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OP0258-HPR INTENSIVE PHYSICAL EXERCISE FOR ELDERLY PERSONS WITH RHEUMATOID ARTHRITIS IMPROVES PHYSICAL CAPACITY

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Background: Today, more than 50% of persons with Rheumatoid Arthritis (RA) are over 65 years of age (1). Little is known about the effects of physical exercise in this age group (>65 years).
Objectives: The aim of this randomized controlled study is to investigate the effects of a person-centred progressive aerobic and resistance exercise program, led by a physiotherapist.
Methods: Seventy-four with persons with RA (24% men), mean age 70 years (SD 2.5), were recruited and randomized to an exercise interventions group or an active control group. The intervention consisted of a 20-week individual person-centered exercise program, performed three times a week with guidance from a physiotherapist. Both aerobic and resistance exercise was performed on a high intensity level. The control group followed a home exercise program twice a week. Muscle strength and endurance were assessed by the Chair Stands test, the Timed up and Go and a Bicycle endurance test. Maximal aerobic capacity (VO_2 max) was assessed with ergo spirometry. Activity limitations were assessed by SF36 Physical subscale and the Health Assessment Questionnaire (HAQ).
Results: All participants in the intervention group completed the intervention. The participants had a low disease activity with a mean Clinical Disease Activity Index of 5.4 (SD 3.9). Significant improvements were found for VO_2 max, the Chair Stands test, the Timed up and Go, the Bicycle endurance test on bicycle ($p<0{,}001$) and the SF36 physical (p=0.018) in the intervention group, when compared to the controls. No significant differences between groups were seen on HAQ.
Conclusions: Intensive progressive aerobic and resistance exercise is a feasible intervention for elderly persons with RA. Despite old age and RA the participants gained significant improvements in physical capacity.
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OP0259-HPR SUPERVISED WALKING IMPROVES AEROBIC CAPACITY, EXERCISE TOLERANCE, FATIGUE AND PERCEIVED IMPROVEMENT IN WOMEN WITH PRIMARY SJÖGREN'S SYNDROME: A RANDOMIZED CONTROLLED TRIAL

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Background: Fatigue is a very common symptom of primary Sjögren's syndrome (pSS), being reported by up to 70% of patients [1]. It is more pronounced when compared to healthy individuals [2] and patients often report that it is their greatest problem and the most difficult to cope with [3]. There is only one non-randomized controlled study on aerobic exercise in pSS with a small sample size suggesting improvement in fatigue, aerobic capacity, depression and physical function [4].
Objectives: To evaluate the safety and effectiveness of a supervised walking program in women with pSS.
Methods: Forty five sedentary women fulfilling the American European Consensus Criteria for pSS were randomized to a Training Group (TG, n=23) or Control Group (CG, n=22). Patients in the TG were submitted to supervised walking, 3 times a week, for 16 weeks. The patients of the CG were instructed to not perform any kind of regular physical exercise. Outcomes measured were aerobic capacity, fatigue, disease activity, depression, perception of pSS's symptoms and quality of life. An intent-to-treat analysis was performed.
Results: The mean change after 16 weeks of VO_{2max} ($ml.kg^{-1}.min^{-1}$), distance and FACIT-fatigue were higher in the TG than in the CG (p=0.016, p=0.043 and p=0.030, respectively) (Figure 1). Improved aerobic capacity was associated with improvements in fatigue scores and physical components of quality of life measured using SF-36. Furthermore, improved fatigue scores were associated with reduced depression and improvements in the physical and mental components of the quality of life measures. Overall, 95.4% of patients in the TG rated themselves as clinically improved versus 62% of the patients in the CG (p=0.049). There was no flare in disease activity and no serious adverse events with exercise.

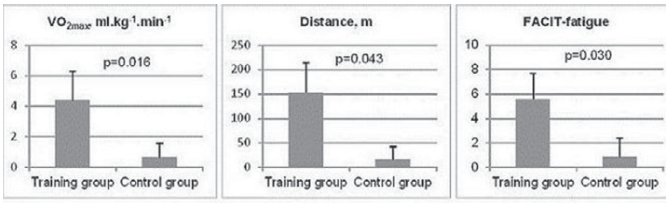

Figure 1. The exercise training group showed improved aerobic capacity, improved exercise tolerance and improved fatigue compared to controls.

Conclusions: This supervised walking program was demonstrated to be feasible and safe with improvements in the aerobic capacity, exercise tolerance, fatigue and patient perception of improvement in pSS patients.
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OP0260-HPR HIGHER SATISFACTION WITH ACTIVITY-RELATED SYMPTOMS AFTER 15-WEEK RESISTANCE EXERCISE IN WOMEN WITH FIBROMYALGIA

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Background: Physical exercise is troublesome for most patients with fibromyalgia (FM) due to activity-induced pain. A reason for activity-induced pain is a low pain threshold. In the present study we investigated if experience of physical activity changed after 15-week progressive person-centred resistance exercise. The control group participated in 15-week relaxation program.
Objectives: To investigate how experience of physical activity changed after 15-week resistance exercise in women with FM, and if experiences correlated with pain threshold.
Methods: 130 women (age 22–64 years, symptom duration 0–35 years) with FM were randomized to 15-week resistance exercise or to a parallel relaxation program. The participants completed Experience of physical activity scale (EPA) comprising five subscales (0–7), assessing how exercise was perceived in terms of Physical relaxation (PR), Well-being (WB), Activity beliefs (AB), Activity-related symptoms (ARS), and Activity Habits (AH) (1). A lower score indicates a higher satisfaction. Pain threshold was investigated with algometer. Within-group and between-group analyses were conducted by non-parametric statistics. Correlations between algometry and ratings on EPA were investigated by Spearman correlation coefficient.
Results:
The resistance exercise group scored significantly higher satisfaction at posttest than before the intervention in their ratings on how they experienced exercise in terms of PR, WB, ARS and AH ($p<0.05$), Table 1.
Between-group analyses showed that the resistance exercise group scored significantly higher satisfaction in ARS subscale ($p<0.006$) after the intervention when compared to the relaxation group.
Significant correlations were found between algometry and PR (rs -0.32, p=0.017) as well as ARS (-0.33, p=0.015) at post-test in the resistance exercise group.

Table 1. Baseline and post-test ratings of EPA in the two groups

EPA subscales	Resistance exercise		Relaxation	
	Baseline (n=67)	15 weeks (n=56)	Baseline (n=63)	15 weeks (n=49)
PR	3.9±1.1	3.6±1.0*	4.1±1.3	3.9±1.2
WB	2.9±1.5	2.5±1.2*	2.7±1.3	2.7±1.4
AB	2.0±1.0	1.9±1.2	2.1±1.3	2.0±1.2
ARS	4.7±1.2	4.1±1.1*	4.9±1.1	4.8±1.1
AH	4.1±1.3	3.1±1.5*	3.7±1.3	3.6±1.4

Within-group changes ($p<0.05$) are marked with *.

Conclusions: Women with FM experienced a higher satisfaction with activity-related symptoms after having participated in a person-centered resistance exercise program, which is an important knowledge for health care professionals when motivating patients for exercise. Correlations between algometry and ratings on PR and ARS indicate that activity-related symptoms are partly associated with the pain threshold.

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OP0261-HPR PHYSICAL ACTIVITY LEVEL MEASURED BY ACCELEROMETER IS COMPARABLE BETWEEN JUVENILE IDIOPATHIC ARTHRITIS PATIENTS AND CONTROLS, BUT PATIENTS SPEND LESS TIME IN VIGOROUS PHYSICAL ACTIVITY

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Background: Previous studies indicate that juvenile idiopathic arthritis (JIA) patients have lower levels of physical activity (PA), spend more time in sedentary PA and less time in moderate and vigorous PA than controls. Associations between PA and disease variables in JIA patients are inconclusive. To our knowledge, this study is the first to compare objectively measured PA in JIA patients treated in the era of biologics with healthy controls whose data collection were conducted at the same time as the patients.

Objectives: To compare objectively measured levels and intensity of PA in JIA patients who have had access to biological treatment from disease onset with age- and sex-matched controls from the general population. Furthermore, to compare PA between JIA patients with persistent oligo- and poly-articular disease, and to examine associations between PA and disease variables in patients.

Methods: Patients, 10–16 years, with persistent oligo- or poly-articular disease (extended oligoarthritis and polyarticular RF +/-), were recruited consecutively at Oslo University Hospital in 2015. Age- and sex-matched controls were selected randomly from the Norwegian Population Registry. PA was measured with accelerometers during 7 consecutive days. The general level of PA was determined by counts per minute (cpm) and steps daily. Cut-off points for different PA categories of intensity were used as described by Evenson[1]. Present pain, and pain and fatigue during the previous week were assessed in all participants. Disease activity, functional ability, diasease duration, use of medication and lower extremity joints with active arthritis were registered in patients. Differences between study groups were analyzed with paired or unpaired analyses as appropriate.

Results: Acceptable data from the accelerometers were retrieved in 53 matched pairs, of which 45 (85%) were female. Mean age was 13.3±2.2 years in patients and 13.2±2.6 years in controls, p=0.55. 26 (49%) patients had polyarticular disease. No significant differences were found in cpm or steps daily, or in time spent in sedentary PA, light PA or moderate PA in patients vs controls (Table 1). However, patients spent significantly less time in vigorous PA than controls. No significant differences in PA variables were found between JIA subgroups. The use of biologic medication correlated weakly with cpm, r=0.30, p=0.03, while no other disease variables correlated significantly with cpm or with vigorous PA (all $r<0.30$, p=NS).

Conclusions: General level of physical activity and time spent in sedentary PA, light PA and moderate PA in JIA patients treated in the biological era are comparable with controls. However, patients spend less time in vigorous PA.

Table 1. Physical activity

	JIA (n=53)	Controls (n=53)	p-value
Counts per minute	457±194	483±135	0.45
Steps daily	9219±2679	9772±2575	0.27
Sedentary daily (min)	575±69	571±58	0.66
Light PA daily (min)	189±48	183±42	0.39
Moderate PA daily (min)	33±11	37±12	0.08
Vigorous PA daily (min)	21±12	26±14	0.04
Achieves 60 min MVPA daily n (%)	17 (32)	26 (49)	0.09

Numbers are mean ± SD or N (%).

Even though these results are promising regarding PA in JIA patients, the results indicate that patients still need to be encouraged to be physically active, with emphasis on increasing vigorous PA.

References:

[1] Evenson et al 2008.

Disclosure of Interest: None declared

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FRIDAY, 16 JUNE 2017

Gout: advances in diagnosis and management

OP0262 TRENDS AND COSTS FOR GOUT HOSPITALIZATION IN SWEDEN

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Background: Gout is the most common arthritic disease in the world with increasing incidence and prevalence. There are differences in gout prevalence and course of disease due to cultural, ethnical and genetic factors stressing the need for data from different parts of the world. An increase in hospitalization for gout has been shown for the last two decades in North America.

Objectives: We evaluated the trend for hospitalization of gout in western Sweden 2000 – 2012 and the health care costs for this 2009 – 2012.

Methods: Hospitalization trends for gout were studied using data from the health care consumption register in the Western Swedish Health Care Region (WSHCR) from 2000–01–01 through 2012–12–31. This area is considered to be representative for the country as a whole. Patients aged 18 years and older who were hospitalized during the study period with a principal ICD-10 diagnosis of gout (M10) at discharge were included. We calculated annual population rates for hospitalization for gout. Inflation-adjusted health care costs for the gout hospitalizations were calculated using the Cost-Per-Patient register (CPP). Dispensation of urate lowering therapy (ULT), allopurinol (M04AA01) and probenecid (M04AB01), within 6 months prior to hospitalization was identified using The Swedish Prescribed Drug Register.

Results: There were 1873 hospitalizations for gout (mean age 75.0–77.6 years, 61–74% men) between 2000 and 2012. Demographic characteristics were similar

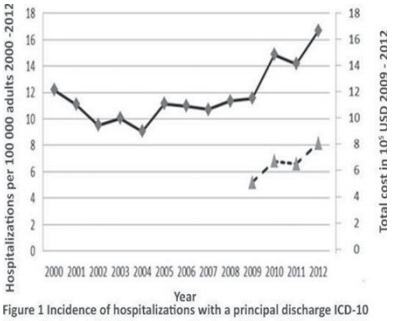

Figure 1 Incidence of hospitalizations with a principal discharge ICD-10 diagnosis of gout (M10) in western Sweden 2000 to 2012 per 100 000 adults (≥18 year) (full line,left side) and total cost for the hospitalizations in 105 USD 2009 to 2012 (dashed line, right side)

Abstract OP0262 – Table 1

	2000	2002	2004	2006	2008	2009	2010	2011	2012
Discharges, no	142	112	108	133	140	144	187	180	213
Incidence per 100 000 adults	12.2	9.5	9. 1	11.0	11.3	11.5	14.9	14.2	16.7
Men, incidence per 100 000 adults	16.1	12.3	12.9	14.4	15.7	16.0	22.0	21.1	24.3
Women, incidence per 100 000 adults	8.4	6.8	5.3	7.7	7.0	7.1	7.9	7.3	9.1
Duration, days, median (range)	3 (1–71)	3 (1–44)	5 (1–75)	5 (1–65)	5 (1–40)	5 (1–39)	5 (1–34)	5 (1–52)	5 (1–41)
Age, years, mean, SD	76.2 (12.1)	74.3 (14.9)	76.3 (11.7)	77.2 (10.2)	77.4 (11.4)	76.7 (11.6)	77.6 (12.7)	75.6 (14.1)	75.0 (13.8)
18–44	3	6	1	0	5	4	8	8	4
45–64	23	16	17	19	12	11	19	28	41
65–84	83	63	67	80	85	89	100	92	108
≥85	33	27	23	34	38	40	60	52	60
ULT, (%), 6 months before hospitalization				28 (21)	38 (27)	27 (19)	38 (20)	47 (26)	45 (21)
Total cost*, 10^5 USD						5.21	6.8	6.6	8.15