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A Case of Moderate Clinical Depression in Early Onset Parkinson's Disease

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CLINICAL HISTORY

A 35-year-old female, married and having two children, studied till 7th Std, a homemaker from a lower-middle socio-economic section, Referred from Department of Neurology to Department of Psychiatry, JSS Hospital with complaints of low backache, neck pain, sadness in the past 3-4 weeks, more so in last 15 days. She was normal 15 days back, when she developed pain in the neck, dragging sensation in lower limbs, unable to do household chores. She reported sadness for the past 15 days, decreased interaction with family, crying spells, disturbed sleep, and decreased interest in activities along with death wishes occasionally on and off.

PAST HISTORY

The patient had been diagnosed with Parkinson's Disease at age 32 years and was on regular medication. She also had migraines and was taking medications only during migraine episodes. No h/o trauma, syncope, falls weakness, and paralysis. No menstrual abnormalities, no history of hypertension, diabetes mellitus, thyroid disorder. No significant psychiatric history in the family.

EXAMINATION AND INVESTIGATIONS

VITALS**: PR-80bpm BP-130/80mm of Hg RR-15cpm General physical examination: No pallor, Icterus, cyanosis, clubbing, edema, and lymphadenopathy. Mood – Subjectively she felt low.**

Objective– **Depressed General appearance and behavior- well kept and groomed. Speech- normal Memory- normal Mood- depressed Mild Resting Tremors were noticed in both hands The face was with less expression. Small stepping gait**

CNS**: Higher mental functions- Intact Cranial nerves- Intact Sensory system- Normal Motor system- Normal Cerebellar functions- normal Reflexes- normal No paucity in range of motion, No rigidity. CVS- S1S2+, No murmurs**

RS– **B/l Air entry + , B/l NVBS+ , No added sounds Per Abdomen: Soft, Non-tender, No organomegaly**

CT BRAIN– PLAIN NORMAL STUDY

THYROID PROFILE

TSH-4.8

T3 – 110ng/dl

T4- 9 mcg/dl

Fasting Blood Sugar-90 mg/dl

Post-Prandial Blood Sugar – 130mg/dl

HbA1c- 5.8

DOI: –

Complete Blood Count – Normal blood picture

PATIENT ASSESSMENT:

Patient health questionnaire (PHQ-9) – 07/27

HAMILTON DEPRESSION RATING SCALE (HAM-D)

SCORE- 09

DIAGNOSIS

The patient was diagnosed with Moderate Depression (as per WHO ICD-10 Criteria) with Parkinson's Disease

DISCUSSION

Parkinson's Disease and Psychiatry conditions are closely associated. Parkinson's disease (PD) is the second most common neurodegenerative disease worldwide, affecting 1-2% of the population with the usual age of onset being above 65 years[1]. These patients mainly present with motor symptoms like bradykinesia, resting tremors, and rigidity. However, 5-10% of these cases present with symptoms at an early age (below 40 years) and is known as EARLY ONSET PARKINSON DISEASE(EOPD). Mutation in the Parkin gene is reported to be a major cause of EOPD with an autosomal recessive inheritance pattern[2].

The etiology of depression in PD is complicated and may result from changed serotonin (5-HT) brain chemistry that is separate from the central dopaminergic deficiency associated with PD motor symptoms. Damage to Dopaminergic, serotonergic, noradrenergic, and cholinergic systems contribute to cognitive and behavioral dysfunctions in these patients[3].

The incidence of depression in EOPD is greater than that in the late-onset variant. EOPD significantly reduces the patients' quality of life and it's also one of the conditions which go undiagnosed or undertreated.

The interaction between depression and PD is bidirectional i.e PD increases the risk for depression and vice versa[4].

When treating a patient with both PD and Depression, it's observed that depressed patients take a significantly higher dose of levodopa for a longer duration, and also have a significantly higher depression score. Treating the patients with levodopa indirectly interferes with serotonergic function in the CNS by its competition for uptake, storage, and metabolism of serotonin. Treatment with antidepressants reverses the effect of levodopa on serotonin (5-hydroxytryptamine; 5-HT). Some patients report exacerbated depressive episodes on taking levodopa , in conditions where antiparkinsonian efficacy is less. A few patients with previous history of depressive episodes have reported attempting suicide after taking Levodopa[5][6].

Patients with early-onset PD are particularly vulnerable to depression as a reaction to the illness's detrimental effect on their careers, financial security, and quality of life during their most productive years. The early onset of PD causes 'premature social aging', whereby the level of social handicap is inconsistent with the patient's age and may further contribute to the risk factors for depression[7].

Antidepressants like Amitriptyline(TCA), SSRI can be used to treat the depressive symptoms associated with PD[2].

MESSAGE: Early identification of Depression in the Non-motor symptom complex of Parkinson's disease, especially in EOPD, and appropriate diagnosis and treatment of the associated condition would go a long way in reducing the social, mental, physical, and economic burden on the patient[4].

DOI: –

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