

Bipolar Disorder: A Comprehensive Analysis of its Etiology, Impact, and Treatment Options

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Abstract:

Bipolar disorder (BD) is a disorder significantly impacts individuals worldwide, marked by alternating episodes of mania and depression. The onset and progression of the disease are impact by a interplay of genetic factors, neurobiological differences, environmental stressors, hormonal imbalances, and circadian rhythm disruptions. These factors collectively contribute to the manifestation and exacerbation of the disorder. The disorder profoundly affect both mental and physical health. The pervasive impact on daily life can be overwhelming, resulting in severe emotional distress. This distress is compounded by the high risk of suicide associated with the disorder, underscoring the critical need for vigilant care and comprehensive support to ensure the well-being of affected individuals. Effective treatment requires a holistic approach combining pharmacological interventions, psychotherapy, and lifestyle adjustments. Mood stabilizers, antipsychotics, and antidepressants, alongside Cognitive Behavioral Therapy (CBT), psychoeducation, and family therapy, form the cornerstone of treatment. Lifestyle modifications, including regular exercise, adequate sleep, and balanced nutrition, are crucial for symptom management. Electroconvulsive Therapy (ECT) is considered for severe cases. This review underscores the need for continuous research and innovation in therapeutic strategies and emphasizes bridging global disparities in mental health services to ensure equitable care and improve the well-being of people with bipolar disorder.

Keywords: Bipolar Disorder, Mood Disorders, Psychiatric Treatment, Manic Depression, Etiology, Comorbidity

1. Introduction

Bipolar disorder is a frequent, severe, mostly recurrent mood disorder. Mania occurs when emotional highs are severe and continuous, or are combined with psychiatric symptoms that result in markedly disturbed behavior and functioning. BD refers to less severe mood elevations that may be fairly brief and less disruptive, and usually do not result in the patient seeking medical attention; however, mania may progress to hypomania. Bipolar disorder is categorized as Bipolar Disorder I (BD I) with manic episodes and Bipolar Disorder II (BD II) with manic episodes only. Although manic and depressive symptoms have traditionally been viewed as opposing poles, they often co-occur, resulting in a “mixed” state [1].

When dealing with stressful events, mood swings are a common occurrence in life. An underlying affective disorder may be present if mood swings are significant and continuous and cause significant pain or damage. One can categorise affective diseases based on the intensity and level of elevated moods, , ranging from monophasic dis-

order, to BD II, to BD I [2].

Young people are one of the leading causes of disability due to BD. In a global mental health survey, the rate of BD was consistent across different groups [3].

However, patients’ access to treatment varies greatly from country to country, making the treatment of the disorder particularly difficult in developing countries. In terms of gender, Most cases of bipolar II disorder occur in women.

2. Methodology

This paper is a review based on researches and studies collected using Google Scholar in the field of BD. The keywords in the search were BD, treatment of bipolar disorder, causes, and effects.

3. Results and Discussion

3.1 Etiology

Heritability estimates range from 60% to 80%, with a strong genetic component in bipolar disorder. The risk is

significantly increased if a first-degree relative has BD. Numerous genes are thought to interact to contribute to the disorder, though no single gene causes the disorder by itself [4].

Neurobiological Factors: Brain structure and function play significant roles in BD. Neuroimaging research has shown differences in the brain volumes and activity of certain areas in BD patients compared to those without the disorder. These areas include the prefrontal cortex, amygdala, and other parts of the brain involved in emotional regulation [5].

Hormonal Imbalances: Hormonal changes may also be related to triggering or exacerbating bipolar disorder. For instance, thyroid hormone levels have been linked to mood disorders.

Environmental Factors: Stressful life events can trigger episodes of bipolar disorder in individuals who are genetically predisposed. Additionally, substance abuse can both precipitate and exacerbate episodes.

Circadian Rhythm Disruptions: Disruptions in the body's natural sleep-wake cycle have been associated with bipolar disorder, possibly due to the impact on hormonal and neurotransmitter systems.

3.2 Impact

Mental Health: Individuals with bipolar disorder experience episodes of depression and mania, which can be severe and recurrent. Depression episodes can include feelings of sadness, hopelessness, and loss of interest or pleasure in most activities. Mania episodes can include increased energy, activity, and restlessness, excessively high mood, irritability, and often poor decision-making. Both phases can be accompanied by anxiety, psychosis, and suicidal thoughts. All 13 MDQ items were reported ($p < .0001$) more frequently by MDQ-positive subjects compared with MDQ-negative subjects: felt good/hyper (48% vs. 10%), irritable/shouted fights (80% vs. 31%), more confident (61% vs. 30%), less sleep (54% vs. 26%), more talkative (60% vs. 21%), racing thoughts (68% vs. 26%), easily distracted (74% vs. 30%), more energy (61% vs. 28%), more active (60% vs. 30%), more social (35% vs. 6%),

more interest in sex (55% vs. 22%), foolish/risky behavior (57% vs. 10%), and money trouble (53% vs. 9%) [6]

Physical Health: Bipolar disorder has been linked with increased risk of various physical health issues, including cardiovascular disease, diabetes, obesity, and thyroid disease, partly due to the disorder itself and partly due to side effects of some medications used in treatment.

Relationships: The mood swings associated with bipolar disorder can cause significant stress and strain on personal relationships. The unpredictability of mood episodes can

be challenging for family members, friends, and partners, and maintaining stable relationships can be difficult.

Employment and Financial Stability: The episodic nature of the illness can lead to difficulties in maintaining consistent employment. During manic or depressive episodes, an individual's ability to function at work can be significantly impaired, leading to job loss, decreased productivity, and financial instability.

Social Functioning: Social interactions can be greatly affected by bipolar disorder. During manic episodes, individuals may engage in behavior that seems aggressive or overly assertive. During depressive episodes, social withdrawal can occur. This can lead to isolation and difficulties in social relationships.

Suicide Risk: Bipolar disorder carries a high risk of suicide. The risk is due to the severe depression that can be part of the illness, impulsivity during manic phases, and the chronic nature of the disorder.

3.3 Treatment

3.3.1 Psychotherapy

By changing their thought patterns and behaviors, cognitive behavioral therapy (CBT) assists patients in managing problems. It's particularly beneficial in treating depression and equipping individuals with stress management skills. The most studied techniques are psychoeducation and CBT, and they consistently yield good results. Controlled studies have confirmed the effectiveness of CBT, and it has been extensively studied. According to these studies, the therapy significantly altered maladaptive thoughts and behaviours that might have an impact on drug adherence. During the treatment period and follow-up, patients demonstrated higher compliance rates and fewer hospitalizations. Cochran conducted the first randomized controlled trial utilizing cognitive behavioral therapy (CBT) for patients with BD to boost medication adherence. 28 participants were assigned to either standard treatment (which is the group that receives sessions as required by the patient's psychiatrist) or standard treatment plus 6 weekly sessions using cognitive and behavioral techniques on a random basis. Beck's model was only employed by Cochran, where patients were taught through behavioral monitoring techniques that thoughts have an impact on their behavior, and were instructed on how to generate more adaptive thoughts to alter their subsequent behavior. The CBT group showed a significant decrease in relapses and improved medication adherence at post-treatment and 6-month follow-up. [7]

Nearly half of the BD patients cannot be benefited from current pharmacological treatments. Studies that examined the effectiveness of psychoeducation and CBT for BD

have shown that both are effective for preventing relapse in individuals receiving drug therapy, according to recent reviews of studies. A study was conducted to compare the differences between standard treatment for bipolar disorder and psychoeducation as an additional therapy during a recent study. Shorter hospital stays were associated with fewer recur and less acute symptoms for patients who received adjunctive psychoeducation therapy. Compared to conventional therapy, psychological adjunctive therapy has a longer-term benefit of being less costly and more effective. The last few years have seen an increase in the adoption of structured psychological therapies that combine both psychoeducation and cognitivebehavioral therapy. Psychoeducation has been found to be effective in treating and preventing manic and depressive episodes in bipolar disorder, but studies have shown that cognitive-behavioral therapy is particularly helpful in treating and preventing depression. The expectation was that combining both therapies would be particularly beneficial. Research has indicated that enhancing patients' insight into severe mental illnesses, such as schizophrenia, through psychoeducation without providing clues to reduce depressive symptoms can pose certain risks according to studies.

Psychoeducation: Educating patients about bipolar disorder and its treatment can improve adherence to treatment plans and reduce relapses.

Family Therapy: This helps family members understand the disorder and provides them with strategies to cope with challenges. Family therapy is an essential component in the treatment of individuals with mental health disorders.

One of the primary goals of family therapy is to create a supportive environment. Family members are taught to recognize early warning signs and respond appropriately. They also acquire practical skills to manage stress, resolve conflicts, and provide emotional support

Furthermore, family therapy addresses the interpersonal dynamics. By exploring issues within the family unit, therapy can lead to healthier relationships and a better home environment.

Stabilizing daily rhythms, such as sleeping, eating, and activity schedules, is the main focus of Interpersonal and Social Rhythm Therapy (IPSRT), which can aid in managing symptoms of bipolar disorder.

Lifestyle Adjustments and Supportive Therapies

Regular Exercise: Helps manage mood symptoms and overall health.

Sleep Hygiene: Maintaining a regular sleep pattern is crucial in managing bipolar disorder.

Diet and Nutrition: A balanced diet supports overall health and can impact mood stability.

Avoiding Drugs and Alcohol: Substance abuse can com-

plicate the treatment and course of bipolar disorder.

Support Groups: These can provide additional emotional support and a sense of community. [4]

3.3.2 Electroconvulsive Therapy (ECT)

For severe cases or when medications and therapy have not been effective, ECT can be considered. It is particularly effective for severe depression and suicidal ideation. [5] When traditional treatments such as medications and therapy is been effective, Electroconvulsive Therapy (ECT) can be conducted as a viable alternative. This treatment modality is particularly effective for individuals suffering from mental disease ECT has been shown to be highly effective in addressing suicidal ideation, providing rapid relief for patients who are at immediate risk of self-harm [5].

The decision to use ECT is not taken lightly and involves a thorough evaluation by a team of medical professionals to ensure that the patient is an appropriate candidate for the procedure. This comprehensive approach aims to maximize the benefits of ECT while minimizing potential risks and side effects ECT is typically administered in a series of treatments, with the frequency and number of sessions tailored to the individual needs of the patient.

Despite some misconceptions and the historical stigma associated with ECT, contemporary practice has evolved significantly, making it a safe and effective option for many individuals who have not responded to other forms of treatment. The success of ECT in alleviating symptoms highlights its importance as a therapeutic option. For many patients, ECT offers a lifeline, providing hope and the possibility of recovery when other treatments have failed. As such, it plays a crucial role in the comprehensive care of individuals with severe and treatment-resistant forms of mental illness.

4. Conclusion

This comprehensive review underscores the complexity of bipolar disorder, a multifaceted mood disorder characterized by alternating episodes of mania and depression. The etiology of bipolar disorder is influenced by genetic, neurobiological, hormonal, and environmental factors, highlighting its diverse origins and the challenges associated with its management. The disorder significantly impairs multiple aspects of life, including mental and physical health, relationships, employment, and overall quality of life. Due to its profound impact, bipolar disorder necessitates a holistic approach to treatment, combining pharmacological interventions, psychotherapy, and lifestyle adjustments.

The cornerstone of managing bipolar disorder lies in the use of mood stabilizers, supplemented by antipsychotics

and cautious use of antidepressants. Psychotherapeutic interventions like Cognitive Behavioral Therapy and Family Therapy not only support the individual but also educate and involve family members, enhancing treatment outcomes. Moreover, lifestyle modifications such as regular exercise, adequate sleep, and nutritional balance are crucial for managing symptoms and improving life quality. Despite the availability of multiple treatment options, the variability in individual responses necessitates continuous research and innovation in therapeutic strategies. Moreover, the global disparity in access to mental health services calls for an international effort to bridge the gap, ensuring that all individuals suffering from bipolar disorder receive adequate and equitable care.

The high risk of suicide associated with bipolar disorder further emphasizes the need for vigilant monitoring and comprehensive care strategies, aiming not only to treat the disorder but also to enhance the overall well-being of those affected. As research continues to unravel the complexities of bipolar disorder, it is imperative that treatment approaches evolve in tandem, ensuring that they are both scientifically grounded and holistically oriented. This review advocates for ongoing advancements in treatment methodologies and further research to better understand and manage bipolar disorder, aiming for improved out-

comes and quality of life for patients worldwide.

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