



## **IMPACT OF MALE GENDER IN CLINICAL AND LABORATORY FEATURES OF SYSTEMIC SCLEROSIS IN A LARGE SINGLE COHORT.**

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### **BACKGROUND**

Although systemic sclerosis (SSc) affects predominantly the female gender, male patients usually show a more severe visceral profile and worse prognosis. The purpose of this study is to analyze clinical and laboratory features associated with the male gender in a large single SSc cohort.

### **MATERIALS AND METHODS**

Consecutive patients classified as SSc according to the 2013 ACR/ EULAR criteria attended in a single SSc outpatient clinic in the period from 2010 to 2018 were included. Patients were analyzed regarding demographic, clinical and laboratory data that were obtained from an electronic register database. Statistical significance was considered if  $p < 0.05$ .

### **RESULTS**

The SSc cohort of 700 patients comprised 88 men (12.6%) and 612 women (87.4%). Male patients presented shorter disease duration ( $10.08 \pm 6.81$  yrs vs.  $13.86 \pm 9.61$  yrs;  $p < 0.001$ ) and shorter time of follow-up ( $6.34 \pm 5.33$  yrs vs.  $8.84 \pm 6.64$  yrs;  $p < 0.001$ ) when compared to female patients. Their first non-Raynaud symptom was more frequently skin thickness ( $p < 0.001$ ) and their modified Rodnan skin score was higher ( $10.89 \pm 9.90$  vs.  $7.79 \pm 7.89$  yrs;  $p = 0.006$ ) than the female scores. Male gender was significantly associated with diffuse SSc ( $p = 0.020$ ), African-Brazilian ethnicity ( $p = 0.001$ ), environmental factor ( $p < 0.001$ ), pigmentary disturbances ( $p = 0.010$ ), smoking ( $p < 0.001$ ), degree of dyspnea (grade 3 and 4 NYHA) ( $p < 0.001$ ), symptomatic interstitial lung disease ( $p = 0.009$ ), lower forced vital capacity (FVC) at lung function ( $p = 0.023$ ), FVC  $< 70\%$  plus more than 30% of thorax area in computed tomography affected ( $p = 0.09$ ), heart involvement ( $p = 0.019$ ), congestive heart failure ( $p = 0.001$ ), as well as use of cyclophosphamide ( $p < 0.001$ ), rituximab ( $p = 0.002$ ) and continuous O<sub>2</sub> ( $p = 0.044$ ). Male patients died more frequently than female patients (trend;  $p = 0.053$ ), and these deaths were more frequently associated to SSc ( $p = 0.004$ ). Pitting scars, digital ulcers and amputation presented similar frequencies in both genders.

### **CONCLUSION**

Men with SSc, although significantly less frequent than women, are associated with a significantly more severe clinical course in this large SSc cohort. Interestingly, this study emphasized that the fibrotic component of SSc was significantly more aggressive in the male patients, suggesting that this component might explain the worse course in male.