

INFLUENCE OF HEMODILUTION ON LUNG DIFFUSION CAPACITY IN PATIENTS WITH COPD

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Summary. We analyzed the indices of hemoconcentration in relation with a grade of severity of a disease in 70 clinically stable COPD patients. A distribution between stages of COPD was as follows: stage 2 — 35 patients, stage 3 — 26 patients and stage 4 — 9 patients. It was established that higher grade of severity of the disease was associated with an increased hematocrit as a result of compensatory hypoxia-induced erythrocytosis.

In 14 clinically stable COPD patients (stage 2 — 2 patients, stage 3 — 8 patients and stage 4 — 4 patients) we studied the influence of hemodilution on lungdiffusion capacity. Single administration of Xylat infusion caused a reduction of hematocrit. Hemodilution effect was more prominent after 7 day course of treatment.

It was registered that the therapy with Xylat caused an improvement of lung diffusion capacity, which, presumably, was a result rheological effect of medication with an improvement of pulmonary microcirculation. The results of the study can suggest that in COPD patients with signs of erythrocytosis for the purpose of gas exchange correction, it is reasonable to combine the broncholytics with the medications, causing hemodilution.

Keywords: *chronic obstructive pulmonary disease, lung diffusion capacity, pulmonary circulation, hemodilution.*