

Sertraline induced urinary retention : A case report

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Abstract

SSRI is widely used because of its low side effect profile and better tolerability than the older antidepressants. Urinary side effects are uncommon with SSRI as they lack anticholinergic effects. We present a case of young female, who in her postpartum period, developed urinary retention on tab sertraline. Extensive evaluation was done to rule out gynaecological, neurological and urological conditions. She was successfully treated and maintained on tab fluoxetine. Thus, it is suggested that clinicians should be cautioned about potential urinary problems associated with sertraline. Timely detection and management maintains compliance to the medication, helps in recovery from the illness and improves quality of life.

Keywords: Sertraline, Urinary Retention, Nepal

INTRODUCTION

Urinary problems such as incontinence and retention are disabling conditions in women. They can complicate to urinary infection and renal failure.¹ Medications can cause urinary retention and antidepressants amount to about 10% of such cases.² Such adverse effects play vital role in compliance to medication and management.² SSRI is widely used because of its low side effect profile and better tolerability than the older antidepressants.³ Its side effects are well established. However, urinary side effects are uncommon with SSRI as they lack anticholinergic effects. We present a case of young female, who in her postpartum period, developed urinary retention on tab sertraline. She was successfully treated and maintained on tab fluoxetine.

CASE DESCRIPTION

A 30 yr old lady in postpartum 5th week was being treated with tab sertraline 100mg for an episode of severe depression without psychosis developed since 3 weeks. She presented to an outpatient department of a psychiatry unit of a tertiary hospital with complains of urinary

hesitancy and increased frequency which affected her daily activities. This developed following an episode of pain over lower abdomen and difficulty in voiding urine for half a day one week back on day 4th when tab sertraline was increased from 50mg to 100mg. She revealed that she was rushed to a nearby private hospital then where detail evaluation was done to rule out gynaecological, neurological and urological conditions by the respective experts. Her investigations revealed following values:

Complete blood count	WNL
Live and renal function test	WNL
Random blood sugar	WNL
Urine routine microscopy and examination	WNL
USG abdomen and pelvis	Small hemangioma in right lobe liver
ECG	WNL

Acute urinary retention was relieved after urinary catheterization on the same day. On

detail evaluation, she had past history of a depressive episode during her 5th month of pregnancy. She had fully remitted on Cap Fluoxetine 20mg in about 4 weeks and continued the same medication for next 3 months. With a shared decision with family members, taking into account the side effects of antidepressant to the newborn, medications were stopped from 8th month of pregnancy. It was planned to restart medication if depressive symptoms occurred postpartum. At term, she gave birth to a healthy baby by LSCS. There was no history of substance use and family history of psychiatric illnesses nor any other known medical comorbidity or surgery performed except LSCS. General examination and systemic examination gave no significant findings. Mental state examination revealed depressed mood, ideas of low self esteem and increased worry about baby's health.

In view of urinary retention after increasing dose of tablet sertraline, it was cross tapered with tablet fluoxetine. Her urinary complains subsided after a week and she didn't have similar complains. Tablet fluoxetine was optimized to 40mg gradually monitoring symptoms of depression, urinary complains in mother and side effects in newborn. She achieved remission of the episode in the follow-up.

DISCUSSION

Sertraline has been reported to cause both urinary problems such as retention and incontinence. Three similar case reports have described urinary retention with sertraline in females.^{4,5,6} The case reports highlight females and elderly as risk factors for urinary retention with sertraline and our case shows postpartum as another vulnerable period. Different mechanisms are linked to the two different urinary complains though urinary retention can itself present as overflow urinary incontinence.⁷ Among other SSRI, sertraline also has risk for urinary incontinence though the literature has not classified the type of urinary incontinence occurred.^{8,9} Serotonergic neurons innervate lower urinary tract. External urethral sphincter is innervated from serotonergic neurons from both Onuf nuclei and lumbosacral autonomic nuclei. Detrusor muscle receive serotonergic innervations from lumbosacral autonomic nuclei

and raphe nuclei of medulla provide descending inhibition of the bladder.^{10,11} Animal studies have shown interplay of serotonergic receptors in micturation. 5HT₂ receptor activity mediates contraction of external urethral sphincter contributing to the retention of urine.¹² On the contrary, 5HT₇ and 5HT_{1A} receptors have facilitatory effect on the bladder. 5HT_{1A} receptors being autoreceptors, inhibit 5HT₂ receptor activity, thereby exerting excitatory physiological role in bladder.¹³ However, under conditions where the bladder is hyperactive due to irritation, its activity gets inhibited by 5HT_{1A}.¹² 5-HT₄ receptors present in the detrusor muscle play role in increasing urinary frequency.¹⁴ In humans, serotonin evoked a dose-dependent and reversible contraction of the detrusor muscle and a dose-dependent and reversible relaxation trigone, bladder neck and urethral smooth muscle.¹⁵ In both animal and human studies, serotonin is found to mediate increase in plasma vasopressin leading to retention.^{16,17} There was temporal relation of urinary retention with tab sertraline such that it occurred within a week after increasing the dose of tab sertraline and subsided within a week on its discontinuation. Therefore, though uncommonly reported, urinary side effects of SSRI shouldn't be missed by the physicians. It has been observed mostly in the first week.^{4,5} So should be considered as early side effect. It has been suggested that urinary problems are persistent side effects. A study found that the urinary problems with SSRI, which included only escitalopram, persisted over a study period of 12 weeks.² Another case reported persistence of the symptoms for 2 years.⁴ Furthermore, the urinary complains have been observed when tab sertraline was started at even low doses of 25mg or it worsened with the increase in the dose.⁴ Therefore, clinicians should be cautious about new onset urinary problems in patients taking sertraline. Urinary retention is a treatable condition. Urinary complains are more likely to be predictor of non-adherence for antidepressants.² So they should be promptly recognized and treated. Simple measures such as inserting urinary catheter can help to get relieve of acute distension of the bladder. In addition, evaluating likely cause for retention prevents recurrence of the problem. As in other cases, in our case discontinuation of the

medications led to resolution of the problem within in a week.^{4, 5} This is explained by the half-life of sertraline being 26 hrs.¹⁸ Alternative treatment in the case was changing to tablet fluoxetine. Fluoxetine has been found used useful for ameliorating urinary incontinence^{19, 20} or causing urinary retention.²¹ However, our case reports no urinary retention with fluoxetine. Owing to different pharmacological action of mirtazapine, it has also been tried for treating SSRI induced urinary retention.²²

CONCLUSION

Clinicians should be cautioned about potential urinary problems associated with sertraline. Timely detection and management maintains compliance to the medication, helps in recovery from the illness and improves quality of life.

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