

# Bizarre Delusions Follow Dopaminergic Therapy in Parkinson Disease: Challenge in Diagnosis and Treatment

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## Dear Editor

One of the most challenges and worries in treatment of patients with primary Parkinsonism is induction of some psychiatric symptoms or disorders like mania, hypomania, psychosis, sleep deprivation and anxiety [1].

Psychotic symptoms are common in Parkinson disease (Nearly 20-40%). Of course, often they are attributed to dopaminergic therapy. But underlying cognitive impairment play a noticeable role [2, 3].

In a study on 88 patients with primary Parkinsonism without psychotic features, 50% had experienced vivid dreams, hallucinations and illusions as side effects of long treatment with levodopa. Often, the hallucinations were as concurrent or preexistent vivid dream phenomenon [4].

Levodopa therapy may cause sleep disturbance and then induce other psychiatric symptoms [5].

Also, Amantadine toxicity may induce psychiatric symptoms and hallucination [6].

The incidence of psychiatric drug side effects is nearly 20% and hallucinations and delusions happen 4% more with dementia comorbidity and cognitive impairment, increasing age and use of higher dose of levodopa. It is assumed that the main precipitant of psychotic phenomena in Parkinson's disease is dopaminergic excess secondary to the treatment. Also, cognitive impairment with Parkinson's disease, associated with senility and onset in older age, may prone to psychotic like states [7].

A 57 year-old man with high socioeconomic status was referred to a psychiatrist. He was a patient with idiopathic Parkinsonism that used tablet Levodopa 250 mg/TDS and Capsule Amantadine 100 mg/BID from 4 years ago. From one month ago, He believes that a gelatin substance is excreted from all cell bodies and then it convert to hair. These hairs grow and long. He mentioned that my body produces an electrical stream if I expose and rub my hand together. He believes that he is a melancholic patient.

The other symptoms include: Insomnia, depressed mood, weakness, anxiety, agitation, social withdrawn, constipation. The routine lab tests and imaging were normal.

The psychiatrist prescribed him Tablet Trazodone 50 mg at night, Tranquiline 25 mg at night and then Olanzapine 5 mg at night. He declined dosage of Levodopa. Finally, he was improved after 2 weeks. These symptoms may be correlated to the duration of treatment with levodopa.

The patient's mental status has a major role in susceptibility and prone to psychosis. The patients without medications experience delusions or hallucinations, rarely. Some patients with dopaminergic therapy experience mild psychotic symptoms include: visual illusions, benign visual hallucinations, sense of presence and fleeting visual imagery in the peripheral visual field. Our patient experienced some psychiatric symptoms. This condition has a differential diagnosis with delirium, organic brain syndromes, and secondary mania. Hence, delusions were systematized shaken, continuous, therefore this condition isn't a delirious state and we can't attribute it to anticholinergic activity of Amantadine. It is in concordance with an acute psychotic disorder. Finally, we suggest to physicians that interested in the treatment of patients with Parkinsonism, should consider the probability of potential secondary psychiatric disorders follow dopaminergic drugs medications and Amantadine and prescribe these drugs with minimum dosage.

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## Authors' Contribution

SMY designed the study and RB and PY did drafting, revise and submission.

## Conflict of Interest

None

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