ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

PRESCRIBING PATTERN OF ANTIDEPRESSANTS AMONG PATIENTS WITH DEPRESSION IN MENTAL HOSPITAL OF NEPAL AND ITS COMPARISON WITH INTERNATIONAL GUIDELINES

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ABSTRACT

Background: One of the main mental illnesses that is about to become more prevalent is depression. Research on the optimal prescription of antidepressants is crucial since improper use of these medications can exacerbate depression symptoms.

The purpose of this study is to examine the antidepressant prescribing patterns of individuals who have been diagnosed with depression and to see if they align with suggested standards.

Methods: Mental Hospital Patan, Nepal was the site of this retrospective investigation. Enrolled were all patients (≥18 years old) who had been prescribed at least one antidepressant and had a diagnosis of depression. Patients' records were chosen on a daily registration basis between January 15, 2018, and May 14, 2018. The purpose of the data gathering form was to document hospital eligible patient information. Version 21 of the Statistical Package for the Social Sciences (SPSS) was utilized to analyze the data.

Findings: 114 records in all were examined. Five and a half percent of the patients were female. 25.4% of patients were in the 18–27 age range, which was the highest amount. The most often prescribed antidepressants were found to be selective serotonin reuptake inhibitors (SSRIs) (74%), which included fluoxetine (33.33%) and escitalopram (33.33%). The Antidepressant Treatment History Form (ATHF) reveals that the most commonly prescribed dosages of fluoxetine were within the guidelines provided by the Centers for Medicare & Medicaid Services (CMS) and the American Psychiatry Association (APA); however, it was discovered that other antidepressants were prescribed at lower than recommended doses.

Conclusion: It was discovered that antidepressant prescription dosages were lower than those advised by the current guidelines. It is necessary to carry out more research in Nepal to better understand the prescribing pattern of antidepressants and public literacy regarding their sensible usage.

Keywords: Fluoxetine, Escitalopram, Depression, Antidepressants, Prescription Pattern, SSRI

ISSN PRINT 2319 1775 Online 2320 7876

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1. Introduction

Depression (major depressive disorder /clinical depression) is a common but serious mood disorder. Extrapolations from Global Burden of Disease Study (GBD 2013) indicate that depression and anxiety are among the top ten causes of years of life lost to disability (YLDs) in South Asia, which includes Nepal [1]. Studies have indicated that antidepressant prescription varies by country and type of antidepressant chosen is influenced by physician and patient-related factors. Studies regarding dose of prescribed antidepressants and comparison with that recommended by standard guidelines are lacking [2].

Studies regarding antidepressant prescription have been performed under various topics and the major findings are:

- Factors influencing antidepressant prescribing and doses varied over time from first presentation, to antidepressant initiation and longer-term treatment [3].

Depression is one of the most treatable mental disorders. Between 80 % and 90 % of people with depression eventually respond well to treatment. Approximately 35 different antidepressants are currently available worldwide. The American Psychiatric Association (APA) has developed specific treatment guidelines for clinicians to consider when making diagnoses and treating patients for MDD. The guidelines of the Centers for Medicare and Medicaid Services (CMS) focus mostly on recommended dosing of antidepressant medication. In addition, the Antidepressant Treatment History Form (ATHF), which is commonly used in clinical research to assess a patient's treatment history, provides specific dosing guidelines for antidepressant medication [4].

Study on rational prescription of antidepressants is important since their inappropriate use may lead to precipitation of depressive symptoms. The primary aim of this study was to compare the prescribing pattern of antidepressants with standard guidelines provided by APA, CMS and ATHF.

2. Methods

2.1 Study Design,

setting and period This cross-sectional retrospective study was conducted in the Mental Hospital of Patan, Nepal. The medical records from 15th January, 2018 to 14th May, 2018 were reviewed.

2.2 Study population and eligibility criteria

A total of 114 cases were eligible to be included in the study. Patients diagnosed with (mild, moderate or severe form) major depressive disorder and also prescribed at least one antidepressant, those of age ≥ 18 years and those from Out Patient Department (OPD) were included in the study. Patients with forms of mental illnesses other than depression or those who were admitted to the hospital and medical records with insufficient information and illegible handwriting were excluded .

2.3 Data collection instruments

The research was conducted by collecting data from medical records of the patients kept by the hospital. A data collection form was designed after an extensive literature review.

A pilot study was conducted using the designed data collection form and the

ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

available medical records after which necessary modifications were made. Also, we got the tool thus developed reviewed by the experts.

2.4 Ethical Clearance

Ethical approval was obtained from Nepal Health Research Council (NHRC) [Reg. no. 524/2018]. The consent for use of medical records kept by Mental Hospital, Patan was confirmed through an approval letter issued by the hospital itself. We did not inquire any patient directly in this study.

2.4 Data Analysis

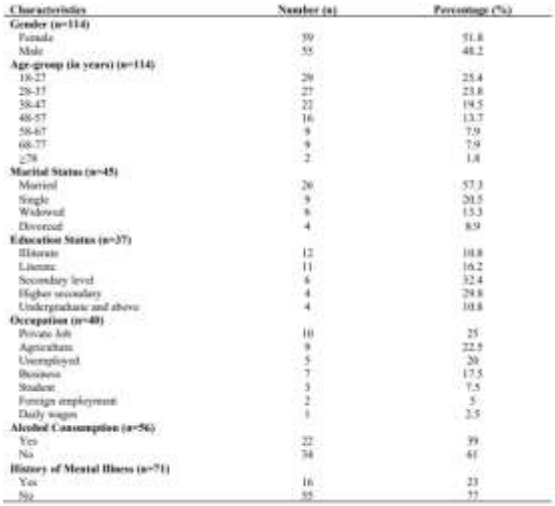
We assessed the socio-demographic characteristics of the patients diagnosed with depression. Also, we assessed some features of the disease and also that of the antidepressants prescribed to them. SPSS version 21 was used for statistical analysis.

3. Results

Of the study participants (7,000), only 114 patients met the inclusion criteria. Of the patients who had an MDD diagnosis (n=128), 14 were excluded because they did not have an antidepressant medication filled during the study period.

Table 1 shows the baseline characteristics of the study participants. There was almost equal proportion of male and female participants in the study. Depression was most prevalent among the patients of age-group 18-27 years (n= 29, 25.4%). Out of 45 patients who had their marital status identified, depression was found to be the most common among married individuals (n= 26). Out of 37 patients who had their education status identified, the highest number of patients under study belonged to those who have obtained secondary level education (n=12) followed by higher secondary (n=11). Out of 40 patients who had their occupation status identified, the highest number of patients under study were private job holders (n= 9). Out of 56 patients who had their alcohol consumption behavior identified, the number of patients who had positive alcohol consumption behavior was (n=22). Out of 71 patients who had their family history of mental illness identified; 55 of the patients diagnosed with depression had no history of mental illness in the family.

Table 1: Baseline Characteristics of the respondents



Characteristics	Number (n)	Percentage (%)
Gender (n=114)		
Female	59	51.8
Male	55	48.2
Age-group (in years) (n=114)		
18-27	29	25.4
28-37	27	23.8
38-47	22	19.5
48-57	16	13.7
58-67	9	7.9
68-77	9	7.9
≥78	2	1.8
Marital Status (n=45)		
Married	26	57.3
Single	9	20.5
Widowed	6	13.3
Divorced	4	8.9
Education Status (n=37)		
Illiterate	12	10.8
Literate	11	16.2
Secondary level	6	32.4
Higher secondary	4	29.8
Undergraduate and above	4	10.8
Occupation (n=40)		
Private Job	10	25
Agriculture	9	22.5
Unemployed	5	20
Business	7	17.5
Student	3	7.5
Foreign employment	2	5
Daily wages	1	2.5
Alcohol Consumption (n=56)		
Yes	22	39
No	34	61
History of Mental Illness (n=71)		
Yes	16	23
No	55	77

Table 2 shows the basic characteristics of depression reported in the study participants. Out of 45 patients who had their stressor (cause) for depression identified; family issues were the most common stressor (n=30). Out of 64 patients who had their total duration of illness (TDI) addressed, 1-6 months was the most common TDI (n=25). Out of 114 patients who had their symptoms addressed, sleep disturbance (n=66) was the most common followed by depressed mood (n=53) and 25 of the patients were

ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

found to have the suicidal ideations developed / suicidal attempts made whereas the number of patients diagnosed with moderate depressive episode was (n=40).

Table 2: Disease Profile of the study population

Figure 1 shows the particular antidepressant prescribed to the study participants. Escitalopram and Fluoxetine were found to be the most commonly prescribed drugs (n=41, 33%).

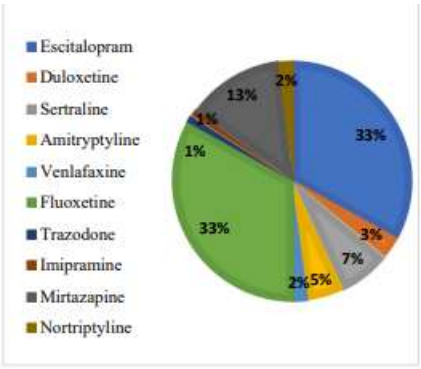


Figure 1: Prescribed antidepressants

Figure 2 shows the antidepressant class prescribed to the study participants. The most commonly prescribed drug classes, from most prescribed to least prescribed were Selective Serotonin Reuptake Inhibitors (SSRIs, N= 91, 73.98 %), Tricyclic Antidepressants (TCAN = 9, 7.31%), Serotonin- Nor epinephrine Reuptake Inhibitors (SNRIs, N=6, 4.87%), Tetra Cyclic Antidepressants (TeCA, N=16, 13.00%), Serotonin Antagonist and Reuptake Inhibitors (SARI=1, 0.81 %)

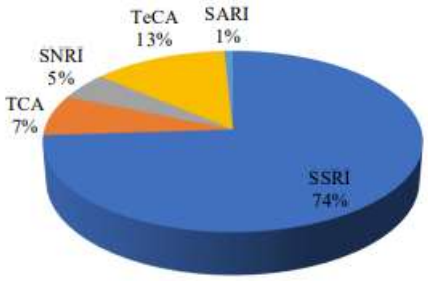


Table 3 shows prescribed antidepressants in accordance to the severity of depression diagnosed amongst the study participants. The frequency of antidepressants prescribed for moderate depressive disorder was n=44, escitalopram and fluoxetine (n=16) were the most commonly prescribed. In the case of mild depression, the frequency of antidepressants prescribed was n=26; escitalopram (n=10) was the most prescribed one. For severe depressive disorder, the frequency of antidepressants prescribed was n=20, escitalopram and fluoxetine (n=8) were the most prescribed ones. The frequency of antidepressants prescribed in case of uncategorized depression was n=33, fluoxetine (n=12) was the most prescribed one.

Table 3: Antidepressants prescribed according to the severity of depression

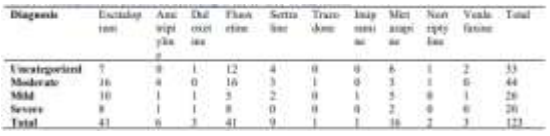


Table 4 shows the most commonly prescribed antidepressant medications, the most common daily dose, and related APA,

ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

CMS and ATHF dosing guidelines for the medications. The most frequently prescribed dosages for fluoxetine only fell within the APA and CMS guidelines and specified in the ATHF; all the other antidepressants were found to be prescribed at lower than recommended doses.

Table 4: Dosing guidelines and its comparison with prescribed doses among the patients under study

Class	Drug	n Drug	%	Common dose[a] (mg/day)	n Taking common dose[b]	% Taking common dose[c]	Recommended guidelines		
							APA	CMS	ATHF
SSRI	Escitalopram	41	33.33	5	26	63.41	10-20	10-20	10
	Fluoxetine	41	33.33	20	20	73.17	20-60	20-80	20
	Sertraline	9	7.31	25	5	55.55	50-200	50-200	100
		91	73.98						
TCA	Amitriptyline	6	4.87	10	5	50	100-300	75-150	200
	Imipramine	1	0.81	25	1	100	100-300	75-200	200
	Nortriptyline	2	1.62	12.5	2	100	50-200	75-150	76
		9	7.31						

Class	Drug	n Drug	%	Common dose[a] (mg/day)	n Taking common dose[b]	% Taking common dose[c]	Recommended guidelines		
							APA	CMS	ATHF
SNRI	Duloxetine	3	2.43	20	2	66.66	60-120	40-120	40
	Venlafaxine	3	2.43	37.5	3	100	75-375	75-375	225
		6	4.87						
ToCA	Mirtazapine	16	13	7.5	13	81.25	15-45	15-45	30
SARI	Trazodone	1	0.81	25	1	100	150-300	150-400	400
		123	100						

4. Discussion

This study is the first of its kind to report the prescribing pattern for antidepressant medications in Nepal among patients with depression and how these practices compare with established dosing guidelines issued by the APA and CMS and specified in the ATHF. The study showed that people of age group 18- 27 years were the most affected by depression; this finding was consistent with several studies; one of such studies reported that patients aged 21–24 years had higher prevalence rates for prescription than those aged 16–17 [5]. In another study, depression was more commonly seen between patients with age group 21-40 years [6].

Depression was found to be more prevalent among females compared to males according to our study. Various studies conducted throughout the world have suggested that depression is more dominantly prevalent among the females [7].

Our study revealed that depression was most common among married individuals and the least among widowed ones. Our finding is in parallel with a previously done research which showed that married people had higher risk of depression [7].

It was found in our study that people who had obtained secondary and higher secondary education were mainly affected by depression. The simple hypothesis from European and US reports that low levels of educational attainment increase the risk and severity of MDD [8]

Family psychiatric history and parental depression, primarily maternal depression has been associated with a child's risk for developing depression [8]. This finding contradicts our result which suggests that family history was not associated with onset of depression.

It was found that sleep disturbances followed by depressed mood, loss of interest and loss of concentration were the most common symptoms observed among the patients under study. Our finding lends support to a study which found that Anhedonia/loss of interest and concentration problems were more common in adults with MDD [9].

Our study suggested that SSRIs are the most commonly prescribed group of antidepressants escitalopram being the

ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

most common medication; this finding is in parallel with the findings of a study which concluded that SSRIs were the most common group and escitalopram was the most common medication used [10]. Another study found out that SSRIs were the most frequently prescribed antidepressants and their prescribing was increasing over nearly the last 10 years [11]. SSRIs are popular because although the efficacy of the SSRIs is comparable to that of the TCAs, the SSRIs have significantly fewer side effects. Unlike the TCAs, they could be used safely in many patient populations, including the elderly and children, both of whom are particularly sensitive to the adverse effects of TCAs. SSRIs also could be prescribed for patients with multiple comorbidities. Because of their overall efficacy, safety, and tolerability, they have become widely prescribed by primary care physicians [4].

Our finding suggested that the most frequently prescribed dosages for fluoxetine only fell within the APA and CMS guidelines and specified in the ATHF; all the other antidepressants were found to be prescribed at lower than recommended doses. TCAs and TeCAs may be prescribed at lower doses because of their increased toxicity and corresponding risk of overdose. The majority of depressed patients should be treated with a low dosage of SSRIs and SNRI, generally corresponding to one tablet per day. Increasing the dose may perhaps be beneficial for some patients with depression, in particular those with severe depression [11]. Other several reasons why antidepressant drugs may have been prescribed at lower than recommended doses include off-label use of antidepressants at low dose as sedative and hypnotic, risk of adverse effects at higher doses and preference of lower starting dose for prescribing antidepressants.

This study assessed only the descriptive characteristics and hence we could not analyze the factors associated with prescribing pattern of antidepressants. Also, the data collection was done only in Mental Hospital, Patan, thus these results may not be generalized to other populations in Nepal due to high levels of ethnic and geographic variations within the country. Most of the medical records we assessed had information on first-time visit of patients to the hospital which is why we could not assess the data from follow-up visits.

5. Conclusion

In this study, baseline features of patients diagnosed with depression in an urban Nepalese mental hospital were evaluated. It was shown that the majority of antidepressant prescription dosages did not correspond with suggested worldwide criteria; more research is required to determine the causes of this.

We also advise hospitals to maintain thorough records in order to support patient follow-up on a regular basis and to carry out additional research in this field.

Additionally, the ideal place to intervene may be in raising public awareness of mental health disorders, such as depression and the appropriate use of medications associated to these conditions, such as antidepressants.

ISSN PRINT 2319 1775 Online 2320 7876

 Journal Volume 10,Iss 09, 2021

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