8 ANTI-NT5C1A AUTOANTIBODIES IN SYSTEMIC LUPUS ERYTHEMATOSUS

[1]May Choi*, [2]Eric Campbell, [3]Ann E Clarke, [2]Adam Amlani, [2]Michelle Jung, [3]Claire Barber, [4]Yvan St Pierre, [2]Marvin Fritzler. [1]*Cumming School of Medicine, University of Calgary*; [2]*University of Calgary*; [3]*Division of Rheumatology, Cumming School of Medicine, University of Calgary*; [4]*Department of Medicine, Division of Rheumatology, Faculty of Medicine, McGill University*

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Background Autoantibodies to the 44 kDa cytosolic 5-nucleotidase 1A (NT5c1A/Mup44) are a biomarker for differentiating sporadic inclusion body myositis (sIBM) from other autoimmune myopathies. These antibodies have also been detected in 10%–20% of SLE patients but the clinical significance has not been reported. This study determined the frequency of anti-NT5c1A autoantibodies in a SLE cohort and then identify demographic, clinical, and serologic correlations.

Methods Patients fulfilling the ACR or SLICC Classification Criteria for SLE were enrolled in a local cohort. Demographic, clinical information (disease activity SLEDAI-2K; damage SLICC/ACR Damage Index (SDI)), and sera were collected at time of enrollment. Antibodies to anti-NT5c1A were determined by an addressable laser bead immunoassay using a full-length human recombinant protein (Origene, Rockville, MD: Cat. #TP324617). The cutoff, established at 400 median fluorescence units (MFU), was two standard deviations above the mean of apparently healthy control sera. Univariable and multivariable analysis were performed to determine associations between the prevalence of high positive anti-NT5c1A and demographic (age, sex, race/ethnicity), clinical features (SLICC/ACR classification criteria, SLEDAI-2K and SDI total scores and subscales including myositis from SLEDAI-2K), medications, and other autoantibodies (anti-dsDNA, extractable nuclear antigens, and anti-phospholipid antibodies).

Results 138 SLE patients were included; 89.1% were female with a mean age of 46.1 years (SD 18.1) and disease duration of 13.7 years (SD 11.6). The prevalence of positive anti-NT5c1A was 15.2% (21/138). Univariable analysis demonstrated that patients who had a positive anti-dsDNA (Odds Ratio (OR) 6.59 [95%CI: 2.21, 19.65]) or anti-nucleosome (OR 8.96 [95%CI: 2.43, 32.99]) were more likely to be positive for anti-NT5c1A. Patients with longer disease duration (OR 0.93 [95%:CI 0.88, 0.98]), proteinuria (24 hour urine protein greater than 500 mg on the SLICC criteria) (OR 0.20 [95%CI: 0.04, 0.88]), acute cutaneous SLE (OR 0.38 [95%CI: 0.15, 0.97] on the SLICC criteria), in particular malar rash (OR 0.25 [95%CI: 0.07, 0.89]) or photosensitivity (OR 0.27 [95%CI: 0.08, 0.84]) were less likely to be anti-NT5c1A positive. Multivariable analysis demonstrated that patients with proteinuria (OR 0.16 [95%CI: 0.03, 0.87]) were less likely to be anti-NT5c1A positive.

Conclusions Anti-NT5c1A antibodies, a novel biomarker for sIBM, were found in 15.2% of SLE patients in keeping with previous reports. The patients were less likely to have a history of proteinuria and there was no association with myositis (on SLEDAI-2K). Further studies are needed to confirm these findings in larger SLE cohorts.

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9 INCIDENCE AND DETERMINANTS OF VERTEBRAL AND PERIPHERAL FRACTURES IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: A PROSPECTIVE LONGITUDINAL COHORT STUDY

[1]Fatma El Hadiyen, [1]Michel WP Tsang-A-Sjoe, [2]Marieke M ter Wee, [1]Alexandre E Voskuyl, [1]Willem F Lem, [1]Irene EM Bultink*. [1]*Department of Rheumatology, Amsterdam Rheumatology and immunology Center, Amsterdam UMC, location VUmc, Amsterdam, Netherlands*; [2]*Department of Epidemiology and Biostatistics, Amsterdam UMC, location VUmc, Amsterdam, Netherlands*

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Background Systemic lupus erythematosus (SLE) is associated with an increased risk of fractures[1]. However, data on the incidence of vertebral and peripheral fractures are limited. In particular, data on (morphometric) vertebral fracture incidence and determinants of such fractures are scarce and show conflicting results. The objective of this study was to assess the incidence of fractures in a population of patients with SLE, and to identify determinants that predict incident vertebral and peripheral fractures.

Methods A prospective longitudinal cohort study in 145 patients with SLE was performed. Serial bone mineral density (BMD) measurements using dual x-ray absorptiometry, and radiographs of the thoracic and lumbar spine were performed at inclusion and after a median of 5 years (IQR 35) follow-up. Demographic and clinical data were collected. Vertebral fractures were scored according to the semi-quantitative method by Genant et al. Reported peripheral fractures were

Abstract 9 Table 1 Multivariate logistic regression analyses of independent explanatory variables that predict incident fracture, showing OR and 95% CI

Variables	Any fracture			Vertebral fractures			Peripheral fractures		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
Age				1.0	1.0–1.1	0.017			
Caucasian ethnicity	13.3	1.7–104.3	0.014						
Postmenopausal status	4.0	1.6–10.1	0.004				3.2	0.86–11.6	0.084
Past stroke							15.5	1.1–212.2	0.040
Alcohol use							Ref.	Ref.	Ref.
- No							0.06	0.01–0.62	0.019
- Moderate							1.9	0.14–24.9	0.634
- Heavy									

OR=odds ratio; CI=confidence interval