

Legionella Pneumonia Immediately after Recovery from COVID-19

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Abstract

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Abstract

We experienced a patient with *Legionella* Pneumonia immediately after discharge from COVID-19. It is very important to accurately detect pathogens of infectious diseases particularly in the time of COVID-19 pandemic.

Key Clinical Message

We experienced a patient with Legionella Pneumonia immediately after discharge from COVID-19. It is very important to accurately detect pathogens of infectious diseases particularly in the time of COVID-19 pandemic.

KEYWORDS

COVID-19, SARS-CoV-2, *Legionella* pneumonia, *Legionella pneumophila*, serogroup 5

CLINICAL IMAGE

An 83-year-old woman, living alone, visited our emergency department with consciousness disorder, high fever (39.3°C), and hypoxemia. She had been discharged only 5 days earlier after 10 days of hospitalization for COVID-19. Examination data revealed high inflammatory responses with acute kidney injury. Chest X-ray and CT demonstrated features of severe pneumonia, mainly in the right lobe (Figure 1), which are obviously distinct from those of COVID-19 (Figure 2). The SARS-CoV-2 antigen was negative, but urinary *Legionella* antigen was positive; *Legionella* pneumonia was diagnosed. Her sputum disclosed *Legionella pneumophila* (serogroup 5). Treatment with antibiotics was successful. The patient gradually recovered and was transferred to a long-term hospital on day 68. In addition, *Legionella pneumophila* was also detected in her daily reused bathtub water. This very common lifestyle in Japan can be a hotbed of *Legionella* infection in this case. Furthermore, increasing concerns on the Legionnaires' disease are warned in association with release or relaxation from lockdown after the burning down of COVID-19 pandemic.^{1,2} Infectious diseases such that caused by *Legionella* should also be considered for patients after discharge.

CONSENT STATEMENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy, and the study was approved by the Ethics Committee in Saka General Hospital (No. 21-9-21).

DATA AVAILABILITY

No data available in this case report.

ACKNOWLEDGMENTS

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CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

DJ, HT, SU and HW substantially contributed to the diagnosis and clinical care of the patient. DJ wrote the draft of the manuscript, and DJ and AH critically revised it for important intellectual content.

FUNDING INFORMATION

None.

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Legend to Figures

FIGURE 1. On admission with *Legionella* pneumonia. Results of chest X-ray and CT scan demonstrated acute inflammatory changes, mainly in the right lobe.

FIGURE 2. On the previous admission with COVID-19 infection. Results of chest X-ray and CT scan showed ground-glass opacities bilaterally with peribronchovascular distribution.

Figure 1

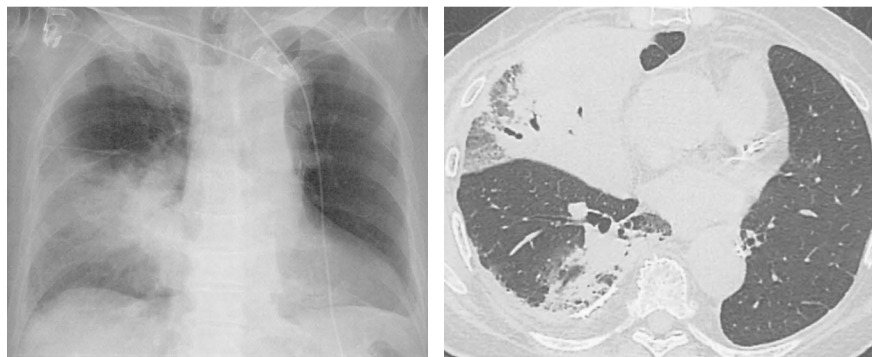


Figure 2

