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COMPREHENSIVE TREATMENT OF OSTEOARTHRITIS PEFORMANS WITH CONCOMITANT METABOLIC SYNDROME

Abstract. *Osteoarthritis peformans is the most common pathology of the musculoskeletal system. OAP, combined with metabolic syndrome (MS), leads to an overuse of the knee joints operation, and is one of the main causes of premature disability in people. Combined treatment using electrophoresis with neocaripasin in patients with OAP and concomitant MS reduces pain, the severity of inflammatory responses and improves quality of life.*

Keywords: *deforming osteoarthritis, metabolic syndrome, complex treatment.*

Introduction. Osteoarthritis peformans (OAP) is the most common form of joint disease: 10-12% of the population suffer from it, and regarding a significant aging of the population, it is becoming an increasingly topical disease. Currently, osteoarthritis peformans is seen as a systemic metabolic disease, which is a part of metabolic syndrome (MS). Metabolic syndrome is a pathological condition which is characterized by the development of abdominal obesity, dyslipidemia, hypertension and carbohydrate metabolism disorders (insulin resistance phenomenon). The treatment of osteoarthritis peformans is a complex problem that does not always lead to positive results [1-5].

Objective: to evaluate the effectiveness of comprehensive treatment of patients suffering from osteoarthritis performans of the knee with concomitant metabolic syndrome.

Materials and methods. Group of observations included 60 patients (38 women, and 22 men), aged between 50 and 70, suffering from OAP (the second and third radiologica stages) with concomitant metabolic syndrome. The patients were divided into 2 groups according to the method of treatment. The

patients from the first group (30 people) received nonsteroidal anti-inflammatory drug (NSAID) - meloxicam at a dose of 15 mg every day once a day and chondroprotector as a drug piaskledine 300 – 1 tablet a day for 3 months. All patients in Group II (30 people including 11 men and 19 women) were administered complex treatment, against the background of meloxicam and piaskledine electrophoresis with neocaripasin (using sinusoidal modulated currents (SMS) in a rectified mode 50% 50 Hz with current intensity 0,04-0, 06 mA / cm², lasting 10-15 minutes daily with 14-16 procedures), repeating the course every 3 months for two years. All patients underwent assessment of pain on a Verbal Rating Scale, x-ray of the knee and biochemical blood tests (indicators of inflammation, lipid and carbohydrate metabolism) before and after the comprehensive treatment.

Results and discussion. Following the comprehensive treatment using electrophoresis with neocaripasin against the background of anti-inflammatory drugs and chondroprotectors there was a significant difference in the clinical course of OAP of the knee joints with concomitant metabolic syndrome in two groups

of observation receiving different treatments.

The patients of the first group compared with patients of the second group experienced more intense and prolonged pain according to the visual analogue scale VAS of pain (Figure 1).

Severity of inflammatory syndrome (according to biochemical findings of inflammation values) reduced in the experimental groups, namely in Group II, which

was subjected to complex treatment (Table. 1).

Assessment of lipid metabolism according to lipidogram test and glucose, insulin and leptin values according to biochemical blood tests in different groups of patients before and after treatment. Reduction of lipid and carbohydrate metabolism was observed in the group of patients where combined therapy had been used. (Table 2).

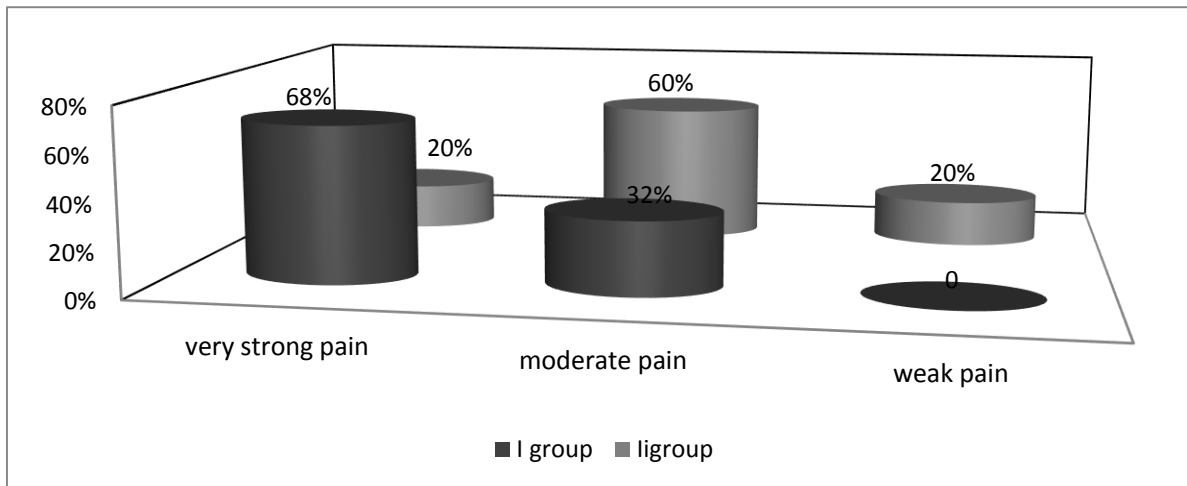


Fig.1. The severity of pain according to VAS pain scale in these groups of patients ($r \leq 0,05$).

Table. 1
Acute phase values of inflammation in patients, suffering from OAP with concomitant metabolic syndrome in various groups of treatment.

Value	I group, n= 30 M±m		II group, n= 30 M±m	
	Before treatment	After treatment	Before treatment	After treatment
CRP	+++	++	+++	++ or +
Fibrinogen, g/l	5,2 ± 0,7	4,3±0,2	5,2 ±0,4	3,7 ± 0,3
Seromuroid, unit	0,320 ± 0,002	0,260 ±0,002	0,320 ±0,003	0,230 ± 0,004
ESR, mm/g	34	20	35	15

Table. 2
Values of lipid and carbohydrate metabolism in patients suffering from OAP with concomitant metabolic syndrome in groups with various treatment

Value	I group n= 30 M±m		II group n= 30 M±m	
	Before tratment	After treatment	Before treatment	After treatment
HDL cholesterol, mmol / L	1,19 ± 0,07	1,18 ± 0,07	1,19 ± 0,07	1,17 ± 0,07
TH mmol / l	1,8 ± 0,04	1,7 ± 0,03	1,9 ± 0,04	1,7 ± 0,03
Glucose, mmol / l	7,4 ± 0,3	6,2 ± 0,4	7,3 ± 0,3	5,4 ± 0,4
Insulin mcUn / l	15,2 ± 0,3	14,3 ± 0,2	15,3 ± 0,3	12,2 ± 0,2
Leptin, pg / ml	18,3 ± 0,2	16,5 ± 0,3	18,4 ± 0,2	13,5 ± 0,3

Conclusions: 1. After the comprehensive treatment of patients with osteoarthritis performing the knee with concomitant metabolic syndrome all values of inflammation decreased by 3 times; lipid and carbohydrate metabolism – by 2 times and pain syndrome after VAS scale decreased by 3 times.

2. After the comprehensive treatment with neocaripasin electrophoresis against the background of anti-inflammatory and chondroprotective therapy, 54% ($r \leq 0,05$) of patients with OAP of the knee with concomitant metabolic syndrome had a slowdown of affecting the knee joints, better efficiency and quality of life.

Prospects of further research. Based on the findings obtained, it is possible to use this comprehensive therapy in future for the treatment of patients suffering from osteoarthritis performing with concomitant metabolic syndrome.

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