Priapism Associated With Atypical Antipsychotic Medications: A Clinical Report

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Priapism is a prolonged and painful penile erection in the absence of sexual stimulation[1–5] and is considered a urologic emergency. The most common priapism presentation is the ischemic type, which can result in corpora cavernosa fibrosis, with a significant risk of persistent erectile dysfunction (30%–90%)[3,6,7] and in severe cases requires penile amputation.[8] The severity is frequently associated with late presentation to medical care. Although there are several etiologic factors, medications remain the most common cause,[2,4] with the histaminic and α_1-adrenergic antagonism a possible mechanism.[1,9] As such, psychotropic medications can contribute to such idiosyncratic events,[9] with antipsychotics being responsible for about half of the cases of iatrogenic venous priapism.[3]

Case Report

A 32-year-old single man had a psychiatric history of paranoid schizophrenia for 11 years. He had no history of substance use disorders or nonpsychiatric medical comorbidity. His last hospitalization in a psychiatric department occurred 2 months before this episode and was motivated by auditory hallucinations and paranoid ideation. He was discharged with clozapine 100 mg/d. Due to psychotic symptom persistency, paliperidone palmitate 100 mg was initiated, with subsequent symptom remission. Four weeks after initiating paliperidone, he experienced a 36-hour painful priapism. The patient denied sexual intercourse or masturbatory habits in the last 2 months, with feelings of shame and embarrassment caused by the prolonged erection and postponing medical care until the pain became unbearable. He was then taken to the emergency department and diagnosed with acute iatrogenic priapism. He underwent a single urologic intervention and was admitted to the surgical ward. Subsequent urologic investigation suggested no pathology that could explain the etiology of priapism, which therefore was attributed to antipsychotics. He was treated with amisulpride due to its relative low affinity for adrenergic receptors. During the rest of inpatient and aftercare surgical follow-up treatment, no more priapism or sexual complaints were observed.

Discussion

Occurrence of priapism is related to α-adrenergic blockage mediated by the α receptors in the corpora cavernosa of the penis.[2] Among typical antipsychotics, there are cases associated with the use of chlorpromazine, levomepromazine, haloperidol,[3,10,11] and zuclopenthixol.[3] In the atypical group, risperidone and ziprasidone have the highest affinity for α-adrenergic receptors[7] and have been associated with several cases[2,3,12] of priapism when administered as monotherapy or in combination. However, there are several cases of priapism with lower α_1 antagonism such as olanzapine,[11,13] quetiapine,[3,9,10,14,15] clozapine,[10] aripiprazole,[7,14,16] and paliperidone.[1,14,17] Although there are numerous priapism reports associated with oral antipsychotics, fewer cases are reported with long-acting antipsychotics. No reports of priapism associated with amisulpride and pipothiazine were found.[3] Thus, amisulpride would be a reasonable choice for treatment[12] because currently, to our knowledge, it is the only available drug that does not have α-adrenergic affinity.[11]

Our patient developed priapism with clozapine and paliperidone palmitate treatment. The gradual increase in the dose of clozapine, an antipsychotic with α-adrenergic antagonism action, may have been the cause of priapism. The anticholinergic properties of paliperidone may be implicated in priapism, especially with the concomitant use of other drugs with affinity for α_1-adrenergic receptors.

Priapism is a rare but severe adverse event, and this case highlights the need for early recognition and treatment. Cases associated with clozapine are widely reported, but there are few reported cases of priapism associated with paliperidone. This is the first case report of priapism, to our knowledge, associated with clozapine and paliperidone palmitate. Switching to another antipsychotic with less α-blocking properties is generally recommended,[11] with amisulpride as the preferred choice of treatment.

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