

Cardiac comorbidity in patients with chronic obstructive pulmonary disease: Diagnosis and economics

Akramova E., Khamitova R.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Aim: To provide a clinical and economic rationale for the comprehensive examination of patients with chronic obstructive pulmonary disease (COPD), by using functional and ultrasound methods for the early detection of cardiac comorbidity. **Subjects and methods:** Three hundred and sixteen patients (33 with COPD, 44 with COPD + hypertension, 73 with COPD + coronary heart disease (CHD), 36 with hypertension, 50 with CHD, 19 with asthma, and 28 with asthma + hypertension) and 33 apparently healthy individuals were examined using 611 indicators obtained directly or by calculation during echocardiography, carotid artery duplex scanning, and 24-hour electrocardiographic (ECG) and blood pressure (BP) monitoring. **Results:** Cardiovascular diseases develop in patients with COPD in its early stages. In cardiac comorbidity, the length of hospital stay increases by 1-1.5 days in patients with COPD; the number of people admitted to hospital more than once every 3 years rises from 14 to 28%; the cost of a pharmacotherapy cycle is 1.35- and 2.95-fold higher when COPD is concurrent with hypertension and CHD, respectively. **Conclusion:** In addition to ECG and spirometry, the management standard for patients with COPD should include echocardiography, 24-hour ECG and BP monitoring, and, according to their results, carotid artery duplex scanning.

Keywords

Cardiac comorbidity, Chronic obstructive pulmonary disease, Clinical and economic analysis, Ultrasound and functional examinations