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SNRI-Induced Urinary Retention in a Young Male with Bodily Distress Disorder

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Abstract: Urinary retention (UR) is characterized by impaired bladder emptying and the presence of post-void residual urine. Certain medications, particularly those with anticholinergic or noradrenergic effects, can interfere with micturition pathways, leading to UR[1,2]. This case report presents a 24-year-old male with recurrent drug-induced urinary retention caused by duloxetine and desvenlafaxine. The patient was first admitted in January 2023 with severe abdominal pain and low mood and diagnosed with Severe Bodily Distress Disorder. Treatment with duloxetine (40 mg) led to acute urinary retention within two days, requiring catheterization. Reducing duloxetine to 20 mg resolved the UR. After discontinuation and subsequent readmission in March 2023 with similar symptoms, initiation of desvenlafaxine (100 mg) again triggered urinary retention, necessitating catheterization. Uroflowmetry indicated a functional cause. Desvenlafaxine was cross tapered with sertraline, resulting in significant improvement without recurrence of UR. This case underscores the importance of careful medication selection and monitoring in patients susceptible to drug-induced urinary side effects.

Keywords: *Urinary Retention; Antidepressants; Bodily Distress Disorder; Serotonin-Norepinephrine Reuptake Inhibitors.*

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I. INTRODUCTION

Bodily distress disorder (BDD) involves persistent bodily symptoms distressing to the individual, often associated with health anxiety. Antidepressants, particularly serotonin-norepinephrine reuptake inhibitors (SNRIs), are central to treatment[1]. However, their use is associated with rare but significant adverse effects, including urinary retention (UR). UR results from excessive alpha-adrenergic stimulation, increasing urethral sphincter tone and causing obstructive voiding symptoms[1,2]. Though commonly reported in elderly patients with predisposing factors, UR is rare in younger individuals without underlying urological conditions[3]. This case highlights severe UR episodes caused by SNRIs in a young patient with BDD, emphasizing tailored antidepressant therapy and close monitoring.

II. LITERATURE REVIEW

Urinary retention induced by antidepressants is a known but uncommon phenomenon. Studies suggest approximately 10% of acute urinary retention episodes could be medication-related[2]. Antidepressants with strong anticholinergic or noradrenergic actions, such as SNRIs (duloxetine, venlafaxine, desvenlafaxine), present a higher risk[2,3]. Pharmacologically, these drugs elevate norepinephrine, increasing α_1-adrenergic stimulation of urethral smooth muscle, thus impairing voiding[2]. SSRIs carry a significantly lower risk due to their minimal noradrenergic action[3].

Clinical trials involving duloxetine report obstructive voiding symptoms at approximately 1% incidence, rarely requiring catheterization[1]. Post-marketing surveillance has identified severe acute retention episodes in young patients without typical risk factors[3]. Risk factors for drug-induced UR commonly include older age, male gender, benign prostatic hyperplasia, and concomitant medications such as opioids or antihistamines[2]. Acute UR necessitates prompt catheterization to avoid complications such as infections, bladder distension, or renal impairment[2].

III. METHODOLOGY

The presented case report utilized an observational clinical approach. The patient underwent a thorough psychiatric evaluation, including clinical interview, mental status examination, and review of medication history. He was diagnosed with severe bodily distress disorder (BDD) based on ICD-11 criteria, marked by persistent distressing somatic

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symptoms and associated depressive features. Physical and neurological examinations revealed no abnormal findings.

The patient initially received duloxetine (40 mg/day). Following acute urinary retention and subsequent catheterization (400 mL), duloxetine dosage was reduced to 20 mg/day, resolving the symptoms. After recurrence of BDD symptoms, desvenlafaxine (100 mg/day) was initiated during a subsequent admission. Severe urinary retention recurred (1600 mL catheterized). Uroflowmetry was performed, demonstrating normal bladder function (peak flow 26 mL/s, post-void residual 20 mL), confirming functional drug-induced obstruction rather than structural pathology.

The management strategy involved discontinuation of the offending medications and cross-tapering to sertraline (100 mg/day), an SSRI, chosen due to its favorable urinary side-effect profile. Psychotherapy (supportive and cognitive-behavioral) was concurrently provided. The patient was closely monitored for recurrence of symptoms.

IV. RESULTS

Following reduction of duloxetine from 40 mg to 20 mg/day, acute urinary retention resolved promptly, and normal voiding resumed. Upon initiation of desvenlafaxine (100 mg/day), severe urinary retention recurred, necessitating catheterization and medication discontinuation. Subsequent uroflowmetry confirmed normal bladder and urethral function, strongly implicating medication-induced functional obstruction rather than structural pathology.

After transitioning to sertraline (100 mg/day), the patient experienced no further urinary retention episodes. Psychiatric symptoms significantly improved, with good medication tolerance and compliance at 1-month follow-up. No further urological complications were reported.

V. DISCUSSION AND CONCLUSION

Urinary retention is a rare yet important adverse effect associated with SNRIs like duloxetine and desvenlafaxine[1–3]. The norepinephrine-mediated increase in urethral sphincter tone explains the functional urinary obstruction observed[2]. The reported severe episodes requiring catheterization in a younger patient without pre-existing urological pathology underline the importance of awareness, early recognition, and prompt intervention in antidepressant prescribing.

In this case, the timely discontinuation of the implicated medications and successful cross-tapering to an SSRI (sertraline) effectively managed psychiatric symptoms without recurrence of UR. Clinicians must remain vigilant for urinary symptoms in patients treated with antidepressants, especially SNRIs, and consider alternative agents like SSRIs when urinary side effects emerge[3].

This case emphasizes an integrated psychiatric and urological approach, underscoring the importance of personalized medication management and careful monitoring in preventing complications associated with antidepressant-induced urinary retention.

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