

Geriatric Psychosis Associated With Stroke And Parkinsons Disease

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Abstract

This is the case of a 71-year-old Caucasian Male, past medical history of uncontrolled medication non-adherent Hypertension and Hyperlipidemia, family history of Parkinson's disease in his sister, with a past psychiatric history of uncontrolled medication nonadherent Bipolar Disorder diagnosed in 2011, history of multiple past inpatient psychiatric hospitalizations, presenting with several months of gradually worsening paranoid delusions and manic behaviors.

Introduction

This case illustrates the psychiatric association of neurologic comorbidities such as Parkinson's Disease that can manifest or exacerbate underlying psychosis in primary psychiatric disorders such as Bipolar Disorder in the absence of being medication-induced or otherwise undifferentiated from functionally independent psychiatric disorders [1, 2, 3]. This case highlights the importance of assessing and evaluating psychiatric patients neurologically in order to identify such neurologic comorbidities as well as to avoid missing any acute neurologic deficits indicative of an acute stroke as was seen in this patient case [4, 5, 6, 7].

Case Presentation

After being diagnosed with Bipolar Disorder in 2011, patient has had an extensive history of medication non-adherence, which ultimately led to multiple inpatient psychiatric admissions for psychiatric decompensation in the form of agitated episodes, impulsive spending, and sleepless nights with increased activity and grandiosity. After stabilization during his inpatient psychiatric admissions, the patient's manic symptoms resolve, until he starts to discontinue his medications, at which point the cycle repeats itself. The patient had been trialed on many different mood stabilizers and antipsychotics, but due to his poor insight and medication non-adherence, he was not on any trialed medications long enough to evaluate for efficacy. Eventually, the patient stopped following up with his outpatient psychiatric providers.

During this episode of psychiatric decompensation, the patient was initially evaluated in the psychiatric emergency room. Vital signs BP 152/99, HR 89, RR 19, Pulse ox 95% on room air, Temp 97.7 F. CBC, CMP, UA were negative for any acute abnormalities, urine drug

screen was positive for benzodiazepines. Upon initial psychiatric screening, the patient was asked what led up to him coming into the hospital and he stated, "I feel bad, it's hard for my wife and son to have me home, the house has a problem. There is something unsafe about the home, and I am bothered that I could not be aware of what I am doing." Upon further questioning patient stated, "I was very excited, spending \$60,000 in a very short time frame but I think other people have been using my credit card." He stated that he had not been sleeping at night for several days, and he had been going to the store in the middle of the night. "I do things too quickly and then realize it afterward." Patient was asked what he was spending money on, and he stated, "on food and electric bicycles, I have several, 5-7 within 2 years." Patients' speech was noted to be dysarthric and tangential, "I am not a good architect, and I made a mistake. I thought the pipes and heat system could catch fire." He then stated that his family wanted him to see a therapist and were in the process of looking for a therapist. He stated he had been "trapped in the house and being watched by the local neighbors. They want to see if everything is safe, they don't like us much." He stated he had not been talking to his wife and son as much, and that "I just want to be better." He denied being linked to any current treatment or outpatient psychiatric provider, and he stated that he stopped taking medications about 2 years ago because "it was not sustainable and I felt lousy, plus it was too expensive." The patient denied suicidal or homicidal ideation plan, intent, or means. He denied feeling angry or violent. He stated, "I just do things too quickly, I don't take the time to think." The patient was observed to have disorganized dysarthric speech during the assessment. He would jump from one topic to another and would answer questions with long rambling answers with irrelevant

details at times. He presented as paranoid and delusional with the belief his house is in danger and the neighbors are stealing from him and watching the home. Patient also expressed delusional thoughts about "I don't have any more blood, it's all food in my body, in my veins".

Collateral information was obtained from the patient's wife. She stated the patient had been "up all night and spending money like crazy." She stated that while they were on vacation 2 weeks prior, he was brought to the hospital due to worsening depression, and he was given a prescription for Ativan. She stated the patient was not able to focus enough to drive safely anymore. The patient had a history of "not doing well on medications" and getting "zombie like" while taking antipsychotics. She stated that the patient had been exhibiting episodes of confusion and recently had begun to have trouble focusing and was gradually getting slower to respond appropriately to questions or commands. The patient had no history of alcohol, tobacco or illicit drug use. The patient had no known drug allergies. The patient's sister had been diagnosed with Parkinson's Disease in the past.

Given the patients dysarthric speech, neurological exam was conducted which revealed the following, right upper facial droop and when patient was asked about it, pt pointed to a scar on his forehead and said, "it is old, happened in a motorcycle accident years ago when I was younger". Patients speech remained dysarthric, finger to nose revealed slight right sided dysmetria, decreased strength BUE/BLE right side 3/5 > left side 4/5, decreased strength with shoulder shrug right side 3/5 > left side 4/5, cogwheeling rigidity in the BUE/BLE and wrists bilaterally, decreased hearing right side which patient stated was chronic since 2018, masked facies, shuffling gait with minimal arm swinging, marked muscular spasticity right side > left side throughout, right sided hyperreflexia 3+, Rhomberg positive, AOx3, EOMI, PERRL, tongue midline, unable to fully assess all cranial nerves due to patients condition, sensation was intact bilaterally to LT and pain. CT head without contrast was ordered to evaluate for stroke, and results came back revealing evidence of a small 1cm left parafalcine meningioma with no identification of an acute cortical infarct noted. MRI head without contrast was ordered, which revealed evidence of tiny acute infarcts seen within the high left parietal lobe near the convexity, two in number and the small left parafalcine meningioma which appeared ossified. Neurology was consulted, patient was started on stroke prophylactics, as well as Sinemet 25-100mg TID for patients suspected undiagnosed Parkinsons Disease, and after neurologic clearance, patient was admitted to the adult in-patient psychiatric unit for further evaluation and plan of care management.

While on the inpatient adult psychiatric unit, the patient presented as paranoid, anxious, and intermittently agitated at times. Patient was continued on Olanzapine oral once nightly started by the psychiatric consult team prior to admission, with dose titrated to 12.5mg oral

once nightly, and Sinemet dosage was increased to 25- 100mg 2 tablets oral BID for further treatment of the patients Parkinsons symptoms. With the above medication adjustments and continued management, pts Parkinson's symptoms resolved significantly with less rigidity/stiffness, increased mobility, increased facial expressions, decreased paranoia and psychosis, increased organization of thoughts, consistent denial of SI/HI or AVH, no agitated or behavioral episodes once medications were titrated appropriately and adjustments made, patient was able to eat on his own, shower on his own and maintain his own hygiene without prompting, engaged himself in interests of his such as reading books, went to a majority of the groups scheduled throughout the day, with gradually improved sleep throughout the night.

The patient was discharged with follow up instructions to follow up with neurology for continued stroke prevention management and evaluation was set up with home health services to assist him with his activities of daily living while he adjusts to life back at home with some rehab home services as well to assist with further increasing his mobility, and was set up with outpatient geriatric psychiatry provider group for further evaluation and plan of care management in order to continue improving.

Discussion

This case highlights the complex interplay between primary psychiatric disorders and neurologic comorbidities in the context of acute psychiatric decompensation. The patient, a 71-year-old Caucasian male with a long- standing history of medication non-adherent Bipolar Disorder and multiple psychiatric hospitalizations, presented with a subacute progression of paranoid delusions and manic symptoms. Given his family history of Parkinson's disease (PD) and the absence of medication-induced psychosis or an organic etiology identified initially, his presentation raises important diagnostic and management considerations that underscore the need for integrated psychiatric and neurologic evaluation in emergency settings [1, 2, 3].

Psychiatric symptoms in patients with neurologic diseases such as PD are well-documented, with psychosis occurring in up to 60% of PD patients over the disease course, even in the absence of dopaminergic therapy [3]. These symptoms can precede or coexist with the motor features of PD and may be mistaken for a primary psychiatric disorder. The overlap in symptomatology—such as paranoia, delusional thinking, and behavioral disinhibition—can obscure the underlying neurologic contribution, particularly in older adults with preexisting psychiatric diagnoses.

Importantly, the emergence or worsening of psychotic symptoms in this patient must be interpreted within the broader clinical context, especially given the subacute trajectory and age-associated risk factors.

Neurodegenerative processes like PD may act as a "second hit,"

exacerbating an already vulnerable neuropsychiatric substrate shaped by years of untreated Bipolar Disorder. This aligns with evidence suggesting that neuropsychiatric symptoms may be amplified in the presence of comorbid neurodegeneration, even when distinct from medication-induced psychosis [1, 2].

This case also reinforces the crucial role of thorough medical and neurologic evaluation during the emergency psychiatric assessment. As emphasized by the American Association for Emergency Psychiatry (AAEP), medical clearance protocols must go beyond cursory screening to include age-specific considerations, functional status changes, and the possibility of comorbid neurologic disease—particularly when patients present with new-onset or atypical psychiatric features [1, 5, 6]. In this patient, subtle neurologic findings ultimately raised concern for an acute cerebrovascular event, which was confirmed on further imaging.

Failure to recognize concurrent neurologic pathology can delay

appropriate treatment and contribute to misdiagnosis, particularly in older patients with a psychiatric history. As such, this case supports the growing consensus that comprehensive, multidisciplinary assessment in emergency psychiatric settings is not only prudent but necessary [4].

Conclusion

In conclusion, this patient's presentation illustrates how neurologic disorders such as Parkinson's disease—whether clinically diagnosed or prodromal—can manifest or exacerbate psychotic symptoms in patients with longstanding psychiatric illness. Emergency clinicians must remain vigilant for signs of neurologic comorbidity in all psychiatric presentations, particularly when evaluating older adults with atypical symptom progression, medication nonadherence, or family history of neurodegenerative disease [1, 2, 3, 4, 5, 6, 7].

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