References:


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SAT0319
SUBCLINICAL ATHEROSCLEROSIS IN INDIAN PATIENTS WITH SCLERODERMA – CLINICAL AND SEROLOGICAL ASSOCIATIONS

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Background: Scleroderma has been associated with increased risk of cardio-ovascular 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).

- To compare clinical (body mass index – BMI, waist:hip ratio – WHR, fasting lipid profile) and serological factors (microparticles, endothelial microparticles, inflammatory cytokines associated with increased cardiovascular risk) between patients with scleroderma and healthy controls.
- To identify factors associated with SCA in scleroderma patients.

Methods: Subclinical atherosclerosis (SCA) was defined by 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-1β, IL-6, TNFα, IL-17) were measured by ELISA using manufacturer instructions. Linear regression was used to identify the determinants of CIMT in scleroderma. Binomial logistic regression was used to identify factors associated with subclinical atherosclerosis in scleroderma.

Table 1. Comparison between patients with scleroderma and healthy controls

<table>
<thead>
<tr>
<th>Serum (L-1x) (pg/mL)</th>
<th>38.19 ± 13.46</th>
<th>31.38 ± 18.29</th>
<th>0.0326</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-6 (pg/mL)</td>
<td>176.6 ± 85.74</td>
<td>128.9 ± 53.61</td>
<td>0.0020</td>
</tr>
<tr>
<td>IL-17 (pg/mL)</td>
<td>56.3 ± 20.45</td>
<td>53.89 ± 20.51</td>
<td>0.5611</td>
</tr>
<tr>
<td>TNFα (pg/mL)</td>
<td>49.65 ± 26.71</td>
<td>42.09 ± 30.41</td>
<td>0.1879</td>
</tr>
</tbody>
</table>

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

References:


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SAT0320
BONE MINERAL DENSITY AND FRACTURE RISK IN A COHORT OF PORTUGUESE SYSTEMIC SCLEROSIS PATIENTS

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Background: Although poorly understood, patients with Systemic Sclerosis (SSc) seem to have higher prevalence of low bone mineral density (BMD) and an increased spine fracture risk.

Objectives: We aim to determine, by conventional densitometry (DXA) and using the fracture risk assessment tool (FRAX), the prevalence of low BMD and the fracture risk, respectively, in our SSc cohort and its potential determinants.

Methods: Observational transversal study was performed including consecutive patients with the diagnosis of SSC. We collected data regarding demographics, lipid profile and serological factors (microparticles, endothelial microparticles, inflammatory cytokines associated with increased cardiovascular risk) between patients with sclerosis and healthy controls.

Results: Median age of patients (n=97) was 62 years old [56, 70], 88.7% female (n=86). Seventy-eight patients (80.4%) had limited cutaneous form, 5 (5.2%) presented a diffuse cutaneous form and 13 (13.4%) an overlap syndrome. According to clinical features: digital ulcers in 30 patients (30.9%), interstitial lung disease (ILD) in 16 (16.5%), gastrointestinal involvement in 16 (16.5%), micositis in 4 (4.1%) and pulmonary arterial hypertension in 3 (3.1%). Anti-topoisomerase 1 antibody (anti-Scl70) positivity was present in 15 patients (15.5%) and anti-centromere antibody (ACA) positivity in 63 (64.9%). Nine patients (9.3%) were smokers and 6 (6.2%) reported an alcohol consumption of 3 or more units/day. Median body mass index (BMI) was 25.4 Kg/m² [21.4, 29.1], with 5 patients (5.2%) being overweight. Vitamin D insufficiency was reported in 19 patients (19.6%). Twenty-one patients (21.6%) had previous low impact 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%).

Low BMD was present in 45 patients (46.4%); median femoral neck BMD (FN-BMD) was 0.827 [0.709, 0.893]. Ten year probability of fracture (%) was: mean risk for major fracture was 5.1 [3.5, 9.7] and 3.8 [2.5, 8]; with and without FN-BMD, respectively; for hip fracture the estimated risk was 1.2 [0.6, 3.1] and 1.0 [2.4, 2.5], with and without FN-BMD, respectively. According to FRAX thresholds for the Portuguese population, 25 patients (25.8%) met criteria to start AOP treatment. Among them, only 10 patients (40%) started it, as the agreement between the indication to treat by FRAX and the onset of treatment was weak (κ = 0.338). A strong agreement was found between FRAX risk threshold with DXA and World Health Organization (WHO) threshold for starting AOP (κ = 0.814) and no agreement was found between FRAX risk threshold without DXA and WHO threshold.

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References:
