



CLINICAL-PSYCHOLOGICAL ANALYSIS OF PSYCHOEMOTIONAL DISORDERS AFTER ISCHEMIC STROKE

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Abstract: This article is devoted to the study of the clinical and psychological characteristics of psychoemotional disorders observed in patients after ischemic stroke based on an extensive literature review. The available scientific data on the correlation of post-stroke conditions such as depression, anxiety, apathy, and affective instability with specific manifestations of neurological damage (damaged brain area, extent of damage, type of stroke) are systematically analyzed. As noted in the literature, the effectiveness and limitations of psychodiagnostic tools used to identify these disorders are considered. Also, based on existing research, the aim is to synthesize knowledge about cost-effective and patient-adapted psychocorrection methods for psychoemotional disorders after ischemic stroke. This article aims to expand the theoretical knowledge base in this area and create a basis for future research.

Keywords: Ischemic stroke, post-stroke syndrome, psychoemotional disorders, depression, anxiety, apathy, affective lability, neurological damage, the role of the cerebral hemispheres, psychodiagnostics, psychocorrection.

Introduction: Ischemic stroke remains a major global health problem, with billions of people becoming disabled or experiencing significant impairment of their quality of life [1, 2]. It is clear from the outside that the main consequences of this disease, which is caused by a violation of cerebral circulation, are neurological deficits (motor, sensory, speech disorders). However, as is increasingly emphasized in the scientific literature, stroke, especially ischemic stroke, also has a profound and long-term impact on the psychological and emotional state of the patient [3, 4]. Post-stroke depression, anxiety, apathy, affective lability and other psychoemotional disorders not only worsen the patient's mental state, but also slow down the overall neurological recovery process, reduce the effectiveness of rehabilitation and lead to the exclusion of patients from social life [5, 6]. Numerous studies show that these psychoemotional problems can reduce the patient's quality of life and increase the risk of recurrent stroke, no less than the physical consequences of stroke [7, 8].

Therefore, understanding the specific clinical and psychological characteristics of psychoemotional disorders after ischemic stroke, determining their connection with neurological damage, and developing effective and patient-specific psychocorrection methods aimed at eliminating these problems are of great importance for modern medicine and psychology. This article aims to summarize our current knowledge about the clinical and psychological characteristics of psychoemotional disorders after ischemic stroke, methods of their assessment, and treatment strategies through a systematic review of the available scientific literature.

• **1. Prevalence and clinical and psychological manifestations of post-stroke psycho-emotional disorders:** A large literature review shows that psycho-emotional disorders are very common after ischemic stroke.

• **Depression:** One of the most common disorders, occurring in approximately 30-60% of post-stroke patients [6, 9]. This figure is much higher than the prevalence of general depression after stroke [10]. The manifestations of post-stroke depression may differ somewhat from general depression; it is often characterized by apathy, decreased motivation, and increased physical activity [11].

• **Anxiety disorders:** The second most common disorder after depression, occurring in 40-50% of patients [7, 12]. This anxiety is often associated with fear of disability after stroke, concerns about future health, the risk of re-stroke, and difficulties in daily life [13].

• **Apathy:** Apathy, which manifests as a decrease in motivation, emotional and intellectual activity, is observed in approximately 20-40% of patients after stroke [14]. It is often associated with damage to the frontal lobe of the brain, especially the prefrontal cortex [15]. Apathy can limit the patient's active participation in the rehabilitation process and worsen outcomes.

• **Affective lability (rapid mood swings):** Abrupt and rapid changes in mood, often accompanied by episodes of crying or laughing for no reason, are observed in 15-25% of patients, especially in right hemisphere lesions [16]. This condition can be a major problem for patients and their loved ones.

2. Relationship between neurological damage and psychoemotional disorders: The literature shows a clear relationship between various features of ischemic stroke and psychoemotional disorders:

• **Role of the cerebral hemispheres:** Many studies have linked left hemisphere damage to depression, and right hemisphere damage to affective lability, anxiety, and sometimes hopelessness [16, 17]. Damage to the language and speech centers of the left hemisphere (aphasia) can limit the patient's ability to express themselves, leading to depression and frustration.

• **Area of injury and extent of injury:** Apathy and executive dysfunction are more common in prefrontal cortex lesions [15]. Also, the extent of the injury (e.g., strokes with low ASPECTS (Alberta Stroke Program Early CT Score) scores) increases the severity of psychoemotional impairment and the risk of developing major depression [18].

• **Type of stroke:** There is also evidence that cardiogenic strokes or strokes resulting from large vessel occlusion often lead to more severe neurological deficits and, at the same time, psychoemotional disorders [19].

3. Methods for assessing psychoemotional disorders: Various psychodiagnostic tools have been used in the existing literature to assess post-stroke psychoemotional disorders:

• **Standard psychometric scales:** HADS, BDI-II, BAI, AIS, BEHAVE-AD, MoCA, etc. are widely used. Their advantage is that they are quick, reliable and easy to complete by patients [20, 21]. However, some researchers argue that these scales may not fully reflect the specific conditions after stroke, since some symptoms (e.g. fatigue, sleep disturbances) can be both a general consequence of stroke and signs of depression or anxiety [22].

• **Clinical interviews:** Instruments such as SCID-5-PV, ADIS-IV allow for a more in-depth and accurate assessment of the patient's condition, as they take into account clinical assessment

and the patient's subjective experiences [23]. However, these methods are more time-consuming and depend on the experience of the specialist.

- **Neuropsychological tests:** Assessment of cognitive functions (e.g., MoCA) is important for understanding poststroke psychoemotional disorders, as cognitive deficits often coexist with depression and anxiety [24].

4. Psychocorrection and treatment methods: Various approaches are used to treat post-stroke psychoemotional disorders, but research into their effectiveness and optimality is still ongoing:

- **Pharmacotherapy:** Antidepressants and anxiolytics can be effective in reducing depression and anxiety, but their use in post-stroke patients has its own characteristics and side effects [25].

- **Psychotherapy:**

- **Cognitive-Behavioral Therapy (CBT):** CBT has shown positive results in reducing depression and anxiety after stroke [26]. It aims to change negative thinking patterns and develop adaptive behaviors. However, it is important to tailor CBT to the cognitive limitations of stroke patients [27].

- **Neurorehabilitation approaches:** Methods that promote brain plasticity (e.g., visualization, motivational exercises) may help improve poststroke psychoemotional status [28].

- **Stress management and relaxation techniques:** It is important to teach the patient how to manage stress and regulate emotional states [29].

- **Patient-tailored approach:** The literature suggests that the most effective approach is one that is tailored to the patient's individual characteristics, neurological status, personal values, and rehabilitation goals [30]. Patient engagement and motivation also significantly improve treatment outcomes.

Conclusion: The analysis of the available literature shows that psychoemotional disorders after ischemic stroke are a widespread, complex and closely related problem to neurological damage. Depression, anxiety, apathy and affective lability are common in the post-stroke period and have a significant impact on the patient's recovery process. Although modern psychodiagnostic tools are effective in identifying these disorders, they also have their limitations. Although CBT, stress management and patient-adapted approaches in the field of psychocorrection are yielding positive results, research should continue to further improve the effectiveness of these methods and adapt them to the individual needs of each patient. Future studies should explore deeper and more comprehensive approaches in these areas.

Practical significance: This article summarizes the existing theoretical knowledge on psychoemotional disorders after ischemic stroke. The analysis of the literature will help neurologists, medical psychologists, psychiatrists and rehabilitologists to better understand the psychological state of patients, choose more effective methods for assessing their condition and subsequently develop treatment strategies tailored to the patient. This will contribute to increasing the overall effectiveness of post-stroke rehabilitation.

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