

Prevalence and Correlates of Metabolic Syndrome in Patients with Rheumatoid Arthritis.

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Background/Purpose: Patients with Rheumatoid Arthritis (RA) have increased morbidity and mortality due to cardiovascular (CV) disease. The screening of CV risk factors, metabolic syndrome (MS) among them, is therefore mandatory. The purpose of this study is to determine and compare the frequency of MS in patients with RA and a control group, and to assess the factors associated with MS.

Methods: This is a cross-sectional study involving 1033 (409 RA and 624 age and gender matched controls) patients, that were being followed at nine different medical institutions from Argentina. MS was defined according to the Adult Treatment Panel III (ATPIII) and International Diabetes Federation (IDF). The relationship between demographic variables (age, gender), clinical data (disease duration, disease activity as per the DAS28, presence of RF and/or ACCP antibody, presence of extra-articular manifestations), pharmacological treatment and MS was examined by descriptive statistics (the chi-square test for categorical variables and the Mann-Whitney test for continuous variables). Variables with $p_{0.10}$ in these analyses were then examined by logistic regression.

Results: The frequency of MS in RA patients and the control group was 30% Vs 39%; $p_{0.002}$ when defined with the ATPIII, and 35% vs 40%; $p_{0.1}$ when defined with the IDF. When both definitions of MS were applied, patients with RA and MS tended to be older (60.6_10.9 age vs 54.3_13.7 age; $p_{0.001}$), to display higher values of erythrocyte sedimentation rate (22 mm/hr vs 18 mm/hr; $p_{0.005}$), to be positive for RF and/or ACCP antibody (92% vs 86%; $p_{0.057}$), to have extra-articular manifestations (35% vs 27%; $p_{0.06}$) and to use hydroxychloroquine (11% vs 18%; $p_{0.03}$). Other variables, such as gender, disease duration and activity and the use of methotrexate and biologic therapies did not differ between patients with and without MS. Variables independently associated with MS in RA patients were age (OR_1.03, 95%CI 1.01–1.06; $p_{0.01}$ for ATPIII- OR_1.03, 95%CI 1.01–1.05; $p_{0.001}$ for IDF), presence of RF and/or ACCP antibody (OR_2.91, 95%CI 1.11–7.61; $p_{0.02}$ for ATP III- OR_2.37, 95%CI 1.09–5.16; $p_{0.02}$ for IDF) and the use of hydroxychloroquine (OR_0.48, 95%CI 0.23–0.97; $p_{0.04}$).

Conclusion: In this study, we were not able to demonstrate a higher frequency of MS in RA patients. However, among RA those older patients who also display features of a more severe disease such as a positive serology and extra-articular manifestations seem to be at a higher risk

for the development of MS; while those on hydroxichloroquine seem to be at lower risk, probably reflecting the use of this drug in cases with a less severe disease.