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COURSE OF NORMAL PHYSIOLOGY BASED ON THE THEORY OF FUNCTIONAL SYSTEMS

Abstract: In the course of normal physiology, students, along with the physiology of individual organs, learn about self-regulating functional systems that determine homeostasis, behavior and mental activity of a person. The theory of functional systems guides students to understand the mechanisms of stability of physiological indicators under various influences on the human body and, in essence, is the theoretical basis of health care, which is no less important than the clinical training of students.
Keywords: Theory of functional systems, course of normal physiology, functional systems of the body.

INTRODUCTION

The entry of Russian universities into the world space is associated with the high quality of education and the level of preparation of students for professional activities. The main requirement for the readiness of graduates of higher educational institutions is the ability to apply the knowledge obtained at the university for their further professional practical activities. At the same time, the leading link in high-quality education is the training of such specialists who are able to meet the needs of citizens, society and the state, which is the result of the educational process.

MATERIALS AND METHODS

Physiology is the science of life activity. It builds knowledge about the dynamics of the functions of living organisms primarily on the basis of structural and morphological data. Traditionally, morphologists study the structure of individual organs and tissues. As an inevitable consequence of this, organ physiology developed. Any modern textbooks on the most important fundamental medical and biological disciplines, such as anatomy, histology, physiology, etc., are built on the organ principle. Commonly recommended textbooks on physiology traditionally present the following sections: physiology of the cell, special tissues, heart, lungs, kidneys, stomach, spinal cord, brain, etc. The general mechanisms linking the activity of organs in the whole organism are nervous, humoral and immune regulation. The organ approach is also inherent in the teaching of medical specialties. They separately describe diseases of the heart, lungs, liver, kidneys, gastrointestinal tract, nervous system, etc. Doctors are divided into organ specialties. Pathogenesis, diagnostics and treatment are directly related to the function of specific organs, and the professional view of the doctor, as a rule, is mainly directed towards the diseased organs. And this, paradoxically, occurs against the background of the fact that the principle of the integrity of the organism was proclaimed as a priority by outstanding figures of Russian medicine S.G. Zybelin, M.Ya. Mudrov, E.O. Mukhin, I.M. Sechenov, I.P. Pavlov and many others [1-4].

RESULTS AND DISCUSSION

It is becoming absolutely clear that the organ principle in biological disciplines cannot be considered optimal for understanding the vital activity of the whole human organism.

In recent years, the molecular genetic approach has been actively introduced into medical and biological sciences, which, despite its enormous scientific significance, further deepens the

analytical principle of studying vital processes and takes specialists even further away from understanding the integrative functions of the whole organism.

A certain advance in the issue of understanding the holistic functions of the organism is taxonomy, i.e. grouping organs according to a specific functional purpose - the digestive, circulatory, respiratory, excretory, immune, nervous and other morphofunctional systems of the organism. These systems allow students and specialists to orient themselves in a certain way towards special physiological processes, but at the same time the basic patterns of functioning are not revealed and the questions remain unanswered: what unites these organs into morphofunctional systems and how do they interact with the whole organism? Essentially, the same shortcomings are inherent in the classical systems approach postulated by L. von Bertalanffy and his followers. The theory of functional systems proposed by P.K. Anokhin defined new approaches to constructing the functions of the whole organism.

First of all, it should be borne in mind that the theory of functional systems differs fundamentally from the widespread systems approach proposed by L. von Bertalanffy, A.A. Malinovsky and their followers. The systems approach proposed by these authors, in the broad sense of the word, considers systems as a set of many phenomena (processes) that, when combined, create a new quality that is different from each component included in the system. In contrast, the theory of functional systems considers systemic organizations in the dynamics of their construction. In this case, the leading link in the construction of a functional system of any level of organization is an adaptive result that is useful for the system and formed by it. Upon achieving the result of the activity, its parameters are imprinted on the structures of the corresponding functional system in the form of a mechanism for the advanced reflection of reality [8], which ultimately forms the goal of the activity upon achieving the required results. The result of the activity of a functional system of any level of organization is, thus, a system-forming factor. It is precisely the useful adaptive results, acting as system-forming factors, that are a kind of “calling cards” of any functional system.

CONCLUSION

The theory of functional systems, in contrast to Western, basically analytical, organ physiology, orients students to the knowledge of the functions of the whole organism.

In the process of training, students, along with the physiology of individual organs, learn self-regulating functional systems that determine homeostasis, behavior and mental activity of a normal, practically healthy person.

The theory of functional systems, orienting students to understanding the mechanisms of stability of various physiological indicators under different and even extreme influences on the body, is essentially the theoretical basis of health care, which, in our opinion, is no less important than the clinical training of students.

REFERENCES:

1. Anokhin P.K. Biology and neurophysiology of the conditioned reflex. - M.: Medicine, 2018. - 547 p.
2. Sudakov K.V. Reflex and functional system. - Novgorod: Publishing house Novgorod. State University named after Yaroslav Mudry, 2017. - 399 p.
3. Systemoquants of physiological processes / Ed. Sudakov K.V. - M., 2017.
4. Andrianov V.V., Vasilyuk N.A. Structure and psychophysiological correlates of systemoquants of educational activity // Collection of experimental and applied physiology. - Vol. 16. - M., 2011. - P. 65-79.