

Case

Rapid Improvement with Mirtazapine in a 14-Year-Old Adolescent Diagnosed with Hypomania: A Case Report

Authors & Affiliations

Sami Arslanoğlu, Seda Erbaş, Mehmet Karadağ, İlayda Albayrak, Naciyenur Bilen Ağca

Gaziantep University, School of Medicine, Gaziantep, Türkiye

Corresponding Author: İlayda Albayrak, M.D., Hasan Kalyoncu University, Gaziantep, Türkiye

E-mail: ilaydaalbayrak084@gmail.com

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Abstract

This case report describes a 14-year-old male patient diagnosed with hypomania who demonstrated a rapid and marked clinical improvement following the addition of mirtazapine to his treatment regimen. The clinical significance of this case lies in highlighting both the potential manageability of childhood mood disorders through early intervention and the possible influence of genetic vulnerability, given a family history of schizoaffective disorder and suicide. The patient presented with a one-year history of increasing anger, violent tendencies, extreme emotional reactivity, insomnia episodes lasting up to two consecutive nights, restlessness, distractibility, subthreshold flight of ideas, abrupt school dropout, evening exacerbation of symptoms, excessive speech, swearing, subthreshold grandiosity, and recurrent episodes of running away from home. Multiple previous pharmacological treatments—including lurasidone 80 mg, methylphenidate 36 mg, zuclopenthixol depot injection, fluoxetine 20 mg, risperidone 1 mg, and escitalopram 10 mg—were ineffective, and several were associated with worsening irritability. Valproic acid (depakine) 500 mg three times daily and aripiprazole 20 mg were initiated for hypomania; however, increasing anger attacks necessitated the addition of chlorpromazine 100 mg, without clinical benefit. Following the introduction of mirtazapine 15 mg for prominent anxiety and insomnia, irritability and temper tantrums resolved completely within two weeks, with full clinical recovery observed at one month. This case suggests that mirtazapine may have a role as an adjunctive treatment in selected pediatric mood disorder cases and underscores the importance of individualized, early therapeutic strategies.

Keywords: Mirtazapine, Bipolar Disorder, Adolescent

INTRODUCTION

Childhood and adolescent mood disorders, particularly hypomania and bipolar spectrum disorders, present significant diagnostic and therapeutic challenges in clinical practice (1). These disorders are associated with a complex interaction of genetic vulnerability, environmental stressors, and neurobiological factors, and the presence of a family history of severe psychiatric illness is known to increase both risk and clinical complexity. Hypomania, a subtype within the bipolar spectrum, is characterized by elevated or irritable mood, increased energy, decreased need for sleep, impulsivity, and behavioral dysregulation. Although less severe than full manic episodes, hypomanic symptoms may cause marked functional impairment, particularly in pediatric populations.

In children and adolescents, hypomanic symptoms frequently overlap with those of attention-deficit/hyperactivity disorder (ADHD), including hyperactivity, distractibility, and impulsivity, often leading to

diagnostic confusion. Epidemiological studies suggest that the prevalence of bipolar disorder in childhood and adolescence is approximately 1–2%; however, diagnosis is frequently delayed due to symptom overlap and developmental variability (2,3). The prognosis may be further complicated when a family history includes disorders such as schizoaffective disorder or completed suicide, underscoring the importance of early recognition and tailored intervention.

Pharmacological management of pediatric mood disorders commonly involves mood stabilizers, such as valproic acid, and atypical antipsychotics, including aripiprazole (2). While these agents are often effective, a subset of patients exhibits treatment resistance or partial response. Mirtazapine, a noradrenergic and specific serotonergic antidepressant, is widely used in adults for depression, anxiety, and sleep disturbances and has been employed off-label in pediatric populations for irritability, aggression, and

insomnia. Nevertheless, concerns remain regarding the potential for antidepressants, including mirtazapine, to precipitate hypomanic or manic episodes, necessitating cautious and individualized use. This case report aims to contribute to the existing literature by describing a rapid and complete clinical response following the addition of mirtazapine in an adolescent diagnosed with hypomania, highlighting the potential benefits of early, personalized pharmacological strategies.

CASE

A 14-year-old male patient, currently in the eighth grade and the eldest of two siblings, was admitted to our outpatient child and adolescent psychiatry clinic eight months prior to the present report. He had been under child psychiatric follow-up since the second grade. At the time of presentation, he had been diagnosed with hypomania and attention deficit disorder, and his family reported a marked increase in anger and violent behavior over the preceding one year.

The patient exhibited pronounced emotional dysregulation, characterized by extreme emotional responses, recurrent insomnia episodes lasting up to two consecutive nights, restlessness, distractibility, and difficulty remaining seated even during examinations. He demonstrated subthreshold flight of ideas, excessive talking, frequent swearing, and subthreshold grandiosity. A sudden dropout from school was noted, and symptoms were reported to intensify particularly during the evening hours. The clinical course was further complicated by repeated episodes of running away from home.

Pharmacological history revealed multiple previous treatment trials with inadequate response or symptom exacerbation. Treatment with lurasidone 80 mg was ineffective, while methylphenidate 36 mg resulted in increased anger and irritability. Additional treatments, including zuclopenthixol depot injection, fluoxetine 20 mg, risperidone 1 mg, and escitalopram 10 mg, were also ineffective and similarly associated with worsening anger. There was a notable family psychiatric history, including schizoaffective disorder and suicide in the patient's grandfather.

Based on the diagnosis of hypomania, valproic acid (depakine) 500 mg three times daily and aripiprazole 20 mg were initiated. At the one-month follow-up, serum valproic acid levels were within the therapeutic range; however, the patient's anger attacks had escalated to a severe level, including attempts to physically harm his father. In response, chlorpromazine 100 mg was added to the treatment regimen, but no clinical improvement was observed. Medication dosages were reassessed and adjusted at two-week intervals.

Given the persistence of severe anxiety symptoms and prominent insomnia, mirtazapine 15 mg was subsequently added to the treatment regimen. At the two-week follow-up after initiation of mirtazapine, the patient's irritability and anger attacks had completely resolved, a change described by the family as dramatic. At the one-month follow-up, the patient demonstrated

full clinical recovery, with resolution of mood symptoms, behavioral dysregulation, and functional impairment.

DISCUSSION

This case illustrates the diagnostic and therapeutic complexity of mood disorders in children and adolescents, particularly when hypomanic symptoms overlap with features of other neuropsychiatric conditions. In pediatric populations, hypomania may present with irritability, impulsivity, decreased need for sleep, and behavioral dysregulation rather than the classic euphoric mood seen in adults. Such presentations frequently complicate early diagnosis and increase the risk of misclassification as attention-deficit/hyperactivity disorder (ADHD), especially when hyperactivity, distractibility, and impulsivity are prominent. In the present case, the episodic nature of symptoms, the presence of insomnia lasting up to two consecutive nights, evening exacerbation, and subthreshold grandiosity favored a mood disorder over ADHD, in which symptoms are typically chronic and context-independent.

Family history played a critical role in diagnostic formulation. The presence of schizoaffective disorder and suicide in a first-degree relative represents a well-established risk factor for bipolar spectrum disorders and is associated with earlier onset, greater symptom severity, and treatment resistance (4,5). This genetic vulnerability further supported the diagnosis of hypomania and underscored the importance of early, cautious, and individualized intervention. Although schizoaffective disorder was considered in the differential diagnosis, it was excluded due to the absence of persistent psychotic symptoms independent of mood episodes (6).

From a treatment perspective, mood stabilizers and atypical antipsychotics constitute the cornerstone of pharmacological management for pediatric hypomania. In this case, valproic acid at a dose of 500 mg three times daily and aripiprazole 20 mg were administered, consistent with guideline-based practice (2). Despite therapeutic serum levels, the patient exhibited persistent and escalating anger attacks, indicating partial treatment resistance (7). The subsequent addition of chlorpromazine 100 mg for behavioral control did not yield clinical benefit, highlighting the limitations of conventional strategies in certain refractory cases (8).

The most notable aspect of this case is the rapid and complete clinical response following the introduction of mirtazapine 15 mg. Mirtazapine is a noradrenergic and specific serotonergic antidepressant with sedative and anxiolytic properties, frequently used to target insomnia, anxiety, irritability, and aggression (9,10). Although antidepressants are traditionally approached with caution in bipolar spectrum disorders due to the risk of inducing hypomanic or manic switches, mirtazapine has been reported to have a relatively lower propensity for mood switching when used adjunctively and with adequate mood stabilization (11). In this patient, the addition of mirtazapine was temporally associated with complete resolution of irritability and temper tantrums within

two weeks and full functional recovery at one month, without evidence of mood destabilization. These findings align with reports suggesting that mirtazapine may be beneficial in selected pediatric cases characterized by prominent irritability, sleep disturbance, and anxiety, particularly when standard mood stabilizer–antipsychotic combinations are insufficient (12,13). Nevertheless, it is not possible to establish causality based on a single case, and spontaneous remission or delayed effects of prior treatments cannot be entirely excluded. Therefore, the observed response should be interpreted cautiously.

Several differential diagnostic considerations warrant discussion. Antidepressant-induced hypomania was unlikely in this case, as mood symptoms preceded mirtazapine initiation and improved rather than worsened following treatment. Similarly, a primary ADHD diagnosis was insufficient to explain the episodic mood elevation, insomnia, and grandiosity. These distinctions emphasize the importance of longitudinal assessment, careful symptom characterization, and avoidance of premature diagnostic closure.

This case further highlights the broader clinical implication that treatment-resistant pediatric mood disorders may benefit from flexible, symptom-oriented pharmacological strategies under close monitoring. Multidisciplinary follow-up and incorporation of psychosocial interventions remain essential components of long-term management, even when pharmacological response is robust.

CONCLUSION

Diagnosing and managing pediatric hypomania is complicated by phenotypic variability and frequent resistance to standard mood-stabilizing regimens. This case highlights the potential utility of adjunctive mirtazapine in resolving persistent irritability, aggression, and sleep disturbances when conventional mood stabilizer–antipsychotic combinations prove insufficient. Importantly, the rapid clinical recovery occurred without precipitating mood destabilization, suggesting that mirtazapine may be a viable option under adequate mood stabilizer cover. While these findings are promising, further controlled research is required to establish standardized safety and efficacy protocols for the use of noradrenergic and specific serotonergic antidepressants in pediatric bipolar spectrum disorders.

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