Rare disease

Schizophrenia and Parkinson's disease: challenges in management

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Summary

A 57-year-old gentleman was admitted for relapse of psychotic symptoms. He had prior diagnosis of schizophrenia and Parkinson's disease. His psychotropic medications were adjusted but his neurological symptoms worsened, mainly dysphagia. His speech and mobility also posed significant problem. Neurology department was contacted for joint management. In the event of resolution of psychotic symptoms, he was transferred to the neurology department for further management. His medication for Parkinson's disease was reviewed; a percutaneous endoscopic gastrostomy tube was inserted in stomach for feeding as dysphagia did not improve. He was transferred back to psychiatry unit for further adjustment in psychotropic medication in order to see a possible improvement in dysphagia. Minor adjustment was done in this regard in view of his mental health stability. Change of medication was not possible for the possible side effects and patient's compliance issue. He was discharged with adequate plans; follow-up arrangement and suggestions for further management.

BACKGROUND

It is important in order to gain insight into some management issues that are associated with these disorders. The reason for the write up is for sharing and exchanging some practical clinical information.

CASE PRESENTATION

A 57-year-old gentleman with a long history of Parkinson's disease and previous diagnosis of schizophrenia in remission with medication, became paranoid over a week, believed that he was being poisoned, withdrawn progressively, expressed unknown fears of being persecuted and admitted to auditory hallucination. He became progressively confused over 2 days, stopped communication, started staring on walls to the extent of becoming somewhat unresponsive to external stimuli. His wife became quite concerned at this point and called emergency numbers. He was transferred by an ambulance to the local general hospital. The medical emergency team assessed him, did some investigations, kept him under observation over 24 h and finally declared him medically clear and transferred to psychiatric services. His wife narrated the situation to the psychiatric resident on call who made relevant notes. At this point, the patient was communicative to some extent. He was able to give some background information with the help of his wife. It was transpired that he had a long history of aforementioned disorders. He was first admitted in 1991 and since then was managed by his family doctor on fluanxol intramuscular depot injection every 2 weeks and risperidone 2.5 mg per day. Ironically, there was no psychiatric follow-up made for him. He was in touch with a neurologist for his Parkinsonism and was managed on medications for the same. Risperidone was increased to 4 mg subsequent to his admission with good effect. He had a remote family history of mental illness as one of his cousins's suffered from some disorder that he was not sure about. In his personal history, he was born in

a rural area as the only child of his parents. His childhood remained uneventful. He had grade ten level of school education, married for 10 years with no children but a very supportive wife. He stopped working a few years ago because of increasing disability secondary to Parkinsonism. There was no history of alcohol or drug abuse. Medically, he suffered from Parkinson's disease, herniated disc, diabetes mellitus, hypertension and spinal stenosis. He reported allergy to lorazepam. The mental status examination revealed: A 57-year-old gentleman who looked older than his stated age, had marked tremors, walked with a support, mood was moderately depressed, he rated it to 3–4 from a 0–10 scale where 0 was rated worst and 10 the best. He denied any suicidal or homicidal ideation. His speech was markedly slow. He admitted to be having paranoid thoughts and auditory hallucination (voices telling him to avoid foods). His cognitive testing remained inconclusive. Insight and judgement were impaired. His full mental status examination was not possible in view of his physical condition. He reported marked worsening of Parkinson's symptoms, especially worsening dysphagia that prevented him getting adequate nutrition. The initial assessment was indicative of relapse of schizophrenia and worsening Parkinsonism. Upon admission to psychiatric unit, a routine blood work and urinalysis along with EKG and CT scan. All were normal except a barium swallow test which yielded abnormality. During the stay in hospital, his psychiatric symptoms resolved quickly but the problem with swallowing became worse. He was referred to neurology services for further management. He was transferred to the neurology department where further investigations and treatment was conducted. A percutaneous endoscopic gastrostomy (PEG)-tube was inserted in stomach in view of swallowing difficulty. His medications were adjusted and he was transferred back to psychiatry unit for adjustment in psychotropic medications with a notion that this might improve dysphagia. His Risperidone was reduced to 1.5

mg from 2.5 mg and Fluanxol depot was continued. It was deemed unnecessary to taper psychotropic medication at this stage in view of remission in psychiatric symptoms.

INVESTIGATIONS

- ▶ Complete blood picture: normal
- ▶ Uri analysis: normal
- ▶ Blood, urea and nitrogen: normal
- ▶ Serum electrolytes: normal
- ▶ Liver function test: normal
- ▶ Renal function test: normal
- ▶ EKG: normal
- ▶ CT scan: normal
- ▶ Barium swallow: abnormal

TREATMENT

- ▶ Risperidone 1.5 mg HS through PEG
- ▶ Sinemet 100/25 mg PEG six times per day
- ▶ Procyclidine 5 mg PEG twice daily
- ▶ Clonazepam 0.5 mg PEG twice daily
- ▶ Baclofen 10 mg PEG 8 hourly
- ▶ Metformin 500 mg PEG twice daily
- ▶ Fluanxol 20 mg intramuscularly 2-weekly
- ▶ Colace PEG 100 mg twice daily
- ▶ Restoril 30 mg PEG HS

Clozapine and seroquel were possible choices in this condition but were not commenced upon as seroquel in the past caused severe dizziness and the patient was not agreeable to start clozapine because of the regular blood work and monitoring issues.

OUTCOME AND FOLLOW-UP

In view of his restricted mobility and dysphagia, special home support arrangements were made through the social worker, neurology appointment for outpatient follow-up was arranged and a regular appointment with psychiatrist was booked. Regular visit by community psychiatric nurse was arranged. The patient was then discharged home care of his wife with all support system in place. At the time of his discharge, there was a marked improvement in tremors and mobility. His mental status examination was normal at the time of discharge.

DISCUSSION

This case is a rare example of co-existence of both disorders. The problem is tricky as the drug treatment of both disorders has opposing effects on the neurotransmitter dopamine. Several reports¹ are being quoted that described the co-existence of idiopathic Parkinson's disease and schizophrenia. In one such case, single-photon emission CT using dopamine transporter (DAT) tracer demonstrated a significant bilateral decrease of striatal DAT. The case

demonstrates two in vivo methods confirming idiopathic Parkinson's disease in a patient with chronic schizophrenia by quantifying (1)-reduced striate dopaminergic innervation and (2)-increased nigral signal extension. It supports the notion that nigrostriatal and mesolimbic dopaminergic pathways largely function independently.¹ Clozapine has been studied in random trials and demonstrated as the most consistently effective treatment for psychosis in Parkinson's disease.² Remoxipride was found useful in a case report with coexisting schizophrenia and Parkinson's disease.³ A case report⁴ with the similar diagnosis, clozapine 62.5 mg per day was switched to olanzapine because of the patient's refusal to take clozapine; he also received L-Dopa 400 mg per day and pramipexole 4 mg/day to treat Parkinsonism. He responded well to treatment but later developed on/off fluctuations and peak-dose dyskinesias, and then treatment with amantadine 200 mg per day was initiated. The patient then developed severe delusions. Pramipexole and amantadine were stopped and quetiapine 125 mg/day was added to the drug regimen which led to marked improvement of the mental state. In our case, we intend to follow-up with him periodically in order to assess his mental health stability and maintain the liaison with the neurology department.

Learning points

- ▶ Rare combination of schizophrenia with Parkinson's disease do pose problem with clinical management.
- ▶ As the psychotropics decrease dopamine and medication of Parkinson's disease increases the availability of dopamine, there is a risk of potential deterioration in symptoms of either illness.
- ▶ Joint treatment by psychiatry and neurology is of importance in dealing with such cases.
- ▶ There is an identified need for supportive treatment for the disability associated with Parkinson's diseases.

Competing interests None.

Patient consent Obtained.

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