19 AUTOANTIBODIES TO THE FUNCTIONALLY ACTIVE RING-DOMAIN OF RO52/SSA ASSOCIATE WITH CLINICAL ACTIVITY IN A SUBSET OF PATIENTS WITH LUPUS

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Introduction Systemic lupus erythematosus (SLE) is a disease with immunological dysregulation, and affects patients commonly carrying autoantibodies in combination with involvement of at least two organ systems affected by inflammation. The different autoantibody specificities correlate with specific clinical manifestations and thus prognosis. Ro/sjögren's syndrome A (SSA) and LA/sjögren's syndrome B (SSB) autoantibodies are common in lupus, and have been described to correlate with a milder phenotype. In the present study the authors wanted to investigate correlations of levels and clinical implications of Ro/SSA and La/SSB autoantibodies including autoantibodies directed towards the functional RING and B-Box domains of the Ro52 protein.

Methods Blood samples from SLE patients (n=232) were analysed for immunological parameters including autoantibodies. All patients were concurrently examined by a rheumatologist and a nurse and information on clinical manifestations and disease activity indices collected.

Results Ro52 autoantibody levels associated with more variables than the other analysed antibodies. Significance was found for disease activity measured with the SLAM score (p=0.031), several variables involved in secondary Sjögren´s syndrome (sSS) and items for a diagnosis of sSS: (sSS p=0.0041; whole unstimulated salivary flow less than 1.5 ml/15 min p=0.027; salivary production measurement p=0.0076, a positive Schirmer's test p=0.046; tear production p=0.019), sedimentation rate (p=0.0003), levels of immunoglobulins (p=0.0003), and an inverse correlation with levels of lymphocytes (p=0.003) and leucocytes (p=0.011). Antibodies to the RING domain of Ro52, which is the functionally active domain with E3 ligase activity, were highly significant for disease activity (p<0.0001).

Conclusion Autoantibodies against Ro52 and the functional RING domain are important in lupus patients and associate more than Ro60 and La antibodies with clinical and laboratory features of the disease. The impact on the SLAM disease activity score was especially noted.