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CORRELATIONS BETWEEN PULMONARY FUNCTION, TRANSTHORACIC ULTRASONOGRAPHY AND NAILFOLD CAPILLAROSCOPY FINDINGS IN SYSTEMIC SCLEROSIS PATIENTS

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Abstract

Systemic sclerosis is a complex autoimmune disorder, in which interstitial lung involvement represents an important complication. The aim of this study is represented by the assessment of the correlations between pulmonary functional tests and transthoracic lung ultrasonography parameters, and, between pulmonary functional tests and nailfold capillaroscopy parameters in patients with systemic sclerosis interstitial lung disease (SSc-ILD).

Material and methods: Twenty patients with SSc-ILD, twenty patients with idiopathic interstitial lung disease (ILD), and twenty healthy controls were included in this study. Pulmonary functional tests, transthoracic lung ultrasonography and nailfold capillaroscopy were performed in all the patients. Statistical analyses were performed using the Student's t-test and the Pearson's correlation, $p < 0.05$ being statistically significant.

Results: In patients with SSc-ILD and ILD, it was demonstrated a significant correlation between pulmonary functional tests and ultrasonographic findings ($p < 0.00001$). Besides these findings, in SSc-ILD patients, significant correlations between nailfold capillaroscopy parameters and ultrasonographic transthoracic findings ($p < 0.00001$), and between nailfold capillaroscopy parameters and pulmonary functional tests ($p < 0.00001$) were found.

Conclusion: In SSc-ILD, transthoracic lung ultrasonography offers a useful tool for the assessment of degree of pulmonary involvement, correlated with the vascular involvement.

Key words: nailfold capillaroscopy, systemic sclerosis, transthoracic ultrasonography

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