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CASE REPORT

Methylphenidate-Induced Hypomania in an Adult with Undiagnosed Bipolar II Disorder and ADHD: A Case Report

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Abstract

Methylphenidate is a first-line pharmacological agent for attention-deficit/hyperactivity disorder (ADHD). While generally well-tolerated, it may precipitate hypomania or mania, especially in patients with underlying bipolar spectrum disorders. A 34-year-old man presented with features of hypomania, including elevated mood, reduced need for sleep, and impulsive behavior, after initiating methylphenidate for presumed adult ADHD. Subsequent psychiatric evaluation uncovered an undiagnosed history consistent with bipolar II disorder. Methylphenidate was discontinued and mood stabilized with lamotrigine and psychoeducation. This case highlights the potential for psychostimulants to induce mood episodes in individuals with latent bipolarity, underscoring the importance of comprehensive psychiatric evaluation prior to initiating stimulant therapy.

1. Introduction

Methylphenidate, a central nervous system stimulant, is commonly prescribed for the management of ADHD in children and adults (Jaeschke et al., 2021; Pauly et al., 2018). It exerts its effects by blocking dopamine and norepinephrine reuptake, thereby enhancing executive function, attention, and impulse control (Berridge et al., 2006; Berridge and Devilbiss, 2011). Although effective, methylphenidate may pose psychiatric risks in certain populations, particularly individuals with underlying or undiagnosed bipolar disorder (Chiappini et al., 2024; Morton and Stock, 2000).

The literature has increasingly recognized stimulant-induced mood episodes, including mania and hypomania, particularly in patients with a personal or familial predisposition to mood disorders (Camacho and Akiskal, 2005; Perugi and Vannucchi, 2015). Misdiagnosis of bipolar disorder as ADHD in adults remains a challenge due to symptom overlap, especially in inattentiveness and emotional dysregulation.

We present a case of methylphenidate-induced hypomania in a middle-aged man who was subsequently diagnosed with bipolar II disorder, highlighting diagnostic pitfalls and the clinical implications of psychostimulant use in vulnerable populations.

2. Case Report

A 34-year-old married man was referred to psychiatric services by his primary care provider for evaluation of elevated mood, reduced sleep, impulsive online spending, and increased sociability over the preceding 10 days. He had been started on methylphenidate immediate release 10 mg twice daily for suspected adult ADHD two weeks earlier, based on longstanding attention deficits, procrastination, and work-related performance issues.

His psychiatric history was unremarkable for prior diagnoses, though he described intermittent periods of "high energy," irritability, and "crashes" since adolescence. He denied any previous psychiatric treatment, substance misuse, or medical comorbidities. Family history was positive for depression in his mother and alcohol use disorder in a paternal uncle (Table 1).

Table 1: Clinical and Diagnostic Data

Parameter	Finding
Presenting complaint	Elated mood, reduced sleep, impulsivity
Mental state exam	Euthymic to hypomanic, pressured speech
Sleep pattern	2–3 hours/night, no fatigue
YMRS score	20
ADHD symptom checklist	Positive for inattentiveness, impulsivity
Family psychiatric history	Depression, alcohol use disorder
Organic screen	Normal CBC, TSH, renal and hepatic panels
Urine drug screen	Negative

Table 2. Follow-Up Summary

Time Point	Mood Status	Sleep	Medication Adherence	Notes
Week 2 post-taper	Improved, euthymic	6–7 hrs/night	Yes	No stimulant reinstated
Week 6	Stable	7–8 hrs/night	Lamotrigine 100 mg	Engaged in CBT, no relapse
Month 3	Stable	Normalized	Maintained	Diagnostic confirmation of Bipolar II

The clinical picture was consistent with a hypomanic episode, likely unmasked or triggered by methylphenidate. Retrospective history, corroborated by his wife, revealed multiple prior episodes of elevated mood, goal-directed activity, and sleep reduction, interspersed with periods of low mood, consistent with bipolar II disorder. Upon recognition of stimulant-induced hypomania, methylphenidate was discontinued immediately. Psychoeducation was provided regarding bipolar spectrum disorders and the risk of antidepressant or stimulant-induced mood destabilization. The patient was initiated on lamotrigine 25 mg daily, gradually titrated to 100 mg over four weeks. Given the absence of florid psychosis or significant agitation, no antipsychotic was required. Sleep hygiene and behavioral regulation were emphasized through cognitive behavioral therapy (CBT) sessions. Within two weeks, the patient reported improved sleep, stabilized mood, and cessation of impulsive behaviors. He demonstrated good insight into his condition and was adherent to follow-up (Table 2). The patient continued outpatient follow-up with a psychiatrist and psychotherapist. He declined further stimulant use and found behavioral strategies sufficient to manage attention concerns. At three months, he remained symptom-free and fully functional at work and in family life (Table 3).

3. Discussion

This case highlights the potential for methylphenidate to induce hypomania in individuals with undiagnosed bipolar spectrum disorders. Bipolar II disorder often remains underdiagnosed, particularly in patients whose hypomanic episodes are subtle or misinterpreted as high functioning (Vieta and Suppes, 2008). In adults with overlapping symptoms of ADHD and bipolarity, accurate diagnosis is challenging yet essential to avoid iatrogenic destabilization.

Multiple studies have documented the risk of stimulant-induced mood switching (MacLean and Sofuoglu, 2018). Previous studies noted a 20–40% rate of stimulant-induced hypomania in patients with unrecognized bipolar disorder (Goldsmith et al., 2011).

Lamotrigine was selected due to its mood-stabilizing

Table 3: Timeline

Timeline Event	Details
Week 0	Initiated methylphenidate 10 mg BID
Week 2	Emergence of hypomanic symptoms
Day 15	Referral to psychiatry; methylphenidate discontinued
Week 3	Lamotrigine initiated and titrated
Week 6	Stabilized on lamotrigine 100 mg
Month 3	Confirmed diagnosis of bipolar II disorder

properties and favorable side effect profile (Miranda et al., 2019), especially for bipolar depression and maintenance therapy. Unlike antipsychotics or valproate, lamotrigine is less sedating and avoids metabolic complications—beneficial in younger or medication-naïve patients.

4. Conclusion

Stimulant-induced hypomania should be considered in adults presenting with new-onset elation or behavioral changes following ADHD treatment. Comprehensive psychiatric evaluation, including mood disorder screening, is essential before prescribing psychostimulants. In individuals with latent bipolarity, mood stabilizers such as lamotrigine offer effective, well-tolerated alternatives for long-term management. This case reinforces the need for diagnostic vigilance and tailored treatment in the overlap of ADHD and bipolar disorder.

Declarations

Ethics approval statement

No ethical approval was required for the current study as it did not deal with any human or animal samples.

Consent to participate

Not applicable

Consent to publish

Not applicable

Data Availability Statement

The data are available from the corresponding author upon reasonable request

Competing Interests

The authors declare that they have no conflict of interest

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Author contribution

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