

## Risperidone-Induced Priapism

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**Priapism is a rare but a well-known complication of antipsychotic drugs (phenothiazine) and its occurrence with the new atypical antipsychotic drugs (Olanzapine, Clozapine & Risperidone) is even more rare. This is a report of an additional case of priapism induced by Risperidone ,its etiology and treatment is discussed in relation to literature.**

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Priapism is a persistent, painful penile erection usually unassociated with sexual thoughts or sexual activity of several hours to a few days duration. Many factors are known to be associated with priapism mainly haematological (sickle cell disease, leukemia and thalassemia), neurological (spinal cord injury), renal, local causes (trauma, infection), drug abuse (alcohol, cocaine and marihuana) and drug therapy (psychotropic, phenytoin, and heparin)<sup>1-3</sup>. Two types of priapism are described. (1) High flow (arterial) priapism which is usually secondary to a rupture of a cavernous artery and unregulated flow into the lacunar spaces, this type of priapism is usually not painful. (2) Venocclusive priapism is usually due to full and unremitting corporeal venocclusion. Prolonged venocclusive priapism results in fibrosis of the cavernous tissue and a loss of the ability to achieve an erection<sup>4</sup>.

It is primarily a disease of male but priapism of the clitoris has been described rarely in female<sup>5</sup>. It can occur at any age most frequent being in the third and fourth decade, 30%-40% have recurrent condition<sup>6</sup>, about half are idiopathic, the remainder are associated with diverse factors; local pathology of the pelvis and blood dyscrasias especially sickle cell disease<sup>1</sup>.

### THE CASE

Twenty one year old male was presented to the Emergency room for persistent and painful penile erection of about 20 hours duration. On careful workup, he admitted to the history of having attacks of prolonged erection during the past 2 months with varying duration (1-3 hours) which used to resolve spontaneously as he was ashamed to be seen in the hospital because of social stigma. He also revealed taking Risperidone 4 mg /day for the last 10 weeks by a private psychiatrist for schizophrenic illness, which was increased to 8 mg /day six days prior to his visit to the emergency room .

General physical examination was normal, local examination confirmed the presence of penile erection which was confined to the corpora cavernosa, with bluish discoloration of the skin but the glans penis was flaccid.

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Laboratory investigations including CBC, a reticulocyte count, coagulation profile, platelet count and urine analysis were normal. Radiological investigations (Penile Doppler ultrasound) and cavernosal blood gas determination confirmed the diagnosis of low flow type priapism. A trial of anticholinergic drug (intravenous injection of orphenendrine 60 mg) was given but without any improvement, then he was immediately referred to the urologist who initially treated him by aspiration with no improvement. An intracavernous injection of alpha-adrenergic blocker (Phenylephrine 100 microgram diluted in 1 ml of normal saline ) which was repeated every 5 minutes, a total dose of 0.5 mg was given but without considerable improvement. Later he developed erectile impotence, his oral neuroleptic was stopped and referred to the psychiatrist for follow up.

## DISCUSSION

Twenty percent of all reports of drug-induced priapism are induced by antipsychotic drugs<sup>6</sup>, most commonly chlorpromazine<sup>7</sup>, thioridazine<sup>8</sup> which occurs within 28 days of initiation of drug therapy<sup>6</sup>. Priapism has been associated with atypical antidepressant drugs mainly Trazodone and selective serotonin reuptake inhibitor (SSRI) fluoxetine<sup>6</sup> while Tricyclic antidepressant have not been associated with priapism<sup>9</sup> probably due to their anticholinergic properties.

There have been recent reports of priapism associated with the usage of atypical antipsychotic drugs (clozapine, olanzepine)<sup>10</sup> and risperidone<sup>11</sup>. The most widely accepted mechanism of drug-induced priapism involves a decrease in local sympathetic tone in relation to parasympathetic tone via direct alpha-receptor blockade<sup>6</sup>. It is a common property among phenothiazines but if it is so why priapism is rare among psychiatric patients. It could be explained by the following: it may go unrecognized, unreported because of short duration and spontaneous remission, but more likely priapism is a complex and multifactorial disorder<sup>12</sup>. Patients commonly delay reporting both prolonged erections and priapism possibly due to emotional trauma, embarrassment and lack of knowledge as to the emergency nature of priapism or the misconception that prolonged erection is a favorable side effect of psychotropic medications<sup>6</sup>.

## CONCLUSION

**In conclusion Risperidone is associated with small but definite risk of priapism, early recognition and prompt treatment are essential to prevent permanent impotence.**

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