

## MANIA IN PARKINSON'S DISEASE WITH TREATMENT EMERGENT DYSKINESIA : A CASE REPORT

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### ABSTRACT

*A case of parkinson's disease starting 7 yrs. ago in 1993 with 2 episodes of mania is presented. The 1st episode (1993) was of 1-½ months duration, when early parkinsons symptoms had already set in. This was treated with anti-psychotic medications for a month, the picture was complicated with stroke and post-stroke sequelae for 5-6 months, where anti-psychotics were continued. He developed dyskinesia, when antipsychotics were stopped. The patient was on selegiline for Parkinson's disease for 2 years and off all medications subsequently. The 2nd episode of mania occurred after 7 years in January 2000. This episode of mania lasting for 2 months duration was treated with divalproate sodium and l-dopa for Parkinson's. Treatment emergent dyskinesia had to be treated with Clozapine. This unusual combination of bipolar-I disorder (2 episodes of mania) with Parkinson's disease and treatment emergent dyskinesia is presented with management strategy.*

*Key words : Bipolar-I disorder, l-dopa, sodium valproate*

In Parkinson's disease, where mainly nigrostriatal tract dopamine deficiency is present, mesolimbic and mesocortical pathways are also impaired which may be related to some of the psychiatric complications. Mjones (1949) studied 262 cases revealing mental symptoms in 40% out of which organic (memory and intellectual impairment) predominated over reactive (depression, irritability etc.).

In affective disorders depression is well established with Parkinsonism. However Mindham (1970) found no evidence of mania in a retrospective study of 89 patients. Parkinson's disease with mania in two patients has been seen in only one study of late onset mania with neurological comorbidities by Shulman and Satlin (1992). Indian studies in this regard are lacking.

In drug induced psychotic states (levo-dopa) visual hallucinations is the most common diagnosis in 6-40% patients. Goodwin (1971) found an incidence of hypomania in 1.5% of the 908 patients treated with levo-dopa. Mood disorders due to a general medical condition

poses problems due to multiple coexistent medical disorders and who are taking concomitant medications.

The case presented highlights the occurrence of 2 episodes of mania in a patient of Parkinson's, with treatment emergent dyskinesia occurring both times, requiring a consultation liaison for the management.

### CASE REPORT

K.S. a 53 year old non-alcoholic, non-smoker, married male, a known case of non-insulin dependent diabetes mellitus, with a family history suggestive of a probable late onset mania in father, was brought in our OPD with features of singing songs, excessive talking, hyper-religiosity, decreased need for sleep with increased appetite of one month duration. Also tremors, rigidity, decreased mobility were present. This was the second episode of altered behaviour in Jan 2000.

The first episode of altered behaviour was

in Dec.1993. Two months before this altered behaviour, the patient had shown evidence of early Parkinson's features in the form of right sided tremors. However the patient had not taken any medications for the same. The first episode had stressors like father's death with a resultant will which was unsatisfactory along with monetary loss and maternal ill-health.

During this manic episode he was talking excessively, appeared happy, with decreased sleep, increased appetite, increased goal directed activity, and over familiarity. This had lasted for 1 & 1/2 months when patient was treated with anti-psychotic medications. One month later, he developed a cerebrovascular accident with right hemiplegia. It took 6 months for recovery during which he continued receiving haloperidol liquid for behavioural symptoms of restlessness and agitation.

In August 1994, the patient developed severe tardive dyskinesias for which all anti-psychotic drugs were stopped as no behavioural or mood symptoms were present then. The patient was started on anti-parkinsonian medication-Selegiline. For subsequent two years patient was maintained to 90% pre-morbid functioning (10% physical complaints and stiffness). The patient discontinued all medications for three years from 1996-99 including the anti-parkinsonian medications.

The parkinsonian features increased in severity in Sept.1999 when upon visiting a neurologist patient was started on a combination of l-dopa +c-dopa. The patient developed severe oral dyskinesias. After four months of treatment the patient was advised to discontinue the same because of the severity of the dyskinesias. About 15 days later, the current (2nd) episode of manic symptoms with severe Parkinson's disease started simultaneously.

The patient was un - manageable at home and so brought to hospital and admitted as an inpatient for a month. On physical examination, parkinsonian features were found and the severity grade on Hoehn and Yahr's scale was grade IV/V indicating a bilateral involvement with postural instability and patient requiring substantial help.

The mental state on first day had revealed punning, rhyming and singing songs with disinhibition in talks, mood as elated, affect expansive in range but labile, grandiose delusions of ability, and impaired social judgement, but did not show any perceptual disturbances or any cognitive deficits. Insight was absent.

A diagnosis of bipolar-I disorder 2<sup>nd</sup> episode mania was made on DSM-IV multiaxial system, along with Idiopathic Parkinson's disease.

Routine investigations (including blood sugars) before and after treatment were within normal range. A MRI brain, 2-D echo, ECG, were normal.

In view of mania and parkinson's disease the patient was started on mood stabiliser divalproate-sodium (200 mg), which was subsequently increased (1000 mg) for his behavioural control. The patient was also started on l-dopa+carbidopa (100 mg) increased further (500 mg) for his parkinsons. The patient developed severe l-dopa induced tongue protrusive dyskinesias, for which clozapine (25 mg) was added as advised by the neurologist. The dyskinesias responded to clozapine.

The parkinsonian symptoms decreased in a week's period and the drug induced dyskinesias decreased after clozapine was added from a grade of 6/6 to 1/6. The patient being a known case of non-insulin dependent diabetes, the oral hypoglycemic agent, (gliipizide+metformin), was continued on the same doses.

The patient was monitored using the following :

Daily nurses observation scale for in patient evaluation (NOSIE) showed progressive improvement. The patient did not have any cognitive deficits as mini mental state examination scores remained at 29/30 during his hospital stay. Weekly abnormal involuntary movement scale showed decreased score and extra-pyramidal system rating scale decreased from 43/48 to 11/48. Hoehn and Yahr's scale for Parkinsons disease was 4/5 on admission, it improved to 1/5.

At the time of discharge, which was a month later, the patient was still cheerful, not elated, with

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no features of delusions of grandiose, and a grade IV insight. The manic symptoms took a month to improve with 80-90% improvement. His Young's Mania Rating Scale showed a fall from 53/60 to 6/60. The parkinsons status showed improvement. There was no evidence of dyskinesias.

To conclude the 1st episode of mania was treated with haloperidol and parkinson's with selegiline. However the emergence of dyskinesias resulted in withdrawal of haloperidol with continuation of selegiline for parkinson's. The 2nd episode of mania had to be treated with sodium - valproate to avoid dyskinesia however the use of l-dopa for parkinson's with emergent dyskinesias necessitated the use of clozapine with a close consultation liaison management with physician and neurologist.

### DISCUSSION

Parkinsons disease which is a low dopaminergic state and mania which is a high dopaminergic state is a very unusual combination although impaired serotonergic mechanism are also known to play a role. In the case presented above the patient had features of parkinson's disease with 2 episodes of mania with complete remission of manic symptoms in between. Another emergent feature was l-dopa induced dyskinesias. Clozapine in low doses was started by the neurologist for dyskinesias.

In this case because of the severity of parkinsons disease we clearly tried to avoid routine anti-psychotic drugs and we opted for mood stabiliser divalproate, which showed very good results. In recent studies atypical antipsychotics like clozapine, olanzapine, and quetiapine have shown good results drug in (l-dopa) induced psychosis.

In one case report, by Vaidya & Choudhary (1988), a successful treatment of a known case of bipolar disorder with mania with parkinson's disease developing later, was treated with electro-convulsive treatment with good results.

The authors have mentioned that ECT's are useful when mania develops before parkinsons disease rather than after.

Secondary mania in both neurologic and geriatric literature exists. Whether this case befitted such a secondary mania considering the multiple comorbid medical illnesses like stroke and diabetes. Nissenbaum and Quinn (1987) have described a "On" and "Off" phenomenon known with l-dopa treatment, where by, hyperkinesias and bradykinesias occur respectively which is a problem in the management. Although the management of mood elevation caused by anti-parkinsonian drugs is described, there is dearth of literature on the management of mania in the case of parkinsons disease.

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