

# RESULTS OF APPLICATION OF ELAMED DEVICES IN CLINICAL PRACTICE

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We preface this collection with an excerpt from an article by A. Kulikov in *The Journal of Family Medicine*, No. 1, 2016.

"The therapeutic effect of physical factors differs from that of medications. The efficacy of physiotherapy procedures is accounted for by the response from the immune, hormone, cardiovascular, and other systems of the body. As a result, the therapeutic effect is formed not only at the organic level, but also at the cellular, subcellular and even molecular one.

When prescribing a combination of traditional medicines with physiotherapy procedures, it is necessary to take into account the stage of the disease development and the nature of the existing disorders. Undoubtedly, preventive medicine, which is aimed at activating the functioning of the systems of a body at a time when its capabilities are quite high, has a great potential. Using physiotherapy methods for preventing diseases is actually comparable to using medications, and is sometimes even more reasonable.

#### MEDICATIONS AND METHODS OF PHYSICAL THERAPY

DEVELOPMENT STAGE	DISORDERS	MEDICATIONS	METHODS OF PHYSICAL THERAPY
PRIMARY DISEASE PREVENTION	N/A	-	+
INITIAL STAGE OF THE DISEASE DEVELOPMENT	PREDOMINANTLY FUNCTIONAL DISORDERS, MINIMAL	+/-	++
STAGE OF APPARENT CLINICAL MANIFESTATIONS	FUNCTIONAL DISORDERS AND ORGANIC	++	++
FINAL STAGE OF THE DISEASE DEVELOPMENT	PREDOMINATING ORGANIC CHANGES	++	+/-

Modern methods of physiotherapy are widely used in urology, traumatology and orthopedics, as well as neurology, dermatology, vascular pathology, etc. In case of presence of

certain concomitant diseases, patients may use mini-devices for having physiotherapy procedures done at home.

Physiotherapy methods need a broader implementation. This should primarily be facilitated by regularly updating the medical community on the modern methods. A rational combination of pharmaceutical and physical therapy helps achieve the desired results in treating patients."

This collection comprises reports and records of researches on the use of portable physiotherapy devices, which were conducted at various medical facilities over a more than 10 years' period and which confirm the efficacy of magneto-therapy in various areas of medicine.

Some statistics to follow. Approximately 75% of medical facilities have Almag-01 or another device manufactured by "Yelatma Instrument Making Enterprise" JSC. But, most importantly, since 1999, the plant has produced over 1,000,000 Almag-01 devices that are now in patients' hands. So, why don't the doctors take advantage of such a large number of devices available with the patients themselves and start prescribing magneto-therapy in cases when it is indicated as part of complex treatment, thus not only improving the quality of medical care, but also saving a patient's time and money? After all, this is an additional contribution to the doctor's authority, as it makes the patient see that the doctor has extensive knowledge and that a customized therapy is selected for the patient.

For additional information on the use of portable devices manufactured by "Yelatma Instrument Making Enterprise" JSC, the study guide on "Clinical Physiotherapy at Contemporary Stages of Treatment and Rehabilitation" is provided free of charge. And if one is personally interested in purchasing the device for medical staff (doctors, nurses), the plant has a loyalty program which allows for purchasing the device with a substantial discount. Please contact your regional sales representative or via e-mail at: [ivanov@elamed.com](mailto:ivanov@elamed.com).

With best regards and looking forward to future cooperation,  
Director for Medicine of "Yelatma Instrument Making Enterprise" JSC  
Alexey Ivanov

# IMPROVING THE QUALITY OF COMPLEX TREATMENT OF BEKHTEREV'S DISEASE

## PURPOSE OF STUDY

Evaluation of the possibilities of improving the quality of Bekhterev's disease treatment by including exposure to pulsed magnetic field produced by ALMAG-02 device as part of the treatment procedure.

## RESULTS OBTAINED AND THEIR CONSIDERATION

The index group demonstrated a consistent positive trend in the following parameters: VAS (nocturnal back pain and pain in the spine within 24 hours), morning stiffness in the joints and spine, the number of painful entheses, the number of swollen joints, BASFI index, global health assessment, Schober symptom, ESR score, CRP, and the need for NSAIDs, i.e. 12 of the 15 parameters considered. The most significant changes by the time of treatment completion were revealed in such parameters as: pain in the spine and joints, severity and duration of morning stiffness, BASFI index. The number of inflamed joints decreased positively. This indicates that magneto-therapy with low-frequency magnetic field was not only accompanied by an analgesic action, but also proved its ability to affect the activity of the inflammatory process, which was confirmed by both clinical and laboratory parameters. The most evident positive trend in the studied parameters was observed for stages I and II of AS disease activity.

Application of this treatment method considerably improved the patients' emotional state and physical health during execution of daily duties and at work. This also confirms the data on high efficacy of this therapy method. Special emphasis should be laid on the absence of side effects of magneto-therapy and the resulting possibility of its application on patients who are intolerant to certain drugs.

## CONCLUSIONS

The results of the studies conducted prove the high efficacy of magneto-therapy with low-frequency magnetic field generated by "ALMAG-02" device as part of complex treatment of AS patients; furthermore, these results demonstrate a wide range of therapeutic actions of magneto-therapy, including the vascular system-supporting, analgesic, anti-inflammatory actions, as well as positive effects on psychological disorders and quality-of-life indicators. Usage of magneto-therapy within complex treatment of AS patients allows to significantly improve the results of the disease treatment and can be recommended for wide use in rheumatology practice.

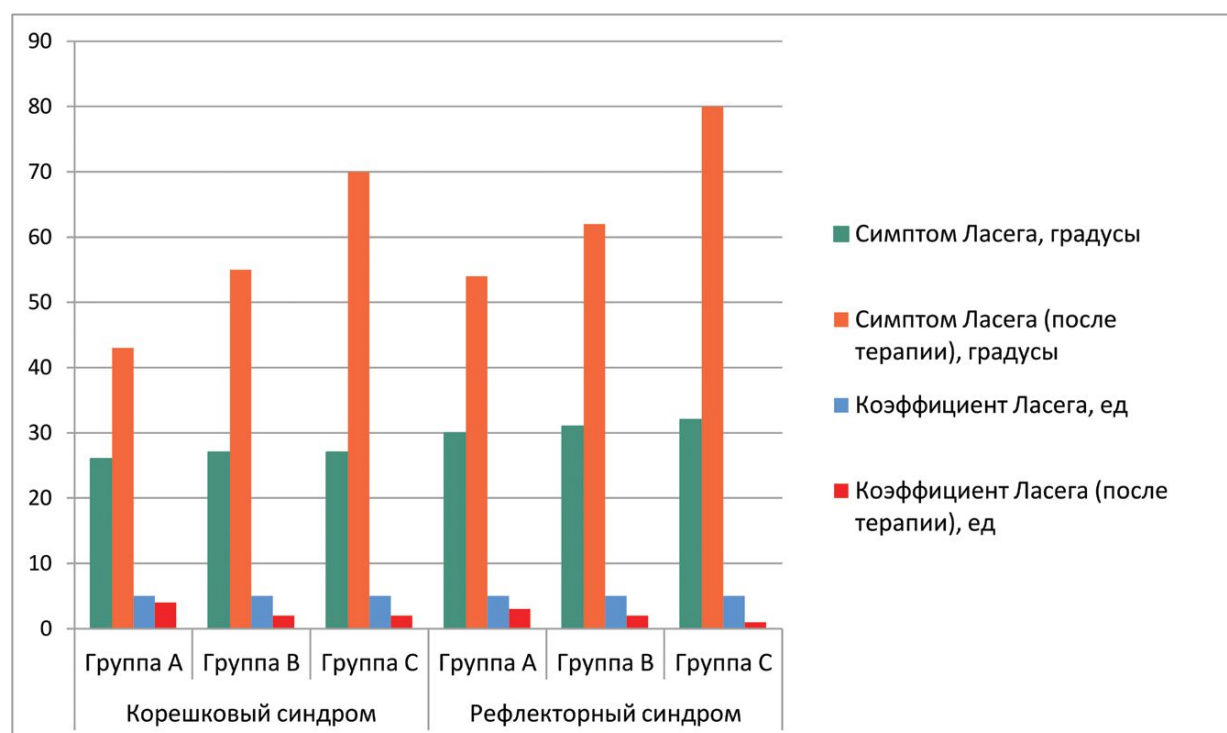
# THE ROLE OF TRAVELLING PULSED MAGNETIC FIELD IN COMPLEX TREATMENT OF OSTEOCHONDROSIS

## PURPOSE OF STUDY

Assessment of efficacy of travelling pulsed magnetic field within complex treatment of osteochondrosis.

## RESULTS OBTAINED AND THEIR CONSIDERATION

The diagram below shows the stretch symptom parameters for patients of different groups throughout the case follow-up process. Straight leg raise with patients from group I was 14.39% less pronounced than with those from group II, and after completion of the treatment course the variance between the groups rose to 23.62%.



It is important to note that the assessment of group II treatment results, which involved application of magneto-therapy of certain parameters as part of the therapeutic process, emphasizes the need for and applicability of usage of the developed therapeutic algorithm based on the methodology applied in hospitals and in out-patient care. This is indicative of reliable expediency of the proposed care of patients having reflex and radicular syndromes of lumbar OC, provided that the suggested rehabilitation treatment complex is followed through.

## CONCLUSIONS

The applied treatment complexes are effective; however, the usage of low-frequency magneto-therapy with "ALMAG-02" device has significantly enhanced the positive trends of the patients' condition. Importantly, magneto-therapy was well-tolerated by all patients, and no refusals to participate in the study due to magneto-therapy intolerance were recorded. Magneto-therapy as an effective, safe and up-to-date medical factor can be successfully applied as part of therapeutic complexes for patients suffering from spinal osteochondrosis, both under in-patient and out-patient conditions.

# FEEDBACK ON APPLICATION OF ALMAG-02 DEVICE FOR CASES OF ACHILLES TENOSYNOVITIS IN ATHLETES

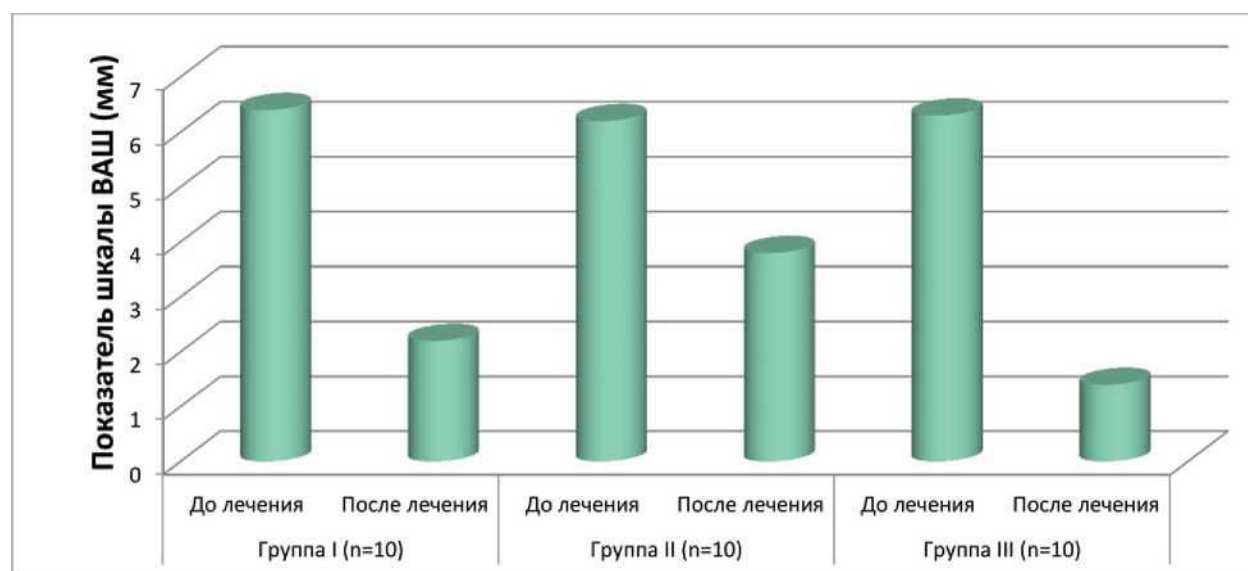
## PURPOSE OF STUDY

Evaluation of the possibility of improving the efficacy of complex treatment of tenosynovitis by including pulsed magneto-therapy with ALMAG-02 device.

## RESULTS OBTAINED AND THEIR CONSIDERATION

All patients were scanned with echo-Doppler; the severity of the pain syndrome was evaluated with 100 mm visual analogue pain scale (VAS). The evaluation was carried out using descriptive statistics; the groups were compared using the Mann-Whitney U-test and Student's t-test.

The sonography detected an initially similar condition of the patients in all groups. There were indirect indications of an inflammatory process: local vasodilation (single-point signals) and inter-fiber edemas, which were represented by extensive uneven echo-negative areas. As a result of the treatment, group I demonstrated a reduction of the superficial single-point signals in the peritendinous region after the first week of treatment. At the end of the course, a further decrease in the intensity of single-point signals of medium depth was observed, while some deep single-point foci remained.



According to the diagram, the level of pain intensity in group I decreased significantly after 1 week of treatment, and even further by the time of treatment end. Proceeding from the above, it is extremely important to restore the optimal motion function of the foot articular complex by quickly suppressing the inflammatory process in the Achilles tendon, which may lead to tenosynovitis that will be resistant to the regular treatment methods and will cause pain while walking. The efficacy of pulsed magneto-therapy was determined by comparing the mean values of VAS in all groups, whereas group I showed a more pronounced trend of complaint reduction. The power Doppler sonography detected an almost complete disappearance of inflammatory foci in the group receiving magneto-therapy, which is indicative of a higher efficiency of a comprehensive approach to treatment when magneto-therapy is used.

## CONCLUSIONS

Magneto-therapy considerably enhances the efficacy of tenosynovitis treatment and should be used as part of its complex treatment for a faster rehabilitation.

# WAYS OF IMPROVING THE TREATMENT EFFICACY OF SHOULDER JOINT PERIARTHRITIS

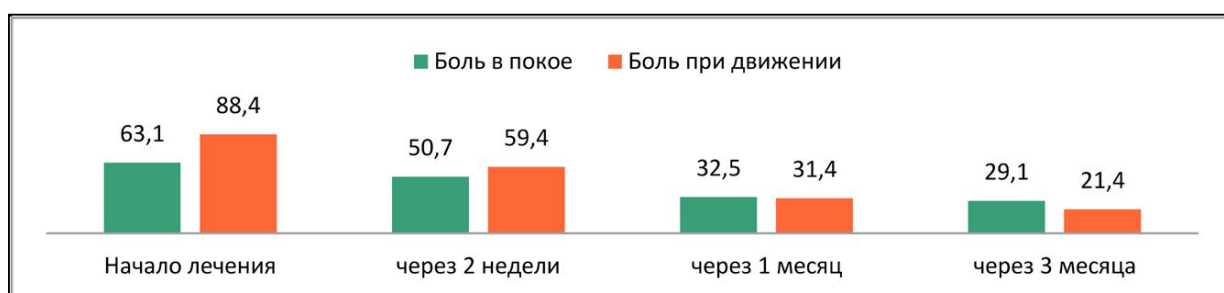
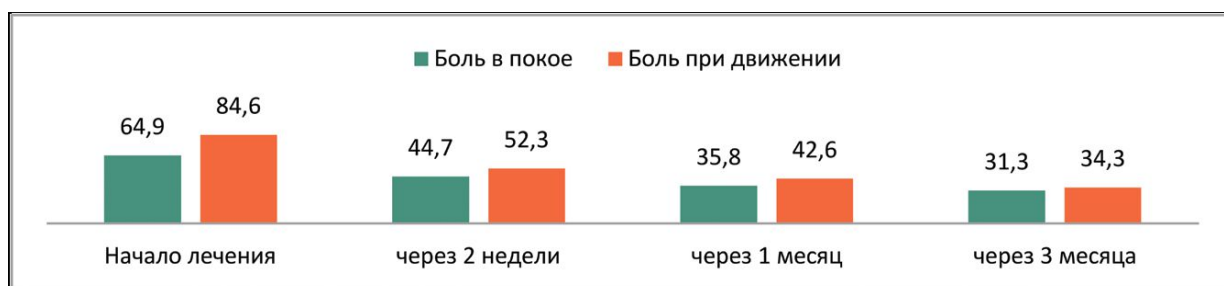
## PURPOSE OF STUDY

Assessment of efficacy of low-frequency pulsed magneto-therapy by ALMAG-02 device within complex treatment of shoulder joint periarthrititis.

## RESULTS

Having received treatment both with NSAIDs and NSAIDs+magneto-therapy, a significant majority of patients demonstrated an improvement in their general state of health, which was manifested in mood elevation, reduced irritability, and normalization of sleep, primarily due to the reduced attacks of night pains.

Abatement of shoulder joint pain in periarthrititis patients of both groups is represented in the diagrams, which show that the pain has gradually decreased in both groups.



Upon completion of NSAID treatment, a considerable improvement in the condition was noted in 15/14 patients (doctor's assessment/patient's assessment), an improvement in 10/12, no change in 5/4. After treatment of NSAIDs+magneto-therapy, an improvement was principally noted in 18/16 patients, a considerable improvement in 9/12, and no change in 3/2. Negative changes after treatment were not detected in either of the groups.

## SUMMARY STATEMENT

Inclusion of magneto-therapy into complex treatment of shoulder joint periarthrititis is advisable, since a more pronounced subsidence of pain, an increase in the range of motions, and normalization of the mental and physical status have been observed. No side effects or complications leading to withdrawal of magneto-therapy in the index group have been detected.

Magneto-therapy with a pulsed magnetic field is recommended to be included into the complex treatment of shoulder joint periarthrititis at all treatment stages, including application by patients themselves if they have the "Almag-02" device available at home.

# CLINICAL RELEVANCE OF INCLUDING TRAVELLING PULSED MAGNETIC FIELD OF "ALMAG-01" DEVICE INTO COMPLEX TREATMENT OF DORSOPATHY WITH MYOFASCIAL DYSFUNCTION OF CERVICOBACHIAL LOCALIZATION

## PURPOSE OF STUDY

Assessment of efficacy of magneto-therapy with travelling pulsed magnetic field within complex treatment of patients with cervical degenerative disc disease (myofascial dysfunction of cervicobrachial localization) combined with dysautonomia syndrome.

## RESULTS

### CASE HISTORY OF THE PAIN SYNDROME SEVERITY AND THE PATIENTS' PSYCHOPHYSIOLOGICAL INDICATORS.

PARAMETER	INDEX GROUP		CONTROL GROUP	
	Before TREATMENT	AFTER TREATMENT	Before TREATMENT	AFTER TREATMENT
PAIN INTENSITY BASED ON VAS, mm	57	9	56	22
<b>VEGETATIVE INDICATORS (POINTS)</b>				
OBJECTIVE	32	20	36	24
SUBJECTIVE	34	17.5	34	25
<b>WAM test (POINTS)</b>				
WELL-BEING	42.2	52.6	42.2	49.6
ACTIVITY	42.4	50.9	42.7	47.9
MOOD	43.5	51.9	43.2	48.6
<b>STATE-TRAIT ANXIETY INVENTORY</b>				
STATE ANXIETY	35.6	19	35.6	27
TRAIT ANXIETY	39.2	26.5	39.2	30

According to the above table, the variances in the indicators are higher when magneto-therapy is used, which is explained by not only the anesthetic, but also the vegeto-stabilizing effect.

## CONCLUSIONS

1. The use of magneto-therapy with a "travelling" pulsed magnetic field increased the efficacy of therapy of patients with myofascial dysfunction due to its anesthetic and sedative effect, which influenced the dysautonomia syndrome.
2. When combined with the use of magneto-therapy, the complex therapy of patients suffering from myofascial dysfunction led to normalization of subjective and objective indicators, as well as to reduction of the anxiety level and of severity of the pain syndrome.
3. It is advisable to recommend magneto-therapy with a "travelling" pulsed magnetic field for inclusion into therapy of patients suffering from musculoskeletal pain combined with emotional and vegetative disorders, which afflict at least 52% of patients with myofascial dysfunction.



# IMPROVING THE TREATMENT QUALITY OF PATIENTS WITH DORSALGIAS BY INCLUDING MAGNETO-THERAPY INTO MEDICAL AND PREVENTIVE ACTIVITIES

## PURPOSE OF STUDY

Increasing the efficacy of treatment of patients with lumbar osteochondrosis by using low-frequency magneto-therapy with the traveling pulsed magnetic field of ALMAG-01 device as part of complex treatment.

## RESULTS

For a convenient interpretation, the data are summarized in Tables 1 and 2.

**TABLE 1. CHANGES IN THE SKEWNESS RATIO OF BIOELECTRIC ACTIVITY OF PARAVERTEBRAL MUSCLES OF THE PATIENTS' LUMBAR SPINE BEFORE AND AFTER TREATMENT.**

GROUPS	ABSOLUTE VALUES OF THE SKEWNESS RATIO				
	Before treatment	AFTER TREATMENT			
		1 month	6 months	12 months	24 MONTHS
CONTROL (N=1 25)	20.5	18.7	16.3	14.9	12.3
Index (N=90)	21.4	12.6	7.4	3.5	2.2

**TABLE 2. COMPARATIVE ASSESSMENT OF LONG-TERM TREATMENT RESULTS FOR EACH GROUP.**

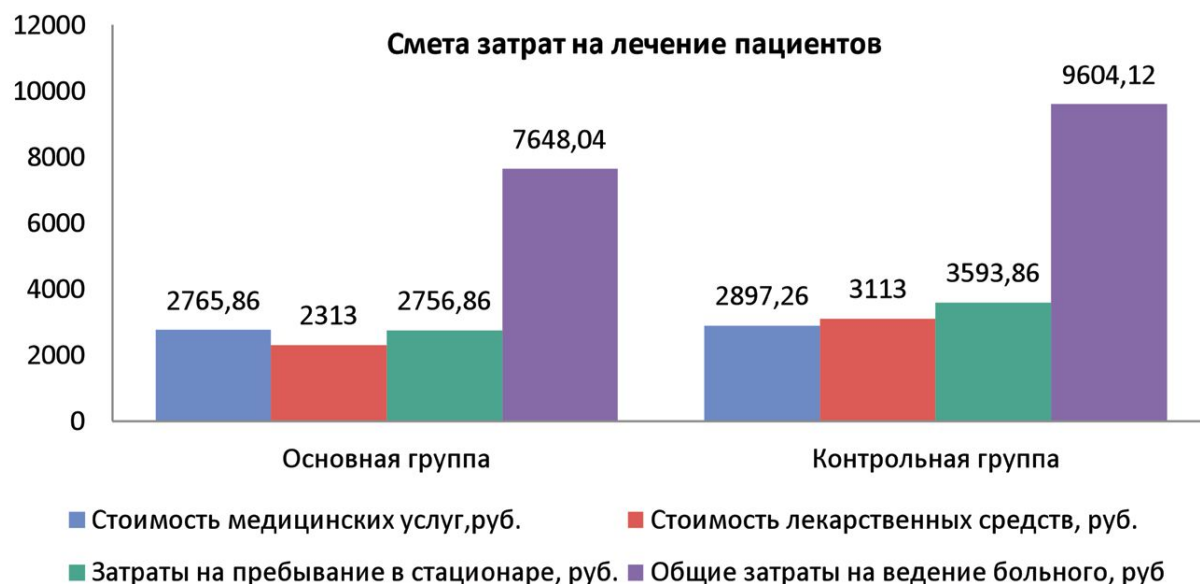
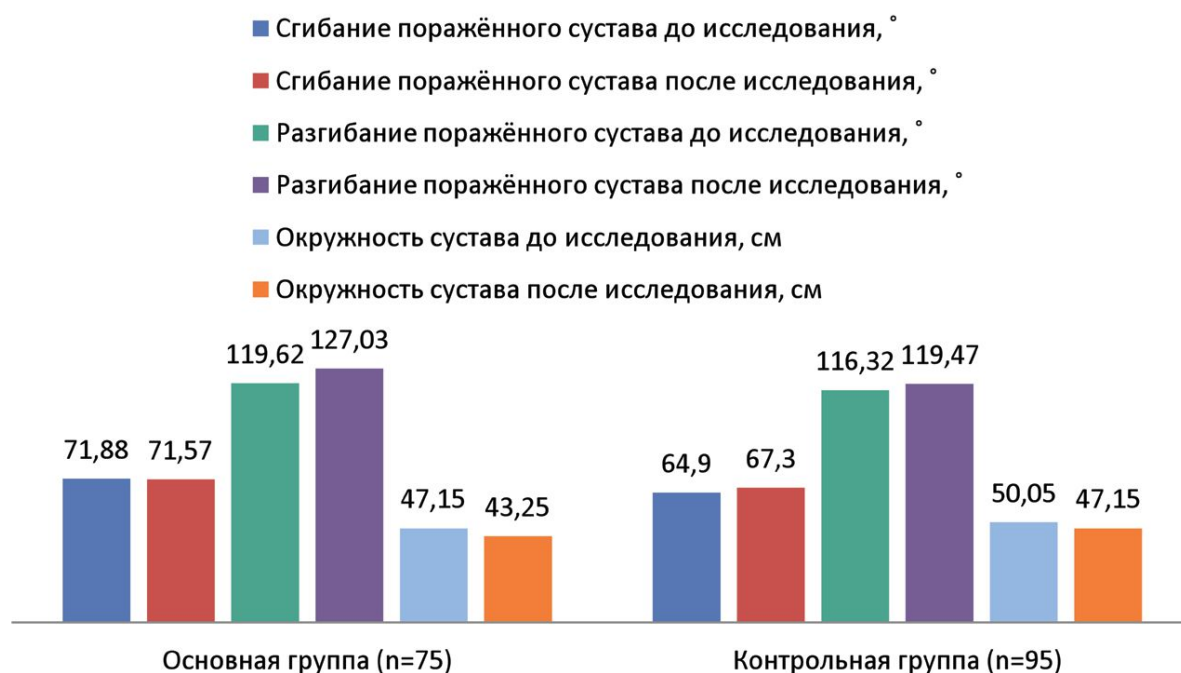
TREATMENT RESULT	PATIENT GROUPS	
	CONTROL (N=1 25)	Index (N=90)
Excellent	6 (4.8%)	7 (7.8%)
GOOD	50 (40.0%)	63 (70%)
AVERAGE	57 (45.6%)	17(18.8%)
POOR	12 (9.6%)	3 (3.4%)
TOTAL	125 (100%)	90(100%)

## CONCLUSIONS

1. Application of magneto-therapy with a "traveling" pulsed magnetic field enhances the efficacy of therapy measures in the sub-acute period of the disease.
2. Application of magneto-therapy with a "traveling" pulsed magnetic field is characterized by a higher therapeutic efficacy, allowing to reduce clinical manifestations of the disease by 15.5% as compared to conventional treatment.
3. Under exposure to magneto-therapy, positive functional and structural changes in the affected spinal region are observed.
4. The follow-up study of long-term results as per the principles of evidence-based medicine are indicative of efficacy of magneto-therapy with a "travelling" pulsed magnetic field.

## ECONOMIC FEASIBILITY OF INCLUDING MAGNETO-THERAPY INTO COMPLEX TREATMENT OF OSTEOARTHROSIS

Below the results of complex treatment of 170 gonarthrosis patients are presented. The changes in the range of motions and the articular circumference have been studied. The changes in the index of knee joint (KJ) mobility function based on the International Classification of Functioning, Disability and Health (ICF) have been analyzed. The data on the patients' quality of life (QoL) based on the 5 indicators of the EQ-5D questionnaire and Visual Analogue Scale (VAS) have been evaluated.



### CONCLUSIONS

The most pronounced effect of the magnetic field has been observed for the quality-of-life indicators associated with pain and discomfort. The strategy of including magneto-therapy into the treatment process is efficient in terms of its cost (the "cost-utility" indicator was 13,417 RUR for the effect in 1 patient versus 25,956 RUR in the control group).

# CLINICAL AND ECONOMIC ANALYSIS OF EFFICACY OF ALMAG-01 DEVICE APPLICATION FOR PATIENTS WITH GONARTHROSIS

## SUMMARY STATEMENT

For the first time in Russia, a randomized, double-blind, placebo-controlled study was conducted of the clinical and economic efficiency of magneto-therapy of gonarthrosis using ALMAG-01 device, which proved the economic feasibility of including ALMAG-01 into the treatment process.

The most relevant differences between the group of treatment with Almag-01 and that with a placebo device were obtained for the following indicators:

- changes in the "Pain and discomfort" indicator (EQ-5D questionnaire);
- changes in the joint volume (according to ICF).

Assessment of the quality-of-life changes, which was conducted on the basis of EQ-5D questionnaire, revealed a 57.3% (from 96% to 38.7 %) decline in the "pain and discomfort" indicator in the group of patients with moderate or severe disorders, who were receiving treatment with ALMAG-01 device, as compared to 37.9% reduction (from 100% to 62.1%) in the placebo device group. According to the results of K.A. Lytkina's study, the effect on pain is one of the most significant indicators in the treatment of arthrosis [3].

Analysis of the volume of the affected joint revealed that the Almag-01 group demonstrated a faster decrease in the joint volume – by 3.9 cm, versus 2.9 cm in the placebo group. Considering the volume of the joint, the course of its change throughout the treatment process indicates that a more pronounced effect was observed when ALMAG-01 device was applied.

Assessment of the changes in the functional parameters of the affected joints, which were evaluated under the ICF in terms of the indicator "mild disturbances and their absence", the group of Almag-01 device showed a more pronounced positive change in the joint mobility function than the placebo group (21.3% and 9.5% respectively).

The study also analyzed whether NSAIDs and additional physiotherapy procedures affected the joints' parameters and whether the study results could be distorted towards overestimating the effect of Almag-01 device.

After analyzing the NSAIDs used, it was determined that the medications of this type had to be prescribed 1.97 times more frequently in the placebo group than in the ALMAG-01 group.

The cost analysis revealed that, in the Almag-01 group, 7,648 rubles were spent for treating 1 patient, as compared to 9,604 rubles in the placebo group.

The "cost-utility" analysis demonstrated that magneto-therapy with Almag-01 device is an effective strategy in terms of its cost on the basis of the criterion of changes in severe and moderate quality-of-life disturbances associated with pain and discomfort. Thus, when using Almag-01 device, 13,417 rubles per 1 patient need to be spent in order to reduce moderate and severe quality-of-life disturbances associated with pain and discomfort, which is 1.93 times less than when using a placebo device (25,956 rubles for achieving the effect in 1 patient).

## **ASSESSMENT OF TRAVELLING PULSED MAGNETIC FIELD APPLICATION IN TRAUMATOLOGY**

### PURPOSE OF STUDY

Determining the efficacy of magneto-therapy with "ALMAG-01" device during treatment of 128 patients with traumatic injuries.

### MATERIALS AND METHODS

DISEASE TYPES	AVERAGE TREATMENT TIME (DAYS)	
	CONTROL GROUP	INDEX GROUP
CLOSED ANKLE FRACTURE (with fixation of an Ilizarov frame)	80	73
CLOSED FRACTURE OF RADIUS BONE IN A TYPICAL SITE	35	32
CLOSED FRACTURE OF FEMORAL NECK	165	157
SHOULDER DISLOCATION	50	45
HIP ARTHROPLASTY	28	26
POST-TRAUMATIC OSTEOMYELITIS	45	43
THERMAL BURNS OF THE BODY OF II-III DEGREES	60	54

### CONCLUSIONS

"ALMAG-01" magneto-therapy device is effective for treatment of patients with traumatic injuries. The obtained treatment results allow to recommend its broad application at different stages of diseases directly at trauma unit wards in order to reduce the periods of temporary incapacity.



# THE ROLE OF MAGNETO-THERAPY IN THE REHABILITATION COMPLEX TREATMENT OF SHOULDER SLIP

## PURPOSE OF STUDY

Reducing the length of temporary incapacity by using the most efficient rehabilitation means and by introducing new methods (magneto-therapy with a travelling pulsed field of ALMAG-01 device).

## RESULTS OBTAINED AND THEIR CONSIDERATION

For a convenient interpretation, the results are summarized in the tables below.

### **FUNCTIONAL PARAMETERS OF PATIENTS' POST-OPERATIVE SHOULDER**

GROUPS OF ATHLETES	MOTION RANGE IN THE OPERATED JOINT, °						FORCE OF DIFFERENT MUSCLE GROUPS, KG				SHOULDER CIRCUMFERENCE, CM
	FLEXION	FRONTAL ABDUCTION	TRANSVERSE ABDUCTION	EXTENSION	EXTERNAL ROTATION	INTERNAL ROTATION	SHOULDER FLEXORS	FOREARM FLEXORS	EXTERNAL ROTATORS	INTERNAL ROTATORS	
INDEX	181	180	105	58	80	56.5	44.4	45.2	22.1	26.6	32.4
CONTROL	179.5	179.5	95	53.58	56.5	38±	42	39.3	16.9	18	29.9
STUDENT'S T-TEST	179.5	1.2	2.8	3.69	7.75	7.49	1.33	5.39	4.6	7.06	5.7

### **PERIODS UNTIL RESUMPTION OF THE TRAINING PROCESS AT THE INITIAL STAGE**

PERIODS AFTER SURGERY, MONTHS	INDEX GROUP	CONTROL GROUP
3-3.5	3 (HOCKEY PLAYER, SKIER, CYCLIST)	1 (FOOTBALL PLAYER)
4-4.5	1 (DOWNHILL SKIER)	-
5-5.5	6 (5-WRESTLERS, 1 DECATHLETE)	2 (WRESTLERS)
6-6.5	-	5 (2 -WRESTLERS, 2 -RUGBY PLAYERS, 1 MOUNTAIN CLIMBER)
7 AND FURTHER	-	2 (WRESTLERS)

## CONCLUSIONS

1. Physical rehabilitation after operative therapy of shoulder slips is one of the most complex, insufficiently studied, and urgent problems.
2. Successful rehabilitation after surgical treatment of shoulder slips is only possible if the principles of early start, comprehensive approach, continuity, etc. are observed. During the immobilization period, the duration of rehabilitation measures should be 2-2.5 hours per day, during post-immobilization – 4-5 hours, during training and recovery – 5-5.5 hours.
3. Application of magneto-therapy with ALMAG-01 device in complex rehabilitation reliably improves the muscle strength and joint mobility, which is why this method can be recommended for use in practice.

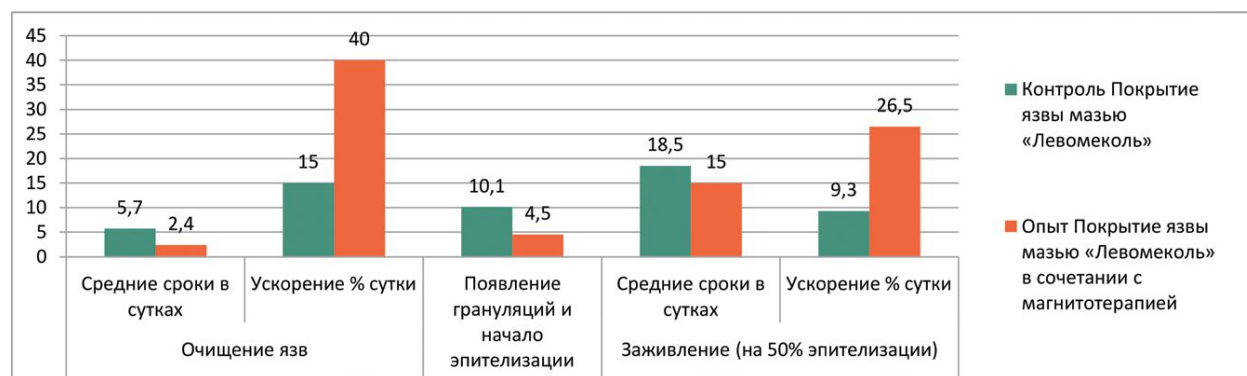
# THE ROLE OF MAGNETO-THERAPY IN COMPLEX TREATMENT OF CHRONIC THROMBOPHLEBITIS COMPLICATED BY TROPHIC DISORDERS

## PURPOSE OF STUDY

Assessment of efficacy of magneto-therapy in complex treatment of trophic ulcers affected by CVD.

## RESULTS AND THEIR CONSIDERATION

When comparing the treatment results of patients with chronic ulcers of venous origin, it was determined that in the second group of patients ("Levomecol" ointment in combination with magneto-therapy), the average time of ulcer clearance from purulent substances and slough, including that from microbial contamination, was 1.5-3 days less than for the patients who were treated only with "Levomecol" ointment. (In general, the period of the wound clearance from purulent substances and slough was thus reduced by 40%). Small ulcers of 1 to 3 cm<sup>2</sup>, when treated with "Levomecol" ointment and magneto-therapy, closed up within 12 days, and medium-sized ones (5 to 10 cm<sup>2</sup>) by the 14th day.



The earliest start of epithelialization was observed in the group of patients who were treated with "Levomecol" ointment in combination with magneto-therapy.

Thus, treatment of trophic ulcers with "Levomecol" ointment combined with magneto-therapy has a necrolytic and antibacterial effect, intensifies phagocytosis, normalizes the microcirculatory changes, subdues the inflammatory processes, stimulates maturation of the granulation tissue and epithelialization of the tissue defect.

## SUMMARY STATEMENT

The clinical and planimetric data obtained through this study indicate that the method of treating venous trophic ulcers by applying "Levomecol" ointment in combination with magneto-therapy allows to reduce the time of ulcer epithelialization by a factor of 1.5.

The results of using low-frequency magneto-therapy as part of complex treatment make it possible to recommend it for the broad practice of treating venous trophic ulcers of the lower extremities. The method is simple, accessible in usage, and should be considered as an important component of complex treatment of such patients. Magneto-therapy can be applied (through a sterile dressing) after initial debridement of the ulcerous area with an antiseptic solution (0.05% solution of chlorhexidine, 0.5% solution of dioxydine, 10% solution of sodium chloride) and application of "Levomecol" ointment. Change of dressings and exposure to magnetic field are to be carried out twice a day. Magneto-therapy as part of complex treatment is recommended for use as preoperative preparation, as well as an independent method of conservative treatment of trophic venous ulcers.





# EXPERIENCE OF APPLICATION OF ALMAG-01 DEVICE DESIGNED FOR TREATMENT WITH TRAVELLING PULSED MAGNETIC FIELD

## PURPOSE OF STUDY

Study of the feasibility and efficacy of using low-frequency travelling pulsed magnetic field generated by ALMAG-01 device on hypertension patients.

## RESULTS AND THEIR CONSIDERATION

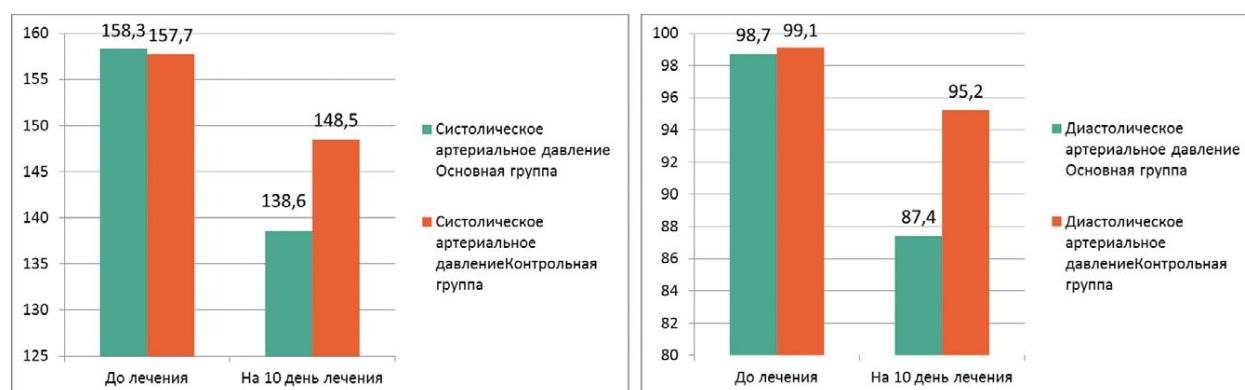
The study was conducted at a veterans hospital in the city of Kazan on patients of two groups, 99 people in total, who were comparable in age, duration of the disease, stage of the disease, and concomitant pathology.

The treatment efficacy was assessed on the basis of changes in blood pressure, number of antihypertensive medications used, and headache as per visual analogue scale (VAS).

The treatment resulted in a significant improvement of the patients' condition, subsidence of weakness and fatigue, reduction or disappearance of headaches. According to pain VAS (measured in points, 1 point=1 cm), the intensity of the pain syndrome decreased from 4.7 points to 2.1 points, while in the control group to  $3.2 \pm 1.7$  points.

When accompanied by the use of magneto-therapy as part of complex treatment, the normalization of blood pressure occurred at an earlier time.

## **CHANGES IN BLOOD PRESSURE OF HYPERTENSION PATIENTS**



## CONCLUSIONS

1. When the collar zone is exposed to a travelling magnetic field, the vessels in the exposed area expand, which triggers a reflexive expansion of the vessels in the thoracic organs and brain, leading to blood pressure decrease in the patients during the treatment course.
2. Complex therapy consisting of magneto-therapy with a "travelling" field and antihypertensive drugs enables obtaining a cumulative effect manifested in a reliable decrease in blood pressure, as well as reducing the dosage and number of medications taken.
3. Magneto-therapy with a "travelling" field applied in the treatment of hypertension patients facilitates reduction of headaches.
4. A course of physiotherapeutic exposure to the pulsed magnetic field of ALMAG-01 device is advisable for treatment of patients with arterial hypertension.

# ASSESSMENT OF EFFICACY OF LOW-FREQUENCY MAGNETO-THERAPY WITH "TRAVELLING" PULSED MAGNETIC FIELD OF "ALMAG-01" DEVICE WITHIN COMPLEX TREATMENT OF HYPERTENSIVE DISEASE

## PURPOSE OF STUDY

Assessment of efficacy of low-frequency magneto-therapy with "travelling" pulsed magnetic field of "ALMAG-01" device within complex treatment of hypertensive disease.

## RESULTS AND THEIR CONSIDERATION

### CHANGES IN BLOOD PRESSURE AND HEART RATE AT REST IN PATIENTS WITH HYPERTENSIVE DISEASE UNDER TREATMENT

PARAMETER	CHANGES IN THE PARAMETERS, PERCENTAGE OF THE INITIAL VALUE	
	INDEX GROUP	CONTROL GROUP
SBP	-21.7	-25.5
DBP	-15.3	-19.1
HEART RATE	-16.4	-18.71

### DIURNAL MONITORING VARIANCES OF BLOOD PRESSURE IN PATIENTS WITH HYPERTENSIVE DISEASE UNDER TREATMENT

PARAMETER	CHANGES IN THE PARAMETERS, PERCENTAGE OF THE INITIAL VALUE	
	INDEX GROUP	CONTROL GROUP
SBP (24)	-20.3	-21.1
DBP (24)	-16.8	-18.8
SBP (D)	-16.9	-19.9
DBP (D)	-13.4	-19.0
SBP (N)	-19.8	-18.4
DBP (N)	-17.6	-21.4
DV (diurnal variation) (SBP)	+3.9	+5
DV (DBP)	+3.0	+3.5

The obtained data indicate that the frequency of achieving high, moderate and low effects of complex therapy exceeds the standard value for the equivalent parameters, which makes it a more preferable antihypertensive method for HD treatment. The frequency of side effects throughout the treatment period was minimal and was adjusted by changing the dosage. When applying magneto-therapy, no side effects were observed, which bears evidence of the method safety.

## CONCLUSIONS

1. The results of comparative assessment of efficacy of magneto-therapy for treatment of hypertensive disease stage II revealed that the "magneto-therapy + medicines" complex has a higher effect as compared to medicines alone in terms of the antihypertensive action and clinical efficacy.
2. According to laboratory studies, both treatment methods have no adverse effect on the peripheral blood pattern, nor do they have a negative impact on the functioning of liver and kidneys.
3. The results of the comparative study suggest that complex treatment, a combination of drugs and magneto-therapy, is preferable as a method with higher efficacy for treating HD stage II.
4. Due to the safety of complex treatment, application of complex therapy at home by patients themselves can be recommended, after a course of magneto-therapy had been completed under in-patient conditions.

# THE ROLE OF MAGNETO-THERAPY IN COMPLEX TREATMENT OF ISCHEMIC HEART DISEASE

## PURPOSE OF STUDY

Assessment of the effect of pulsed magnetic field within complex therapy on the clinical course of ischemic heart disease.

## RESULTS AND THEIR CONSIDERATION

### RESULTS OF THE ANALYSIS OF CHANGES IN THE TREADMILL TEST PARAMETERS BY METHODS OF DESCRIPTIVE STATISTICS IN PATIENT GROUPS

PARAMETER	INDEX GROUP			CONTROL GROUP	
	VISIT	NUMBER	ARITHMETIC MEAN	NUMBER	ARITHMETIC MEAN
DURATION OF EXERCISE PERFORMANCE	BEFORE TREATMENT	62	4.88	51	4.96
	AFTER TREATMENT	62	5.77	51	5.41
MAXIMUM HEART RATE REACHED, BPM	BEFORE TREATMENT	62	119.37	57	119.24
	AFTER TREATMENT	62	117.76	57	116.70
MAXIMUM SBP, MM HG	BEFORE TREATMENT	62	168.69	57	169.28
	AFTER TREATMENT	62	180.30	57	163.09
MAXIMUM DBP, MM HG	BEFORE TREATMENT	62	97.57	57	97.26
	AFTER TREATMENT	62	91.49	56	92.33

## CONCLUSIONS

1. The anti-ischemic action of magneto-therapy with a travelling magnetic field is confirmed by a significant ( $p=0.007$ ) increase in the duration of exercise performance before appearance of ST segment depression of 1 mm or of pain during the treadmill test by 27.48% as compared to the baseline data, while in the group of patients who were receiving placebo this parameter was 17.48%.
2. Treatment with magneto-therapy in addition to basic therapy of patients with IHD, stable angina of effort FC I-II is more effective. The proportion of patients in the index group with a positive treatment effect was 42.65%, while in the control group this parameter was 25.19%.
3. Application of magneto-therapy with a "travelling" magnetic field within complex therapy of IHD patients is generally well-tolerated. Throughout the 30 days of treatment, no serious adverse reactions or untoward changes in the laboratory indicators were registered in either group of patients.

# EXPERIENCE OF APPLICATION OF ALMAG-01 DEVICE FOR TREATMENT OF OBLITERATING ATHEROSCLEROSIS OF THE LOWER EXTREMITIES

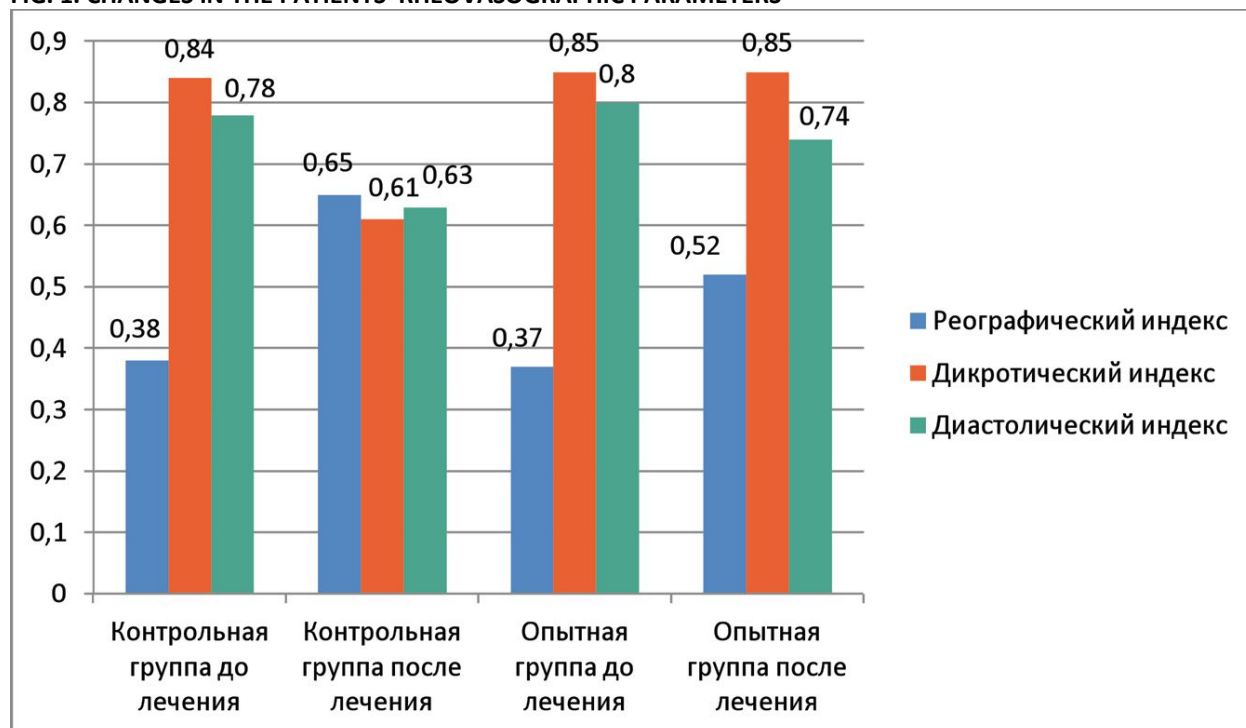
## PURPOSE OF STUDY

Study of the feasibility and efficacy of using low-frequency pulsed magnetic field generated by ALMAG-01 device on patients with atherosclerosis of the lower extremities.

## RESULTS AND THEIR CONSIDERATION

Generally, the tolerability of the procedures was good. Clinical effect was observed in 59% of cases. The pain syndrome intensity decreased from 5.8 to 2.6 and 3.7 points in the index and control groups respectively. In the index group, a trend towards a decrease in the systolic and diastolic blood pressure was noted. The changes in the rheovasographic parameters are presented in Fig. 1.

**FIG. 1. CHANGES IN THE PATIENTS' RHEOVASOGRAPHIC PARAMETERS**



As shown on Fig. 1, the magnetic field had a beneficial effect on the patients' regional hemodynamics, which was represented by improvement of the shape and structure of the rheographic curves, quantitative parameters of RVG. Thus, the course treatment with the magnetic field of ALMAG-01 device of patients with obliterating atherosclerosis of the lower extremities with stage 2A clinical manifestations facilitated a decrease in the severity of the pain syndrome and sensory disorders, as well as an improvement of the parameters of peripheral hemodynamics, which was accompanied by skin color changes in the affected limbs and reduced lameness.

## SUMMARY STATEMENT

A course of physiotherapeutic exposure of the lumbar region and lower extremities to the pulsed magnetic field of "ALMAG-01" device is recommended for treatment of patients with atherosclerosis of the lower extremities.

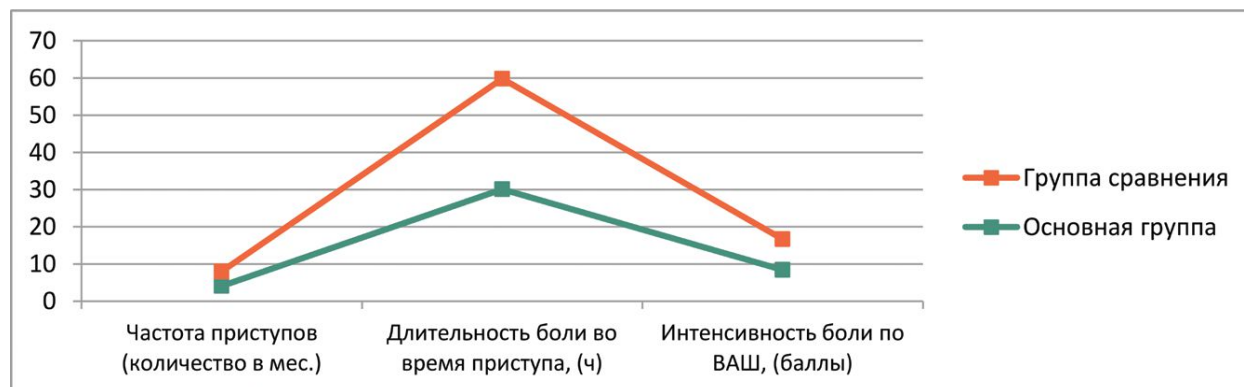
# EFFICACY OF MAGNETO-THERAPY WITHIN COMPLEX MIGRAINE TREATMENT

## PURPOSE OF STUDY

Study of the efficacy, tolerability and safety of magneto-therapy with a travelling magnetic field in complex migraine therapy.

## RESULTS AND THEIR CONSIDERATION

Analysis of the clinical features of patients in the index and control groups did not reveal significant differences in the frequency, duration and intensity of pain during a migraine attack.



Analysis of the comorbid disorders in the studied groups only showed a significantly higher incidence of biliary dyskinesia in patients of the index group and of allergic manifestations in patients of the control group. Thus, the studied groups were comparable in both the clinical manifestations of migraine and the comorbid diseases.

After complex preventive therapy, which included magneto-therapy (index group), the frequency of attacks and the number of analgesic drugs used by the patients over a 1-month period significantly decreased. In the index group of patients, the frequency of taking medications for quick relief of migraine attacks was significantly reduced.

## SUMMARY STATEMENT

The conducted study showed that inclusion of 10 procedures per month of magneto-therapy with a "travelling" magnetic field into complex preventive therapy of migraine, which comprises antidepressants and muscle relaxants, increases its efficacy: not only is the number of analgesics significantly reduced, but, most importantly, the number of attacks. A more significant reduction of vegetative disorders and a more pronounced improvement in the quality of life of migraine patients was observed, as compared to the patients who did not receive magneto-therapy within complex treatment. The therapy, which included magneto-therapy, had good tolerability and was safe. No serious side effect was registered. Analysis of the clinical effect of magneto-therapy suggests that it should be included into the complex of anti-migraine measures, especially in the presence of asthenic complaints.

Thus, given its ease of application, good tolerability, therapeutic efficacy and an acceptable safety profile, magneto-therapy can be recommended for widespread use in neurological practice as a means of complex preventive migraine therapy.

# IMPROVING THE TREATMENT QUALITY OF DISCIRCULATORY ENCEPHALOPATHY BY INCLUDING MAGNETO-THERAPY INTO THE TREATMENT PROCESS

## RELEVANCE

Methods that produce a vascular effect in cases of cerebral ischemia have an important place in the treatment of ischemic brain injuries. There is a growing interest among professionals regarding the usage of magnetic fields for various brain diseases, including encephalopathies of various origins.

## RESULTS AND THEIR CONSIDERATION

The changes in the subjective clinical symptoms in terms of patients' self-assessment of their state of health reflected an improvement in the overall condition indicators of the patients receiving magneto-therapy. All the subjects of the index group assessed the treatment results as positive: 28 (57.1%) patients as "excellent", 20 (40.8%) as "good" and 1 (2%) as "satisfactory". The results of the effect of magneto-therapy on neurologic symptoms are presented in Tables 1 and 2.

**Table 1. CHANGES IN PATIENTS' CLINICAL SYMPTOMS AS PER LINDMARK SCALE**

PATIENT GROUP	DAY 1	DAY 7	DAY 20	DAY 30
INDEX	327.5	235.8	201.7	168.4
CONTROL	308.9	284.8	256.4	233.3

According to Table 1, a distinct effect of magneto-therapy was observed already by the 7<sup>th</sup> day of treatment and reached its maximum by the 30<sup>th</sup> day.

**Table 2. CHANGES IN PATIENTS' CLINICAL SYMPTOMS AS PER GBS SCALE**

PATIENT GROUP	DAY 1	DAY 7	DAY 20	DAY 30
INDEX	38.2	29.7	20.1	16.9
CONTROL	39.1	35.2	33.9	29.5

## CONCLUSIONS

Based on the data obtained, it can be concluded that magneto-therapy with the "travelling" pulsed magnetic field of ALMAG-01 device is well-tolerated by patients and effectively influences the neurological status variations, including both the parameters of focal neurological symptoms and the neuropsychological features. The device's effect on the regression of focal neurological symptoms has been clearly traced starting from the first week of treatment. Due to the fact that such an effect of magneto-therapy as improvement of the patients' neuropsychological status was observed at a later time, it is advisable to extend the course of treatment by the patients themselves at home in compliance with the method used in the hospital.

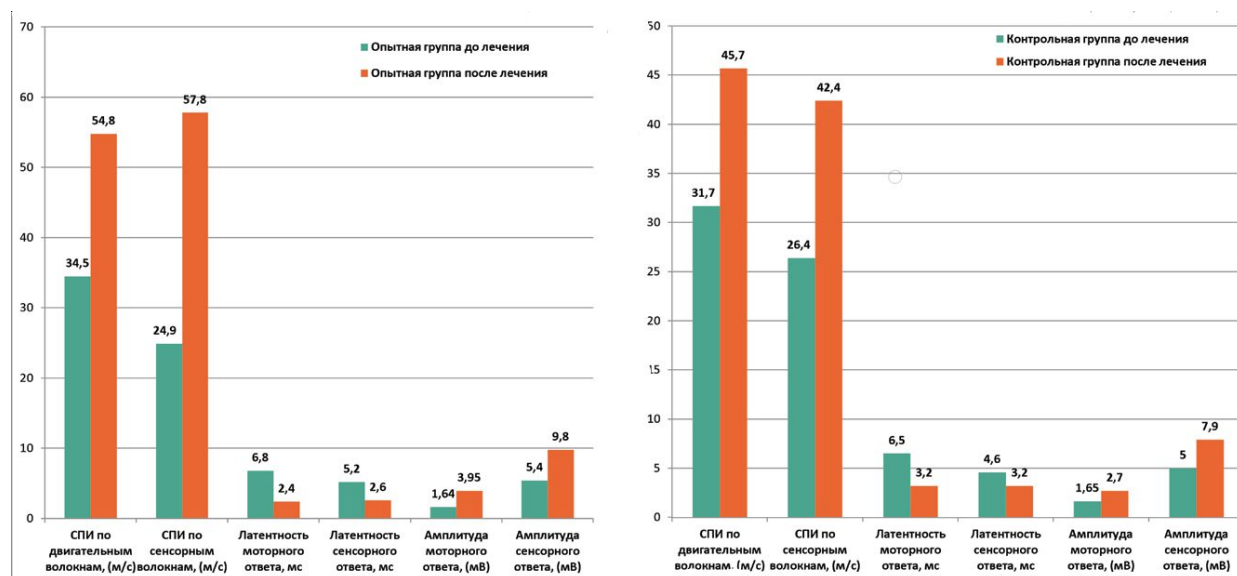
# ASSESSMENT OF EFFICACY OF LOW-FREQUENCY MAGNETO-THERAPY WITH THE "TRAVELLING" MAGNETIC FIELD OF "ALMAG-01" DEVICE WITHIN COMPLEX TREATMENT OF PERIPHERAL NERVE NEURITIDES

## PURPOSE OF STUDY

Examination of the clinical neurophysiological change patterns and of the efficacy of low-frequency magneto-therapy with the travelling pulsed magnetic field of ALMAG-01 device in patients with post-traumatic neuritides (neuropathies).

## RESULTS AND THEIR CONSIDERATION

### CHANGES IN THE ENMG PARAMETERS OF PATIENTS WITH PERIPHERAL NEUROPATHY AFFECTED BY TREATMENT IN BOTH GROUPS.



The integrated assessment of treatment efficacy showed that 16 (53.3%) patients out of the group that was additionally receiving magneto-therapy within the complex treatment demonstrated a pronounced improvement. In the group where magneto-therapy was not used additionally in the treatment, a pronounced improvement was noted only in 13 (43.3%) patients. No positive changes were observed in 1 (3.3%) patient who was additionally receiving magneto-therapy in the complex treatment, and in 8 (26.6%) patients who were only receiving medications.

## CONCLUSIONS

1. Comparative study of the efficacy of drug therapy versus the complex treatment that included magneto-therapy in patients with post-traumatic neuropathies revealed an acceleration of the recovery rates in the group of patients receiving magneto-therapy. Primarily, the effect of magneto-therapy on the severity of the pain syndrome and the vegetative trophic changes was observed.
2. In order to ensure a faster and more complete clinical recovery, magneto-therapy should be included into complex treatment of patients with post-traumatic neuropathies, along with drug treatment.

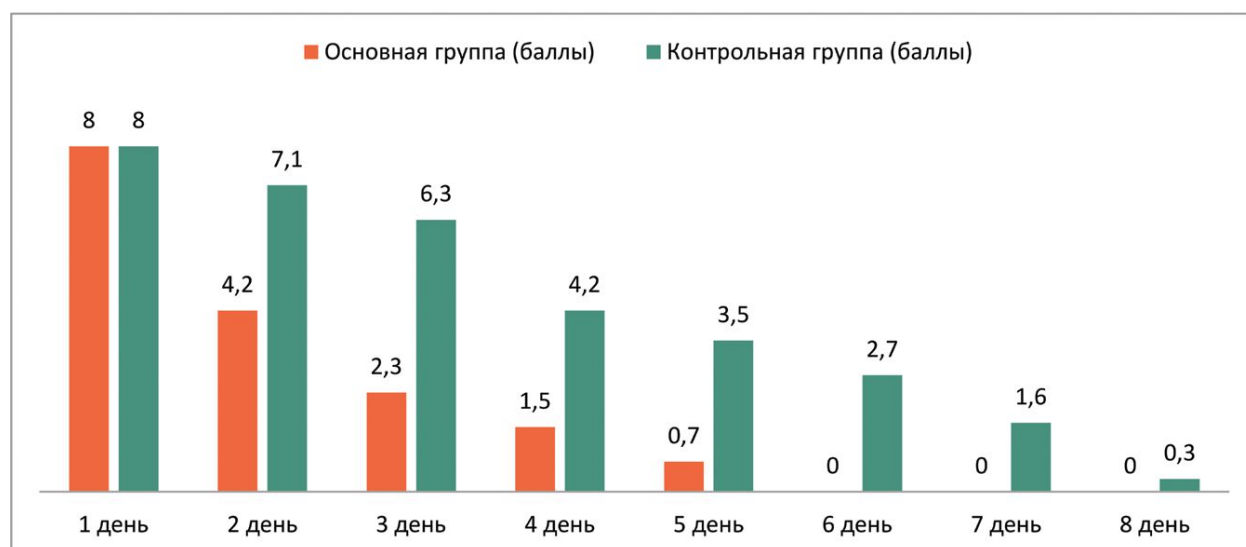
# FEASIBILITY OF INCLUDING MAGNETO-THERAPY INTO COMPLEX TREATMENT OF CHRONIC SINUSITIS

## PURPOSE OF STUDY

Reviewing the efficacy of magneto-therapy within complex treatment of sinusitis.

## RESULTS AND THEIR CONSIDERATION

Nasal congestion in the patients of the index group completely subsided on the 8th-9th day of the study, while in the control group 2-2.5 days later. The maximal difference between the parameters in the two groups was observed on the 6th-7th day (82.8%). Reduction of discharge from the nasal cavity was also faster in the index group of patients.



Application of magneto-therapy in the complex therapy of chronic exudative sinusitis allowed to avoid performing a puncture and to achieve sanation of the sinus by means of conservative therapy alone. In most cases (in 86%), the positive results of the non-puncturing treatment were achieved while applying magneto-therapy. Its use reduced the number of such patients by 4.7 times.

## CONCLUSIONS

The use of magneto-therapy in the complex treatment of chronic sinusitis led to a quicker regression of clinical symptoms and alleviation of the disease progression, an improvement of the patients' quality of life, their social and physical activity, as well as boosted their work productivity; the positive therapy results were in most cases achieved without resorting to a therapeutic sinus puncture. The efficacy of using magneto-therapy has been confirmed by objective data (endoscopic signs, as well as X-ray imaging), as compared to therapy by drugs alone, which makes it possible to recommend including magneto-therapy into the complex of therapeutic measures at all stages of treatment.



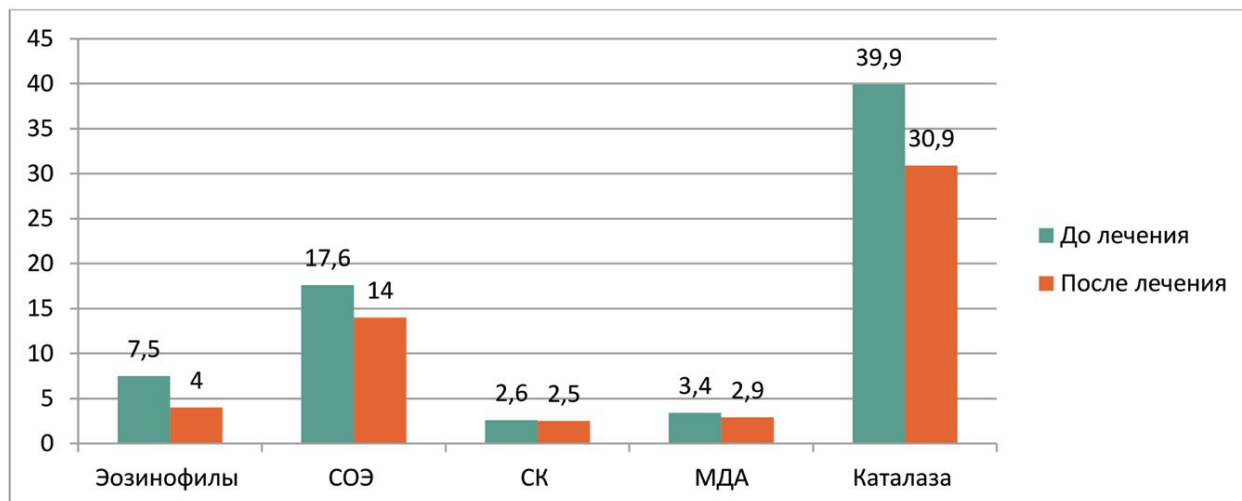
# TRAVELLING MAGNETIC FIELD FOR CASES OF BRONCHIAL ASTHMA WITH A GASTROINTESTINAL COMORBIDITY

## PURPOSE OF STUDY

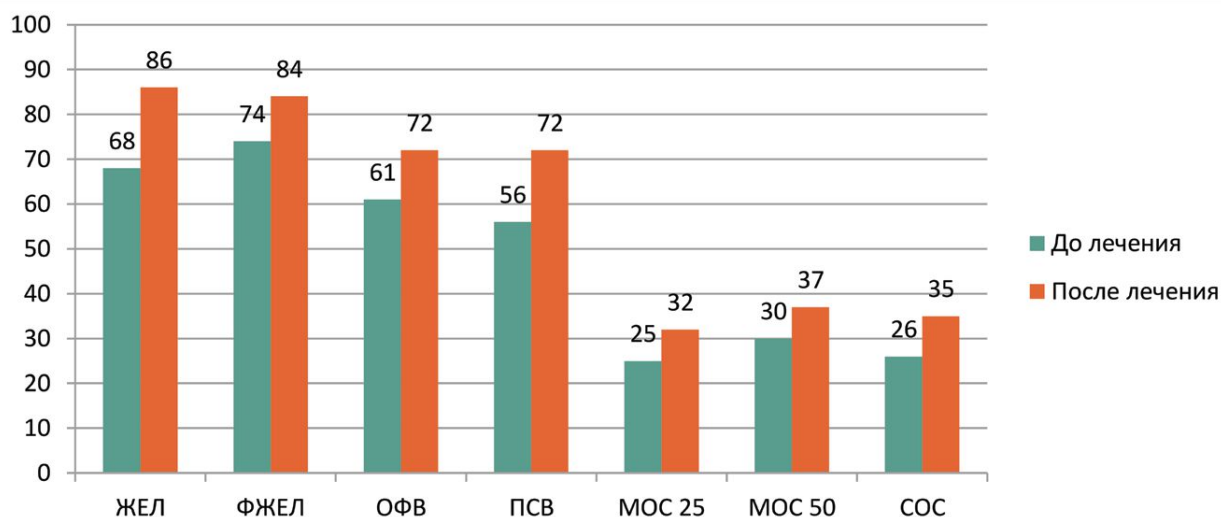
Elaboration of a method for complex treatment of asthma with a concomitant gastrointestinal pathology by means of physical factors, in particular, a travelling pulsed magnetic field.

## RESULTS AND THEIR CONSIDERATION

### CLINICAL BLOOD CHEMISTRY VALUES REFLECTING THE INFLAMMATORY PROCESS ACTIVITY



### CHANGES IN THE SPIROGRAPHIC PARAMETERS DURING COMPLEX TREATMENT WHICH INCLUDED EXPOSURE TO TPMF



## SUMMARY STATEMENT

During treatment of asthma patients, it is advisable to use magneto-therapy with a travelling pulsed magnetic field: it alleviates the symptoms on the part of the respiratory and digestive systems, provides for an anti-inflammatory effect at the systemic and local levels, improves the bronchial patency, while the effect lasts for up to six months.

# TREATMENT OF BRONCHIAL ASTHMA USING ALMAG-01 DEVICE

## PURPOSE OF STUDY

Assessment of efficacy of low-frequency magneto-therapy with "travelling" pulsed magnetic field of "ALMAG-01" device within complex treatment of bronchial asthma patients.

## RESULTS AND THEIR CONSIDERATION

### CHANGES IN THE "FLOW-VOLUME" PARAMETERS OF ASTHMA PATIENTS

PARAMETERS	CONTROL GROUP NO. 2			INDEX GROUP NO. 1		
	BEFORE	AFTER	VARIANCE	BEFORE	AFTER	VARIANCE
VC	51.9	73.2	21.3	52.6	76.4	23.8
FEV1	41.3	66.1	24.8	43.6	69.1	25.5
PFER	45.4	65.3	19.9	46.4	68.2	21.8
MEF25	33.2	55.1	21.9	34.8	59.3	24.5
MEF50	29.3	48.3	19.0	30.1	50.2	20.1
MEF75	24.2	46.2	22.0	26.3	49.3	23.0
FEF25-75	27.3	49.2	21.9	28.1	52.0	23.9

In the course of the study it was detected that the patients of control group No. 2 revealed more resistance of their asthma to the conducted therapy as compared to those of group 1. This involved increasing the dosage of drugs or replacing them, which, consequently, led to a longer period of rehabilitation and temporary incapacity for work, as well as increased the cost of treatment.

## SUMMARY STATEMENT

The use of magneto-therapy within complex treatment of asthma enhances its efficacy (by increasing the respiratory function for an average of 3%), which is indicative of the need to include magneto-therapy into the treatment complex for mild and moderate forms of the disease, as well as into the complex of rehabilitation measures.

# **PULSED MAGNETO-THERAPY WITHIN COMPLEX TREATMENT OF PATIENTS WITH GASTRIC AND DUODENAL ULCERS**

## PURPOSE OF STUDY

Assessment of the efficacy of combined therapy, which includes the components of the industry-specific standard adopted by Order No. 241 of the Ministry of Healthcare the Russian Federation dd. 22/11/2004, as well as magneto-therapy with the travelling magnetic field of ALMAG-02 device, for cases of chronic gastritis, duodenitis, gastroduodenitis, gastric and duodenal ulcers.

## SUMMARY STATEMENT

Combined application of medicines and a magnetic field form complementary interactions that enhance their cross-effect on one another. This allows to reduce the dosage of chemical drugs, to completely abandon antibiotics and, having achieved 100% eradication of *H. pylori*, to solve the main tasks of treating chronic gastroduodenal pathology, as well as improve the patients' quality of life. Exclusion of toxic antibiotics from the treatment regimen reduces the chances of developing a drug disease and the cost of an anti-relapse course, as well as makes a harmless and high-quality treatment available to any population groups, including the disadvantaged ones.

## CONCLUSIONS

1. The multicomponent nature of the etiopathogenetic mechanisms and clinical manifestations imposes the need to conduct the complex of clinical and laboratory studies with a follow-up control.
2. The frequent recurrence, the risk of malignancy and the high % of therapy failures based on the industry-specific standards actualizes the search for new treatment regimens, incl. those involving magneto-therapy.
3. Combining the components of the industry-specific standards and magneto-therapy with a "travelling" magnetic field into one therapeutic course increases the treatment efficacy, reduces the number and intensity of relapses, and allows to completely cancel antibiotics.
4. Such a combined program is comparable to the baseline course in terms of the treatment length, but does not cause adverse side effects or complications, which is important for patients with concomitant diseases.

# WAYS OF IMPROVING THE TREATMENT EFFICACY OF PSORIASIS

## PURPOSE OF STUDY

Evaluation of the possibility of improving the quality of psoriasis treatment by including pulsed magneto-therapy into the program of complex treatment.

## RESULTS AND THEIR CONSIDERATION

The treatment led to a change in the acoustic wave velocity within the psoriatic focus. It decreased by 37% outside of the pathology focus, and by 23% 4 weeks after the treatment start in the patients of different groups, while after 3 months the decrease was by 48% outside of the pathology focus, and by 35% versus the initial values, which may serve as a predictive favorable criterion in the disease progression (Fig. 1). As a result of application of magneto-therapy, positive changes in the cellular immunity level were observed in 90.4% of group I patients, which was confirmed by a significant 1.5-fold increase in the percentage of the total number of mature T-cells (CD3), as well as by doubling of the ratio of CD4:CD8 values. The performance impairment index exceeded the values compared against the control ones in patients of all the groups and was most pronounced in group I. The highest values of this parameter were detected in patients of group I, which correlated to the degree of intensity of affective disorders.

## CONCLUSIONS

1. The use of cryotherapy proved effective in patients of group I. By day 28, the PASI values of group I patients decreased by 78%, and the remission period extended to 6-9 months in 90.4% of group I patients. At the time of the next exacerbation, the clinical manifestations did not exceed 10 as per PASI. The achieved therapeutic effect persisted for up to 12 months.
2. As a result of application of magneto-therapy, positive changes in the cellular and humoral immunity levels were observed in 90.4% of patients, with the most pronounced ones demonstrated by patients of group I.
3. It is therefore suggested that magneto-therapy be added to conventional treatment as part of the complex treatment of psoriasis patients, in the form of courses comprising 25, 20 and 15 daily procedures, with 1-month intervals between the courses. Magneto-therapy is indicated for cases of vulgar, chronic and seborrheic psoriasis.

# COMPLEX THERAPY OF PATIENTS WITH DIABETIC FOOT SYNDROME

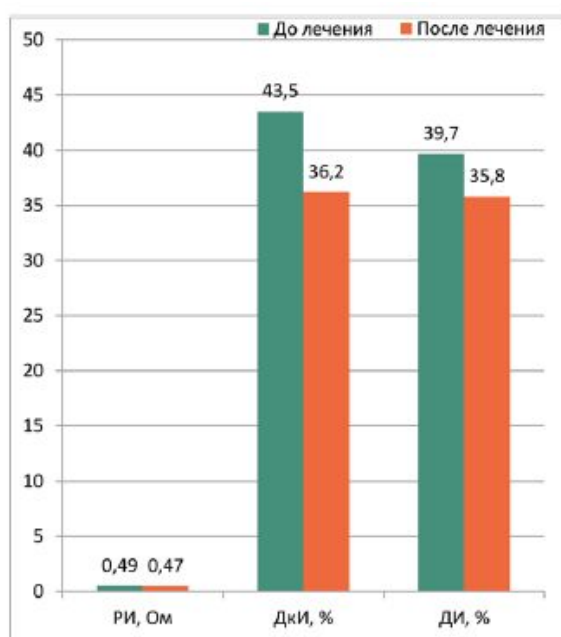
## PURPOSE OF STUDY

Study of the feasibility and efficacy of using low-frequency travelling magnetic field generated by "ALMAG-01" physiotherapy device on patients with diabetic foot syndrome of the neuro-ischemic form suffering from type 1 diabetes.

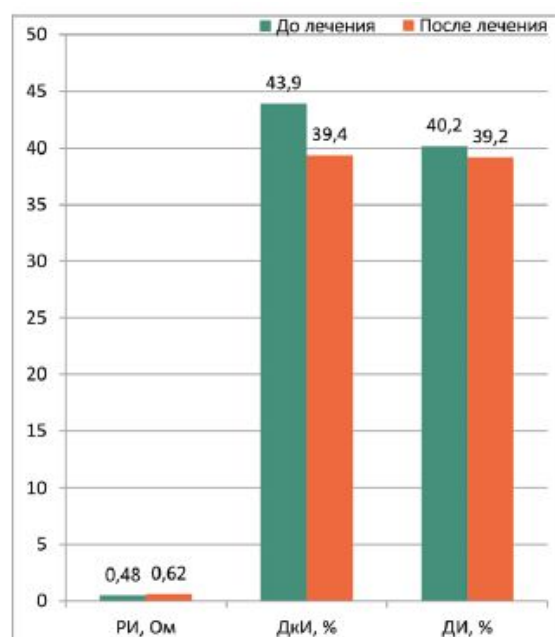
## RESULTS AND THEIR CONSIDERATION

The treatment resulted in improvement of the majority of the patients' condition; positive changes in the subjective and objective manifestations of the disease occurred. Clinical effect was observed in 59% of cases. Based on pain VAS data, the pain syndrome intensity decreased from 4.8 to 2.1 points in the index group and to 3.5 points in the control group.

## CHANGES IN THE RHEOVASOGRAPHIC PARAMETERS OF THE LOWER EXTREMITIES AFFECTED BY THE TREATMENT



1 ГРУППА (ОПЫТНАЯ), 104 ЧЕЛОВЕКА



2 ГРУППА (КОНТРОЛЬНАЯ), 98 ЧЕЛОВЕК

The course treatment with ALMAG-01 device of patients with diabetic foot, clinical manifestations of neuropathic ulcer, helped to reduce the severity of the pain syndrome and the sensory disorders, as well as to improve the parameters of peripheral hemodynamics, which was accompanied by skin color changes in the affected limbs and accelerated healing of the ulcerous defect.

## SUMMARY STATEMENT

The use of "ALMAG-01" device within complex treatment helped to improve the patients' general well-being, had a moderate spasmolytic effect, produced a moderate analgesic and hypotensive action, with no side effects whatsoever. The resulting vasodilating effect on patients with neurovascular changes is of particular interest for further more detailed study in terms of a broader application for patients with the studied clinical entity.

Thus, the results of the above research make it possible to recommend a course of physiotherapeutic exposure to the travelling pulsed magnetic field of "ALMAG-01" device on the lumbar region and lower extremities of patients with diabetic foot.

# **ASSESSMENT OF EFFICACY OF LOW-FREQUENCY MAGNETO-THERAPY WITH A "TRAVELLING" MAGNETIC FIELD WITHIN COMPLEX TREATMENT OF NEUROPATHIC PAIN IN ZOSTER PATIENTS**

## ISSUE RELEVANCE

At present, between 2% and 40% of people in the world suffer from chronic pain. Based on its pathogenesis, chronic pain is divided into neuropathic, nociceptive and psychogenic. Treatment of neuropathy is fraught with significant difficulties, which accounts for the relevance of finding methods that would enhance the efficacy of therapy.

## PURPOSE OF STUDY

Assessment of efficacy of low-frequency magneto-therapy with a travelling magnetic field for treating neuropathic pain in herpes zoster patients.

## RESULTS AND THEIR CONSIDERATION

After the treatment, 70% of patients noted a complete or nearly complete subsidence of pain (from 0 to 1 point), 30% experienced mild or moderate pain (from 0 to 3 points). In general, this group demonstrated a decrease in the level of pain during treatment from 5.4 to 0.8 points on average. Prior to treatment start, group II patients generally (94%) assessed the severity of their pain as high or very high, while 6% of patients had mild to moderate pain. As a result of the treatment, pain subsidence down to 0-1 points was detected in 94% of patients, and pain intensity of 2-3 points was noted in 6.2% of patients. In general, this group demonstrated a decrease in pain during treatment from 5.3 to 0.4 points on average. Among the patients from group III, fewer persons with severe or very severe pain (74%) were observed, while mild or moderate pain was noted in 26% of patients. After treatment, 74% of patients showed a decrease in the pain severity to 0-1 points, and 26% of patients remained at the pain level of 2-3 points. In general, this group demonstrated a less pronounced decrease of pain during treatment (from 4.0 to 0.8 points on average).

## SUMMARY STATEMENT

The study determined the high efficacy of the complex therapy, which combined the usage of standard medications with magneto-therapy, in order to relieve neuropathic pain in patients with herpes zoster. When this combination is prescribed, a more reliable analgesic effect is achieved already after 10 days of therapy. Magneto-therapy is indicated for all cases of herpes zoster, provided there are no contraindications (high temperature, presence of a secondary infection, a pacemaker at the site of exposure, etc.), especially with a pain level greater than 5 points as per VAS. The results obtained show that including low-frequency magneto-therapy into complex treatment of postherpetic neuropathy significantly increases its efficacy.

## INTERNATIONAL EXPERIENCE. REPORTS FROM INDIAN DOCTORS

Name of the medical organization: Abrol Medical Center

Name and surname of the doctor: Dr Ajay Abrol / Dr RajaniDigra

Period: from June 2016 to August 2018

Results:

THE GROUP OF THE DISEASES	THERAPEUTIC EFFECTS	THE NUMBER OF PATIENTS WHO RECEIVED A THERAPEUTIC EFFECT (NUMBER OF PEOPLE /% OF THOSE WHO HAD INITIALLY PATHOLOGICAL SYMPTOMS)
DORSOPATHY AND SPONDYLOPATHY	MARKED RELIEF FROM PAIN AND IMPROVED MOVEMENT	78%
DISEASES OF THE JOINTS	RELIEF FROM PAIN AND OTHER SYMPTOMS AND IMPROVED GAIT. HELP IN IMPROVEMENT IN LIFESTYLE TO THE PATIENT	81%
DISEASES AND INJURIES OF THE PERIPHERAL NERVOUS SYSTEM	PAIN RELIEF AND RELIEF FROM OTHER SYMPTOMS OF THE DISEASE	85%
DISEASES OF THE URINARY-GENITAL SYSTEM	URINARY INCONTINENCE — RELIEF WITHIN 8 DAYS OF USE TO THE PATIENTS	94%

### CONDITION OF THE PATIENT ON WHOM DEVICE WAS USED

THE DISEASE	NUMBER OF PATIENTS
SPONDYLOPATHY	56
LUMBAR DORSOPATHY	67
OSTEOARTHRITIS	29
SCIATICA PAIN	19
ROTATOR CUFF INJURY	17
HEEL SPUR / PLANTAR FASCIITIS	58
DIABETIC NEUROPATHY	16
DUPUYTREN'S CONTRACTURE	04
RHEUMATOID ARTHRITIS	37
RETROCALCANEAL BURSITIS	18
URINARY INCONTINENCE	04
TENNIS ELBOW/GOLFER'S ELBOW	11
SCAPULOHUMERAL PERIARTRITIS	18
LOW LEG DEEP VEINS THROMBOPHLEBITIS	04
VARICOSE VEINS	06
DISORDERS OF SEPARATE NERVE ROOTS AND PLEXUSES OF UPPER AND LOWER LIMBS (RADIAL, MEDIAN AND ULNAR NERVE DISEASES)	01(TREATED) 02(UNDER TREATMENT)

## INTERNATIONAL EXPERIENCE. REPORTS FROM INDIAN DOCTORS

Name of the medical organization: Goldtouch Healing Center

Name and surname of the doctor: Dr. Love Kumar

Period: from June 2017 to August 2018

Results:

THE GROUP OF THE DISEASES	THERAPEUTIC EFFECTS	THE NUMBER OF PATIENTS WHO RECEIVED A THERAPEUTIC EFFECT (NUMBER OF PEOPLE 1% OF THOSE WHO HAD INITIALLY PATHOLOGICAL SYMPTOMS)
DORSOPATHY AND SPONDYLOPATHY	RELIEF SUBSTANTIAL TO THE PATIENTS FROM PAIN AND IMPROVED MOVEMENT	83%
DISEASES OF THE JOINTS	PAIN RELIEF IS GOOD FROM THE THERAPY AND PATIENTS HAD IMPROVED MOVEMENT IN THEIR JOINTS	85%
DISEASES AND INJURIES OF THE PERIPHERAL NERVOUS SYSTEM	THERE IS A MARKED IMPROVEMENT IN THE CONDITION OF THE PATIENTS	80%
DISEASES OF THE RESPIRATORY SYSTEM	PATIENTS INFORMED IN IMPROVEMENT IN THEIR CONDITIONS.	85%

### CONDITIONS OF THE PATIENT ON WHOM DEVICE WAS USED

THE DISEASE	NUMBER OF PATIENTS
COCCYGODYNIA	14
BRONCHIECTASIS	6
SACROILITIS	9
WOUND HEALING	17
SLIP DISC	9
OSTEOARTHRITIS	21
JOINT CONTRACTURE	11
TRAUMA SPINE	3



Name of the medical organization: Dr Meenakshi Clinic

Name and surname of the doctor: Dr Meenakshi Shukla

Period: from December 2016 to August 2016

<b>THE GROUP OF THE DISEASES</b>	<b>THERAPEUTIC EFFECTS</b>	<b>THE NUMBER OF PATIENTS WHO RECEIVED A THERAPEUTIC EFFECT (NUMBER OF PEOPLE 1% OF THOSE WHO HAD INITIALLY PATHOLOGICAL SYMPTOMS)</b>
<b>DORSOPATHY AND SPONDYLOPATHY</b>	<b>RELIEF FROM THE BACK PAIN</b>	<b>83%</b>
	<b>RELIEF FROM THE NECK PAIN</b>	<b>84%</b>
<b>DISEASES OF THE JOINTS</b>	<b>RELIEF FROM THE KNEE PAIN</b>	<b>90%</b>
<b>DISEASES AND INJURIES OF THE PERIPHERAL NERVOUS SYSTEM</b>	<b>RELIEF FROM THE STATIC PAIN</b>	<b>84%</b>

Results:

**CONDITIONS OF THE PATIENT ON WHOM DEVICE WAS USED**

<b>THE DISEASE</b>	<b>NUMBER OF PATIENTS</b>
<b>BACK PAIN</b>	<b>24</b>

<b>KNEE PAIN</b>	<b>57</b>
<b>NECK PAIN</b>	<b>63</b>
<b>SCIATIC PAIN</b>	<b>37</b>

## **INTERNATIONAL EXPERIENCE. REPORTS FROM INDIAN DOCTORS**

Name of the medical organization: Dr Wasoori Clinic

Name and surname of the doctor: Dr Satish Chander Wasoori

Period: from July 2016 to August 2018

Results:

<b>THE GROUP OF THE DISEASES</b>	<b>THERAPEUTIC EFFECTS</b>	<b>THE NUMBER OF PATIENTS WHO RECEIVED A THERAPEUTIC EFFECT (NUMBER OF PEOPLE 1% OF THOSE WHO HAD INITIALLY PATHOLOGICAL SYMPTOMS)</b>
<b>DISEASES AND INJURIES OF THE PERIPHERAL NERVOUS SYSTEM — DIABETIC NEUROPATHY</b>	<b>THERE WAS A MARKED IMPROVEMENT IN THE CONDITION OF PATIENTS WITH DIABETIC NEUROPATHY. THERE WAS MARKED DECREASE IN THE SYMPTOMS OF DIABETIC NEUROPATHY SUCH AS TINGLING, PIN PRICKS, BURNING SENSATION IN THE LOWER LIMBS AND ALSO IMPROVEMENT IN GAIT OF THE PATIENTS.</b>	<b>90%</b>

### **CONDITIONS OF THE PATIENT ON WHOM DEVICE WAS USED**

<b>THE DISEASE</b>	<b>NUMBER OF PATIENTS</b>
<b>DIABETIC NEUROPATHY</b>	<b>100</b>