

Long-term results in treatment of arthrosis by extracorporeal shock-wave therapy

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Introduction: The extracorporeal shock-wave therapy (ESWT) is an effective method for non-invasive treatment of patients with arthrosis.

Methods: During the last 4 years we have conducted 12'000 treatments of osteoarthrosis patients. We have observed the results of 1'115 patients with coxarthrosis, gonarthrosis and ankle-joint arthrosis over long-term period of 24 till 36 months.

The joint's pathologic stage was assessed by clinical and X-ray methods (Kellgren & Lawrence classification). The objectiveness of pain sensation in the most painful regions was achieved with F-meter and VAS.

All patients were treated with an interval of 7 to 12 days. They had from 3 to 6 ESWT sessions using Masterpuls MP100 (Storz Medical, Switzerland). During the session, 2000-3000 shocks were applied with different frequency and pressure ranging from 1.5 to 4.0 bars.

Results: For 95% of patients with 1st stage arthrosis, a significant decrease of pain sensation during the period of follow-up exams was observed. Before the ESWT treatment, the mean VAS score was 4.5 ± 0.7 , during the last follow-up exam only 0.5 ± 0.3 . According to the F-meter measurements, the intensity of pain sensation was reduced by $84.3 \pm 3.2\%$.

42% of patients with 2nd stage arthrosis had significant decrease of pain sensation during the last follow-up exam. Before the ESWT treatment the mean VAS score was 6.8 ± 0.8 , during the last follow-up exam only 1.8 ± 0.9 . According to the F-meter measurements, the intensity of pain sensation was reduced by $62.4 \pm 4.7\%$.

Discussion: ESWT treatment of arthrosis patients results in significant reduction of pain medication and number of physiotherapy sessions, and in restoration or in noticeable increase of full daily motor activity even 2-3 years after the last ESWT procedure.

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