ASSOCIATION BETWEEN SEDENTARY LIFESTYLE AND OBESITY WITH SLEEP DISORDERS IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME

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BACKGROUND

Sjögren's syndrome (SS) is associated with increased rates of fatigue, diffuse pain and humor oscillation. Sleep disorders are likely to occur in these patients. Here we analyzed rates of daytime sleepiness in patients with primary SS (pSS) and how they correlate with disease activity, pain, fatigue and physical fitness indexes.

METHODS

In this cross-sectional analytical study, 123 patients with pSS were evaluated from November 2019 to June 2021. Demographic and anthropometric (body mass index, BMI) data were collected. Patients were assessed by visual analogue fatigue and pain scale, international physical activity questionnaire (IPAQ), erythrocyte sedimentation rate (ESR), the EULAR SS disease activity index (ESSDAI) and the EULAR SS patient reported index (ESSPRI). The Epworth sleepiness scale (ESS) was used to assess daytime sleepiness. Patients were retrospectively clustered according to presence (n = 44) or absence (n = 79) of sleep disorders for comparisons.

RESULTS

A total of 123 pSS patients were analyzed, 97.6% of which were female, 80.5% Caucasian, mean age of 51.6 (± 13.2) and disease duration of 5.54 (± 4.85) years. Anti-SSA/Ro antibodies were positive in 82.1% (n = 101/123), anti-SSB/La in 53.7% (n = 58/108) and focus score ≥ 1 in 91.5% (n = 97/106) of patients. Active smoking was present in 2.4% of patients. In the ESSDAI evaluation, 59.1% (mean 1.5 $\pm$ 1.3) of the patients had low disease activity and 40.9% (mean 10.7 $\pm$ 5.4), moderate or high disease activity. Mean ESSPRI was 5.96 (± 2.4). Thirty-five percent of patients were physically active and 35.8% had sleep disorders. Patients with and without sleep disorders were not different regarding age, disease duration or ESR. High sleepiness scores were associated with ESSDAI, ESSPRI, and visual analogue scales of both fatigue and pain (p = 0.001). In the regression analysis, there was a trend towards difference regarding the ESSDAI (p = 0.051) between groups with and without sleep disorders. Sedentary and obese patients were 1.8 times more likely to have sleep disorders compared to nonsedentary and nonobese patients.

CONCLUSION

Sedentary lifestyle and/or obesity were associated with presence of sleep disorders in our pSS patients. Human endogenous oscillators (biological clocks) are affected by environmental factors, classically the sunlight, but also food and physical activity. Subjects with unbalanced diet, at nonprefixed mealtimes, may present altered sleep phases. In addition, unhealthy habits may lead to obesity, which can affect hormone homeostasis and affect the circadian sleep cycle, besides predisposing to sleep ventilatory disorders. In contrast, regular physical activity releases pleasure hormones, reducing stress and anxiety, reestablishing hormonal homeostasis and improving sleep quality.

KEYWORDS

Primary Sjögren's syndrome, Sleep disorders, Sedentary lifestyle, Obesity.