subclinical synovitis and tenosynovitis (the latter is recently identified as a strong predictor for RA-development).

Methods: 315 patients with recent-onset (<1 year) arthralgia of small joints and a clinical suspicion for progression to RA were consecutively included in our CSA-cohort. At baseline the squeeze test (compression across the knuckles of MCP- and MTP-joints with the force of a firm handshake) and unilateral contrast-enhanced 1.5T MRI of MCP(2-5)- and MTP(1-5)-joints was performed and scored according to RAMRIS. MRI-scores were dichotomized with data from age-matched symptom-free controls as reference. Follow-up ended when patients developed clinically apparent inflammatory arthritis (IA), or else after 2 years. Associations of the squeeze test and MRI-data were studied with generalized estimating equations, associations with IA-development with cox regression.

Results: 51% of CSA-patients had a positive squeeze test in MCP- or MTP-joints. In univariable analyses a positive test was associated with MRI-detected subclinical synovitis (OR 2.10 (95%CI 1.30-3.40)) and tenosynovitis (OR 1.68 (1.05-2.68)). In multivariable analyses including both inflammatory features only synovitis remained significant (OR 1.90 (1.16-3.13)). Thus, a positive squeeze test is a measure of subclinical synovitis, with a sensitivity of 44% (95%CI 33-55) and specificity of 72% (68-76).

A positive squeeze test in CSA was not associated with IA-development in cox regression adjusted for age, gender, CRP and ACPA-status (HR 1.57 (0.77-3.19)). This was consistent with the finding that subclinical synovitis was not associated with IA-development in multivariable analysis adjusted for age, gender, CRP, ACPA-status and tenosynovitis (HR 1.40 (0.59-3.31)), whilst tenosynovitis was associated (HR 4.94 (2.03-12.06)).

Conclusion: The squeeze test is a simple test that, when positive in CSA, doubles the probability of presence of subclinical synovitis.

Disclosure of Interests: None declared

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Rehabilitation

AB1259

THE IMPACT OF DIFFERENT EXERCISE MODES AND INTENSITIES ON PAIN AND ENJOYMENT IN PEOPLE WITH EARLY RHEUMATOID ARTHRITIS

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Background: The benefits of exercise for people with rheumatoid arthritis (RA) are now widely recognised [1]. However, exercise participation among people with RA remains low. A key reason for that could be the commonly held belief that exercise, may exacerbate disease activity while acutely increasing levels of joint pain. The association of acute exercise with pain has not been established in RA and especially in people with a recent diagnosis.

Objectives: This study investigated the impact of acute aerobic-and resistance-type exercise on perceptions of pain in people with early RA.

Methods: Following local NHS ethical approval, ten people with RA volunteered for the study (Age=46±13years; BMI=29.4±8.6kg/m², RA diagnosis=13±9months, mean±SD). Inclusion criteria were RA diagnosis (2010 EULAR criteria) within the last two years and not engaging in regular physical activity (i.e. no participation in structured exercise >2 times per week). They were assessed for maximal aerobic capacity and maximal strength at chest press, leg press and wide-grip lateral pulldown to determine intensities for exercise conditions. Thereafter they completed one no-exercise control trial (CON) and four exercise trials: 30 minutes of sub-maximal cycling at a workload equivalent to 65% VO₂max (CYCLE); high intensity interval exercise consisting of 10x1 minutes cycling intervals at a workload equivalent to 95% VO₂max (HIIE); resistance exercise consisting of three sets of 12-15 repetitions at 70%1RM (RES-70); resistance exercise consisting of three sets of repetitions to failure at 30%1RM (RES-30). All trials were randomised and separated by a washout period of 3-7 days. Participants completed a visual analogue scale (VAS) for pain at baseline then 2-and 24-hours post exercise; they also completed a questionnaire related to exercise enjoyment 2-and 24-hours post exercise.

Results: Currently four RA participants have completed the study and all participants completed the prescribed exercises in full. Perceived pain was low at 2 hours (0.7±0.4) and 24 hours post-exercise (1.2±0.8) for all exercise conditions (see table 1). Importantly, a difference in heart rate between the aerobic conditions (heart rate during HIIE was 16% higher than during CYCLE), and a difference in workload between the resistance conditions (RES-30 was 117% higher than RES-70) did not result in a difference in pain perception. One participant reported increased pain at 24 hours (7cm vs 1cm at 2 hours) post RES-30, but

claimed that this was purely muscular and not joint pain. Interestingly, all participants enjoyed the exercises with comparable high results across the exercise conditions (see table 1).

Table 1 Pain and Enjoyment Descriptives

Trial	Baseline VAS pain (cm)	2-hour VAS pain (cm)	24-hour VAS pain (cm)	2-hour exercise enjoyment (1-119)	24-hour exercise enjoyment (1-119)
CON	0.1±0.3	0.1±0.3	0.3±0.3	63.8±13.0	63.8±13.0
CYCLE	0.1±0.3	0.5±0.4	0.9±1.2	86.8±11.0	88.0±8.8
HIIE	0.1±0.3	1.3±1.9	1.1±1.7	85.0±27.8	88.3±19.1
RES-70	0.1±0.3	0.4±0.4	0.5±0.4	91.3±13.0	88.3±6.6
RES-30	0.1±0.3	0.4±0.5	2.4±3.1	88.5±17.1	85.0±13.1

(mean±SD)

Conclusion: This study identified minimal exercise effect on perceived pain at 2 hours-and 24 hours-post exercise among participants with early RA. This suggests that exercise did not exacerbate pain and importantly, high intensities and high loads did not cause additional pain. Nevertheless, further larger studies are required to examine the role of acute exercise on disease activity, e.g. inflammation, and the association with perceived pain in people with early RA.

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AB1260

ARE THERMAL CURE AND REHABILITATION EFFECTIVE FOR RELIEVING LOW BACK PAIN? RESULTS OF A RANDOMIZED CONTROLLED TRIAL

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Background: Low back pain (LBP) is a major health problem around the world. It affects almost 80% of the population. Patient with LBP suffer from a heavy pain which is associated to long time incapacity. Different methods of treatment are applied in the objective of reducing pain and thus improving functional capacities of patients.

Objectives: Our study aimed to compare the benefits, with regard to LBP symptoms, of a thermal cure and a rehabilitation treatment.

Methods: It is a randomized therapeutic trial including patients with LBP, randomly divided into two groups: thermal cure and physical rehabilitation. Both of them were conducted in the same spa center of Djbal El Ouest. Outcome measures were visual analogic scale of pain (VAS), Oswestry Disability Index (ODI), Short Form-36 (SF36) questionnaire and schober test. Evaluation was carried out at day 18, 3 months, 6 months and 12 months following treatment.

Results: Seventy-four patients were included, divided into 2 groups: thermal group (n=37) and dry rehabilitation group (n=37). Seventy patients performed the full treatment.

In the group of patients treated with thermal cure treatment (n=37), a significant improvement of VAS of pain, ODI and SF 36 was noted in day 18, 3 months, 6 months and 12 months (Table 1).

Table 1. Tendencies of the clinical indexes after treatment by thermal cure

	D0 (n=37)	D18 (n=37)	3months (n=35)	6months (n=32)	12months (n=36)
VAS ± SD	68,2 ± 16,2	35,8 ± 26,5	55 ± 19	60,2 ± 18,1	56,1 ± 19
P		0,000	0,000	0,008	0,002
ODI ± SD	38,3 ± 14,1	29 ± 17,5	32 ± 14,1	30,2 ± 14,1	28,5 ± 13,6
P		0,03	0,03	0,07	0,000
SF 36 physical mean score ± SD	34,4 ± 14,3	64,2 ± 18	45,9 ± 19	50 ± 21,8	47,9 ± 18,5
P		0,000	0,000	0,000	0,001
SF36 mental mean score ± SD	38,9 ± 16,3	71 ± 21,6	55,1 ± 20,4	56,4 ± 19,9	52,2 ± 20,8
P		0,000	0,000	0,000	0,000
Schober test ± SD	3,1 ± 1,3	3,5 ± 1,3	2,8 ± 1	3 ± 1,1	3,2 ± 1,5
P		0,037	0,322	0,812	0,657

VAS: visual analog scale; ODI: Oswestry Disability Index; SF36: short form 36