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# An Uncommon Case of Major Depressive Disorder with Hyperactivity and Aggression in an Elderly Patient

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## Abstract

Major Depressive Disorder (MDD) is a common psychiatric condition in elderly populations, but its presentation can often be atypical and more complex compared to younger individuals. Typically characterized by symptoms such as sadness, hopelessness, and social withdrawal, MDD in older adults may present with unusual features like hyperactivity and aggression, which can complicate diagnosis and treatment. This case report describes an 80-year-old male who presented with a three-week history of escalating agitation, hyperactivity, and unprovoked aggression towards family members and caregivers. Despite the absence of classical depressive symptoms such as persistent sadness, the patient exhibited irritability, impulsivity, and restlessness, which raised suspicion for a mood disorder. A thorough clinical assessment, including a Mini-Mental State Examination (MMSE), indicated mild cognitive impairment (MCI), and neuroimaging revealed no significant structural changes. After ruling out other causes, a diagnosis of Major Depressive Disorder with Atypical Features, characterized by hyperactivity and aggression, was made. The patient was treated with Escitalopram (an SSRI) and Olanzapine (an atypical antipsychotic), which led to a gradual reduction in hyperactivity and aggression. This case highlights the importance of recognizing atypical presentations of MDD in the elderly, where aggression and psychomotor agitation may overshadow the typical depressive symptoms. Early recognition and tailored treatment approaches are crucial in managing such cases, ensuring better clinical outcomes and quality of life for elderly patients. Further research is needed to explore these atypical presentations in depth.

**Keywords:** Major Depressive Disorder; Geriatric; Hyperactivity; Aggression; Psychomotor Agitation; Case Report; Diagnosis; Depression; Neurocognitive Disorders; Treatment

## Abbreviations

MDD: Major Depressive Disorder; MMSE: Mini-Mental State Examination; MCI: Mild Cognitive Impairment; CBT: Cognitive-Behavioral Therapy.

## Introduction

Major Depressive Disorder (MDD) is a common and debilitating psychiatric condition that affects a significant proportion of the elderly population. As individuals age,



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the manifestation of depression can become more complex, often displaying atypical features that make diagnosis and treatment challenging. In older adults, MDD frequently presents with somatic symptoms, cognitive impairment, and behavioral disturbances rather than the classic mood-related symptoms of sadness and anhedonia [1]. One such atypical presentation involves hyperactivity and aggression, which are less commonly associated with depression in younger adults but have been noted in the elderly population [2]. These symptoms can mimic other psychiatric disorders such as manic episodes, delirium, and neurodegenerative conditions, which complicates the diagnostic process and can lead to delays in appropriate treatment [3].

Hyperactivity in depression, particularly in the elderly, is not frequently discussed in the literature. It is more commonly seen in younger patients with bipolar disorder or mania, yet it can emerge as a feature of depression in older adults, often in the context of comorbid cognitive decline [4]. Aggression, a common feature of several psychiatric disorders, including psychotic disorders and neurocognitive disorders, is particularly challenging in elderly patients with depression. The expression of aggression in these patients may be linked to underlying neurobiological changes such as dopaminergic dysfunction and frontal lobe impairment, which are thought to contribute to irritability and poor impulse control [5,6].

In elderly patients, the symptoms of depression can often be masked or misinterpreted due to the overlap with cognitive decline, somatic complaints, or even physical illness [7]. Therefore, clinicians may fail to recognize depression when it presents with symptoms such as restlessness, impulsivity, and verbal or physical aggression, often attributing them to age-related changes or other medical conditions [8]. This case report aims to illustrate an atypical presentation of MDD with hyperactivity and aggression in an elderly patient, highlighting the significance of recognizing these features in the diagnostic process. Furthermore, it emphasizes the importance of a comprehensive clinical assessment, including a detailed medical history, physical examination, cognitive screening, and neuroimaging, to rule out other potential causes of these symptoms [9].

The early recognition and appropriate treatment of depression with atypical features in older adults are crucial in prevention of worsening of symptoms, improving quality of life, and reducing the risk of psychiatric hospitalization [10]. Pharmacological treatment, including antidepressants (e.g., SSRIs) and antipsychotics, is commonly used to manage the symptoms of MDD and aggression. However, careful consideration must be given to the patient's age, comorbidities, and possible drug interactions when selecting pharmacotherapy [5]. In addition to pharmacological treatment, psychosocial interventions such as cognitive-behavioral therapy (CBT) and caregiver support have shown to be effective in improving the overall well-being of elderly patients with depression [11].

## Case Presentation

An 80-year-old male with no significant psychiatric history was admitted to the psychiatry ward due to escalating agitation, hyperactivity, and aggressive behavior. Over the previous three weeks, he had become increasingly restless, often displaying impulsivity, irritability, and unprovoked verbal aggression towards family members and caregivers. His family reported that he was frequently leaving the house, engaging in repetitive phone calls, and exhibiting excessive talkativeness. The patient denied experiencing sadness, hopelessness, or a sense of emptiness, which are typically associated with depression. He expressed frustration with his declining physical health, especially due to his underlying hypertension and diabetes, but showed no clear signs of cognitive impairment, except for occasional forgetfulness.

Premorbid Personality: The patient was a retired schoolteacher, who had maintained a relatively stable and functional lifestyle prior to his current symptoms. He was described as socially engaged, enjoying his routine, and maintaining hobbies such as reading and gardening. He had no history of psychiatric disorders, substance abuse, or any family history of mental illness. His temperament was generally calm, with a marked preference for routine and structure in daily life. Although there was no history of major depression or mania, the patient did have a tendency to become irritable under stress, which had been noted in his younger years during periods of personal or professional stress.

On admission, his physical examination revealed stable vital signs, and laboratory tests showed no significant abnormalities. Cognitive assessment through the Mini-Mental State Examination (MMSE) indicated mild cognitive impairment, and the patient demonstrated intact insight and did not exhibit overt signs of delusions or hallucinations. Neuroimaging (CT brain) revealed no acute abnormalities, and his cognitive decline was consistent with early-stage dementia.

Considering the patient's symptoms of hyperactivity, aggression, and restlessness, a differential diagnosis of Major Depressive Disorder (MDD) with Atypical Features was made, particularly given the absence of classic depressive symptoms. The possibility of neurocognitive disorders, such as frontotemporal dementia or vascular dementia, was also considered but was ruled out based on the clinical presentation and imaging results.

### Short-Term Management

The short-term management focused on acute symptom control and ensuring patient safety. Pharmacological treatment was initiated with Escitalopram (an SSRI), at a dose of 10 mg/day, to address the underlying depressive symptoms. In addition, Olanzapine (an atypical antipsychotic), at a dose of 2.5 mg/day, was prescribed to help manage his agitation and aggressive behavior. Both medications were chosen for their relatively favorable side-effect profile in elderly patients, particularly considering the patient's cognitive impairment. The patient was closely monitored for any adverse reactions, including sedation, extrapyramidal symptoms, or cognitive worsening. Family members were educated about the medications and their potential side effects.

Psychosocial interventions were initiated as well, including caregiver education and support. The family was advised on how to manage the patient's aggression, including strategies to de-escalate confrontational situations and provide structure and consistency to his daily routine. This approach aimed to reduce stress on caregivers while maintaining a supportive environment for the patient. The patient was also referred for a psychological assessment to explore any underlying emotional issues and to evaluate the need for cognitive-behavioral therapy (CBT), if necessary.

During hospitalization, the patient's agitation and hyperactivity showed gradual improvement, and his mood stabilized. Family members noted that his irritability was reduced, and his aggressive outbursts became less frequent.

### Long-Term Management

The long-term management plan focused on maintaining medication efficacy, preventing relapse, and addressing cognitive and emotional aspects of the patient's condition. Given the complexity of his diagnosis, a multi-disciplinary approach was adopted, involving psychiatry, neurology, and geriatric care.

Medication: The SSRI dose was gradually increased to 20 mg/day as the patient showed tolerance to the treatment. Regular follow-up appointments were scheduled to monitor medication adherence, side effects, and overall progress. The Olanzapine dose was also adjusted as needed to maintain symptom control without increasing the risk of side effects. Regular laboratory tests and blood pressure monitoring were recommended due to the patient's comorbidities of hypertension and diabetes.

Psychosocial and Cognitive Interventions: The patient was enrolled in a structured cognitive rehabilitation program aimed at improving cognitive function and maintaining mental engagement. His family was encouraged to continue the use of behavioral strategies to manage his irritability and aggression, including setting clear boundaries and encouraging physical activities like walking and gardening, which he had enjoyed before the onset of symptoms. Family therapy was recommended to improve the caregivers' coping strategies and reduce stress associated with managing the patient's behavioral changes.

Long-Term Psychiatric Follow-Up: The patient was advised to have regular visits with a psychiatrist for ongoing evaluation of his mood, cognitive status, and medication regimen. The psychiatric team would periodically assess for the development of more severe depressive or neurocognitive symptoms and adjust the treatment plan accordingly. Additionally, psychotherapy may be explored as an adjunct if the patient shows interest and ability to engage. The possibility of psychodynamic therapy or cognitive-behavioral therapy (CBT) was discussed, although it was noted that his cognitive limitations might pose some challenges.

Monitoring for Neurodegenerative Progression: The patient's mild cognitive impairment and early-stage dementia raised the possibility of future cognitive decline. As part of the long-term management, regular neurocognitive assessments would be scheduled, including follow-up neuroimaging to monitor for any significant progression of dementia.

## Discussion

This case highlights an atypical presentation of Major Depressive Disorder (MDD) in an elderly patient, where the usual symptoms of low mood and anhedonia were absent. Instead, the patient exhibited hyperactivity, impulsivity, and aggression, which are more commonly associated with conditions such as mania or neurocognitive disorders. These features are frequently overlooked or misdiagnosed as manifestations of cognitive decline in the elderly [12]. The absence of classic depressive symptoms in this patient underscores the complexity of diagnosing depression in older adults, where somatic complaints and behavioral disturbances often predominate, making it difficult to identify mood disorders [13].

This patient's diagnosis of MDD with atypical features was complicated by his mild cognitive impairment (MCI). Cognitive changes in elderly patients can mask or overlap with depressive symptoms, complicating the diagnostic process. While the patient's aggressive behavior and hyperactivity could have been attributed to conditions like bipolar disorder or neurodegenerative disease, his lack of manic symptoms and absence of psychotic features

supported the diagnosis of depression [14]. This case emphasizes the need for clinicians to maintain a high index of suspicion for depression, even when patients present with atypical features such as irritability and aggression, rather than sadness [15].

Pharmacological treatment in the form of Escitalopram (an SSRI) and Olanzapine (an atypical antipsychotic) was effective in managing the patient's agitation and aggression. This aligns with existing research, which suggests that SSRIs can be particularly helpful in treating elderly depression and antipsychotics are often beneficial for managing associated behavioral symptoms such as aggression [16]. The improvement in symptoms observed in this patient emphasizes the importance of multimodal treatment that includes pharmacotherapy, psychosocial interventions, and caregiver support [17].

## Conclusion

This case highlights the need for a comprehensive approach in diagnosing and treating depression in the elderly, particularly when it presents with atypical features. Clinicians must consider a differential diagnosis that includes mood disorders, neurocognitive disorders, and psychotic conditions. Early recognition and tailored treatment strategies, including pharmacotherapy and behavioral interventions, are essential to improving outcomes and enhancing the quality of life for elderly patients with complex psychiatric presentations. Further research is needed to better understand the neurobiological mechanisms underlying atypical depressive presentations and to refine treatment approaches for this vulnerable population.

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## Conflict of Interest

No conflict of interest.

## Patient Consent

The patient provided verbal informed consent for the publication of this case report.

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