

COMPUTED TOMOGRAPHY IN THE DIAGNOSIS OF MORPHOLOGICAL CHANGES IN PULMONARY CIRCULATION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Abstract

The aim was to study the features of blood circulation in chronic obstructive pulmonary disease (COPD) patients using computed tomography for the assessment of the morphology of the pulmonary trunk, pulmonary arteries, inferior vena cava and heart ventricular size depending on the severity of the course of the disease, treatment and its terms.

Material and methods. 30 patients with COPD of clinical groups "C" and "D" with severe and extremely severe bronchial obstruction were examined using spirometry and computed tomography (GE "Ligth Speed-16" and Siemens "Sensation-16"). The analysis of the obtained data was performed using K-Pacs viewer software.

Morphological changes in the blood vessels of the pulmonary vascular bed in patients with COPD were evaluated on the basis of the size of the pulmonary trunk, the pulmonary arteries, the inferior vena cava and the size of the ventricles of the heart, depending on the severity of the course of the disease, treatment and its terms.

Results and conclusions. Multi-slice computed tomography is an alternative method for detecting changes in blood circulation in the lungs.

Indirect signs of the development of chronic pulmonary heart disease are: an increase in the diameter of the pulmonary trunk (LS) and the proximal right pulmonary artery (PA) and left PA, inferior vena cava; the size of the ventricles of the heart and their ratio (LV / RV).

The deterioration of the indices after one and a half year of observation was more significant in individuals whose treatment did not meet the requirements of GOLD.

The results of measuring the diameter of the pulmonary artery trunk, despite the absence of a significant difference during the first and second visits in patients of both groups, followed the same direction of change and demonstrated a tendency to increase, especially in COPD patients with COR pulmonale in history.

COPD is often combined with aortic sclerosis and coronary artery sclerosis.

Computed tomography is an informative method for diagnosing hemodynamic disorders in patients with cCOPD.

Key words: chronic obstructive pulmonary disease, computed tomography, pulmonary trunk, pulmonary arteries, ventricles of the heart.

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