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DOI: 10.1136/annrheumdis-2019-eular.6041

FRI0047 SPECIFICS OF THERAPY FOR RHEUMATOID ARTHRITIS PATIENTS UPON THYROID INVOLVEMENT IN THE AUTOIMMUNE DISEASE

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Background: Apart from joints, the inflammation often involves other organs and tissues including lesions of the thyroid gland at which the disturbance of the gland affects considerably the functioning of cells of the immune system, and the activity of rheumatoid arthritis. Production of autoantibodies to thyroid hormones is assumed to be one of possible mechanisms of thyroid dysfunction.

Objectives: Studying various types of thyroid lesion in rheumatoid arthritis, searching for links between clinical manifestations of rheumatoid arthritis and specifics of thyroid lesion, and the level of antibodies to thyroid hormones.

Methods: The study included patients diagnosed with rheumatoid arthritis verified by ACR/EULAR criteria of 2010, and without any exclusion criteria. Rheumatoid arthritis activity was assessed utilizing DAS 28 Calculator.

The presence of thyroid lesion was evaluated by means of clinical workup, ultrasound examination, and laboratory tests, including measuring the concentration of TTH, free T3, T4, as well as anti-TPO. Antibodies to T3 and T4 (anti-T3 and anti-T4) were measured by enzyme immunoassay, and the findings were shown in absorbance units. The cut-off values of positive and negative findings for anti-T3 (0.098 absorbance units) and anti-T4 (0.093 absorbance units) were calculated by ROC curve analysis utilizing sera from relatively healthy donors (n = 39). The results were shown as an arithmetic mean value ± standard error (M ± m).

Results: 72 patients with rheumatoid arthritis participated in the study. The mean activity of rheumatoid arthritis assessed by DAS 28 Calculator was 3.2 ± 1.4 points. Extra-articular presentations were detected in 20 patients, 5 of whom showed clinical manifestations of thyroid lesion. All five patients were marked by low TTH and a high activity of rheumatoid arthritis (4.8 ± 1.9 points of DAS28). In 73 patients antibodies to T3 were detected (0.128 ± 0.047 absorbance units). Apart from the thyroid gland, no clear association between these antibodies and lesions of other organs or systems were noted. A statistically significant tendency for an increase in X-ray stage linked to increased antibodies to T4 was noted ($p = 0.034$; ANOVA); an inverse relation was noted for antibodies to T3 ($p = 0.034$; ANOVA). The association with DAS 28 for antibodies to T4 ($r = -0.525$; $p = 0.031$) and for antibodies to T3 ($r = -0.391$ $p = 0.040$) was also inverse and statistically significant. Besides, another statistically significant correlation was revealed between the value of DAS 28 and TTH concentration ($r = -0.330$ $p = 0.046$).

Conclusion: The available findings demonstrate that a high activity of rheumatoid arthritis is associated with hypothyroidism development, despite the tendency for increased count of antibodies to T4 which is typical of rheumatoid arthritis. The possibility to modify the activity of rheumatoid arthritis by correcting thyroid dysfunction is very important both for developing a strategy of managing drug-resistant cases of rheumatoid arthritis, and for the management of this condition in general.

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Acknowledgement: The paper examines the effect of thyroid dysfunction on the treatment of patients with rheumatoid arthritis

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.2488

FRI0048

SARCOPENIA AND SARCOPENIC OBESITY ARE ASSOCIATED TO GLUCOCORTICOID USE AND CLINICAL AND SEROLOGICAL MARKERS IN RHEUMATOID ARTHRITIS

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Background: Sarcopenia play an important role in the quality of life, morbidity and mortality of the patients, especially in who suffer chronic disease. In rheumatoid arthritis (RA) sarcopenia risk is higher due to joint dysfunction, pharmacological therapy and chronic inflammation¹; these conditions may induce changes in body composition such as an increase in visceral fat associated to reduced muscle mass. Recently emerge the concept of sarcopenic obesity, however the association to clinic characteristics and pharmacotherapy in RA has not been established.

Objectives: We investigated the prevalence of sarcopenia and sarcopenic obesity, as well as the relationship with glucocorticoids (GCs) use and clinic characteristic of RA patients from southern Mexico.

Methods: We carried out a cross-sectional study in 223 RA patients (89% women, mean age 44 years), all diagnosed according to ACR/EULAR 2010 criteria. The body composition was examined using a bioimpedance method (body weight, muscle mass, body fat, etc.). Abdominal