Bupropion-Induced Spontaneous Ejaculations

N. A. Uvais, DPM[a,*], and Salah Basheer, PhD[a]

Bupropion is an antidepressant that inhibits dopamine and norepinephrine reuptake in the brain.[1] Of the antidepressants, it is considered to have the least sexual side effects and is often prescribed to treat selective serotonin reuptake inhibitor–associated sexual dysfunction.[2] However, there are rare reports of premature ejaculation and spontaneous orgasm associated with bupropion.[2–4]

Case Report

A 39-year-old unmarried man experienced spontaneous ejaculations after the use of bupropion 300 mg/day. He was prescribed bupropion 150 mg/day after being diagnosed with dysthymia. The dose was increased to 300 mg/day after 2 weeks. He started having an intense feeling to ejaculate every day, mostly after micturition, within 2 weeks of increasing the medication. Although, he controlled the urges most of the time, there were multiple instances when he failed and ejaculated. Neither salient erections nor sexual arousal were associated with the ejaculations. Before his treatment with bupropion, he indicated no sexual problems with the exception of sexual aversion. There was no past psychiatric history or medication or any prior significant sexual history. Due to this complaint, he stopped bupropion treatment. After 1 week of stopping bupropion, he claimed that he no longer suffered from spontaneous ejaculation.

Discussion

Several antidepressants (escitalopram, venlafaxine, citalopram, reboxetine, duloxetine) are reported to cause spontaneous ejaculation.[5] To our knowledge, spontaneous ejaculation with bupropion has not been reported to date. The mechanism by which bupropion induces spontaneous ejaculations is unclear. However, both central and peripheral actions of the drug may play a role. Research[6] has highlighted the role of dopamine in human sexual response, especially in libido, sexual arousal associated with hypersexuality, and spontaneous erections. Through its inhibitory effects on the dopamine transporter, bupropion enhances activity in central dopaminergic neurotransmitter systems, and the spontaneous ejaculations experienced by our patient might have been mediated through the dopaminergic system.[4] The noradrenergic effects of bupropion can also contribute to this rare side effect due to its peripheral effects on the sympathetic system.[4]

Clinicians should be aware of the possibility of spontaneous ejaculation with bupropion treatment. Further research is needed to understand the exact mechanism of and treatment options for this rare side effect.

Published online: January 2, 2020.

Potential conflicts of interest: None.

Funding/support: None.

Patient consent: Consent was received from the patient to publish this case report, and information has been de-identified to protect anonymity.

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[a]Department of Psychiatry, Iqraa International Hospital and Research Centre, Calicut, Kerala, India

**Corresponding author:* N. A. Uvais, DPM, Iqraa International Hospital and Research Centre, Calicut, Kerala, India (druvaisna@gmail.com).

Prim Care Companion CNS Disord 2020;22(1):19l02453

To cite: Uvais NA, Basheer S. Bupropion-induced spontaneous ejaculations. *Prim Care Companion CNS Disord*. 2020;22(1):19l02453.

To share: https://doi.org/10.4088/PCC.19l02453