

Features of hormonal homeostasis when using various types bioresonance therapy in the complex treatment of patients with hemorrhagic fever with renal syndrome

L.V. Chernetsova

(GOU VPO "Izhevsk State Medical Academy", Izhevsk)

Hemorrhagic fever with renal syndrome (HFRS) is the most common viral natural focal disease registered in Russia [10]. The development of methods of differentiated complex therapy with the use of medication and non-medication methods in the system of complex treatment and rehabilitation of patients with HFRS is of particular relevance.

In recent years, integrative methods of prevention and treatment have been intensively developed, taking into account the reserves of the body's adaptive capabilities, the levels of their reactivity, the state of the main regulatory systems in terms of their stress and exhaustion [1, 5, 9]. Among such methods, a clear advantage belongs to endo- and exogenous bioresonance therapy [2-4, 6-8].

The purpose of the research was the study of various options bioresonance therapy in the complex treatment of patients with HFRS in the acute period, when almost all traditional physical factors are contraindicated for use.

Research methods

The study included 78 patients with HFRS (observation group I) against the background of the combined use of drug therapy and various options for bioresonance therapy. All patients at the stage of complex treatment in a hospital (from 3-5 days of hospitalization) were divided into 4 subgroups - Ia, Ib, Ic and Id. In subgroup Ia, resonance frequency therapy (RFT) was used according to HFRS frequency programs (No. 371, 372, 373) with the imposition of electromagnetic inductors in the form of a "belt" along the perimeter of the front surface of the body and a "loop" on the lumbar region, with an intensity of 100 conv. ... units, exposure 10-15 minutes, 8-10 procedures, daily. In subgroup Ib, basic endogenous bioresonance therapy (BRT) was carried out according to the IV strategy in the mode according to the activity of time (circular and vertical method) sequentially along all and worst meridians with a recording of the general and particular BR-preparation, 7-10 sessions, exposure from 10-30 minutes. In subgroup Ic - induction therapy (IT) programs No. 6 and 18 (normalization of sleep and falling asleep), later (9-15 days) No. 11, No. 12 (endocrine regulation) and No. 15 (cerebral) using a special electromagnetic "loop"-Inductor, which was superimposed on the corresponding wave points -" indicators "of the head, with an intensity of 15-20 conv. units, 10-15 impacts, daily. In subgroup Id - complex BRT in the form of a combination of endogenous bioresonance and induction therapy, 7-12 exposures, daily. In subgroup Ic - induction therapy (IT) programs No. 6 and 18 (normalization of sleep and falling asleep), later (9-15 days) No. 11, No. 12 (endocrine regulation) and No. 15 (cerebral) using a special electromagnetic "loop"-Inductor, which was superimposed on the corresponding wave points -" indicators "of the head, with an intensity of 15-20 conv. units, 10-15 impacts, daily. In subgroup Id - complex BRT in the form of a combination of endogenous bioresonance and induction therapy, 7-12 exposures, daily. In subgroup Ic - induction therapy (IT) programs No. 6 and 18 (normalization of sleep and falling asleep), later (9-15 days) No. 11, No. 12 (endocrine regulation) and No. 15 (cerebral) using a special electromagnetic "loop"-Inductor, which was superimposed on the corresponding wave points -" indicators "of the head, with an intensity of 15-20 conv. units, 10-15 impacts, daily. In subgroup Id - complex BRT in the form of a combination of endogenous bioresonance and induction therapy, 7-12 exposures, daily. In subgroup Id - complex BRT in the form of a combination of endogenous bioresonance and induction therapy, 7-12 exposures, daily. In subgroup Id - complex BRT in the form of a combination of endogenous bioresonance and induction therapy, 7-12 exposures, daily.

The comparison group (II) consisted of 23 patients with HFRS, who during the entire study received standard drug therapy against the background of imitation of bioresonance therapy (placebo) while observing the identity of sessions, frequency and intensity of exposure.

Evaluation of the state of dynamics of the hormonal-metabolic status and the effectiveness of treatment in 101 patients with HFRS (men aged 18 to 55 years) was determined by the content of prolactin, cortisol, thyroid stimulating hormone (TSH) and thyroid (triiodothyronine, T₃ and thyroxine T₄) hormones, testosterone, C-peptide, insulin, depending on the phase of the acute period of the disease (high and early convalescence) and the severity of the disease (mild - 29 people, moderate - 43, severe - 29).

Results and discussion

The results of the studies showed that in all patients with HFRS in the acute period of the disease, there is a violation of the adaptive-compensatory mechanisms both in the central and peripheral links of hormonal regulation. The detection of a significant increase in the concentration of prolactin, as well as cortisol, TSH, testosterone, C-peptide and insulin, indicates the activation of not only the hypothalamic-pituitary-adrenal system, but also the links of its interaction - thyrotropic, gonadotropic and glucose-metabolic axes. Signs of discoordination in the form of an increase in TSH levels with a simultaneous decrease in T levels³ and T₄ confirms the manifestation of the so-called "euthyroid" pathological syndrome. Impaired neurohumoral regulation in patients with HFRS is a distinctive syndrome, has a phase nature, correlates with the peculiarities of the clinical picture and the prognosis of the disease. The greatest difference in the violation of hormonal homeostasis was recorded in the acute period at the height of the manifestation of the infectious process.

In the course of complex treatment of patients with HFRS against the background of various BRT options in the acute period of HFRS (high and early convalescence), the degree of the most significant changes in hormonal homeostasis was recorded in group I of observation. A comparative analysis of individual types of BRT in the complex treatment of patients in the acute period of HFRS revealed the following features.

In subgroup Ia, under the influence of RFT in the complex treatment of HFRS patients, statistically significant changes were revealed only in the insulin content, the level of which decreased from the initially increased by 26.4% (from 155.6 pmol / L to 114.5 pmol / L, $p < 0,05$).

In subgroup Ib, during endogenous BRT, patients with HFRS showed positive dynamics, which was characterized by a decrease in the initially elevated levels of prolactin by 21.8% (from 17.9 ng / ml to 14.0 ng / ml, $p < 0.05$), C-peptide by 22.2% (from 353.2 nmol / L to 274.7 nmol / L) and insulin by 31.4% (from 152.9 pmol / L to 104.9 pmol / L, $p < 0.05$). There was also a clear tendency towards a decrease in the initially elevated TSH content by 14.9%, an increase in the initially decreased T levels³ by 18.2% and T₄ ($p > 0.05$). Nevertheless, the value of the values of the ratio coefficient (T₃+ T₄) / TSH significantly increased by 33.8% (from 37.9

conventional units up to 50.7 conventional units, $p < 0.05$).

In subgroup Ic, when using IT, an identical but more significant dynamics of changes in hormonal status was observed, which was manifested by a significant decrease in prolactin levels by 21.6% (17.6 ng / ml to 13.8 ng / ml, $p < 0.05$), cortisol by 30.0% (from 794.2 nmol / L to 556.2 nmol / L, $p < 0.05$), C-peptide by 21.8% (from 361.1 nmol / L to 282.3 nmol / L, $p < 0.05$) and insulin by 31.2% (from 148.6 pmol / L to 102.2 pmol / L, $p < 0.05$) and an increase in the ratio

(T₃+ T₄) / TSH by 29.6% (from 38.0 conventional units to 48.3 conventional units, $p < 0.05$).

In subgroup Id, with the combined use of BRT, the most significant positive shifts in the chain of the studied hormonal parameters were noted. A significant decrease in the initially elevated levels of hormones was found: prolactin by 36.0% (from 17.2 ng / ml to 11.0 ng / ml, $p < 0.05$), cortisol by 25.5% (from 763.0 to 568, 0 nmol / L, $p < 0.05$), insulin by 26.9% (from 157.9 nmol / L to 109.8 pmol / L, $p < 0.05$) against the background of an increase in testosterone by 14.7% (from 15.4 nmol / L to 19.2 nmol / L, $p < 0.05$), the ratio coefficient (T₃+ T₄) / TSH by 51.6% (from 38.2 conventional units to 57.9 conventional units, $p < 0.05$) and T₄ by 22.3% (from 103.0 nmol / L to 126.0 nmol / L, $p < 0.05$).

The dynamics of the revealed hormonal changes under the influence of drug therapy in patients of group II was noted to a lesser extent; moreover, there was a significant significant decrease (below normal) in insulin levels by 74.1% (from 160.3 pmol / l to 41.5 pmol / l, $p < 0.05$), against the background of only a tendency towards a decrease in the initially elevated levels of prolactin, TSH and T₄...

When assessing the effect of the combined use of BRT (subgroup Id), its undoubted advantage was revealed in comparison with individual variants of BRT (RFT, endogenous BRT, and IT) and drug therapy (II comparison group). This was confirmed not only by the presence of a significant improvement in central neurohumoral regulation in the dynamics of a decrease in hyperprolactinemia, the content of cortisol, TSH, C-peptide, insulin in the blood, a significant increase in the ratio (T₃+ T₄) / TSH and testosterone levels, but also the timing of the leveling of hormonal imbalance in patients with HFRS in the 1st observation group. The therapeutic effect of the combined use of BRT, assessed by the state of hormonal homeostasis in the acute period of HFRS, in our opinion, is associated with the summation of individual types of BRT as a result of manifestations of the central homeostatic effect, which causes a positive effect on the central and peripheral links of the endocrine system towards the normalization of neurohumoral regulation.

Summarizing the results of the influence of different types of BRT on the main pathogenetic mechanisms of neurohumoral regulation, depending on the severity of HFRS, a clear advantage was revealed when using endogenous BRT and the combined version (endogenous BRT and IT). The results obtained make it possible to identify indications for their differentiated use in the acute period of complex treatment: RFT is indicated for patients with mild severity during the height and early convalescence of HFRS; endogenous BRT - for patients with mild, moderate and severe forms of HFRS during the peak period; IT - patients with mild severity during the height and moderate and severe severity during early convalescence; combined variant of BRT - for patients with mild and

moderately severe in all phases of the acute period (high and early recovery).

conclusions

Thus, in an infectious process, hormones of the neuroendocrine system can be considered as vectors reflecting the complex relationship between an infectious agent and neurohumoral homeostasis. The use of various variants of endo- and exogenous BRT in the complex treatment and rehabilitation of patients with HFRS has a beneficial effect on hormonal homeostasis as an adaptive regulator, which ultimately leads to the normalization of neurohumoral regulation in the concerned central and peripheral links of the endocrine system as a whole.

Literature

1. Balabolkin M.I. Endocrinology / M.I. Balabolkin. - M.: "Universum publishing", 1998. - 582 p.
2. Bobrovskaya A.N. Clinical experience with induction therapy in frequencies of biocurrents of the brain // Abstracts and reports. IV International Conference "Theoretical and Clinical Aspects of Bioresonance and Multiresonance Therapy" Part II. - M.: IMEDIS. - S. 74-82.
3. Brusina L.I., Serova T.A. The use of homeopathic medicines for immune correction // Abstracts and reports. III International Conference "Theoretical and Clinical Aspects of Bioresonance and Multiresonance Therapy". Part I. - M.: IMEDIS, 1997. - S. 142-145.
4. Gotovsky Yu.V., Perov Yu.F. Features of biological action physical and chemical factors of low and ultra-low intensities and doses. - M.: IMEDIS, 2003. -- 388s.
5. Gotovsky Yu.V., Solomatin V.A., Tikhomirov D.D. Combined bioresonance diagnostics and therapy // Abstracts and reports. VI International Conference "Theoretical and Clinical Aspects of the Application of Bioresonance and Multiresonance Therapy". Part I. - M.: IMEDIS, 2001. - S. 131-139.
6. Gotovsky Yu.V., Korolev Yu.N., Katorgin V.S. Preliminary data on the effect of resonant frequencies of the electromagnetic field on bacterial cells // Abstracts and reports. VI International Conference "Theoretical and Clinical Aspects of Bioresonance and Multiresonance Therapy". Part I. - M.: IMEDIS, 2000. - S. 21-23.
7. Islamov B.I., Gotovsky Yu.V., Funtikov V.A. Some results application of BRT in medical practice // Abstracts and reports. III International Conference "Theoretical and Clinical Aspects of Bioresonance and Multiresonance Therapy". Part I. - M.: IMEDIS, 1997. - S. 40-60.
8. Koroleva M.V., Meizerov E.E. Studying the dynamics of autonomic regulation with induction therapy in mode No. 15 (Cerebral program) // Abstracts and reports. VI International Conference "Theoretical and Clinical Aspects of Bioresonance and Multiresonance Therapy". Part I. - M.: IMEDIS, 2001. - S. 174-178.

9. Cattail, V.M. Pathophysiology of the endocrine system / V.M. Cattail, R.A. Arches; per. from English - SPb. - M. : "Nevsky Dialect" - "BINOM Publishing House", 2001. - 336 p.

10. Sirotin B.Z., Zharsky S.L., Tkachenko. E.A. Hemorrhagic fever with renal syndrome (consequences, their diagnosis and classification, clinical examination of those who have been ill). - Khabarovsk: Riotype, 2002. -- 128 p.

Chernetsova, L.V. Features of hormonal homeostasis when using various types of bioresonance therapy in the complex treatment of patients with hemorrhagic fever with renal syndrome / L.V. Chernetsova // Traditional Medicine. - 2007. - No. 1 (8). - S.11-13.

[To favorites](#)