

Diagnostic significance of KL-6 level in patients with community-acquired COVID-19-associated pneumonia in acute and post-acute periods of the pathological process

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Conflict of interest: none

OBJECTIVE. To determine the level of KL-6 in the serum of patients with community-acquired COVID-19-associated pneumonia in different periods of the pathological process and to establish its diagnostic significance.

MATERIALS AND METHODS. We examined 58 patients in different periods of coronavirus disease (COVID-19). The severity of dyspnoea, anamnesis, objective status, KL-6 level, computed tomography data, pulse oximetry, lung ultrasound, spirometry, body plethysmography, and DLco were assessed. Parametric. A clinical case is presented.

RESULTS AND DISCUSSION. In the acute period, the level of KL-6 didn't differ from the control ($p>0.05$). In the early post-acute period, the level of KL-6 was significantly higher than in the control ($p<0.001$) and was observed in every second patient. In the late post-acute period, the level of KL-6 wasn't statistically different ($p>0.05$), but there were patients with elevated levels, which may indicate fibroblast hyperactivity and the initiation of fibrotic changes in the lungs. In subgroup 4, the level of KL-6 was similar to healthy control ($p>0.05$) and indicates that 6-12 months after the onset of the first symptoms of the disease, interstitial lung disorders mostly don't increase, while changes in clinical and functional parameters may be observed.

CONCLUSIONS. The determination of KL-6 levels in the serum of patients with community-acquired COVID-19-associated pneumonia can be used to monitor the severity and duration of immunological changes in the lungs, especially after the critical course of the acute period of the disease.

KEY WORDS: community-acquired pneumonia, COVID-19, post-acute period, KL-6, lung ultrasound, spirometry, body plethysmography, diffusing capacity of the lungs.