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NEW APPROACH TO INTERPRET THE RYODORAKU MAP TO ESTIMATE THE FUNCTIONAL STATE OF THE BODY'S REGULATORY SYSTEMS IN SCENAR-THERAPY

The data available today suggest that SCENAR-therapy normalizes the functional state of the system of neurohumoral regulation of the body's physiological functions [1,2,3,4]. Apparently, this can be considered to be one of the most important factors providing its effectiveness in treating such a wide range of diseases.

The autonomic nervous system (ANS) is the structural basis for the system of regulation of the body's internal environment. Therefore its dysfunctions, estimation of their importance in development of a pathologic process determine the objectives and tactics of using SCENAR in therapy.

The autonomic dysfunctions are clinically presented as an autonomic dysfunction syndrome (ADS) which is, in fact, a universal symptom group that is found in development of almost any pathologies and diseases. The syndrome complicates the disease course, impairs the effectiveness of a special therapy, and in the end impairs the body's self-recovery potential.

In modern ideas the ADS indicates both the disorders in various systems of the body and the pathogenesis – dysfunction of the higher centers of the autonomic regulation and disturbed equilibrium of the trophotropic and ergotropic activity. The developed central imbalance manifests itself as an autonomic activation, with the ANS sympathetic or parasympathetic tone dominating at the periphery, inadequate decrease (asthenia) or increase (hyperactivation) of the ANS functional activity, and is accompanied by disturbed equilibrium of the functional activity of organs that provide various autonomic functions [5,6,7,8].

The analysis of the heart rate variability (HRV) is one of the most physiologically grounded methods for objective estimation of the regulation system's functional state. Now this method is, in fact, a standard in this field [8,9].

The HRV analysis allows to estimate the ANS functional state based on objective data and set objectives of SCENAR-therapy application for normalizing the regulatory potential of the body. Moreover, it also gives objective criteria for their achievement. However this diagnostic method doesn't solve one of the main tactic problems of SCENAR-therapy – localizing the zones to be treated.

Today reflexodiagnostic methods and, specifically, the Nakatani's method are widely spread in the practice of the SCENAR-therapy diagnostic support [8, 10, 11]. They allow not only to estimate the functional state of a patient but also localize the zones to be treated. These methods, however, have a common disadvantage – the ANS functional state is estimated based on electroconductivity values only. As it is well-known, the electric conductivity shows the functioning of the sympathetic ANS only. It isn't critical for the traditional application of the Nakatani's method – estimating of the energy state of the Chinese meridian system. However, the estimation of the ANS state using only electroconductivity values is approximate as it doesn't consider parasympathetic characteristics.

In particular, when interpreting the Ryodoraku map, high electroconductivity values are usually interpreted as the ANS functional hyperactivity. Still, it is true only in case of a certain ratio of the sympathetic and parasympathetic ANS. For example, when the sympathetic tone is evident, high electroconductivity values may correspond to normal ANS functional activity. This can be seen from comparing the examination data obtained by the Nakatani's method with those obtained from using the HRV assessment method [13]. In this situation high electroconductivity values indicate only that the sympathetic characteristics are dominating and that the parasympathetic activity is deficient while the ANS functional activity in general may be normal. We can present many other ambiguities of such a kind.

To continue, I'd like to remind you the characteristics that are formed when examining the patient by the Nakatani's method, for example, using the RISTA-EPD complex [11] (Fig. 1).

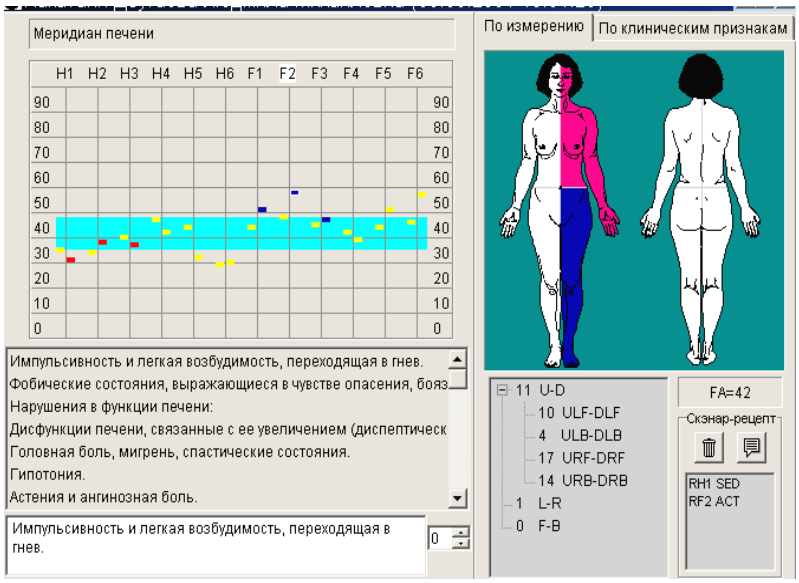

Fig. 1

They are:

- Ryodoraku map with the physiological norm corridor marked on it and electroconductivity values for every meridian branch
- Average value for all measurements – FA – that corresponds to the center of the corridor
- System of asymmetry indices that characterize the contribution of separate meridian groups sharing the same skin area to the general functional imbalance
- List of possible clinical presentations that are typical for every meridian

Unlike the existing approaches, the suggested approach is based on using the characteristics of blood pressure and pulse rate that are measured right after measuring electroconductivity in biologically active points (BAP) by the Nakatani's method (Fig. 2).

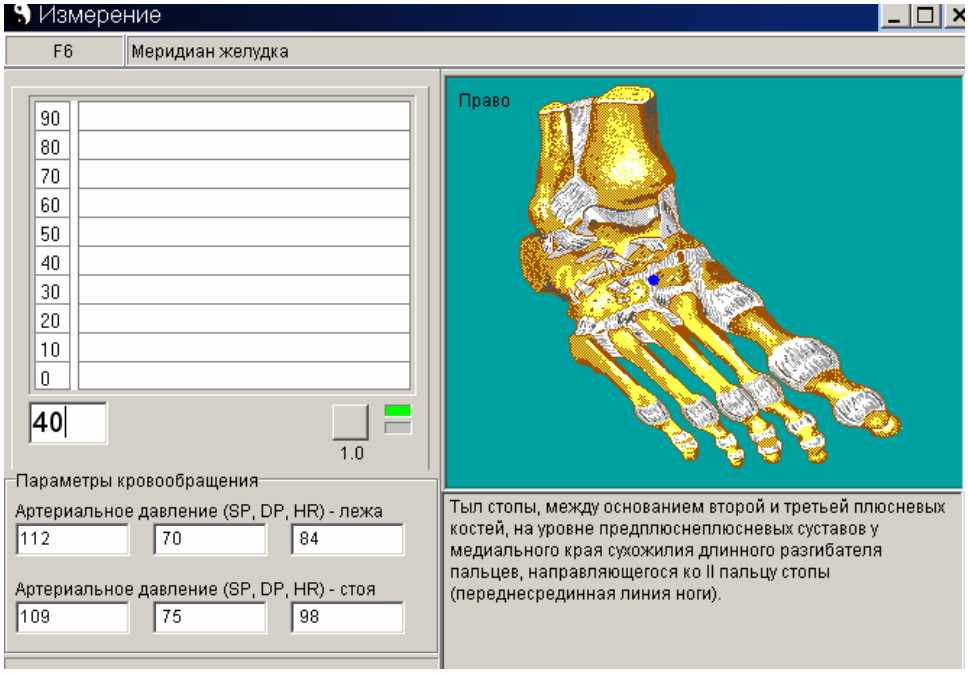

Fig.2

The comprehensive automatic analysis of these characteristics allows to more efficiently take into account the parasympathetic functional activity when estimating the ANS state and not to complicate the procedure of patient examination. In fact this allows to estimate the ANS functional state as

efficiently as when using the HRV assessment method and localize reflexogenic zones to normalize identified disorders at the same time.

During examination the average electroconductivity value, blood pressure and pulse rate characteristics are used to estimate the ANS functional activity and the equilibrium of sympathetic and parasympathetic influences.

The equilibrium of autonomic functions is estimated from the general look of the Ryodoraku map. If there are meridians whose electroconductivities are out of the limits of the physiological norm corridor, this is interpreted as disturbed equilibrium of the autonomic functions.

The asymmetry indices allow to estimate the contribution of particular groups of autonomic dysfunctions to the general functional imbalance.

So, based on collected data of the examination carried out using the suggested approach, a diagnostic decision for the ANS functional state can be created. It can be done based on the following characteristics: ANS functional activity, the ratio of the ANS sympathetic and parasympathetic functional activities (parasympathicotonia, eutonia, sympathicotonia), equilibrium of autonomic functional activities (Fig. 3).

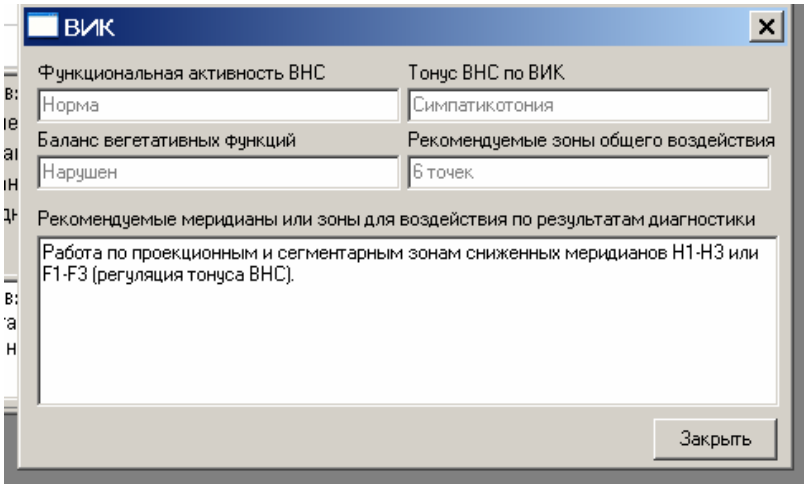

Fig. 3

The examining of the patient's state so carried out allows to set specific objectives of using the SCENAR-therapy for normalizing the functional state of the regulatory systems, develop objective criteria of their achievement, and, which is extremely important, it allows to check the decision using the HRV method.

In conclusion, I'd like to give you an example of changed BP (blood pressure), PR (pulse rate) and electroconductivity values when treating a patient (as a prophylaxis) with the SCENAR-device in the individually-dosed mode (IDM).

The patient was examined using the method considered above. The data of the examination are given in the Fig. 4.

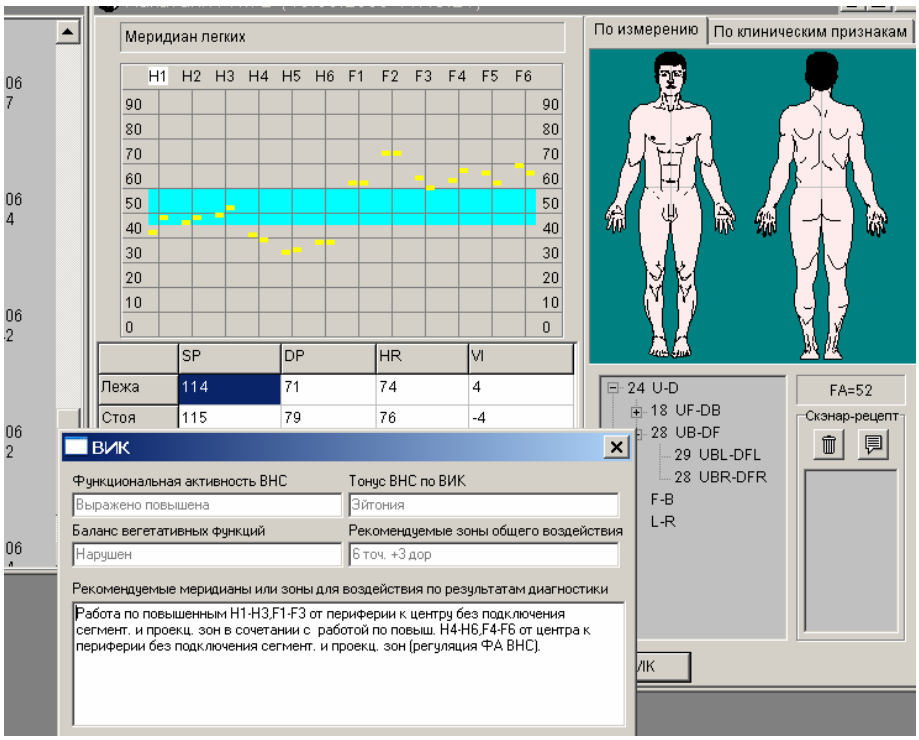

Fig. 4

A SCENAR-prescription (Fig. 5) was generated based on the examination data and RISTA-EPD's recommendations.

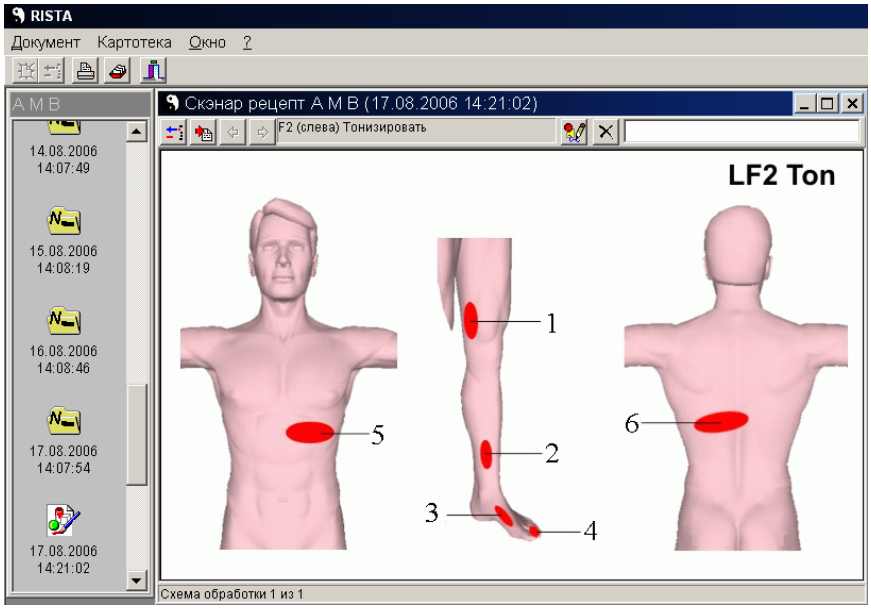

Fig. 5

According to the recommendations, zones 1-4 were treated in the IDM and blood pressure, pulse rate and electroconductivity of the LF2 and RF2 meridian were checked. Blood pressure, pulse rate were checked and Kerdo index (V.I.) [14] was calculated after getting the signals of delivered dose in IDM, and the dosed stimulation time was recorded using stopwatch. Total stimulation time was determined based on the behavior of electroconductivity, blood pressure and pulse rate characteristics. The data measured are given in Table 1.

Table 1

Date	№ zones	T treat. (min.)	SP	DP	PR	V.I.	FA	LF2	LF2
18.08.06			114	71	74	4	**52**	**67**	**56**
18.08.06	1	1’00	111	71	74	4	-	-	-
	1	1’50	112	69	74	7	-	-	-
	1	2’40	108	65	72	10	-	**52**	-
	1	1’50	110	63	70	10	-	**48**	-
	1	2’45	107	66	75	12	-	**52**	-
		10’05							
	2	3’30	121	72	76	5	-	**48**	-
		3’30							
	3	2’45	114	68	67	0	-	**48**	-
	3	2’50	111	68	65	-4	-	**49**	-
		5’35							
	4	2’15	112	71	68	4	-	**48**	**44**
		2’15							
		21’25							
21.08.06			**112**	**70**	**70**	**0**	**52**	**48**	**49**

Changes of asymmetry indices indicating of better equilibrium of autonomic functions are given in Table 2.

Table 2

Date	U-D	F-B	L-R	UBL-DFL	UBR-DFR
18.08.06	24	5	0	29	28
21.08.06	14	4	1	17	19

The Ryodoraku map after 48 hours after SCENAR-treatment is given in Fig.6.

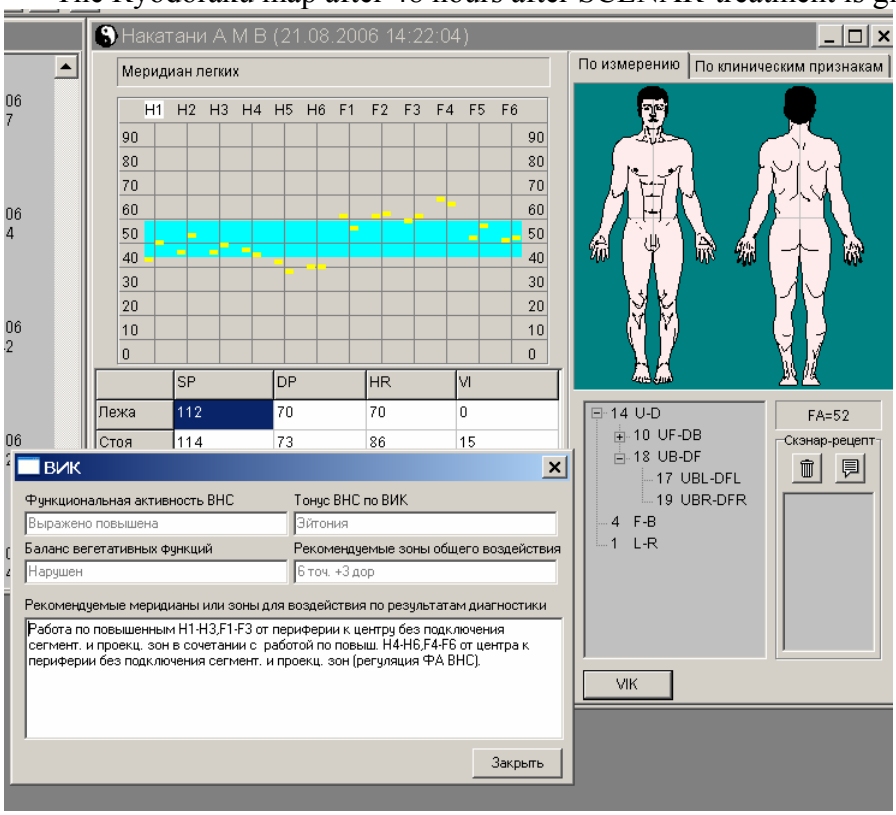

Fig.6

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