Pharmacology & Toxicology Research

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Research Article

A STUDY ON CLINICAL EVALUATION AND PRESCRIBING PATTER OF DRUGS USED IN SCHIZOPHRENIA PATIENTS

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Received October 07, 2017; Accepted January 27, 2018; Published March 29, 2018;

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Cite This Article: S., S., Raju, P. (2018). A Study on clinical evaluation and prescribing patter of drugs used in schizophrenia patients. Pharmacology & Toxicology Research, 3(1). 1-10

ABSTRACT

The prospective observational study conducted at Swasthik Samalochana Hospital, Warangal during February2013-July 2013. The study enrolled 150 in-patients and out-patients with Schizophrenia were included in the study who met inclusion criteria, after obtaining their informed consent**.** In 150 Patients in the Psychiatry clinic were characterized into based on predominant symptoms abnormal behavior, Hallucinations. In Psychological patients 51% males and 48% females were suffering schizophrenia disorder and various causes are 43.3% of family history, 12.6% of alcoholic, 6.6% family problems, 7.3% of thyroid disorders, 1.3% of post-menopausal problems. In this study nearly 50% of the patients had 3 risk factors primarily like family history, alcohol, financial problems. The necessity of patient counseling by a clinical pharmacist plays a major role in educational interventions and healthy life style modifications were an essential part in the prevention of schizophrenia and different psychological disorders of central nervous system. Abnormal behaviour, hallucinations and aggressive are the most predominant symptoms in this study.

KEYWORDS: Schizophrenia, hallucinations, psychological patients, psychiatry clinic.

INTRODUTION

Schizophrenia is chronic ,severe mental disorder caused by some inherent dysfunction of brain that has affected people throughout the history, resulting from abnormalities that arises early in life and disrupt normal development of the brain and has a lifetime risk of 1% and affects at all age groups, approximately 10% die from suicide. The evidence implies that neurodevelopment abnormalities contribute to susceptibility to schizophrenia. Firstly, clinical studies show that patients with schizophrenia manifest minor behavioural abnormalities in childhood even before the onset of schizophrenia. Secondly, recent advanced imaging techniques such as magnetic resonance imaging provide reliable evidence of abnormalities during development of the central nervous system. Such abnormalities include consistent increases in ventricular size at the onset of schizophrenia, with notable alterations in some areas including the prefrontal cerebral cortex and hippocampus. The acute psychotic schizophrenic patients will respond usually to antipsychotic medication Phenothiazines: [ex: chlorpromazine, fluphenazine, and thioridazine]. Chlorpromazine is a low potency prototype agent which acts as antagonist of d2 dopamine receptors in the mesolimbic system of the brain. Thioxanthenes: [ex: flupenthixol, clopenthixol] Flupenthixol is use by blocking postsynaptic dopamine receptors in the brain and they also produce an alpha adrenergic blocking effect and depress release of hypothalamic and hypophyseal hormones. Butyrophenones: [ex: haloperidol, droperidol] haloperidol a Butyrophenones, apparently owes its antipsychotic effect primarily to its antagonistic activity on dopamine D2- receptors in the central nervous system. Compared to other agent it has a relatively mild sedative effect but it often causes extra pyramidal symptoms. It has an antiemetic effect through its activity in the 'chemoreceptor trigger zone'. Antagonistic

effects on other receptors (e.g. histamine or serotonin receptors) have marginal importance. Atypical drugs:[Ex:Clozapine, Risperidone, Olanzapine] Clozapine is a first atypical antipsychotic agent with week d2 blocking action with no extra pyramidal effects. Olanzapine is use in blocking multiple monoaminergic [D2, 5-HT2] as well as muscuranic and H1 receptors. Both +ve &- ve symptoms are improved.[1-4].

MATERIALS AND METHODS

Study Site: The study was conducted in a psychiatry clinic of Swasthik Samalochana Hospital, tertiary hospital setup , with the consent and under the supervision Dr. Y. Sridhar Raju (psychiatrist), Swasthik samalochana Hospital, Pochamidanam ,Warangal.

Study design: Prospective observational study.

Study setting: The study was conducted at Swasthik samalochana hospital for a period of 6 months from Feb 2013- July 2013. This study involved 150 in-patients and out patients.

Analysis of Data:Aug 2013 – Sep 2013.

Screening: Patients visiting the psychiatry clinic were screened for psychological problems using a standard questionnaire to identify the individuals in to various groups of patients like acute, chronic ,paranoid, catatonic. Of these patients, patients with history of psychiatry problems over a period of years were recruited.

STUDY CRITERIA

Inclusion criteria

Patients who come to psychiatry clinic with history of psychological problems.

i. Patients under Antipsychotic Therapy.
ii. Patients of both sexes with a diagnosis of Schizophrenia will include the study.
iii. Patients from age 15yrs to 65yrs are included in the study.
iv. Patients of both categorized newly diagnosed and old cases of Schizophrenia are included in the study.
v. Patients with Thyroid Disorders are included in the study.
vi. Patients suffering with any other diseases like Epilepsy, Tuberculosis, Asthma, Diabetes mellitus.

Exclusion criteria

i. Patients <15years.
ii. Patients with pregnancy and Lactation.
iii. Patients with severe disability
iv. Patients who do not comply with study procedure.

Source of data

Patient records, Laboratory reports, direct communication with patients and their care takers.

STUDY MATERIALS

The following study materials were developed for the study procedure.

Patient Data Collection Form

A suitably designed patient data collection form was prepared for in-patients and out-patients (Annexure-III) by referring standard text books and journals, which includes demographic details of the patients such as age, gender, education, social habits, occupation, family history and medication history and quality of life questionnaires.

Parameters that are considered to be included in the study

i. Demographics, symptoms and past history of the patients recruited.
ii. Laboratory parameters includes Thyroid function tests, Electrolytes levels, EEG test, CT-scan& MRI scan.
iii. Treatment –prescription pattern of various drugs used in psychiatry patients included in the study.

The study was carried out over a 6 months period from Feb2013-July 2013. All the medication charts issued during this period were followed on immediately following each day consultation with Doctor and copied and recorded on case record forms.

Study was conducted on 150 patients with schizophrenia. Patients with various co-morbidity conditions like patient who were treated with Antipsychotic drugs were also involved in the study.

Prescriptions were received and analyzed which have complete information as per inclusion criteria. The prescription indicates recommended by WHO were used as tool to assess the drug utilization pattern. Prescriptions of the patients

were observed and necessary information were collected the data so obtained were analyzed for calculation of drug use indication.

Study procedure

i. Both in patient and out patients were reviewed on daily basis who met the study criteria in psychiatric department.
ii. All the necessary information required for the study was collected from review of patient records, laboratory data, direct communication with patients and their care takers.
iii. All the above information collected in properly designed data collection form. Data was analysed based on requirement.

Step wise procedure

i. Patient's recruitment in a psychiatric hospital
ii. Total number of subjects screened 350
iii. Among them 150 were with Schizophrenia disorder. Among 150 cases
iv. Classified the Schizophrenia disorder based on Symptoms.
v. Screened patients according to symptoms
vi. Assessment of diagnostic criteria
vii. Study of therapeutic management
viii. Symptoms were recorded on received patients are Abnormal behaviour, Talking to self, Smiling to self, Hallucinations etc.
ix. Drugs used in patients received in the clinic were Chlorpromazine, Olanzepine, Haloperidol, Trihexyphendyl etc.

Methodology- flow chart-study procedure

Recruitment of patients who come to psychiatric clinic with symptoms of schizophrenia

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Screening of patients according to inclusion criteria

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Determine the percentage of individuals with various schizophrenia disorders

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Noting down the demographic details of patient (Age, Sex)

↓

Determining the various psychological symptoms in received patients and estimates the percentage of individuals with various psychological symptoms

↓

Determine the percentage of individuals with various triggering factors

↓

Assessing the inter study of disease and determining
.the percentage of individuals with Mild, Moderate, severe

↓

Estimating thyroid levels in received patients

↓

ssessment of Diagnostic criteria

↓

Prescription writing trends of drugs used

RESULTS

Details of patients enrolled in the study

A total number of 150 schizophrenia patients were enrolled in the study.

Demographic details

Gender

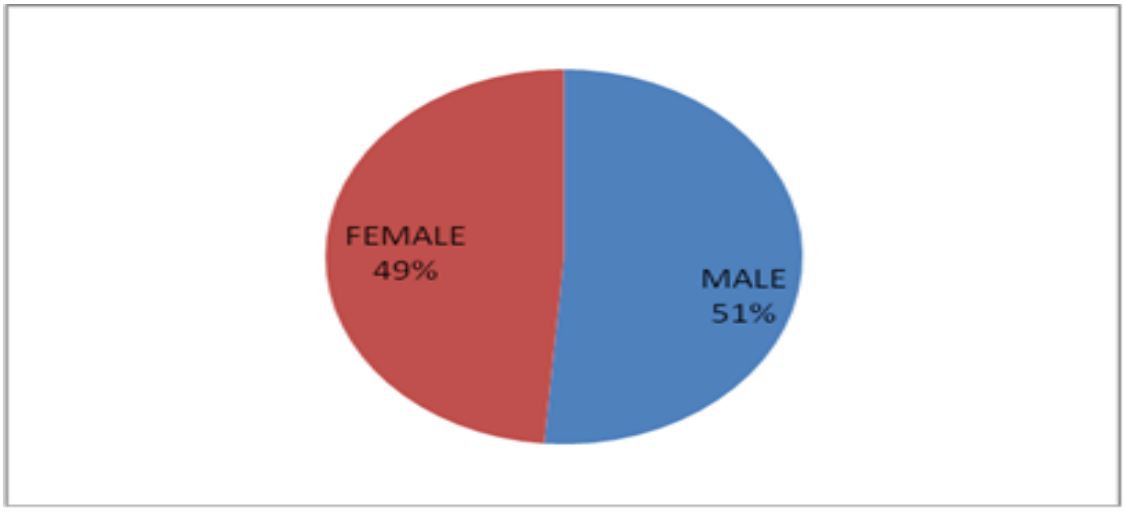
Table 1: No of Individuals according to Gender

No. of Males no (%)	No. of Females no (%)	Total
77(51.3)	73(48.6)	150

Interpretation

Among 150 patients attended the psychiatry clinic with various psychological symptoms .Males were found to be 77(51.3%) and females were found to be 73(48.6%).

Figure1: Gender distribution among various Schizophrenia patients



Types of schizophrenia disorders

Table2:No. of patients with different psychotic patterns:

	Total	No. of males	No. of Females
		n %	n %
Acute	8(5.3%)	3(37.5%)	5(62.5%)
Chronic	50(33.3%)	24(48%)	23(46%)
Paranoid	22(15.3%)	11(50%)	12(54.5%)
Catatonic	1(0.66%)	1	0

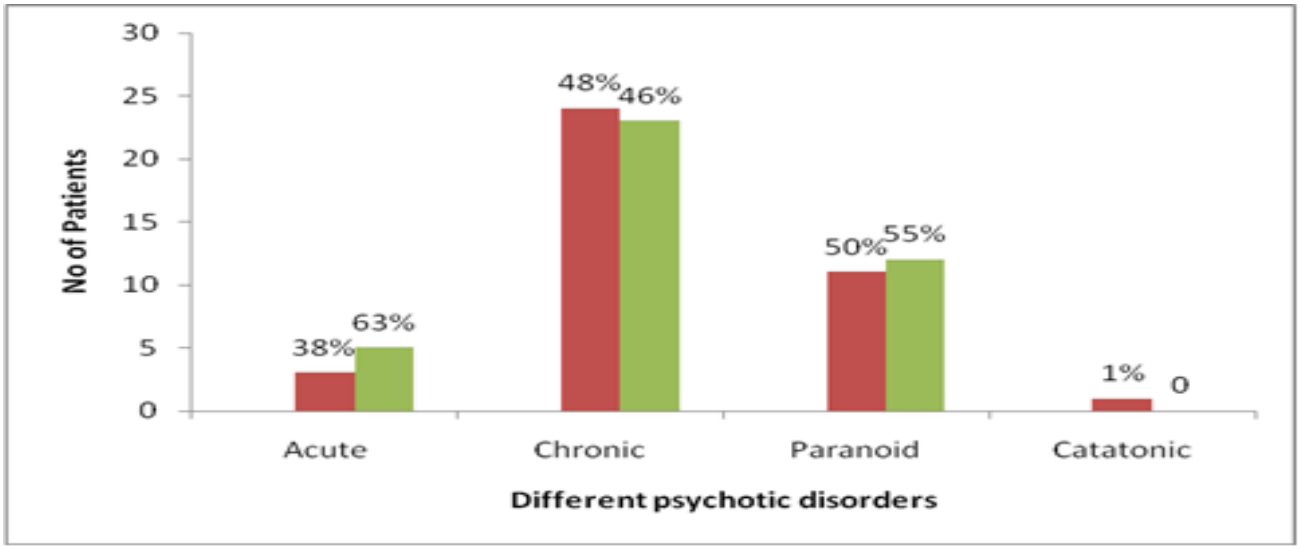
Among 150 patients visited psychiatry clinic with psychological symptoms

5.3% of individuals were with Acute psychotic disorder.

33.3% of individuals were with Chronic psychotic disorder.

15.3% of individuals were with Paranoid psychotic disorders.

Figure 2: Patients with different psychotic patterns.



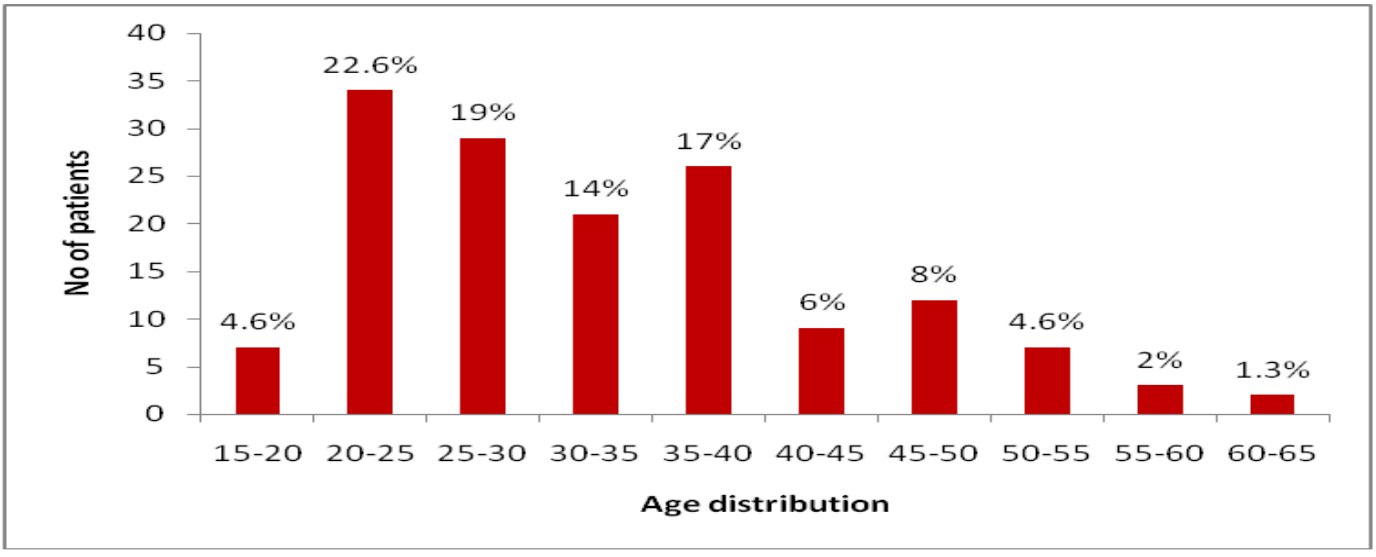
Age (years)

Table 3: No of Individuals according to age in schizophrenia patients.

Among 150 schizophrenia patients, the age group individuals as follows:

Age in years	No of Patients	Percentage (%)
15-20	7	4.60%
20-25	34	22.60%
25-30	29	19%
30-35	21	14%
35-40	26	17%
40-45	9	6%
45-50	12	8%
50-55	7	4.60%
55-60	3	2%
60-65	2	1.30%
Total	150	

Figure 3: Age distribution of the psychiatry patients.



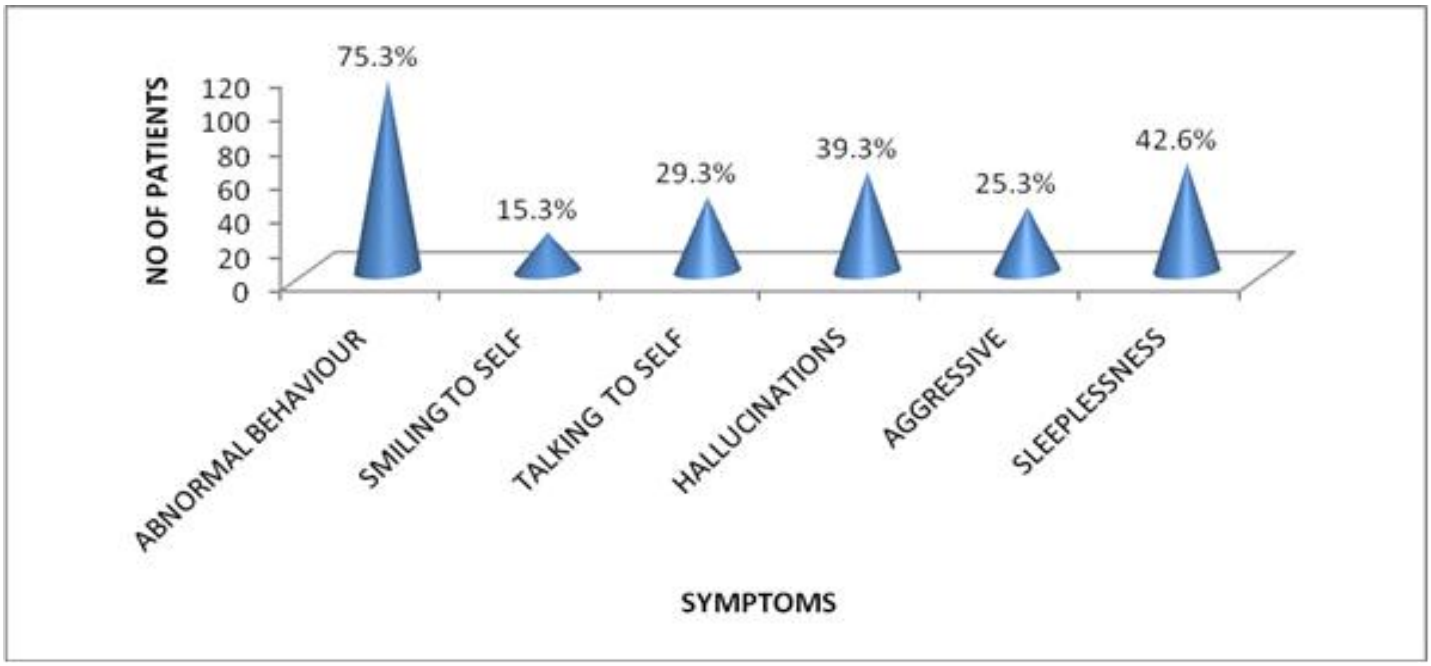
Symptoms

Table 4: No. of individuals with different symptoms in psychiatry patients.

Among 150 psychological patients, various symptoms in schizophrenia patients were with complaints as follows:

Symptoms	No of individuals	Percentage
Abnormal behavior	113	75.30%
Smiling to self	23	15.30%
Talking to self	44	29.30%
Hallucinations	59	39.35%
Aggressive	38	25.30%
Sleeplessness	64	42.60%

Figure 4 : No. of individuals with different symptoms in psychiatry patients.

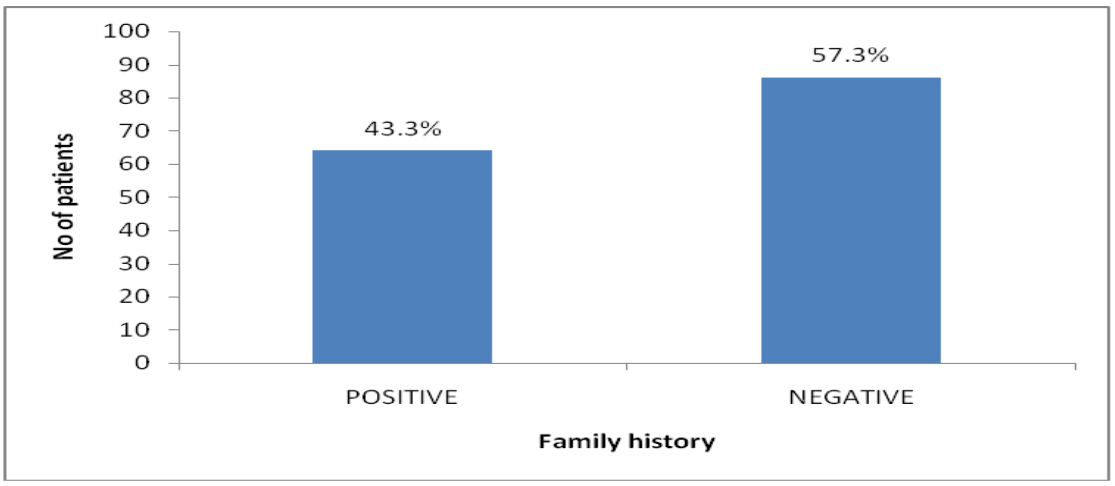


Family history

Table 5:No. of Individuals with Positive Family history.

Total no	No.of Positive family historyand percentage (%)	No.of Negative family history and percentage (%)
150	64(43.3%)	86(57.3%)

Figure 5: Family history.



Out of 150 patients, attend the clinic 64(43.3%) patients were found to have positive history of schizophrenia which includes:

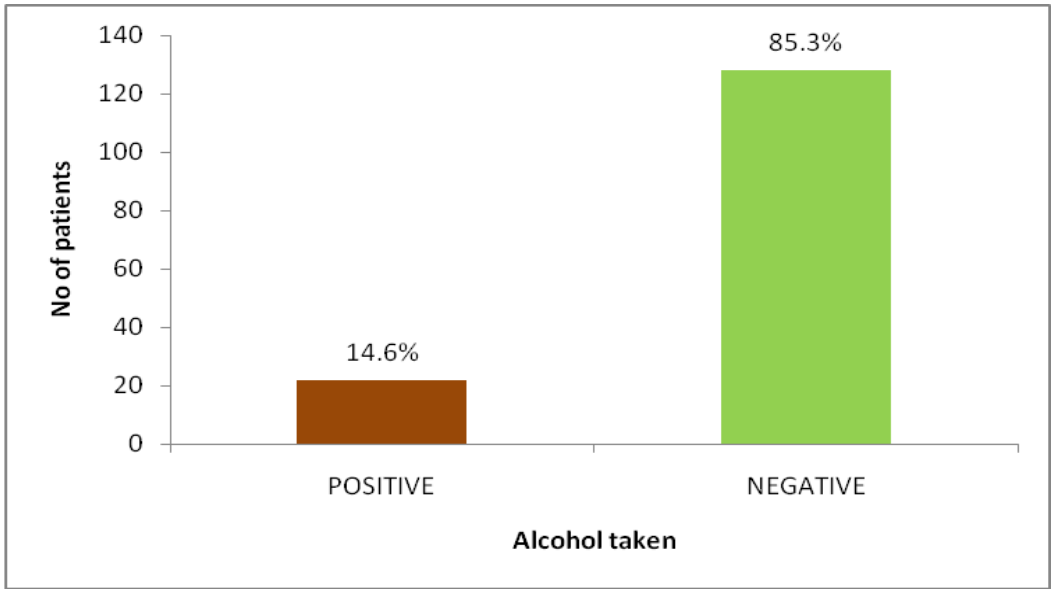
i. known cases of schizophrenia
ii. Some of their family members like brother or sister or uncle or aunt or grandfather or grandmother were experiencing psychological disorder.

Other 86(57.3%) individuals were having no family history of schizophrenia but they were experiencing psychological symptoms due to various other causes.

Table 6: Individuals in substance abuse: Alcohol taken.

Total(only males)	Taken Alcohol	Not Taken Alcohol
150	22(14.6%)	128(85.3%)

Figure 6: Alcohol taken.



Among 150 psychological patients 22(14.6%)male patients are taking alcohol so they are suffering with alcohol withdrawal syndrome like alcoholic psychosis(acute/chronic schizophrenia) and other 128(85.3%) patients are do not take alcohol.

Table7: No of patients with various causes for psychosis.

Among 150 schizophrenia patients, were various causing factors are as follows:

Causes	No of individuals	Percentage(%)
Family history	64	43.30%
Alcohol	22	14.60%
Family Problems	10	6.60%
Thyroid Disorder	11	7.30%
Post-menopausal	2	1.30%

Figure 7: Various causes for psychosis.

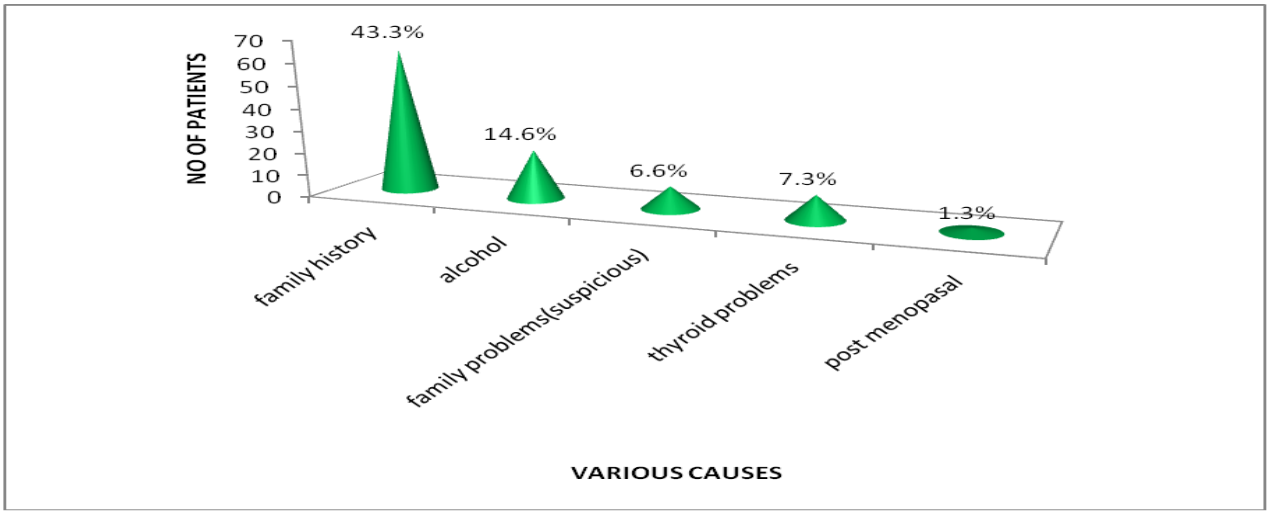


Table 8: DUR of various Antipsychotic drugs.

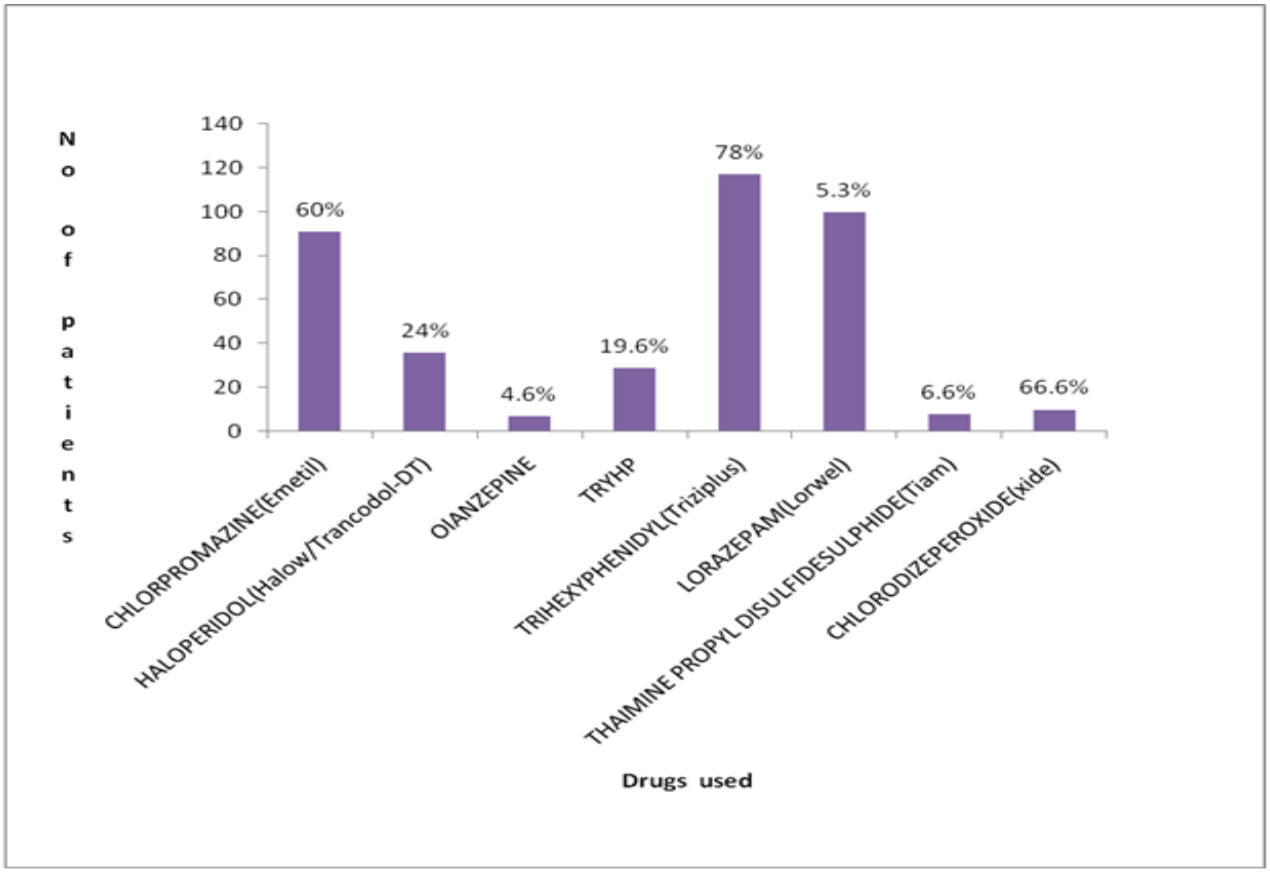
Drugs	No. Of patients used	Percentage
Chlorpromazine(Emetil)	91	60%
Haloperidol(Halow/Trancodol)	36	24%
Olanzepine	7	4.60%
Tryhp	29	19.30%
Tryhexiphendyl(Triziplus)	117	78%
Thiamine propyl Disulfide	8	5.30%
Chlorodizeperoxide(xide)	10	6.60%
Lorazepam(Lorwel)	100	66.60%

Total no of prescriptions: 150

84.6% of patients were used typical drugs

4.6% of patients were used atypical drugs

Figure 8: Various drugs used in schizophrenia patients.



DISCUSSION

A study was conducted in the psychiatry clinic department to explore the clinical profile, patient behavioral symptoms and prescription writing trends of various drugs used among schizophrenia patients. Prescribed drugs efficacy, tolerability and QoL of patients were also studied so that the patient would be given treatment to schizophrenia at the onset of symptoms.

Out of 150 patients in my study, there were 77 (51.3%) male patients and 73(48.6%) were female patients with schizophrenia.

In the present study, it was observed that predominant number of patients visited the psychological clinic were Males and were slightly greater (51%) than Females (49%). Symptoms shown by the patients were abnormal behavior (75.3%), smiling to self (15.3%), talking to self (29.3%), hallucinations (39.35%), aggressive (25.3%), sleeplessness (42.6%). In our study, most common people affected were between 20-25 age groups.

A study conducted by Anabel Martínez-Arán *etal*, for the Spanish Working Group in Cognitive function on the screen for cognitive impairment in psychiatry patients found that the schizophrenia disorder was between 18 and 55 years. According to my study the age groups between 15-65years were more prone to schizophrenia disorder.

A study conducted by Jos´e Valente *etal*, on Revisiting thyroid hormones in schizophrenia studies of prenatal, neonatal, and/or childhood TH status founded that TSH levels were related to propensity to develop schizophrenia at the adult age, particularly in at-risk offspring (e.g., familial history of schizophrenia), as well as familial TH level correlations. In our study Family history and alcohol are the most important common cause of schizophrenia. In our study family history was found to be positive in 43.3% of the patients attended the clinic, alcohol was found to be the major cause in 14.6% patients, and thyroid problems were found to be the cause in 7.3% patients followed by family problems in 6.6% patients and post-menopausal in 1.3% patients.

A study conducted by John W. Kasckow and Sidney Zisook on co-occurring depressive symptoms in the older Patient with Schizophrenia discussed depressive syndromes in the context of patients with primary thought disorders or psychosis in whom depression was the primary problem for schizophrenia. In my study abnormal behavior (75.3%) was found to be the predominant primary symptom of schizophrenia.

A study conducted by Jeffrey A. Lieberman *etal,* on Effectiveness of Antipsychotic drugs in patients with chronic schizophrenia founded that Olanzapine was the most effective in terms of the rates of discontinuation, and the efficacy of the conventional antipsychotic agent perphenazine appeared similar to that of quetiapine, risperidone, and ziprasidone. Olanzapine was associated with greater weight gain and increases in measures of glucose and lipid metabolism. In my study most effective drug are used in schizophrenia patients were chlorpromazine and haloperidol.

CONCLUSION

Among 150 patients, Males were suffered them females because of various factors like family history, financial problems, family problems and mainly alcohols.

By patient counseling the risk factors of schizophrenia were identified.

In 10% of females were abnormal thyroid levels in schizophrenia patients.

Patients better recovered through treatment using atypical drugs (chlorpromazine, haloperidol).

Not only drugs and through supportive treatment Electro convulsive treatment to improve the patient quality of life.

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