P027

PHASE ANGLE, FAT-FREE MASS INDEX AND THE RISK OF DIGITAL ULCERS IN PATIENTS WITH SYSTEMIC SCLEROSIS

E. Rosato[1], A. Gigante[1], A. Iacolare[1], A. Villa[1], M. L. Gasperini[1], M. Muscaritoli[1,*]

[1]Department of Translational and Precision Medicine, SAPIENZA UNIVERSITY, Roma, Italy

Rationale: Digital ulcers (DUs) represent a major and invalidating complication of Systemic Sclerosis (SSc). We hypothesized that changes in body composition (BC) may increase the risk of developing new DUs in SSc.

Methods: Phase angle (PhA) and fat free mass index (FFMI) were assessed by BIA at enrollment and after 12 months. Development of new DUs at 12 months was assessed and DUs classified according to Amanzi et al.[1] Major vascular complications were also recorded. Results are expressed as mean ± SD. Student's unpaired 2-tailed t test, Mann-Whitney test, Pearson product-moment correlation coefficient or Spearman's rank correlation coefficient, chi-square test or Fisher's exact test, receiver operating characteristic (ROC) curve analysis (to analyze the prognostic accuracy of FFMI or PhA toward development of new DUs) were used as appropriated. In multivariate analysis, we inserted only variables with p value < 0.05 in univariate analysis.

Results: Seventy-nine SSc patients (67 females) aged 53 ± 13 years were enrolled. In SSc patients with a DUs history, phase angle (PhA) value was higher ($p < 0.01$) while FFMI was lower ($p < 0.05$) with respect to patients without a DUs history. After 12 months follow-up, 30 patients (38%) presented at least one new episode of DUs. Patients with reduced PhA had a relative risk (RR) of 10.1 for new DUs (CI 3.5–29.5, $p < 0.0001$), while patients with reduced FFMI had a RR of 6.7 for new DUs (CI 2.1–21.8, $p < 0.001$). In multivariate analysis, FFMI and PhA were associated with major vascular complication (DUs, pulmonary arterial hypertension, and scleroderma renal crisis). FFMI reduction at 12 months was greater in SSc patients with short (≤ 3 years) than in patients with long duration [0.4 (0–0.50) vs − 0.10 (− 0.2–0), p=0.01].

Conclusion: Both PhA and FFMI may predict the risk for development of new DUs and major vascular complications after 12 months in SSc patients.

References: [1]Amanzi L, et al. Rheumatology 2010

Disclosure of Interest: None declared