

Ground-glass opacity on chest computed tomography in a young, athletic man with coronavirus disease 2019–related pneumonia without hypoxemia

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Coronavirus disease 2019 (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a virus that has so far killed over 125 000 people and infected around 2 million people worldwide. Coronavirus disease 2019 is characterized by a wide spectrum of clinical symptoms such as fever, dry cough, dyspnea, sore throat, nausea, and vomiting. However, the greatest threat to the patient is the rapid progression of respiratory disorders, leading to acute respiratory failure and death. The Centers for Disease Control and Prevention (CDC) warn that some individuals are at greater risk of deterioration of COVID-19 symptoms that can lead to hospitalization and the need for ventilation. This group includes people over the age of 65 years and those with respiratory diseases, cardiac diseases, and diabetes.¹

Here, we present the case of COVID-19 in an athletic 28-year-old Polish man with no underlying medical conditions, no addictions, and a body mass index of 21.37 kg/m², who returned to Poland from Switzerland on March 14, 2020. He was admitted to the Department of Infectious Diseases on March 23, 2020, with a 2-day history of fever of up to 39 °C, productive cough, tachycardia of up to 110 bpm, and slight dyspnea on exertion (oxygen saturation, 97%). No physical abnormalities were found. Biochemical tests showed leukopenia (white blood cell count, $3.31 \times 10^3/\mu\text{l}$; reference range, $4\text{--}10 \times 10^3/\mu\text{l}$), thrombocytopenia (platelet count, $142 \times 10^3/\mu\text{l}$; reference range, $150\text{--}420 \times 10^3/\mu\text{l}$), and slightly elevated alanine aminotransferase levels (66 U/l, reference range <41 U/l). Other test results including lactate dehydrogenase levels (193 U/l; reference range, 135–225 U/l) and C-reactive protein concentration (0.73 mg/l; reference range <5 mg/l) were normal.

The influenza test result was negative. The patient's nasopharyngeal swab was positive for SARS-CoV-2. There were no abnormalities on chest X-ray. Owing to the clinical presentation and a positive SARS-CoV-2 test, chest computed tomography was performed. It revealed a ground-glass opacity in the lower lobe of the right lung (FIGURE 1). Azithromycin (500 mg daily) and chloroquine (500 mg daily) were administered, and the symptoms gradually subsided. After 9 days of hospitalization, the patient was discharged home in a good general condition, without any symptoms.

The described case of a patient with COVID-19 contradicts the reports on a mild course of COVID-19 in young, athletic, and nonsmoking people with no underlying medical conditions. The biochemical abnormalities noted on

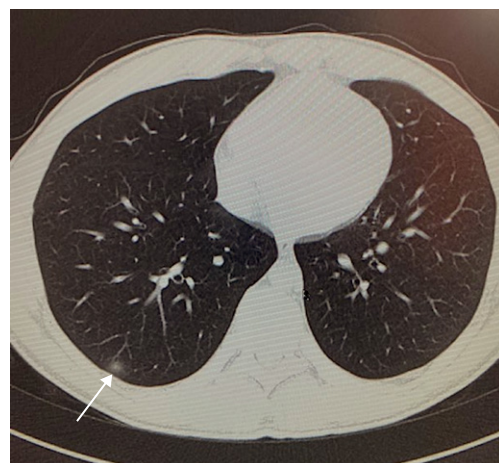


FIGURE 1 Chest computed tomography showing an inflammatory infiltrate (arrow) in the lower part of the right lung in a patient with coronavirus disease 2019

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admission (leukopenia, thrombocytopenia, and slightly elevated alanine aminotransferase levels) may serve as specific biomarkers of COVID-19 severity.^{2,3} As the X-ray examination is characterized by lower sensitivity to identify some of COVID-19 manifestations in the lungs in the early course of this disease, chest computed tomography appears to be a very helpful diagnostic tool.⁴ Our study confirms that chloroquine and azithromycin may be effective in the treatment of COVID-19 in young people, as indicated in other studies.⁵

ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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