

10. Single-specificity anti-Ku antibodies in a tri-nation cohort of 2140 systemic sclerosis subjects: clinical associations

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Autoantibodies directed against Ku are present in systemic sclerosis (SSc) sera and have been associated with myositis overlap and possibly interstitial lung disease. However, there is a paucity of data on the clinical correlates of anti-Ku antibodies in the absence of other SSc-specific antibodies. The aim of this study was to assess the clinical correlates of single-specificity anti-Ku in SSc.

A tri-nation (Canada, Australia, USA) cohort of 2140 SSc subjects was formed, demographic and clinical variables were harmonized, and sera were tested for anti-Ku using a line immunoassay. Statistical analyses were performed to determine associations between the presence of single-specificity anti-Ku antibodies (i.e. in isolation of other SSc-specific antibodies) and outcomes of interest, including myositis, interstitial lung disease (ILD) and survival.

24 (1.1%) subjects had antibodies against Ku, and 13 (0.6%) had single-specificity anti-Ku antibodies. All subjects with single-specificity anti-Ku antibodies had high-titer positive antinuclear antibodies. These subjects were older at disease onset than anti-Ku negative subjects (mean age 51.5 vs 45.3 years). They were less likely to be of white ethnicity (70% vs 81%). They had more limited cutaneous disease (77% vs 63%), less digital vascular complications, and less calcinosis (8% vs 25%). However, they were more likely to have ILD (58% vs 34%) and pulmonary hypertension (25% vs 14%). Although there was no difference in inflammatory myositis prevalence, subjects with single-specificity anti-Ku antibodies were more likely to have significantly increased CK levels. Subjects with overlapping, but not single-specificity, anti-Ku antibodies were found to have an increased prevalence of malignancy compared to anti-Ku negative subjects (27% vs 8%, OR 4.6, CI 1.2-17.6, p=0.0249). No difference in survival was noted in subjects with single specificity anti-Ku antibodies.

This is the largest cohort to date focusing on the prevalence and disease characteristics of single-specificity anti-Ku antibodies in subjects with SSc. These results need to be interpreted with caution in light of the small sample. International collaborations are key to understanding the clinical correlates of uncommon serological profiles in SSc.