Case report: Severe and treatment-resistant spontaneous ejaculation secondary to atomoxetine

Dear Sir,

Atomoxetine is a generally well-tolerated noradrenalin reuptake inhibitor indicated for the treatment of attention deficit hyperactivity disorder (ADHD).¹ It may have an important role in treating patients with ADHD and comorbid stimulant use disorder due to its low proclivity to abuse or diversion.¹ The most common sexual side effects of atomoxetine include ejaculation disorder and erectile dysfunction.² Keltner and his colleagues define sexual dysfunction as a reduction in libido, arousal (i.e. lubrication, erection) and/or release (i.e. orgasm/spontaneous ejaculation).

We write to you to report a 24-year old man with ADHD diagnosed and treated successfully in childhood with methylphenidate. In the absence of treatment for his ADHD in adulthood, he developed polysubstance use disorders diagnosed using the Diagnostic and Statistical Manual of Mental Disorders for methamphetamine, cannabis, benzodiazepine and tobacco. He was withdrawn from methamphetamine and cannabis using symptom triggered withdrawal scales under reducing benzodiazepine cover. He also received high doses of nicotine replacement therapy for management of tobacco use disorder. He was weaned off diazepam using divided doses of diazepam with a 5–10 mg reduction daily over a period of 3 weeks.

On completion of his detoxification, and on further longitudinal assessment, his ADHD symptoms persisted. Specifically, symptoms of emotional dysregulation, inattention and hyperactivity. To treat his underlying ADHD, he was commenced on atomoxetine and titrated up to 80 mg daily.

Atomoxetine was overwhelmingly helpful in restoring his ability to concentrate and complete his recovery planning, and to reduce motoric hyperactivity. However, following commencement of the atomoxetine treatment, he developed a rapid onset of spontaneous ejaculation with orgasmic sensation occurring two to three times daily, which was dose dependent. He only volunteered these side effects a few weeks after commencing. Upon direct questioning of sexual dysfunction, he declared his embarrassment about the issue and his preference to continue atomoxetine due to the impressive clinical response. Citalopram treatment slowly titrated to 40 mg daily was only marginally effective in reducing the frequency of spontaneous ejaculation to around once every 2 days. Atomoxetine was tapered and upon cessation there was immediate restoration of normal sexual functioning.

Sexual functioning is an aggregate of elaborately interconnected physiological systems, influenced by a multiplicity of psychological and social determinants.^{3–5} It has been identified that noradrenergic systems, as well as others (such as oxytocinergic, serotonergic, cholinergic and nitric oxide), influence or potentiate sexual functioning; however, these systems are usually countervailed by reuptake inhibition of monoamines.^{3–5} For example, nitric oxide production is inhibited by serotonin production.^{4,5} However, nitric oxide plays an important role in blood flow to the smooth muscles involved in initiating and sustaining an erection.^{4,5} Other authors have written

about the effects of monoamine oxidase inhibitors on the autonomic nervous system and their efficacy at the cholinergic and alpha1-adrenergic receptors leading to interference with normal sexual function.^{3,4} He was reticent to admit to atomoxetine-induced spontaneous ejaculation out of perceived embarrassment. Sexual dysfunction, secondary to prescribed medical management, contributes to non-compliance and acts as an additional stressor for patients. This case highlights the importance of asking about side effects of prescribed medication, particularly those effects that patients may not volunteer, such as sexual side effects.

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