Exploring a complex case of catatonia treatment using diazepam in a middle-aged female: a multidisciplinary exploration of a unique case - a case report

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ABSTRACT

Background: This case report delves into the intricate interplay between medical and psychiatric domains through the detailed analysis of a 41-year-old female patient presenting with a myriad of symptoms, including decreased level of consciousness, urinary tract infection, and subsequent catatonia secondary to depression with psychotic features.

Case Presentation: The collaborative involvement of Internal Medicine, Neurology, Infectious Disease, and Adult Mental Health specialists underscores the necessity of a multidisciplinary approach. The temporal evolution of the patient's condition, coupled with the sequential adjustments in treatment strategies, provides insights into the nuanced manifestations of overlapping medical and psychiatric conditions.

Conclusion: This report aims to highlight the intricate diagnostic process, treatment challenges, and the collaborative efforts required for the successful management of this rare and multifaceted case.

Keywords: Catatonia, diazepam, depression, psychiatry, multidesplinary.

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Background

The intersection of medical and psychiatric conditions presents a complex landscape that challenges the conventional boundaries of clinical practice [1,2]. In recent years, the recognition of bidirectional relationships between physical and mental health has underscored the importance of an integrated approach to patient care [3]. Understanding the intricate interplay between medical illnesses and psychiatric disorders is crucial for providing comprehensive and effective treatment strategies [2].

Catatonia, a neuropsychiatric syndrome characterized by a spectrum of psychomotor abnormalities, poses a unique challenge in clinical practice due to its diverse etiological factors and complex symptomatology [4]. It manifests as a cluster of motor dysregulations, including immobility, mutism, posturing, and negativism. Historically associated with schizophrenia, catatonia has been recognized as a syndrome occurring across various psychiatric and medical conditions [4,5]. The diagnostic and statistical manual of mental disorders acknowledges catatonia as a specifier for several psychiatric disorders and highlights its potential association with medical illnesses [6].

The coexistence of medical and psychiatric conditions poses diagnostic challenges, often requiring a multidisciplinary approach for accurate assessment [2,3,7]. Differentiating between symptoms originating from medical illnesses, primary psychiatric disorders, or their intricate interplay demands a nuanced understanding of the symptomatology of each condition [7].

The evolving field of integrated care aims to bridge the gap between traditional medical and psychiatric practices [8]. Collaborative efforts involving specialists from both domains facilitate a holistic understanding of a patient's health. This integrated approach not only enhances diagnostic accuracy but also optimizes treatment strategies, ensuring comprehensive and patient-centered care [8-10].

In this context, we present a unique case that intricately weaves together medical and psychiatric dimensions, highlighting the need for a cohesive and collaborative approach to managing complex clinical presentations. The complexities underscored in this case serve as a microcosm of the broader challenges faced in contemporary healthcare, emphasizing the imperative for ongoing research, education, and clinical refinement in the realm of integrated medical and psychiatric care.

Case Presentation

The case of a 41-year-old female with a history of major depression disorder, hypertension (HTN), and diabetes mellitus (DM) presented a multifaceted clinical challenge,

marked by a cascade of symptoms and a diagnostic odyssey. The patient's initial manifestation, involving hyperglycemia, altered consciousness, and dysuria, set the stage for an intricate diagnostic and therapeutic trajectory.

Initial presentation (Sep 2, 2023)

On admission, the patient exhibited a constellation of symptoms, including confusion, dysuria, weakness, abdominal pain, and altered consciousness. Physical examination revealed signs of dehydration, elevated blood pressure, and tachycardia. Laboratory findings were indicative of a urinary tract infection (UTI), elevated liver function tests (LFTs), and ketonuria. Imaging studies uncovered a fatty liver on abdominal ultrasound and idiopathic intracranial HTN on brain computed tomography (CT).

Comprehensive assessment and initial management

The initial assessment suggested a symptomatic UTI with elevated LFTs and decreased level of consciousness. A comprehensive plan was instituted, encompassing admission, septic and hepatitis screens, intravenous fluids, abdominal CT, sliding scale insulin, resumption of her HTN medication adherence to neurology recommendations, discontinuation of metformin, and consideration of psychiatry consultation.

Progression and neurological and psychiatric implications

The subsequent days (Sep 3, 2023-Sep 9, 2023) revealed ongoing concerns of poor oral intake, generalized weakness, and abdominal pain. Neurological assessments revealed a complex array of symptoms, including altered consciousness, nonspecific headache, and refusal to walk due to generalized fatigue. Also, hallucination gestures, are echolalic with the poverty of speech and low tone. The diagnostic workup explored potential causes such as encephalitis, delirium due to metabolic factors, or a primary psychiatric disorder. Management involved in treating the underlying UTI, after lumbar puncture was normal, brain magnetic resonance imaging (MRI) with contrast, and routine electroencephalogram (EEG) were both unremarkable.

Stabilization and mental health involvement

As the case progressed, stability emerged, marked by improved communication and the initiation of Olanzapine 2.5 mg at night for 2 days then 5 mg, and Sertraline 25 mg for 2 days then up to 50 mg during the day. Mental health assessments revealed hypoactive delirium, prompting a thorough investigation for medical causes. A possible transfer to a mental hospital was also considered.

Catatonia and treatment response

The subsequent days unfolded a challenging clinical course, with the emergence of catatonia secondary to depression because the patient was very hypoactive and echolalic with poverty of speech and low tone. Medications such as olanzapine 5 mg HS, sertraline 50 mg OD for 2 days then increasing the dose to 100 mg OD, and diazepam 10 mg TID were vital in the patient's recovery. Mental health interventions, including switching to lorazepam 2 mg after a poor response with diazepam 10 mg TID, contributed greatly to the patient's gradual improvement. Observations, assessments, and plans were meticulously documented, highlighting the intricacies of managing catatonia in the context of comorbidities.

Toward discharge and post-stabilization

By early October 2023, the patient demonstrated significant improvements, prompting considerations for discharge. Medication adjustments were made to optimize the treatment plan. The patient was also given an appointment at an adult health clinic to follow up on her depression and for her response to the catatonia treatment at home. The involvement of physiotherapy underscored the holistic approach to the patient's care.

Discussion

The presented case of a 41-year-old female with a history of HTN and DM is a compelling illustration of the intricate interplay between medical and psychiatric factors in the manifestation and progression of catatonia.

The patient's initial presentation, marked by altered consciousness, hyperglycemia, and UTI, underscores the importance of considering both medical and psychiatric etiologies in cases of acute illness. While the literature extensively documents the association between diabetes and altered mental status, the emergence of catatonia as a manifestation of depression in this context adds a layer of complexity that merits further exploration [11,12].

The neurological implications in this case, including altered consciousness and intestinal obstruction, align with existing literature on the diverse presentations of psychiatric disorders. Studies have reported cases where psychiatric conditions - particularly depressive disorders - can present with neurological symptoms, often posing diagnostic challenges [13]. The need for a comprehensive diagnostic workup, as demonstrated in this case, resonates with recommendations in the literature for a multidisciplinary approach in cases of ambiguous clinical presentations [11,13].

The initiation of olanzapine and sertraline, in this case, is consistent with literature advocating for the integration of psychiatric management in cases of medical comorbidities. While stabilization of the patient and improvements in communication were achieved, the subsequent emergence of catatonia prompted adjustments in the treatment plan, highlighting the dynamic nature of psychiatric symptoms in the course of illness [14,15].

The utilization of lorazepam and diazepam in managing catatonia aligns with existing literature suggesting that benzodiazepines are effective interventions in catatonic states [16,17]. The gradual improvement observed with diazepam administration and subsequent transition to oral medications mirrors reported treatment responses in similar cases documented in the literature [16,18].

The collaboration between Internal Medicine, Neurology, and Infectious Disease specialists was extremely important in unraveling the diagnostic mystery [2]. The infectious disease team addressed the presence of an extended-spectrum beta-lactamase UTI, while the Neurology specialists conducted a thorough assessment, including lumbar puncture, brain MRI with contrast, and routine EEG. The involvement of Mental Health specialists became increasingly relevant as the clinical course could not explain the patient's mental status [2,4].

As the case progressed, the focus shifted toward mental health evaluation due to the persistence of the patient's symptoms and the emergence of catatonic features such as being hypoactive and low tone and speech. The neurological assessments, including echolalia, altered consciousness, and the absence of new focalities, suggested a primary psychiatric disorder or delirium due to metabolic causes [19].

The transition from the acute phase of diagnosis to the management of catatonia required careful consideration of the patient's psychiatric well-being. Olanzapine and sertraline were initiated, and the Mental Health team closely monitored the response, leading to adjustments in medication administration routes and dosages. The phased introduction of diazepam further improved the patient's communication and movement [20].

Long-term management involves a gradual transition to outpatient care, emphasizing mental health follow-up and adjustments to the medication regimen based on the patient's progress. The collaboration between specialties continued to be crucial in ensuring a holistic approach to the patient's care, recognizing the ongoing interplay between medical and psychiatric factors [3].

Implications for Future Research and Clinical Practice

This case prompts further exploration of the intricate relationship between medical and psychiatric conditions, particularly in cases of catatonia. The diagnostic challenges encountered in this case highlight the need for heightened awareness among healthcare professionals regarding the potential overlap between medical and psychiatric presentations.

The successful management of this complex case emphasizes the importance of multidisciplinary collaboration - not only in diagnosis but also in the ongoing care and adjustment of treatment plans. Future research endeavors could focus on refining the diagnostic criteria for catatonia in the context of comorbid medical conditions and also exploring the optimal strategies for integrating mental health interventions into the broader medical care framework.

Conclusion

The presented case demonstrates the evolving nature of diagnosis and treatment in the context of a patient presenting with both medical and psychiatric symptoms. The intricate collaboration between Internal Medicine, Neurology, Infectious Disease, and Mental Health specialists proved essential in navigating the complexities of this case, ultimately leading to the identification of catatonia secondary to depression with psychotic features. The successful outcome underscores the significance of a comprehensive and multidisciplinary approach in managing such challenging cases and highlights the ongoing need for research to further elucidate the complex interplay between medical and psychiatric conditions.

What is new?

This article emphasizes the effectiveness of a multi-team approach in treating catatonia secondary to depression with psychotic features, including the use of atypical medications.

Conflict of interests

The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent for publication

Written informed consent was obtained from the patient.

Ethical approval

Ethical approval is not required at our institution to publish an anonymous case report.

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Summary of the case

1	**Patient (gender, age)**	41 years, female
2	**Final diagnosis**	Catatonia secondary to depression with psychotic feature
3	**Symptoms**	Hypoactive, poverty of thought, and low tone and speech
4	**Medications**	Symptomatic treatment given
5	**Clinical procedure**	Routine labs and imaging
6	**Specialty**	Psychiatry, neurology