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Correspondence

Re-emergence of SARS-CoV2 in a discharged COVID-19 case

Dear Editor:

Since December 2019, novel coronavirus (SARS-CoV2) infected disease (now nominated as COVID-19) has soon emerged as a global health concern.¹ However, information

on the course of the disease is still limited. Here we report a case of COVID-19 who met the criteria for discharge but was tested positive for SARS-CoV2 again 10 days after discharge.

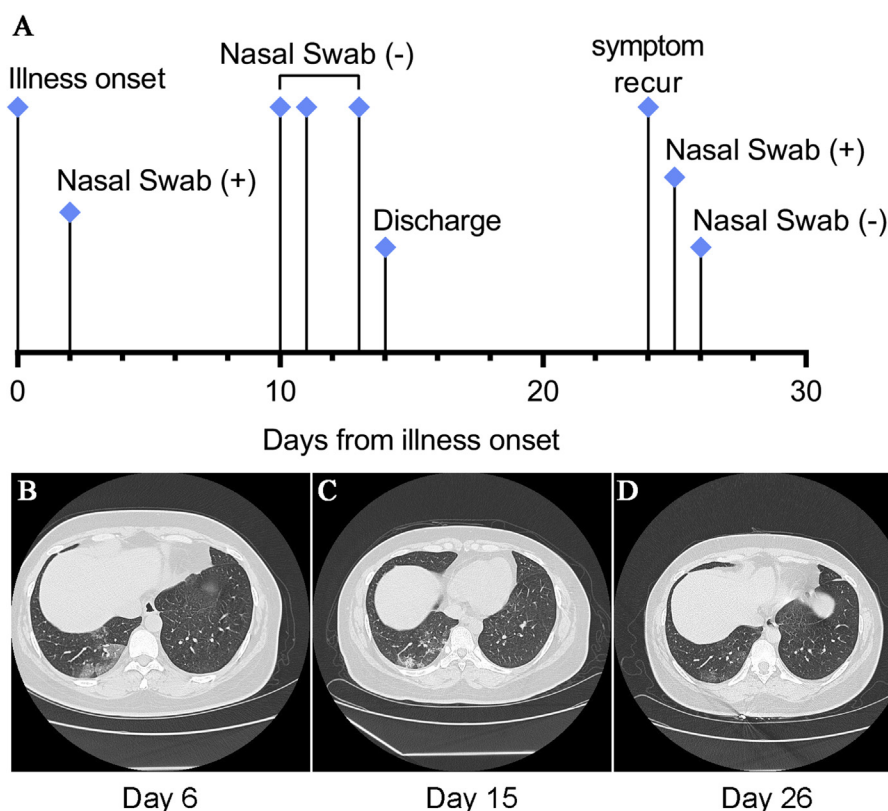


Figure 1. Clinical course of the patients. (A) Timeline for the clinical course in this patient and detection for SARS-CoV2; “+” and “-” indicates a positive or negative results for SARS-CoV2 by real-time RT-PCR assay, respectively; (B)–(D): Images of chest CT finds on day 6 (B), day 15 (C) and day 26 (D).

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The patient is a 40-year-old woman who had no baseline comorbidities, her disease course was illustrated in Fig. 1A. She developed fever up to 37.8 °C on January 25th without other symptoms. 2 days later, she felt shortness of breath and developed diarrhea, and then went to local hospital. There her nasal swab was obtained, and SARS-CoV2 was tested positive with real-time reverse-transcriptase polymerase-chain-reaction (RT-PCR) assay targeting ORF1ab and N gene of virus genome. The patient was then transferred to our centre on day 5 of illness onset.

Symptoms in this patient was mild throughout the hospitalization period. The patient received treatment including interferon α 2b aerosol inhalation (5 million unit daily, day 5 - day 16), lopinavir/ritonavir tablets (400mg/100 mg, twice daily, day 7 - day 16) and supportive care in a negative-pressure isolation ward. On day 8, patient had a mild diarrhea (4 stools/day), but resolved soon after treatment with montmorillonite powder. Body temperature of the patient had returned normal since day 7. Oxygen saturation remained above 95% with low-flow (2–3L/min) oxygen supply.

Initially, the patient had slight leukopenia and lymphopenia (0.71G/L, on day 5), but recovered soon (1.16G/L, on day 9). Chest computed tomography (CT) showed ground glass opacities (GGO) in the right lung at early phase (Fig. 1B), and then gradually changed to GGO with consolidation and fibrosis (Fig. 1C).

By day 16, body temperature of this patient had retained normal for 9 days, and she complained no symptoms. RT-PCR examination for SARS-CoV-2 was performed on day 10, 11 and 14, and all 3 tests were negative. The patient was then discharged from hospital and was instructed to receive a quarantine at home. However, on day 24, the patient felt chest pain and had cough and sputum production. Her symptom was not relieved on day 25, so her nasal swab was obtained and the test for SARS-CoV-2 was positive again. The patient was admitted to our centre on day 26. Chest CT scan on day 26 showed absorption on lung disease (Fig. 1D). The observation of the patients is still ongoing. Family member of this patient has been ruled out from infection.

Previous study on SARS-CoV showed that virus load could be detected for more than 10 weeks after disease onset.² It is reasonable to suppose that SARS-CoV2 may also shed from patients for a prolonged duration. As the viral load in a sample may fluctuate during disease course,³ false negative results may also occur. Although it is not clear whether this positive finding is associated with disease transmission potential, given the disastrous outcome of disease transmission, longer observation period should be taken into consideration for COVID-19 patients.

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Mi Zhou
Qingfeng Li
Lin Cao
Yingfen Liu
Yi Zha

Department of Laboratory Medicine, Public Health Clinical Centre of Chengdu, Chengdu, China

He Xie

Department of Disease Prevention, Public Health Clinical Centre of Chengdu, Chengdu, China

Mingquan Zeng

Department of Critical Care Medicine, Public Health Clinical Centre of Chengdu, Chengdu, China

Xuemei Shi

Department of Outpatient, Public Health Clinical Centre of Chengdu, Chengdu, China

Yueqing Gao

Liqu Xie

Department of Radiology, Public Health Clinical Centre of Chengdu, Chengdu, China

Mei Luo

Yilan Zeng*

Department of Infectious Disease, Public Health Clinical Centre of Chengdu, Chengdu, China

*Corresponding author. Public Health Clinical Centre of Chengdu, 377# Jing ming Road, Jin Jiang District, Chengdu, China. Fax: +86 028 64369118.

E-mail address: 2499081791@qq.com (Y. Zeng)

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