

Psychiatric cosmetology. Psychiatry, the queen of medical sciences – the link with autoimmune diseases



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The disintegration of medicine into specialties and the Aristotelian paradigm to describe the course of events and not to investigate their ultimate cause have made it difficult for modern medicine to develop a coherent model of understanding the problem of health and disease. In the minds of doctors there is a belief that internal medicine diseases are the center of medicine, but on the other hand, when studying their pathogenesis, most of them, especially chronic ones, are at least partially psychogenic in nature.

Thus, psychiatry can contribute to the emergence of a coherent model of health and disease and propose a new trend in maintaining health and preventing mental and somatic diseases, which I have called psychiatric cosmetology.

The human brain is a composition of self-regulating systems, connected with each other cybernetically by feedback loops. The function of the brain, like any organ, requires energy expenditure and leads to fatigue of cells, which manifests in their poorer functioning and forces their rest and regeneration. It is a physiological fatigue process related to the accumulation of catabolic products in cells, including adenosine derived from ATP. Adenosine accumulates in excess in cells and is transported to the intercellular space, where it activates adenosine A1 and A2A receptors, reducing the release of neurotransmitters and, by hyperpolarization of cell membranes, inhibiting the activity of nerve cells [1].

This mechanism slows down the information processing in the gray cortex of the brain, inhibits drive and motivation in the reward system, and calms down joy and emotional activation by the serotonin system, promoting rest and sleep.

The physiological mechanism of fatigue is usually broken by human will, often accompanied by excessive

consumption of caffeine or other psychostimulants. Caffeine, as a non-specific antagonist of adenosine receptors, blinds them for several dozen minutes, which allows nerve cells to continue working despite fatigue [2]. Chronic excessive use of the brain structures responsible for thinking, emotions, motivation and drive ultimately leads to a disturbance of their functioning, which is manifested in the deterioration of cognitive functions, reduced pleasure, motivation and drive, lack of joy and persistent sadness.

The reward system physiologically balances the action of the punishment system, while the joy system associated with the serotonin system balances the fear system associated with the amygdala and the GABAergic system. In a situation of worse functioning of the reward and joy systems, their antagonistic systems gain the advantage, which causes suffering and pain, both mental and physical, as well as fear and anxiety.

The process of development of mental disorders described in this way overlaps with biological factors in the form of genetic susceptibility or accompanying diseases, as well as environmental factors that may play a protective role or increase the risk.

However, the presented elegant model of the formation of mental disorders does not end with mental disorders. The predominance of negative stimuli in the form of fear, pain, and suffering leads to activation of the parasympathetic part of the nervous system, which leads to a decrease in blood supply to the gastrointestinal tract and skin, periodic increases in heart rate and blood pressure, increased muscle tone, faster breathing, and bronchial relaxation – everything in order to prepare the body for fight or flight.

The second arm of the adaptive response to stress is activation of the hypothalamus–pituitary–adrenal axis. It causes an increase in the release of cortisol by the

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adrenal glands, which leads to mobilization of the metabolism, enabling the survival of a difficult situation. These stress responses are evolutionary adaptations that increase the survival of the human species on Earth.

Nowadays, the problem is that the intensified civilization stress is chronic in nature; therefore it leads to a chronic activation of the sympathetic system and the stress axis, which leads to unfavorable somatic consequences.

Chronic sympathetic activation leads to dysregulation of the intestinal function, heterostasis of the circulatory system and numerous somatic symptoms from each organ system. Over the years, physiological disturbances become chronic and lead to somatic disorders in the form of gastrological, cardiological, dermatological or orthopedic diseases. In turn, chronic activation of the stress axis puts the body into a state of hypercortisolemia with all its consequences in the form of reduced glucose tolerance and type 2 diabetes, as well as disturbances of the immune system in the form of reduced immunity, allergies, asthma, and autoimmune diseases.

All these consequences start with the exhaustion of the brain's centers that regulate negative emotions and control stress. However, because the somatic consequences take place many years after the onset of a mental crisis, they disappear from the event horizon and are not identified as the true cause of the disease and are not treated. On the other hand, if the cause of the symptoms is not treated, it leads to relapse and, perhaps, apparent incurability, which is observed in the case of chronic somatic diseases.

The presented model of the development of chronic diseases, in particular autoimmune diseases, is a proposal to add psychiatric treatment to rheumatological treatment. Diseases such as rheumatoid arthritis and ankylosing spondylitis may include male adaptative syndrome in their pathogenesis. Regulation of the reward system by intervention with an antidepressant pro-dopaminergic drug can help treat chronic somatic conditions by reducing anhedonia and melancholy. Improving the mood can also reduce mental and physical suffering and pain in these patients. Conversely, intervention with a pro-serotonin antidepressant can restore joy and control over stress and anxiety, and thus improve coping with negative emotions. Regulation of the reward center and the joy center may reduce the activation of the stress axis, contributing in the long term to the reduction of autoimmune system disturbances, and an improvement in the prognosis of chronic rheumatic diseases.

This proposed model is an interesting topic for new interdisciplinary – rheumatological and psychiatric – clinical trials.

The idea of psychiatric cosmetology assumes the use of psychiatric drugs at an early stage of the

emergence and development of a mental crisis, which in terms of the International Classification of Diseases is referred to as adaptation disorders. Common life problems can lead to symptoms of anxiety, depression, physiological disturbances, and sleep problems. Pharmacological assistance at this stage makes it possible to use lower doses of drugs for shorter periods of time. When popularizing psychiatric cosmetology, I recommend drugs that affect the serotonin, dopamine and adrenergic systems, nootropic drugs and drugs that stimulate neurogenesis [3].

On the other hand, in a situation of multi-level accumulation of medical problems and the emergence of late complications of distress in the form of somatic diseases, psychiatric treatment restoring the functional balance in the brain may disable the mechanism that maintains the somatic disease and, in that way, may improve the outcome in the treatment of chronic medical diseases.

Conclusions

When medicine, and psychiatry in particular, help the patient to regulate and strengthen the dysregulated brain systems and restore the nerve cells to their synchronous functioning, an important element of psychiatric cosmetology is the proper hygiene of life. It is about rewarding oneself for work and effort, resting as long as working, relaxing in order to turn off excessive stimulation of the sympathetic nervous system and taking care to ensure good sleep, allowing for metabolic regeneration of cells in the whole body.

All efforts and attempts by a patient are beneficial in maintaining well-being. They may be respiratory relaxation, mindfulness, fitness, diet including the use of psychobiotics and healthy selfishness, i.e. consciously giving yourself joy and pleasure. These are recommendations of mental hygiene, which is an integral part of psychiatric cosmetology.

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