Management of Comorbid Anxiety States in the Clinical Pattern of Endogenous Mental Diseases of the Schizophrenic Spectrum

Abstract. The paper presents modern knowledge about anxiety as a comorbid pathology in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum, its epidemiology and etiology. The study describes the features of the influence of anxiety on the dynamics of the underlying disease, the effectiveness of its treatment and the quality of life of patients in general. The research determined the main components of a program for managing comorbid anxiety through the implementation of psychotherapeutic interventions by methods of cognitive behavioral therapy (CBT).

The aim of this study is to provide a systematic review and generalization of research existing in this area to solve the problem of the implementation of CBT for anxiety states in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum.

Materials and methods are represented by the comparison and correlation analysis of existing historical and modern data. Relevant peer-reviewed articles were selected through literary searches in electronic databases (MEDLINE, SCOPUS, Web of Science, APA PSYCINFO, Science Direct).

The conducted analysis made it possible to obtain the results indicating the frequent comorbidity of anxiety in schizophrenia. It is of interest to note that anxiety states can occur in any form of the disease and at any of its stages. They significantly complicate the course of the underlying disease, substantially increasing the recurrence risk of psychosis and suicidal attempts.

The presence of anxiety states in schizophrenia can be considered as an unfavorable prognostic factor that reduces the quality of life of patients. In accordance with the topic of this review, the issue of a comprehensive assessment of anxiety states in patients with schizophrenia and the development of programs of psychotherapeutic measures for their correction require special consideration. The issues, demanding further research, include the structuring and personalization of
Управління коморбідними тривожними станами у клініці ендогенних психічних захворювань шизофренічного спектру

Анотація. В роботі представлені сучасні знання про тривогу, як коморбідну патологію в клініці ендогенних психічних захворювань шизофренічного спектру, її епідеміології та етіології. Описано особливості впливу тривоги на динаміку перебігу основного захворювання, ефективність його лікування та якість життя хворих у цілому. Визначено основні складові програм управління коморбідною тривогою через застосування психотерапевтичних інтервенцій методами когнітивно-поведінкової терапії (КПТ). Метою даної роботи є системний огляд та узагальнення досліджень, що існують у цій галузі, для вирішення проблеми реалізації КПТ тривожних станів у клініці ендогенних психічних захворювань шизофренічного спектру. Матеріали та методи представлені порівнянням та співвідношенням існуючих історичних та сучасних даних. Відповідні рецензовані статті було визначено шляхом проведення літературних пошуків в електронних базах даних (MEDLINE, SKOPUS, Web of Science, APA PSYCINFO, Science Direct). Проведений аналіз дозволив отримати результати, що свідчать про часту коморбідність тривоги при шизофренії. Цікавим виявився той факт, що тривожні стани можуть виникати за будь-якої форми захворювання і на будь-яких його етапах. Вони суттєво ускладнюють перебіг основного захворювання, значною мірою підвищуючи ризик рецидиву психозу та суїцидальних спроб. Наявність тривожних станів при шизофренії можна розглядати, як несприятливий прогностичний чинник, що знижує якість життя хворих.

Psychotherapeutic programs, examination of certain types of productive and negative symptoms, the use of mindfulness-based cognitive therapy, and the implementation of short-term protocols.

Keywords: cognitive behavioral therapy, anxiety, anxiety states, anxiety disorders, schizophrenia

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УПРАВЛІННЯ КОМОРБІДНИМИ ТРИВОЖНИМИ СТАНАМИ У КЛІНІЦІ ЕНДОГЕННИХ ПСИХІЧНИХ ЗАХВОРЮВАНЬ ШИЗОФРЕНІЧНОГО СПЕКТРУ

Анотація. В роботі представлені сучасні знання про тривогу, як коморбідну патологію в клініці ендогенних психічних захворювань шизофренічного спектру, її епідеміології та етіології. Описано особливості впливу тривоги на динаміку перебігу основного захворювання, ефективність його лікування та якість життя хворих у цілому. Визначено основні складові програм управління коморбідною тривогою через застосування психотерапевтичних інтервенцій методами когнітивно-поведінкової терапії (КПТ). Метою даної роботи є системний огляд та узагальнення досліджень, що існують у цій галузі, для вирішення проблеми реалізації КПТ тривожних станів у клініці ендогенних психічних захворювань шизофренічного спектру. Матеріали та методи представлені порівнянням та співвідношенням існуючих історичних та сучасних даних. Відповідні рецензовані статті було визначено шляхом проведення літературних пошуків в електронних базах даних (MEDLINE, SKOPUS, Web of Science, APA PSYCINFO, Science Direct). Проведений аналіз дозволив отримати результати, що свідчать про часту коморбідність тривоги при шизофренії. Цікавим виявився той факт, що тривожні стани можуть виникати за будь-якої форми захворювання і на будь-яких його етапах. Вони суттєво ускладнюють перебіг основного захворювання, значною мірою підвищуючи ризик рецидиву психозу та суїцидальних спроб. Наявність тривожних станів при шизофренії можна розглядати, як несприятливий прогностичний чинник, що знижує якість життя хворих. Відповідно до теми цього огляду специального розгляду вимагає питання проведення комплексної оцінки тривожних станів у хворих на шизофренію, розробки програм психотерапевтичних заходів щодо їх корекції. Серед питань, що вимагають подальшого наповнення, — структурування та персоналізація
Theoretical substantiation of the problem. Modern requirements for the quality of the provision of psychiatric care emphasize the need to use not only highly effective medications, but also effective psychotherapeutic support of patients in the therapeutic process. Empirical evidence suggests that anxiety, as a therapeutic target, can have a positive effect on the course of psycho-productive symptoms, alleviate the course and improve the results of the underlying disease [7, 10, 20, 22, 25]. However, there is still a lack of research on the possibilities and limitations of such approaches and the specifics of their application in practice.

At present, CBT is one of the main treatments of choice in the treatment of anxiety disorders: simple and social phobia, panic disorder, generalized anxiety disorder (GAD), and obsessive-compulsive disorder (OCD). Trauma-focused CBT, along with the EMDR method, is the main intervention in the treatment of post-traumatic stress disorder (PTSD). CBT is included in schizophrenia treatment protocols as an important component of a comprehensive care plan, along with medicinal therapy and other interventions. CBT can be used both on an outpatient basis and during hospitalization, as well as in the form of individual, group and family therapy.

The evidence base on the effectiveness of CBT in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum is expanding. It contains research findings in relation to various age and gender groups of patients, takes into account all stages and forms of the underlying disease.

The results of studies on the effectiveness of CBT, aimed at anxiety in the clinical pattern of endogenous mental diseases, demonstrate an improvement in statistical indicators in the intervention groups as compared to the absence of changes in the control groups and the preservation of treatment results during subsequent follow-up observations of patients [3, 10, 13, 16, 19, 20]. Despite the heterogeneity of patient populations and methods of psychotherapeutic interventions, most of the reviewed studies support the feasibility of CBT in addressing anxiety problems in psychotic patients. Determining more effective interventions, the precise mechanisms of their action and the effect on the reduction of psychotic symptoms are unanswered questions for further research.

Analysis of recent research and publications. Anxiety as a source of dysfunction in schizophrenic patients. Awareness of the presence and potential
The significance of anxiety states associated with schizophrenia is consistent with research findings that describe the epidemiology and phenomenology of anxiety in schizophrenia. Thus, symptoms of anxiety states can occur in 65% of patients with various forms of schizophrenia and can reach the threshold for diagnosing concomitant anxiety disorders in 38% of such patients [1, 9, 22]. A 2011 meta-analysis that pooled data from 52 studies with a total of over 4,000 patients found that 38.3% of individuals with diseases of the schizophrenic spectrum had at least one comorbid anxiety disorder. The most common anxiety disorder was social phobia (SP), which was present in 14.9% of cases. It was followed by PTSD — 12.4%, OCD — 12.1%, GAD - 10.9%, panic disorder (PD) — 9.8%, and specific phobias (SP) — 7.9% [1].

Available studies have revealed high rates of panic attacks, symptoms of social anxiety and PTSD in the prodromal phase of the disease and in psychotic states [2, 9, 11, 19]. This may indicate that symptoms such as panic, social anxiety, and withdrawal symptoms may be central to the psychopathology of delusions and accompany an exacerbation of the psychotic episode. The onset of obsessive-compulsive symptoms may precede the onset of psychotic symptoms, they may occur concurrently, or develop later [21]. The transition to psychosis from the prodromal stage is characterized by significantly higher situational anxiety and tension. Interestingly, anxiety symptoms are more pronounced in the first episode than in people with multiple episodes of schizophrenia [25].

The demographic correlation of anxiety symptoms in schizophrenia indicates higher rates for female patients and for patients of younger age groups [1, 7].

Factors such as different diagnostic approaches and often small patient populations can contribute to differences in research findings on the prevalence of anxiety disorders and anxiety symptoms in schizophrenic patients. The significance of a comprehensive assessment of patients with schizophrenia and symptoms of anxiety is due to the fact that these indicators are several times higher than those in the general population.

The role of anxiety in the formation and maintenance of psychotic symptoms. Anxiety is one of the least studied conditions in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum, despite evidence of its significant impact on the outcome of the disease [10]. In spite of this evidence, the causal relationship between increased anxiety and clinical outcome remains uncertain. In other words, it is still not clearly determined whether anxiety influences clinical outcome, or the latter influences how anxiety is perceived.

Considering the issue of the manifestation of anxiety in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum, one should keep in mind that increased anxiety can be caused by both productive and negative symptoms that can affect perception and the ability to resist new stresses. However, a number of
studies do not confirm this relationship and indicate that anxiety may be independent of psychopathology [15].

Negative emotional states not only increase very high stress levels in patients with psychosis, but are also related to the formation and maintenance of psychotic symptoms. The results of a study on the influence of anxiety on the experience of productive psychotic symptoms indicate that anxiety is associated with the level of severity of paranoia, delirium and can cause an acute increase in hallucinatory production [12, 14]. At the same time, anxiety states can be triggered by delusional symptoms, but they can also occur regardless of them [23].

Anxiety is the psychological basis of cognitive disorders in schizophrenia [17]. Cognitive impairments, in turn, can interfere with assessment and adequate response to stressful factors. As a result, patients choose inappropriate coping strategies – avoiding the problem or isolation [18].

Anxiety symptoms are highly correlated with symptoms of depression, somatization, and guilt in people with schizophrenia, and are an important predictor of suicidal ideation in schizophrenia. When the condition of patients with schizophrenia is burdened by depression, the comorbidity of anxiety disorders significantly complicates the degree of its severity [25].

The consequences of PTSD typically include increased arousal and stress, social isolation and interpersonal conflict, and generally poor professional and social functioning. The comorbidity of PTSD in schizophrenia is associated with impaired visual-spatial functions, attention, and tasks of immediate and delayed memorization [11].

Recent research into the interaction of genes with the environment supports the idea that genes associated with schizophrenia lead to changes in not only dopamine but also serotonin signaling pathways in the brain, thereby suggesting an “affective pathway” to psychosis [5]. About 60% of people referred to the group of high clinical risk of schizophrenic spectrum disorders have a history of childhood psychological traumatic events [4]. These findings suggest the presence of dysfunctional cognitive patterns such as defectiveness / shame and social isolation / alienation, which may be a risk factor for the development of negative evaluative beliefs. The presence of such a negative cognitive assessment of oneself, others and the world as a whole contributes to an increase in the external locus of control and an increase in symptoms.

The belief that events by themselves do not affect a person is a central idea of the general cognitive model of anxiety disorders. Emotions are influenced by one’s own expectations, assessment and interpretation of external events. Thus, in anxiety, interpretations relating to physical and psychological danger are in the foreground. A systematic reassessment of the threat automatically activates the body's alarm program – changes in the activation of the autonomic system, weakening of current
processes, selective attention. The activation of attention on sensations that cause fear, and their negative assessment is supported by various forms of avoidant and defensive behavior, which interferes with the awareness of the absence of real danger. The influence of interpersonal factors aggravates the anxiety state or leads to secondary affective disorders.

Comorbid anxiety disorders among people with schizophrenia are associated with an increase in the number of hospitalizations and length of stay at psychiatric hospitals, as well as an increase in psychiatric emergency visits. This indicates that clinicians should be attentive to make the secondary diagnoses that may be missed in the presence of the underlying diagnosis and use proven tools and assessment methods to do so.

**Statement of basic materials. Clinical observations.** Patient A., at the age of 21, was admitted to therapy in the winter of 2020 by the referral of the attending psychiatrist, due to an exacerbation of the condition described as depressive symptoms. The patient's medical history describes 3 psychotic episodes (autumn 2017, spring 2018, summer 2019) with hospitalization, the diagnosis was F20 – «Schizophrenia». Psychotic episodes, among other things, could be triggered using psychoactive substances and aggravated by a history of psychosocial stressors over several years: traumatic events in childhood, a history of social anxiety and abusive relationships in adolescence. The patient was offered cognitive behavioral therapy, with a total duration of 25 sessions with a setting once a week, with supporting booster sessions once a month after the end of the main stage of therapy.

The first two sessions were devoted to the preparatory stage of therapy. A diagnostic assessment was carried out: a study of personality traits and features of cognitive processes, behavior, as well as an assessment of the presence of traumatic situations and social factors (both unfavorable and contributing to adaptation). Diagnostics was carried out in compliance with all the requirements for conducting such studies at the clinic and included a clinical interview and the patient's work with the necessary diagnostic techniques, scales and questionnaires.

An important part of this stage was the formulation of the cognitive conceptualization of the case: the definition of cognitive schemes that contribute to the maintenance of dysfunctional beliefs and maladaptive behaviors, as well as the role of stress factors that affect the onset and persistence of pathological disorders.

Developing a therapeutic formulation, socializing into a CBT model, establishing a therapeutic relationship and setting therapy goals were the final steps at this stage.

The patient's psychotic symptoms were generally weakened and practically did not appear, however, paranoid ideas were present during social interactions. The main source of anxiety was illness and related limitations in the present and the
future, which caused great anxiety. Patient A. noted that the positive emotions that she could periodically experience frightened her greatly, since her beliefs were aimed at the relationship between an increased background of mood with an exacerbation of the condition and possible psychosis. In addition, the experience of positive emotions was perceived as a loss of control, which provoked withdrawal into excessive reflections (up to obsessions). During therapy, there was a feeling of some kind of manipulation, as the main way to avoid anxiety and maintain self-esteem, which led the patient to exhaustion and depressive manifestations.

Describing her experiences of past acute psychotic states, patient A. noted a feeling of complete control, perception of herself, others, and the world, which makes it possible to assume that psychosis in this case could be used as an adaptation mechanism – a feeling of being able to influence one's life.

At the initial stage of therapy, the client was in touch, underwent the setting well, and showed interest in therapy. Difficulties with homework were observed. Interest was manifested in filling out questionnaires and in interpreting them, as well as, in general, in psychoeducation about the main diagnosis and accompanying symptoms of anxiety and depression.

After several sessions of therapy, we could talk about a decrease in symptoms of depression, as well as a shift in the emphasis of therapy to the state of anxiety and work with dysfunctional deep and intermediate beliefs, in view of setting additional goals for therapy. The main work has focused on changing the assessment of anxious mental experiences using psychoeducation to normalize these experiences. Techniques were used to reduce the symptoms of anxiety, correct cognitive distortions, affective flattening, develop the ability to cope with stress, and form new adaptive behavioral strategies.

The main phase of therapy was completed in the summer of 2020. As of today: the patient was not hospitalized, no acute psychotic episodes were noted. Patient A. attends booster sessions once a month. At the end of the main stage of therapy, the indicator of the strength of confidence in the growing psychotic state decreased from 95% to 45%. There was also a decrease in the level of anxiety and depression according to the Hospital Anxiety and Depression Scale (HADS) from 17 points to 9, according to the Spielberger-Khanin State-Trait Anxiety Inventory (STAI) from 47 to 34 points.

Discussion. Based on the clinical observations, we proposed a model of psychotherapeutic interventions using CBT for the management of comorbid anxiety states in the clinical pattern of endogenous mental diseases of the schizophrenic spectrum. This model effectively complements psychopharmacotherapy and focuses on anxiety associated with the patients' own mental experiences. The main hypothesis of the nature of such experiences is based on the presence of the patient’s pronounced false interpretation of normal mental phenomena, up to their catastrophization.
Existing assessment methods can be used to analyze the effectiveness of this model, as well as to measure the progress of individual clients during treatment.

To determine the level of anxiety in working with such patients, the following questionnaires and standardized scales can be recommended: expert scale for determining the level of anxiety and depression “Hospital Anxiety and Depression Scale (HADS)”, the Spielberger – Khanin questionnaire for determining reactive and personal anxiety (State-Trait Anxiety Inventory, STA I), and expert scale for determining the level of anxiety (Hamilton Anxiety Rating Scale).

Patients should be examined “on the way out” of the psychotic state, since the severity of psychotic symptoms and thought disorders at the time of exacerbation can prevent them from maintaining attention for a long time, which will make it impossible to answer questions and fill out the necessary questionnaires, and it will also question the validity of the obtained results. It is also important to exclude the presence of acute or chronic somatic pathology, which can produce anxiety.

In the course of our research, it was found that an important aspect is also the study of cognitive, behavioral and emotional responses to stress. Such an analysis makes it possible to more clearly present the pathogenesis, psychodynamic mechanisms of anxiety and phobic states and partially explain the patterns of development of one or another psychopathological symptomatology. The obtained data will contribute to a better understanding of the patterns of evolutionary development, the transformation of behavioral and cognitive responses to anxiety, depending on the duration of the course of the disease and other factors. During the clinical interview, there will be an opportunity to assess these reactions and subsequent analysis, and the analysis of the patient's life history and past medical history will determine the strategies of protective behavior and cognitive adaptive mechanisms, most often used in threatening and anxious situations.

An important aspect is also the analysis of significant external environmental and psychological internal factors that affect the characteristics of the formation of certain behavioral strategies and their transformation in the course of the disease. The obtained data will contribute to the understanding of psychodynamic mechanisms in each specific case, which is important in choosing adequate psychotherapeutic correction and rehabilitation measures.

When using CBT approaches to work with psychotic patients, work aimed at assimilating the skills of acceptance and management of productive symptoms by patients is of great importance.

At the same time, therapy does not aim to facilitate the elimination of symptoms. It seeks to restructure the old voices assessments and delusions and generate new alternatives that do not cause the same distress as the patient's past cognitive interpretations. In this case, treatment should be considered as effective if
there is a decrease in the patient's emotional distress as a result of therapy [6], as well as the “improved social outcome” – “greater social involvement and effectiveness” [24].

Current research and randomized controlled trials show that CBT should be implemented in a way that is acceptable to patients, which will enhance their ability to adapt to disease and work to improve their quality of life [8]. CBT in endogenous mental diseases of the schizophrenic spectrum should be developed relying on the basic “classical” principles:

1. Cooperation. Joint development of a common, conceptualization, understandable for the patient, which will form his/her ideas about the origins and mechanisms that provoke anxiety states and maintain side psychotic symptoms.
2. Normalization. Support and acceptance without judgment can reduce the experiences of shame or stigma that are often associated with anxiety and psychosis.
3. Orientation of the patient to accept psychotic symptoms.

The treatment protocol can be broken down into four main stages (Table).

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<thead>
<tr>
<th>Stage</th>
<th>The purpose of the intervention</th>
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<tr>
<td>Preparatory (diagnostic) stage</td>
<td>Diagnostic assessment. Cognitive conceptualization. Developing a therapeutic formulation, socializing into a CBT model, establishing a therapeutic relationship, setting goals.</td>
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<tr>
<td>Psychoeducational stage</td>
<td>Providing the patient with adequate information about the origin and course of existing disorders, the possibilities of therapeutic measures, the need for active participation in the therapeutic process.</td>
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<tr>
<td>The main stage</td>
<td>Techniques aimed at reducing anxiety symptoms, correcting cognitive distortions, and developing the ability to cope with stress. Relapse prevention, working with maladaptive schemes, rules of life.</td>
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<tr>
<td>The final stage</td>
<td>CBT interventions to plan for the future and teach relapse prevention skills.</td>
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The presented format displays the chronological order of the stages of therapy but is not strictly prescriptive. Displacement or intersection of stages in the process of therapeutic intervention is obvious for clinical practice. In addition, options for the inclusion of additional stages to solve related problems that may arise in the course of therapy are not excluded.

The treatment plan is a required part of CBT. It allows us to outline the structure and scope of psychotherapeutic assistance for a specific patient, to carry out
the management of a clinical case and to track the effectiveness of psychotherapeutic assistance.

Planning psychotherapy for people with schizophrenia requires careful research and attention to areas such as the patient’s psychological and psychosocial problems. The psychotherapist may face a number of problems that will significantly interfere with therapy. Such problems include ambivalent or negative attitudes towards therapy, rapid fatiguability during a session, deviations from the subject, or, on the contrary, excessive concentration on something.

Working through the feelings and emotions of the therapist can become a problem as well. Establishing a collaborative partnership is an essential part of CBT and it aims to develop in the patient a sense of striving for a common goal during the psychotherapeutic process.

Reestablishing a sense of subjectivity and intersubjectivity in the patient can be facilitated by involving the patient in telling his/her life story. It is this kind of patient support, which consists in the independent discovery of objective reality, that is the basic principle in CBT. The here and now principle, applied in CBT, encourages the expression of existing feelings and experiences, helping to restore the connection between the person and the actual situation. Thus, the use of a narrative approach can enhance the ability of patients with schizophrenia to restore the lost unity between emotions and interpersonal situations, and therefore, restore a basic sense of self and oneself in relationships with others.

Patient motivation is another significant factor that can affect the effectiveness of CBT. Therefore, it is extremely important to take into account the patient’s subjective complaints regarding his/her feelings, as well as the problems and goals of therapy.

Analyzing the research data on the effectiveness of CBT in anxiety states in schizophrenic patients, it can be concluded that the expediency of introducing structured short-term therapeutic programs is obvious [3, 7, 20]. Despite the recognition of the scientific validity and evidence-based effectiveness of using these programs, they have not yet received a widespread application in Ukraine. Therefore, analysis of the experience in implementation and application of programs in other countries and the gradual introduction into practice of CBT protocols and in endogenous mental disorders of the schizophrenic spectrum are the promising directions of research.

Conclusions. The results of the study demonstrate that CBT is an effective method for the treatment of patients with chronic psychosis, and the issue of the effectiveness of CBT in working with patients with the first psychotic episode is the least studied. Patients who underwent the first psychotic episode represent a special group, since they have to fight not only with the symptoms of the disease, but also negatively perceive the recently diagnosed disease. A complete or incomplete
understanding of how the disease will now affect their lives can also lead to depression, anxiety, and low self-esteem.

Thus, we can conclude that psychological education, normalization, assessment of negative automatic thoughts and dysfunctional deep beliefs, as well as focusing on the negative consequences of destructive behavior, whose implementation is possible with CBT methods, should be included in the goals of helping mentally ill people, including to relieve symptoms and improve their quality of life.

Programs for the management and care of patients with a first psychotic episode must be tailored to suit the unique and specific needs of each patient. This individualization should be the general rule for every therapy, but it is especially important for patients in this group, which has a wide range of symptoms, problems and goals. In this context, one can encounter such problems as manifestations of depressive symptoms, low self-esteem, lack of motivation, decreased social functioning, anxiety, obsessive thoughts, etc. Thus, with certain adherence to the protocols and rules for using CBT methods, the intervention in each individual case will be different.

At this stage of the research, the authors were interested primarily in the analysis of their own studies and existing clinical observations from other scholars to build a conceptual model. At the next stages, it is planned to empirically test it to answer questions that require further attention, structuring and personalization of psychotherapeutic programs, identifying the features of working with certain types of productive and negative symptoms, as well as introducing short-term protocols, which will contribute to effective patient follow-up.

References:


Література:


