

# Case Report

## Cabergoline-induced Mania in a Patient of Pituitary Microadenoma

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### ABSTRACT

Cabergoline, a dopamine agonist agent, is commonly used in the treatment of hyperprolactinemia, Parkinson's disease, restless leg syndrome, and antipsychotic-induced prolactin elevation. It is generally well tolerated as compared to other dopamine agonist agents due to its more selective D2 receptor agonistic effect. We present a case of a 25-year-old female who developed manic episode, following the use of cabergoline for treatment of pituitary microadenoma. We suggest that physicians should carefully screen patients before initiating cabergoline therapy and at-risk patients may benefit from more frequent monitoring and cessation of therapy at the earliest safe juncture.

**Key words:** Cabergoline, mania, pituitary microadenoma

### INTRODUCTION

Cabergoline, a dopamine agonist agent, is commonly used in the treatment of hyperprolactinemia, Parkinson's disease, restless leg syndrome, and antipsychotic-induced prolactin elevation. It is generally well tolerated as compared to other dopamine agonist agents due to its more selective D2 receptor agonistic effect.<sup>[1]</sup> However, it can cause certain psychiatric side effects including psychosis, depression, impulse control disorders, and nightmares. A few cases of cabergoline-induced mania are reported previously.<sup>[2,3]</sup> We present a case of a 25-year-old female who developed manic episode, following the use of cabergoline for treatment of pituitary microadenoma.

### CASE REPORT

A 25-year-old female without the past and family history of psychiatric and neurological illness reported to the psychiatry outpatient department with complaints of over-talkativeness, big talks, irritability, over-familiarity, decreased sleep, and increased physical activity for the last 14 days. There was no history of any substance use. No ongoing stressor could be elicited. On evaluation, it was found that the patient was taking tablet cabergoline 0.5 mg twice weekly from the last 6 months. She had complaints of amenorrhea, breast pain, weight gain from the last 1 year, for which she consulted an

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endocrinologist. Magnetic resonance imaging (MRI) of the brain revealed small subcentimetric lesion in the left half of pituitary gland, suggestive of microadenoma. Her serum prolactin level was 60.32 ng/ml (normal range: 4.79–23.3 ng/ml). She was started on tablet cabergoline 0.5 mg twice weekly. With this treatment, her amenorrhea and breast pain improved. She was regularly consulting the endocrinologist and continuing the same medication.

A detailed medical evaluation, including a neurological examination, revealed no significant findings. Hematological and biochemical indices were within normal limits, including serum prolactin level (21.3 ng/ml). On mental status examination, euphoric affect and grandiose ideas and decreased need for sleep were elicited. Young Mania Rating Scale (YMRS) score of the patient was 26. Possibility of manic episode induced by cabergoline was entertained. Cabergoline was stopped and the patient was started on lithium carbonate 800 mg per day along with lorazepam 1 mg per day. On consultation with an endocrinologist, MRI of the brain was done, and no abnormality was detected. As the patient was asymptomatic and her serum prolactin level was within normal limit, no further endocrine treatment was advised by the endocrinologist. After 10 days of treatment, her manic symptoms improved significantly. YMRS score of the patient decreased to 10. She was continued only on 800 mg lithium carbonate per day. On evaluation after 4 weeks of treatment, her manic symptoms have resolved completely and no further endocrinological symptoms reappeared during this period. Dose of lithium carbonate was tapered to 600 mg per day with the goal of ultimately discontinuing it.

## DISCUSSION

In our patient, the strength of association between cabergoline use and the emergence of manic symptoms is strengthened by factors such as absence of a past history, family history of any mood disorder, or history of substance use, fast remission of manic symptoms with the stoppage of the cabergoline, and use of lithium carbonate. Previous literature suggests that the duration of dopamine agonist therapy before onset of manic

symptoms ranged from days to years.<sup>[2]</sup> This supports the association of cabergoline use and the emergence of manic symptoms in our patient who developed mania after a period of 6 months of treatment. Hence, a probable causal link between cabergoline use and manic symptoms can be established by Naranjo adverse drug reaction probability criteria.<sup>[4]</sup>

D2 receptor agonistic effect of cabergoline is responsible for manic episode. Higher starting dose (0.5 mg per day) of cabergoline is associated with risk of psychosis.<sup>[5]</sup> However, no literature is available regarding relation between dose of cabergoline and emergence of manic symptoms.

The patients with factors for vulnerability to mania such as past history and family history of mood disorder and substance abuse may be more susceptible to emergence of manic episode with the use of cabergoline. We suggest that physicians should carefully screen patients before initiating cabergoline therapy and at-risk patients may benefit from more frequent monitoring and cessation of therapy at the earliest safe juncture.

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## Conflicts of interest

There are no conflicts of interest.

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