

Tricyclic antidepressant-induced acute urine retention in a young woman with postpartum depression - case report

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Summary

A rare case of acute urinary retention in a young woman due to simultaneous use of a tricyclic antidepressant and anticholinergic drugs is presented along with the data from the current literature, including the pharmacological action of these drugs, mainly focused on urological patients.

Key words: Urinary retention; Tricyclic antidepressants; Depression.

Introduction

Acute retention of urine is a common disorder in older men while it is very infrequent in women, especially young women. Distinguishing between the possible causative mechanisms of urine retention in women is sometimes very difficult, thus it is of great importance to obtain a full medical history, especially in patients whose risk of developing acute urine retention is extremely low.

Case Report

A 32-year-old woman was referred to the urologic department suffering from suprapubic pain and fever. The medical history included postpartum depression and irritable colon syndrome. On clinical examination, suprapubic dilatation and tenderness were revealed. All hematological and biochemical laboratory tests were within normal ranges. Ultrasound examination of the urinary tract revealed no dilatation of the renal pelvis, the renal parenchyma was normal, the urinary bladder was dilated while the bladder wall was normal. Catheterization of the bladder was performed and 600 cc of clear urine were obtained. The urine culture was negative. Since the patient failed to urinate for a second time, she underwent some additional intermittent catheterizations until she showed some improvement. From her medical history it resulted that the patient was under treatment with anti-cholinergic drugs for dysmenorrhoea. After 48 hours and four bladder catheterizations, the patient was able to urinate on her own, without residual urine in the bladder. The urodynamic control, revealed no abnormalities.

Discussion

Tricyclic antidepressants (TA) are a drug category with a vast experience on the usage over the last decades [1, 2]. The mechanism of action is multiple: They decrease the contraction of the bladder (detrusor) with two distinct mechanisms: An anticholinergic and a non-cholinergic/non adrenergic mechanism that inhibit the entrance of Ca²⁺ ions in the muscular cells. Moreover they seem to increase urethral resistance by blocking the α -adrenergic receptors in the bladder triangle, the proximal urethra, and smooth muscle cell sphincter, while they decrease the stimuli (physiological and reflex feedback)

and cell excitation of the lower medullar neurons by increasing serotonin levels. The most common adverse effects from the urogenital system are urine retention, dysuria [8, 9] and anorgasmia [6]. In the recommended doses, most TA are considered safe for use in urology and gynecology, with mild and rare adverse reactions. Our case though, emphasizes the increase in the probability of urine retention when TA are combined with anticholinergic drugs. In conclusion, the fact that should be outlined is that when treating a patient with urinary retention (especially among groups of very low incidence, e.g. young adults), great attention should be addressed to a detailed medical history in order to achieve the best results and to avoid possible misdiagnoses.

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