Role of Stress Echocardiography in the Detection of Pulmonary Hypertension in Patients With Lung Disease

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Pulmonary hypertension (PH) is a progressive condition characterized by an elevated pulmonary pressure which can lead to insufficiency of the right ventricle. In patients with chronic obstructive pulmonary disease (COPD) there is a high prevalence of PH, of mild-moderate level, associated with lower survival. In interstitial lung disease (ILD), the prevalence of PH reaches 74% in patients with sarcoidosis, with a death rate 8 times higher.

We performed stress echocardiography in patients with pulmonary diseases with different severity levels in order to detect the presence of early PH.

Subjects of both sexes with various respiratory diseases, particularly with COPD and ILD were selected. All subjects performed: clinical examination; blood tests; spirometry with diffusion lung CO (DLCO) measurement; arterial blood gas analysis; 6-minutes walking test (6MWT); Doppler echocardiography at rest and during exercise (stress echo).

Have been examined so far 4 patients, aged 53-75 years, two with ILD and two with COPD. In two of these patients, we recorded significant increases in pulmonary arterial pressure (PAP) during exercise (PAP increased from 28 to 54 mmHg).

Although our study is still ongoing and the cases evaluated are numerically limited, execution of stress echo seems to be able to identify, in patients with not very advanced impaired lung function, a condition of significant PH.