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Antipsychotic-Induced Urinary and Fecal Incontinence in Atypical Psychosis: A Rare Case Report

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Abstract

Incontinence caused by antipsychotic drugs is a rare side effect; urinary incontinence is more common than fecal incontinence. In this case, a 62-year-old female patient with a diagnosis of atypical psychosis developed urinary and fecal incontinence one month after initiating depot treatment with Paliperidone Palmitate. Because no other cause for the incontinence was identified during evaluation, it was considered a drug-related side effect, and treatment was switched to Aripiprazole. Atypical antipsychotics are believed to contribute to the development of urinary and fecal incontinence through various mechanisms, including alpha one adrenergic blockade, anticholinergic effects, antiserotonergic effects, interactions with caffeine, and side effects such as sedation and diabetes. In the literature, only one case of urinary incontinence associated with Paliperidone Palmitate has been reported. This case is presented as the first case of double incontinence associated with paliperidone palmitate therapy.

Keywords

Antipsychotic, Drug Side Effect, Incontinence, Paliperidone Palmitate, Schizophrenia

1. Introduction

Paliperidone is the active metabolite of risperidone and has a high affinity for Dopamine D2 and Serotonin 5HT-2A receptors, while also being antagonistic on Adrenergic α1-α2 and Histamine H1 receptors. In this case, urinary and fecal incontinence that occurred within one month after starting Paliperidone Palmitate treatment was thought to be a side effect of the drug. Secondary incontinence due

to antipsychotic medications is typically seen in the first few weeks of treatment, is dose-dependent, and usually resolves on its own without additional intervention. However, it has been reported that in some cases it can persist for an extended period and may necessitate discontinuation of the drug [1] [2]. Drug-induced urinary and fecal incontinence or isolated fecal incontinence is less common [2]. In the literature, cases of incontinence induced by antipsychotics have been most commonly reported with Clozapine, with a prevalence ranging from 2.4% to 42% [3] [4].

2. Case

A 62-year-old female patient, a primary school graduate, lives with her son and is a housewife. She does not drink alcohol or use substances, and there is no known psychiatric illness in the family. She had her first psychiatric examination in 2021. She presented with complaints, including bringing items from the street and hoarding them, buying the same product multiple times, suspiciousness, touchiness, inappropriate behaviors such as laughing and swearing at funerals, decreased self-care, inability to be alone, and fear. Risperidone 50 mg/2 weeks depot treatment was started upon the diagnosis of "Unspecified Psychosis". The patient showed improvements in self-care and communication, and a decrease in hoarding behaviors. In 2022, when she was admitted to intensive care due to CVA, her treatment was switched from Risperidone to Haloperidol drops. However, she did not consistently comply with the new medication schedule. She then did not receive psychiatric help for approximately 2 years. In July 2024, she was brought to our psychiatric clinic by her children because she believed she was being followed, slept with a knife out of fear, and ran away from home and slept in a park because she feared her son would kill her. She was also reported to be talking and laughing to herself, unable to recognize her relatives, begging, spending all day at the bank branch, hoarding, laughing for no apparent reason, hearing nonexistent voices, and jumping in front of cars. These behaviors had been ongoing for a month. Olanzapine 10 mg/day was prescribed, but she refused treatment. As a result, her daughter requested legal intervention, and the health board conducted an evaluation. During the mental status examination at the health board psychiatry polyclinic, it was observed that her thought content included persecution and delusions of reference, her associations were loose, her mood was dysphoric, and her affect was superficial. She described auditory and visual hallucinations, had impaired judgment, lacked insight, and displayed a defensive attitude. She was accepted into our service in accordance with Article 432 of the Turkish Civil Code. The patient started treatment with Paliperidone 3 mg/day, which was gradually increased to 12 mg/day. The patient responded well to treatment, and depot therapy was initiated due to non-compliance with oral therapy. Loading doses of 150 mg and 100 mg paliperidone palmitate were administered, and no adverse effects were observed. When the PANSS score dropped from 100 to 47, the patient was discharged in partial remission, with plans to continue monthly depot therapy

with 100 mg paliperidone palmitate.

The patient presented to the neurology outpatient clinic in October 2024 with a complaint of urinary incontinence that had been present for a month. Neurological examination revealed paresis on the left side, oromandibular dystonia, and tonic muscle contraction in the left hand. Since the symptoms were thought to be related to the medications being used, a consultation was requested. The patient's paliperidone palmitate dose was reduced to 75 mg per month. In November 2024, it was learned that the patient stopped receiving paliperidone palmitate injections due to side effects, and treatment was switched to 20 mg of Aripiprazole daily. It was learned that the patient's fecal incontinence completely resolved after the medication change; the need for adult diapers for urinary incontinence was eliminated; the patient recognized the need to use the toilet; and the patient experienced only occasional urinary leakage with coughing.

Her medical history revealed that after a stroke in 2021, she developed neurogenic bladder, experienced urinary and fecal incontinence for a year, and was monitored with a catheter for 6 months, after which these problems resolved. She currently takes ASA 100 mg per day. In November 2023, the patient was diagnosed with chronic kidney failure and started on 2.5 mg of Ramipril daily. A neurological examination in July 2024 revealed mild hemiparesis on the left side; a brain CT scan showed areas of encephalomalacia in the right insular cortex and parietal lobe. In September 2024, the neurology and internal medicine outpatient clinics suspected a link between fecal incontinence and antipsychotic treatment. The Naranjo Probability Scale, used to assess the likelihood that paliperidone caused an adverse reaction, yielded a score of 4, indicating a "possible adverse reaction".

3. Discussion

Although urinary incontinence during antipsychotic treatment is rare, it is significant because it impairs treatment adherence. Current evidence focuses on converging hypotheses rather than a single mechanism. The relationship between antipsychotic drugs and incontinence is complex, as psychosis itself can be a cause of incontinence [5]. Atypical antipsychotics such as Risperidone, Aripiprazole, Olanzapine, and Clozapine are believed to induce urinary and fecal incontinence by blocking alpha-1 adrenergic receptors [1] [6] [7].

Antipsychotics (especially clozapine and some low-potency agents) can cause urinary retention through anticholinergic effects. Retention can develop into overflow incontinence; this condition cannot be detected unless the amount of urine remaining after urination is assessed [7] [8]. In animal studies, Olanzapine inhibits the external urethral sphincter via its antimuscarinic mechanism, causing urinary retention; however, it can also rarely cause incontinence through central effects [9]. D2 receptor antagonism can promote detrusor overactivity and urgency/incontinence in susceptible individuals by reducing inhibitory control of the urination reflex [8] [10].

Sedation, a common side effect of atypical antipsychotics, can hinder patients

from using the toilet and result in enuresis [11] [12]. Clozapine and Risperidone can also contribute to incontinence during sleep by inducing sedation through H1 receptor antagonism [2]. Loss of bladder fullness sensation during deep sleep has been linked to the sedative effects of these drugs [1] [7].

Most second-generation antipsychotics antagonize 5-HT2 (and sometimes 5-HT3) receptors, and it is thought that this mechanism may impair the ability to hold urine during sleep or with increased intra-abdominal pressure by disrupting the pudendal sphincter activation reflex during lower urinary tract filling [8] [13]. Medications such as Olanzapine and Risperidone, which antagonize these receptors, can cause incontinence by disrupting pudendal reflexes [1].

Weight gain and dysglycemia associated with antipsychotics may contribute indirectly through polyuria and nocturia [8]. Diabetes mellitus, as a result of drug treatment, is also a significant contributor to fecal incontinence [2]. The recto-anal inhibitory reflex is impaired in diabetic patients, and fecal incontinence is associated with the patient's glycemic control and disease duration [14].

Clozapine and Chlorpromazine may lower the seizure threshold; urinary incontinence may occur during or after a seizure [7]. Some patients with psychosis consume excessive amounts of caffeinated beverages with diuretic effects [15]. Caffeine can increase Clozapine blood levels, worsening its side effects, especially urinary incontinence [16]. Amisulpride-associated urinary incontinence is a rare condition. Due to the selective effect of amisulpride on dopamine receptors, the pathophysiology of urinary incontinence is not fully understood [17].

Gastrointestinal hypomotility, particularly associated with clozapine, due to the anticholinergic effects of antipsychotics, leads to fecal obstruction and overflow incontinence [18]. This condition may be accompanied by urinary incontinence due to shared autonomic dysregulation and pelvic floor involvement, and "double incontinence" may occur [1] [18]. Cases of risperidone-induced fecal incontinence are rare in the literature. It is unknown whether risperidone causes retention-type fecal incontinence via central or peripheral effects [19]. Two patients with autism spectrum disorder reported a doubling of incontinence (urinary and fecal) within 1 - 3 weeks of starting risperidone treatment [20]. Urinary incontinence is more common than fecal incontinence with risperidone use, thought to reflect differences in the sensitivity of the urethral and anal sphincters to risperidone [21]. Paliperidone Palmitate may cause urinary incontinence through antagonism of 5-HT2A and α1 receptors in the bladder detrusor muscle and internal bladder sphincter [22].

Neurogenic bladder has been linked to receptor-level alterations, including upregulation of muscarinic signaling pathways (particularly M2 and M3), increased purinergic afferent activity, and heightened bladder sensory pathway sensitivity [23]-[25]. Antipsychotic-induced dopaminergic and serotonergic blockade may exacerbate these alterations [24] [25]. α1-adrenergic antagonism associated with some atypical antipsychotics may impair bladder outlet resistance in patients with underlying neurological lesions, thereby contributing to overflow incontinence

[25]. These findings suggest that antipsychotic-related receptor modulation may affect the neurogenic sensitivity of the lower urinary tract, increase the risk of urinary incontinence, and potentially influence the persistence or recurrence of symptoms after clinical improvement.

Written informed consent was obtained from the patient for publication of this case report.

4. Conclusion

The current view is that drug-related incontinence involves changes in receptor levels (α1, D2, serotonergic, muscarinic), along with sedation, constipation, metabolic changes, and individual factors such as age, pelvic floor integrity, and concomitant medication use. Paliperidone Palmitate is suggested to cause urinary incontinence by affecting D2, 5-HT-2A, α1, and H1 receptors. Only one case of urinary incontinence associated with Paliperidone Palmitate treatment has been reported in the literature. This case represents the first instance of double incontinence associated with Paliperidone Palmitate.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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