

Ulnar and Radial Stenosis in Systemic Sclerosis.

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Background/Purpose: Systemic sclerosis (SSc) is a chronic, autoimmune disease. Endothelial damage has been recognized as the initial pathogenic factor. The involvement of the microvasculature is well defined, whereas the prevalence of large vessels disease is still unknown. We aim to describe the frequency of ulnar and radial stenosis in SSc patients and analyze the correlation between arterial stenosis and digital ulcers.

Methods: We included 57 SSc consecutive patients who fulfilled ACR 1980 classification criteria, and 21 healthy controls. SSc patients were classified in two groups: those with present or past digital ulcers and those without them. We collected demographic, clinical and laboratory information. The control group was constituted with voluntaries who attended spontaneously to our hospital to make an image study. All participants have done an arterial ecodoppler of both arms, looking for ulnar and radial stenosis. Statistical analysis: Mann-Whitney, Fisher test $p_{0.05}$, Odds Ratio (OR), Forward Stepwise, Hosmer and Lemeshow test.

Results: The presence of stenosis in at least one ulnar artery was observed in 18 of 57 patients with SSc (31%) and in none of the 21 controls ($p_{0.003}$). Stenosis occurred in at least one radial artery in 9 of 57 SSc patients (15%) and in one of 21 controls ($p_{0.19}$). Univariate analysis is shown in Table 1. In the multivariate model, the best predictors of digital ulcers were age at onset of Raynaud phenomenon before 40 years (OR 5.3 95%CI 1.54–18.22, $p_{0.008}$) and presence of late SD pattern (OR 4.4 95%CI 1.29–15.63, $p_{0.018}$). The area under ROC_0.76 and the Hosmer and Lemeshow test was not significant ($p_{0.54}$). Ulcers probability calculated by the model and observed in the sample by combining groups with different predictors is presented in Table 2.

Conclusion: In the present series, ulnar stenosis was observed frequently in SSc patients. However, the size of the sample did not allow adjusting for potential confounders. Stenosis of large vessels in SSc patients was not associated with presence or history of digital ulcers. The best predictors of digital ulcers were age at onset of Raynaud phenomenon before 40 years and the presence of late SD pattern.