

COMPARATIVE CHARACTERISTICS OF PHARMACODYNAMIC EFFECTS OF ILOPROST AND SILDENAFIL IN PATIENTS WITH COPD AND PULMONARY HYPERTENSION

E. A. Merenkova

Summary

We have studied the influence of iloprost and sildenafil on hypoxemia and hypercapnia grades and evaluated pulmonary circulation, ventilation and diffusion lung capacity in 16 patients with pulmonary hypertension and severe COPD. The comparative group consisted of 12 patients with pulmonary arterial hypertension (idiopathic pulmonary hypertension — 6, systemic connective tissue diseases — 5, congenital heart defects -1). An interval between tests was not less than 2 days.

It was established that sildenafil (20 mg) in comparison with iloprost (10 mcg) possessed stronger vasodilative effect on pulmonary vessels. Use of sildenafil in patients with severe and very severe COPD could lead to an increase of hypoxia despite improvement of pulmonary ventilation and diffusion. This phenomenon could possibly be explained by the shift of ventilation-perfusion balance in zones with reduced ventilation due to pronounced vasodilative effect of sildenafil.

Inhaled iloprost in 10 mcg dose causes no disturbances of ventilation-perfusion balance in patients with severe and very severe COPD. One of the factors that could reduce possible negative influence of iloprost on ventilation-perfusion balance was a decrease of dynamic hyperinflation of lungs, which, in turn, reduced alveolar hypoxia. These results allows us to recommend an administration of iloprost in treatment of patients with COPD and severe pulmonary hypertension.