Vimentin is a cytoskeletal protein expressed by mesenchymal cells, including endothelial and renal tubular cells. Antibodies to vimentin were described in 10%–53% of patients with Systemic Lupus Erythematosus (SLE). Vimentin has been proposed as a target of the in situ immune response in lupus nephritis. Post-translational modifications increase the immunogenicity of vimentin, as demonstrated by the detection of anti-modified-vimentin antibodies in rheumatoid arthritis. Carbamylation is a non-enzymatic post-translational modification (addition of a cyanate group on lysine and arginine residues), which has been linked to NETosis. The role of carbamylated vimentin (Car-Vim) as an antigenic target in SLE has not been evaluated yet.

Aim of the study was to assess the prevalence of anti-Car-Vim and to investigate any association with clinical and serological features in SLE patients.

We enrolled 109 SLE patients (102F:7M, mean age 39.4 ±12.6 years, mean disease duration 10.5±9.5 years, mean SLEDAI 2K ±5.5). Table 1 summarises the main clinical and serological features. Overall, 30/109 patients (27.5%) were positive for anti-Car-Vim. The prevalence of anti-Car-Vim was significantly higher in patients with lupus nephritis (18/44) compared to those without (12/66) (41.8% vs 18.2%, p=0.006); moreover, anti-Car-Vim serum levels were significantly higher in patients with lupus nephritis [2561 (1783) OD] compared to those without [1970 (1123) OD; p=0.0178]. No difference was found in prevalence or titre of anti-Car-Vim in presence/absence of other clinical or serological manifestations. No correlation between anti-Car-Vim serum levels and SLEDAI 2K was found.

Higher prevalence and serum levels of anti-carbamylated vimentin antibodies in patients with lupus nephritis confirm the role of vimentin as a target of the immune response in glomerulonephritis and suggest their possible role as a biomarker of kidney involvement in SLE.
PS2:29 THE INCIDENCE AND POSSIBLE RISK FACTORS OF LOW BONE MINERAL DENSITY IN KOREAN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Patients with systemic lupus erythematosus (SLE) are vulnerable to bone loss and fractures, and frequencies of low bone mass reported in 4% to 74%, variably according to study design and ethnicity. The objective of this study was to evaluate the incidence of low bone mineral density (BMD) and association of clinical factors in Korean patients with SLE. In total, 138 female patients with SLE in 5 hospitals and 165 female healthy controls (HCs) were recruited. All SLE patients fulfilled the 1997 American College of Rheumatology classification criteria for SLE. The osteopenia and osteoporosis was based with the WHO criteria on dual-energy X-ray absorptiometry. The mean age of female SLE patients was 49.7 ± 11.3 years, and age, weight, and height were not different with those of HCs. Ninety-two (66.7%) patients with SLE had osteopenia, and 32 (23.2%) patients had osteoporosis, however only 25 (15.2%) HCs had osteopenia (p<0.001). The SLE patients with osteopenia were older (53.8 ± 13.2 vs 48 ± 13.7 years, p = 0.011), lower weight (54.2 ± 9.9 vs 58.3 ± 8.4 kg, p = 0.008), and took higher cumulative doses of glucocorticoids (2,332.9 ± 4,964.2 vs 711.4 ± 2,185.6 mg, p = 0.006) than those not. On multivariate regression analysis, age (odds ratio (OR) = 1.039, p = 0.027) and weight (OR = 0.957, p = 0.038) were associated with osteopenia. The incidence of osteopenia was significantly higher in Korean patients with SLE. In addition, age and weight were independent risk factors of osteopenia in SLE.

REFERENCE