more than five years with patients with RA in a stationary setting. Results of the online survey demonstrate that the ranking of the impact of specific rehabilitation interventions did only marginally differ between the two person groups: Both groups ranked the importance of occupational and physical therapy the highest. Only the subjective importance of splints and assistive technologies was higher assessed by the general members of the ÖGR. Further, the ranking about the estimated impact of rehabilitation methods for patients with RA was very similar between the two person groups: The importance of rehabilitation for patients with functionality restrictions and for patients with RA in the first years of their disease was ranked the highest by both groups.

Conclusion: Results of the online survey demonstrate that ratings related to the impact of rehabilitation interventions for RA patients do only slightly differ between the investigated member groups of the ÖGR. Finally, the results indicate that rehabilitation methods for RA patients and rehabilitation related knowledge are well accepted and successfully transferred into disease management of patients with RA by professionals and experts in rheumatology in Austria.

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THU0571

EFFICIENCY OF COMPLEX REHABILITATION PROGRAM IN PATIENTS WITH OSTEOARTHRITIS

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Background: Rehabilitation techniques and nonpharmacologic therapies help to relieve pain and improve functional status in patients with osteoarthritis (OA) in addition to drug treatment [1–4].

Objectives: To evaluate the efficiency of 12-month complex rehabilitation program in patients with OA.

Methods: 50 patients with OA of hand, knee and ankle joints (76% females, age of 48 to 69 years, disease duration of 2 to 15 years) were included and randomized into 2 groups. All patients received non-steroidal anti-inflammatory drugs and chondroprotectors in standard doses. 26 study group patients underwent 12-months complex rehabilitation program: laser therapy of 12 to 15 min (infrared laser radiation, wavelength of 0.89 micrometers, pulse frequency of 1200 to 1500 Hz) for hand, knee and ankle joints, 3 courses for 10 sessions with a mean interval of 3,3 months; 45-min dynamic exercises using gym apparatus Enraf-Nonius under the supervision of a trainer 3 times a week; 45-min exercises for hands 3 times a week; 45-min occupational therapy, 10 sessions; wrist, ankle and knee orthoses, education program (3 daily 90-min studies); balance training on the COBS-platform 3 times a week. 24 patients received only drug therapy (control). Tender and swollen joint count, joint pain on 100-mm VAS, Lequesne index, WOMAC, hand grip strength, the average powers of knee extension and ankle flexion by EN-TreeM movement analysis, symmetry index (SI) and load distribution on the COBS-platform in the different modes were evaluated at baseline and at 12 months.

Results: After 12 month in the study group tender joint count decreased by 56,2% ($p<0,01$), swollen joint count – by 67,3% ($p<0,01$), pain on VAS – by 54,7% ($p<0,01$), Lequesne index – by 2,3 times ($p<0,01$), WOMAC – by 1,8 times ($p<0,01$). The grip strength of a more affected hand enhanced by 41,3% ($p<0,05$), of a less affected – by 43,4% ($p<0,05$). The average extension power of a weaker knee increased by 57,3% ($p<0,01$), of a stronger – by 44,2% ($p<0,05$). The average flexion power of a more affected ankle joint elevated by 34,9% ($p<0,05$), of a less affected – by 48,2% ($p<0,05$). The pressure on the COBS-platform of the extremity with more affected joint of the patients with OA of knee joints increased by 11,7% ($p<0,05$), SI – by 12,9% ($p<0,05$) in the mode «habitual stand». The load on the limb with more affected joint elevated by 13,2% ($p<0,05$), SI – by 25% ($p<0,05$) in the mode «get up and sit down». The pressure on the COBS-platform of the extremity with more affected joint of the patients with OA of ankle joints was enhanced by 14,3% ($p<0,05$), SI – by 18,2% ($p<0,05$) in the mode «habitual stand». The load on the limb with more affected joint was elevated by 12,8% ($p<0,05$), SI – by 20,1% ($p<0,05$)

in the mode «tiptoe bounce (do not leave ground)». In the study group there were statistically significant differences from the control group in all parameters ($p<0,05$).

Conclusion: 12-month complex rehabilitation program relieves pain, improves functional ability, power of motion, balance and load distribution in patients with OA.

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THU0572

THE ROLE OF PRESSURE PAIN THRESHOLD IN A REHABILITATIVE APPROACH TO ANALYZE PAIN PROCESSING MECHANISM IN HAND OSTEOARTHRITIS PATIENTS: A PILOT STUDY.

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Background: The hand pain experienced by patients with hand osteoarthritis (OA) is often accompanied by hypersensitivity and signs of peripheral and central sensitization¹. The European League Against Rheumatism (EULAR) published a systematic literature review that summarized the current non-pharmacological, pharmacological and surgical approaches for the management of hand OA². The identified review did not consider interventions that specifically targeted reducing pain sensitivity. A reliable method to assess the presence of hypersensitivity is the pressure pain threshold (PPT)³. During the rehabilitation management considering the pain mechanism involved could be an important factor to address more effective treatments⁴.

Objectives: The aim of the present study was to investigate the role of pain processing mechanism in patients with hand OA through PPT and using a specific functional Magnetic Resonance Imaging (fMRI).

Methods: 20 patients with hand OA and 20 healthy controls, aged 50 to 90 years, were recruited. Pressure pain threshold (PPT) was assessed bilaterally over the hand, on the C5-C6 zigoapophyseal joint, median, ulnar, radial nerves, and anterior tibial muscle by a blinded assessor respect to the condition of the subjects³. In five participants for each group, PPT over the hand was assessed neurophysiologically by advanced modalities including functional MRI to analyze the pain mechanisms related to hand OA⁵.

Results: The results showed that PPTs were significantly lower over the hand and the median, ulnar, radial nerves ($P<0.05$), but not over the C5-C6 zigoapophyseal joint and anterior tibial ($P>0.05$) in OA patients as compared to healthy controls. Both groups demonstrated activation of the thalamus, frontal and somatosensory cortex area during PPT over the hand, although the total brain area activated in OA patients was greater than in control participants.

Conclusion: Patients with hand OA shown features of altered pain mechanism that were evident both in PPTs measures than using functional MRI. PPT is a useful marker in detecting pain sensitivity in hand OA and could be used in future pain studies to evaluate pain modulation strategies.

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