Background: Scleroderma has been associated with increased risk of cardiovascu lar events, however, studies on this from India are sparse. We evaluated clinical and serological factors associated with subclinical atherosclerosis in Indian patients with scleroderma, in a cross-sectional design.

Objectives: To compare carotid intima-media thickness (CIMT, mean value of both carotids) as a measure of subclinical atherosclerosis (SCA) between patients with scleroderma (n=61) fulfilling 2013 ACR/EULAR criteria, and healthy controls (n=41).

Methods: Subclinical atherosclerosis (SCA) was defined as presence of carotid plaques, or increased CIMT >2 standard deviations compared with Indian reference standards for age and sex. Total microparticles (TMP) were measured on plasma after ultracentrifugation as per previously described protocol using microbeads of 3 μm size (TMP were of size 0.1-1 μm); of these, microparticles positive for CD31 and CD142 were endothelial microparticles (EMP). Serum cytokines (IL-1, IL-6, TNF-α, IL-17) were measured by ELISA. The study was approved by the Institute of Medical Sciences, Department of Nephrology, Lucknow, India.

Results: Median age of patients (n=97) was 62 years old [56, 70], 88.7% were females (n=86). Seventy-eight patients (80.4%) had limited cutaneous form, 5 (5.2%) had mixed form and 4 (4.1%) had diffuse form. Regarding clinical features: digital ulcers in 30 patients (30.9%), interstitial lung disease in 29 patients (29.9%), Raynaud phenomenon in 25 patients (25.8%), 11 (11.3%) had previous of major fracture. Median body mass index (BMI) was 25.4 Kg/m² [21.4, 29.1], with 5 patients (5.2%) being underweight. Vitamin D insufficiency was reported in 19 patients (19.6%). Twenty-one patients (21.6%) had reportedly used oral glucocorticoids (GCT) for more than 3 months at a dose of 5mg daily or more. Eleven patients (11.3%) had previous of major fractures: 10 of which were vertebral and 1 wrist fracture. Regarding the prescribed anti-osteoporotic treatment (AOP), we found: alendronate (n=7, 7.2%), zoledronic acid (n=7, 7.2%), denosumab (n=2, 2.1%) and teriparatide (n=1, 1%).

Conclusion: Patients with scleroderma had significant burden of subclinical atherosclerosis, which could not be explained by traditional or novel cardiovascular risk factors.

References:

Disclosure of Interests: None declared.