

## November 11/08: Antinucleosome Antibodies

Antinucleosome autoantibodies were previously described as a marker for active lupus nephritis. However, the sensitivity and specificity of this marker are still discussed. Regarding the antigen which is used for the assay, it would be expected that it is a combination of anti-dsDNA and anti-histone antibody tests. While anti-dsDNA antibodies are said to be highly specific for SLE (systemic lupus erythematosus), and particularly for lupus nephritis, anti-histone antibodies lack specificity for lupus. Nevertheless, antinucleosome antibodies are said to have a higher diagnostic efficiency for lupus nephritis than anti-dsDNA antibodies.

The following prospective multicenter study aimed to investigate the diagnostic value of antinucleosome antibodies as a marker for biopsy-proven active proliferative lupus nephritis:

Bigler C, Lopez-Trascasa M, Potlukova E, Moll S, Danner D, Schaller M, Trendelenburg M

### **Antinucleosome Antibodies as a Marker of Active Proliferative Lupus Nephritis**

*Am J Kid Dis 2008; 5: 624-629*

35 patients with SLE undergoing renal biopsy had lupus nephritis, of which 89% had antinucleosome antibodies. The control groups were 23 patients with SLE with a history of lupus nephritis, but without clinical signs of activity at the time of sampling, and 36 patients with SLE without clinical signs of lupus nephritis at any time. 83% of the first and 78% of the latter control group were positive for antinucleosome antibodies.

Anti-dsDNA antibodies measured by Farr assay were found in 94.3% of patients with active lupus nephritis, compared to 84.5% of control patients with SLE without active nephritis. In contrast to antinucleosome antibodies, anti-dsDNA antibody titers in patients with active lupus nephritis were significantly greater than in SLE controls.

The authors concluded that the test is of limited help in the distinction of patients with active nephritis from those with SLE without active renal disease. Furthermore, it has no advantage compared to the dsDNA test performed by Farr RIA.

Obviously, the specificity of antinucleosome antibodies for lupus nephritis is low. The results of the following study show that their specificity for SLE in general is questionable:

Andreoli L, Pregnotato F, Burlingame RW, Allegri F, Rizzini S, Fanelli V, Radice A, Corace C, Sinico RA, Meroni PL, Tincani A

### **Antinucleosome antibodies in primary antiphospholipid syndrome: A hint at systemic autoimmunity?**

*J Autoim 2008; 30: 51-57*

The authors aimed to evaluate if antinucleosome antibodies might be predictors for full-blown SLE or lupus-like disease in a cohort of patients with primary antiphospholipid syndrome (APS). A multicentric cohort of 105 patients with primary APS was tested for IgG/IgM antinucleosome antibodies by using a homemade assay with H1-stripped chromatin as an antigen. 81 of 105 patients (77%) were positive for antinucleosome antibodies. Medium to high results were present in 46% of the patients.

70 patients served as disease controls: 20 with infectious diseases, 20 with rheumatoid arthritis and 30 with dsDNA-positive SLE. The patients with infectious disease and rheumatoid arthritis were all negative, while, as expected, 87% of SLE patients were positive at medium to high titer for antinucleosome antibodies.

48 APS patients were tested for antinucleosome antibodies during follow-up, at least at two years apart from the initial samples. The majority of patients displayed a stable antibody titer, only a few of them (10 of 48) became either positive or negative during follow-up. 2 of 105 patients with primary APS developed manifestations of SLE. These 2 patients were positive for antinucleosome antibodies 4 and 8 years before SLE developed, respectively.

This study reports that antinucleosome antibodies, considered specific for SLE by some authors, can be frequently detected in primary APS without any sound correlation to the clinical/serological features considered as hints of a transition disease between primary APS and SLE.

