FRI0045

CHANGES IN LEFT VENTRICULAR SYSTOLIC FUNCTION ARE PREDICTED BY DISEASE SEVERITY IN PATIENTS WITH RHEUMATOID ARTHRITIS WITHOUT PRIOR CARDIOVASCULAR DISEASE

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Background: Occult left ventricular (LV) systolic dysfunction (LVSD) is associated with worse cardiovascular outcomes in asymptomatic patients with arterial hypertension and/or diabetes mellitus. In these patients, LV systolic function may worsen or improve overtime. However, little is known about the changes in LV function during follow up of patients with rheumatoid arthritis (RA).

Objectives: This prospective study analyzed incidence and factors associated with changes in LV systolic function in patients with RA without known cardiovascular disease.

Methods: One-hundred-forty outpatients with RA without overt cardiac disease were recruited between March and December 2014. Patients underwent clinical and echocardiographic evaluation at baseline and after a median period [min-max] of 35 [23-47] months of follow up. Stress-corrected midwall fractional shortening (sc-MFS) was used as measure of LVSD and considered impaired if <86.5%. Disease activity was assessed with the clinical disease activity index (CDAI).

Results: Impaired sc-MFS at follow up (sc-MFS-FU) was detected in 60/140 (43%) patients who were compared with 80 patients with normal sc-MFS-FU. Baseline sc-MFS did not differ significantly between the two groups, which appeared to diverge significantly soon after 1-year of follow up (figure). Baseline anti-citrullinated protein antibodies (ACPA) positivity, high disease activity (CDAI>10) and duration of RA were independently associated with impaired sc-MFS-FU at multiple logistic regression analysis. Among these parameters, ACPA had the highest sensitivity (80%) whereas high disease activity had the highest specificity (89%) for sc-MFS-FU. A predictive score including all three predictors (ACPA status, CDAI>10 and duration of RA) detected impaired sc-MFS-FU with a sensitivity of 78% and specificity of 82% (AUC 0.80 [IC 0.72-0.88], $p < 0.0001$).

Conclusion: This study supports the hypothesis that changes overtime in LVSD in patients with RA are associated with ACPA, high disease activity and duration of disease.

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FRI0046

POLYPHARMACY: A RARELY-DISCUSSED PROBLEM IN RHEUMATOID ARTHRITIS. DATA FROM A LARGE REAL-LIFE STUDY

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Background: Polypharmacy is concomitant use of five or more drugs and is usually associated with various comorbidities and advanced age. The already demonstrated consequences of polypharmacy are increased side effects, drug interactions, increased hospitalizations, drug handling difficulties, reduced adherence, and even increased mortality. Rheumatoid arthritis (RA) is a chronic systemic disease with preferential involvement between the third and fifth decades. Owing to treatment of underlying disease and comorbidities, patients with RA frequently require combined use of several drugs. Despite the possible negative consequences of polypharmacy in RA, there is a shortage of studies in literature.

Objectives: Evaluate prevalence and factors associated with polypharmacy in patients with RA in a real-life setting.

Methods: This is a cross-sectional part of the Rheumatoid Arthritis in Real Life (REAL) study that analyzed RA patients in a real-life context from August to October 2015 in 11 public health services in Brazil. Statistical analysis involved obtaining frequencies of the variables of interest and multiple Poisson regression analyses.

Results: We evaluated 792 patients, of whom 89% were women, with median age of 56.6 years. 78.73% had a positive rheumatoid factor and 55.2% had an erosive disease. The median Disease Activity Score was 3.52, the median CDAI score was 9. Of the patients, 67.9% used 5 or more drugs as follows: mean of 2.8 and maximum of 5 drugs for RA, mean of 2.7 and maximum of 9 different types of medications for comorbidities, and mean of 5.5 and maximum of 11 drugs in total. The most commonly used drugs, besides specific drugs for underlying diseases, were vitamin D (63.8%), folic acid (61.1%), calcium (57%), and antihypertensive drugs (47%). In the multivariate analysis, the use of corticosteroids, methotrexate, and biological DMARDs and number of comorbidities (all with $P < 0.001$) were statistically significant. Age, schooling, rheumatoid factor positivity, and measures of activity by compound disease activity indexes were not associated with polypharmacy.

Conclusion: The prevalence of polypharmacy was high (67.9%) in this population with RA, much higher than that described for elderly populations and other chronic diseases. This data can serve as an alert for this important and rarely-discussed aspect of RA.

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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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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