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Risperidone Induced Priapism: Case Report

Hatim Yousef Alharbi

Collage of Medicine at Qassim University, Saudi Arabia

Abstract: **Priapism is caused by different etiologies. One of theses etiologies is antipsychotic medication. Although antipsychotic induced priapism is a rare side effect, patients should be fully educated about it due to possible harmful complications. We presented a case of 35-year-old man with a diagnosis of intellectual disability and challenging behavior who had been prescribed risperidone and presented multiple times to the Accident and emergency (A&E) department due to priapism. These episodes resolved after discontinuing risperidone.**

Keywords: **Accident and emergency (A&E), Risperidone Induced Priapism.**

1. INTRODUCTION

Priapism is a pathological condition representing a true disorder of penile erection that persists beyond or is unrelated to sexual interest or stimulation. Overall, erections lasting up to 4 hours are by consensus defined as 'prolonged'. It is considered a urologic emergency that should be treated promptly as it can lead to erectile dysfunction in 30–90% of patients. In general, priapism is divided into 3 types: high-flow, low-flow and stuttering type. High-flow priapism is non-ischemic and is usually caused by a blunt perineal trauma. Low-flow priapism is the most common form of priapism, accounting for more than 95% of all priapism episodes. Ischemic priapism has been identified as idiopathic in the majority of cases since no specific cause could be identified. Moreover, ischemic priapism has been associated with sickle cell anemia, hematological dyscrasias, neoplastic syndromes, and the use of several different medications.

Among medications various psychoactive medications are also known to cause low-flow priapism, with trazodone the most commonly implicated member of this group. Drug-induced priapism is associated with antidepressants and antipsychotics and accounts for approximately 15% to 41% of all cases, of which antipsychotics-induced priapism is most common. We report the case of recurrent priapism as a result of standard doses of Risperidone after first use and with multiple dosage uses.

2. CASE STUDY

Our patient was a 35-year-old Saudi single man who had been diagnosed as a case of intellectual disability with challenging behavior. The patient was started on Risperidone 2 milligram (mg) at bedtime targeting the challenging behavior and the sleep disturbance. Approximately one week after starting him on risperidone, the patient developed painful erection. The patient felt shy and didn't report this issue to anyone and then it resolved spontaneously after almost 4 hours. Two days later, the patient got another episode of painful erection, which was more severe than the first episode. The patient presented to the A&E department in severe pain. The patient denied any history of trauma, sickle cell disease or trait, illicit drug use, vasoactive agents, including nitrates, recent intercourse, or use of any medications or devices for sexual enhancement. A urological consultation was done and a cavernosal aspiration-irrigation was performed which resulted in the detumescence of the penis. The dose of risperidone was decreased to 1 mg and the patient was advised to see his primary consultant within one-week period. Approximately 3 days after the second episode, the patient developed another episode of painful erection and thus he was presented to the A&E department .The cavernosal aspiration-irrigation was performed another time; which resulted in the detumescence of the penis. The risperidone was discontinued and the family insisted to keep the patient off medications with frequent follow up in the clinic. Then, the patient was followed in the clinic for almost 6 weeks and the painful erection episodes disappeared .The sleep disturbance was managed by giving the patient 3 mg of Melatonin.

3. DISCUSSION

The effect of antipsychotic medication is difficult to predict in people with intellectual disability and they may be more sensitive to side effects than others. Both atypical and typical antipsychotics have been associated with priapism. The most studied mechanism by which antipsychotics are thought to cause priapism is through alpha-1 adrenergic antagonism. Risperidone is one of the atypical antipsychotic, which has proven efficacy in reducing aggression, and self-injurious behavior in intellectually disabled patient . It seems that priapism with risperidone can occur at any time after starting the medications. It is obvious that priapism is not dose related and can occur even with small doses. There are multiple risk factors associated with drug induced priapism like, rapid and recent doses changes and frequent medications changes and use of other medications which known to cause priapism. While priapism is an uncommon side effect of antipsychotics, it is one that patients should be made aware of due to the possible complications. Priapism is known to be associated with serious complications including erectile tissue necrosis, fibrosis and penile gangrene.

Our case illustrates the need of educating the patient about priapism and the importance of seeking help immediately and not to feel shy about this serious problem. It is of high importance to rule out any other causes of priapism in any patient presented with painful erection. The decision of shifting patient to another medication or to keep him off medications should be discussed fully with the patient and his family taking into account the risk-benefit ratio of each individual patient. It is also important to consider previous episodes of medication-induced priapism when prescribing psychotropic medications as this may increase the patient's future risk of priapism. One of the limitations of our case report is that we don't have an idea about the possibility of hyperprolactinemia, which is known side effect of Risperidone and associated with priapism.

4. CONCLUSION

Priapism is a urological emergency and immediate urological consultation should be sought out to prevent the serious complications. Patients should be educated about the possible risks of priapism, including future episodes, and to present to the hospital emergently should symptoms develop. There are growing evidence on antipsychotic induced priapism. It is of high importance to rule out different causes of priapism in all patients presented with painful erection.

Finally it is worth mentioning that further studies are needed to explore the exact prevalence of antipsychotic induced priapism.

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