

# Somatopsychic disorders in patients with community-acquired pneumonia associated with coronavirus disease (COVID-19)

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**Conflict of interest:** none

**OBJECTIVE.** To determine the categories of patients with community-acquired pneumonia associated with COVID-19, in which somatopsychic disorders are most common in the acute period of the disease, and to establish the degree of expressiveness of these disorders in order to optimize patient management.

**MATERIALS AND METHODS.** 48 patients with community-acquired pneumonia associated with COVID-19 hospitalized in the therapeutic department during the acute period of the disease. Average age – 62.5 (54.0, 68.8); men – 21 (43.7 %), women – 27 (56.3 %).

The examination included general clinical methods, PCR tests for the verification of COVID-19, computer tomography of the chest cavity, pulse oximetry, determination of the levels of C-reactive protein (CRP), D-dimer, assessment of the mental state of patients using the Hospital Anxiety and Depression Scale (HADS).

**RESULTS AND DISCUSSION.** Taking into account the fact that, according to the data of the previous individual analysis, the examined patients had, on the one hand, different degrees of expressiveness of respiratory insufficiency and different levels of laboratory parameters, and, on the other hand, different expressiveness of symptoms of somatopsychic disorders, it was expedient to conduct a cluster analysis for systematization and generalization obtained results.

It was shown that in patients of cluster 2, which included patients with a moderately severe course of the disease, the indicators of the levels of oxygen saturation, CRP and D-dimer in blood serum, as well as the number of lymphocytes in the general blood analysis were statistically significantly better than in patients cluster 1, which included patients with a severe course of the disease. The expressiveness of somatopsychic disorders according to the HADS-anxiety and HADS-depression questionnaires in patients of cluster 2 was statistically significantly lower than in patients of cluster 1. In addition, symptoms of depression of various degrees of severity were found in almost all patients of cluster 1, and in most patients it was combined with increased anxiety of various degrees of severity.

**CONCLUSIONS.** To determine the degree of severity of the course of community-acquired pneumonia associated with COVID-19, not only the area of lung tissue damage according to computer tomography data and the level of oxygen saturation should be used, but additional criteria: levels of CRP, D-dimer and lymphocytes in the peripheral of blood. The moderately severe course of community-acquired pneumonia associated with COVID-19 is characterized not only by a relatively high level of oxygen saturation, but also by low levels of CRP and D-dimer, as well as a normal level of lymphocytes in the peripheral blood. The severe course of community-acquired pneumonia associated with COVID-19 is characterized not only by a relatively low level of oxygen saturation, but also by high levels of CRP and D-dimer, as well as a low level of lymphocytes in the peripheral blood. In patients with community-acquired pneumonia associated with COVID-19, with a low level of oxygen saturation, high levels of CRP and D-dimer, and a normal level of lymphocytes in the peripheral blood in the acute period of the disease, symptoms of depression and increased anxiety are quite often observed, and in half of such patients have moderate or severe symptoms. This may require examination of the mental status of such patients at least through questionnaires, as well as correction of these disorders during the acute period of the disease and during the rehabilitation stages.

**KEY WORDS:** community-acquired pneumonia associated with COVID-19, acute period of COVID-19, oxygen saturation, C-reactive protein, D-dimer, level of lymphocytes in the blood, somatopsychic disorders, depression, anxiety.