by spyrometry) who, follow maximal medical care and remain symptom-limited in exercise capacity or functional status. The goal of PR is for the patient to become more physically active and maintain independence a longer period of time. The benefits of PR extend far beyond physical endurance and reduced dyspnoea, and include improved adherence, reduced health care utilization and costs, more patient involvement in disease management, and improved patient outlook. In the recent years, the beneficial effects of a comprehensive and multidisciplinary pulmonary rehabilitation program have been so well documented in COPD that this therapy has gained a prominent position in most guidelines on diagnosis and treatment of this disorder. The magnitude of the effects resulting from pulmonary rehabilitation compare favourably with the available drug therapies in COPD, and the evidence for reducing use of health care resources is increasing. The successful effects of pulmonary rehabilitation in COPD can be largely attributed to the systemic component of the disease, with peripheral muscle dysfunction the best documented.

Pulmonary Arterial Hypertension in Scleroderma

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Systemic sclerosis (SSc) is a rare chronic disease of unknown cause characterized by diffuse fibrosis and degenerative changes in the skin and internal organs. It can cause serious complications in the lungs in two major ways: the pulmonary fibrosis and pulmonary hypertension (PAH). Owing to the fact that lung damage in SSc has a high incidence (70 % in the necropsy studies) and represents the leading cause of death in scleroderma patients, it is required an early systemic evaluation of lung complications in these patients. The objective was to study the particularities of lung complications in patients with SSc. Material and methods This study is based on the surveying of 12 patients with the SSc, aged between 28 and 68 years old, the majority of the patients being females. The diagnosis was established on the bases of the clinical presentation, the laboratory data and the instrumental examination: hemoleucogram, immunological tests (Anti-Scl 70 antibody, Anticentromere antibody), ECG, echocardiography, spirography, chest X-ray, CT of the chest, pulse-oximetry. Results and discussions The lung complications were determined in a big number of patients 83.3 %. PAH was diagnosed in 4 patients: 1 case of severe isolated PAH in a patient with limited form of SSc, and 3 cases of light PAH associated with pulmonary fibrosis. Pulmonary fibrosis without PAH was determined in a half of examined patients. Cor pulmonale was revealed in 2 patients, both of them with PAH. The symptoms of lung damage were non-specific and consisted of shortness of breath from an activity (at 8 patients from 10) and dry cough (at 5 patients from 10). In order to treat the severe PAH was administrated a phosphodiesterase 5 inhibitor (Sildenafil) and a calcium channel blocker (Verapamil) with a good clinical and hemodynamic response. Conclusions: 1. Both the diffuse and the limited subsets of scleroderma patient may develop PAH, but it is more common in patients with limited scleroderma. 2. Symptoms that might indicate PAH are non-specific. 3. Echocardiography is recommended in the annual evaluation of all sclerodermic patients. 4. New effective treatments may improve quality of life and improve long-term outcome.