



acquired from MRI [3]. Accurate joint centers and axes were calculated with analytical surface fits to the segmented MRI bones for the hip, knee and ankle.

Results: Peak hip force for medio-lateral (ML) proximo-distal (PD) and antero-posterior (AP) is presented in Figure 1B for the C and FO with values for each subject.

Conclusions: The results of this study indicate that FO can change the load distribution in the hip joint. A reduction or similar values for ML, DP and AP force was found for all but one participant. These changes may potentially contribute to the reduction in pain. Further studies are needed to investigate if there is a relationship between changed loading and pain for RA patients. This knowledge can potential be used for design of better FO and clinical guidelines for use of FO.

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THU0716 LONGITUDINAL OUTCOME OF AEROBIC FITNESS IN ADOLESCENTS AND YOUNG ADULTS WITH JIA

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Background: Aerobic fitness may serve as an important health-related outcome measure in JIA. A reduced aerobic fitness is associated with cardiovascular morbidity, mortality and osteoporosis in adult patients with chronic diseases. However, in adolescents and young adults, long-term outcome data of aerobic fitness are unknown. Reduced aerobic fitness was described in cross-sectional studies in children and adolescents with JIA, and was more impaired in active disease

Objectives: Our objectives are to describe course of the aerobic fitness in a longitudinal cohort of adolescents and young adult JIA-patients who are intensively treated including the possibility of biologics and to identify the association of clinical variables with aerobic fitness.

Methods: In a longitudinal cohort, all consecutive JIA patients aged 10–24 years were included after informed consent. Annual examinations were obtained from demographic and disease-related items. At baseline and end of the study, aerobic fitness (VO₂peak) was assessed using a graded cardiopulmonary exercise test (CPET) to volitional exhaustion performed on an electronically braked cycle ergometer. Absolute and relative VO₂-peak values were measured and related to healthy controls (Z-scores), using one-sample T-tests. Non-parametric tests were used to evaluate results

Results: Paired Z-scores were available from 27 patients. 44% were male, median age at baseline was 13,0yrs (IQR 4,3), disease duration 7,6yrs (6,7), JADAS27 4,0 (5,9), DAS28 2,2 (1,2). 76% of the patients were in DAS28-remission. 11% had systemic JIA, 7% persistent oligoarticular and 82% had a polyarticular course. Baseline and end Z-scores were reduced compared to healthy controls (ZAbs_base -0,68, IQR2,3 p=0,01; Zrel_base -1,33, IQR 2,0, p<0,01; Zabs_end -0,23, IQR 1,7, p=0,06; Zrel_end -0,87, IQR 2,2, p=0,01) and did not change significantly over time (change Zabs_change 0,45, p=0,34; Zrel_change 0,46, p=0,31). At baseline, MTX-use (p=0,04) and a higher DAS28 (p=0,015) and ESR (p=0,013) are associated with a worse outcome of aerobic fitness. The greatest improvement of aerobic fitness over time was seen in patients with a higher ESR (p<0,01) and thrombocytes (p<0,01) at baseline. Multivariate analysis showed that a higher DAS28 and male gender were the most important variables for worse

aerobic fitness at baseline, a higher ESR at baseline was the most important predictor for improving aerobic fitness over time

Conclusions: Aerobic fitness is significantly reduced in adolescents and young adults with JIA and does not improve over time, despite intensive treatment. Be aware of a reduced quality of life due to a persistent reduced aerobic fitness during disease course of JIA, despite low disease activity

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THU0717 MIRROR VISUAL FEEDBACK THERAPY IMPROVES CLINICAL OUTCOMES AND THE ACTIVITY OF DAILY LIVING TO PATIENTS WITH HAND COMPLEX REGIONAL PAIN SYNDROME

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Background: Wrist osteoporotic fractures may be as disabling as vertebral or hip fractures and the functional decline attributed to them is similar to that seen for arthritis and diabetes mellitus. Sometimes these fractures will lead to a painful, debilitating condition with sensory and motor disturbances, changes in vascular tone, temperature and edema- complex regional pain syndrome (CRPS). We found some clinical trials and case reports which conclude that mirror visual feedback therapy (MVFT) improves clinical outcomes and the activity of daily living to patients with hand neurological disorders, including CRPS.

Objectives: In this controlled randomized clinical study we tried to investigate the effects of (MVFT) in CRPS type I following osteoporosis wrist fracture.

Methods: We included 21 subjects with osteoporotic wrist fracture and early CRPS (duration of 3–4 weeks), with a single hand affected by allodynia, stiffness and vasomotor disturbances, from Physical Medicine and Rehabilitation outpatient clinic. They are randomly assigned into two groups: MVFT group (n=11, simply place a mirror between their two hands and train the patient by asking them to move both hands while watching the reflection of the non-affected hand in the mirror, 10 minutes for each session, four times a day) and Control group (n=10, moved both hands separated by an opaque partition between the arms). All subjects also received conventional therapy. On presentation and after 4 weeks of rehabilitation programme we assessed the wrist flexion and extension with a goniometer and the Patient-Rated Wrist Evaluation (PRWE) a 15-items questionnaire designed to measure wrist pain and disability in activities of daily living.

Results: Subjects in the mirror therapy group showed significant improvement in range of motion: extension increased with 50.4% vs. 41.7% and for flexion MVFT achieved 33.2% and Control group 16.8% (P<.001). The rehabilitation programme also increased hand function with better results to 4 weeks PRWE for MVFT group (40.4 vs. 51.8, P=0.003).

Conclusions: MVF is a simple, inexpensive, without adverse events treatment option that significantly reduces pain and stiffness and improves hand mobility in early CRPS after osteoporosis wrist fracture.

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THU0718 DIFFERENCES IN THE COURSE OF ITALIAN- AND GERMAN-SPEAKING PATIENTS' OUTCOME AFTER INTERDISCIPLINARY PAIN PROGRAM

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Background: Available evidence shows that the experience and perception of pain varies among different populations. Further, inequalities are reported in pain treatment across various types of pain and in different settings (1). In particular, it is unknown how much immigrants in Western European countries profit from pain management programs.

Objectives: The aim of this study was to detect differences in the course of Italian- and German-speaking patient's state of health and quality of life after a 4-week standardized interdisciplinary pain management program in German or in Italian.

Methods: The prospective cohort study with 61 Italian-speaking and 63 German-speaking patients with fibromyalgia or chronic back pain measured health-related quality of life, pain, anxiety and depression comparing at baseline, after 4 weeks of pain program and at 1 year follow-up. Differences between the two groups