

*Qayimjonov Oyatullo Zoxidjon o'g'li*

*Andijan state medical institute*

## **BIPOLAR DISORDERS SECONDARY PROPHYLAXIS DURING THE PRODROMIC PERIOD; MODERN DIAGNOSTIC METHODS OF SUBCLINICAL SYMPTOMS**

**Annotation:** This article details bipolar disorder. Prevention, treatment and symptoms of the disease are discussed. It is considered a mental disorder associated with the nervous system. The mood will not be the same sick person, constantly changing. The development of bipolar disorder often begins with the prodromic (or prodromal) period. During this period, the full symptoms of the disease are not yet noticeable, but subclinical signs may be present, which may worsen over time and become a complete form of bipolar disorder.

**Keywords:** Bipolar, manic, preventive, mood, genetics, brain, mechanical, symptom, Prodrom, biomarker.

Bipolar disorder is a mental disorder. People with bipolar disorder have mood swings, they feel happy or loud (manic) or very low and depressed as usual. This change in mood occurs no matter what happens in a person's life. Mood swings can even be mixed so that the person is manic and depressed. Mood swings can last from a few days to several months and even years, and can affect people's thinking, activities, and daily activities. A 2013 study of the global burden of disease found that bipolar I and II occur in 1.2% of the population. The exact cause of bipolar disorder is unknown, but genetics, environment, brain structure, and chemistry may play a role. The results of the study showed that people who have a first-degree relative, such as their parents or siblings, are more likely to develop this disease. While people with bipolar disorder who have a parent or brother are more likely to develop the disease themselves, most people with bipolar disorder in the family do not develop the disease. Environmental factors such as Stress and trauma probably affect the development of bipolar disorder. Bipolar disorder (BB) is one of the most complex and serious diseases for human mental health. In this disease, sharp mood swings — manic and depressive states — are the main signs. The development of bipolar disorder often begins with the prodromic (or prodromal) period. During this period, the full symptoms of the disease are not yet noticeable, but subclinical signs may be present, which may worsen over time and become a complete form of bipolar disorder. Therefore, it is very important to make an early diagnosis and take preventive measures during the prodrome period.

### **Prodromic period of bipolar disorder:**

The prodromic period of bipolar disorder is the time before the symptoms of the disease develop significantly, in which the patient does not yet experience serious symptoms. However, during this period, subclinical, that is, less noticeable symptoms may appear, which may increase over time and lead to the development of complete bipolar disorder. In bipolar disorder, the prodromic period often begins among young adults and adolescents, but it varies depending on the individual characteristics of people. The prodromic period can usually last from a few months to a year. During this time, the patient experiences subclinical symptoms, that is, small changes that do not reach the specific symptoms of the disease, but indicate it in advance. The prodrome period is essential to prevent the development of bipolar disorder and to detect the disease early on.

### **Signs Shown During The Prodrome Period:**

During the prodromic period of bipolar disorder, symptoms are simple and erratic, which can sometimes be difficult to distinguish separately. Nevertheless, during this period, attention should be paid to the following main signs.

**Changes in mood:**the most important signs that lead to the development of bipolar disorder during the Prodromic period are unclear and temporary changes in mood. The patient may notice mood swings that often last from a few days to several weeks: sometimes feelings of restlessness, depression, sadness, or over-Joy.The transition between increased mood (mania) and decreased mood (depression) may not be clear yet, but these changes may increase over time and manifest as clear signs of bipolar disorder.

**Changes in sleep:** during the Prodromic period, there may be serious changes in sleep. For example, patients may experience too much sleep or, conversely, sleep. This sleep disturbance can be a sign of a transition to a manic or depressive state.During the manic period, people can experience a greater sense of energy and activity without feeling less sleep. In the depressive period, however, people may struggle with conditions such as constant fatigue, excessive demand for sleep, and sleep disorders.

**Changes in energy and activity levels:**in the manic period, people may feel very energetic, active and curious, but this can often lead to overactivity and irresponsible decisions.In the depressive period, however, the energy level may be low, people may not be interested in something and refuse to perform daily activities.

#### **Attention and concentration problems:**

During the prodrome period, patients may experience difficulty concentrating and concentrating. They may notice that their thought processes have slowed down, or thoughts that are often mixed in their brains.This situation is especially observed in the manic period, when people are engaged in a lot of thoughts and, instead of focusing on each one, constantly try to do several things.

#### **Changes in social relationships:**

Social attitudes can also change during the prodrome period. Patients can often feel uncomfortable in contact with others. Decreased social activity or, conversely, excessive activity, unexpected relationships, and unusual behavior may be shown.Secondary prevention plays an important role in preventing the development of bipolar disorder during the prodrome period. Secondary prevention is a set of measures aimed at reducing or preventing the development of the disease. Prevention strategies during prodromic bipolar disorder include the following.

#### **Subclinical symptoms:**

Subclinical symptoms of bipolar disorder complete manic or depressive periods of bipolar disorder have not yet begun, but the following signs may be present.

**Mood swings:** patients may experience mood swings over the long term — sometimes depression and sadness, and other times excessive joy and cheerfulness.In the event of a transition to manic status, patients may be more active, more talkative, and more likely to engage in social interaction.

**Sleep disorders:** usually during the subclinical period of bipolar disorder, there are problems with sleep regulation: some patients sleep poorly (manic condition), while others sleep excessively (depressive condition).

Changes in energy and activity levels: patients can often notice changes in energy levels: sometimes they can be very active and have physical energy, and sometimes they can feel excessive tiredness and naivety.

Difficulty concentrating: among subclinical symptoms, patients may experience difficulty concentrating and concentrating.

Social and emotional changes: changes in social activity, isolation or, conversely, excessive socialization, changes in emotional state and difficulties in social communication can occur.

### **Secondary prevention:**

Psychotherapy: cognitive-behavioral therapy (CBT) and other psychotherapeutic approaches help patients manage stress, stabilize mood, and develop social skills during the prodrome period. With psychotherapy, patients are also trained to manage their emotional state, reduce anxiety and stress, and improve social and performance.

Medications: during the prodrome period, mood stabilizers such as mood stabilizers (mood-balancing drugs) or, if necessary, antipsychotic drugs and antidepressants may be used. These drugs help to quickly stabilize the patient's mood and serve to prevent the full development of the disease. Lifestyle changes: measures such as maintaining a healthy lifestyle, exercising, managing stress and regulating sleep can help prevent the development of the disease during the prodrome period.

Social support: with good communication with family members and close friends, constant support and social interaction, patients can feel more mentally confident and safe.

### **Modern Diagnostic Methods:**

Modern diagnostic methods are widely used to identify subclinical symptoms of bipolar disorder and diagnose it at an early stage. With these techniques, monitoring subclinical symptoms and changes in mood can help prevent the progression of the disease. The following are modern diagnostic methods used to identify subclinical symptoms of bipolar disorder. Psychometric tests and surveys: psychometric tests and diagnostic surveys are important tools in identifying subclinical symptoms of bipolar disorder. They help to assess mood, thought processes and emotional state. Mood Disorder Questionnaire (MDQ): this questionnaire is used to identify manic and depressive periods of bipolar disorder. MDQ helps assess patients' mood swings, energy levels, and social activities.

Young Mania Rating Scale (YMRS): used to identify manic symptoms. The test assesses the patient's mood, energy, sleep, social activity, and other symptoms. Hamilton Depression Rating Scale (HDRS): used to assess depressive symptoms. This scale helps to identify subclinical signs of a depressive state.

Neuroimaging (Brain Imaging): Neuroimaging is a modern diagnostic method used to study brain structures and functions. Subclinical symptoms of bipolar disorder can be associated with changes in brain activity, so changes and activity in brain structures can be detected with neuroimaging. Magnetic resonance imaging (MRI) and functional MRI (fMRI): these imaging techniques help to detect changes in brain structure and brain activity. Changes associated with bipolar disorder are observed, especially in the prefrontal cortex and limbic system. Positron-emission tomography (PET): PET imaging helps study brain function and is used to detect possible changes during the subclinical period of bipolar disorder.

**Biomarker-based research:** biomarker-based research is an important tool to help detect bipolar disorder at an early stage. Biomarker-based tests are used in blood and brain fluids to detect subclinical symptoms. Blood biomarkers: in the subclinical period of bipolar disorder, depending on some biomarkers in the blood (e.g. serotonin and dopamine levels), it is possible to predict the likelihood of developing the disease.

**Biomarkers in the brain fluid:** research based on biomarkers in brain fluids can be done to identify earlier signs and symptoms of the disease. This method may indicate changes that occurred during the subclinical period of bipolar disorder at an early stage.

**Electronic high activity monitors (EEG):** the Electroencephalogram (EEG) method helps to measure brain activity. To determine the subclinical symptoms of bipolar disorder and the onset of the disease, it is possible to identify changes in brain activity using the EEG method. This method can be especially effective in patients who are in the manic or depressive period.

**Genetic tests:** the development of bipolar disorder is greatly influenced by genetic factors. With the help of modern genetic tests, it is possible to identify people prone to bipolar disorder and identify their subclinical symptoms. Genetic studies can help identify risk factors for bipolar disorder and help predict future progression of the disease.

### **Conclusion:**

Modern diagnostic methods are important to identify subclinical symptoms of bipolar disorder and diagnose the disease at an early stage. Psychometric tests, neuroimaging, biomarker-based studies, EEG, and genetic tests can be used to identify changes that occur during the subclinical period of bipolar disorder. These methods effectively help to prevent the early diagnosis of patients and the development of the disease. With the help of modern diagnostic technologies, it is possible to prevent the development of bipolar disorder and provide patients with the right treatment.

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