New approaches to assessing the state of the nervous system and mental activity in patients with psychosomatic disorders: modern possibilities electropunctural diagnostics

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New approaches to evaluation of nervous system condition and psychical activity in patients with psychosomatic disturbances: modern possibilities of electropunctural diagnostics

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## **RESUME**

Actual questions of examination of patients with psychosomatic pathology with use of electropunctural diagnostics methods - vegetative resonance test "IMEDIS-TEST" and R. Voll's method are considered. Different views on pathogenesis of psychosomatic disorders are presented. Mechanisms of psycho-neuro-somatic disturbances in the body are described basing on modern scientific conceptions. Instrumental methods of study, psychometric methodics and diagnostic parameters of electropunctural methods are characterized.

Keywords: psychosomatic, experimental-psychological study, psychometric methodics, vegetative resonance test "IMEDIS-TEST", R. Voll's method.

## **SUMMARY**

The article discusses topical issues of examination of patients with psychosomatic pathology using modern electropunctural diagnostic methods - the vegetative resonance test (ART) "IMEDIS-TEST" and the method of R. Voll. The points of view of various authors on the pathogenesis of psychosomatic disorders are presented. The mechanisms of psycho-neuro-somatic disorders in the body are outlined from the standpoint of modern scientific concepts. The instrumental research methods, psychometric methods and diagnostic parameters of electropuncture methods are characterized.

Keywords: psychosomatics, experimental psychological examination, psychometric techniques, vegetative resonance test "IMEDIS-TEST", R. Voll's method.

The study of the structure of psychosomatic diseases is one of the topical areas of modern medical research [2, 3, 10]. This is due to the fact that patients with diseases arising against the background of stressful situations account for more than 1/3 of the entire contingent of patients [10]. At the same time, on the one hand, mental disorders are the cause of somatic pathology, and, on the other hand, somatic disorders (by the type of feedback) negatively affect the neuropsychic sphere of a person [2, 11].

Before moving on to a detailed analysis of these mechanisms, it is necessary to consider a few basic terms.

Psychosomatics (Greek psyshe - soul, soma - body) - direction in medicine and

psychology, which studies the influence of psychological (mainly psychogenic) factors on the occurrence and subsequent dynamics of somatic diseases [2, 10]. It should be noted right away that the term "psychogenic factor" refers to those negative effects on the human psyche that cause psychological trauma [5, 8].

In other words, psychosomatics is a scientific term that defines the close relationship between the soul ("psyshe") and the body ("soma"), expressed primarily in the fact that many somatic (bodily) diseases are caused by mental disorders and psychological factors [3] ...

Neurosomatics is a direction of medical science that studies the influence of diseases of the nervous system on the occurrence and development of somatic pathology [2, 6, 14].

Somatoneurological and somatopsychic disorders are pathological changes in the state of the nervous system and mental activity that occur against the background of diseases of the somatic sphere [1, 3, 10, 13].

Clinical psychology is a private psychological discipline, the subject of which is mental disorders and mental aspects of somatic disorders (diseases). At the same time, in English-speaking countries, in addition to the term "clinical psychology", the concept of "pathological psychology" (Abnormal Psychology) is used as a synonym [7, 8].

Clinical psychology is one of the areas of research in the field of psychosomatics [7].

The classification of areas of psychological research depending on the object of scientific research is shown in Fig. 1 (according to [7]).



Rice. 1. Classification of directions of psychological research.

To assess the condition of a patient with psychosomatic pathology, the following classifications and pathogenetic approaches are used.

Psychosomatic relationships can be represented in the form of four groups of states (according to A.B.Smulevich) [7]:

- 1. Somatized mental reactions are disorders that are formed without participation of somatic pathology in the framework of formations of a neurotic or constitutional nature (neuroses, neuropathy).
- 2. Psychogenic reactions (nosogeny) are disorders that arise in connection with a somatic illness that acts as a traumatic event. Such reactions belong to the group of reactive states.
- 3. Reactions of the exogenous type (somatogeny) are reactions that manifest due to the impact of somatic harm (implemented on a pathogenetic basis). Such disorders belong to the category of symptomatic psychoses.
- 4. A reaction of the type of symptomatic lability is psychogenic provoked manifestation (or exacerbation) of manifestations of a somatic disease associated with a combination of social and situational factors. The reactions of the group under consideration are formed with the participation of constitutional predisposition (alexithymic, "coronary" and other types) as a result of the interaction of mental (anxious, depressive, dysphoric, conversion, asthenic and other disorders) and somatic pathology, accompanied by the formation of general symptom complexes [7].

When working with patients, it is important to take into account the formation of the "psychosomatic cycle" (according to MV Korkina) [7, 8], which looks like this.

- 1. Periodic updating of psychological problems;
- 2. Strengthening the intense emotional stress associated with these problems. experiences;
- 3. Somatic decompensation, exacerbation of chronic somatic diseases and the formation of new somatic symptoms.

To understand the unified structure of psycho-neuro-somatic disorders, it is necessary to consider the concept of the psychosomatic process according to V.I. Simanenkov [7] presented below.

- 1. Psychosomatic diseases develop on the basis of genetic (immunogenetic) prerequisites, which are associated with the features of immune and neuroendocrine reactivity, central autonomic regulation.
- 2. In conditions of psychological conflicts and emotional distressive of influences, states of socio-psychological maladjustment are formed, and in the future and personality disorders.
- 3. It is precisely the "imposition" of environmental stress factors affecting a person in the course of his individual development and socio-psychological maladjustment, to constitutional and genetic characteristics allows us to talk about the ontogenesis of psychosomatic disorders.
- 4. In the process of psychosomatic ontogenesis, the formation of vertically organized functional systems with multiple intersecting direct psycho-neuro-endocrine-immune and reverse somatopsychic connections and the formation of a "psychosomatic circuit".
- 5. The "target organ" in such a circuit plays an active role and can modulate the state of the central links of the functional system.
- 6. In the phase of exacerbation of the disease, the severity of psychosomatic the functional system can decrease due to the greater autonomy of the "target organ".
- 7. It is in remission that the structure of psychosomatic functional system. Achieving remission occurs both at the expense of a multilevel

adaptive restructuring, and by compensatory activation of new links in the system.

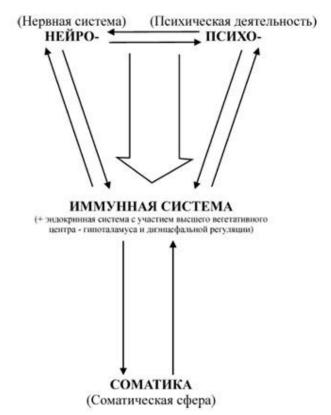
- 8. In diseases with a progressive course as the organic defect, due to a decrease in the adaptive capabilities of individual links of the functional system, a narrowing of the "adaptation corridor" occurs and sensitization of the system develops, which makes it unlikely to achieve stable remission.
- 9. From the main provisions of the concept of ontogenetic psychosomatic process, it follows that the means of adaptive and psychotropic therapy can positively influence both the psychological status of patients and the state of "target organs", as well as the course of psychosomatic diseases.

In the structure of psychosomatic diseases, it is conditionally possible to distinguish the main components of the links:

- 1. Neurosomatic link, which includes, first of all, residual organic lesions of the central nervous system, vascular disorders in the arterial and venous blood supply to the brain (arterial spasm and depletion of arterial blood flow, venous stasis and the formation of secondary intracranial hypertension), post-traumatic and post-infectious disorders. It can be assumed that the existing disorders of the nervous system, in addition to a direct negative effect on the somatic sphere, are a kind of premorbid background, aggravating the consequences of the impact of a psycho-traumatic factor.
- 2. Psychosomatic link suffered mental trauma, long-term stressful influences. This mechanism can also be considered from two points of view: firstly, the influence of the psychogenic factor on the onset and development of somatic pathology, and secondly, stress exposure negatively affects not only the somatic sphere, but also the nervous system, aggravating the existing disorders, the most indirectly intensifying neurosomatic disorders.
- 3. Somatoneurological and somatopsychic disorders acting on feedback principle.

Considering that these disorders are closely interconnected and affect each other, it is very difficult to clinically differentiate between neurosomatic and psychosomatic disorders, therefore, in patients with psychosomatic pathology, regardless of the nosological form, it would be more correct to speak of a single structure of psycho-neuro-somatic disorders. This, in turn, presupposes a comprehensive examination and comprehensive therapy for this group of patients.

Psycho-neuro-somatic relationships are shown in Fig. 2.



Rice. 2. Scheme of psycho-neuro-somatic relationships in the body.

At the same time, it is important to understand that these relationships in practice look much more complicated. The presented diagram shows such important parameters for the body as the state of the immune system, diencephalic and endocrine regulation, mesenchymal-metabolic metabolism, which must be taken into account.

In this regard, it is important to return to the pathogenesis of psychosomatic disorders according to V.I. Simonenkov to once again focus on one of the mechanisms of the formation of psychosomatic pathology, when "in the process of psychosomatic ontogenesis, the formation of vertically organized functional systems with multiple intersecting direct psycho-neuro-endocrine-immune and reverse somatopsychic connections and the formation of a" psychosomatic circuit " [7]. This is one of the key mechanisms for the formation of psycho-neuro-somatic disorders.

To differentiate the neurosomatic and psychosomatic links in the clinic, detailed examinations of patients are carried out, which are as follows.

- 1. Assessment of the state of the nervous system, which includes a consultation neurologist and carrying out the necessary instrumental studies.
- 2. Research of mental activity, for which it is necessary to conduct experimental psychological research by a psychologist [9].
- 3. Examination of the somatic sphere, which is carried out depending on nosological form, with a detailed study of the state and functions of various organs.

One of the modern diagnostic approaches for examining patients with psychosomatic pathology is electropuncture diagnostics. Most often

## are used:

- 1. Method of vegetative resonance test "IMEDIS-TEST" [1].
- 2. R. Voll's method [12].

Informativeness clinical and instrumental research, including electropuncture methods are presented in table. one.

Since this work is mainly devoted to assessing the state of the nervous system and mental activity, the scheme for examining the somatic sphere is presented briefly.

Regarding the use of electropunctural diagnostic methods in the study of the neuropsychiatric sphere, the following should be noted.

Table 1
Informative value of various research methods in a comprehensive examination
patients with psychosomatic disorders

Исследуемая область	Проводимые исследования	Результаты исследований
Нервная система	Осмотр неврологического статуса	Черепно-мозговая иннервация — рассеянная очаговая микросимптоматика. Двигательная сфера — чаще гиперрефлексия и расширение рефлексогенных зон. Чувствительная сфера — без нарушений. Координационная сфера — легкая атаксия в сенсибилизированной позе Ромберга. Выражены проявления вегетоневроза.
	Глазное дно	Проявления венозного застоя и косвенные признаки внутричеренной гипертензии.
	Допплерография (УЗДГ)	Обеднение артериального кровотока, проявления венозного застоя, косвенные признаки внутричеренной гипертензии.
	Электроэнцефалография (ЭЭГ)	Проявления дисфункции гипоталамических структур
	Метод Р. Фолля	<ol> <li>Изменение показателей на БАТ артерий в сторону снижения измерительных величин в случае обеднения артериального кровотока и повышения измерительных величин по сравнению с коридором возрастной нормы в случае артериального спазма.</li> <li>Изменение показателей на БАТ вен при проявлении вевозного застоя.</li> <li>В 90 % случаев изменение измерительных величин на БАТ артерий и вен сопровождаются эффектом падения стрелки.</li> </ol>
	ВРТ «ИМЕДИС-ТЕСТ»	<ol> <li>Снижение измерительного уровня при тестировании органопрепаратов артерий и вен (ОП «Артерии» D4; ОП «Вены» D4);</li> <li>Снижение измерительного уровня при тестировании органопрепарата гипоталамической области (Hypothalamus D4) как органа-мишени для геопатогенной нагрузки (Указатель Silicea D60).</li> <li>Тестирование электромагнитной нагрузки диффузно по органам и системам.</li> </ol>
Психическая деятельность	Экспериментально- психологическое иссле- дование с использова- нием психометрических методик (9)	<ol> <li>Нарушение мнестических функций в виде нарушения концентрации и устойчи- вости внимания, снижения объема опосредованной памяти;</li> <li>Выявление конфликтных зон и эмоционально-значимых переживаний в связи со стрессовой ситуацией в семье или на работе, в отношениях с детьми. Выражен- ные нарушения эмоционально-волевой сферы.</li> </ol>
	Метод Р. Фолля	Повышение показателей по БАЗ. При этом отмечается их нормализация после применения антистрессовых программ терапии.
	ВРТ «ИМЕДИС-ТЕСТ»	<ol> <li>Определяется психическая нагрузка при тестировании соответствующего указателя ВРТ «ИМЕДИС-ТЕСТ» (Указатель Ерірhysis D4).</li> <li>Тестируются указатели на депрессивные расстройства (Указатель Mandragorae radice D30).</li> <li>Тестируются целесообразные для использования антистрессовые и антидепрессивные программы ритмов мозга (Программа «Стресс 1», «Стресс 2» и, в большинстве случаев, Программа «Стресс 3», Программа «Депрессия 1»).</li> </ol>
Соматичес- кая сфера	УЗИ-органов брюшной по- лости и почек, компьютер- ная томография, допол- нительные лабораторно- инструментальные исследования	Определяется патология в соответствующих соматических органах и системах
	Метод Р. Фолля	Изменения показателей на БАТ соответствующих органов. Например, бронхи- легкие при бронхиальной астме; 12-перстная кишка при язве 12-перстной кишки.
	ВРТ «ИМЕДИС-ТЕСТ»	Изменения показателей органопрепаратов соответствующих органов в виде сни- жения измерительных величин.

The study of the neuropsychiatric sphere in patients with psychosomatic pathology is always a complex multidimensional work of specialists in various fields: a neurologist, a psychologist, and often a psychiatrist. As can be seen from the table, this study can be conditionally divided into two components: firstly, it is a study of the nervous system, and secondly, a study of mental activity. Neurological examination using instrumental methods and the work of a psychologist using psychometric techniques often, unfortunately, do not give an understanding of a clear picture of the "core of pathology", because they are belated. This is due to the fact that psychoneurological disorders have already caused psychoneurosomatic disorders in the body and formed a certain somatic pathology, which, in turn, by the type of feedback, it aggravates the existing disorders of the nervous system and mental activity. A vicious circle is formed with the development of disorders of diencephalic and endocrine regulation and pathological changes in the immune system. This is shown in Fig. 2.

Here it is necessary to note such a feature of ART "IMEDIS-TEST" as the preclinical nature of the method. ART "IMEDIS-TEST" allows testing the presence of psychological stress at the stages when clinical changes of a neuropsychiatric nature are not yet detected. Selecting drugs that relieve psychological stress (such as the flower infusions of Dr. Bach), the doctor solves not only a therapeutic problem, but also deals with the timely prevention of further psychosomatic disorders.

The use of certain ART indicators "IMEDIS-TEST" also helps to identify depressive disorders in the early stages, which makes the work of a psychiatrist more focused and timely.

It should also be noted that the ART indicators "IMEDIS-TEST" are very diverse and allow assessing (also at preclinical stages) the state of the main integrative indicators of the body: parameters of the immune system, hypothalamic regulation, endocrine functions.

Comparing the data presented in table. 1, the following conclusions can be drawn.

- 1. Methods of electropunctural diagnostics (autonomic resonance test of ART "IMEDIS-TEST" and R. Voll's method) occupy an important place in a comprehensive study of three important components of pathogenesis in psychosomatic pathology: the nervous system, mental activity and the somatic sphere. The ART methods "IMEDIS-TEST" and R. Voll are applicable both in the study of the pathology of each pathogenetic link, and in the assessment of psychosomatic disorders in the complex.
- 2. The preclinical nature of ART "IMEDIS-TEST" allows detecting violations nervous system and mental activity in the early stages of the disease, which allows timely prevention of psychosomatic disorders.

## Literature

- 1. Avanesova E.G., Avanesova T.S., Gotovsky M.Yu., Bocharov D.G. Application vegetative resonance test "IMEDIS-TEST" in the clinical practice of a doctor: Manual. M .: IMEDIS, 2007 .-- 164 p.
- 2. Alexander F. Psychosomatic medicine: principles and practical application. M., 2002 .-- 344 p.
  - 3. Brown J. Psychosomatic approach. M., 2001 .-- 318 p.
- 4. Zenkov L.R. Clinical electroencephalography (with elements of epileptology). A guide for doctors / L.R. Zenkov. 6th ed. M .: MEDpressinform, 2013 .-- 356 p.

- 5. Izard K.E. Psychology of emotions. SPb .: Peter -M., 2000. 375 p.
- 6. Karvasarsky B.D. Neuroses: A Guide for Physicians. 2nd ed. M.: Medicine, 1990 573 p.
- 7. Clinical psychology: Textbook for universities. 5th ed. / Ed. B.D. Karvasarsky. SPb .: Peter, 2015 .-- 896 p.
- 8. Korkina M.V. Psychiatry: Textbook for students. honey. universities / M.V. Korkina, N. D. Lakosina, A.E. Lichko, I.I. Sergeev. 4th ed. M.: MEDpressinform, 2008 .-- 576 p.
- 9. Rubinstein S.Ya. Experimental methods of pathopsychology and experience their application in the clinic (Practical guide). M .: April-Press, Psychotherapy, 2010 .-- 224 p.
- 10. Starshenbaum G.V. Psychosomatics and psychotherapy: healing of soul and body / G.V. Starshenbaum. Ed. 5th. Rostov n / a: Phoenix, 2015 .-- 350 p. (Psychological workshop).
- 11. Ushakov G.K. Borderline neuropsychiatric disorders. M .: Medicine, 1987 .-- 304 p.
- 12. Yanovskiy OG, Karlyev KM, Koroleva NA, Kuznetsova TV, Gotovsky Yu.V. Possibilities of computerized electropunctural diagnostics according to R. Voll's method in therapy with reflexotherapy and homeopathy methods (guidelines). M., 1999 .-- 28 p.
- 13. Clinical Neuropsychology / Kenneth M., Heilman MD, Valenstein MD NY, 1993.
- 14. Zillmer EA, Spiers MV, Culberson WF Principles of neuropsychology. Wadsworth Thomson Learning. Australia, 2001.

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