

CLINICAL AND FUNCTIONAL ASSESSMENT OF LONG-TERM FOLLOW-UP OF PULMONARY THROMBOENDARTERECTOMY

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Objective: to evaluate the long-term follow-up of surgical treatment of patients with chronic thromboembolic pulmonary hypertension.

Methods: from 2004 to 2013 160 pulmonary thromboendarterectomies were performed. Long-term results were analyzed in 41 patients (9 men, 12 women) in the period from 4 to 6 years. Mean age of patients was 48 ± 27 years. To analyse the long-term follow-up we used following data: 6 min walking test, heart failure functional class according to NYHA, mean pulmonary artery pressure and pulmonary vascular resistance according to right heart catheterization and the diameter of the pulmonary artery branches according to computer tomography.

Results: according to 6 min walking test distance was increased 2.8 times from baseline: from $166,7 \pm 105,3$ m to $472,2 \pm 80,0$ m. There was a reduction of mean functional class of heart failure (NYHA) from $3,3 \pm 0,7$ to $0,8 \pm 0,2$. Mean pulmonary artery pressure decreased from $54,0 \pm 23,4$ mm Hg to $25,2 \pm 15,4$ mm Hg. Pulmonary vascular resistance decreased from $639,7 \pm 120,6$ dyn · sec · cm⁻⁵ to $101,4 \pm 89,2$ dyn · sec · cm⁻⁵ in the long term, which means the remodeling of the right ventricle and distal small arterioles. According to computer tomography we marked reduction in the diameter of the pulmonary artery trunk from $35,10 \pm 5,3$ mm to $30,30 \pm 8,6$ mm, which indicates the effectiveness of the surgery and the restructuring of the pulmonary arterial bed.

Conclusions: pulmonary thromboendarterectomy leads to patients clinical and functional status improvement, both in hospital and in the long-term period, as evidenced by an increase of 6 minute walking test distance and reduction of heart failure functional class (NYHA), normalization of hemodynamic parameters. This procedure leads to remodeling of the right ventricle and distal arterioles of the pulmonary circulation as a result of the restructuring of pulmonary arterial bed, which was confirmed by computer tomography.