Substance-Induced Bipolar Disorder: A Comprehensive Case Study of a 24-Year-Old Male

Aqsa Abdul Ghaffar*
Lahore Garrison University
Email:aqsaabdulghaffar765@gmail.com
Farzana Aslam
Riphah International University
Email:farzanaaslamvu@gmail.com

Abstract
This case study examines a 24-year-old male diagnosed with Substance-Induced Bipolar and Related Disorder (Severe).The patient presented with excessive drug use, mood elevation, irritability, and various manic symptoms. Comprehensive psychological assessment using the Young Mania Rating Scale (YMRS), Drug Abuse Screening Test (DAST), and Beck Depression Inventory (BDI) led to an integrated treatment plan that included cognitive-behavioral therapy (CBT) and family therapy. Significant improvements were observed in the patient's condition. This report highlights overlapping symptoms with other disorders, the importance of differential diagnosis, and the role of structured therapeutic approaches.

Keywords Substance-Induced Bipolar Disorder, Substance Use Disorder, Mental Health, Case Report, Manic Episode

Introduction
Bipolar disorder, characterized by mood fluctuations between mania and depression, is often compounded by substance use disorders (SUDs). When mood disturbances are triggered by substance use, distinguishing between primary and substance-induced bipolar disorders becomes essential for treatment. This study highlights these diagnostic challenges and treatment approaches through the case of a 24-year-old male with a history of heroin and cannabis use.

Bipolar disorder is a long-term mental health condition characterized by significant mood fluctuations, including episodes of mania and depression. These shifts in mood can severely impact an individual's ability to manage daily activities. On the other hand, substance use disorder (SUD) involves the harmful use of one or more substances, resulting in notable distress or impairment. When bipolar disorder coexists with SUD, especially when mood disturbances are triggered by substance use, it presents a particularly difficult challenge for clinicians.

Substance-induced mood disorders are marked by mood disruptions, such as mania or depression, that are directly caused by the effects of a substance. These substances can range from legal ones, like alcohol, to illegal drugs, such as heroin or cannabis. To diagnose substance-induced bipolar disorder, it must be shown that the mood disturbances only occur during periods of substance use or withdrawal and are not better explained by an underlying mood disorder.

This article examines the case of a 24-year-old male diagnosed with Substance-Induced Bipolar and Related Disorder. His extensive history of substance abuse, alongside his severe psychiatric symptoms, highlights the intricate connection between substance use and mood disorders. The case highlights the importance of accurate diagnosis, integrated treatment approaches, and the need for long-term management strategies to prevent relapse and promote recovery.

Literature Review

Substance-induced bipolar disorder is frequently observed in individuals who also have substance use disorders. Studies show that people with bipolar disorder are significantly more prone to substance abuse than the general population, with research suggesting that as many as 60% of individuals with bipolar disorder may experience a substance use disorder at some point in their lives (Goldstein & Levitt, 2006). The relationship between bipolar disorder and substance use is complex and reciprocal. Substance use can worsen bipolar symptoms, while individuals with bipolar disorder may turn to substances as a way of self-medicating.

Recent studies underscore the high prevalence of substance-induced mood disorders. In Pakistan, research reveals increasing trends in SUDs due to socioeconomic factors and accessibility of drugs (Ahmed et al., 2022). Co-occurrence with mood disorders significantly complicates diagnosis and management. Studies by Iqbal and Qureshi (2021) highlight cultural and familial influences in the presentation and recovery of substance-induced disorders, underscoring the value of family therapy in the South Asian context.

The impact of substance-induced bipolar disorder on an individual's life can be profound. It often leads to severe functional impairment, including difficulties in maintaining employment, relationships, and overall quality of life. Moreover, substance use can complicate the clinical presentation of bipolar disorder, making it more challenging to diagnose and treat.

Diagnostic Challenges

Diagnosing substance-induced bipolar disorder requires careful assessment of the timing between substance use and the onset of mood symptoms. Clinicians must establish whether the mood disturbances are directly caused by substance use or if they indicate a separate, underlying mood disorder. This distinction is vital because treatment approaches for substance-induced bipolar disorder differ significantly from those for primary bipolar disorder.

According to the DSM-5, the criteria for diagnosing substance-induced bipolar disorder include:

- A noticeable and persistent mood disturbance, characterized by an elevated, expansive, or irritable mood, with or without depressive symptoms.
- The mood disturbance arises during or within one month of substance intoxication or withdrawal.

- The disturbance leads to significant distress or impairment in social, occupational, or other key areas of functioning.

- The symptoms cannot be better accounted for by a primary bipolar disorder.

Differentiating between substance-induced and primary bipolar disorder is particularly challenging in individuals with a prolonged history of substance use. In such cases, obtaining a detailed patient history, including the relationship between the onset of mood symptoms and substance use, is essential for accurate diagnosis.

Treatment Modalities

Treating substance-induced bipolar disorder necessitates a comprehensive approach that tackles both the substance use and the mood disorder. This integrated strategy ensures that both conditions are addressed together, leading to more effective and sustained recovery. Pharmacotherapy, including mood stabilizers and antipsychotic medications, is often used to manage the mood symptoms. However, the choice of medication must be carefully considered, particularly in patients with active substance use, as certain medications may have abuse potential or interact negatively with substances of abuse.

In addition to pharmacotherapy, psychotherapy plays a crucial role in treatment. Cognitive-behavioral therapy (CBT) is particularly effective in helping patients develop coping strategies to manage both their mood symptoms and substance use. Motivational interviewing, a therapeutic approach designed to enhance a patient's motivation to change, is also commonly used in this population.

Long-term management of substance-induced bipolar disorder often involves a combination of medication, therapy, and lifestyle changes. Relapse prevention strategies, including regular monitoring and support groups, are essential to help patients maintain sobriety and stable mood.

Method

Case Study Design

This report presents a retrospective single-case study of a 24-year-old male diagnosed with Substance-Induced Bipolar and Related Disorder. A case study design was selected to offer a comprehensive evaluation of the patient's condition, treatment process, and outcomes. This method facilitates an in-depth exploration of the intricate relationship between substance use and mood disorders within a real-world clinical context

Data Collection

Data collection included clinical interviews, family reports, and medical records. Structured assessments with YMRS, DAST, and HDRS quantified symptom severity. Monitoring during detoxification confirmed the diagnosis. Family history revealed a pattern of alcohol use disorder

in the father and anxiety issues in the mother, highlighting the genetic and environmental influences on the patient's condition.

1. **Clinical Interviews**: The patient underwent structured and unstructured clinical interviews conducted by a trained psychiatrist. The initial interview focused on obtaining a comprehensive history of the patient's substance use, psychiatric symptoms, and social background. Follow-up interviews were conducted weekly during the treatment period to assess the patient's progress and response to treatment.
2. **Patient Self-Reports**: The patient was encouraged to provide self-reports regarding his mood, substance use, and any perceived triggers for his symptoms. These self-reports were collected regularly and used to monitor the patient's subjective experience of his condition and his adherence to the treatment plan.
3. **Family Interviews**: Interviews were conducted with the patient's family members to gather additional information on the patient's behavior, mood changes, and substance use history. Family members provided valuable insights into the patient's social interactions and the impact of his condition on the family unit.
4. **Medical Records**: The patient's previous medical records were reviewed to gather information on past psychiatric diagnoses, substance use history, and any previous treatments. These records provided a baseline for understanding the patient's long-term health history and helped in formulating the diagnosis.

Assessment Tools

Several standardized assessment tools were used to evaluate the patient's psychiatric symptoms, substance use, and overall functioning. These tools provided objective measures that complemented the clinical interviews and observations.

1. **Structured Clinical Interview for DSM Disorders (SCID-I)**: The SCID-I was administered to confirm the diagnosis of Substance-Induced Bipolar and Related Disorder. This semi-structured interview guide was used to assess the presence of mood symptoms and their relationship to the patient's substance use.
2. **Mental Status Examination (MSE)**: The MSE was conducted at the initial assessment and during follow-up visits to evaluate the patient's cognitive functioning, mood, thought processes, and behavior. The MSE provided a snapshot of the patient's mental state and was used to monitor changes over time.
3. **Substance Use Assessment**: The patient's substance use was assessed using a combination of self-reports and urinalysis. Urinalysis was conducted at various points during treatment to objectively verify the patient's reports of abstinence or use.
4. **Mood Assessment Scales**: The patient's mood was assessed using standardized scales such as the Young Mania Rating Scale (YMRS) and the Hamilton Depression Rating Scale (HDRS).

These scales were used to quantify the severity of manic and depressive symptoms and to track changes over the course of treatment.

Treatment Implementation

The treatment plan was developed based on the comprehensive assessment and was implemented in a phased manner. The plan included pharmacotherapy, psychotherapy, and family interventions, as detailed in the case presentation section. The patient's progress was monitored weekly, and adjustments to the treatment plan were made as necessary based on the patient's response.

Ethical Considerations

The study was conducted following ethical guidelines for case reports, ensuring confidentiality and anonymity of the patient. Informed consent was obtained from the patient for the publication of the case report. The patient's identity has been anonymized, and all personal identifiers have been removed to protect the patient's privacy.

Case Presentation

Patient Information

The patient, A.A., is a 24-year-old unmarried male from a middle-class nuclear family. He is the youngest of five siblings and lives with his family. A.A. has a history of poor academic performance, having only completed his matriculation. He is unemployed and has a long-standing history of substance abuse, which has significantly impacted his social and occupational functioning.

Reason for Referral

A.A. was referred to the outpatient psychiatry department at Government Hospital Lahore by his family due to a noticeable change in his behavior over the past month. The family reported that A.A. had been experiencing episodes of elevated mood, irritability, and increased energy. These episodes were characterized by excessive and irrelevant talking, racing thoughts, self-laughter, and inflated self-esteem. Additionally, the patient exhibited signs of psychomotor agitation, including restlessness and anger outbursts. The family also noted a marked increase in the patient's appetite.

History of Presenting Illness

A.A.'s substance use began at the age of 16, initially with cannabis. Over the years, his substance use escalated, leading to dependence on multiple substances. By 2017, A.A. had progressed to using heroin daily, consuming approximately 3 grams per day. In addition to heroin, he continued

to use cannabis, smoking 7-8 hash-filled cigarettes daily. He also reported occasional alcohol use, particularly during social gatherings.

A.A.'s substance use has led to several legal and social issues. In 2020, he was involved in a robbery, which he later admitted was driven by his need to finance his drug habit. Despite these challenges, A.A. had not sought treatment for his substance use or associated psychiatric symptoms prior to this referral.

Mental Status Examination (MSE)

Upon presentation, A.A. appeared disheveled and exhibited poor personal hygiene. He made minimal eye contact and seemed restless throughout the interview. His speech was rapid and pressured, with frequent tangentiality and circumstantiality. The patient's thought processes were disorganized, characterized by flight of ideas and racing thoughts. His mood was labile, alternating between irritability and euphoria.

A.A. demonstrated impaired cognitive functioning, with poor attention and concentration. His memory for recent events was impaired, although his remote memory appeared intact. Insight and judgment were significantly compromised, with the patient denying any problems with his substance use or mood.

Diagnostic Process

Based on the clinical presentation and history, A.A. was provisionally diagnosed with Substance-Induced Bipolar and Related Disorder (Severe). The diagnosis was made considering the temporal relationship between his mood symptoms and substance use. The manic symptoms appeared to be directly linked to his ongoing heroin and cannabis use, as well as his history of episodic alcohol use.

To confirm the diagnosis, A.A. was monitored closely over a period of two weeks during which he abstained from substance use. During this time, his manic symptoms gradually subsided, supporting the diagnosis of a substance-induced mood disorder rather than a primary bipolar disorder.

Overlapping Symptoms and Differential Diagnosis

The patient presented with elevated mood, irritability, racing thoughts, and impulsivity, overlapping with primary bipolar disorder and schizophrenia spectrum disorders. Differentiating substance-induced bipolar disorder required observing symptom resolution following detoxification. Diagnostic tools such as the Structured Clinical Interview for DSM Disorders (SCID-I), Young Mania Rating Scale (YMRS), Drug Abuse Screening Test (DAST), and Beck Depression Inventory (BDI) were pivotal.

Key differential considerations included:

1. **Primary Bipolar Disorder**: Absence of manic episodes outside substance use episodes ruled this out.
2. **Schizophrenia Spectrum Disorders**: Lack of persistent delusions or hallucinations and resolution of symptoms during abstinence excluded this diagnosis.
3. **Substance-Induced Psychotic Disorder**: The predominance of mood symptoms directed the diagnosis toward a mood disorder.

Treatment Plan

The treatment plan for A.A. was multifaceted, involving both pharmacotherapy and psychotherapy. The initial focus was on managing his acute manic symptoms and addressing his substance use.

1. **Pharmacotherapy**: A.A. was started on a mood stabilizer, specifically lithium, to manage his manic symptoms. Additionally, an antipsychotic, olanzapine, was prescribed to address the disorganized thinking and agitation. Given the patient's history of substance abuse, careful monitoring was implemented to avoid potential medication misuse.

2. **Detoxification**: A.A. underwent a supervised detoxification program to manage his withdrawal symptoms from heroin and cannabis. The detoxification process was challenging, with the patient experiencing severe cravings and agitation. Supportive care, including hydration and nutritional support, was provided to aid in his recovery.

3. **Psychotherapy**: Once stabilized, A.A. was enrolled in cognitive-behavioral therapy (CBT) to address his substance use and develop coping strategies for managing stress and cravings. Motivational interviewing was also incorporated to enhance his commitment to sobriety and treatment adherence.

4. **Family Therapy**: Given the significant impact of A.A.'s substance use on his family, family therapy sessions were conducted to improve communication and address any enabling behaviors within the family system.

    - **Psychoeducation**: Educated family members about substance-induced bipolar disorder and their role in recovery.
    - **Communication Training**: Improved understanding and reduced enabling behaviors.
    - **Problem-Solving Sessions**: Identified family dynamics contributing to substance use triggers.
    - **Behavioral Contracts**: Established agreements within the family to avoid enabling behaviors.

5. **Relapse Prevention**: A.A. was educated on relapse prevention strategies, including the identification of triggers and the development of a support network. He was encouraged to attend support groups, such as Narcotics Anonymous, to maintain his sobriety.

Patient Progress and Outcome

Over the course of treatment, A.A. demonstrated significant improvement. His mood stabilized, and his manic symptoms resolved. He remained abstinent from heroin and cannabis throughout his treatment, although he continued to struggle with cravings. The patient's cognitive functioning also improved, with better attention and concentration noted during follow-up visits.

A.A. successfully completed the detoxification program and continued with outpatient therapy. His family reported a marked improvement in his behavior, noting that he was more engaged in daily activities and exhibited fewer irritability and anger outbursts.

Despite these improvements, A.A. remains at risk for relapse due to his long history of substance use and the chronic nature of his condition. Ongoing monitoring and support are essential to ensure continued recovery and prevent a recurrence of symptoms.

1. **Implementation of therapy**:
   - Sessions were facilitated by a trained clinical psychologist with experience in systemic family therapy.
   - Homework Assignments: Families practiced active listening and communication exercises at home, reporting progress in subsequent sessions.
2. **Patient Response on Therapy**:
   - Initially resistant to family involvement, the patient gradually appreciated the improved family dynamics, reporting reduced feelings of isolation and better emotional support.
   - Family feedback indicated enhanced understanding of the disorder and increased confidence in managing relapses.
3. **Outcome Ratings**:
   - **Pre-Therapy YMRS Score**: 35 (severe mania).
   - **Post-Therapy YMRS Score**: 15 (mild symptoms).
   - **Family Conflict Scale Rating**: Improved from 7/10 (high conflict) to 3/10 (low conflict).

Graphical Representation of Therapeutic Outcomes

The chart below illustrates the reduction in YMRS scores and family conflict levels over the course of therapy:

Assessment Period	YMRS Score	Family Conflict Score
Pre-Therapy	35	7
Post-Therapy (8 weeks)	15	3

Discussion

This case highlights the complexities of diagnosing and treating substance-induced bipolar disorder. The patient's extensive history of substance use, coupled with his severe psychiatric symptoms, required a comprehensive and integrated treatment approach. The literature on substance-induced bipolar disorder emphasizes the importance of accurate diagnosis, as the treatment strategies differ significantly from those used for primary bipolar disorder (Goldstein & Levitt, 2006).

One of the key challenges in this case was differentiating between substance-induced and primary bipolar disorder. The patient's manic symptoms were closely linked to his substance use, particularly heroin and cannabis, making it clear that the mood disturbance was substance-induced. This aligns with findings from studies that suggest a strong temporal relationship between substance use and mood symptoms in substance-induced bipolar disorder (Swann et al., 2004).

This case illustrates the complex interplay between substance use and mood disorders. Accurate diagnosis required separating mood symptoms from the direct effects of substances. Indigenous family therapy methods enriched treatment by addressing cultural norms and family dynamics specific to the South Asian context. Homework assignments reinforced learning, while outcome ratings quantified improvements.

The diagnostic process in substance-induced bipolar disorder is inherently challenging due to the overlapping symptoms of mood disorders and substance use. In this case, the use of a structured diagnostic approach, including a period of abstinence, was crucial in confirming the diagnosis. This approach is supported by clinical guidelines, which recommend monitoring patients during a period of substance abstinence to differentiate between substance-induced and primary mood disorders (American Psychiatric Association, 2013).

The use of standardized assessment tools, such as the Structured Clinical Interview for DSM Disorders (SCID), can also aid in the diagnostic process by providing a comprehensive evaluation of the patient's symptoms and history (First et al., 1995). However, the clinician must remain vigilant for the possibility of co-occurring mood disorders, particularly in patients with a long history of substance use.

The treatment of substance-induced bipolar disorder requires a multifaceted approach that addresses both the substance use and the mood disorder. In this case, the combination of

pharmacotherapy and psychotherapy proved effective in managing the patient's symptoms and promoting recovery. The use of lithium and olanzapine is well-supported in the literature for managing manic symptoms, particularly in patients with a history of substance use (Geller et al., 2004).

However, the treatment of substance-induced bipolar disorder extends beyond symptom management. Addressing the underlying substance use is critical to preventing relapse and promoting long-term recovery. In this case, the use of CBT and motivational interviewing was essential in helping the patient develop coping strategies and enhance his motivation to maintain sobriety. The integration of family therapy also played a crucial role in addressing the broader impact of substance use on the patient's social environment.

Long-Term Outcomes and Implications

Substance-induced bipolar disorder is associated with a high risk of relapse, both in terms of substance use and mood symptoms. The chronic nature of the disorder necessitates ongoing monitoring and support to ensure continued recovery. In this case, the patient's progress during treatment was encouraging, but the risk of relapse remains a concern due to his long history of substance use.

The case underscores the importance of integrated treatment approaches that address both substance use and mood disorders. It also highlights the need for continued research into the most effective treatment strategies for this population. Future studies should explore the long-term outcomes of patients with substance-induced bipolar disorder and the factors that contribute to sustained recovery.

Conclusion

This case report illustrates the complex interplay between substance use and mood disorders, specifically in the context of substance-induced bipolar disorder. The patient's history of extensive substance use and associated psychiatric symptoms presented significant challenges in diagnosis and treatment. However, with a comprehensive and integrated approach, including pharmacotherapy, psychotherapy, and family therapy, the patient demonstrated significant improvement.

The case highlights the importance of accurate diagnosis and the need for a tailored treatment plan that addresses both the substance use and the mood disorder. It also underscores the ongoing risk of relapse in this population and the need for long-term management strategies to promote sustained recovery.

In conclusion, substance-induced bipolar disorder is a challenging condition that requires a multifaceted treatment approach. Clinicians must be vigilant in distinguishing between substance-induced and primary mood disorders and must develop integrated treatment plans that address the

unique needs of this population. Continued research and clinical innovation are essential to improving outcomes for individuals with substance-induced bipolar disorder.

Effective management of substance-induced bipolar disorder necessitates integrated strategies combining pharmacotherapy, psychotherapy, and family interventions. Indigenous approaches provide cultural relevance, enhancing outcomes. Future research should further explore region-specific interventions and long-term recovery strategies.

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