ANTI-DFS70 AUTOANTIBODIES INDUCED BY ANTI-TNF THERAPY IN RHEUMATOID ARTHRITIS AND SPONDYLOARTHRITIS PATIENTS

Teresa Carbone1,2, Carmela Esposito3, Ornella Mercuro2, Antonio Carriero1, Valentina Picerno1, Maria Carmela Padula1, Angela Padula1, Vitto Pafundi2, Salvatore D’Angelo1, Carmela Esposito3, Ornella Mercuro2, Antonio Carriero1, Valentina Picerno1, Maria Carmela Padula1, Angela Padula1, Vitto Pafundi2, Salvatore D’Angelo1

Background: anti-DFS70 antibodies (anti-DFS70ab) were recently described as biomarkers clinically useful to discriminate Systemic Autoimmune Rheumatic Diseases (SARD) from non-SARD patients, especially if no concomitant SARD-specific autoantibodies were found. Several unanswered questions concerning the biological significance of this autoantibodies still remain.

Objectives: to evaluate the prevalence of anti-DFS70ab in Rheumatoid Arthritis (RA) and Spondyloarthritis (SpA) patients and the influence of anti-TNF therapy on their development. Methods: sera from adult RA (n = 100) and SpA (n = 105) patients, included psoriatic arthritis, fulfilling ACR/EULAR 2010 and ASAS 2011 criteria, respectively, were studied for anti-DFS70ab as measured by IIF, then confirmed by immunoblotting. Medical history, demographic and clinical data were collected at enrolment.

Results: the prevalence of anti-DFS70ab was 4.00% (4/100) in the RA and 4.76% (5/105) in SpA cohort. All anti-DFS70ab in RA patients were monospecific, while only 1 sample in SpA showed concomitant anti-centromere positivity. The findings for the anti-DFS70ab positivity revealed no statistical differences between the groups (p > 0.05). In RA cohort, there were no differences between anti-DFS70ab positive and negative patients regarding the F/M ratio (F/M, 3/1 vs 84/12, p > 0.05), mean age (50.2 ± 12.4 vs 55.6 ± 11.7 yrs, p > 0.05) and disease duration (18.2 ± 15.2 vs 14.0 ± 9.9 yrs, p > 0.05). In SpA group, no significant differences were found between patients with and without anti-DFS70ab in F/M ratio (3/2 vs 43/57, p > 0.05) and regarding disease duration (18.8 ± 7.7 vs 19.0 ± 20.0 yrs, p > 0.05) while the mean age of anti-DFS70ab patients was significantly higher than the negatives (66.8 ± 10.4 vs 53.5 ± 15.0 yrs, p < 0.05). Serological and clinical data of anti-DFS70ab positive patients were summarized in Table 1. In our cohort, all anti-DFS70ab were negative before initiating biologics.

Conclusion: based on our findings, detection of anti-DFS70ab reactivity cannot completely exclude the suspicion of SARD, especially for RA and SpA. In addition, the rate of anti-DFS70ab positivity resulted higher in RA and SpA patients than previously observed in a cohort of samples from outpatients clinics (2.1%) [1]. Immunogenicity of anti-TNF therapy has been also addressed in this study, showing that all detected anti-DFS70ab were induced by anti-TNF therapy. Further studies are needed to support these preliminary data.

REFERENCES