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Abstract Group: 1.5. Diffuse Parenchymal Lung Disease

Keyword 1: Interstitial lung disease (connective tissue disease) **Keyword 2:** Pulmonary hypertension
Keyword 3: Interstitial lung disease

Title: 6-minute walk test predicts pulmonary artery pressure in patients with collagen vascular disease associated interstitial pneumonia

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Body: [Objective] It has been reported clinical importance of pulmonary hypertension(PH) in collagen vascular disease(CVD), however the role of PH in interstitial pneumonia related CVD(CVD-IP) has been scarcely evaluated. We sought to determine the prediction factor of mean pulmonary artery pressure(MPAP) in patients with CVD-IP. [Method]Patients with CVD-IP underwent right heart catheterization(RHC) within 3 months of initial evaluation at our institution. Patients with left ventricular dysfunction, incomplete follow-up, and patients with respiratory failure were excluded. [Results] We studied 44 patients, (19 male, mean age 59.8±11.0years). They were 13 with RA, 13 with SSc, 9 with PM/DM, and 9 with others. PaO2 at rest was 83.1±9.6mmHg,MPAP was 17.2±5.5mmHg (>20mmHg, 13(29.5%)), cardiac index(CI) was 3.6±0.8L/min/m2, pulmonary vascular resistance index(PARI) was 223±102 Wood units/m2, %vital capacity(%VC) was 78.4±21.0%, percentage of carbon monoxide diffusing capacity (%DLco) was 50.9±17.6%, and 6-min walk distance(6MWD) was 502±142 m, and minimum SpO_2 at 6-min walking test ($mSpO_2$) was 85.6±5.9%, respectively. The median observation period was 31.8 months with 11 patients died. In the univariable model, MPAP was significantly correlated with %DLco (r=-0.377,P=0.013), and $mSpO_2$ (r=-0.552, P=0.0001). In the multivariable model, MPAP was significantly correlated with 6MWD (r=-0.360,P=0.019) and $mSpO_2$ (r=-0.595,P<0.001). Conclusion] 6MWD and $mSpO_2$ were independent predictors of MPAP in CVD-IP.