CASE REPORT

ONLINE **EXCLUSIVE**

THE PATIENT

35-year-old soldier in the US Army

SIGNS & SYMPTOMS

- History of posttraumatic stress disorder
- Priapism

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THE CASE

A 35-year-old African-American man, who was an active duty service member, presented to the Troop Medical Clinic with a 4-hour history of priapism. He had been taking sertraline 100 mg and prazosin 10 mg nightly for 4 months to treat his posttraumatic stress disorder (PTSD) with no reported adverse effects. These doses were titrated 2 months prior to presentation. The patient reported that he took his usual medication doses before bed and awoke at 3 am with a penile erection. At 7 am, he presented to the clinic because of pain from the continued erection.

THE DIAGNOSIS

A penile erection was present on physical exam. All medications were reviewed for adverse effects. A work-up for anemia, sickle cell disease, thalassemia, and platelet abnormalities was negative. A blood gas analysis performed on blood aspirated from the corpus cavernosum showed hypoxemia, hypercarbia, and acidosis, confirming a diagnosis of ischemic priapism.

DISCUSSION

Priapism is a prolonged erection of the penis that is usually not associated with sexual activity or stimulation. It is considered a urologic emergency and requires prompt treatment to prevent long-term complications, such as permanent erectile dysfunction.

Priapism is classified as one of 2 types: ischemic ("low flow") or nonischemic ("high flow").

Ischemic priapism is the most common type. It is caused by dysfunctional cavernosal smooth muscle, which creates a compartment-like syndrome in the cavernous tissue that leads to hypoxia and acidosis.[1] Nonischemic priapism is often caused by a fistula between the cavernosal artery and corpus cavernosum and is common with traumatic injuries. Nonischemic priapism has a lower risk for long-term complications (due to the blood being well-oxygenated) and often resolves spontaneously without treatment.[2,3]

Certain medications can cause priapism

Our patient's ischemic priapism was most likely caused by the combined antagonistic properties of prazosin and sertraline on alpha-1 adrenergic receptors.[3,4] Adrenergic alpha-blockers block the sympathetic system, which can in turn inhibit penile detumescence and cause priapism.[4]

An increasingly common Tx combination. Selective serotonin reuptake inhibitors (SSRIs) such as sertraline are considered first-line treatment for the symptoms of PTSD,

and prazosin has been found to be effective in the treatment of nightmares associated with PTSD. (Treatment of PTSD-related nightmares with prazosin is an off-label but frequent use of the medication.) This combination of medications is becoming increasingly common for the treatment of PTSD and its associated symptoms.[5-7]

Cases to date provide interesting insight into this adverse effect

In our literature review, no documented cases of priapism were attributed to prazosin when it was used for the treatment of nightmares, but there are multiple case reports of priapism linked to the drug's use for hypertension.

In the majority of these case reports, the dosage exceeded 10 mg/d and was much higher than the dosage typically used to treat nightmares.[7] Many of the affected patients also had associated comorbidities such as diabetes or chronic kidney disease.[4]

Sertraline has been associated with priapism when used as monotherapy and in combination therapy with antipsychotics. All SSRIs have antagonistic properties to alpha-1 adrenergic receptors, but sertraline appears to have more than a 10-fold increase in affinity when compared to other SSRIs.[3]

Treatment: An injection and aspiration

Our patient was treated with phenylephrine injection and aspiration, which resolved the priapism. Prazosin was stopped, and the patient was weaned off of sertraline. He continued to follow up closely with Behavioral Health for further management of his PTSD and associated symptoms.

THE TAKEAWAY

PTSD is being diagnosed more frequently, especially in active duty soldiers, veterans, members of the National Guard, and reservists.[8] Because nightmares are a common symptom of PTSD and SSRIs are first-line treatment for PTSD, the combination of prazosin and an SSRI for the treatment of PTSD is frequently encountered.[5-7] Providers who prescribe and/or care for patients treated with these medications need to counsel patients on the risk of priapism and the risks associated with a delay in seeking medical care.

If a patient who is taking these medications presents with priapism, contact Urology immediately for acute management. Both medications must be stopped to prevent future episodes; prazosin can be stopped immediately, but patients must be weaned off of sertraline to avoid experiencing withdrawal symptoms. Patients will need to follow up with a behavioral health team for continued management of their PTSD symptoms. JFP

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