

Severe acute urinary retention requiring urinary catheterization in a young female patient using duloxetine: A case report

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Abstract

Side effects are one of the most important obstacles to the use of psychotropic drugs. Although duloxetine, commonly used in clinical practice, is known to be an effective and reliable antidepressant, it is known to cause some side effects. Although it has been reported in the literature that urinary side effects such as urination difficulties and frequent urination may be encountered, especially in men, it is very rare in women. Urinary retention is defined that is sudden onset of inability to void or presence of important amount of postmicturitional residual urine. It has been reported that drug-induced urinary retention may be associated with psychotropic drugs such as olanzapine, sertraline, aripiprazole and duloxetine in the literature. The cases associated with duloxetine were generally seen in combination form and with organic pathologies. As far as we know, the young female patient who has no organic pathology has no urinary retention associated with the use of duloxetine. In this report, we present a young female patient who had a 32-year-old without organic disease who developed urinary retention requiring urinary catheterization after the use of duloxetine.

Keywords: Antidepressant; case report; duloxetine; female; side effect, urinary retention.

INTRODUCTION

Duloxetine that is a serotonin-noradrenaline reuptake inhibitor, has been used effectively in the treatment of medical conditions such as major depressive disorder, generalized anxiety disorder, urinary incontinence, diabetic neuropathic pain and fibromyalgia (1,2). Although it is a well-tolerable and safe treatment option, it has side effects such as loss of appetite, sweating and palpitations (3). However, rare side effects of urinary system have been reported (3,4). In the literature, urinary side effects such as difficulty in urination and frequent urination are described. However, these side effects were generally seen in male patients (5).

Urinary retention is defined that is sudden onset of inability to void or presence of important amount of

postmicturitional residual urine. Mainly it is an important problem of men, prevalence of urinary retention in females is extremely low (6). So that, anesthesia, neurogenic and psychogenic disorders may also play a role in the development of urinary retention in women (6,7). It is thought that it is usually related pharmacological agent on females (8). It has been reported in the literature with urinary retention related psychotropic drugs such as olanzapine, sertraline, aripiprazole (9-12). However, cases of urinary retention associated with combination duloxetine-quetiapine and duloxetine-olanzapine have been reported (5,13). In addition, the recent report presents a case of duloxetine-associated urinary retention in an elderly female patient with comorbid organic pathology (14). However, as far as we know, the young female patient who has no organic pathology has no urinary retention

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associated with the use of duloxetine, in the literature.

In the present report, we present a young female patient who had a 32-year-old without organic disease who developed urinary retention requiring urinary catheterization after the use of duloxetine.

Case Report

Thirty-two years old woman, married, has two children, high school graduate, and housewife patient, applied to our outpatient clinic for reasons such as reluctance, unhappiness, and unwillingness to work, forgetfulness, thoughtfulness and body pain. After exclusion of organic pathologies such as thyroid functions and vitamin deficiencies, the patient was diagnosed with depressive disorder according to DSM-5 diagnostic criteria. The patient's Hamilton Depression Scale (HAM-D) score was 36 and the Hamilton Anxiety Scale (HAM-A) score was 26. The patient that has no known organic disease and allergic, was started as treatment of duloxetine 30 mg/d and after one week the dose was titrated up to 60 mg/d. At two week follow-up, the HAM-D score decreased to 26 and the HAM-A score decreased to 18. In the second week of the use of duloxetine, the patient had difficulty in urinating and expressed a very disturbing expression. So the patient's difficulty in urinating had progressed until the emergence of the emergency room service and urinary catheterization. She had recurrence in her complaints after the procedure. The laboratory tests were normal and the patient was asked for urology, Infectious Diseases and nephrology consultation. But there was no organic pathology that could explain the retention as a result of the consultation. The patient was referred to the psychiatry clinic because of duloxetine that was thought as a possible cause of urinary retention. Duloxetine was considered as the cause of urinary retention and the daily dose of duloxetine was decreased by 30 mg/d. There was a decrease in her complaints and duloxetine was discontinued. Sertraline 50 mg/d treatment was started. The patient's urinary complaints did not start and there was a decrease in depressive symptoms. 'Duloxetine-associated severe urinary retention' was classified as a possible side effect with 7 points according to Naranjo Adverse Drug Reactions Probability Scale. (15)

DISCUSSION

We present in here the case report of urinary retention developing during treatment with duloxetine. In the literature we could find just one similar case report, by Aktürk, in a 63-year-old woman with diabetes mellitus who had been treated for depressive disorders by duloxetine and the patient complained of urinary retention (14). In addition, there were two reports of urinary retention using olanzapine-duloxetine and quetiapine-duloxetine combination (5,13). We think that our case is important because of requiring urinary catheterization, female gender,

acute development, lack of comorbid organic disease, and most importantly, our patient is only using duloxetine.

Duloxetine is known to have cholinergic, dopaminergic, histaminergic and α -1 adrenergic activity as well as serotonergic and noradrenergic activity. The most likely mechanism for duloxetine-related urinary retention is that due to the increased sympathetic stimulus of duloxetine, it causes an indirect reduction in the parasympathetic tone, thus causing pseudoanticholinergic symptoms such as urinary retention (16). The another likely mechanism for this possible side effect is that according to animal studies, both serotonin and noradrenaline in sacral spinal cord may facilitate the effect of external urethral sphincter activity during the storage phase of the dissociation cycle (17,18). Therefore, we think that this mechanism of action may have been effective in our case. When duloxetine that with combined serotonergic and noradrenergic activity, can be thought to be a safe and effective drug in the treatment of stress urinary incontinence, (19) it may be thought to cause urinary retention. To the best of our knowledge, there were reports of tricyclic antidepressant (20), venlafaxine (21,22) and reboxetine (23) in the literature. Considering that these drugs have noradrenergic efficacy in their mechanisms of action, duloxetine, which is known to have a noradrenergic mechanism of action, can be expected to be associated with urinary retention.

In our case, there were no risk factors for urinary retention, such as surgical procedure, comorbid organic disease, infection, other drug use or neurological disease (19). In addition, our patient was using duloxetine as the only drug that could cause a possible side by contrast with previous reports (5,13). In addition, although urinary retention is relatively rare in female patients, our patient is a young woman. However, in our case, the symptom was so severe that our patient was admitted to the emergency department with a bladder glob and urinary catheterization was performed. Also, after the discontinuation of duloxetine, the patient's complaints resolved in a short time. We recommend as a first approach in treatment, it is the prevention of conditions such as kidney damage, which may not be recycled, and duloxetine is stopped in a short time. Considering these features, our case is characteristic.

Our report should be valued with some limitations. First of all, it is important that the serum duloxetine level of our patient could not be determined. On the other hand, the fact that some of our patient's complaints were based on the patient's declaration may have been subject to our case. Finally, the inability to re-test the side effect with duloxetine may be another limitation.

In conclusion, duloxetine is an antidepressant that is frequently used in clinical practice because of its efficacy and safety. The fact that clinicians take into account urinary side effects while administering duloxetine to patients will improve the treatment compliance and quality of life of patients, as well as prevent such as kidney damage difficult to recycle. Prospective and focused studies with a large population of future, will be useful explain this case.

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