pattern of all the psychiatrists in India. In future, a larger survey should be conducted covering many areas of the prescription pattern.

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