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Optimization of Functional Diagnostics of Gastrointestinal Tract Diseases

Turdiev Mashrab Rustamovich, Olimova Aziza Zokirovna
Bukhara State Medical Institute

Abstract: This article provides a literary analysis of current trends in the functional diagnosis of diseases of the gastrointestinal tract. For this purpose, foreign and domestic scientific articles and scientific research results were analyzed.
Key words: functional diagnostics, diseases, gastrointestinal tract.

Relevance. The development of new medical technologies provides invaluable assistance in the diagnosis and treatment of various pathologies, while the theoretical knowledge of the clinical features of diseases and personal experience data are insufficient for the doctor to make a diagnosis. Knowledge of modern diagnostic methods and their competent application becomes important. In the arsenal of diagnosing chronic gastroduodenitis associated with Helicobacter pylori, the doctor has a wide range of options. It is significant that the results obtained from numerous research methods also vary depending on the types of constitution. Indeed, at present, pediatrics, like other sciences, follows trends according to which the assessment of the development of a child's health takes place taking into account his individual characteristics [10,14,21]. Hence, the role of the constitutional aspect in the formation and course of diseases of the upper digestive tract, in particular chronic gastroduodenitis, seems important. The doctrine of the constitution. Within the framework of the anthropological approach, taking into account the constitutional characteristics of the body is an integral component when studying the state of human health [21]. This approach to the study of a macroorganism allows us to obtain a more complete understanding of the diversity of forms and factors of variability of systems, as well as to identify patterns between the particular somatic constitution of a person (somatotype) and his other systems [22], in particular the digestive system. In our country, the methodological basis of the doctrine of the constitution was an approach called individual-typological, which was used in the study of various aspects of functioning and development, as well as the principle of integrity. Such domestic anthropologists as V.V. Bunak, anatomists V.N. Shevkunenko and V.G. Shtefko, pathophysiologist A.A. Bogomolets, therapist M.V. Chernorutsky, pediatrician M.S. Maslov, teacher M.Ya. Breitman, were the founders of this scientific direction. The outstanding works of these scientists formed the theoretical basis for practical medicine. The doctrine of the constitution acquired the status of a scientifically based medical methodology, which made it possible to introduce the classical rule of medicine - to treat the patient, not the disease [21,22]. Currently, there are many assessments, interpretations and definitions of the constitution, which is associated with the variety of approaches that have emerged during the development of constitutional science [3,22]. So, according to E.G. Martirosov, the constitution is a set of the most significant individual characteristics and properties enshrined in the hereditary apparatus

and determining the specificity of the reactions of the whole organism to environmental factors [22]. B.A. Nikityuk believed that the reactivity of the body is the internal content of the constitution, and the constitution is nothing more than a combination of physicality, psychodynamics and other characteristics reflecting the state of reactivity [4]. In physical anthropology, constitution is a fundamental characteristic of an entire organism, most fully embodying the idea of the qualitative unity of its biological organization [4,21,22]. The idea of the tropism of a certain spectrum of diseases to one or another constitutional type, registered by body type, belongs to the German constitutional school. In the domestic school, the first steps in this direction were taken by M.V. Chernorutsky, who was the first to introduce the classification of the American anthropologist Bryant, on the basis of which he proposed his own classification of human body types, consisting of three components: asthenic (hyposthenic), normosthenic and hypersthenic [22]. He also identified and formulated the main features of a particular type. Thus, the hyposthenic (asthenic) type is characterized by a low position of the diaphragm and a small heart with an elongated droplet shape. Elongated lungs, relatively short intestines with reduced absorption capacity. Blood pressure tends to decrease, and cholesterol levels in the blood are reduced. Metabolism is slightly increased, dissimilation processes are intense. The hypersthenic type has other features: the diaphragm is located high, a voluminous stomach and long intestines with high absorption capacity. The heart is relatively large and located more horizontally. Blood pressure tends to increase.

There is an increased content of cholesterol and uric acid in the blood, and an increased number of red blood cells. Assimilation processes and a tendency to obesity predominate. A normosthenic is a moderately well-fed, proportionally developed type. Individual anatomical variability determines the ability to respond to a variety of environmental stimuli [7,14]. It should be noted that at different levels, vital parameters have a constitutional conditionality. This is evidenced by a sufficient number of facts accumulated in modern literature. The human constitution is laid down in early ontogenesis [7]. During these periods, a predisposition to a particular pathology is formed. Most diseases in adults and children arise against the background of one or another predisposition. But this predisposition does not always translate into a true multifactorial disease, since in young children, due to age-related physiological characteristics, the threshold values for the influence of external factors are reduced. As the immune system grows and matures, the effect of external factors on the body may increase, while hereditary factors may weaken. Under favorable environmental conditions, a predisposition to the disease may not be realized at all [1,7]. Manifestations of predisposition depend not only on unfavorable external environmental factors, but also on the duration and strength of their influence. An example is the incidence of morbidity in adolescence. Thus, at this age the frequency of many chronic diseases increases [1,7,14,21]. The idea about the tropism of a certain spectrum of diseases to one or another constitutional type, registered according to body features, belongs to the German constitutional school (Rees L. et al., 1945). The concepts of “constitution” and “chronic diseases of internal organs” from the position of genetic determination reveal taxonomic commonality. These complex phenotypic traits are of a polygenic, multifactorial nature [14,21]. Phenotypic manifestation is due not only to the coordinating interaction of a large number of genes and their primary products at the molecular biochemical level, but also to morphological regulatory mechanisms at higher levels of organization [21]. The formation of such phenotypic fundamental processes of life as metabolism, reproduction, immunity, information processing, adaptation to changing environmental conditions occurs under the influence of genetic and environmental factors. The influence of environmental factors on the

physical development of children and adolescents is well known. All their diversity can be divided into 3 groups: biogeographical, socio-economic and environmental [22]. However, it is important to understand that modern constitutional science no longer focuses on studying the frequency of occurrence of individual constitutional types in various diseases, but focuses on studying the causes, mechanisms, clinical differences, and variants of the course of pathological processes in groups differentiated by constitutional characteristics. In accordance with the above, it can be noted that asthenics are more often exposed to diseases of the gastrointestinal tract [3,10,22] and have, in comparison with others, a greater risk of stomach and duodenal ulcers, and vegetative-vascular dystonia. Another famous Russian clinician Vasilenko V.Kh. believed that "patients are, as it were, from birth predisposed to peptic ulcer disease due to their asthenic constitution." Among hypersthenics, according to the observations of Chernorutsky M.V., people with diabetes mellitus and gallbladder diseases are more common; in hyposthenics, disorders of the autonomic nervous system can be noted [10].

The relationship between body features and the reactivity of the body, metabolism, endocrine immunological indicators, and temperament characteristics proves that the somatotype can act not only as the basis for constitutional diagnosis and assessment of human health. Here somatology intersects with ideas about homeostasis as a fundamental property of life to maintain a stable existence in changing environmental conditions. The study of homeostatic mechanisms is carried out at different levels of organization of biosystems, from a cell to a whole organism, under normal conditions and adaptation to changes in the external environment [1,10]. It is difficult to overestimate the importance of the role of the doctrine of the human constitution in the problem of assessing his health. Health is a holistic multidimensional state of the body (including positive and negative indicators) in the process of realizing genetic potential in a specific social and environmental environment, allowing a person to perform his biological and social functions to varying degrees. It is modern anthropology, with its unique capabilities of quantitatively assessing the physical status of the human body in various periods of its ontogenetic cycle, at any level of studying morphology from subcellular to organismal, the ability to give not only individual, but also typological characteristics (which brings it to the population level), is the basis for those scientific works in various directions that are related to human health issues [22]. However, the constitutional norm of reaction, marked by a certain somatotype, does not change the essence of the disease itself with its characteristic clinical signs, patterns of development and outcome, but it makes it possible to clarify the constitutionally dependent signs of the disease, which give the pathological process an individual expression.

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