

*Materials of Conferences***APPLICATION OF ULTRASOUND AND LOW-FREQUENCY IMPULSE THERAPY IN COMPLEX TREATMENT OF PATIENTS WITH GONARTROSIS**

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The study was the assessment of the efficiency of application of ultrasound and low-frequency impulse therapy in complex treatment of patients with gonarthrosis.

Materials and methods. Examined 83 patients with gonarthrosis of the I-II stage in age from 35 to 67 years.

Patients were divided into 2 groups on conducted therapy. In the main group consisted of 45 patients with gonarthrosis of the I-II stage, received at the background of the standard treatment course ultrasound and low-frequency impulse therapy, the comparison group made up of 38 patients, who had received only standard treatment.

Assessment of the degree of inflammation of the joints was carried out with the help of the scale VAS (Visual Analogue Scale), index WOMAC (Western Ontario and McMaster University Osteoarthritis), ultrasonography, roentgenography and measurement of the circumference of the knee joints.

Of main group patients in the complex with standard treatment was included ultrasound therapy from the apparatus «Sonomed-5» (BOSCH) on the area of the knee joint, with frequency of 1 MHz, with capacity of 0,1-0,2 W/cm², in the pulse mode, for 5-6 minutes and low-frequency impulse therapy with frequency of 100 Hz, current strength of 1-2 mA, for 5-6 minutes. The course of treatment is 10-12 daily procedures.

The results of the study. The results of the study showed that in patients with gonarthrosis of the I-II stage of the main group received combination of ultrasound and low-frequency impulse therapy, indicators of clinical symptoms, ultrasound examination of the knee joints surpassed the results of the comparison group, in which applies only to standard treatment.

After the course of treatment at 89,9% of the patients of the main group was decrease of pain syndrome, inflammatory phenomena, volume of movements in knee joints increased, which was confirmed by the positive dynamics of the evaluation of the level of pain on VAS with decrease by 27,3% ($p<0,05$), index WOMAC - by 25,5% ($p<0,05$), with increase in volume of movements in knee joint - by 19,5% ($p<0,05$).

Analysis of ultrasonography of the knee joints showed an reduction of inflammation symptoms at

75,3% of the patients with gonarthrosis of the I-II stage.

After the course of treatment in patients of the main group the treatment duration was 21 ± 7 days, while in the control group - 42 ± 5 days. The duration of remission in patients of the main group was 9-12 months, in control group – 4-6 months.

Conclusions. Application of ultrasound and low-frequency impulse therapy in the complex treatment of patients with gonarthrosis of the I-II stage contributes to the improvement of clinical condition, the reduction of pain syndrome, reduction of inflammatory phenomena, treatment time and increase in the duration of remission.

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RESULTS OF THE SEARCH OF SUBSTANCES WITH NEUROPROTECTIVE ACTION AMONG THE NEW DERIVATIVES OF BACLOPHEN

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Introduction. As the modification of the structure of existing medications is a productive way of the search of neuropsychotropic substances allowing to increase their effectiveness and safety [1, 2, 10], we have worked out several salts and compositions of baclophen (a GABA derivative - (4-amino-3-(para-chlorophenyl)- butyric acid) with organic acids: citric, succinic, malic, oxalic, nicotinic, glutaminic and glycine. Neuroprotective action is typical of the GABA derivatives. Many structural analogues and derivatives of GABA possess neuroprotective activity – phenotropil, phenibut, pikamilon, and others [3, 8, 9]. The combination of baclophen and metabolically active acids was supposed to allow the creation of substances with marked neuroprotective effect.

Materials. Screening among 10 baclophen derivatives was performed on male Wistar rats. We used the model of brain ischemia produced by gravitational overload in craniocaudal vector in combination with the estimation of the degree of neurological deficit on the McGrow scale [6, 7], the model of electroconvulsive brain injury with maximal electroshock with the estimation of the duration of coma, time of restoration of spontaneous motion activity [4, 5] and the degree of amnesia of conditional reflex of passive avoidance, produced before maximal electroshock [1]. Baclophen, its derivatives and the comparison medications – pyracetam, phenibut, phenotropil were injected intraperitoneally in the equimolar concentrations one time 30 minutes before the modeling of neuropathology. Check rats received physiologic saline in the equivalent volume. Statistical processing of results: Crusc-Wallace analysis, the Dunn criterion.

Results. Baclophen and its derivatives displayed neuroprotective and nootropic effect: decreased the degree of neurological deficit with the model of brain ischemia produced by gravitational overload in craniocaudal vector, reduced the duration of coma and time of restoration of spontaneous motion activity, prevent the amnesia of conditional reflex of passive avoidance on the maximal electroshock model. Glutamate-, glycine- and citrate comprising analogs of baclofen are statistically significantly more active than the initial substance. The majority of substances exceeded pyracetam, phenibut and RGPU-184 - even phenotropil by effectiveness.

Conclusion. The conducted studies point at effectiveness of the creation of effective neuroprotectors on the basis of baclophen derivatives. Baclofen citrate excels baclofen in activity, all its' examined derivatives, and the comparison medications – pyracetam, phenibut, phenotropil and is considered to be perspective for studying in the capacity of neuroprotector.

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THE DIAGNOSIS AND TREATMENT PSYCHOSOMATIC DISEASES

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The method "Installations of a positive majorant" is a diagnostic and correctional method. 1- the estimation to a psychological condition is given, 1- the psychological installation is formed, 3 - the quality of life raises, 4 - the psychological condition is improved, 5 - the dysfunctions disappear.

The clinical and biochemical analysis of blood are a dynamic parameter of a condition at stress. At chronic stress the elements of blood do not leave for frameworks of normal intervals. At vegetative balance the quantity of crates comes nearer to average arithmetic. This analysis is an express train - method of definition of a condition sympato-parasympatic domination and shows condition dynamics.

Aikido - psychophysical east system of struggle, which application optimizes a functional condition. Not aggression of the given direction, impellent activity and application of respiratory practice allow to apply it as a correctional method at the increased background pressure, psychosomatic infringements.

Feature of correction psychosomatic infringements at an exhaustion sympatic department of nervous system is the necessity of realization a relaxation of procedures at support of immunity, as