Letters to the Editors

The active immunological profile in patients with primary Sjögren’s syndrome is restricted to typically encountered autoantibodies

Sirs,

Primary Sjögren’s syndrome (pSS) patients can be distinguished by combination of sicca symptoms such as xerostomia, xerophthalmia, salivary gland (SG) biopsy showing focal infiltration by lymphocytes and the detection of autoantibodies (Ab) directed against sicca syndrome autoantigens (SSA/Ro and SSB/La) (1). However, pSS patients are also characterised by a broad spectrum of systemic manifestations and multiple Ab, of which anti-nuclear Ab (ANA ≥1:320) and rheumatoid factors (RF) are the most frequently detected (2, 3).

Considering that a serum-based approach combining different Ab would be meaningful for characterisation of pSS patient with an active immunological profile, we first decided to conduct an analysis to evaluate the performance of conventional Ab including ANA on HEp-2 cells, anti-SSA/Ro Ab, and IgM RF in a well-characterised population of pSS patients (n=113; 92.9% were female) who had benefited from a comprehensive clinical, histological and radiological assessment (4).

The analysis for typical Ab showed ANA (71.7% at 1:320), anti-SSA/Ro Ab (61.1%), anti-SSB/La Ab (31.0%) and IgM RF (44.2%). In addition, and since we observed interrelationships between Ab that are suspected to have prognostic value in pSS (5-8), we further distinguished two groups of patients based on the triple association ANA+SSA+RF to characterise patients with an active immunological profile (Fig. 1A). Patients with the triple Ab association were referred to as group I (n=46) in contrast to group II patients (n=67) that possessed up to 2 Abs. Group I patients were characterised by a younger age at diagnosis (46.7±23.6 years in group I vs. 52.7±21.4 years in group II, p=0.02 data not shown). Moreover, and as presented in Figure 1B, SG involvement characterised patients from group I with regards to abnormal SG enlargement (odds ratio (OR)=2.6 CI95% 1.1-6.3, p=0.04) and abnormal major SG ultrasonography (OR=22.8 CI95% 4.9-106, p<e10^-4) as recently established (9, 10).

Those patients from group I more often had dense SG lymphocyte infiltration using grade 3 Chisholm-Mason scale (OR=3.5 CI95% 1.1-11.1; p=0.04), hypergammaglobulinaemia over 20g/L (OR=6.9 CI95% 1.7-27.7, p=0.007), and a higher erythrocyte sedimentation rate (29.2±23.6 in group I vs. 18.2±20.0; p=0.01). In contrast, differences were observed with regards to clinical manifestations with the exception of intermittent pulmonary involvement (OR=3.6 CI95% 1.4-9.4, p=0.008).

Then, later, the presence of atypical Ab was further explored in 44 pSS patients from the cohort using a new automated chemilumi-

Fig. 1. Interrelations between anti-sicca syndrome (SSA/Ro) Ab, anti-SSB/La Ab, anti-nuclear Ab (ANA) and rheumatoid factor (RF) in 113 patients with primary Sjögren’s syndrome (pSS).

A. Ab to SSA, ANA and RF. IgM co-existed in 40.7% of the patients (grey) and 31.0% of the patients were positive for both anti-SSA and anti-SSB Ab (dotted line). Only 4 patients were ANA and RF positive but anti-SSA Ab negative.

B. The presence of the triple association (ANA+SSA+RF) resulted in more severe disease with salivary gland (SG) involvement, and abnormal SG ultrasonography (SGUS). Fisher’s exact test was used to measure the odds ratio and the corresponding 95% confidence interval. Associations are indicated when p<0.05.

References


