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QUETIAPINE AND RECURRENT PRIAPISM: A CASE REPORT

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INTRODUCTION

Priapism is a rare side effect of anti-psychotics. Both typical and atypical anti-psychotics can cause priapism. Priapism means persistent and most of the times painful penile erection not associated with sexual stimulation. Priapism can cause urinary retention, cavernosa fibrosis, gangrene and even impotency if it is not treated properly in time. About 50% of priapism patients end up having impotency.[1] Drugs account for 25-40% of priapism.[2] The most common drugs causing priapism are anti-hypertensives and anti-psychotics.[1] In anti-psychotics, second generation anti-psychotics are more associated with priapism. But the information in the literature is limited. Most common anti-psychotics causing priapism are Risperidone, Olanzapine and Quetiapine. We are reporting a case of recurrent episode of priapism due to Quetiapine use followed by Olanzapine. As per the study in 2010,[2] the number of reported cases of priapism were 23, 14 and 6 for Risperidone, Olanzapine and Quetiapine respectively. The dispute in the Olanzapine and the Quetiapine reported cases and the scientifically proven affinity of the two drugs for alpha-1 receptors may be due to the issues of length and the use of the drugs in the market or due to lack of reporting of the cases of priapism of Quetiapine. Dose and the duration of treatment is not related with the occurrence of priapism.[1] But as per this case report, we can assume that the sudden rise of drug level in the body causes priapism because priapism was seen in this patient only when Quetiapine was first introduced to the patient and then introduced to the patient after a period of one year. But when the patient was on Quetiapine on a maintenance dose for a long time, it did not cause priapism.

CASE REPORT

A 35 year old male came to the emergency with a suicidal ideation. He had thoughts of killing himself for the last 15 days or so. The stressing factor in his life was the death of his father more than a year back. We obtained further history for the patient and it was found that he has a past history of bipolar disorder diagnosed 18 years ago. At that time the patient was started on Quetiapine 100 mg twice a day and then it was increased to Quetiapine 400 mg twice a day. The patient reported to have an episode of priapism 10 days after this. He came back to the hospital in the emergency department and there he was treated with a medicine by iv route, the name of which he does not remember. Priapism was managed and the patient was discharged from the hospital. He was started on Quetiapine 200 mg twice a day and he has regularly taken his medicine for the past 18 years. He stopped taking the medicine a year back. Patient reported that initially he felt okay without the medication, but then after 6-7 months he started to feel depressed. In this admission, the patient was admitted to the hospital and kept into 1:1 observation. He was started on Quetiapine 100 mg QHS and then increased to 300 mg QHS. On the fifth day of admission, the patient reported to have painful penile erection for 4 hours. Physical examination showed uncircumscribed fully erect penis with mild tenderness on palpation throughout the penis. Testicular examination was normal. Rest of physical examination was normal. Complete blood count, blood electrolytes and renal and hepatic function tests were normal. Genotype testing was done for cytochrome P450 3A4.[4] There was no enzymatic abnormality. The patient was given oral fluids followed by oral Acetaminophen. Then he was given oral Phenylephrine. The patient failed to respond to Phenylephrine. He was then taken to the emergency room. Urology consult was done. He was started on iv fluids and iv Acetaminophen. Then local Lidocaine Injection was given to the patient. Blood was withdrawn

from the corporal bodies. Eventually the pain of the patient reduced and then there was gradual detumescene.

COMMENTS

The two theories on the cause of priapism are alpha 1 receptors blockage and genetic abnormalities.[3] In genetic abnormalities, cytochrome p450 abnormality is considered to be responsible. Likewise, as per the other hypothesis, alpha 1 blockage and the decreased venous blood outflow from the penis results in priapism. The potential of the occurrence of priapism depends on the affinity of the anti-psychotic to bind the alpha 1 receptors. Risperidone has the maximum affinity of binding to the alpha 1 receptors followed by Quetiapine.

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