Venlafaxine Induced Spontaneous Ejaculation: A Case Report

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Abstract

Venlafaxine, an antidepressant classified as a serotonin-norepinephrine reuptake inhibitor (SNRI), is commonly associated with side effects such as dizziness, nausea, nervousness, drowsiness, and sexual dysfunction. These side effects are typically dose-dependent and more common at higher doses. This case highlights a rare occurrence of spontaneous ejaculation linked to venlafaxine at a relatively low dose, underscoring the importance of recognizing that such side effects can appear even at lower therapeutic levels.

Keywords

venlafaxine, spontaneous ejaculation, sexual, side effect

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INTRODUCTION

Venlafaxine, categorized as a serotonin-norepinephrine reuptake inhibitor was first approved by FDA in 1993. It is extensively used in major depressive disorder, generalized anxiety disorder, social anxiety disorder and panic disorders. Additionally, it has also been used off-label for conditions such as attention deficit disorder, fibromyalgia, premenstrual dysphoric disorder, migraine, etc.[1] It acts via blocking the serotonin and norepinephrine reuptake pumps leading to increase in the serotonergic and noradrenergic neurotransmission, with effects on the norepinephrine pumps being more relevant at higher doses.[2] The most notable side effects of venlafaxine include gastrointestinal effects, sleep problems and sexual dysfunction. Among sexual problems, diminished libido, impotence and difficulty achieving orgasm are commonly reported.[1] Spontaneous ejaculation is a relatively less reported sexual side effect and when present has occurred with high doses. Here we present a case who developed spontaneous ejaculation at a relatively lower dose of venlafaxine.

CASE

21 years, unmarried male with a history of palpitations, shortness of breath, tremors of hand and body, something stuck in throat with generalized body weakness and anticipatory fear presented in OPD. There were no mood symptoms and no history of substance use. There was no significant past medical and family history. Physical examination did not reveal any abnormality. Mental state examination did not reveal any significant abnormality. A diagnosis of Anxiety not otherwise specified (NOS) was made as per ICD-10. Thyroid screening test and cardiac examination and investigation were done to rule out any possible organicity. Patient was started on Venlafaxine 37.5 mg OD which was increased to 75 mg after 2 days. After 2 weeks of dose optimization, patient expressed up to 70-80 % reduction in his anxiety symptoms. However, after the dose increment patient complained of spontaneous ejaculation 3-4 times/day without any sexual arousal and associated with significant distress. No urological etiology was found. Venlafaxine was cross tapered with escitalopram and stopped in 1 week. Improvement in spontaneous ejaculation was seen with reduction of dose and resolved completely within 1 week of stopping venlafaxine. Patient is currently on escitalopram 10 mg and is maintaining well.

DISCUSSION

Venlafaxine, belonging to the phenylethylamine class, is rapidly absorbed orally and has a half life of around 5 hours. It is metabolized in the liver to its major active metabolite, O-desmethylvenlafaxine (ODV) which has a mean half life of 11 hours. Venlafaxine and its metabolites have primarily renal excretion. Besides being a potent reuptake inhibitor of norepinephrine and serotonin, it is also a weak inhibitor of dopamine reuptake. Venlafaxine unlike tricyclic antidepressants (TCAs) has no appreciable affinity for the histaminergic, muscarinic cholinergic or alpha-1 adrenergic receptors and is associated with low frequency of anticholinergic, sedative and cardiovascular side effects. The reported side effects with use of venlafaxine are dizziness, nausea, insomnia, nervousness, somnolence, and sexual problems.[3]

Studies have shown that sexual dysfunction associated with venlafaxine ranges between 43–67%.[4,5,6] Among sexual side effects, decreased libido, delayed orgasm, and erectile dysfunction are the most frequently reported symptoms.[5,7] Spontaneous ejaculation, however, is a rare side effect of venlafaxine.

There are three published reports on five cases of venlafaxine induced spontaneous ejaculation that we could come across.[8-10] In these reports patients developed spontaneous ejaculation after receiving at least 150 mg of venlafaxine and it subsided after reducing the dose. The outcome for one case is not reported.[9] Sexual arousal was also present in three cases and absent in one. It was not commented upon in one report.

The possible mechanism behind this phenomenon may be attributed to increased noradrenergic activity, which reduces ejaculatory latency and triggers spontaneous ejaculation. Norepinephrine activates alpha-adrenergic receptors located in the vas deferens, seminal vesicles, and urethra. This activation stimulates smooth muscle contractions in these organs, enhancing both the emission and expulsion stages of ejaculation.[11] The role of norepinephrine in spontaneous ejaculation is further supported by occurrence of spontaneous ejaculation in other drugs that inhibit norepinephrine reuptake such as atomoxetine, methylphenidate, reboxetine.[9,12]

In our case, despite venlafaxine being a dual reuptake inhibitor of serotonin and norepinephrine, we hypothesize that the noradrenergic mechanism played a central role in causing spontaneous ejaculation.[5] This is supported by the resolution of symptoms upon cross-tapering with escitalopram, a drug with predominantly serotonergic activity.

Interestingly, in our case, spontaneous ejaculation occurred at a much lower dose of 75 mg, highlighting that this side effect is not necessarily dose-dependent and can manifest even at lower doses. This variation suggests that individual sensitivity to noradrenergic activity may play a significant role in the onset of such rare side effects.

CONCLUSION

Spontaneous ejaculation, a rare side effect of venlafaxine, is possibly a result of noradrenergic activity. Documenting rare sexual side effects of venlafaxine is crucial for a deeper understanding of its side-effect profile. While individual case reports offer valuable insights, a clearer picture of the nature and prevalence of these side effects can only come from controlled, prospective studies involving larger patient groups. Such studies are essential for establishing patterns, identifying risk factors, and improving patient care.

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