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CASE REPORT

# Quetiapine-associated and dose-related hypomania in a woman with schizophrenia

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## INTRODUCTION

Antidepressant, induced mania has been well documented [1]. Although atypical antipsychotics are used in the treatment of mania, these drugs can cause mania and manic like states [4,8]. Quetiapine, an atypical antipsychotic recently marketed for the treatment of schizophrenia in our country, is characterized by a greater affinity to 5-$HT_2$ receptors, compared to $D_2$ receptors [9].

In the present article, we report a case who developed hypomanic state precipitated by quetiapine use.

## CLINICAL PICTURE

Mrs. Y, female, 33-year-old, married, first school graduate, housewife.

### History of complaints

Mrs. Y has been followed by Firat University School of Medicine, Department of Psychiatry, for 3 years because of her diagnosis of schizophrenia, paranoid subtype. She was admitted to our clinic three times in this period with schizophrenic exacerbations characterized by paranoid delusions, reference thoughts, blunted affect and auditory hallucinations. The patient was treated with a variety of antipsychotics such as haloperidol, chlorpromazine and fluphenazine. Mrs. Y was last discharged from the hospital 2 months ago with the combination of haloperidol 5 mg/d and chlorpromazine 75 mg/d. Chlorpromazine was added to haloperidol to manage psychomotor agitation observed occasionally. Additionally, lithium, 600 mg/d, was started for her cluster headache after having consulted the Department of Neurology. The dose of lithium was increased from 600 to 900 mg/d by the Department of Neurology on the 18th day after discharge. Within 3 weeks, she came to our clinic because of the side effects of the last treatment regimen. She had polyuria, polydypsia, weakness, excessive nausea and vomitting. She was considered to describe the symptoms of possible lithium intoxication. Thus, she was hospitalized and the last treatment regimen was discontinued. The level of lithium was 1.7 mEq/l. The patient was treated conservatively for 3 d. Afterwards, quetiapine (50 mg/d) was started and titrated to 200 mg b.i.d. within 4 d. Within 2 weeks, she developed a hypomanic state characterized by delusions of grandeur, pressured speech, lack of sleep, irritability, aggressiveness, euphoria and flight of ideas. Therefore, quetiapine was decreased to 100 mg/d gradually. Then, hypomanic symptoms returned completely within 5 d. The combination of

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quetiapine100 mg/d, haloperidol 5 mg/d and diazepam 5 mg/d was initiated for maintenance treatment regimen.

### Personal and family history

A semi-structured interview was performed to provide enough information about Mrs. Y and her family's physical and psychiatric disorder. She had a history of head injury from when she was 12 years old. She has been followed in our clinic for schizophrenia. She had no history of substance abuse. There was no history of family psychiatric disorder.

### Mental state examination

Interest and care of oneself was not enough. Mr. S' speech was detailed and of a higher tone. She had anxious and irritable mood. There was no disorientation of time, place and persons. In the examination of perception, mood related auditory hallucination was determined. In addition, she exhibited distractibility, psychomotor acceleration, delusions of grandeur, pressured speech, lack of sleep, irritability, aggressiveness, euphoria and flight of ideas.

## DISCUSSION

Mrs. Y meets the criteria for a hypomanic episode according to DSM-IV [2]. We suggest the present case to be quetiapine use induced dose related hypomanic state because of the following reasons: (1) appearance of the symptoms in association with starting quetiapine and increasing dosages, (2) disappearance of these symptoms with decreasing dosages, and (3) no history of personal and family affective disorder.

Mania related to atypical antipsychotics (i.e. risperidone and olanzapine) has been reported [4,5,8]. Additionally, in a study carried out by Dwight et al. [5], an increase in Young Mania Rating Scale scores was observed after initiation of a risperidone regimen in all six patients with schizoaffective disorder, bipolar type. We could find only one case who developed hypomanic symptoms associated with quetiapine use in the literature [3]. Manic and hypomanic symptoms related to atypical antipsychotics have been attributed to their potent antagonism to 5-HT receptors, and this antagonism has been reported to be able to switch the antidepressant activity and consequently manic state [7]. Moreover, it has been reported that since serotonin acts as an inhibitor of dopamine and norepinephrine, the antagonism to 5-HT receptors may result in the suppression of serotonin and this neurotransmitter disequilibrium may cause a manic episode [6].

The patient's lithium level was determined to be at a toxic limit. Therefore, this level was considered to be able to be associated with a possible suicide attempt, but Mrs. Y and her family did not accept this. Hypomanic state occurring during quetiapine use may be considered to switch from the diagnosis of schizophrenia to schizoaffective disorder. However, the mood symptoms have not been present for a substantial portion of the total duration of the active and residual periods of Mrs. Y's illness.

In conclusion, the present findings suggest that quetiapine can induce a hypomanic and manic state in some cases. Therefore, clinicians must be aware of probable hypomanic and manic states when using quetiapine.

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