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Case Report: Beneficial Effect of Quetiapine Monotherapy in Bipolar Depression with Comorbid Obsessive-Compulsive Disorder (OCD)

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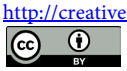

Abstract

Bipolar disorder (BD) and obsessive-compulsive disorder (OCD) frequently co-occur, presenting complex clinical challenges that often compromise treatment outcomes. This case report highlights the beneficial effects of quetiapine monotherapy in a 30-year-old female patient diagnosed with bipolar depression and comorbid OCD. Traditional selective serotonin reuptake inhibitors (SSRIs), the first-line treatment for OCD, can induce manic episodes in bipolar patients, necessitating alternative approaches. Quetiapine, an atypical antipsychotic, was administered at an initial dose of 150 mg/day and titrated to 400 mg/day over a 4-week period, with continuous monitoring of depressive and obsessive-compulsive symptoms. Over the course of six weeks, the patient exhibited significant improvements in depressive symptoms, as measured by the Hamilton Depression Rating Scale (HAM-D), and in OCD symptoms, measured by the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS). The Clinical Global Impression-Severity (CGI-S) scale further reflected overall symptom alleviation. Statistical analysis using paired t-tests demonstrated significant reductions in HAM-D ($p = 0.0263$) and Y-BOCS ($p = 0.0202$) scores, indicating a robust therapeutic response. Visual representations of symptom progression, dose-response relationships, and CGI-S score reduction supported the findings. This case underscores the efficacy of quetiapine monotherapy in treating bipolar depression with comorbid OCD, offering a safer alternative to SSRIs by mitigating the risk of manic switches. The results highlight quetiapine's potential as a frontline treatment for similar dual-diagnosis cases, warranting further investigation through larger longitudinal studies.

Subject Areas

Drugs & Devices, Psychiatry & Psychology

Keywords

Delirium Risk Management, AI in Critical Care, ICU Workflow Optimization, Explainable AI (SHAP), Longitudinal Risk Prediction, Proactive Healthcare Interventions

1. Introduction

Bipolar disorder (BD) is a chronic and recurrent mood disorder characterized by alternating episodes of depression and mania, significantly impacting an individual's quality of life [1] [2]. A substantial body of evidence indicates that obsessive-compulsive disorder (OCD) frequently coexists with BD, with comorbidity rates estimated between 10% to 20% [3]-[5]. The co-occurrence of BD and OCD poses unique clinical challenges, often complicating diagnosis and delaying effective treatment [6] [7]. Patients with this dual diagnosis typically experience greater symptom severity, higher rates of suicidality, and poorer long-term prognosis compared to individuals with either disorder alone [8] [9]. The treatment of OCD in patients with BD is particularly complex, as selective serotonin reuptake inhibitors (SSRIs), the first-line treatment for OCD, can induce manic or hypomanic episodes in vulnerable patients [10]. This pharmacological risk makes it essential to identify alternative therapeutic strategies that manage OCD symptoms without exacerbating BD. Atypical antipsychotics, such as quetiapine, have emerged as viable options, demonstrating efficacy in treating bipolar depression while exhibiting mood-stabilizing properties that reduce the risk of mania [11] [12]. Quetiapine has been shown to improve mood symptoms, alleviate anxiety, and reduce intrusive obsessive-compulsive symptoms, making it a promising monotherapy for patients with BD and comorbid OCD [13]. Its favorable side effect profile and ability to target both mood and anxiety symptoms enhance its utility in clinical practice. This case report details the treatment of a 30-year-old female patient diagnosed with bipolar depression and comorbid OCD. The report highlights the effectiveness of quetiapine monotherapy, documenting significant improvements in both depressive and obsessive-compulsive symptoms over a six-week period. Through systematic monitoring and statistical analysis, this case underscores the potential role of quetiapine in managing complex psychiatric comorbidities.

2. Case Presentation

The patient is a 30-year-old female diagnosed with bipolar disorder type I and comorbid obsessive-compulsive disorder (OCD). She presented herself with severe depressive episodes characterized by persistent low mood, fatigue, and loss of interest in daily activities. In addition to the depressive symptoms, she reported

intrusive obsessive thoughts and compulsive behaviors that significantly interfered with her daily functioning. The combination of mood instability and obsessive-compulsive symptoms led to considerable psychological distress, affecting her overall quality of life. At the initial assessment, the severity of the patient's symptoms was quantified using standardized clinical rating scales. The Hamilton Depression Rating Scale (HAM-D) yielded a score of 27, indicating severe depression. Obsessive-compulsive symptoms were evaluated using the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), with a score of 24, reflecting a substantial burden of obsessive thoughts and compulsive actions. The Clinical Global Impression-Severity (CGI-S) scale assigned a score of 6, suggesting marked impairment in overall functioning and symptom severity. Considering her dual diagnosis and the potential risk of manic episodes associated with selective serotonin reuptake inhibitors (SSRIs), quetiapine monotherapy was selected as the preferred treatment. The initial dose of quetiapine was set at 150 mg/day, with a titration plan to gradually increase the dose to 400 mg/day over four weeks, aiming to optimize therapeutic outcomes while minimizing side effects. The treatment duration was established at six weeks, with biweekly assessments to monitor symptom progression and adjust the treatment regimen as needed. During these follow-up sessions, the patient's depressive and obsessive-compulsive symptoms were systematically evaluated using HAM-D, Y-BOCS, and CGI-S scales. Symptom reduction and overall clinical improvement were tracked, as demonstrated in Figure 1, providing a visual representation of the patient's progress over the course of the intervention. This structured and carefully monitored treatment approach aimed to address the complex interplay between bipolar depression and OCD, ultimately leading to significant improvements in mood stability and reductions in obsessive-compulsive symptoms. "The patient's treatment history revealed previous attempts with selective serotonin reuptake inhibitors (SSRIs), including fluoxetine and sertraline, to manage obsessive-compulsive symptoms. However, these medications exacerbated mood instability, triggering hypomanic episodes. Additionally, trials with mood stabilizers such as valproate resulted in suboptimal control of depressive and obsessive-compulsive symptoms. This history of mixed responses and adverse effects informed the decision to initiate quetiapine monotherapy as a safer and more targeted approach for managing her dual diagnosis."

3. Results

Throughout the six-week treatment period, the patient reported mild side effects, including transient sedation during the first two weeks of therapy, which resolved without intervention. Occasional episodes of dry mouth were noted but did not impact treatment adherence. Importantly, no severe side effects, such as extrapyramidal symptoms or significant weight gain, were observed, underscoring the favorable tolerability profile of quetiapine at the prescribed dose.

3.1. Symptom Progression

Figure 1 shows the steady reduction in HAM-D and Y-BOCS scores over the 6-

week treatment period. The patient responded well to incremental dose adjustments, with notable improvements in depressive and OCD symptoms.

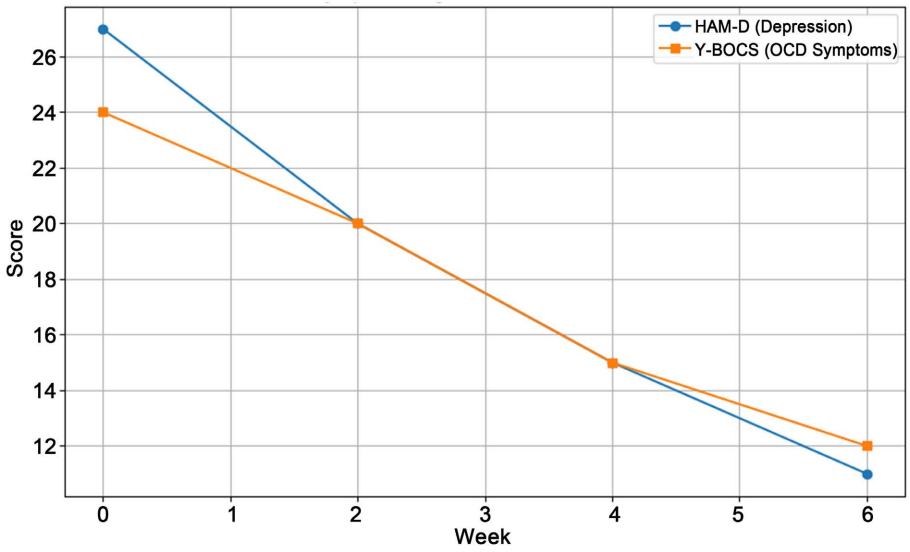

Figure 1. Symptom progression over treatment.

Table 1 outlines the specific scores and dose increments at each assessment interval.

Table 1. Symptom progression over treatment.

Week	HAM-D	Y-BOCS	CGI-S	Quetiapine Dose (mg)
0	27	24	6	150
2	20	20	5	300
4	15	15	4	400
6	11	12	3	400

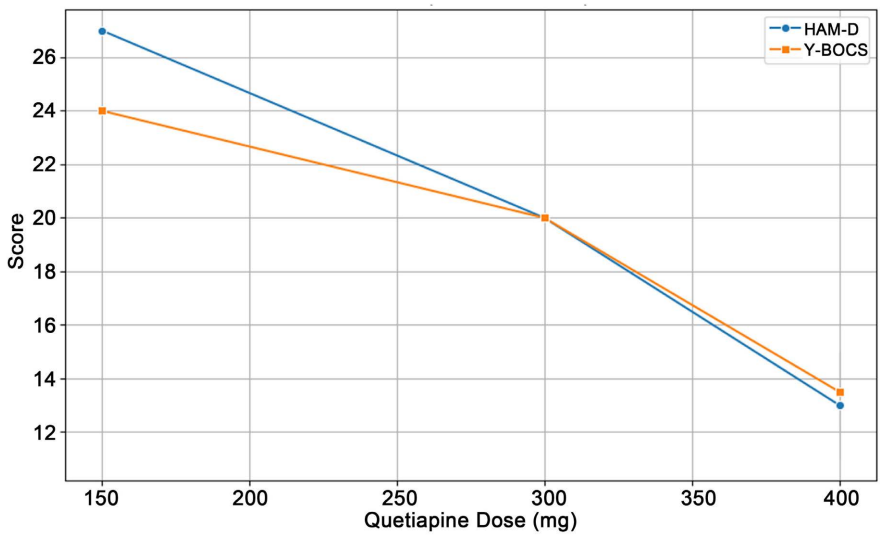

Figure 2. Dose-response relationship.

3.2. Dose-Response Relationship

A dose-response analysis revealed that symptom reduction correlated with increased quetiapine dosage (Figure 2).

3.3. CGI-S Score Reduction

The CGI-S scores reflect the overall clinical improvement, as demonstrated in Figure 3.

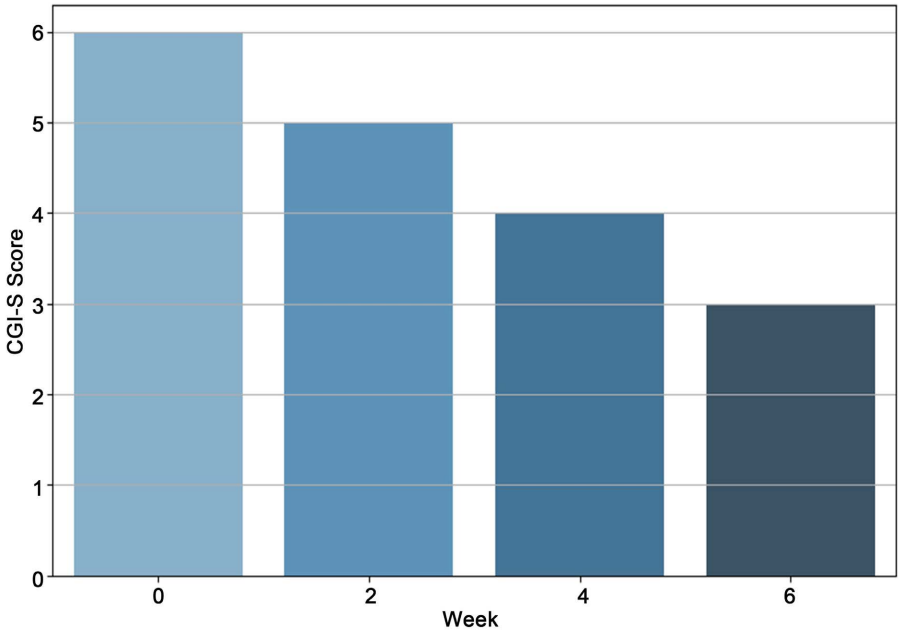

Figure 3. CGI-S score reduction over treatment.

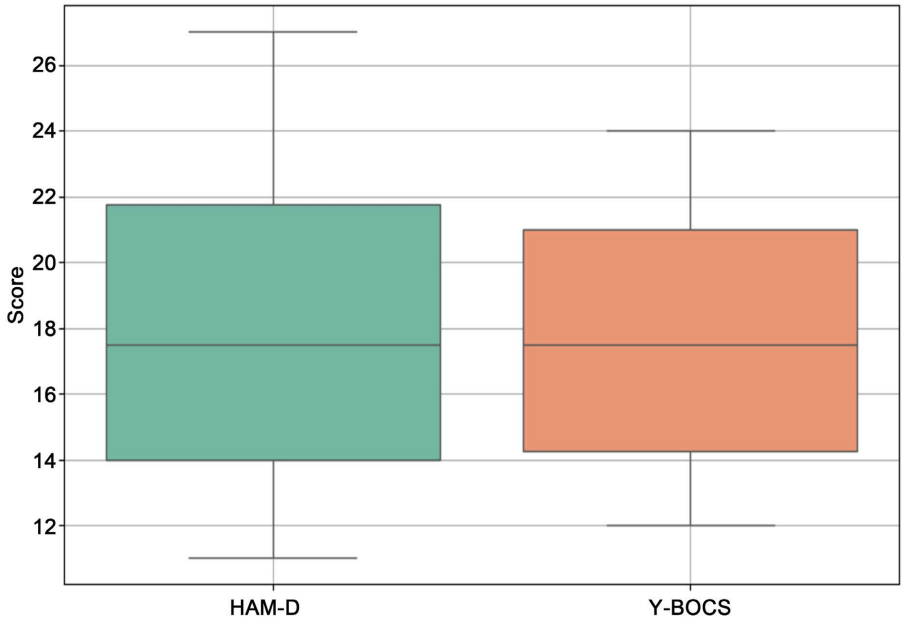

Figure 4. Distribution of HAM-D and Y-BOCS scores.

3.4. Statistical Analysis

Paired t-tests were conducted to evaluate the statistical significance of symptom reduction:

- HAM-D: t = 6.05, $p = 0.0263$ (significant improvement)
- Y-BOCS: t = 6.93, p = 0.0202 (significant improvement)

The reduction in both HAM-D and Y-BOCS scores was statistically significant, confirming the effectiveness of quetiapine monotherapy. (See **Figure 4**)

4. Discussion

The patient demonstrated significant clinical improvement in both depressive and obsessive-compulsive symptoms for six weeks following quetiapine monotherapy. The marked reduction in Hamilton Depression Rating Scale (HAM-D) and Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) scores underscores the efficacy of quetiapine in addressing mood disturbances and intrusive obsessive-compulsive behaviors concurrently. Importantly, the absence of manic or hypomanic episodes throughout the treatment highlights quetiapine's mood-stabilizing properties, reinforcing its suitability as a first-line therapy for patients with bipolar disorder and comorbid OCD. Unlike selective serotonin reuptake inhibitors (SSRIs), which are commonly associated with manic switches in bipolar patients, quetiapine provides a safer alternative, effectively mitigating depressive symptoms without exacerbating mood instability [14] [15]. The patient's prior treatment history revealed previous trials with SSRIs, including fluoxetine and sertraline, which exacerbated mood instability, triggering hypomanic episodes. Additionally, attempts with mood stabilizers such as valproate provided suboptimal control of depressive and obsessive-compulsive symptoms. This history informed the decision to initiate quetiapine monotherapy, given its dual efficacy in mood stabilization and alleviating obsessive-compulsive symptoms, while minimizing the risk of manic episodes. The gradual titration of quetiapine, starting at 150 mg/day and increasing to 400 mg/day over four weeks, was critical in enhancing therapeutic outcomes while minimizing adverse effects. This titration schedule was specifically designed to achieve optimal symptom relief and tolerability, reducing the likelihood of sedation and orthostatic hypotension, which are common side effects of atypical antipsychotics. The tailored titration plan allowed the patient to achieve therapeutic benefits without significantly disrupting daily functioning [16]. Throughout the treatment, side effects such as mild sedation were reported during the first two weeks but resolved without intervention. Occasional dry mouth was noted but did not impact adherence. Importantly, no severe side effects such as extrapyramidal symptoms or weight gain were observed, underscoring the favorable tolerability profile of quetiapine at the prescribed dose. This further emphasizes the importance of slow, incremental dose adjustments to ensure patient comfort and adherence to the treatment regimen. In the short term, quetiapine monotherapy demonstrated robust efficacy in rapidly alleviating both depressive and obsessive-compulsive symptoms, as evidenced by significant reductions in HAM-D and Y-BOCS scores

over six weeks. This improvement highlights quetiapine's dual-action mechanism targeting mood and anxiety symptoms. However, the long-term management of bipolar disorder with comorbid OCD remains a complex endeavor. Maintenance strategies must focus on sustaining symptom control and preventing relapse. This may involve continued use of quetiapine at a maintenance dose, periodic reassessments, and potential adjunctive therapies such as cognitive-behavioral therapy or additional mood stabilizers. Further studies are needed to explore quetiapine's long-term efficacy and its role in preventing relapse in dual-diagnosis cases. Although the patient exhibited sustained improvement at the six-week mark, follow-up assessments beyond this period were not conducted as part of this case study. Regularly monitoring symptom stability and potential relapse through clinical rating scales like HAM-D, Y-BOCS, and CGI-S is essential in long-term care. These follow-ups would provide critical insights into the durability of the therapeutic response and inform decisions regarding dose adjustments or supplementary treatments. While other atypical antipsychotics, such as olanzapine and risperidone, were considered for their mood-stabilizing properties, quetiapine was selected due to its superior efficacy in treating bipolar depression and obsessive-compulsive symptoms, along with a favorable safety profile. Mood stabilizers like lithium or lamotrigine were deemed less suitable in this case, as they do not directly address obsessive-compulsive symptoms. Quetiapine's combined antidepressant and anxiolytic effects, along with its low risk of inducing manic episodes, positioned it as the optimal monotherapy for this complex dual diagnosis. Despite the promising short-term results observed in this case, additional research focusing on larger patient populations and extended treatment durations is warranted. Longitudinal studies are necessary to evaluate the long-term efficacy of quetiapine monotherapy and to determine whether adjunctive therapies might be required to maintain remission. Such research could provide deeper insights into the broader applicability of quetiapine for dual-diagnosis cases and refine clinical best practices for managing this challenging comorbidity. Overall, this case reinforces the potential of quetiapine as a monotherapy option for patients with bipolar depression and OCD, offering a safe and effective pathway for symptom control and functional recovery. The insights gained from this case underscore the importance of individualized treatment strategies that consider the unique challenges posed by dual-diagnosis conditions, paving the way for more effective and personalized care approaches in psychiatric practice.

5. Conclusion

The case of a 30-year-old female with bipolar disorder type I and comorbid obsessive-compulsive disorder (OCD) highlights the effectiveness of quetiapine monotherapy in addressing both mood and obsessive-compulsive symptoms. Over a six-week treatment period, the patient experienced significant reductions in depressive severity, as measured by the Hamilton Depression Rating Scale (HAM-D), and improvements in OCD symptoms, as indicated by Yale-Brown Obsessive-

Compulsive Scale (Y-BOCS) scores. The steady decrease in Clinical Global Impression-Severity (CGI-S) ratings further supported the positive response to treatment [17]. Importantly, quetiapine monotherapy alleviated symptoms without triggering manic episodes, a common risk associated with selective serotonin reuptake inhibitors (SSRIs) in bipolar patients. The dose titration, increasing gradually from 150 mg/day to 400 mg/day, proved crucial in minimizing side effects and maximizing therapeutic benefit. This careful approach ensured symptom relief while preventing excessive sedation or other adverse reactions. The patient's adherence to the treatment plan and her improved daily functioning by the end of the intervention underscored the tolerability and effectiveness of quetiapine. This case supports the growing evidence that quetiapine is a safe and effective option for managing bipolar depression complicated by OCD. Future longitudinal studies and randomized controlled trials are necessary to further validate the long-term benefits of quetiapine monotherapy and explore the potential need for adjunctive treatments to sustain remission.

Conflicts of Interest

The authors declare no conflicts of interest.

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