## The use of the gas-discharge visualization method in assessing the effectiveness of a multilevel system adaptive diagnostics and therapy A.E. I. V. Kudaev Zamlela, N.K. Khodareva (LLC "MCIT" ARTEMIDA ", Rostov-on-Don, Russia)

#### Introduction

There is a constant search for methods that can objectify the effectiveness of the therapy (allopathic, homeopathic, psychotherapeutic, informational, etc.), including laboratory and instrumental examination methods. But a special place is occupied by non-invasive methods. One of them - gas discharge imaging (GDV), or bioelectrography, or kirlianography - is a computer registration and analysis of images of the glow of a gas discharge induced by the electron-optical emission of an object, including a biological one, placed in a high-intensity electromagnetic field. Biological emission is amplified in a gas discharge, converted into a digital code due to a video conversion system, enters a computer and, after computer processing, is visualized as an image, which is a spatially distributed group of glow areas of different brightness [3, 5]. The method is safe, painless, informative, does not depend on the desire and experience of the operator, non-invasive, visual and reproducible, simple and convenient to use (there are no special requirements for the room, environmental conditions). Allows you to assess the influence of weak, subthreshold factors, to monitor the complex effects of various types of therapy. In this case, the reaction of the body as a single system is revealed and the state of individual organs and functional systems of a person is assessed [6, 1, 2]. simple and convenient to use (there are no special requirements for the room, the complex effects of various types of therapy. In this case, the reaction of the body as a single system is revealed and the state of individual organs and functional systems for the room, environmental conditions). Allows you to assess the influence of weak, subthreshold factors, to monitor the complex effects of various types of therapy. In this case, the reaction of the body as a single system is revealed and the state of individual organs and functional systems of a person is assessed [6, 1, 2]. simple and convenient to use (there are no special requirements for the

The purpose of this study - objectification of the effectiveness of the multilevel system adaptive diagnostics and therapy (MCADT) using the gas-discharge imaging method.

#### Study design

The study included 20 patients: men and women, aged 22 to 65 years (average age 41.14 ± 12.57) with various nosologies (various nosological forms) The study was open in one group (single group design) prospective, pop comparative, monocent

The study was open in one group (single group design), prospective, non-comparative, monocentric.

The duration was 4 weeks: before the bioresonance therapy, the initial image of all the patient's fingers was taken, then the treatment was carried out according to the author's method of MRADT [4], after which the GDV-grams were taken again. Evaluation of the direction and effectiveness of the therapy (MCADT) was carried out after 4 weeks using a bioelectrographic study.

## Materials and research methods

The gas-discharge image was recorded using the GDV Camera software package (developed under the guidance of Prof. KG Korotkov, ITMO TU, St. Petersburg) in 2 versions: "without filter" (1 mode) and "with filter "(mode 2). The device makes it possible to assess the psychophysical state and functional activity of a person, to obtain on the computer screen moving images of the glow of a gas discharge (GDV-grams) and store them in the form of files [3, 5]. The device has passed clinical trials and is certified by the Federal Service for Surveillance in Healthcare and Social Development as a device for medical technology dated April 28, 2005, No. FS 022a2005 / 1633-05. As an object, 10 fingers of the patient's hands were used.

Computer processing of the obtained images was carried out using the GDV Scientific Laboratory program, which allows multivariate processing and statistical comparison of samples of static or dynamic GDV-grams, GDV Diagram (developed by Kirlionics GDV International), designed for graphical presentation of complex GDV parameters and monitoring the state of the main organs and systems of a person on the basis of data obtained from ten fingers of a person's hands, and "GDV Qualification", designed to assess the psychophysiological status and the level of the functional and energy state of the body. For statistical processing of the data obtained, the sign and Wilcoxon test was used.

IRADT was performed on the equipment of the company "IMEDIS": apparatus "MINI-EXPERT-DT", apparatus "IMEDIS-BRT-PC" (set 2, module "Medication SELECTOR"), as well as the apparatus "Golden Section", which is the author's development of MCIT " Artemis".

### Research results and discussion

When analyzing GDV-grams in the "GDV Scientific Laboratory" software, statistically significant differences were found in all patients.

According to the data of the programs "GDV Qualification", "GDV Diagram", before the MRADT, in 100% of patients maladjustment states and prenosological changes were revealed, sports-important qualities were present in 45%. 75% had a low integral coefficient, 95% had an energy deficit and a high functional-energy balance, 80% had a high level of stress and instability of autonomic regulation. After the MRADT, an activating effect on the psychophysiological state of patients was noted: the integral coefficient, the functional-energy index increased; decreased functional and energy balance, energy deficit and energy deficit symmetry. In 90% of patients, the symptoms of the maladaptive state disappeared and psychophysical qualities characteristic of the activation reaction (activity, purposefulness,

self-confidence, stress resistance, mental self-regulation), the presence of prenosological qualities was noted in 25%. These indicators persisted after 4 weeks, but were less pronounced compared to the indicators immediately after MRADT, 60% of patients showed only sports-important qualities.

Example

Patient V., 49 years old. According to the data of the "GDV Diagram" program, there was a high activation coefficient, a low integral area, the instability of vegetative regulation was revealed (a high coefficient of variation of the standard deviation). The most significant changes were observed in the meridians of the bladder, kidneys, lungs and liver, which was taken into account during BRT. After the MRADT, the activation coefficient decreased, but remained above the norm, the integral area returned to normal. On the control study, after 4 weeks, normal indicators of the integral area, activation coefficient and autonomic regulation were revealed. The remaining changes were taken into account during further BRT (Fig. 1–3).







Rice. 2



Rice. 3

According to the "GDV Qualification" program, patient V. before MRADT had a low integral coefficient and functional-energy index and, at the same time, a high indicator of energy deficiency and energy deficiency symmetry, the presence of symptoms of maladjustment state (vegetative dysfunction, energy deficiency state, anxiety-hypochondriacal state). After the MRADT, an activating effect on the psychophysiological state of the patient was noted: the integral coefficiency symmetry decreased, the symptoms of the maladaptive state disappeared and psychophysical qualities characteristic of the activation reaction appeared (activity, purposefulness, confidence in itself), however, some prenosological qualities remained (insoluble dreams). 4 weeks after the MSAD (Tables 1, 2), only sports-important qualities were observed.

Table 1

# Change in the functional and energy state of patient V., 49 years old, against the background of IRADT

No.	Integral coefficient	Functional energetic index	Functional energetic balance	Energy deficit	Symmetry energy deficit		
one	- 170	11.7	17	88.3	76.7		
2	27.3	75	6	25	16.7		
3	35	73.3	five	26.7	6.67		

1 - primary examination by the GDV method; 2 - examination of the patient by the GDV method after 10 minutes. after the IRADT; 3 - examination of the patient by the GDV method 4 weeks after the MRADT.

table 2

Change in the psychophysiological status of patient V., 49 years old, against the background of MSADT

No.	AC	PF	SR	ST	RG	IN	DR	AA	DT	II	TH	SL	VD	ED	NC
one						+	+	+	+	+	+		+	+	
2	+	+	+		+		+								
3	+	+	+	+	+										

1 - primary examination by the GDV method; 2 - examination of the patient by the GDV method after 10 minutes. after carried out by IRADT; 3 - examination of the patient by the GDV method 4 weeks after the MRADT.

Sportingly important qualities: AC - activity, PF - purposefulness, SR - self-confidence, ST - stress resistance, RG - mental self-regulation.

Pre-nosological qualities: IN - introspection, DR - insoluble dreams, AA - unmotivated anxiety, DT - decreased performance, II - irascibility.

Disadaptive states: TH - anxiety-hypochondriacal states, SL - striving for loneliness, VD - autonomic dysfunction, ED - energy deficiency states, NC - the need for examination.

Conclusions:

1. Multilevel systemic adaptive diagnostics and therapy is an effective method of treatment that confirmed by statistically significant differences using the gas-discharge imaging method.

2. Bioelectrography can be used as an objective (reliable) method for evaluating the results

## bioresonance therapy.

3. The most pronounced picture is observed when shooting GDV-grams "without a filter", which makes it possible to assess the the incipient functional changes in the state of organs (organism), while GDV-grams "with a filter" reflect the morphological state of organs, the changes of which are much slower.

## Literature

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