



Columbus Journal of Case Reports

Case Report

Legros A, et al. Colu J Cas Repo 04: 2022-31

Subtle and Confounding Features of Catatonia in a Geriatric Patient with Bipolar Disorder: A Case Study

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Submission Date: 14 October, 2022

Accepted Date: 25 October, 2022

Published Online: 31 October, 2022

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How to cite this article: Legros A, et al. (2022) Subtle and Confounding Features of Catatonia in a Geriatric Patient with Bipolar Disorder: A Case Study. Colu J Cas Repo 02(04): 2022-31.

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Abstract

A 71-year-old female patient with past psychiatric history of bipolar I disorder, generalized anxiety disorder, and past medical history of hypertension, recurrent Urinary Tract Infections (UTI), asthma, and hyperlipidemia was brought by her family to the psychiatric emergency room for a 3-week history of altered mental status and disorganized behavior. The family reported the patient was agitated, not sleeping, had difficulty speaking, and recently had her stable dose of Quetiapine down-titrated. On examination, the patient was dysphoric, anxious, withdrawn, paranoid, restless, fidgeting, and had an intense stare. She intermittently made odd facial expressions and spoke with a long speech latency and low volume. She was admitted to the inpatient geriatric psychiatry unit with the differential diagnoses of bipolar I disorder with mixed features, mania, bipolar depression with psychotic features, and delirium due to UTI. Her symptoms did not significantly improve with antipsychotics, a mood stabilizer, and an antidepressant. To abate her anxiety prior to a brain MRI, 1 mg of lorazepam was administered intramuscularly before the procedure. She experienced a notable improvement in her mood, speech, and psychomotor retardation. Thus, a diagnosis of catatonia was considered. The signs of retarded type catatonia that the patient demonstrated included hypokinesia, staring, mutism, withdrawal, stereotypy, and grimacing. These signs were clouded by the patient's psychiatric and medical comorbidities and past depressive, psychotic, and anxious episodes. A Bush-Francis Catatonia Rating Scale (BFCRS) score of 13, along with improvement following administration of a sufficient dose of lorazepam, supported a diagnosis of catatonia. This case demonstrates the importance of ruling out catatonia in geriatric patients with comorbid psychiatric and medical illnesses. This presentation, and previously reported studies demonstrating the underdiagnosis of catatonia, support maintaining a low threshold of suspicion for catatonia in geriatric patients exhibiting altered mental status, social withdrawal, or agitation.

Keywords: Bipolar disorder; Catatonia; Geriatric patient

Abbreviations

HPI	:	History of Present Illness
MSE	:	Mental Status Exam
AVH	:	Auditory and Visual Hallucination
SI	:	Suicidal Ideation
HI	:	Homicidal Ideation
BFCRS	:	Bush-Francis Catatonia Rating Scale

Introduction

The classification and diagnostic criteria of catatonia have evolved since the condition was first characterized in 1874 [1]. Presently, the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) requires at least three of the following twelve symptoms to diagnose catatonia: stupor, catalepsy, mutism, waxy flexibility, negativism, posturing, mannerisms, stereotypy, agitation/grimacing, echolalia, and echopraxia [2].

The etiology of catatonia is often multifactorial. Conditions implicated in the development of catatonia include neurological disorders such as Lewy body dementia, encephalitis, and stroke; psychiatric disorders including depression and chronic psychosis; and medical conditions including renal failure, hyponatremia, Urinary Tract Infection (UTI), and SARS-CoV-2 infection [3-6]. Psychoactive medications, drug naivety, medication dose changes, withdrawal from medication, and drugs of abuse have all been recognized as precipitants of catatonia as well [3,7,8]. Given the number of precipitating etiologies, the DSM- 5 recognizes catatonia not only as a specifier for psychiatric conditions but also as an independent syndrome [9].

Catatonia is highly prevalent in the geriatric population, especially among patients admitted to an inpatient geriatric psychiatry unit [3]. A 2022 systematic review determined that the prevalence of catatonia within the general hospital ranges from 5.5% to 8.9% and increases to 27% to 39.6% within a psychogeriatric unit [3]. In a single-institution study, screening all admitted geriatric psychiatry patients with DSM-5 diagnostic criteria yielded a prevalence of 20.8% [10]. Furthermore, patients over 65 years old are approximately 3.95 times more likely to develop catatonia than their younger counterparts [11]. Despite this well-documented increased prevalence of catatonia among geriatric patients, the condition is underdiagnosed [12]. One contributing factor may be the diversity of a geriatric catatonic presentation, which can vary from acute to indolent, and can last a few days or up to several years [3]. The subtlety of catatonic symptoms, which can be masked by or co-exist with other conditions, including neurocognitive disorders, delirium, and psychosis, may also contribute to its underdiagnosis [3,13,14]. For geriatric patients, a diagnosis of catatonia is frequently comorbid with other medical conditions and more strongly associated with affective disorders rather than psychotic disorders [3,12]. Nevertheless, despite increased risk for the development of catatonia, geriatric patients respond well to treatment, especially when catatonia is detected early.³ As such, under-recognition of catatonia is a serious problem as it leads to subsequent delays in treatment and increased risk for the development of adverse outcomes including immobility, dehydration, pulmonary embolism, pneumonia, and death [3,15].

Case Presentation

The patient is a 71-year-old female with a history of bipolar I disorder, generalized anxiety disorder, hypertension, recurrent UTIs, asthma, and hyperlipidemia who presented to the behavioral hospital emergency room after a 3-week history of disorganized behavior and altered mental status. She was admitted to the inpatient geriatric psychiatry service.

History of Present Illness

The patient presented to the emergency room accompanied by her daughter who reported that her mother had recently become increasingly agitated and had begun displaying bizarre behavior out of the ordinary from her high-functioning baseline accompanied by speech difficulties. A month prior, the daughter reported her mother was suspended from her long-term job as an educator due to worsening performance.

The daughter stated that her mother also endorsed paranoid thoughts, such as stating that her husband was not “Who she thought he was.” She also noticed that her mother became erratic, depressed, anxious, agitated, and neglectful of her everyday duties, such as cooking and cleaning. During this time, the patient lost about 10 pounds and had difficulty sleeping.

On interview, the patient reported that she was brought to the hospital because her family was concerned by her decreased speech. She described a 2-week history of depressed mood, distractibility, anxiety, and insomnia, and concern over her decreased appetite and weight loss. The patient reported being psychiatrically stable on psychiatric medications but recently discontinued them due to perceived adverse side effects and an overall uncertainty regarding her need for continued treatment.

Past Psychiatric and Medical History

Per chart review, the patient’s psychiatric history includes bipolar I disorder, generalized anxiety disorder with panic attacks, and postpartum depression, none of which had previously required inpatient hospitalization. She was adherent with outpatient psychiatric follow-up for years and was psychiatrically stable on Quetiapine 800 mg by mouth daily, Fluoxetine 20 mg by mouth daily, Buspirone 15 mg by mouth twice daily, and Alprazolam 0.5 mg by mouth daily as needed for anxiety. However, over the course of the prior 13 months, her dose of Quetiapine was down-titrated to 200 mg by mouth at bedtime. Her most recent manic symptoms occurred more than one year prior to admission.

Her past medical history includes long standing hypertension and hyperlipidemia, for which she took enalapril 10 mg and atorvastatin 20 mg by mouth daily, respectively. Over the past year, she developed recurrent UTIs for which she has been treated with levofloxacin. She denied a history of tobacco use, illicit substance use, or excessive alcohol use.

Physical and Mental Status Examination

During the hospital course, the patient was afebrile with persistent tachycardia ranging from 72 to 126 Beats Per Minute (bpm) with a median of 102 bpm and elevated blood pressure averaging 140s systolic and 90s diastolic mmHg. On physical exam, she was well-groomed and well-kempt. She did not present with any focal or sensory neurologic deficits. In the psychiatric emergency room, she was paranoid, guarded, and evasive, but not overtly responding to stimuli. In the geriatric inpatient unit, she was intermittently pacing, hypervigilant, restless, and fidgeting. She was oriented to person, place, and time, but easily distractible. Her affect was dysphoric and anxious. She intermittently stared at team members and made odd facial expressions, raising one side of her mouth and her eyebrows for several seconds. She rocked back and forth holding her bed sheets. She had a long speech latency with speech that was barely audible. Her movements were slowed, and her thought process seemed concrete with poor insight. She denied suicidal or homicidal thoughts. She was guarded but superficially cooperative with the interview.

Investigations

Laboratory tests and imaging were ordered to rule out organic causes of altered mental status. Before admission, the patient was transferred to a medical emergency room to undergo a head CT without contrast to rule out structural causes of altered mental status and speech difficulty. Results were unremarkable with no midline shift, hemorrhage, or mass effect. The patient was tachycardic, but electrocardiogram demonstrated normal sinus rhythm. Urine drug toxicology yielded negative results. Laboratory tests ruled out syphilis, HIV, and COVID-19 infections; hyperthyroidism or hypothyroidism; deficiencies of vitamin B9, B12, and D; lead and arsenic poisoning; elevated Erythrocyte Sedimentation Rate (ESR), hyperammonemia, and porphyria. Two urine culture samples were positive for white blood cells and leukocyte esterase; therefore, the patient was prescribed nitrofurantoin 100 mg by mouth twice daily for 7 days. UTI was ruled out as the primary cause of the patient's disorganized behavior given its lack of correlation with the timeline of behavioral changes. MRI brain was performed on her 6th day of admission and showed no infarction, hemorrhage, neoplasm, hydrocephalus, or any other structural changes that could cause altered mental status.

Hospital Course

On the first day of admission, the hospital team diagnosed the patient with bipolar I disorder with mixed features given that the patient met diagnostic criteria for major depression and her symptoms of paranoia, distractibility, subjective flight of ideas, and sleep deficit are features of mania. She was initiated on Divalproex Sodium 500 mg by mouth twice daily for mood stabilization, Risperidone 2 mg by mouth twice a day for psychosis, and lisinopril 20 mg by mouth daily for hypertension. Despite being prescribed a mood stabilizer and an antipsychotic medication, she remained paranoid, seclusive, anxious and depressed.

On the third day of admission, the patient showed some improvement in her speech and admitted to feeling a sense of impending doom for several months, particularly after her spouse was in an accident. She felt unwarranted responsibility for the accident and believed she also endangered her pet. Sertraline was added for anxiety and the dose was titrated up to 50 mg by mouth daily. To address her anxiety and insomnia, lorazepam 0.5 mg by mouth was prescribed to be taken at night, as needed. Due to her persistent dysphoric affect, long speech latency suggestive of thought blocking, and her ability to sleep about 6 hours a night, the team then considered the diagnosis bipolar depression with psychotic features.

Despite taking a mood stabilizer, antipsychotic, antidepressant, and low-dose benzodiazepine, the patient remained anxious, depressed, and paranoid, with mutism and slow movements. These signs and symptoms did not show significant improvement until her sixth day of admission when the patient was given lorazepam 1 mg via intramuscular injection for anxiety and claustrophobia prior to her brain MRI. A few minutes after the procedure, the staff noticed that her movements were quicker. Her mood, speech volume and fluency, and eye contact all improved. This drastic improvement in symptoms after lorazepam administration prompted the consideration of catatonia, in addition to bipolar depression. As such, the Bush-Francis Catatonia Rating Scale (BFCRS) was applied retrospectively to assess the patient for catatonia. When applied to her symptoms at admission, her score was 13: +1 for immobility, +2 for speaking less than 20 words for 5 minutes, +1 for staring and poor eye contact, +1 for grimacing for less than 20 seconds, +2 for frequent stereotypy (fidgeting in this patient), +2 for minimal PO intake for more than 1 day, +1 for ambitendency, and +1 for autonomic abnormality (persistent tachycardia). Given that a BFCRS score of 2 or higher is a positive screening for catatonia, this supported the diagnosis of catatonia.

The signs of retarded type of catatonia that the patient demonstrated included hypokinesia, staring, mutism, withdrawal, stereotypy, and grimacing. These signs were clouded, however, by her psychiatric comorbidities. Initially, the hypokinesia was seen as psychomotor retardation in the context of her severe depression and possibly extrapyramidal symptoms from chronic use of an antipsychotic. Her staring was seen in the context of paranoia and her mutism was seen as thought blocking in context of psychosis.

Withdrawal from eating and routine activities along with poor eye contact are common features of depression, as well as catatonia. Restlessness, including fidgeting, can be a symptom of anxiety or akathisia. However, fidgeting can also be a stereotypy in catatonia.

On the seventh day of admission, the patient was given lorazepam 1 mg at night and 0.5 mg in the morning by mouth for catatonia. Gradually, her insight and speech improved. On the eighth day of admission, the patient attested to improved mood and appetite. Her anxiety and restlessness gradually subsided. She became less guarded and no longer reports a sense of impending doom. Her BFCRS score decreased from 13 to 5. On the ninth day of admission, her speech latency was no longer present, her affect was euthymic, her attention improved, her eye contact was appropriate, and insight fair. No further psychomotor retardation was noted. She was discharged home with a BFCRS score of 0. Summary of the hospital course is depicted in (Figure 1).



Figure 1: Patient Hospital Course.

Follow-up Visits

At her telehealth follow-up visit one week after hospital discharge, the patient reported that her mood, anxiety, sleep, and appetite had all improved, but she felt fatigued throughout the day. On mental status examination, she was calm, cooperative, and attentive. Her eye contact was appropriate, her speech had an average rate and volume. No psychomotor retardation or agitation was noted. Her thought process was linear and goal-oriented. She was grossly oriented and had good insight and judgment. She denied visual or auditory hallucinations. No delusions or preoccupations were elicited.

One month later during her next telehealth visit, the patient continued to report noticeable improvement in her mood. At that time, lorazepam was tapered to 0.5 mg by mouth daily to avoid day-time fatigue.

Discussion

We report a case of catatonia with subtle features in a 71-year-old female with a history of bipolar I disorder in which the incidental administration of lorazepam during an MRI procedure resulted in a marked improvement of behavioral symptoms.

The BFCRS is commonly used to measure severity of symptoms and track response to treatment. In addition to meeting diagnostic criteria for catatonia, the patient's significant decrease in BFCRS score and overall clinical improvement after lorazepam administration alluded to the diagnosis of catatonia. This case demonstrates the importance of maintaining a low threshold for the clinical diagnosis of catatonia, especially in geriatric patients with psychiatric illnesses such as major depressive disorder and bipolar disorder. Older patients, compared to younger patients, are at higher risk for developing catatonia due to medication withdrawal, underlying medical or psychiatric comorbidities, and hospitalization [3]. Risk factors for catatonia in our patient included her age, history of recent UTI, antipsychotic dose changes, and history of an affective disorder.

First-line treatment recommendation for nonmalignant catatonia is a benzodiazepine, with lorazepam used most commonly in clinical practice. Due to the increased risk of side effects including falls among geriatric patients on benzodiazepines, lorazepam was administered at the minimum effective dose of 1.5 mg by mouth daily, split between 0.5 mg administered in the morning and 1 mg administered at night.

This dosing regimen aligned with guidelines that suggest initiating older patients on a low dose of a benzodiazepine [16]. The higher dose of lorazepam was given at bedtime to alleviate insomnia and lower the risk of day-time sedation. Eventually, the benzodiazepine dose should be slowly tapered to prevent withdrawal symptoms or rebound catatonia.

Case studies have shown second-generation antipsychotics such as ziprasidone and olanzapine are effective in treating patients presenting with psychosis and catatonia [17,18]. Given that antipsychotics may worsen or precipitate catatonia, clinicians should weigh the benefits and the risks of their use. Our patient's comorbid psychosis (delusions and paranoia), and bipolar disorder necessitated the use of an antipsychotic medication. Despite concurrent use of Risperidone, an antipsychotic with high D2 blocking affinity, the patient's hypokinesia improved significantly with the use of lorazepam. Similar to our patient, a patient with catatonia from a 2011 case report was reported to be stable on Risperidone and Lorazepam [19].

Conclusion

The presentation of catatonia may not be obvious initially due to comorbid diagnoses including depression, anxiety, and medication side effects. Benzodiazepines are well-tolerated and effective treatment for catatonia. Clinicians should consider catatonia in geriatric patients with mood and psychotic symptoms when they exhibit behavioral changes such as withdrawal or agitation, especially with limited response to conventional treatment.

Authors' Contributions

AL, GFR, MRV, MS, and MB contributed to the conceptualization and final drafting of the document. All authors agree to be held accountable for all aspects of the work related to its accuracy and integrity.

Acknowledgements

None.

Funding

This research received no specific funding from any funding agency in the public, commercial, or not-for-profit sectors.

Informed Consent

Patient provided the team verbal consent to write this case report with the condition that no identifiable information would be included in the report.

Disclosure (Authors)

The authors declare no conflicts of interest.

Disclaimer

None.

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