

Priapism Following Trazodone Use in a Patient Using Drugs and Alcohol: A Case Study

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Citation

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Abstract

We present a case of priapism, an urological disorder and medical emergency with a variety of known etiologies, including the use of psychotropic medications. We report here on the first instance to our knowledge, a case of priapism, which occurred following trazodone use in a patient who was actively using alcohol, opiates and benzodiazepines. It is unclear if these drugs act in additive or synergistic manner to cause priapism. Since trazodone is frequently prescribed as a hypnotic in drug abusers, clinicians should be cautious regarding the risk of priapism in this population.

INTRODUCTION

The word "priapism" is derived from "Priapus," the Greek God of fertility whose symbol was an erect phallus (1). It was first described by Tripe in 1845 in Lancet (2). Priapism is a pathologically prolonged painful erection, which is an urological emergency and requires immediate treatment to prevent complications (3). Roughly 40-50% of patients who develop priapism become impotent even after surgical interventions (3).

The cause of priapism is unclear in 50% of cases. Known causes of priapism include blood dyscrasias, tumors, trauma, spinal cord injuries, and stroke. Drug-induced priapism accounts for 20-40% of cases (4). It is most often associated with three classes of drugs: neuroleptics, antidepressants, and antihypertensives. Previous cases of priapism have been reported with antipsychotic and antidepressants including trazodone, olanzapine, thioridazine, clozapine and perphenazine (5). Additionally, a number of drugs of abuse including marijuana, heroin, cocaine, and alcohol have been known to cause this disorder (6).

Although various cases of priapism have been reported with these drugs, we report here on the first instance to our knowledge, of a case of priapism which occurred following moderate trazodone use in a patient who was actively using alcohol, opiates, and benzodiazepines. Trazodone, an atypical antidepressant, is primarily used for the treatment of insomnia. It is a triazolopyridine derivative that works as a postsynaptic 5-HT_{2a} antagonist with only weak presynaptic

serotonin reuptake inhibition and also alpha-adrenergic antagonist effects. Trazodone is often chosen for substance abusers to promote sleep due to concerns for the abuse liability of prescription hypnotics. Priapism associated with trazodone usage has been reported with a frequency ranging between 1 in 1,000 and 1 in 10,000 and does not appear to be dose related (4).

CASE REPORT

Mr. A was a 34 year old white male with history of depression, alcohol dependence, benzodiazepine dependence, and opiate dependence who was started on 200 mg of trazodone by his outpatient psychiatrist. Mr. A was sentenced to jail after a month of being on trazodone, where he remained for three months. He continued to take trazodone while in jail without any side effects. Once out of jail, Mr. A continued to abuse street drugs and alcohol and was taking the same dose of trazodone. One evening while watching television at home, Mr. A started having a painful erection after taking his dose of trazodone, without any sexual stimulation or trauma. Although he was in acute distress, he did not go to the emergency room, as he believed that the erection would subside on its own. As he continued to have a painful erection, Mr. A was rushed to the emergency room where he was diagnosed with priapism. Mr. A was admitted to the Urology unit and emergency corpus cavernosum and spongiosum shunts were performed with drainage of about 50 cc of blood. Mr. A's condition improved and he was discharged on stable condition. Mr. A was readmitted to hospital after three weeks when he was

found unconscious on the street with a blood alcohol level of 510 mg/dl and urine that was positive for opiates. Mr. A was seen by consultation and liaison psychiatry at that time. Mr. A's trazodone was discontinued and he was started on mirtazepine for insomnia. Mr. A responded well to mirtazepine.

The fact that this patient was actively abusing narcotics, benzodiazepines and alcohol, may have posed an additional risk for him. Although, it is still unknown if drugs act in an additive or synergistic manner to cause priapism, the risk of priapism increases when combining drugs and alcohol with psychotropic medications.

DISCUSSION

Several drugs of abuse, including ethanol and cocaine, have been associated with priapism (6). Recently, the condition was described in a patient who took ecstasy (7). In one previously published case report, a patient suffered from priapism after taking an overdose of trazodone while actively abusing cocaine. Since cocaine has been associated with priapism in the past, the report suggested that combined trazodone and cocaine use might increase the risk of priapism (8). To our knowledge, this is the first case of priapism involving a patient who was taking trazodone and was actively abusing alcohol, opiates and benzodiazepines. This patient was on the same dose of trazodone for three months while in jail and did not have priapism while incarcerated. He developed priapism after he was released from jail, when he started using drugs and alcohol. This strongly suggests that the combination of alcohol, opiates and benzodiazepines increased the risk for priapism in this patient. Although, this case suggests that there may be a close relationship between trazodone, priapism, drugs and alcohol, the exact mechanism is not clear. Priapism results from decreased venous outflow from the corpora cavernosa of the penis. There are wide variations in the interval between initiation of trazodone use and the onset of priapism. However, based upon data reported to the US Food and Drug Administration, these data suggest that this complication is most likely to occur within the first 28 days of treatment (9). The specific doses or time frame that precipitates these attacks after taking trazodone is unclear, but it appears to be more common within the first few months of initiation of trazodone use. Priapism associated with trazodone has been reported for dosages ranging from 50 mg to 400 mg daily and for treatment lasting from 1 day to 18 months (9). This case may be of a heuristic value because of demonstration that trazodone can cause priapism

when combined with drugs and alcohol. Further studies need to be done to demonstrate whether using street drugs and alcohol along with trazodone have synergistic manner to cause priapism.

Since trazodone is commonly used as a hypnotic and often chosen for polysubstance abusers due to its low abuse potential, clinicians should be aware of the possible additive risk of priapism and should be cautious in prescribing trazodone in this population. Prior to initiating therapy, clinicians need to discuss the side effects of trazodone including priapism and documentation of informed consent may be necessary to protect against litigation. Clinicians should inform their patients of the potential for cavernosal ischemia, fibrosis and subsequent impotence from even a single episode of priapism (10). In particular, a clinician should enquire if a patient has a history of prolonged erections. These patients need to be aware of their potential for developing priapism; since as many as 50% of patients presenting with priapism during psychotropic treatment have a prior history of prolonged erections (4). If priapism occurs, urological consultation should be immediately sought. Education of the patient is critical in avoiding trazodone-related priapism and its potential long-term complications, especially in polysubstance abusers. Unfortunately, patients with priapism are often embarrassed or hesitant to seek help. It is important that patients beginning use of trazodone or other drugs that cause priapism are informed of this side effect and of the need for rapid discontinuation of the medication and treatment if priapism should occur. Patient education about the risk of priapism is essential to avoid the long-term complications, including impotence and possibly penile gangrene. Individuals who have had prior prolonged erections are more susceptible to priapism (4). Certain medical conditions, many medications, and substance abuse may also increase the risk of priapism. This effect may be additive. Patients should avoid using drugs and alcohol while on trazodone, as it may increase their risk of priapism. If the erection lasts more than 2 hours, the patient must obtain emergency care, as impotence has been reported after erections lasting 4 hours or longer.

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