

Discordance Between Clinical Status and Chest X-Ray (CXR) in COVID-19 Patient with Asymptomatic Transmission in Jakarta

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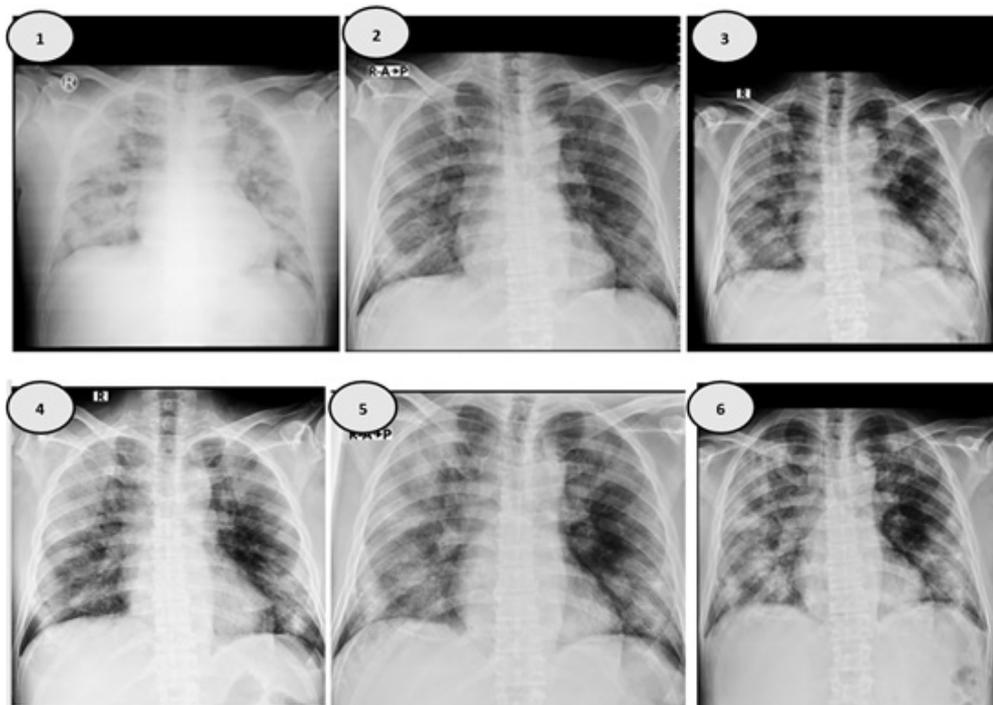


Figure 1. Series of CXRs starting from day 1 up to 7 of hospitalization. CXRs at day 1 (1), day 3 (2), day 4 (3), day 5 (4), day 6 (5), and at day 7 of hospitalization (6), each. According to the CXRs, the patient's pneumonia and infiltration improved.

Coronavirus Disease 2019 (COVID-19) symptoms are highly various in each patient. Patients with COVID-19 may show severe symptoms with severe pneumonia and ARDS, mild symptoms resembling simple upper respiration tract infection, or even completely

asymptomatic.¹ Few are known about the natural progression of COVID-19 and whether its pneumonia follow the pattern of pneumonia caused by other microorganism. Chest X-ray (CXR) is an affordable and simple radiology modality routinely used to monitor patient with

COVID-19. It is not known whether CXR is useful for monitoring COVID-19 patient.

Male, 55 years-old, Mr. F, experienced symptoms of respiratory disease. On the first day of symptoms, the patient developed fever of 38 °C, gradually followed by dry cough and sore throat. On day 7 of symptoms, patient experienced mild dyspnea. The patient underwent CXR leading to the diagnosis of severe pneumonia. Hence, the patient was admitted to emergency room at department of pulmonology of the Persahabatan Hospital, Jakarta, on day 8 of symptoms (day 1 of hospitalization).

The patient had no history of contact with confirmed or presumed COVID-19 patients, nor any known travel history. Patient's wife had close contact to confirmed COVID-19 patients. The wife was reported to be healthy with no symptoms. However, she refused to be tested for COVID-19.

During 8 days of hospitalization, the patient received CXR daily. (**Figure 1**) There was a gradual improvement of lung lesion seen on CXR starting from the first day of hospitalization. However, patient clinically deteriorate and suffered from severe dyspnea on the fourth day of hospitalization.

The patient required oxygen therapy delivered through high flow nasal canule and Optiflow. In addition, the patient was treated with Oseltamivir 2 x 75 mg, chloroquin 2 x 500 mg, Levofloxacin 1 x 750 mg, Vitamin C 2 x 1000 mg, Vitamin B1 1 x 100 mg, Vitamin B6 1 x 100 mg, and Vitamin B12 1 x 200 mcg. The patient was discharged after 15 days of hospitalization following two negative RT-PCR COVID-19 tests.

It is important to note that COVID-19 symptoms are highly variable. Patients may show severe or mild symptoms, or just be asymptomatic.² Ye, et al.² reported about case series including a familial cluster with asymptomatic transmission. In our study, patient

never had contact with COVID-19 patient. In this case, wife might acted as asymptomatic carrier for our patient.

CXR finding in this patient does not correlate well with improvement of clinical condition. On the day 8 of symptoms (day 1 of hospitalization), CXR showed a wide bilateral infiltrate. However, patient only experienced mild dyspnea. CXR was conducted on the first day of hospitalization and started improving on day 2 and the following day. However, the patient continued to clinically deteriorate as well as developed severe dyspnea requiring higher level of oxygen therapy on day 4 of hospitalization. This discordance between CXR finding and clinical status may be caused by cytokine storm leading to acute respiratory distress syndrome (ARDS).³ It may also caused by fibrosis formation that develop at the late stage of COVID-19 infection.⁴

Asymptomatic transmission is possible in COVID-19. Clinician attending COVID-19 patient must rely on monitoring the clinical presentation of the patient and not solely on CXR improvement.

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