

IMAGING AND LABORATORY DIAGNOSTICS RESULTS AS PREDICTORS OF THE DISEASE IN COVID-19 PATIENTS.

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COVID-19 is a progressing disease which may result in respiratory failure requiring hospitalization and oxygen supplementation. The aim of the study was to assess the significance of chest computed tomography (CT) images and laboratory test results obtained on admission to the hospital for the severity of COVID-19.

A retrospective analysis of the data of patients hospitalized at the Pulmonology Department of the COVID-19 Temporary Hospital in Poznań from February 2021 to March 2022 was carried out. Upon admission to the ward, patients had a laboratory test and CT performed.

The study group consisted of 282 patients aged 60 ± 15 years. Men accounted for 68.1% of patients. The average involvement of the lung parenchyma by inflammatory changes was 40%. Lung involvement strongly correlated with the proportion of time requiring oxygen supplementation during hospitalization ($r=0.65$, $p<0.001$), levels of C-reactive protein ($r=0.51$, $p<0.001$) and activity of aspartate aminotransferase ($r=0.48$, $p<0.001$). Patients who died or required intensive care treatment, continuous positive airway pressure (CPAP)/ bilevel positive airway pressure (BPAP) ventilatory support, high-flow oxygen therapy, had significantly greater involvement of the lung parenchyma.

Preliminary results of laboratory tests and chest CT scans can predict the severity of COVID-19 and the type of therapy.