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S-RI-2

ANTI-MANNOSE BINDING LECTIN ANTIBODIES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS.

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Introduction: Deficiency of complements e.g. C1q and C4, and the presence of anti-C1q have been shown to be associated with the development of systemic lupus erythematosus (SLE). Mannose binding lectin (MBL) is now considered as a member of the complement system independent of the classical and alternative pathways. MBL deficiency has also been demonstrated in patients with SLE. In this study we investigated whether anti-MBL antibodies are present in a Caucasian cohort of SLE patients

Methodology: A conventional ELISA was set up using an alkaline phosphatase conjugated anti-human IgG. Results were expressed as ratio of OD of the sample when compared with the positive mouse control. A positive test was defined as OD ratio >mean + 2SD above that obtained from healthy control subjects. 138 SLE patients and 50 healthy subjects were studied. Dot-blot analysis was used to confirm the anti-MBL autoantibodies detected reacted specifically with MBL protein. Disease activity was recorded in patients with SLE.

Results: Anti-MBL antibodies were detected in 13/138 (9.4%) SLE patients and 2/50 normal controls (4%). (p=0.43). There was a tendency that patients with SLE had higher serum levels of anti-MBL. Presence of anti-MBL antibodies were not shown to correlate with lowish serum MBL levels in 20 patients. Additionally, there was no correlation between anti-MBL antibodies and overall disease activity, presence of lymphopenia, levels of C3 and anti-dsDNA in the serum, and ESR.

Conclusion: Anti-MBL antibodies are found in SLE patients as well as normal controls. The lack of association with disease activity suggests that it is not likely that these antibodies play a significant role in disease flare. The IgG class switching, however, suggests that this is an antigen driven response and further reinforce the hypothesis that MBL protein plays a role in the aetiology of SLE.

S-RI-3

SOLUBLE CD40 LIGAND IN THE SERUM OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND RHEUMATOID ARTHRITIS.

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Background: Systemic lupus erythematosus (SLE) is characterized by T cell-dependent B cell activation. T-B cell interaction is dependent on the presence of costimulatory molecules including CD28/B7 and CD40L/CD40. Elevated and prolonged expression of CD40L is reported in activated T lymphocytes in patients with SLE. Soluble CD40L (sCD40L) is found to be a marker of T cell activation.

Objective: To determine whether sCD40L is present in the serum of patients with SLE as compared with patients with rheumatoid arthritis (RA) and normal controls.

Methods: A two site, enzyme linked immuno-assay (ELISA) was used. Two monoclonal antibodies directed to different epitopes of CD40L, one linked to biotin, were used to test sera from 99 SLE patients, 33 RA patients and 29 normal controls. The OD values from individual age-matched sera were compared with a dose curve generated with a CD8/CD40L fusion protein.

Results: The median (interquartile range) sCD40L levels for SLE, RA patients and normal controls were 6.06 (1.52-19.79) ng/ml, 9.05 (5.07-42.94) ng/ml and 1.89 (0.035-7.04) ng/ml respectively. SLE and RA patients had significantly higher sCD40L levels than controls (Vs SLE, p=0.01; Vs RA, p=0.001) while no difference was observed between SLE and RA patients (p=0.07). A few RA patients had higher sCD40L levels than SLE patients. Pre-absorption assay using Dynal beads coated with monoclonal anti-CD40L showed specific binding to CD40L. A 1-site ELISA suggests that the sCD40L detected exists in multimeric form. Initial analysis of disease activity suggests that there is a positive correlation.

Conclusion: Soluble CD40L is present in the serum of both SLE and RA patients and might contribute to the ongoing B cell activation seen in these diseases. The multimeric and functional characteristics of sCD40L remain to be determined.