

ORIGINAL ARTICLE

## Prescription Pattern of Antidepressant Drugs in a Tertiary Care Centre of Central India

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### Abstract

**Objective:** In psychiatric practice, antidepressant drugs are widely used group of drugs. Number of drugs is available in this group with diverse type of mechanisms and efficacy/safety profile. The objective for the study was to identify the prescription pattern of antidepressant drugs in the centre for determination of current trends. **Materials and Methods:** The retrospective study was conducted at NKP Salve Institute of Medical Sciences and Research Centre, Nagpur. Case records of all the patients suffering depression and other psychiatric disorders and treated with antidepressants during the period of 2012-13 by institutional psychiatrists were analyzed for prescription pattern of antidepressant drugs. **Results:** A total of 400 patients received antidepressant drugs. Out of which 128 (32%) patients treated with Escitalopram, 82 (20.5%) with Fluoxetine, 71 (17.75%) with Nortriptyline, 29 (7.25%) Venlafexine, 16 (4%) with Sertraline, 14 (3.5%) with Dothiepin, and 17 (4.25%) with Paroxetine. **Conclusion:** Selective Serotonin Reuptake Inhibitors (SSRIs) are still a very popular group of antidepressant drugs in this region. Escitalopram followed by Fluoxetine and Nortriptyline were the most preferred drugs among psychiatrist for the management of depression because of their efficacy/safety profile and best usefulness for the local population.

**Keywords:** Antidepressant, SNRIs, SSRIs, TCAs,.

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### Introduction

Depression is one of the major problems among neuropsychological disorders. Hence in psychiatric practice, antidepressant drugs are widely used group of drugs. A significant increase in use of antidepressant drugs was observed across all the socio-demographic groups in USA from 1996. The rate of utility of antidepressants was found to be increased from 5.84% in 1996 to 10.12% in 2005 as 13.3 million cases were treated with these drugs in 1996 and 27 million patients in 2005 in USA.<sup>1</sup> In England, average increase in use of antidepressant drugs was 10% per year during the period of 1998 to 2010.<sup>2</sup>

Number of drugs is available in antidepressant group with diverse type of mechanisms and efficacy/safety profile. Antidepressants as a class of drugs are used primarily in the management of depressive 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. Over the years many classes of antidepressants have become available in India, some of which have stood the test of time and are still in use and some, which are no more marketed or are no more a favorite of clinicians. The research focusing the usefulness of antidepressants in India has more or less followed the trends in the west.<sup>3</sup> In a retrospective study done between February 2006 to January 2007 in private hospital at Chennai, India showed that SSRIs are favored as first line treatment in a first episode of depression and are prescribed more frequently because the side effects are better tolerated than the older drugs. This pattern was observed even when the newer antidepressants SSRIs and the SNRIs were prescribed in majority of cases in other regions.<sup>4</sup>

Availability of wide variety of antidepressant drugs and globally their different pattern of prescription indicates that different regional populations need different antidepressant and same drug may not be useful in another population group. Therefore this study was undertaken to analyze the prescribing pattern of various antidepressant drugs in this part of central India. So that current trend can be identified which will be useful for the management of psychiatric disorders.

## Materials and Methods

It was a retrospective study which was conducted at NKP Salve Institute of Medical Sciences and Research Centre, Nagpur. Case records of all the patients suffering depression and other psychiatric disorders and treated with antidepressant drugs during the period of 2012-13 by institutional psychiatrists were analyzed for prescription pattern of antidepressant drugs. Prior the study permission from institutional ethics committee was sought. The antidepressant drugs received by the patient like tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs) and atypical antidepressants for depression and other psychiatric disorders were noted. Data was recorded in case record form and analyzed using Microsoft excel program.

## Results

A total of 400 cases were managed with antidepressant drugs during the one year period of 2012-2013. Patients were prescribed Tricyclic Antidepressants (TCAs), Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin Norepinephrine Reuptake Inhibitors (SNRIs) and Atypical Antidepressants for depression and other and psychiatric disorders. Escitalopram was the most common drug which was prescribed to majority of cases (128 cases, 32%). Fluoxetine was prescribed to 82 (20.5%) patients. Nortriptyline was the 3<sup>rd</sup> leading drug antidepressant drug prescribed to 71 (17.75) cases. Other drugs used were venlafaxine in 7.25%, sertraline in 4%, dothiepin in 3.5%, mirtazepine in 3.25%, paroxetine in 4.25%, bupropion in 1.25%, duloxetine in 1.5%,

amitriptyline in 1% and fluvoxamine in 1.25% of patients (Table- 1).

**Table- 1: Antidepressant drugs utilization**

Drug received	Number	Percentage
Escitalopram	128	32
Fluoxetine	82	20.5
Nortriptyline	71	17.75
Venlafaxine	29	7.25
Sertraline	16	4
Dothiepin	14	3.5
Mirtazepine	13	3.25
Paroxetine	17	4.25
Bupropion	5	1.25
Duloxetine	6	1.5
Amitriptyline	4	1
Fluvoxamine	5	1.25

## Discussion

In the present study escitalopram was the most commonly used antidepressant drug i.e. in 32% of patients followed by fluoxetine in 20.5% and nortriptyline in 17.75% of patients. Avasthi et al in India found that SSRIs were prescribed most frequently i.e. 48% for the treatment of newly cases of major depression followed by the SNRIs 17%. Of the SSRIs fluoxetine 23% and sertraline 20% were favored. In SNRI group, venlafaxine 17% was most frequently prescribed drug. Most common tricyclic antidepressant was imipramine (8%).<sup>3</sup> Pinto et al evaluated tolerability and response to escitalopram in Indian patients with major depression in a 8-week open-label multicentric study among 18-65 years old. They found observed that escitalopram was well tolerated, with only 2 patients (1.7%) withdrawing from the study due to adverse events. There were no serious adverse events.<sup>5</sup>

Escitalopram was found superior in a meta-analysis which was done using studies in major depressive disorder (MDD) comparing escitalopram with active controls, including selective serotonin reuptake inhibitors [SSRIs] (citalopram, fluoxetine, paroxetine, sertraline) and serotonin/noradrenaline reuptake inhibitors [SNRIs] (venlafaxine, duloxetine). In this meta-analysis, superior efficacy of escitalopram compared to SSRIs and SNRIs was confirmed, although the superiority over SSRIs was largely explained by differences between escitalopram

and citalopram.<sup>6</sup> Boulenger JP et al compared efficacy of long-term treatment with escitalopram and paroxetine in severely depressed patients and found that escitalopram as significantly more effective than paroxetine in the long-term treatment of severely depressed patients.<sup>7</sup> Edward P et al estimated the costs and quality-adjusted life weeks (QALWs) of duloxetine and escitalopram. They observed that escitalopram was more effective in terms of QALWs and less costly than duloxetine for treatment of depression.<sup>8</sup> Another pragmatic randomized open-label comparative study of sertraline and citalopram in major depressive disorder had shown better efficacy, earlier onset of action and more number of responders and remitters by citalopram as compared to sertraline in MDD in Indian patients.<sup>9</sup> Mathur et al observed that mirtazapine is effective in the treatment of major depression at the dosages range of 15-45 mg/day and it has efficacy equivalent to that of the standard TCA amitriptyline, albeit, with a substantially better tolerability profile.<sup>10</sup>

The studies indicate that use of SSRIs is much more common in comparison to other group of antidepressant drug for the management of depression. Findings of other authors about superiority of escitalopram are similar to our observations as we also found use of escitalopram as most common. The rapid market uptake of the new antidepressants, particularly SSRIs, is likely to have been driven by increased awareness of depression, together with availability and promotion of new therapies.<sup>11</sup> The large rise in antidepressant volumes is caused by a complex mixture of more patients being prescribed SSRI and 'other' antidepressants, the use of higher doses, and longer durations of treatment, with the balance changing overtime. Fluoxetine was another leading drug prescribed by psychiatrist in the present study. Many authors also found utility of this drug as mentioned in the literature. Antidepressants like fluoxetine and other SSRIs are known to improve cognition and memory in some studies which provides additional benefit.<sup>12</sup>

## Conclusion

Selective Serotonin Reuptake Inhibitors (SSRIs) are still a very popular group of antidepressant

drugs in this region. Escitalopram followed by Fluoxetine and Nortriptyline were the most preferred drugs among psychiatrist for the management of depression because of their efficacy/safety profile and best usefulness for the local population. These drugs are probably most favored because use of these drugs is associated with fewer side effects and better patient compliance.

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**Conflict of Interest:** None declared

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