BIOMARKERS OF CLINICAL RELAPSE AND RADIOLOGICAL PROGRESSION IN PATIENTS WITH RHEUMATOID ARTHRITIS IN REMISSION. OBSERVATIONAL STUDY OF 5 YEARS OF FOLLOW-UP
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Background: Patients with Rheumatoid Arthritis (RA) in remission will present flares during the evolution of the disease. Definitive biomarkers have not been identified to predict flares and radiographic progression (RP) in this kind of patients

Objectives: To search biomarkers of clinical relapse and RP in patients with RA in clinical remission

Methods: RA patients in clinical remission (DAS28-ESR<2.6 for>6 months) were selected. Clinical, epidemiological and serological data were analyzed. MRI of dominant hand, ultrasound assessment of knees and hands and serum levels of inflammation and angiogenesis biomarkers were evaluated at 0 and 48 weeks. Synovial biopsy was performed in patients with subclinical synovitis. Patients were follow-up for 5 years. Radiological data were collected. Clinical relapse was defined as the loss of remission status involving a therapeutic intervention. RP was defined as the change in the Sharp van der Heijde (SvH) index at 5 >0.47 [SDD (minimum detectable change)].

Results: 60 patients in DAS28 remission. 12 also met remission criteria for SDAI (33.3%), CDAI (31.6%) and ACR (35%), studying subclinical synovitis (UDAS:SH>2+PD)1. After 5 years of follow-up, 44 (73%), 11 (18%), and 10 (17%) patients remained in remission according to DAS28, SDAI, DAI and ACR criteria, respectively. 29 patients (48%) had flares at any time during the 5 years. In the multivariate analysis, the variables that were related to clinical relapse were the BMI (OR 1.6 CI 95% 1.1-2.3), bone edema at baseline (OR 1.2 CI 95% 1.0-1.5), PD signal at 48w (OR 9.2 CI 95% 1.2-66.7) and the change in levels of CXCL16 (OR 1.04 CI 95% 0.9-1.0) and ESR (OR 3.6 CI 95% 1.1-12.2) between the first and latest evaluation (Rate). In the subgroup of 23 patients undergoing synovial biopsy, the number of mast cells was higher in those patients (n=10) who flared (p=0.02). 20 patients (33%) changed DMARDs or biological therapy. In the logistic regression analysis, BMI (OR 1.3 CI 95% 1.1-1.6), biological therapy (OR 17.8 CI 95% 2.167.1), progression of erosions measured by MRI (OR 1.1 CI 95% 1.1-1.72) were the main factors that predicted the change in baseline therapy after 5 years of follow-up. Finally, only 6 patients (10%) had RP according to the SvH index and 7 (12%) had erosion progression. This small number of “progressors” did not allow more exhaustive analysis of factors predicting RP. However, the number of macrophages and T cells at sinovial tissue (ST) was much higher in patients with RP. Likewise, the first-year rate of bone edema was significantly higher in patients suffering structural progression (p=0.04).

Conclusion: 27% of RA patients lost clinical remission (DAS28) after 5 years of follow-up. BMI, baseline bone edema, PD signal at 12m and first-year rate of CXCL16 and VSG levels were predictors of joint flares. Baseline BMI, use of biological therapy, MRI erosions and calprotectin levels predicted the change of baseline therapy for RA. Only 10% of patients had RP along the study. Sinovial mast cells were associated with disease flares. Macrophages and T cells in ST were higher in patients with RP in an exploratory analysis.

REFERENCE

CHARACTERISTICS OF MULTIRESISTANT PATIENTS TO BIOLOGICAL TREATMENTS IN RHEUMATOID ARTHRITIS, AND ASSOCIATED FACTORS: AN OBSERVATIONAL AND RETROSPECTIVE STUDY IN 385 PATIENTS
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Background: Despite a wide range of biological treatments (DMARDs) in the management of rheumatoid arthritis (RA), some patients fail in different lines of treatments. Currently, there is no consensual definition of multiresistance to bDMARDs in RA.

Objectives: The aim of our study was to describe the characteristics of « multiresistant » patients and to establish associated factors with multiresistance to bDMARDs in RA.

Methods: In this observational and retrospective study, 48% met criteria for subclinical synovitis (UDAS: SH>2+PD). After 5 years of follow-up, 44 (73%), 11 (18%), and 10 (17%) patients remained in remission according to DAS28, SDAI, DAI and ACR criteria, respectively. 29 patients (48%) had flares at any time during the 5 years. In the multivariate analysis, the variables that were related to clinical relapse were the BMI (OR 1.6 CI 95% 1.1-2.3), bone edema at baseline (OR 1.2 CI 95% 1.0-1.5), PD signal at 48w (OR 9.2 CI 95% 1.2-66.7) and the change in levels of CXCL16 (OR 1.04 CI 95% 0.9-1.0) and ESR (OR 3.6 CI 95% 1.1-12.2) between the first and latest evaluation (Rate). In the subgroup of 23 patients undergoing synovial biopsy, the number of mast cells was higher in those patients (n=10) who flared (p=0.02). 20 patients (33%) changed DMARDs or biological therapy. In the logistic regression analysis, BMI (OR 1.3 CI 95% 1.1-1.6), biological therapy (OR 17.8 CI 95% 2.167.1), progression of erosions measured by MRI (OR 1.1 CI 95% 1.1-1.72) were the main factors that predicted the change in baseline therapy after 5 years of follow-up. Finally, only 6 patients (10%) had RP according to the SvH index and 7 (12%) had erosion progression. This small number of “progressors” did not allow more exhaustive analysis of factors predicting RP. However, the number of macrophages and T cells at sinovial tissue (ST) was much higher in patients with RP. Likewise, the first-year rate of bone edema was significantly higher in patients suffering structural progression (p=0.04).

Conclusion: 27% of RA patients lost clinical remission (DAS28) after 5 years of follow-up. BMI, baseline bone edema, PD signal at 12m and first-year rate of CXCL16 and VSG levels were predictors of joint flares. Baseline BMI, use of biological therapy, MRI erosions and calprotectin levels predicted the change of baseline therapy for RA. Only 10% of patients had RP along the study. Sinovial mast cells were associated with disease flares. Macrophages and T cells in ST were higher in patients with RP in an exploratory analysis.

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Background: Smoking is a major risk factor for development of both cardiovascular disease (CVD) and rheumatoid arthritis (RA) and causes an attenuated response to antirheumatic treatment. Smoking is a major risk factor for development of both cardiovascular disease (CVD) and rheumatoid arthritis (RA) and causes an attenuated response to antirheumatic treatment. Smoking is a major risk factor for development of both cardiovascular disease (CVD) and rheumatoid arthritis (RA) and causes an attenuated response to antirheumatic treatment.

Objectives: The aim of this study was to compare disease activity and CVD risk factors across smoking status in RA patients. Further to evaluate the impact of smoking cessation on risk of future CVD events in these patients.

Methods: RA disease characteristics, CVD risk factors and relevant medication were recorded in patients from 10 countries (Norway, UK, Netherlands, USA, Sweden, Greece, South Africa, Spain, Canada and Mexico). Information on CVD events were collected after a median follow-up of 3.54 years (inter-quartile range 2.51–6.06). Adjusted analysis of variance, logistic regression and COX proportional hazards analyses with time to event as response variable were applied to compare RA disease activity (measured by DAS28), CVD risk factors and CVD event rates across current, former and never smokers.

Results: Among the 3311 included RA patients (1012 former, 887 current and 1412 never smokers), 235 experienced a CVD event(s) during follow-up. At enrollment into the study current smokers were more likely to have moderate/high disease activity compared to former and never smokers (p<0.001 for both) (Figure 1). There was a gradient of worsening CVD risk factor profiles (lipoproteins and blood pressure) from never smokers, via former smokers, to current smokers. Furthermore, after 3.54 years of follow up former and never smokers had significantly lower CVD event rates compared to current smokers (hazard ratio (95% confidence interval): 0.70 (0.51, 0.95), p=0.02 and 0.48 (0.34, 0.69), p<0.001, respectively) (Figure 2). The CVD event rates for former and never smokers were comparable.

Conclusion: We show for the first time that smoking cessation in RA patients was associated with lower disease activity, improved lipid profiles and was a predictor of reduced rates of CVD events.

Disclosure of Interests: None declared