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Causes and Treatment of Bipolar Disorder

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Abstract: Bipolar disorder is a psychological illness that is directly associated to suicide and is marked by episodes of manic or hypomanic periods and depressed. Suicidal conduct in people with bipolar illness has a highly complicated pathophysiological basis and closely related to psychosocial factors, genes, environment, etc. This article examines the influencing factors of physiology and psychology and the common psychotherapeutic approaches used to treat bipolar disorder, comprising psycho-educational interventions, interpersonal and social rhythm therapy, and family therapy, and cognitive behavioral therapy. The present urges people with bipolar disorder require psychosocial counseling in addition to pharmacological therapy. Several bipolar illness therapies have both advantages and disadvantages, which are currently debatable, and it is challenging to come to reliable conclusions from pertinent research. There is still a need for further future evidence-based medical research to support drug and psychotherapy treatments for bipolar disorder. Large sample studies in natural scenarios may be one of the future research directions.

Keywords: bipolar disorder, mania, depression, cognitive behavioral therapies, treatment

1. Introduction

The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), published by the American Psychiatric Association, includes four basic categories of bipolar disorder: BD I (depression episodes and at least one full-blown manic episode); BD II (several long-lasting depressive episodes, minimally manic episodes at least once, but no manic episodes); cyclothymic disorder (multiple bouts of hypomania and depression, in which the depression does not match the requirements for a depressive episode); and disorder not else described by bipolar (symptoms and episodes similar to depression and hypomania that may alternate quickly but may not fully satisfy the standards Any of these diseases mentioned above) [1]. A syndromal manic episode is the hallmark of BD I, which is indicated to affect between 0.6% and 1.0% of people throughout their lives globally [2]. A diagnosis of BD II requires a combined hypomanic episode and a major depressive episode., which has an estimated lifetime incidence of 0.4% to 1.1% worldwide [2]. In recent years, patients with BD have received great attention from the medical community, but there is still no effective solution to clinical problems and interventions cannot meet the needs of patients.BD is a mental condition that has an extremely high prevalence and suicide rate. Since it is not possible to judge the patient's condition in a quantitative or qualitative way clinically, the misdiagnosis rate is high. Of all psychiatric disorders, high lifetime suicide attempt rates and suicide mortality are both linked to BD. Patients with BD have a lifetime attempt rate of 25% to 50%, and a

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fatality risk of 8% to 19% from suicide [3]. These data highlight the dangers of borderline personality disorder and the need to study and treat it. Many young people are upset by the intense job pressure brought on by the quickening of life, excessive mental tension which leads to endocrine dysfunction, reduced immunity and resistance, and induces physical and mental diseases. BD is a common psychiatric disorder known for its high prevalence, high suicide rate, and high rate of misdiagnosis. The lives of people with BD will be greatly affected and cause serious financial burdens to families and society. BD has grown to be a significant global public health problem. The value of studying BD extends beyond medicine, but also of sociological significance in reducing the burden on families and socio-economic issues. This article will conduct the main research from two aspects: examine the reasons and methods of treating BD and identify more potent therapy approaches.

2. Bipolar Disorder

2.1. The Symptoms of BD

BD is currently used to describe a range of affective disorders in which individuals suffer depressive episodes marked by low mood and associated symptoms (For instance, a decrease in energy and enjoyment). Manic episodes are also experienced by patients. It is distinguished by an ecstatic, irritated, or both moods. Moreover, there are accompanying symptoms like greater energy and a decreased need for sleep, or hypomania, which has symptoms that are milder or shorter-lived than those of mania [4]. It is clinically characterized by recurrent depression (at least two bouts of substantial mood or activity disruption), sometimes manifested by elevated mood, high energy, and increased activity (mania or hypomania), sometimes with low mood, decreased energy, and decreased activity (depression) [5]. With the deepening of disease research, the clinical understanding of bipolar disorder with anxiety symptoms has also been improved, including early age of onset, severe disease, frequent suicidal behavior, high risk of impulsive aggression, difficulty in alleviating symptoms, undesirable drug treatment effect, drug abuse and alcohol abuse. Those symptoms are all clinical features of bipolar disorder with anxiety symptoms [6].

2.2. The Diagnosis of BD

BD I has just one, two, or more manic episodes, or manic episodes interspersed with significant depression episodes. A manic episode is a severe emotional state characterized by exhilaration, impatience, or a sense of self-importance that lasts at least one week, accompanied by an increase in the activity of the individual's energy or subjective experience. There may also be additional identifying signs, such rapid speaking, incessant and difficult to interrupt, rushing thinking, a rise in self-confidence or ambition, a reduction in sleepiness, distraction, impulsive or risky conduct, and quick transitions between various emotional states (i.e., emotional lability). On the great majority of days, strong manic and depressed symptoms alternate rapidly or mix together during mixed episodes (at least 2 weeks) [1].

One or more hypomanic episodes and at least one depressed episode characterize BD II, an episodic mood disorder. An emotional condition that lasts for at least four days and is marked by euphoria, a high mood, irritation, activity, and chatter is known as a hypomanic episode. accompanied by other identifying signs including heightened vigor and activity, as well as a reduced need for sleep, verbal stress, shifting of thoughts, distraction, inattention, or reckless behavior. The majority of the time, appeal symptoms are not accompanied by psychotic symptoms and merely appear as individual anthropogenic modifications that do not significantly hinder function. A depressive episode is defined by a sad mood that lasts for at least two weeks, a decline in interest, and other symptoms such changes in food or sleep, psychomotor agitation or retardation,

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exhaustion, inappropriate or meaningless guilt, feelings of hopelessness, and suicide thoughts. There is no history of manic or mixed episodes prior to a depressive episode [1].

3. Etiology

3.1. Physiological Causes

Research indicates that BD has a significant hereditary component. The heritability rates of BD are up to 70-80% from the evidence of twin studies [7]. Moreover, twin studies revealed that hereditary factors contribute to most of the familiarity with BD. Several investigations found that BD's concordance rate is much higher among genetically identical monozygotic twin pairs (MZ twin pairs) than among dizygotic twin pairs (DZ twin pairs) (who share, on average, half their genes) [8].Regarding individual hormone levels, BD patients also show some abnormality. Several investigations have revealed that the hypothalamic-pituitary-auxin axis (HPA), hypothalamic-pituitary-thyroid axis (HPT), and hypothalamic-pituitary-auxin axis, in particular, are all dysfunctional in individuals with BD. Studies have found that some patients with depressive episodes have excessive plasma cortisol secretion, changes in circadian rhythm, no spontaneous cortisol secretion inhibition at night, and dexamethasone cannot inhibit cortisol secretion.

3.2. Psychological Causes

3.2.1. Family

In early qualitative studies, the absence of family intimacy, overbearing mothers, and emotionally or positionally absent fathers were all associated with BD. Quantitative research have discovered a link between parenting practices and the emergence of BD. Patients with BD express themselves less in the family, which is associated with comorbidities of bipolar and dysthymia. At the same time, patients with low family cohesion have a significantly higher history of suicide attempts [9]. Rosenfarb and colleagues found that upbringing and attachment in bipolar patients differed from normal controls. BD and single patients with phase depression felt less maternal love than normal controls. In the explicit self-rating report on attachment patterns, the BD and unipolar depression groups were less attached to the mother than the control group [9]. Adolescents with BD and those with attention deficit hyperactivity disorder were compared by Geller and colleagues Between 7 and 16 years old (ADHD). Social controls in the same family and peer characteristic groups, and semi-structured interviews were used to assess adolescents and their mothers. The results showed that adolescents with BD were associated with ADHD and community controls. Adolescents with BD also have more trauma in the parent-child relationship: they feel less warmth from their mother and more tension and hostility from their mother or father. Adolescents with BD, however, have fewer friends and less developed social skills than do those with ADHD [9]. Neeren and colleagues found that different parenting styles were measured through the Parental Parenting Style Questionnaire and found that different maternal parenting styles were associated with BD to varying degrees. Adolescents with BD feel less warmth and acceptance and more from the parents' mind control [9]. A study by Chinese scholar Yao Yuhua and colleagues showed that parents' poor parenting style was related to the occurrence of violent aggression among adolescents. Compared with the control group, adolescents with violent aggression showed lower emotional warmth and understanding, higher refusal and denial, higher severe punishment, and excessive interference protection. Excessive and severe punishment in parenting can lead to resentment, revenge and even criminal activity in their children. Excessive interference by the father can lead to emotional instability in children, like provocation, brutal impulsivity, and are more likely to produce violent crimes; Excessive protection and interference by mothers can exacerbate children's emotional instability

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and strong emotional reactions, such as anxiety and worry [10]. The parenting style of parents is an important factor affecting the socialization and development of children. It may also affect the level of symptoms of BD.

3.2.2. Childhood Trauma

Those who experienced trauma as children are more prone to acquire BD. Studies have shown that the abuse experienced in childhood is closely related to the onset of BD [11]. Leverich examined a sizable group of bipolar patients and discovered that those with BD had greater incidences of both physical and sexual abuse throughout childhood. People who experienced physical and sexual abuse in childhood had a higher lifetime morbidity, earlier age of onset, and faster cycle frequency than patients with no abuse history. A history of physical abuse tends to be linked to a rise in mania, and both physical and sexual abuse are linked to an increase in suicidal conduct. The course of treatment for patients who have experienced childhood abuse is lengthier and more severe than it is for those who have not. Grandin investigated childhood stressful events, including abuse (physical and sexual abuse), and found that the more childhood stressful events that occurred before the age of onset, the earlier the age of onset. Childhood abuse can also have an impact on an individual's impulsive-aggressive behavior [9]. In patients with BD, traumatic experiences throughout early childhood can have a significant effect on how patients are attributed, leading to potentially dysfunctional attitudes and making them more likely to have negative thinking in the future. Patients with BD with childhood traumatic experiences are more inclined to make negative explanations of events, and are more likely to make negative self-evaluations, resulting in emotional polarization, so that individuals develop from a bad psychological state to BD.

4. Treatment

4.1. Cognitive Behavioral Therapies (CBT)

For many emotional and behavioral issues, cognitive behavioral therapies have established themselves as mainstream, successful psychosocial interventions. Some research suggests that CBT is as efficient as other types of psychotherapy or medication, and perhaps even more so [12].
CBT is founded on a number of fundamental ideas, such as: Psychological issues can be dealt with more effectively by learning new coping mechanisms, which will help people with psychological issues feel better and be more effective in their daily lives. Psychological issues are partly derived in defective or unhelpful ways of thinking, acquired patterns of non-helpful behavior [12]. CBT aims to alter patients' thought processes. These methods might involve a) Realizing the thinking errors that led to the problem and then reevaluating them in a realistic context; b) Developing a deeper comprehension of others' motivations and behaviors; c) Handle challenging situations with problem-solving skills [12]. CBT treatment usually involves trying to change behavior patterns. CBT techniques include: a) Addressing one's concern instead of avoiding it; b) Prepare for possible awkward encounters by role-playing; and c) Gain the ability to relax and unwind [12]. The goal of CBT aims to assist people treat themselves. Patients get help about promoting coping strategies so they can alter problematic thoughts, emotions, and behavior.

Forty-two BD patients were distributed randomly to get either CBT or standard clinical treatment in one trial, treated with usual medications, and none received psychosocial therapy prior to enrollment. In this study, CBT included psychoeducation, focusing on the importance of medication adherence and how to improve adherence, coping with stress, cognitive reconstruction, life regularity, and sleep retention. After 6 months of follow-up, the results showed that: a) The overall social functioning rating (SFRS) score, the average increase in the CBT group was 16.4 points, while the control group increased on average 3.9 points ($p<0.05$); b) Depressive symptoms (Beck

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depression questionnaire), Compared to the control group, the CBT group had an average decline of 7.3 points as opposed to 2.5 points for the control group ($p<0.02$).; c) Other 29 patients who have no obvious efficacy in the control group after 6 months of follow-up were changed to the CBT group and compared with the patients who remained in the control group, the recurrence rate of this group was reduced by 60% after 18 months of follow-up, which was significantly different from the control group [13].

4.2. Family Focused Therapy (FFT)

Family focus therapy is centered on the patient's family's impact on the disease's progression and the degree to which the patient's family members are impacted emotionally by BD. Its purpose is to help patients and their families identify and solve difficulties and conflicts within the family through psychological education, reduce the tension in the family environment, and let patients have a good recovery environment. It addresses fundamental information regarding BD, family member interactions, and enhancing teamwork abilities [14]. Home focus treatment is an effective addition to medicine for reducing symptoms in people with BD and lowering hospitalization rates, according to studies [15]. Family strife, criticism, and disagreement are all highly correlated with the start of BD. Family psycho-educational treatment appears to be helpful in avoiding recurrence and managing symptoms, according to mounting research.

4.3. Interpersonal and Social Rhythm Therapy (IPSRT)

There is strong evidence linking abnormalities in circadian rhythms to mood instability in BD. Interpersonal and Social Rhythm Therapy (IPSRT), which evolved from interpersonal psychosocial treatment for depression, is a brief psychotherapy strategy that concentrates on the current issues here. It is based on interpersonal psychotherapy, focusing on addressing the impact of interpersonal stress on emotions, combined with behavioral adjustments to stabilize daily rhythms. The foundation of conventional interpersonal treatment is the hypothesis that stressful interpersonal situations cause people with a genetic predisposition to BD to experience the emergence of emotional problems, particularly depression. Therefore, for these general networking conditions, helping patients understand how to recognize social styles that are inappropriate are closely related to their depressive symptoms, thereby improving patients' interpersonal skills. It differs slightly from interpersonal psychotherapy in that it places more focus on and is more concerned with the impact that daily events play in the patient's life. The basic theoretical assumption is that symptoms are caused by changes in work and rest routines and social stimuli and disorders of neurotransmitters. Patients should learn to monitor the internal connections and interactions between daily routines, schedules, and levels of social stimulation and emotions. For example, patients may find that hypomanic symptoms occur when sleep is irregular or less than 8 hours of sleep per day and night. In response to this phenomenon, patients can help develop a variety of related coping strategies, including medications, taking a warm bath before bed, or other measures to ensure 8 hours of sleep per night. In the later stages of treatment, help patients learn to regulate daily routines, work and rest rhythms, and seek the best balance between these factors. Sometimes life events can break established patterns, so patients need to learn to prevent problems, anticipate possible changes and how to respond [16]. Bipolar I patients who were intensely manic, mixed, or depressive were randomized to receive either weekly interpersonal and social rhythm treatment or similarly intensive clinical care, all of which included medication, in a large (n=175) randomised clinical study. IPSRT was randomly assigned again to compare to clinical management after acute stabilization, and therapy lasted for 2 years. After acute stabilization, there was no significant differences among groups. Nevertheless, compared to clinical care group, patients who got IPSRT

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had longer duration of relapse and better occupational function in the maintenance stage. Also, patients being able to stabilize their day or overnight patterns throughout acute treatment benefited the most from IPSRT's impacts on delaying recurrences [17]. After an acute episode, individuals may benefit from assistance in stabilizing their sleep and waking cycles in order to prevent further mood instability.

4.4. Psycho-Educational Interventions

Because of the appeal to a wider population as well as the immediate effects and economic reasons, psychoeducation is recommended as the first choice for psychological intervention in BD. The goal of psychoeducational interventions is to help patients become experts in managing BD, taking a proactive approach to managing the disorder by accepting the condition, understanding the symptoms, and treatment options [18]. People with BD should receive psychoeducation on three topics: a) accept and recognize the authority of psychiatry and understand themselves in this way; b) see that individuals can exercise restraint; c) Think that they are capable of self-reflection and change. Psychoeducational interventions usually include an introduction to the therapist and interpretation of treatment guidelines, notification of confidentiality issues, signing psychoeducational agreements, and explaining general concepts of BD. Another focus of psychoeducational interventions is to explain the biological nature of BD and the social stigma associated with the disease to correct the patient's inadequate understanding and guilt while explaining depressive symptoms. Moreover, psychoeducational interventions also emphasize the importance of adherence to medication and access to a doctor. Psychoeducational interventions also include understanding risk factors for relapse. To prevent relapse, psychoeducational interventions help patients learn coping skills and develop coping plans to recognize signs of relapse [18].

5. Suggestions for Future Study

The severity of diagnostic problems is still underestimated. For now, the accuracy of diagnosing BD remains a problem, in part because of mixed episodes and the ease of misdiagnosis of depression. since both illnesses have the same diagnostic standards for depressed episodes. Categories of family psychoeducation plus skills development, such as FFT, can be considered a well-established treatment. In teenagers, interpersonal and social rhythm treatment is still in the experimental stage. From a treatment perspective, the author suggest that it is important to start addressing functional outcomes rather than simply focusing on symptom reduction. A better understanding of the factors behind these injuries will allow for targeted prevention and treatment. Conclusive clinical studies on BD still need further studies. The authors suggest the need for more and longer-term representative prospective studies in children, adolescents, and adults.

6. Conclusion

Mental health has always been an important aspect of human life. The amount of people suffering from bipolar disorder is increasing every year. Society should pay more attention to this series of issues. According to studies, the high rates of BD, suicide, and misdiagnosis are certainly not simple stress reactions, it is closely related to psychosocial factors, like genes, family environment and so on. Cognitive behavioral therapy and psychological interventions are the most effective psychotherapeutic approaches. Of course, it is also more important to study and improve treatments. Treatment of BD is mainly through medication and psychological intervention. At present, a combination of the two is used for treatment in clinical practice, and certain results have been achieved. In recent years, effective therapies for BD have emerged and have been widely valued by clinicians. At present, the advantages and disadvantages of various therapies for BD are still

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controversial, and it is challenging to get reliable conclusions from pertinent studies. Drug and psychotherapeutic methods for BD still need more evidence-based medical research to support in the future.

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