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# Original Research

## Adverse Drug Effects of Antidepressants in Patients of MDD in a Tertiary Care Teaching Hospital: An Observational Study

Dr Pragyan Paramita Jena[1], Dr Birendra N. Naik[2], Dr Ayan Roy[3], Dr Bhabagrahi Rath[4]

[1,3]Postgraduate Trainee, Department of Pharmacology, VIMSAR, Burla, Sambalpur, Odisha, India;
[2]Assistant Professor, Department of Psychiatry, VIMSAR, Burla, Sambalpur, Odisha, India;
[4]Professor and HOD, Department of Pharmacology, VIMSAR, Burla, Sambalpur, Odisha, India

***ABSTRACT:***
**Background and Objective**: Determining and monitoring the prevalence of ADRs of antidepressant medications in MDD patients in a tertiary care teaching hospital. **Materials and Method**: Patients prescribed with at least one antidepressant were selected and monitored for adverse drug reactions (ADRs), irrespective of their age and gender. **Results** : TCAs was the most frequently prescribed antidepressants and most commonly associated with ADRs. Dry mouth and weight gain were the most frequently reported ADRs. Majority of the ADRs were 'mild' in their severity. **Conclusion**: TCAs were the most common antidepressants implicated in causation of ADRs. SSRIs were relatively safer and produced minimal adverse effects. Anticholinergic adverse effects occurred in majority followed by sedation and weight gain effects.
**Key words:** Adverse effects, antidepressants, depression

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**Corresponding author:** Dr Birendra Narayan Naik, Assistant Professor, Department of Psychiatry, VIMSAR, Burla, Sambalpur, Odisha, India

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### INTRODUCTION

Depression is a major public health problem in India, contributing to significant morbidity, disability as well as mortality, along with significant socioeconomic losses. Globally, an estimated 322 million were affected by depression in 2015. [1] Globally, the proportion of the population with depression is estimated to be 4.4% ; common among females 5.1% vs 3.6% with a peak in the 55–74-year age group in both sexes. [1] Depression at its worst can lead to suicide. The association of depression and suicides are well established and studies have shown the probability of deaths from suicide among depressed hospitalized patients to be 15%.

Major depressive disorder (MDD) is characterized by deep sadness, reduced energy, vegetative nervous system dysregulation, cognitive dysfunction, and even a high suicidal tendency. The lifetime prevalence rate for MDD is 16.2% in most developed countries. Approximately 15%-45% of MDD patients suffer from a chronic , unremitting course of depression despite receiving multiple antidepressant medications.

Antidepressants are a class of drugs used primarily in the management of depressive disorders and anxiety disorders. However, this class of drugs is also used for the management of sexual dysfunction, eating disorders, impulse control disorders, enuresis, aggression and some personality disorders. [2]

The prevalence of adverse drug reactions (ADRs) in the psychiatric patients varies from 17.25% to 60.7%.[5-7] Several studies show that antidepressants and antipsychotics are most frequently associated with ADRs, which accounts for approximately 90% of all ADRs in the psychiatry department.[3,4,5]

ADRs due to antidepressants decreases adherence and delay recovery and may also cause treatment failure.[6,7].As there is only limited data available regarding the safety of psychotropic agents especially on antidepressants in the local population, this study is intended to assess the prevalence and pattern of ADRs to antidepressants.

### AIMS AND OBJECTIVE

To monitor the adverse effects of antidepressants

## METHODOLOGY

A cross-sectional study was carried out at the psychiatry OPD of VIMSAR, Burla for a period of 3months after obtaining permission from Institutional Ethics committee. A total of 40 patients diagnosed with MDD as per ICD-10 classification treated with antidepressants were included in this study. Drugs received and ADRs experienced by the study patients were recorded using adverse side effect check list. The prevalence of ADRs was determined by taking the ratio of total number of patients who experienced ADRs to the total number of patients included in the study.

## RESULTS

40% MDD patients belonged to 30-40 years. TCAs were the most frequently prescribed antidepressants (55%) followed by SSRIs. Among the TCAs, Dosulepin has been reported to be used extensively. Most common adverse effect encountered overall was annticholinergic accounting for 75% cases.

## DISCUSSION

Anticholinergic adverse effect (dry mouth) was most commonly reported ADR. This may be attributed to the pharmacological antagonism of muscarinic receptors by the drugs mostly TCAs. This finding is in contrast to the study conducted by Swathi et al.,[8] wherein insomnia was the most commonly reported ADR. This difference occurred because SSRI were the most commonly prescribed class of drugs in the above study. SSRIs have minimal effects on histamine H1 receptors and therefore can cause less sleep disturbances than other antidepressants. Weight gain was the next frequently observed adverse effect. It is well known that antidepressants like mirtazapine can increase appetite and carbohydrate craving and that may lead to significant weight gain.[9]

Majority of the ADRs were due TCAs. This could be attributed to increased frequency of used prescription of these drugs. Dosulepin/Dothiepin was widely prescribed and was the most common drug implicated in causing ADR. Insomnia was most commonly associated with the patients who were on SSRIs. within the first few days to weeks of the therapy. Since SSRI do not block alpha-1 adrenergic receptors significantly, orthostatic hypotension is unlikely in patients receiving SSRIs.

## CONCLUSION

TCAs are the most common class of drugs implicated for the ADRs. This prospective surveillance study provided a representative data of ADR profile of the antidepressants likely to be encountered in Indian psychiatric patients. Constant vigil in early detection and reporting of ADRs and subsequent management can make the therapy with antidepressants safer and effective.

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## CONFLICT OF INTEREST

None

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