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PATTERN OF ANTIDEPRESSANT PRESCRIPTION IN PATIENTS SUFFERING FROM DEPRESSIVE DISORDER IN A TERTIARY CARE HOSPITAL

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Keywords:

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ABSTRACT: Background: Depression is becoming an important health problem worldwide because of its relatively high lifetime prevalence, significant disability, suffering, dysfunction, and economic burden caused by it. **Objectives:** The present study was conducted with the objective to determine the prescribing pattern of antidepressant drugs in patients suffering from depression disorder in the psychiatric outpatient department of a tertiary care hospital. **Materials and Method:** A prospective observational study was conducted to analyze the drug prescription pattern of the various antidepressant drug prescribed in Depressive Disorder. This study was conducted in psychiatric OPD of a tertiary care teaching hospital. **Results:** A total of 150 patients attending the psychiatric OPD were screened for the study. Among them, 75 were excluded as they had other psychiatric and medical illnesses. Out of 75 patients, 41 (54.7%) were males, and 34 (45.3%) were females. Most of the cases fall under the age group of 18 to 30 years. Escitalopram 48 (28.2%) was the most commonly prescribed antidepressant followed by sertraline 14 (8.2%), Paroxetine 5 (2.9%), Desvenlafaxine 3 (1.8%), Mirtazapine 2(1.2%) and Fluoxetine 2 (1.2%). Clonazepam was the commonest co-prescribed drug in 56 (74.7%) no. patients, followed by Clobazam 9 (12%), Zolpidem 3 (0.04%). **Conclusion:** This study revealed that the prevalence of depressive disorder was more in males than females. The peak prevalence of depression was in the age group of 18-30 years. Escitalopram was the most commonly prescribed, followed by sertraline. Among the benzodiazepines, clonazepam was the most commonly prescribed drug.

INTRODUCTION: Depression is becoming an important health problem worldwide because of its relatively high lifetime prevalence, significant disability, suffering, dysfunction, and economic burden caused by it. India is among one of the countries with the highest number of people suffering from depression [1].

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Depression can affect people from all backgrounds across the life course, from early childhood to the end stages of life [2]. It is estimated that more than 300 million people in the world suffer from depression, which is listed by the World Health Organization (WHO) as the single largest factor contributing to global disability [3].

According to the biopsychosocial model, biological, psychological and social factors show a significant role in emerging depression. The pre-existing vulnerability can be either genetic, implying an interaction between nature and nurture, or schematic, resulting from childhood views of the world [4].

The socio-demographic factors of age, gender, education, and income have been identified as important factors in explaining the variability in the prevalence of depression [5]. Tricyclic anti-depressants, selective serotonin reuptake inhibitors, serotonin and noradrenaline reuptake inhibitors and newer atypical antidepressant form the drug treatment of depression [6]. Antidepressant prescribing patterns have changed globally over the last few years, with conventional drugs like tricyclics and MAO inhibitors being gradually replaced by selective serotonin reuptake inhibitors (SSRIS) and novel antidepressants [7]. The principal objective of drug utilization research is to enable rational use of drugs which is hard to find without the knowledge of prescription patterns. The analysis of prescribing patterns is to evaluate and suggest modifications if required in the prescribing pattern of medical practitioners to make medical practice rational and cost-effective [8]. Although the newer drugs are very commonly prescribed, the data on antidepressant drug utilization from this part of our country is sparse. Therefore, the present study was conducted with the objective to determine the prescribing pattern of antidepressant drugs in patients suffering from depression disorder in the psychiatric outpatient department of a tertiary care hospital.

MATERIALS AND METHODS:

Methodology:

Study Design: A prospective observational study was conducted to analyze the drug prescription pattern of the various antidepressant drug prescribed.

Study Area: This study was conducted in psychiatric OPD of a tertiary care teaching hospital under Sankardev University, Guwahati, Assam, India.

Study Period: The study was conducted for a period of 3 months, from March 2020 to May 2020.

Sample Size: Seventy-five prescriptions were analyzed on the basis of standard guidelines.

Inclusion Criteria:

i) Patients of either sex, aged between 18-70 years of age and diagnosed with only unipolar Depressive disorder according to ICD 10 diagnostic criteria which are prescribed with at least one antidepressant medication.

Exclusion Criteria:

i) Patients with the organic disorder.

ii) Patients suffering from other major psychiatric illnesses (Schizophrenia, bipolar major disorder, obsessive disorder).

iii) Patients with a history of alcohol or substance abuse.

iv) Patients not willing to give consent.

Study Procedure: The proposal for the study of the prescription pattern of antidepressant drugs has been submitted to The Institutional Ethical Committee (IEC), and approval was obtained before the commencement of the study. The data of the patients visiting psychiatric OPD during the period of March 2020 to May 2020 were collected. The individual participant was explained about the study, and they were also assured that their identity would be kept confidential and they have the option to refuse participation in the study. Informed consent was obtained from the participants prior to the study, both in English and Bengali format.

Data Collection: The following data were collected.

• Demographic details like name, age, gender, OPD no., residence, occupation, and educational status

•The antidepressants being prescribed and the use of concomitant medications was noted. The details of medication collected from the patients included the name of the prescribed drug, dosages, dosing schedule, and duration of drugs. A total of 150 patients attending the psychiatric OPD were screened for the study. Among them, 75 were excluded as they had other psychiatric illnesses (Schizophrenia, bipolar major disorder, obsessive disorder) and comorbidities like hypothyroidism and diabetes. The drugs prescribed for the depression disorder were analyzed on 75 prescriptions.

Data Analysis: All the data were compiled and analyzed in the Department of Pharmacology, and statistical analysis was done.

RESULTS: Table 1 shows that out of 75 patients, 41 (54.7%) were males, and 34 (45.3%) were females. Most of the cases fall under the age group of 18 to 30 years 42 (56%), followed by age group of 31 to 40 years 14 (18.7%). It was seen that out of 75 patients, 54 (72%) were from rural area and 21 (28%) were from urban area. According to marital status, 50 (66.7%) were married, 24 (32%) were unmarried and 1 (1.3%) was a widow.

TABLE 1: DISTRIBUTION OF PATIENTS ACCORDING TO AGE GROUP, GENDER, RESIDENCE AND MARITAL STATUS

Age in years	Male	Female	Total no. of patients
18-30	22 (29.3%)	20 (26.7%)	42 (56%)
31-40	8 (10.7%)	6 (8%)	14 (18.7%)
41-50	2 (2.7%)	1 (1.3%)	3 (4%)
51-60	7 (9.3%)	6 (8%)	13 (17.3%)
61-70	2 (2.7%)	1 (1.3%)	3 (4%)
Total	41 (54.7%)	34 (45.3%)	75 (100%)
Residence			
Rural	30 (40%)	24 (32%)	54 (72%)
Urban	12 (16%)	9 (12%)	21 (28%)
Total	42 (56%)	33 (44 %)	75 (100%)
Marital status.			
Married	25 (33.3%)	25 (33.3%)	50 (66.7%)
Unmarried	15 (20.1%)	9 (12%)	24 (32%)
Widow	0	1 (1.3%)	1 (1.3%)
Divorce	0	0	0
Total	40 (53.4%)	35 (46.6%)	75 (100%)

Table 1 shows that out of 75 patients, 41 (54.7%) were males, and 34 (45.3%) were females. Most of the cases fall under the age group of 18 to 30 years 42 (56%), followed by age group of 31 to 40 years 14 (18.7%). It was seen that out of 75 patients, 54 (72%) were from rural area and 21 (28%) were from urban area. According to marital status, 50 (66.7%) were married, 24 (32%) were unmarried and 1 (1.3%) was a widow.

TABLE 2: DISTRIBUTION OF CASES ACCORDING TO EDUCATIONAL STATUS, OCCUPATION AND RELIGION

Education	No. of patients
Illiterate	15 (6.7%)
Matriculate	42 (69.3%)
Graduate	18 (24%)
Postgraduate	0 (0%)
Total	75 (100%)
Occupation	
Student	14 (18.6%)
Employed	32 (42.7%)
Unemployed	29 (38.7%)
Total	75 (100%)
Religion	
Hindu	31 (41.3%)
Muslim	44 (58.7%)
Total	75 (100%)

Table 2 shows that out of 75 patients, 42 (69.3%) were matriculate, 18 (24%), were graduate and 15 (6.7%) were Illiterate. According to occupational status 32 (42.7%) were employed, 29 (38.7%) were unemployed and 14 (18.6%) were student. Most of the patients were Muslims 44 (58.7%) and 31 (41.3%) were Hindus.

TABLE 3: PRESCRIBING PATTERN OF ANTI-DEPRESSANT DRUGS

Antidepressants	No. of patients
Escitalopram	48 (64%)
Sertraline	14 (18.7%)
Paroxetine	5 (6.7%)
Desvenlafaxine	3 (4%)
Mirtazapine	2 (2.7%)
Fluoxetine	2(2.7%)
Amitriptyline	1 (1.2%)

As shown in **Table 3**, Escitalopram 48 (28.2%) was the most commonly prescribed antidepressant followed by sertraline 14 (8.2%), Paroxetine 5 (2.9%), Desvenlafaxine 3 (1.8%), Mirtazapine 2(1.2%), and Fluoxetine 2(1.2%).

TABLE 4: PRESCRIBING PATTERN OF ANTI-DEPRESSANTS ACCORDING TO GENDER

Antidepressants	Gender		Total
	Male	Female	
Escitalopram	30	18	48 (64%)
Sertraline	9	5	14 (18.7%)
Paroxetine	2	3	5 (6.7%)
Desvenlafaxine	3	0	3 (4%)
Mirtazapine	2	0	2 (2.7%)
Fluoxetine	2	0	2 (2.7%)
Amitriptyline	1	0	1 (1.2%)
Total	49	26	75 (100%)

As shown in **Table 4**, Among the antidepressant drugs, Escitalopram was most commonly prescribed 48 (64%) in both male and female, followed by Sertraline 14 (18.7%), Paroxetine 5 (6.7%), Desvenlafaxine 3 (4%), Mirtazapine 2 (2.7%) and Fluoxetine 2 (2.7%). The least prescribed antidepressant was Amitriptyline 1 (0.6%).

TABLE 5: PRESCRIBING PATTERN OF ANTI-DEPRESSANTS ACCORDING TO AGE GROUP

Antidepressants	Age group					Total
	18-30	31-40	41-50	51-60	61-70	
Escitalopram	26 (34.7%)	9 (12%)	3 (4%)	7 (9.3%)	3 (4%)	48(64%)
Sertraline	12 (16%)	0	0	2 (2.7%)	0	14 (18.7%)
Paroxetine	3 (4%)	2 (2.7%)	0	0	0	5 (6.7%)
Desvenlafaxine	2 (2.7%)	1 (1.2%)	0	0	0	3 (4%)
Mirtazapine	0	1 (1.2%)	1 (1.2%)	0	0	2 (2.7%)
Fluoxetine	1 (1.2%)	1 (1.2%)	0	0	0	2 (2.7%)
Amitriptyline	0	1 (1.2%)	0	0	0	1 (1.2%)
Total	44	15	4	9	3	75 (100%)

Table 5 Shows that Escitalopram was most commonly prescribed in the age group of 18-30 years with a percentage of 26 (34.7%), followed by Sertraline 12 (16%).

TABLE 6: CO- PRESCRIBED DRUGS

Co- prescribed drugs	No. of patients
Clonazepam	56 (74.7%)
Clobazam	9 (12%)
Zolpidem	3 (0.04%)
Pantoprazole	14 (18.7%)
L-methyl folate	7 (9.3%)
Vit B complex	6 (8%)

Table 6 Shows the co- prescribed drugs. Clonazepam was prescribed in 56(74.7%) no. of patients, followed by Clobazam 9 (12%), Zolpidem 3(0.04%), Pantoprazole 14(18.7%), L-methyl folate 7 (9.3%) and Vit B complex 6 (8%).

DISCUSSION: This study revealed that the prevalence of depression disorder was more in males 41 (54.67%) than females 34 (45.33%). A similar type of studies done by Mohammed et al, showed that prevalence was more in males 36 (51.8%) than females 8 (48.2%).9Our study showed that the peak prevalence of depression was in the age group of 18-30 (43.18%) followed by 31-40 (25%) in both the genders. Depressive disorders tend to first appear in adolescence or early adulthood. One in every five adolescents is likely to experience a diagnosable depressive episode by the age of 18. 10Numerous studies have established that childhood stressors such as abuse or witnessing domestic violence can lead to a variety of negative health outcomes and behaviours, such as substance abuse, suicide attempts, and depressive disorders [11]. Increased risk of depression has been associated with Adverse Childhood Experiences (ACE) [12]. The present study shows that there is an increased preponderance of depression in rural area 39 (88.62%). A study conducted by Probst JC *et al*, [13] prevalence of depression was significantly higher among rural than urban populations (6.1% versus 5.2%). The higher prevalence of depression among the rural populations may probably due to the reason that rural populations have to live in poor living conditions than urban populations.

The present study shows that the majority of the patients 50 (66.67%) were married, educated up to matric and are employed. Similar findings were noted in a multicentric study done by Grover S *et al.,* [14,] which has shown that majority of the participants were married, educated up to or beyond high school level, and were employed. The reason of this marital status might be that a larger part of our studied population is between 18-30 years, and most individuals in this part of the country are married by the age 30 years.

Most of the patients in our study were Muslims 44 (58.67%), and 31 (41.33%) were Hindus. Similarly, the majority of the participants were Muslims in the multicentric study done by Grover S et al.14

In the present study, among the antidepressants used, escitalopram was most commonly prescribed 48 (64%) followed by sertraline 14 (18.7%). This finding of our study is in agreement with the results of Tripathi A *et al.,* [15] who reported that escitalopram was the most common antidepressant prescribed, followed by sertraline.

Although pharmacological and psychological interventions are both effective for major depression, anti-depressant drugs remain the mainstay of treatment [16]. Selective serotonin reuptake inhibitors (SSRIs) are considered a first-line pharmacological treatment for major depressive disorder (MDD) [17].

SSRIs are greatly preferred over the other classes of antidepressants. The adverse-effect profile of SSRIs is less prominent than that of some other agents, which promotes better compliance Thakkar KB *et al.* [1] In our study, Benzodiazepines were co-prescribed in 68 (40.1%) patients. Among the benzodiazepines, clonazepam was the most commonly prescribed drug, followed by clobazam and zolpidem.

Escitalopram and clonazepam was the most common drug combination used. When patients with depression begin antidepressant therapy, sometimes a benzodiazepine is added to the therapy to mitigate the anxiety and insomnia that occur with depression, reduce depression severity more quickly, and improve antidepressant performance [18].

CONCLUSION: This study revealed that the prevalence of depression disorder was more in males than females. The peak prevalence of depression was in the age group of 18-30 years, followed by 31-40 years in both genders. There is an increased preponderance of depression in a rural area.

The majority of the patients were married, educated up to matric and are employed. Most of the patients in our study were Muslims. Among the antidepressant drugs, escitalopram was most commonly prescribed, followed by sertraline. Among the benzodiazepines, clonazepam was the most commonly prescribed drug. Escitalopram and clonazepam was the most common drug combination used.

More studies have to be undertaken to find out the internal factors like pharmacogenetics and the external factors like various environmental factors that can help to determine the treatment protocols and promote rational use of drugs in the southern part of Assam.

Limitations of our Study: The limitation of our study was that the sample size was relatively small. Further studies hasto be carried out over a larger number of samples so that sufficient data can be collected and the findings could be generalized.

Strengths of our Study: The study on prescription patterns of antidepressant drugs is very sparse from the southern part of Assam. Our study was done in this region of Assam in a tertiary care hospital regarding the utilization of antidepressant drugs in the psychiatry outpatient department.

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CONFLICTS OF INTEREST: None

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