

Sexual dysfunction with the use of antidepressants in a tertiary care mental health setting – a retrospective case series

Kingshuk Lahon, Harsha M. Shetty, Amith Paramel¹, Gyaneswar Sharma¹

Departments of Pharmacology and ¹Psychiatry, Mahatma Gandhi Medical College and Research Institute, Pondicherry, India.

ABSTRACT

Sexual dysfunction affects patients' quality of life. It can occur secondary to physical or mental disorders, substance abuse and treatment with prescription drugs like antidepressants. We wanted to study the prevalence of sexual dysfunction associated with antidepressant use in the psychiatric unit of a tertiary care hospital and assess for causality, severity and preventability. We did a retrospective data collection from case records of patients on antidepressants from the Psychiatry outpatient clinic of a tertiary care teaching hospital during the period 1st January 2006 to 31st December 2006, excluding those with complaints of sexual dysfunction prior to treatment. Data are presented as a case series. Documented adverse events were subjected to analysis for causality, severity and preventability using Naranjo's, modified Hartwig and Siegel and modified Schumock and Thornton's Preventability scales respectively. Out of 169 patients, four patients developed sexual dysfunction (2.36%) associated with duloxetine, mirtazapine, trazodone and sertraline. We observed a possible causal relationship of mild to moderately severe ADR (sexual dysfunction) which was not preventable. Prevalence of antidepressant associated sexual dysfunction was lower than quoted in Western literature probably due to the retrospective nature of our study design. Active monitoring and intervention can greatly improve the quality of life and compliance to treatment.

Key words: Antidepressants, causality, preventability, sexual dysfunction, severity

INTRODUCTION

The human sexual response is the physiological ability to experience desire, arousal, orgasm, and resolution.^[1] Sexual dysfunction is defined as disturbance in sexual desire and in the psychophysiological changes that characterize the sexual

response cycle and cause marked distress and interpersonal difficulty.^[2] There is a strong relationship between depression and sexual dysfunction in that the former is a risk factor for developing sexual dysfunction, especially decreased libido and erectile dysfunction. On the other hand, patients presenting with sexual dysfunction often have accompanying depressive disorder.^[3] Sexual dysfunction can occur secondary to physical or mental disorders, substance abuse, as well as prescribed drug treatment.^[4,5] Complaints of sexual dysfunction may indicate nonresponse to treatment, progression of the underlying disorder, or adverse effect of drug treatment. Antihypertensives such as α - and β -adrenergic blockers, diuretics, anticholinergics, antihistamines, antidepressants, benzodiazepines and antipsychotics are common medicines which can cause sexual dysfunction.^[6]

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Address for correspondence:

Kingshuk Lahon, Department of Pharmacology, Mahatma Gandhi Medical College and Research Institute, Pondicherry - 607402, India.
E-mail: kingshukl@yahoo.co.in

In Western societies, sexual dysfunction affects an estimated 43% of women and 31% of men in the general population.^[7] Up to 70% of patients with depression may be affected with sexual dysfunction.^[8] Most antidepressant drugs are associated with sexual dysfunction with varying degrees of prevalence. Tricyclics (30%), MAO inhibitors (40%), SSRIs (60–70%), venlafaxine (70%), trazodone (unknown except for few case reports), mirtazapine (25%), reboxetine (5–10%), and duloxetine (46%) have been implicated in causing sexual dysfunction in Western populations.^[9] But it is difficult to accurately identify treatment-emergent dysfunction, due to confounding factors, like mental illness itself, cultural influences, and comorbidity.^[10] It can be reliably detected only from systematic history taking at baseline and during treatment, preferably with the help of validated questionnaires, like the Arizona Sexual Experience Scale (ASEX)^[11] or Changes in Sexual Functioning Questionnaire (CSFQ).^[12] As it is a nonserious adverse drug reaction (ADR), antidepressant-induced sexual dysfunction is less often studied and reported. However, it is an important problem for patients which affects their quality of life^[13] and also the compliance to drug treatment – and hence, we wanted to study the prevalence of sexual dysfunction in the psychiatry unit of our tertiary care hospital and assess them for Causality, severity and preventability.

We report here a mini case series of sexual dysfunction associated with the use of antidepressants in the psychiatric unit of a tertiary care hospital. ADR monitoring data were collected retrospectively from case records of patients who were diagnosed with psychiatric conditions where antidepressants are indicated, such as depressive or adjustment disorders (as per criteria of International Classification of diseases (ICD-10 Classification of Mental and Behavioural disorders)^[14] and who received antidepressant therapy from the psychiatry outpatient clinic of a tertiary care teaching hospital in Pondicherry during the period 1st January 2006 to 31st December 2006. Patients not receiving antidepressant therapy and those with complaints of sexual dysfunction prior to treatment were excluded from the study. The documented adverse events were subjected to causality analysis using Naranjo's scale,^[15] severity analysis using modified Hartwig and Siegel scale,^[16] and preventability analysis using modified Schumock and Thornton's Preventability scale.^[17]

Out of 169 patients, diagnosed with depressive disorder or any other condition where antidepressants were prescribed, four patients developed adverse effects on sexual function (2.37 %). The cases are described as follows.

CASE REPORTS

Case 1

A 54-year-old male, having a history of diabetes (not on

antidiabetic drugs) and alcohol consumption, was diagnosed with mixed anxiety and depressive disorder with alcohol dependence. He was treated with the antidepressant duloxetine, along with clonazepam and buspirone for relieving the anxiety. Duloxetine was started at a daily dose of 20 mg for 3 days, increased to 30 mg for 7 days, followed by 40 mg as maintenance dose. During the course of maintenance treatment, he complained of decreased libido.

Case 2

A 43-year-old male, on anti-tubercular drug treatment for right-sided pleural effusion due to pulmonary tuberculosis with a history of alcohol consumption, was diagnosed with depressive disorder with alcohol dependence. He was treated with the antidepressant mirtazapine along with lorazepam and vitamin B complex formulation for the alcohol dependence. Mirtazapine was started at 7.5 mg daily and increased to 15 mg after 7 days, to continue as maintenance dose. After 4 weeks of treatment, he complained of erectile dysfunction. Mirtazapine was replaced by trazodone 150 mg daily, increased to 300 mg after 4 days. After 2 weeks of treatment, the patient's erectile dysfunction got relieved.

Case 3

A 38-year-old male was diagnosed with mixed anxiety and depressive disorder. He was treated with the antidepressant trazodone along with alprazolam for relieving the anxiety. Trazodone was started at a dose of 150 mg and it was increased to 300 mg after 3 days; the treatment was continued for 10 days, after which he discontinued the medications on his own. After 11 days, the patient reported with complaint of increased libido and nocturnal emission.

Case 4

A 35-year-old female was diagnosed with obsessive compulsive disorder (OCD) with depressive disorder. She was treated with the antidepressant sertraline along with clonazepam. Sertraline was started at a daily dose of 25 mg and increased to 50 mg after 4 days, followed by 75 mg as maintenance thereafter. After 1 week, clonazepam was replaced by zolpidem. The patient complained of decreased libido during the course of maintenance treatment.

Results of causality, severity, and preventability assessment are summarized in Table 1.

Table 1: Summary of causality, severity, and preventability scores/grades

Case no	Causality score (Naranjo's scale)	Severity grade (modified Siegel and Hartwig scale)	Preventability grade (modified Schumock and Thornton's scale)
1	2 (Possible)	Moderate (Level 3)	Not preventable
2	3 (Possible)	Mild (Level 2)	Not preventable
3	3 (Possible)	Mild (Level 2)	Not preventable
4	2 (Possible)	Mild (Level 1)	Not preventable

None of the patients complained of sexual dysfunction at the time of primary diagnosis. The symptoms manifested during the course of treatment. The confirmation of sexual dysfunction was made on the basis of the patient's history as per case definition of ICD-10 for sexual disorders. All the antidepressants mentioned are known to cause adverse effects on sexual function. Duloxetine is known to cause difficulty in achieving orgasm, as per the ASEX scale.^[18] In our patient, we found a possible association of duloxetine with decrease in libido. Mirtazapine has lower tendency to cause sexual dysfunction, although decrease in libido, delayed orgasm, and less commonly, erectile dysfunction are reported. Trazodone may cause increase or decrease in libido, impaired ejaculation, and priapism rarely. It has been used for treating difficulty in initiating and maintaining erection in some cases. In our second patient, possible association of mirtazapine with erectile dysfunction was suspected and that was the reason why it was changed to trazodone. Mirtazapine is regarded as one of the antidepressants with lower tendency to cause sexual dysfunction; even when it occurs, it is mostly in the form of decreased libido, whereas erectile dysfunction is rare.^[19,20] Trazodone causing changes in libido has been reported. Sertraline is known to cause decrease in libido and delayed orgasm.^[19] Confounding factors in the causality assessment are the concurrent use of benzodiazepines like clonazepam, lorazepam, and alprazolam in all the cases. Furthermore, the presence of comorbid chronic illness like diabetes mellitus or pulmonary tuberculosis on treatment with anti-tubercular drugs can be additional risk factors. The association of moderate alcohol dependence can also be an aggravating factor in causing sexual dysfunction as alcohol use is known to cause impotence in males with an incidence close to 50% in chronic alcoholics.^[21] The patient was, however, off alcohol use during the maintenance phase of antidepressant treatment.

Complete spontaneous remission of sexual dysfunction occurs in 10% cases and partial remission in an additional 11%.^[19] Thus, waiting for tolerance to the ADR^[22] to develop can be a useful strategy. The alternative recommendation (in case remission does not occur) is to reduce the dose, provide “drug holidays” or discontinue the drug, switch over to a new drug, or add adjunctive drugs to the treatment regimen. The antidepressant regimen was not changed for the first patient, but the 5-HT partial agonist buspirone which was added for anxiolytic effect, also had adjunctive effect of increasing libido. In the second patient, stoppage and change of drug was necessary as a possible association of mirtazapine with erectile dysfunction was suspected. The third patient was lost to follow up, but non-compliance was observed when he came with the complaint of nocturnal emission. For the fourth patient, antidepressant was not changed. However, the possibility of additive adverse effect of clonazepam on sexual function was reduced as it was replaced by zolpidem (due to poor response in relieving insomnia) after 7 days.

There is no way in which sexual dysfunction can be prevented with the use of antidepressant medications. However, proper selection of drugs, reduction of dose where necessary, discontinuation or change of drug, or use of adjunctive therapy where indicated can help in mitigating the effects.

Limitations in our study were because of the retrospective nature of our study design. There was absence of causality association of the ADRs with antidepressants beyond a possible score on Naranjo's scale due to confounding factors and the inability to collect objective evidence due to lack of corresponding interventions, like re-challenge, etc. Moreover, it has been found that questionnaire-based history-taking at baseline and during treatment can give a better picture of the sexual dysfunction, which is feasible only in a prospective design unless it was recorded in the case sheets.

Finally, the compliance of the patients can be more carefully monitored in a prospective study. One strength of our study is that we can see a possible association of known types of sexual dysfunction with various antidepressants in the population of Pondicherry and Tamil Nadu similar to Western populations. To our knowledge, studies evaluating antidepressant-induced sexual dysfunction in Indian tertiary care mental health settings are lacking.

Prevalence of antidepressant-associated sexual dysfunction was lower than quoted in Western literature. This could be due to the retrospective nature of our study design, as direct questioning and questionnaire-based methods applied at baseline and during treatment are superior in detecting antidepressant-associated sexual dysfunction. It highlights the need for prospective studies in Indian populations. Access to reliable data on prevalence of sexual dysfunction with the use of antidepressants can improve clinicians' decision-making and patient care.^[13] We found possible relation of antidepressants in causing sexual dysfunction, accounting for mild to moderate severity ADR. Although there was no way to prevent it, all the sexual dysfunctions found in our study were manageable with pharmacotherapy.

Antidepressant-induced sexual dysfunction has been found to be a major cause of non-adherence to drug treatment in depressive disorders.^[19,23] Active monitoring and intervention in such cases can greatly improve the quality of life and compliance to treatment.

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