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Duloxetine-Induced Retrograde Ejaculation: A Case Report

Mahmut Bulut[1], Keremhan Gozukara[2], Mehmet Cemal Kaya[1]

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Dear Editor,

Retrograde ejaculation refers to the propulsion of semen back in to the urinary bladder rather than the usual anterograde flow[1]. Antidepressant drugs are frequently associated with sexual dysfunction (SD). Duloxetine, a newer antidepressant agent, has sexual dysfunction as a side effect confirmed by placebo studies[2]. In some cases, other rare sexual side effects such as hypersexuality have been reported during duloxetine treatment[3].

Here, we report an unusual case of retrograde ejaculation after duloxetine treatment for major depressive disorder (MDD) with co-morbid generalized anxiety disorder (GAD). Written informed consent was obtained from the patient before writing this report.

AN, a 43-year-old married man who met the DSM-IV criteria for MDD with co-morbid GAD. He had been prescribed several medications for MD GAD for 11 years (paroxetine, mirtazapine, venlafaxine, citalopram, escitalopram, tianeptine, milnacipran, sertraline, trazodone, imipramine, and clomipramine). The medications were discontinued because of the adverse effects of these drugs. He had been taking fluoxetine 20 mg/day PO for the last 6 months. MDD and GAD symptoms were resolved but he was suffering from erectile dysfunction and diminished libido with fluoxetine treatment. The fluoxetine treatment was ended and a duloxetine 60 mg/day PO regimen started. On the second day of duloxetine treatment, difficulties with ejaculation started and continued after the wash-out period for fluoxetine (4th week). In the 4th week of the duloxetine treatment, sexual side effects of fluoxetine (erectile dysfunction, diminished libido) completely resolved and remission of MDD and GAD continued, although he had difficulties ejaculating. Due to his complaints, a urine specimen was collected following masturbation. Using a microscope with 10x magnification, the centrifuged urine sediment was examined for the presence spermatozoa. As spermatozoa were seen in the sediment, the patient was diagnosed with retrograde ejaculation according to the European Association of Urology guidelines on ejaculatory dysfunction[1]. The duloxetine dose was decreased to 30 mg/day for two months, but retrograde ejaculation continued. In the 3rd month, duloxetine treatment was stopped and bupropion 150 mg/day PO was started. Further confirming his report of retrograde ejaculation related to the duloxetine medication, the patient reported that he was able to ejaculate normally 2 days after cessation of duloxetine, and a urine specimen collected following masturbation contained no spermatozoa. According to the Naranjo probability scale, the adverse drug reaction was considered definite (Naranjo probability scale score: 10)[4]. Our patient reported no sexual side effects with bupropion treatment.

If sexual function and fertility have priority for the patient, it may be better to choose antidepressants other than duloxetine. Duloxetine was shown to be safe and effective in the treatment of MDD, and no significant differences with placebo were found for duloxetine-induced SD[2]. We replaced fluoxetine with duloxetine

because of the SD effects of fluoxetine. SD effects of fluoxetine completely resolved but another sexual side effect (retrograde ejaculation) occurred. Dose reduction may be another choice for antidepressant-induced SD. Duloxetine dosage was decreased from 60 mg/day to 30 mg/day, but two months after dose reduction retrograde ejaculation still persisted. After discontinuing duloxetine and initiating bupropion, retrograde ejaculation completely resolved and no other SDs occurred. Remission of MDD and GAD was going on. Although drugs such as serotonin and norepinephrine reuptake inhibitors group are known to cause ejaculatory problems, retrograde ejaculation has been rarely reported. Alpha-1 adrenergic receptor antagonism is one of the causes of retrograde ejaculation. Almost all of the drugs reported to induce retrograde ejaculation have effects antagonizing the Alpha-1 adrenergic receptors[5]. Duloxetine is a novel selective serotonin and norepinephrine reuptake inhibitor that has an inhibitory effect on Alpha-1 adrenergic receptors. This inhibitory effect may be the possible mechanism of duloxetine-induced retrograde ejaculation in our case.

To our knowledge this is the first reported case of duloxetine-induced retrograde ejaculation in the literature. We suggest that clinicians should be careful about this possible side effect in MDD with co-morbid GAD patients. Changing duloxetine treatment to bupropion might be helpful when these conditions occur.

Keywords: *duloxetine, retrograde ejaculation, bupropion*

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[1]*Assist. Prof., Dicle University, School of Medicine, Department of Psychiatry, Diyarbakir - Turkey*
[2]*M.D., Palandoken State Hospital, Urology Clinic, Erzurum - Turkey*

Correspondence Address: Dr. Mahmut Bulut
Dicle Universitesi, Tıp Fakültesi, Psikiyatri Anabilim Dalı, 21280, Diyarbakır - Türkiye
Email address: drmahmutbulut@yahoo.com

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M.B., K.G., M.C.K.: *The author reported no conflict of interest related to this letter.*