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CASE REPORT

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Delirium Associated with Olanzapine Therapy in an Elderly Male with Bipolar Affective Disorder

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Atypical antipsychotic medications are commonly used to treat symptoms of delirium. Olanzapine has been successfully used in the treatment of delirium. However, there have been few case reports of delirium associated with olanzapine. We hereby report a case of delirium associated with olanzapine therapy. Possible risk factors and underlying pathogenesis is discussed.

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Key Words Olanzapine, Antipsychotics, Delirium, Elderly patients.

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Introduction

Olanzapine is a second generation antipsychotic agent approved for management of schizophrenia as well as mania. The package insert for olanzapine includes a warning regarding possibility of adverse cerebrovascular events with its use in elderly patients with dementia.[1] It has also been reported that elderly patients have dose requirements similar to the young adults.[2]

Antipsychotic olanzapine has been reported to be useful in the management of symptoms of delirium.[3,4] However, contrary to this, there are few reports of olanzapine related delirium.[5-7] We hereby report a case of olanzapine associated delirium developing in an elderly male with bipolar affective disorder (BPAD), because of its rarity.

Case

82 years old married male working as a farmer was suffering from bipolar affective disorder for the last 50 years. He had multiple episodes of mania and depression which were treated with various psychotropic medications. He was maintaining well for the last 3 years and hence had stopped all medications and was only taking lorazepam 1 mg on as and when required basis for sleep.

He now presented with complaints of over talkativeness, big talks, over activity, decreased need for sleep and excessive cheerfulness for the last 1 month. There was no associated history of fits, urinary incontinence, fever, forgetfulness or other symptoms suggestive of organicity. His personal and family history were non significant. Medical history revealed patient to be suffering from benign hypertrophy of prostrate grade I. Mental status examination revealed elated affect, increased psychomotor activity, grandiose ideation and absent insight. His Mini Mental Status Examination score was 25/30. A diagnosis of BPAD currently manic episode was made. He was started on divalproex 250 mg HS, olanzapine 5 mg Hs increased to 10 mg HS after 5 days and lorazepam 2 mg HS. The patient after taking medications for about two days reported excessive sleep and consequently stopped divalproex. He however, continued olanzapine and lorazepam in the dose prescribed. However, after about two days of 10 mg olanzapine, the family members noticed that the patient would get up in the night at around 2.00 a.m. He would then start roaming about in the house, would not recognize the family

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members, would start saying that he should go to work and would not recognize the time and place also. He would urinate at wrong places. On occasions, he would start picking up the bed sheets or the pillow covers saying that ants were sitting there, though the family members would not see anything there. He would on occasions stand on the table and start speaking to self or would try to reach for some invisible objects in the air. He would then go to sleep at around 5:00 a.m. in the morning and would get up at 9:00 a.m. He would not recollect the happenings of the night time. His day time activities however, started to decrease. These episodes continued regularly every night. A diagnosis of delirium was made and he was investigated. Hematological investigations, including serum electrolytes, liver function tests were normal except for increased blood Urea-54 mg% (15-45 mg% normal range) and increased S. Creatinine-2 mg% (0.5-1.0 mg% normal range). Computed tomography scan head was normal. Lorazepam was increased to 4 mg per day and olanzapine was continued in the same dose. The manic symptoms decreased in intensity. The family members then stopped olanzapine on their own. Two days after this, the family members reported improvement in delirious symptoms. He would now take only lorazepam 4 mg per day and would have improvement in manic as well as the abnormal behavior suggestive of delirium. Hematological investigations done after the improvement in abnormal behavioral episodes of delirium revealed similar findings.

Discussion

Our case was diagnosed as a case of delirium as per ICD-10 criteria.[8] The history given revealed features like fluctuating consciousness, impaired recent memory, disorientation, perceptual disturbances in the from of visual hallucinations, disturbed sleep wake cycle, picking up movements, and sun downing phenomenon. An increase in dose upto 10 mg per day of olanzapine precipitated agitated delirium in our patient. The Naranjo probability scale[9] indicates that olanzapine was the probable cause of delirium. Though our patient had increased blood urea and serum creatinine, but this persisted even after resolution of delirium. Delirium in our case responded to stopping of olanzapine. Patient was not on other medications other than lorazepam which was being continued much before the onset of delirium and was continuing even after resolution of delirium.

There was no other associated medical condition at the time of delirium. However, one of the limitations with our report is the outpatient follow up of the patient.

Traditionally, delirium has been treated with typical antipsychotics, particularly haloperidol. However, with the increasing use of atypical antipsychotics, there have been several studies describing the successful use of these agents especially olanzapine, for the treatment of delirium.[3,4,10,11]

Conversely, there have been few reports of delirium associated with olanzapine. Most of these have been in patients with other risk factors for delirium like combination with lithium, intoxication with olanzapine, in patient with metastatic lung cancer with intractable nausea and in a case with mental retardation, seizure disorder, and acute cellulites.[5,6,12,13]

Like our case, there has been report of a 76-year-old man, also a bipolar disorder patient who developed olanzapine related delirium.[7] However, patient was on higher dose (20-30 mg) of olanzapine per day along with other psychotropic medications and had also developed systemic infection.

The anticholinergic property of olanzapine might have contributed to the pathophysiology of delirium induced by olanzapine.[14] Old age and impaired renal function tests could have predisposed to the development of delirium.

To conclude, one must be cautious while using olanzapine even in low doses, in elderly patients. Further research is warranted to identify the risk factors associated with olanzapine associated delirium.

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