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CLINICAL IMAGE

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Can the Omicron variant of COVID-19 cause pneumonia in young patients without risk factors?

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Abstract

The Omicron variant (B.1.1.529) of coronavirus disease 2019 (COVID-19) has rapidly spread worldwide since December 2021. In daily medical practice, pneumonia does not often appear as a complication of the Omicron variant. We present a case of COVID-19 pneumonia by the Omicron variant in young patients without obvious risk factors.

KEYWORDS

computed tomography, COVID-19, Omicron, pneumonia, young patients

1 | CASE PRESENTATION

A 19-year-old woman who was vaccinated twice 4 months ago had high fever (maximum 39.5°C), cough, and loss of appetite for 4 days. She had well-controlled asthma without treatment. She was hospitalized with a diagnosis of COVID-19 (Omicron variant) confirmed by reverse transcription-polymerase chain reaction (RT-PCR). Investigations revealed oxygen saturation (SpO_2) of 98% (room air); respiratory rate, 18/min; low white blood cell count, $2.4 \times 10^3/\mu L$, lymphocyte, 30.3%; and mildly elevated C-reactive protein (CRP) level, 0.73 mg/dL. Chest computed tomography (CT) showed bilateral multiple ground glass opacities (Figure 1). Administration of remdesivir improved her symptoms within 5 days.

Lung damage from the Omicron variant is generally milder than that from other variants.[1] Hence, we tend to believe that the Omicron variant rarely causes pneumonia. However, this case suggests that the Omicron variant can cause pneumonia even in young vaccinated patients without risk factors for progression to severe disease. If patients have persistent high fever, then chest CT should be performed to administer appropriate treatment.

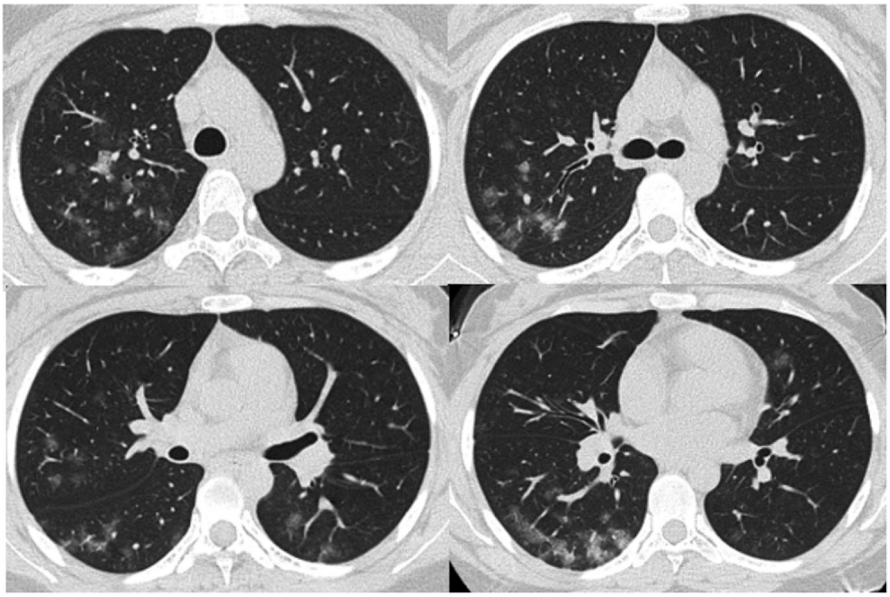

FIGURE 1 Chest computed tomography showing bilateral multiple ground glass opacities with subpleural and peribronchial distribution

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Noriaki Ito wrote the initial draft of the manuscript. Yoshihiro Kitahara, Kei Miwata, Mafumi Okimoto, and Toshiro Takafuta suggested improvement. All authors read and approved the final manuscript.

ETHICAL APPROVAL

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

CONSENT

Published with written consent of the patient.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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