

**PRIAPISM: A RARE SIDE EFFECT OF PRESCRIBING RISPERIDONE IN AUTISTIC CHILDREN****\*Bouchra Aabbassi and Abdeslam Benali**

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**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 its 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.

**KEYWORDS:** Risperidone, autistic child, priapism.**DISCUSSION**

Priapism can occur in all age groups. The pathophysiology is still unclear and it is considered to be multifactorial in origin.<sup>[2]</sup> 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.<sup>[2,3]</sup> The antipsychotic agents are implicated in 15% to 26% of priapism associated with medications.<sup>[3]</sup> Among atypical antipsychotic, Clozapine, Risperidone and Olanzapine have been reported to be associated with the condition as well.<sup>[2,3,4]</sup> Recent evidence indicates that atypical antipsychotics represent a promising option for the treatment of autistic disorder.<sup>[2,3]</sup> In particular, Risperidone appears to be effective in treating aggressiveness, hyperactivity, irritability, stereotypies, social withdrawal, and lack of interests.<sup>[3,5]</sup> 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.<sup>[7,8,10,11]</sup> Ischemic priapism accounts for 95% of priapism.<sup>[2]</sup> 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 increased parasympathetic tone relative to sympathetic tone due to direct alpha-adrenergic receptor blockade.<sup>[2,9]</sup>

Risperidone is a potent alpha1- and alpha2 -adrenergic receptor antagonist and, therefore, could potentially cause priapism.<sup>[8,9]</sup> Priapism may occur at any time during the treatment course of psychotropic medications, even without change of dosage, and even on monotherapy.<sup>[2,6]</sup> However, priapism can occur at nearly any age and any dose.<sup>[8,10]</sup> 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.<sup>[2,7]</sup> Impotence is reported in more than 50% of the cases in which priapism was not treated.<sup>[2,4,7]</sup> Treatments including ice packs, enemas, medications and anesthesia generally do not produce consistent results. Management usually includes intracavernosal 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.<sup>[2,5,7]</sup> If the patient need 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.<sup>[3,2,6]</sup> 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.<sup>[6]</sup> If appropriate, it is generally recommended to switch to another antipsychotic with less alpha1-blocking properties; like Sulpiride.<sup>[8]</sup>

## CONCLUSION

The clinicians who prescribe Risperidone should beware 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 reponse should be made available to caretakers of those in the at risk group of young patients.

## REFERENCES

1. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, Janecek E, Domecq C, Greenblatt DJ. A method for estimating the probability of adverse drug reactions. *ClinPharmacolTher*, 1981; 30: 239-45. [PMID:7249508]
2. Sharma A, Fleisher MH. Risperidone-induced priapism: A case report. *Prim Care Companion J Clin Psychiatry*, 2009; 11(4): 174-5. [PMID: 19750074]
3. Gagliano A, Germanò E, Pustorino G, Impallomeni C, D'Arrigo C, Calamoneri F, Spina E. Risperidone treatment of children with autistic disorder: effectiveness, tolerability, and pharmacokinetic implications. *J Child AdolescPsychopharmacol*, 2004; 14(1): 39-47 [PMID: 15142390]
4. Bejrananda T, Thongseiratch T. Frequent penile erection in a boy with autism spectrum disorder: Case report. *J Urology*, 2018; 118: 195-197. [PMID: 101016]
5. Compton MT, Miller AH. Priapism associated with conventional and atypical antipsychotic medications: a review. *J Clin Psychiatry*, 2001; 62(5): 362-6. [PMID: 11411819]
6. Pradhan T, Hardan A. Priapism associated with risperidone in a 21-year-old male with autism. *J Child AdolescPsychopharmacol*, 2013; 23(5): 367-8. [PMID: 23738870]
7. Prabhuswamy M, Srinath S, Girimaji S, Seshadri S. Risperidone-induced priapism in a 12-year-old boy with schizophrenia. *J Child AdolescPsychopharmacol*, 2007; 17(4): 539-40. [PMID: 17822349]
8. O'Connor SE, Brown RA. The pharmacology of sulpiride -a dopamine receptor antagonist. *Gen Pharmacol*, 1982; 13(3): 185-93 [PMID: 7047291]
9. Almari G, Nguyen M. A case of priapism with risperidone. *Case Reports in Psychiatry*, 2014; 2 [PMID: 241573]
10. Greiner T, Schneider M, Regente J, Toto S. Priapism induced by various psychotropics: A case series. *World J Biol Psychiatry*, 2019; 20(6): 505-512. [PMID: 10.1080]
11. Paklet L, Abe A, Olajide D. Priapism associated with risperidone ; a case report , literature review and review of the south London and Maudesley hospital patient's database. *Ther Adv Psychopharmacol*, 2013; 3(1): 3-13. [PMID: 10.1177]