Letters to the Editors

Regular physical activity is associated with lower levels of ESSPRI and other favourable patient-reported outcomes in patients with primary Sjögren's syndrome

Sirs,

We recently reported data on one hundred consecutive visits of patients with primary Sjögren´s syndrome (pSS) in a rheumatological outpatient clinic, and found that the EULAR Sjögren´s syndrome patient-reported index (ESSPRI) (1) correlated significantly with other patient-reported outcomes (PRO), serum beta-2 microglobulin and ESR (2). Although it is known that the joint symptoms in pSS seldom lead to permanent damage, we found that the mean Health Assessment Questionnaire (HAQ) in patients with pSS was elevated (0.33±0.51), reflecting a slightly diminished functional capacity in some patients (2). Moreover, the ESSPRI also correlated with the HAQ. Other investigators have likewise reported lowered functional status in patients with pSS (3).

Fatigue, joint and muscle pain, arthritis, comorbidities, and eligibility for disability compensation have also been reported to predict diminished health-related quality of life in pSS patients (4), and some studies have found that targeting physical activity and cognitions of it would reduce fatigue in patients with pSS (5, 6). Therefore, our present aim was to study the prevalence of regular physical activity in patients with pSS, and its correlation with ESSPRI, HAQ and other PROs as well as immunological parameters.

The data on one hundred consecutive outpatient visits of patients with pSS were reviewed from the patient charts (2). Patients who had answered the ESSPRI questionnaire, and fulfilled at least four of the revised American-European consensus group criteria for pSS (7), were included. Data on the ESSPRI (0-10 cm), patient's global health assessment (visual analogue scale, 0–10 cm) (PGH-VAS), pain-VAS (0–10 cm) and HAQ (range 0–3) were gathered from the patient charts. The level of physical activity of the pSS patients was assessed. The frequency of physical exercise (≥30 minutes with at least some shortening of breath or sweating) had been asked for by a questionnaire. Physical activity was graded on four levels: ≥3 times weekly, 1–2 times weekly, 1-2 times monthly and no exercise. Forty-two of the patients (38 female, 4 male) had answered the questionnaire on their physical activity. The mean age of these 42 patients was 54±15 years (range 23–82 years), and the mean duration of the disease 10±9 years (range 0–30 years).

Twelve (28%) of the 42 pSS patients were physically very active with at least 3 exercise times per week, 21 (50%) of the patients exercised 1–2 times weekly, and two patients (5%) 1–2 times monthly. Seven (17%) of the patients did not or could not exercise. The pSS patients with highest levels of exercise (≥3 times weekly) had significantly lower ESSPRI, pain-VAS, PGH-VAS and HAQ levels than the others (Table I). Age, disease duration, BMI, ESR, serum immunoglobulin levels or serum beta-2 microglobulin levels did not differ significantly between pSS patients with high frequency of regular physical activity, and the others (Table I).

Table I. Clinical data and patient reported outcomes in 42 patients with primary Sjögren's syndrome grouped by the frequency of physical exercise.

Variable	pSS patients with physical exercise		*p*-value
	≥3 times weekly n=12	<3 times weekly n=30	
Age, years	51 ± 15	55 ± 15	0.448
Disease duration, years	7 ± 8	11 ± 9	0.176
ESR, mm/h	11 ± 6	16 ± 16	0.206
IgG, g/L	14.0 ± 5.0, n=11	13.9 ± 4.8, n=27	0.948
IgA, g/L	2.64 ± 1.11, n=11	2.17 ± 1.19, n=27	0.336
IgM, g/L	1.34 ± 0.87, n=11	1.26 ± 0.88, n=26	0.795
Serum β2m, mg/L	2.18 ± 0.50, n=11	2.39 ± 0.93, n=28	0.499
ESSPRI, cm	2.62 ± 1.73	4.19 ± 2.19	0.032
Pain-VAS, cm	0.49 ± 0.71	2.79 ± 2.57	<0.0001
PGH-VAS, cm	1.61 ± 1.61	3.25 ± 2.45	0.016
HAQ	0.10 ± 0.20	0.46 ± 0.59	0.005
BMI (kg/m^2)	25.5 ± 4.01, n=11	25.4 ± 4.21, n=29	0.957

Statistical analysis: Student's *t*-test. The values are expressed as means ± standard deviation.
pSS: primary Sjögren's syndrome; β2m: beta-2 microglobulin; VAS: visual analogue scale; ESSPRI: EULAR Sjögren's syndrome patient-reported index; PGH: patient's global health assessment; HAQ: Health Assessment Questionnaire; BMI: body mass index.

Our results show that regular physical activity in pSS patients is associated with lower pain-VAS, lower PHG-VAS, lower HAQ and lower ESSPRI, *i.e.* the composite index of fatigue, sicca symptoms and pain**.** Our current data thus support the view from previous studies (5, 6) that regular physical activity would be useful in amending the patient reported outcomes in pSS. Recent studies have reported that traditional risk factors for atherosclerosis are more common in patients with pSS than in controls (8, 9), and that increased intima-media thickness and decreased pulse wave velocity are frequently present in pSS patients (10, 11). In the future it would also be valuable to evaluate whether regular physical activity would have a favourable effect on these surrogate markers of subclinical atherosclerosis in pSS patients.

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