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Short Communication

On the Issue of the Nature and Definition of Depression

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Abstract

Currently, there is no common understanding of the nature of depression or its strict scientific definition, which leads to mistakes in the diagnosis and treatment of depressive conditions. The existing definitions of depression do not reflect its internal nature and are of an external descriptive nature, which leads away from the essence of the problem. The article offers the author's view on the nature of depression, as a state of ancient nonspecific adaptation - unresponsiveness, and gives its scientific definition.

Key Words: depression; adaptation; unresponsiveness

Introduction

The definition of scientific concepts is of great importance for the development of science. Their free interpretation leads away from the essence of the matter. The definition reflects the depth of knowledge of the subject. The development of science goes from one definition to another. Meanwhile, in scientific and practical Guides, little attention is often paid to the definitions of concepts; the definitions of concepts are vague and have a pseudo-scientific descriptive nature. WHO: Depression is persistent sadness, loss of interests, low self-esteem, feelings of guilt, and inability to do usual work. Wikipedia: Depression is a mental disorder, the main symptoms of which are low mood, anhedonia, feelings of melancholy, anxiety, and in severe cases - the depressive triad. In ICD-10, the diagnosis of depression is determined by a long list of typical clinical syndromes.

Currently, there is no common understanding of the nature of depression, which leads to errors in the diagnosis and treatment of depressive conditions. Some authors associate depression with hypothymia [12,13], others with a complex affective symptom complex [11], confirmed by path psychological research, and others - with phase protective states, complex neurobiological syndrome [1,3,4]. A number of authors propose more than 18 criteria for depression (Hamilton and Beck depression scales), which is labor-intensive and does not clarify the understanding of the phenomenology of depression. The neurotransmitter model of depression is simplified [14, 16], reveals its neurochemical mechanisms, but does not reflect its evolutionary path physiological essence. Meanwhile, any psychopathological phenomenon has its own phylogenetic basis, historical roots, and is a clinical expression of evolutionary processes, adaptation genesis, driven by natural selection, and not a simple consequence of dysfunction or breakdown of biological structures [16].

The binary (two-level) concept of depression is relevant, revealing the nature of depression, where negative affectivity in the form of alexithymia, anhedonia, dysphoria, anesthesia and apathy is primary, axial and reflects the nature, register of depression, and positive affectivity is secondary, reflecting reciprocal arousal adjacent to depressive focus of central structures [11]. With apathetic depression, there is no development of clinical depressive disorders, since apathy is the bottom of the depressive register disorders [11, 15]. Apathy is implied with abulia. The clinical picture of apathetic depression is reminiscent of apatoabulic syndrome in schizophrenia, but its dynamics are reversible, phase-specific. However, the outcome of long-term severe depression can be atrophy of depressive tissue, diseases of its disintegration, asthenic and somatoform syndromes, which expands the understanding of depressive disorders [11, 16].

In schizophrenia, the presence of apatoabulic syndrome indicates about the completion of the pathological process [7, 12, 13, 17]. It is also the bottom of negative register disorders, but is irreversible, has the character of a neuropsychic defect and has other pathogenetic roots. Apatoabulic states are a form of nonspecific adaptation of the body - unresponsiveness. The biological meaning of these conditions is to prevent disorganization and decay of the body under pathological conditions [7, 16, 17].

The aim of the article is to use the methods of scientific generalization, logic, systemic evolutionary analysis and theoretical modeling to understand the internal nature of depression and formulate its scientific definition. The relevance of the article is beyond doubt, because depression is widespread in the world and is a common cause of disability and mortality in the population.

Discussion

An organism is an open biological system that expresses and preserves itself through the constancy of its internal environment, homeostasis. Regulation of homeostasis occurs at all its levels - cellular, tissue, systemic. Homeostasis

is the moment of integrity and independence of the organism from the ecosystem, which dictates its morph functional structure through natural selection. Disruption of homeostasis is the essence of destruction and death. The organism, as a whole, a system, is formed through the reflection of internal needs and the reciprocal launch of self-regulation processes aimed at satisfying the reflected need, which leads to homeostasis and preservation of the body.

A cell is a biological system of a lower order. Cells are rigidly integrated into the macroorganism as an integral system, subject to its requirements, but have a certain independence, which ensures the plasticity and flexibility of its regulation.

Reactivity is the main property of life. Reactivity is the body's ability to internally respond to changes in the demands of the ecosystem, the form of its interaction with it, a special type of reflection associated with the regulation of homeostasis.

The integrative factor of the life activity of a macroorganism, as a biological system of a higher order, is the reflected need, and the system-forming reactive structure is the basal nuclei of the brain and emotional centers [16].

The development of emotions comes from the reflex ring and the basal nuclei regulating homeostasis, working on the feedback principle [2]. Emotions, as a form of the psyche, reflect the body's needs for matter, energy and information necessary to maintain homeostasis, and carry an energetic charge of self-regulation. Evolutionarily – genetically, according to the "stimulus-response" type, they are associated with effectors processes and form a single complex of the body's reactivity with them. Emotions are the center of adaptive reactivity, goal setting and integration of the body. Being a system-forming reactive structure, they regulate in the body the movement of energy flows (metabolic, hormonal and vegetative) [16]. In humans, reactivity is differentiated, which is associated with the development of higher emotions, consciousness and intelligence.

The central nervous system has various adaptive energy modes of operation, which increases its functional plasticity. The energy regime is the ability of nervous tissue and the entire organism, as a whole system, to change the energy range of its functioning. Its change is observed with changes in motivation, biorhythms, and fluctuations in affect [6]. A low adaptive energy mode of the body's vital activity with an increase in the threshold of its reactivity is postulated as depression.

The equivalents of depression, like the equivalents of other clinical phenomena, are projected into the animal world, for nothing arises from nothing, and each clinical phenomenon has its own evolutionary history. It is known that higher mammals often suffer from typical types of depression. In lower animals, states of unresponsiveness—anabiosis—are observed. If we draw well-known physiological parallels, then depression is the equivalent of suspended animation. Ancient adaptations do not disappear in the process of evolution, but are suppressed and appropriated by new young adaptations, acquiring a different internal content.

Central adaptive mechanisms for regulating the reactivity of the body operate at all its levels - cellular, tissue, systemic, but autonomous regulation of reactivity is also possible. The cell, being a lower-order biological system, can exhibit the capabilities of autonomous parafunctional regulation when the central regulation of the body is weakened [16].

Adaptation can be specific or nonspecific [10]. Nonspecific adaptation is associated with ancient generalized undifferentiated defense mechanisms: hyperthermia, phagocytosis, general adaptation syndrome, suspended animation, muscle numbness, psychomotor agitation, blackout, autism, trance, pain. The evolution of the living world follows the path of creating differentiated protection associated with the development of higher forms of neuropsychic activity. However, the ancient adaptive regulations of the organism do not disappear during the process of evolution, but are suppressed and appropriated by new young forms. When phylogenetically young functions are damaged, ancient relationships begin to manifest themselves. In the dynamics of the body's reactions to damaging factors, one should see not arbitrary dysfunctions and broken structures, but a natural retreat of the body to past stages of development with the exposure of ancient defense mechanisms. The plasticity of the body's regulation lies in the fact that when it is difficult to manifest new specific functions, nonspecific relationships again appear on the scene. When homeostatic systems are weakened and internal constants change, the body's cells begin to find themselves in harsh survival conditions; Young specialized brain structures responsible for specific adaptation are especially affected. As a result, the mechanisms of ancient nonspecific adaptation again come to the fore. Ancient adaptive nonspecific regulations of the body continue to operate at higher stages of evolution of the living world, but in the form of their equivalents [16]

Anabiosis is a form of ancient nonspecific adaptation, consisting in the body's unresponsiveness; common in viruses, bacteria, worms, fish, amphibians, and reptiles. In some higher animals (bears, badgers, rodents) it is seasonal, observed in the form of periods of hibernation. As an equivalent, suspended animation can be observed in humans in the form of Seasonal Affective Disorder.

Depression is a state of unresponsiveness, adaptive suppression of vital processes, a low adaptive energy mode of functioning of the body in order to preserve its internal organization in conditions of pathology. Depression is a form of ancient nonspecific adaptation, the equivalent of suspended animation, provides time for rest, restoration of impaired functions, and reflects plasticity and flexibility of regulation [16].

Depressive tissue is a pathological tissue in which protective inhibition of vital processes, a low adaptive energy mode of functioning, an adaptive increase in the threshold of reactivity, and systemic disintegration are observed in order to prevent its disorganization and decay in pathological conditions.

It is known that in the presence of central depression, neuropsychiatric disorders have a benign course (TBI, encephalitis, stroke, schizophrenia, Alzheimer's disease, Parkinson's disease, etc.) in contrast to lucid states. Depression acts as a biological defense factor. It is likely that somatic diseases in the presence of autonomic depression also have a benign course.

The regulation of the body's reactivity is associated with the regulation of the energy modes of its functioning. A low energy mode of life with an increase in the threshold of the body's reactivity is postulated as endogenous depression.

The following types of regulation can be distinguished [16]:

A. Central regulation of the body's reactivity:

1. Cyclic form - ancient, associated with the basal structures of the brain, nonspecific generalized adaptation, reflecting natural cycles and rhythms.

With depression, disturbances in the rhythmic functioning of the hypothalamic-pituitary and limbic systems are observed and pineal gland, which manifests itself in the rhythm of release of releasing hormones and

melatonin. This form of regulation is associated with daylight photons, which affects the total rhythm of the body, including the rhythms of wakefulness and sleep, sexual activity and food intake [8]. The cyclic form of regulation of the body's reactivity is generalized and nonspecific. In the pathology of the cyclic form of regulation, bipolar affective disorder with a clinical picture of negative affectivity is observed. There are no symptoms of positive affectivity due to the systemic, generalized nature of depression.

2. Affective form – phylogenetically younger emotional regulation of reactivity, dictated by the action of the environment and reflected need. The progressive evolution of the body's reactivity consists in the development of differentiation of basic emotions. Emotions, reflecting current needs and being the system-forming reactive center of the body, regulate the energy regimes of its life activity. The affective form of regulation of reactivity is partial and specific. In pathology of the affective form of regulation, a recurrent affective disorder with a negative clinical picture is observed and positive affectivity.

B. Autonomous regulation of reactivity.

When the central regulation of the body is weakened, peripheral cells and tissues of the body can exhibit the possibility of autonomous, parafunctional regulation. In the clinical picture of autonomic depression, adaptive inhibition of the functions of pathological tissue, its systemic disintegration and systemic compensatory processes are observed.

It is necessary to differentiate between central depression and hypothymia. Depression is the unresponsiveness of the soil on which the pathological process grows; it is deep and necessary, has the character of a condition and is associated with the central regulation of reactivity. Hypothymia is superficial, random and transient; it is not a condition of adaptive soil movement. Depression is treated with biological methods, hypothymia – with psychotherapy [9].

The distinction between neurotic, including tearful depression, is hardly justified, since tears are a form of relieving neuropsychic tension during fear and its clinical equivalents - anger, anxiety, stress and physical pain [18]. Patients with depression note "dry tears" and lack of tension relief. Tearfulness is usually found in the structure of astheno-neurotic syndrome, depression belongs to a deeper register of neuropsychic disorders.

Conclusion

The regulation of the body's reactivity is associated with the regulation of the energy regimes of its life activity. A low adaptive energy mode of the body's vital activity with an increase in the threshold of its reactivity is postulated as depression.

Depression is a state of unresponsiveness, adaptive suppression of vital processes, a low adaptive energy mode of functioning of the body in order to preserve its internal organization in conditions of pathology. Depression is a form of ancient nonspecific adaptation, the equivalent of suspended animation, provides time for rest, restoration of impaired functions, and reflects plasticity and flexibility of regulation.

The cyclic form of regulation of the body's reactivity is generalized and nonspecific. In its pathology, bipolar affective disorder is observed with symptoms of negative affectivity, which are primary, axial and reflect the internal nature, the register of depression. At the same time, secondary positive affectivity is not observed due to the systemic, generalized nature of depression.

The affective form of regulation of the body's reactivity is partial and specific. In its pathology, recurrent affective disorder is observed with symptoms of negative and positive affectivity. At the same time, positive symptoms of depression are not obligate, but are a consequence of reciprocal excitation of central structures adjacent to the depressive focus with phenomena of secondary hyperesthesia.

With autonomous depression, adaptive inhibition of the functions of pathological tissue, its systemic disintegration, and systemic compensatory processes are observed.

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