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Letter to the Editor

Risperidone-induced priapism in a middle-aged adult: Preventive considerations

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Priapism is a pathological condition characterised by painful, prolonged, and sustained penile erection that occurs without any sexual stimulation (Huang et al., 2009). Although the exact mechanisms linking risperidone and priapism remain unclear, it is commonly understood that antipsychotic-mediated α-adrenergic receptor blockade in the penile cavernosal tissue is the primary mechanism leading to priapism. This action blocks sympathetic activation that mediates penile smooth muscle contraction and detumescence (Hwang et al., 2021; Segraves, 1989).

Second-generation antipsychotics (SGA) are thought to be less likely to cause priapism than their counterparts; however, multiple reports have incriminated nearly all SGAs. Sood et al. (2008) described 50 cases of priapism associated with SGAs; of these, risperidone was the offending agent in 16. By 2013, investigators had found 32 instances of priapism associated with risperidone (Paklet et al., 2013). Nonetheless, as it is a rarely reported adverse effect, priapism continues to be underappreciated and underemphasised. We report a case of risperidone-induced priapism in a middle-aged adult with no risk factors to add to the evidence base and sensitise clinicians to its broader management implications.

1. Case report

Mr. S, a 48-year-old Indian married male with no prior psychiatric history or treatment, presented to the outpatient department with a 2-year history of delusion of infidelity, irritable mood, and agitation. He was diagnosed with delusional disorder and initiated on Tab. Risperidone 2 mg nightly. As he was reluctant to take medicines, we initiated a low dose of risperidone and advised a review after two weeks.

Three days after starting treatment, he experienced an episode of painful penile erection that lasted for two hours and subsided spontaneously. On the next day, he took the tablet at 9 PM. After an hour or so, he experienced another episode of priapism; this time, it was more severe and painful. As it continued to progress even after a few hours, he checked into the emergency department of a urology centre. After evaluation, he was diagnosed with low-flow priapism and treated with ice, intravenous ketorolac, aspiration of blood (220 ml) from corpora cavernosa, and intracorporal injection of adrenaline. Risperidone was discontinued and his symptoms improved. During the follow-up review in psychiatry, no further episodes of priapism were reported in the week following discharge. Though the delusion persisted, he was not willing to take any medications. Sexual functioning was reportedly intact.

There was no prior history of priapism or any other symptoms of sexual dysfunction. He tested negative for sickle cell disease and did not have any haematological disorder. He had no history of using substances, including alcohol, nicotine, cocaine, or cannabis. He had no relevant past or current medical history of note, including pelvic or genital trauma, and was not on any medications. Family history was unremarkable, and he denied any drug allergy. Written informed consent was obtained from the patient to report the findings.

2. Discussion

Second-generation antipsychotic-induced priapism has been known for more than three decades now, and 15–26 % of all priapism cases are linked to the usage of antipsychotics (Sharma and Fleisher, 2009). Despite this long history, awareness and appreciation of this important adverse effect remain suboptimal. Priapism can have significant consequences. Direct consequences are related to tissue hypoxia, resulting in ischemic penile corporal tissue necrosis progressing to fibrosis and permanent erectile dysfunction; early intervention is key to preserving the erectile tissue (Vilke et al., 2004).

With increasing approved and off-label use of antipsychotics, it is important to raise awareness about antipsychotic-induced priapism, even though its absolute risk is low. This is because, as observed in the index case, it can negatively influence attitudes of the patient towards antipsychotic agents, and more generally, towards psychotropics. This may severely curtail options for psychopharmacologic treatment among those who need it the most; a situation that no doctor or patient would want.

Hence, evaluation for priapism risk factors, patient education, and monitoring assume significance when initiating antipsychotics. We suggest the following steps for implementing this in actual practice:

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- ➢ Proactively evaluate for risk factors for priapism before initiating antipsychotics – This includes taking a good sexual history and investigating for pharmacological and haematological risk factors. For more information on risk factors for antipsychotic-induced priapism, readers are referred elsewhere (Hwang et al., 2021). The importance of a thorough sexual history cannot be overemphasised, as a past history of prolonged, painless erection is the best predictor of subsequent priapism (Thompson et al., 1990). Since patients with psychosis are less likely to report sexual symptoms spontaneously, the onus is on clinicians to recognise and address them before starting antipsychotics. Notably, the index patient did not have any risk factors for priapism.
- ➢ Educate the patient about potential side effects of antipsychotics before initiation —this may help in early identification and mitigate negative drug attitudes that may influence adherence.
- ➢ Monitor for priapism throughout the course of treatment and whenever there is a change/addition of drug — this is important because antipsychotic-induced priapism has been reported both acutely and after an extended period of drug initiation and when changes have been made to the drug regimen, such as addition of another antipsychotic, antidepressant, or lithium (Sood et al., 2008).

We hope the above report sensitises clinicians to the possibility of priapism when initiating antipsychotics and triggers greater awareness and proactive patient education and monitoring. Further empirical research on the profile and risk factors for antipsychotic-induced priapism is essential to evolve evidence-based management guidelines for the condition.

CRediT authorship contribution statement

Rohith Suresh: Writing – original draft, Data curation, Conceptualization. **Kumar PN Suresh:** Writing – original draft, Project administration, Investigation, Data curation, Conceptualization. **Vikas Menon:** Writing – review & editing, Data curation.

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Declaration of Competing Interest

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