

Priapism as Side Effect of Prescribing Risperidone in Autistic Children: about Two Cases

Bouchra Aabbassi^{1*}, Abdeslam Benali²

¹Child and adolescent psychiatrist, Psychiatric Hospital Errazzi, Berrchid, Morocco

²Research team for mental health, University Hospital Mohamed VI, Marrakesh, Morocco

*Corresponding author: Bouchra Aabbassi, child and adolescent psychiatrist, Psychiatric Hospital Errazzi, Berrchid, Morocco;
E-mail: aabbassi-iam@hotmail.com

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Abstract

Introduction: Priapism is a prolonged and usually painful and persistent penile erection unaccompanied by sexual desire. It can occur as a rare side effect of antipsychotic medications. Risperidone is an atypical antipsychotic widely prescribed for the treatment of behavioral problems on children with autism spectrum disorder. It seems associated with the priapism in children.

Case presentation: We present two cases of children, 12-years old and 16-years old, diagnosed with autistic disorder who developed priapism on an existing regimen of Risperidone and the treatment decisions that followed.

Conclusion: The clinicians who prescribe risperidone should beware of the possibility of this rare complication in their patients. Information about this possible side effect and instructions regarding appropriate response should be made available to caretakers of those in the at risk group of young patients.

Keywords: Risperidone, antipsychotics, autistic child, priapism

Introduction

Priapism is a prolonged and usually painful and persistent penile erection unaccompanied by sexual desire. Priapism is an uncommon urological emergency, relatively rare but due to his potentially serious and long-term consequences if prompt presentation and medical intervention is not performed. It can occur as a rare side effect of antipsychotic medications. Risperidone is an atypical antipsychotic widely prescribed for the treatment of behavioral problems on children with autism spectrum disorder. It seems associated with the priapism in children. In this paper we describe two cases of autistic children who developed priapism on an existing regimen of Risperidone and the treatment decisions that follows.

Case reports

Case 1

Y. is a 12-year-old male diagnosed with autistic disorder in his early childhood. He consults the psychiatric department on January 2016. There was no history of any major medical illness that could influence normal neurological development in the patient during childhood. Presently at the age of 12 years, he associated behavioral problems included destructive tendencies, screaming without apparent reason, aggression, self-injurious and irritability. Risperidone was prescribed to manage these disruptive behavior symptoms. When the dosage of was increased gradually to 1,5 mg/day, the child awoke with a painful erection which lasted 6 hours. There was no history of penile, genital, or pelvic trauma; and there was no evidence of any infection or malignancy. There was no change in his current medications and no reported use of any medication or any herbal preparation. He was immediately sent to the emergency department. The discontinuation of Risperidone led to an improvement in the pain. He was admitted on the urology service and the priapism resolved completely within a few hours after intracavernosal washing. Risperidone was the only known causative factor and it was discontinued. On leaving the hospital, the prescription of antipsychotic treatment was indicated. We prescribed Aripiprazole. But, the family did not have the financial means to procure this expensive medication. Safely, the patient was put under 150 mg/day of Sulpiride with a favorable outcome. The priapism had not returned when the patient was followed up 4 months later.

Case 2

Z. is a 16-years old boy with autism spectrum disorder and no known past medical history. He was brought to the child and adolescent psychiatric service on December 2019 with 10

years history of autism spectrum disorder. Recently, Risperidone was prescribed by pediatrician for behavioral disorders: agitation, irritability and insomnia without any medical or environmental apparent reasons. He was started on Risperidone 1,5mg per day. The boy developed frequent penile erections after an increase in Risperidone dosage for a month to 2mg/j. Apart from taking antipsychotic medication, he had no risk factors for priapism. Also, there was no history of penile, genital, or pelvic trauma; and there was no evidence of any infection or malignancy. There was no change in his current medications and no reported use of any medication or any herbal preparation. Y. was immediately sent to the emergency department where a diagnosis of low flow priapism was made. He was treated with ice and pain relief and underwent drainage of the corpus cavernosum and intracorporal injection of adrenaline. Risperidone was stopped immediately. We meet him after a medication-free period of one week. Risperidone was replaced with aripiprazole 1mg per day. He reported no further episodes of priapism.

In the two cases, we have established a probable causal relationship between Risperidone and Priapism using the Naranjo ADR probability scale, with a scoring about 7 [1].

Discussion

Priapism can occur in all age groups. The pathophysiology is still unclear and it is considered to be multifactorial in origin [2]. Some common etiological factors on child include leukemia, spinal and perineal trauma, sickle cell anemia, thrombocytopenia, malignancy, neurological disorders, and the use of certain drugs [2,3]. The antipsychotic agents are implicated in 15% to 26% of priapism associated with medications [3]. Among atypical antipsychotic, Clozapine, Risperidone and Olanzapine have been reported to be associated with the condition as well [2,3,4]. Recent evidence indicates that atypical antipsychotics represent a promising option for the treatment of autistic disorder [2,3]. In particular, Risperidone appears to be effective in treating aggressiveness, hyperactivity, irritability, stereotypies, social withdrawal, and lack of interests [3,5]. However, Risperidone can have side effects that suggest an informal analysis of the medication's use. Much has been discussed about the metabolic side effects; however, there is relatively little know about the occurrence of ischemic priapism which has been reported with Risperidone in few cases from different countries [7,8,10,11]. Ischemic priapism accounts for 95% of priapism [2]. It is caused by obstruction of the venous drainage from the corpora cavernosa of the penis. Although the relationship between psychotropic medication and priapism is well documented, the exact incidence is unknown. The proposed mechanism responsible for this obstruction is in-

creased parasympathetic tone relative to sympathetic tone due to direct alpha-adrenergic receptor blockade [2,9]. Risperidone is a potent alpha1- and alpha2 -adrenergic receptor antagonist and, therefore, could potentially cause priapism [8,9]. Priapism may occur at any time during the treatment course of psychotropic medications, even without change of dosage, and even on monotherapy [2,6]. However, priapism can occur at nearly any age and any dose [8, 10]. Clinicians must be aware of the risk and reports of early signs such as prolonged erections should be taken seriously. Priapism is considered a serious urological emergency. It leads to vessel-stasis, hypoxia, ischemia and acidosis, resulting in irreversible cavernosa fibrosis [2,7]. Impotence is reported in more than 50% of the cases in which priapism was not treated [2,4,7]. Treatment including ice packs, enemas, medications and anesthesia generally do not produce consistent results. Management usually includes intra-cavernosal washing, followed by intracavernosal injection of an alpha-agonist, and in case none is effective, shunt surgery between corpora cavernosa and corpus spongiosum, otherwise sapheno cavernosal surgery is suggested [2,5,7]. If the patient needs to be maintained on an antipsychotic regimen, the dosage should be decreased, or the medication should be discontinued and changed with a medical follow given the high degree of risk for priapism with antipsychotics [3,2,6]. Risperidone and Aripiprazole are the only molecules approved by the United States Food and Drug Administration (FDA) for the treatment of behavioral problems on children with autism spectrum disorder [6]. If appropriate, it is generally recommended to switch to another antipsychotic with less alpha1-blocking properties; like Sulpiride [8].

Conclusion

These cases illustrated the importance of patient and family education on priapism as a possible side effect of medications. Also, the clinicians who prescribe Risperidone should be aware of the possibility of this rare complication in their patients especially doing to common nonverbal and/or non communicative features of autism. Information about this possible side effect and instructions regarding appropriate response should be made available to caretakers of those in the at risk group of young patients.

Consent

Written informed consent was obtained from the patient's legal guardian(s) for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The authors declare no competing interest

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