

DOI: <https://dx.doi.org/10.18203/2319-2003.ijbcp20214118>

Original Research Article

A study on prescribing pattern and drug utilization among depressed patients in a tertiary care teaching hospital

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Received: 10 September 2021

Accepted: 04 October 2021

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ABSTRACT

Background: Drug utilization is defined as the marketing, distribution, prescribing and use of drugs in society. Various factors like quality, quantity, and cost of drugs plays an important role in selection of drug therapy. Hence we wanted to observe that drug utilization and prescribing pattern of antidepressants.

Methods: A prospective observational study were conducted in a psychiatric department at RMMCH for a period of 6 months from November 2019 to April 2020. Sixty patients were enrolled and analysed to study the pattern and the world health organisation (WHO) prescribing indicators.

Results: From 60 prescriptions, the most widely prescribed antidepressant drug escitalopram 21 (42%) as a combination drug citalinforte 30 (50%), linotril 21 (42%) lorazepam 12 (20%), haloperidol 6 (10%) and quitipin 3 (5%). Most commonly, depression was seen in age group between 31-40 years and males were more to depression than females. Most drugs were prescribed under brand names (55%) than generic drugs (45%). Monotherapy was the preferred drug pattern for the mild depression followed by dual therapy and triple therapy for moderate and severe depression respectively. The number of drugs which were prescribed from the WHO and national list of essential medicine (NLEM) was haloperidol (10%) and escitalopram (85%) respectively.

Conclusions: Escitalopram was the commonly prescribed drug for depression followed by lorazepam, linotril and haloperidol. Monotherapy was most preferred, because of increased medication adherence, low ADRs, minimum cost and lesser drug interactions compared to other therapies.

Keywords: Drug utilization, Prescribing pattern, Escitalopram

INTRODUCTION

Depression is very much a real illness and can affect one's mood, energy, thoughts and behaviour. WHO factsheet reported that more than 264 million people were affected by depression worldwide.¹ The depressive disorders are characterized by sadness, loss of interest or pleasure, feelings of guilt or low self worth, disturbed sleep or appetite, feelings of tiredness and poor concentrations. Deficiency of monoamine hypothesis (serotonin, noradrenaline), neuroendocrine abnormalities and genetics can lead to depression and many drugs have been

discovered for the treatment of depressions like selective serotonin reuptake inhibitor and tricyclic antidepressants.²

Drug utilization study is defined by the WHO as marketing, distribution and use of drugs in society with special emphasis on resulting medical, social and economic consequences.³ The purpose of drug utilization pattern is determination of benefit-risk relationship, cost effectiveness and can ensure the appropriate use of dose, duration of therapy and outcomes of therapy with drugs.⁴ Without the knowledge of prescribing pattern it would be difficult to rationale the drugs and to conduct the drug

utilization research. The prescribing pattern promotes appropriate use of monitored drugs, reduction of abuse and ensures medical care rationale.⁵

Aims and objective

The aim and objectives of the study were to study the prescribing pattern and drug utilization review on depressed patients.

METHODS

A prospective observational study was conducted in a psychiatric unit of a tertiary care teaching hospital RMMCH from November 2019-April 2020. Ethical clearance was obtained from the institutional ethics committee (IEC) before starting the study. We used the following inclusion as well as exclusion criteria for the study.

Inclusion criteria

Patients who were treated for depression either as inpatient or outpatient, all patients who were diagnosed with depression and patients between 13-59 years of age were included in the study.

Exclusion criteria

Patients who were not willing to participate in the study, patients under special groups (pregnancy women and lactating mothers) and patients with other psychiatric disorders were excluded from the study.

The data collection form included information about patient’s name, age, sex, generic name and brand name drugs, antidepressant drug prescribed, rationality of the drug prescription in accordance with the NLEM. Prescription of all patients was entered in a preforma and was analyzed using descriptive statistics.

Statistical analysis

The data was collected and entered in Microsoft excel software 2007 and interpreted by descriptive statistics that was presented to analyse and express the report as counts and percentages in the form of tables, charts and graphs.

RESULTS

Sixty prescriptions were analyzed during the study period and patients were classified as mild, moderate and severe depressed based on HAM-D scoring (Hamilton depression rating scale).⁶ Patients were prescribed with antidepressants, benzodiazepenes, antipsychotic and others. The most preferred antidepressant was escitalopram 21 (42%), followed by combination drug citalinforte 30 (50%) and linotril 21 (42%) as shown in the Table 1.

Table 1: Frequency of drug prescribed.

Drugs	Number of prescriptions	Percentage (%)
Citalin forte	30	50
Escitalopram	21	42
Linotril	21	42
Haloperidol	6	12
Lorazepam	12	20
Quitipin	3	5
Librium	3	5
Rexite bt	9	15
Bct	18	30
Others	18	30

Also, it was observed that patients belonging to the age group between 31-40 years were more prone for the occurrence of the depressive disorder (Table 2).

Table 2: Age wise distribution of patients.

Age (Years)	Number of prescriptions	Percentage (%)
<20	3	5
21-30	19	31.5
31-40	31	52
>40	7	11.5

Furthermore, it was observed that, the depression was observed greatly among males (33) patients compared to females (27) patients (Figure 1).

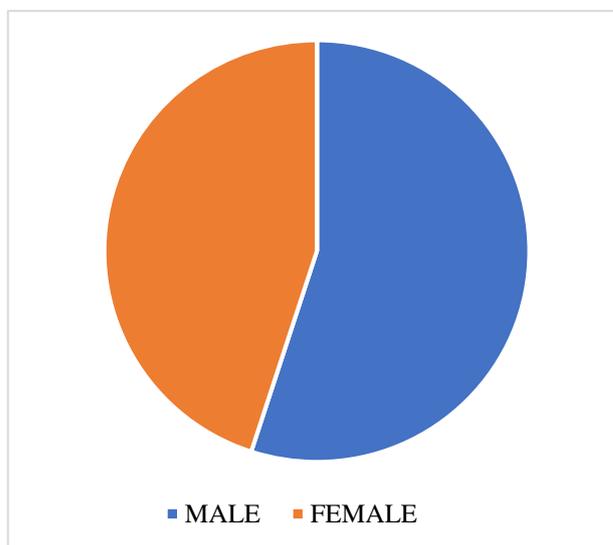


Figure 1: Gender wise distribution.

Lately, it was observed that the most preferred prescribing pattern for the mild depression, moderate depression and severe depression were antidepressants, antidepressants with benzodiazepenes and antidepressants with antipsychotics respectively (Table 3).

Table 3: Prescribing pattern for depressive disorder.

Depressive disorder	Patients (%)	Antidepressants (%)	Benzodiazepene (%)	Antipsychotic (%)
Mild	20	90	5	1
Moderate	48	96	55	10
Severe	22	100	87	58

Drugs prescribed in accordance with the WHO list of medicines and NLEM, was found to be haloperidol 10% and escitalopram 85%.

DISCUSSION

In the present study the escitalopram was the most commonly prescribed antidepressant drug followed by a combination drug 'citalinofote' and linotril etc. Grover et al in a multicentric study analyzed prescription data of 706 patients with depression in diverse teaching institution in public and private sectors and even privately run psychiatry clinics found that escitalopram was the most commonly antidepressant, comprising 40% of total prescription, followed by sertraline (17.6%) and fluoxetine (16.3%).⁷ Gang wang et al an 8 week open label, multicentric, single arm, prospective study conducted among 18-65 year olds at psychiatric outpatient unit found that escitalopram 10-20 mg treatment was efficacious in reducing depression, improving social function and quality of life.⁸

A study conducted by Carvalho et al revealed that safety, tolerability, adverse events and side effects were fewer in escitalopram (SSRI) than TCAs making it a widely used drug in treating major depressive disorder.⁹ Escitalopram and clonazepam was the most common combination used in polytherapy. Benzodiazepenes are co-prescribed for depressive disorder cases. The commonly prescribed benzodiazepenes were lorazepam and clonazepam which was also mentioned by Hussain et al.¹⁰

Lahon et al a retrospective drug utilization study on antidepressant in psychiatric unit found that antidepressant drug duloxetine (96) were mostly prescribed followed by escitalopram (43) but, the preferences for duloxetine over SSRIs as the first line drug in depressive disorder did not conform to the standard treatment guidelines (STG). Adequate dosing was seen for all antidepressants except duloxetine and mirtazapine where, underdosing was prevalent.¹¹

A study conducted by Hussain et al reported that the patients on antidepressants were mostly in the age group between 20-40 years accounting to 51.25%.¹⁰ Similarly, a retrospective observational study analyzed the case records of patients and revealed that antidepressants were distributed in the age group between 21-40 years as clarified by Lahon et al.¹¹ Yerkade et al evaluated the prevalence of depressive disorder were mostly common in females (170, 56.6%) than males (130, 43.3%) and the maximum prescription rate was in the age group between

31-40 years.¹² Similar to our study, the patients on antidepressants were mostly in the age group 31-40 years and antidepressants drugs were mostly prescribed in males (30, 60%), than females (24, 40%) because their social life is vary from other studies like most of the males were under daily wages workers and their economic status was unstable, which was further worsened by COVID-19 pandemic.

In our study mostly proprietary named (55%) medicines were prescribed compared to generic medicines. They were more expensive than generic drugs making it not affordable to most patients. Also, the growth in the number of fatal diseases and the cost of those medicines for such diseases were very high, use of generic drugs for treating other illness is strongly recommended. Mostly in our study antidepressants drugs were prescribed from NLEM which promotes to rational use of medicines considering the cost, safety and efficacy etc.

Limitatons

Our results should however be seen in the light of our small sample size, as compared to the studies with which they have been compared. This study was conducted in a controlled social environment and results may vary between hospitals. As with any drug utilization study quantification of the data on the comparative clinical effectiveness of the antidepressants were not possible. Moreover the sudden outburst of COVID-19 pandemic largely affected the patient followup for much more reliable outcomes.

CONCLUSION

Escitalopram was the most commonly prescribed drug for depressive disorder followed by lorazepam, linotril and haloperidol. Monotherapy was the most followed because of increased medication adherence, low ADRs, minimum cost and lesser drug interactions compared to other therapies.

ACKNOWLEDGEMENTS

Author would like to thanks to the mentors, head of the department of pharmacy and department of psychiatry for their encouragement, advise and full support to this study.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Thangamariyappan C, Karnan D, Roshini G, Manna PK, Kumar A. A study on prescribing pattern and drug utilization among depressed patients in a tertiary care teaching hospital. *Int J Basic Clin Pharmacol* 2021;10:1282-5.