

Neurosis, as adaptation disease

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Abstract

The article proposes an evolutionary psychobiological model of the development of neurosis – the disease of adaptation. Evolutionary and pathogenic mechanisms of neurosis progress, its stages, and outcomes are revealed. The role of the biological ground in the origin and clinical evidence of neurosis is revealed. The methods for treatment of neurosis – as an adaptation disease are proposed. The social character of the disease is emphasized.

Key Words: Evolution; Fear; Unitary defense reactions; Psychosomatic relations

INTRODUCTION

Till now there are disagreements in understanding of the reasons, dynamics, an outcome, ways of preventive maintenance and treatment of a neurosis [1,2]. In ICD-10, the concept of "neurosis" is generally absent, as an indefinite concept. The existing models of neurosis, as a nosological unit, do not contribute to its unified treatment, the resolution of contradictions associated with the problems of neurosis. Meanwhile, neurosis forming psychosomatic diseases, including coronary heart disease, hypertension, duodenal ulcer, ulcerative colitis, bronchial asthma, type 2 diabetes, gynecological diseases, immunodeficiency states and others [3] in their extreme manifestation, supplies urgent pathology to therapeutic and neurological hospitals. In addition, the neurosis problem is closely intertwined with the problems associated with the use of psychoactive substances: ethyl alcohol, tobacco and others, acting as factors of therapeutic and tranquilizing, euphorizing and adaptogenic action in neurosis, are also involved in the formation of urgent therapeutic, neurological, and mental pathology.

Taking into account the foregoing, as well as the high prevalence of neurosis, the presence of social roots in it, the resolution of the problematics of neurosis is of paramount importance.

DISCUSSION

Adaptation, as a device, can be specific and nonspecific. The general nonspecific syndrome of G. Selje's adaptation is characterized by tension, intensity, an extremely broad and generalized spectrum of protective processes covering the whole organism, a sharp activation of the hypothalamic-pituitary-adreno-cortical system [4,5], which plays a leading role in the process of nonspecific adaptation.

However, due to nonspecificity, diffuse general character, generalization of the response to the stressor, the nonspecific adaptation syndrome is not always optimal. The fee for nonspecificity and generalized response to a stressor is neurosis, as a disease of adaptation.

The progress of adaptation follows the path of specialization and differentiation of responses to a stressor, which allows the body to more finely, qualitatively and adequately adapt to the environment, as a metasytem. Specific adaptation reactions are associated with the development of the CNS and the cerebral cortex.

The reason for the neurosis is fear and its equivalents, including neuropsychic overstrain stress, anxiety and physical pain.

Anxiety is fear directed toward the future. Stress is equivalent of fear, a reflection of the threat to life. Physical pain is equivalent of fear, an indicator of a threat to the integrity of the body. Emotions of fear, reflecting the threat to life, are an important evolutionary protective acquisition of the organism.

At the moment of fear, the experience of danger is the mobilization of the body's defenses aimed at preventing the threat. There is a neuroendocrinal shift, or a general adaptation syndrome [4,5]. In the blood, hormones of fear are thrown out, the whole hormonal mirror of the body changes. At the same time, the main metabolism, cardiac output increases, blood pressure rises, breathing quickens, the utilization of glucose by the body tissues accelerates, visual acuity, hearing, speed of muscle and neural reflex reactions increase, etc.

There are two types of unitary defense reactions for fear:

1. Psychomotor agitation-active resistance, care from the situation (escape) (Active protection)
2. Psychomotor stupor-immobility, mimicry (Passive protection)

Both types of reactions are genetically programmed, are protective, defensive, aimed at preserving the organism, against an immediate threat, damaging factor. In this case, the following protection options are possible:

1. Hyperergic protection reaction
2. Normoergic (adequate) defense response
3. Hypoergic (anergic) defense reaction

The nature of the reaction depends on the previous experience of the organism, the available stereotypes-automatisms of protection, sensitization (readiness) of the organism. Hyperergic protection reaction (shock) is less expedient, since it quickly leads to exhaustion, necrosis, destruction of protective forces, weakening of the body. Hypoergic defense reaction, as ignoring the danger, is possible with underdevelopment or depletion of the body's defenses – is also less favorable, as the body is destroyed. Normoergicheskaya protection reaction is adequate and corresponds to the body's need for protection. With active protection from stressor – musculoskeletal excitation, a critical realization and utilization of the energy of fear takes place. With the reaction of the stupor of active realization and utilization of the energy of fear does not occur, and after the termination of action of the stressor there is a slow, gradual, lytic return of an organism in an initial condition. At the same time, the energy of fear

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burns not in the furnace of musculoskeletal excitation, but is realized through a chain of internal vegetative reactions, smooth visceral muscles, that is, through vegetodystonic and vegetotiskinetik reactions (vegetoneurotic reactions), which leads to Neurocirculatory Dystonia (NDC).

With chronic fear, the level of neurohormonal protective energy in conditions of hypodynamia will be steadily increased, vegetative neurotic reactions are fixed, the phenomenon of the "boiler" arises, a persistent psychosomatic syndrome with an exit into psychosomatic disease. Psychosomatic syndrome is the ability of the body with the help of homeostatic reactions to withdraw the neuropsychic energy through the body [6]. In this case, the localization of the somatic link is not an accident, since the somatic link is an integral part of a complex psychobiological protective complex [7,8].

Psychosomatic disease is a persistent psychosomatic syndrome caused by the pathogenic influence of fear, which channeled and purposefully "hits" vulnerable, genetically determined structures [9]. Psychosomatic disease is a typical process, causally related to exogenous and endogenous conflicts that violate psychosomatic integration, and manifested a breakdown in neurohormonal and vegetative regulation.

Classical examples of psychosomatic diseases are the diseases of the "holy seven" [10] – essential hypertension, bronchial asthma, duodenal ulcer, ulcerative colitis, rheumatoid arthritis, neurodermatitis, as well as ischemic heart disease (IHD), type 2 diabetes, obesity, psychosomatic thyrotoxicosis, biliary dyskinesia, a symptom of the irritated bowel, intestinal colic, migraine and others [7,8,11].

Stages of development of psychosomatic disease

1. Functional stage of the disease, or NDC stage (Persistent psychosomatic syndrome) – Morphological changes in tissues are not observed.
2. Morphological stage of the disease [7] – Morphological changes in the tissue are observed.

With the advent of psychosomatic disease, secondary pain and anxiety – phobic syndromes arise, a persistent somatopsychic syndrome, a vicious cycle of the disease is formed. In this case, the role of the stressor on the development of psychosomatic disease may decrease [7].

The neurosis clinic forms

1. The stressor, whose importance is largely individual, taking into account gender, age, cultural and social factors, intensity and time of action of the stressor [12].
2. The soil of the disease, which can come:
 - Type of biological constitution, as morphofunctional expression of genotype, genetic strength or fragility of adaptive homeostat
 - Emphasis of character
 - Disease of the central nervous system, brain: organic, vascular, atrophic, endogenous radicals
 - Soma disease – acute and chronic somatic diseases, endocrine diseases

The cause and the soil of the disease can change places. In the neurosis clinic, not the causative factor [13], but the pathology of the soil, can dominate.

The neurogenic factor gives an impetus to the pathokinesis of the soil [14]:

1. If the soil of a neurosis is an organic disorder of the central nervous system, the brain with a functional weakness of vegetative regulation, it is easier to form NDC, a persistent psychosomatic syndrome.
2. If the soil of the disease is the pathology of the catfish, it is easier to form the morphological stage of the psychosomatic disease, a persistent somatic-mental syndrome, a vicious cycle of the disease.
3. If the patient has a character emphasis, then the chronic disease becomes easier due to increased sensitization of the patient to the stressor, it is easier to develop NDC, persistent psychosomatic syndrome, vicious circle of the

disease. Unfavorable are asthenic, anxious and hysterical accents of character.

4. If the patient has an asthenic constitution, that is, when the asthenic radical dominates in the psyche and soma, the course of the neurosis assumes a malignant character with the rapid passage of all stages of the disease, the formation of a severe psychosomatic disease, the vicious circle of the disease, and the psycho-organic syndrome.
5. If the patient has an endogenous or atrophic radical CNS, brain neurosis flowing benign, the clinic takes place the leveling of the causative factors of the disease, rarely formed by NDC, a persistent psychosomatic syndrome, in the first place is the pathology of the soil.

Stages of neurosis development, as adaptation disease

1. Adaptation system, transient psychosomatic reaction
2. Functional stage of psychosomatic disease, NDC as persistent psychosomatic syndrome
3. Morphological stage of psychosomatic disease – Formation of secondary somatopsychic syndrome, vicious circle of the disease
4. Heavy psychosomatic disease, exhaustion of the body, anergic reaction to harmfulness, severe personality disorder, psychoorganic syndrome

CONCLUSIONS

Evolutionary psychobiological approach to neurosis, as a disease of adaptation

It gives the key to understanding the causes and mechanisms of neurosis formation, its dynamics and outcome. It allocates somatic diseases of adaptation within the framework of neurosis in a separate group of psychosomatic diseases, including ischemic heart disease, hypertension, duodenal ulcer, bronchial asthma, ulcerative colitis, vegetative dyskinesia and vegetative dystonia, endocrine, gynecological diseases, obesity, dermatitis, arthrosis, immunodeficiency states and others. It identifies ways of treating neurosis as an adaptation illness:

- Reduction of the urgency of the stressor (psychotherapy, sedatives)
- Impact on the soil of the disease
- Coping of persistent psychosomatic syndrome, NDC (psychotropic and somatotropic drugs, vegetative stabilizers, psychotherapy) to direct the energy of fear into the furnace of musculoskeletal excitation (exercise therapy, physical labor, hardening, breathing exercises, sublimated activities, and others)
- Coping of somatopsychic syndrome, vicious circle of the disease (somatotropic and psychotropic agents, vegetative stabilizers)

It stresses the integrity of the body, the internal unity of the somatic, mental and social. Only a complex impact on a person, as a single psychobiological system, integrated into the society, can increase the effectiveness of treatment – Rehabilitation and prevention programs.

Neurosis is a social disease, since most stresses are of a social nature. Solving social problems, social protection of a person is decisive factor in the prevention and treatment of neurosis, as a disease of adaptation. In the treatment of neurosis should be involved not only doctors, psychiatrists and psychotherapists, but also doctors internists, psychologists and social workers. In the case of severe somatization of neurosis, the illness is cured by an internist with the involvement of a psychiatrist, psychotherapist, psychologist and a social worker.

CONFLICTS OF INTEREST

There are no conflicts of interest.

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