CASE REPORT

Acute urinary retention after venlafaxine use

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Summary
We describe a case of lower urinary system symptoms (LUSs) and acute urinary retention that developed after treatment with a low dose of venlafaxine. A 48-year-old male patient was admitted to our clinic because of difficulty urinating, an intermittent stream, and trickling at the end of urination, together with urinary retention that had started about 45 days ago. The patient had been taking venlafaxine for the previous 6 months. The drug had been prescribed by the psychiatry department for a diagnosis of major depression, and the dose had been increased from 75 mg/day to 150 mg/day 1.5 months earlier. The patients' symptoms were thought to be related to venlafaxine, and the symptoms disappeared completely after venlafaxine was replaced with agomelatin. We concluded that the LUSs and urinary retention were due to the venlafaxine treatment.

Key words: Acute urinary retention; Lower urinary tract symptoms; Venlafaxine.

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Introduction
Lower urinary system symptoms (LUSs) consist of symptom subtypes related to urinary storage and drainage. LUSs are an important health problem due to their negative effects on quality of life. Acute urinary retention develops due to an inability to urinate and results in a full and tense bladder, together with suprapubic pain and tenderness. The most common cause of LUSs is benign prostate hyperplasia. Acute urinary retention can develop due to genitourinary system tumors, vesical or urethral stones, urethral strictures, and medications, in addition to acute prostatitis and neurological diseases (1).

Several case reports have described venlafaxine-related acute urinary retention when the drug was used in combination and in high doses. We describe a case of LUSs and acute urinary retention that developed following the use of low-dose venlafaxine monotherapy.

Case report
A 48-year-old male patient with a diagnosis of major depression presented to our clinic with LUSs, which included difficulty urinating, an intermittent stream, and trickling at the end of urination, together with an inability to urinate. The symptoms had lasted for about 20 h and had started after the venlafaxine dosage had been increased from 37.5 mg twice daily (75 mg/day) to 75 mg twice daily (150 mg/day) 1.5 months earlier. The patient had no history of significant disease or abdominal or urologic surgery, and his family history revealed nothing of significance. A physical examination revealed a vesical globe. Kidney-ureter-bladder film was normal. No pathology was observed in the abdomen or urinary system on ultrasonography, and no pathology was found on cranial and lumbar magnetic resonance images. A transurethral (TU) catheter was placed, as the patient had a vesical globe. A urine culture was sterile.

The results of urodynamic tests were normal. No urogenital system pathology was found that could explain the patients condition, and a psychiatry consultation was therefore requested to evaluate whether the problem was associated with the venlafaxine treatment. The psychiatry department suggested that the patients symptoms were related to venlafaxine. Thus, the dose of venlafaxine (150 mg/day) was decreased gradually and discontinued after five days.

The patient was prescribed a daily dose (25 mg) of agomelatin, which is a melatoninergic receptor agonist antidepressant.

The TU was removed one day after the dose of venlafaxine was decreased to 37.5 mg twice a day, and urination was monitored. The TU was inserted again when the patient developed a vesical globe. The TU catheter was removed three days after venlafaxine was discontinued. During uroflowmetry, the patient was unable to urinate freely ($Q_{max}$ 3 ml/s), but no significant postvoiding residual urine (PVR) was seen in the bladder. Uroflowmetry was repeated the next day. The $Q_{max}$ was 8.1 ml/s, with no significant PVR. The patient was discharged and advised to continue taking his current medical treatment. At outpatient follow-up 10 days later, the symptoms had disappeared completely, the $Q_{max}$ was 19.3 ml/s, and the PVR was 10 cc on uroflowmetry.

Discussion
Venlafaxine belongs to the serotonin-noradrenaline reuptake inhibitor group and exerts its effects by blocking serotonin, noradrenaline and, at high doses, dopamine uptake bidirectionally. It is used to treat major depression and anxiety. It is administered orally and is a safe drug that can usually be tolerated (2). The effects of ven-
Venlafaxine are similar to those of tricyclic antidepressants, which also affect serotonin and noradrenaline receptors, but it has relatively few side effects due to its lack of affinity to other receptors. The most common side effects are nausea, somnolence, dry mouth, dizziness, irritability, constipation, asthenia, anxiety, anorexia, blurred vision, abnormal ejaculation or orgasm, and impotence. However, these effects are usually mild and rarely require treatment cessation. In addition to the above-mentioned side effects, hypertension was reported to be a common problem among patients taking venlafaxine (3). Due to its tolerability and few side effects mentioned above, venlafaxine is considered a good option for a patient with major depression.

LUSs and acute urinary retention can occur following the use of opiates, antihistamines, alpha adrenergic agonists, ganglion blockers, phenothiazines, and monoamine oxidase (MAO) inhibitors. These findings are attributed to the contraction of the urethral sphincter muscle as a result of anticholinergic stimulation (4). Previous studies also showed that LUSs and acute urinary retention developed following treatment with antidepressant and antipsychotic drugs. The development of LUSs was reported after the use of duloxetine, a selective serotonin noradrenaline reuptake inhibitor (5) and milnacipram, another antidepressant (6). Urinary side effects, such as urinary incontinence, related to venlafaxine have previously been reported in the literature (7, 8), and several cases of LUSs and acute urinary retention following the use of venlafaxine were reported. However, these side effects only occurred when venlafaxine was used in combination with another drug or when venlafaxine was administered at high doses (375 mg once daily) when used as monotherapy (9, 10).

Our case is important, as it is the first report of the development of LUSs and acute urinary retention when venlafaxine was used as monotherapy and at a low dose. LUSs and acute urinary retention are thought to be due to adrenergic stimulation, which occurs as a result of venlafaxine inhibiting noradrenaline reuptake. These side effects can be severe and can interfere with the continuation of treatment, as in the present case. Despite these side effects, in a limited patient series, venlafaxine was reported to increase the quality of life of patients with neurological disorders by reducing their daily urination frequency and increasing their bladder capacity (11). In the present case, agomelatine, which is used to treat depression and sleep disorders, was thought to be a safer option than venlafaxine due to its lack of interaction with the relevant receptors and the patient’s clinical condition, and no urinary tract side effects were observed.

**CONCLUSION**

Venlafaxine is a safe and effective antidepressant for the treatment of major depression and anxiety disorders. However, it may not be suitable for patients with accompanying prostate disease or micturition disorders. Prior to prescribing venlafaxine, it should be considered that venlafaxine monotherapy can cause LUSs and urinary retention.