

Materials and methods. Literature analysis, clinical records.

Here is an example of observation of the patient with recurrent ADEM.

Patient G., female, 44 years old. By reason of the developed right-sided hemiparesis was taking treatment for ischemic stroke in the primary vascular center. On brain CT – there is hypodensitive area in the right parietal-temporal region. Released with improvement. In 2 months, weakness in the right limbs came back, also there was a walking shakiness. Examined in the regional vascular center - in addition to focal symptoms as right-sided hemiparesis and static locomotor ataxia, attention was attracted by the presence of euphoria and decrease of criticism and cognitive functions. There was carried out a complex examination. On the brain MRI large pocket of demyelination in white matter, mainly periventricular were revealed. ADEM diagnosis was established, on the pulse therapy with methylprednisolone there was positive dynamics. MRI monitoring in 2 months – pockets reduction. In 4 months - the focal symptoms re-entered, there were bouts of short-term loss of consciousness without seizures. On MRI - decrease of the “old” pockets volume and a new one was revealed in the left temporal region. Considering the disease flow and examinations, the diagnosis is a multi-phase ADEM. Under the pulse therapy with glucocorticoids, there is positive dynamics, but cognitive and emotional disorders persisted.

Conclusion. Despite the development of ADEM criteria, there are difficulties in its diagnosis, especially in the recurrent cases. It is necessary to carry out a differential diagnosis with systemic diseases, chronic neuroinfections and disseminated sclerosis. The study of the anamnesis, clinical and MRI-monitoring allows to clarify diagnosis, as it was in the given case.

UDC 612 DOI 10.22448/AMJ.2017.3.120-121

THE ROLE OF ACUPUNCTURE IN CORRECTION OF IMMUNOLOGICAL VIOLATIONS IN THE ACUTE PERIOD OF ISCHEMIC STROKE

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Abstracts: In order to study the effectiveness of reflexotherapy in correction of immunological disorders in an acute period of ischemic stroke, 45 patients were clinico-immunologically examined (on the 2nd day of patients stay in the hospital and 15 days after the beginning of the course of early rehabilitation). In the main group of patients (30 people), whose basic complex of rehabilitation measures was optimized by the inclusion of reflexotherapy, there was a significant improvement in a number of indicators of cellular and humoral immunity: reduction of leukocytes in peripheral blood ($p < 0.05$), an increase in lymphocyte count ($p < 0.05$), relative and absolute values of T-lymphocytes (CD3 +) content ($p < 0.01$ and $p < 0.05$, respectively), immunoregulatory cells of T-helpers (CD4 +) ($p < 0.05$), decrease in the number of B-lymphocytes to normal values ($p < 0.01$), and an increase in Ig G level ($p < 0.05$). In the control group (15 people), where standard treatment was conducted, there was no pronounced dynamics of the indices. Thus, a comprehensive clinical and immunological study of the effectiveness of non-drug correction of immunological disorders in the acute period of ischemic stroke demonstrated high efficiency of acupuncture, with relative simplicity and safety of its application.

Key words: acute period of ischemic stroke, acupuncture, reflexotherapy, immune status, cellular and humoral immunity

The death rate from stroke in Russia remains one of the highest in the world [7]. Complications that supplement to the pathological process cause death more often than the immediate severity of stroke [2]. In a relatively late period, somatic complications develop due to immobility of patients, autonomic dysfunction and infection [2]. Consequently, their treatment and prevention are of primary practical importance.

Recently in the pathogenesis of ischemic stroke immense importance is attached to the immunological mechanisms, incl. autoimmune process that aggravates the clinical picture and contributes to neurological deficits. The main pathogenesis of stroke is a damage of vascular endothelium [1].

In the literature, various pharmacological methods of correction of immunological disorders in patients who underwent ischemic stroke [3,4,5,6] have been described. However, when they are used, there is a risk of developing side effects, which can significantly limit their purpose.

The centuries-old experience of acupuncture allows to classify it as a method that restores the immune status. The aim of the study was to survey the possible effectiveness of reflexotherapy in correcting immunological disorders in the acute period of ischemic stroke.

Materials and methods A clinical and immunological examination of 45 patients (22 women and 23 men) aged 44 to 81 years (mean age 64.3 ± 1.8) in the acute period of ischemic stroke was performed in the Primary Vascular Department of Blagoveshchensk. Clinical diagnosis was made based on anamnestic information, the results of subjective and objective neurological symptoms and data of additional research methods. The severity of neurologic symptoms assessed by the NIHSS scale, averaged 6.05 ± 0.42 points. To assess the possible effect of acupuncture on the immune status, an immunological study was conducted in 2 groups of patients (representative by sex, age and severity of neurological symptoms).

The first group of patients (control, 15 people) received only standard therapy. Among patients in the second group

(basic, 30 people), regular treatment was optimized by including reflexotherapy. At the same time, in order to correct the immunological disorders, acupuncture points with immunoregulatory effects were punctured daily (in addition to the standard acupuncture regimen, which was developed depending on the existing neurological deficit). Reflexotherapy procedures were prescribed from 2-3 days of the patient's stay in the hospital (in the absence of contraindications), with 20-30 minutes duration of the exposure by a harmonizing method, 10-12 procedures per course.

The immunological study was conducted on the 2nd day of patients' stay in the hospital and 15 days after the beginning of the course of early rehabilitation. Phenotyping of peripheral blood lymphocytes was carried out by indirect immunofluorescence using monoclonal antibodies to clusters of differentiation of CD3 +, CD4 +, CD8 +, CD20 +, CD16 +, CD25 +. The smears were counted using a luminescent microscope "Lumam-R8" and a combination of light filters. The concentration of serum immunoglobulins was determined by the Mancini method of radial immunodiffusion using monospecific antisera. As normative values, we applied indicators of 20 healthy individuals, represented by sex and age.

Results and discussion A comparative analysis of the immunological examination in the control group showed that significant changes in the immune status against the background of the generally accepted standard treatment of ischemic stroke did not occur, except for a significant decrease of increased B-lymphocyte counts (CD20+) to the norm (from 17.3% to 10.8%, $p < 0.05$).

In the main group of patients in whom the basic complex of rehabilitation measures was optimized by the including reflexotherapy, there was a significant decrease in leukocytes in peripheral blood (from $7.6 \times 10^9 / l$ to $6.0 \times 10^9 / l$, $p < 0.05$) and a significant increase in the lymphocyte count (from 28.6% to 34.33%, $p < 0.05$). There was also a significant increase in the relative and absolute indices of the T-lymphocyte (CD3 +) content (from 47.4% to 52.9%, $p < 0.01$, $0.82 \times 10^9 / l$ to $1.1 \times 10^9 / l$, $p < 0.05$) and immunoregulatory cells of T-helpers (CD4 +) (from 32.7% to 38.7%, $p < 0.05$). The tendency to increase the cytotoxic T-lymphocytes (CD 8+), natural killers (NK cells, CD16 +), IRI and the tendency to decrease CD25 + cells expressing the IL-2 receptors ($p > 0.05$) was registered. On the part of the humoral immunity, there was a significant decrease in the number of B-lymphocytes to normal values (from 17.17% to 10.2%, $p < 0.01$) with an increase in IgA production ($p > 0.05$) and a reliable increase in the level Ig G (from 12.8 g / l to 13.9 g / l, $p < 0.05$). Thus, practically all the indicators of the immune status under the influence of acupuncture treatment reached normal values. While in the control group, where standard treatment was conducted, there was no significant change in the indices, and such important immune status indicators as T-lymphocytes (CD3 +), T-helpers (CD4 +), NK cells (CD16 +), remained below normal.

Against the background of a significant immune status improvement in the main group, there was a more significant regression of the neurologic deficit according to the NIHSS scale on average by 4.6 points (to 1.43 ± 0.14 points, $p < 0.001$), whereas in the control group less pronounced positive dynamics - by 2.6 points (to 3.5 ± 0.54 , $p < 0.05$) was registered.

Thus, a comprehensive clinical and immunological study of the effectiveness of non-drug correction of immunological disorders in the acute period of ischemic stroke showed high effectiveness of acupuncture, with relative simplicity and safety of its application. Correction of immunological disorders is the prevention of the development of infectious complications in the acute period of ischemic stroke, and, consequently, accelerates the process of early rehabilitation.

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UDC 616.8 – 085.84: 616.831 – 005.4 DOI 10.22448/AMJ.2017.3.121-123

THE USE OF COMBINED METHODS OF REFLEXOTHERAPY IN THE EARLY REHABILITATION OF STROKE

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Abstracts: In order to study the effectiveness of combined reflexotherapy methods, the early rehabilitation course for 70 patients with acute ischemic stroke, divided by random sampling into 3 groups, were held. In the main group (30 people), the basic treatment complex was optimized by the combined use of dynamic electroneurostimulation (DENS) and acupuncture. Monitoring of the status of two comparison groups (20 people each), cor-