Acute Urinary Retention Associated with Olanzapine Long-acting Injection: A Case Report

To the editor,

Antipsychotic non-adherence in patients with schizophrenia poses a significant challenge and continues to impact long-term outcomes in up to 20%–60% of patients.[1] Long-acting injectable (LAI) forms of antipsychotics offer a significant advantage in this regard by improving adherence and reducing the burden of remembering to take medications daily.[2] Olanzapine LAI consists of Olanzapine pamoate suspended in an aqueous solution, given through an intramuscular route.[3] The efficacy and safety profile is similar to oral formulation except for adverse effects specific to the route of administration.[3,4] The common adverse effects are weight gain, headache, insomnia, post-injection site pain, headache and sedation, and the rare possibility of post-injection syndrome, a serious adverse event.[3,4] Although there have been rare reports of acute urinary retention with oral formulation,[5] it has not been reported with LAI formulation. We report a case of a 63-year-old gentleman who developed acute urinary retention with Olanzapine LAI. Informed written consent was obtained to report this case.

Case Description

Mr C is a 63-year-old, unmarried gentleman with a family history of Schizophrenia in two first-degree relatives and prostate carcinoma in another first-degree relative. His medical history is significant for hypertension, for which he is on 50 mg/day of Atenolol. He was diagnosed with Schizophrenia at the age of 23 years and has been on 15 mg/day of Olanzapine since then with good social and interpersonal functioning. Following non-compliance to medications, he presented with a relapse of illness for a month, characterized by delusion of reference, delusion of persecution, irritability, decreased self-care, and decreased interaction with family members with marked social and interpersonal dysfunction. He was admitted, and the dose of Olanzapine was increased to 20 mg/day. During the third day of inpatient care, Olanzapine LAI was administered with a plan of repeating the dose of 405 mg/month, as he had relapsed due to medication non-compliance. He was monitored for post-injection syndrome subsequently. Subsequently, after 18 hours, he developed lower abdominal pain and inability to pass urine. Abdominal examination revealed suprapubic bulging with tenderness. The genitourinary examination was normal, and per rectal examination did not reveal prostatomegaly.

Urology consultation was sought for evaluation of acute urinary retention. There was no history of urological problems in the past. Ultrasonography revealed a distended urinary bladder with a normal prostate gland volume (29cc). Uroflowmetry revealed a reduced peak urinary flow rate (5.9 mL/s) and post-voiding residual volume of 400 mL. The urine routine and microscopy did not reveal any abnormality. Prostate-specific antigen was in the normal range (1.26 ng/mL). A diagnosis of non-obstructive acute urinary retention secondary to Olanzapine LAI was considered. After catheterization, the patient was also started on a combination of Dutasteride 0.5 mg/day and Tamsulosin 0.4 mg/day. Both the oral and LAI forms of Olanzapine were stopped. After three weeks, the catheter was removed, and the patient had no difficulty passing urine. However, there was a failed response to adequate trials of Aripiprazole (30 mg for six weeks) and Amisulpride (800 mg for eight weeks) subsequently. Hence Olanzapine oral formulation was restarted with a gradual dose increment to 20 mg/day with a good response. He did not have any urinary symptoms subsequently. A Naranjo adverse reaction probability scale revealed a score of 5, indicating a probable association between Olanzapine LAI and acute urinary retention.

Discussion

In this report, we have described acute urinary retention associated with Olanzapine LAI in an elderly gentleman. Even though acute urinary retention has been reported rarely with oral formulations of atypical antipsychotic agents,[5] it is extremely rare with LAI formulations. Peripheral muscarinic blockade can result in reduced detrusor muscle contractility, which can result in acute urinary retention or overflow incontinence. In an earlier report, Risperidone LAI was associated with acute urinary retention in an elderly gentleman without any associated risk factors.[6] Bladder neck dysfunction and detrusor underactivity associated with Risperidone were postulated behind this.[6] The central and peripheral antimuscarinic effects of Olanzapine have been implicated in voiding dysfunction in the earlier reports.[7]

The absorption of Olanzapine can start immediately after the injection of LAI formulation and is affected by pre-treatment with the oral formulation of Olanzapine.[8] The mean observed Olanzapine plasma concentration stemming from both oral and depot formulation can peak as early as the second day.[8] The cumulative dose of both oral and depot preparation could explain the higher anti-muscarinic activity leading to acute urinary retention in our patient. He otherwise did not have associated risk factors for urinary retention such as prostatic hyperplasia, infection, or concomitant medications. While monitoring for post-injection site syndrome immediately after the administration and weight gain and sedation in the long term is routinely carried out, adequate evaluation of voiding functions and regular monitoring for voiding dysfunction should be considered in elderly patients on Olanzapine LAI.

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Delta-8-tetrahydrocannabinol Associated Manic Switch: A Case Report

To the editor,

There is a growing debate regarding the decriminalization and legalization of cannabis for medicinal and recreational use. Several novel tetrahydrocannabinol (THC) derivatives have gained popularity in recent years. Delta-8-THC (Δ^8-THC), an isomer of Δ^9-THC, is primarily produced by the cyclization of Cannabidiol, an inactive compound extracted from hemp.[1] The recreational use of Δ^8-THC is constantly growing. Except for reports of acute toxicity, the psychiatric side effects of Δ^8-THC are largely unknown.[2,3] We report a case of Δ8-THC associated affective switch in a young adult. Informed consent was taken to report this case.

Case Description

Mr S is a 26-year-old single gentleman from South India working as an Engineer in the United States. He has a well-adjusted premorbid personality and his family history is significant for organic mood disorder in his father and major depression in his younger brother. The onset of psychiatric illness was at the age of 25 years. It was characterized by sad mood, anhedonia, anergia, loss of appetite, disturbed sleep, and low self-esteem which lasted for more than a month. He was advised 10 mg of escitalopram by a telepsychiatry consultation. After four weeks of treatment, the patient noticed a minor improvement in his mood and energy levels and subsequently discontinued medications. On the suggestion of a friend, the patient began consuming delta-8-tetrahydrocannabinol (Δ^8-THC) gummies on a regular basis in order to improve his mood (3–4 per day, individual dosage not clear). After one month of use, the patient developed irritability, fearfulness, and suspiciousness over his flatmate. This was followed by decreased need for sleep, elevated mood, increased self-esteem, anger, and increased activities and energy levels. The patient was hospitalized in the United States for acute management of symptoms. The routine biochemical evaluation and Computed Tomography of Brain were normal. He was treated with 20 mg of tablet Olanzapine. There was an improvement in manic symptoms within two weeks. He did not continue to use Δ^8-THC gummies thereafter.

After four months, he returned to India and presented to our center with complaints of pervasive low mood, reduced energy levels, reduced appetite, suicidal ideations, and disturbed sleep. After a detailed examination, a diagnosis of Bipolar Affective Disorder, severe depression without psychotic symptoms was considered as per the International Classification of Diseases. 10th edition. The past manic episode was considered as Δ^8-THC associated affective switch. He was started on 900 mg/day of lithium along with bupropion with gradual dose titration up to 300 mg/day. There was a gradual improvement in symptoms with improvement in functioning.

Discussion

In this report, we have described Δ^8-THC associated affective switch in a young