

Massive bilateral pneumothorax associated with COVID-19 pneumonia

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Report

On March 11th, 2020, a 55-year-old man with an unremarkable medical history presented to our Emergency Department for a falls following syncope with right thoracic trauma. In the previous days, the patient reported illness started with a fever and followed by a dry cough. Oxygen saturation was 95%. X-ray was performed with the evidence of two rib fractures. No signs of pneumothorax or pneumonia were detected (Figure 1). The patient was discharged advising isolation at home for the possible risk of coronavirus infection due to typical symptoms (fever and cough) in a high-risk area (Lombardy, Italy).

On March 15th, 2020, the patient was readmitted to the emergency department in critical condition. He presented severe dyspnea and oxygen saturation was 65%. CT-scan was performed showing massive bilateral pneumothorax with pneumomediastinum (Figure 2). After bilateral chest tube insertion oxygen saturation was 89%. Blood samples showed severe hypoxia (pO₂ 39 mmHg pCO₂ 34 mmHg). White blood cell count was normal (9.400 x mm³) with severe lymphocytopenia (600 x mm³). LDH was 440 U/L and CPK was 660 U/l. Nasopharyngeal swab specimen for COVID-19 was collected and the patient was hospitalized. A chest CT scan was repeated the following day showing severe bilateral pneumonia (Figure 3). The nasopharyngeal swab specimen resulted positive for COVID-19. The patient was treated with a high flux oxygen mask, hydroxychloroquine and antibiotic prophylaxis with ceftriaxone and clarithromycin. In the following days due to desaturation patient was treated with continuous positive airway pressure (CPAP). After 3 weeks the patient was discharged from the ward and transferred to a rehabilitation unit.

Pneumothorax was found in 1-2% of patients with COVID-19 in epidemiological studies of the Chinese population of Wuhan [1-2]. In this case, bilateral pneumothorax seems more likely to be attributed to pneumonia and cough rather than fractures that were compound and monolateral. We recommend performing a CT scan of the re-expanded lung in patients with pneumothorax fever and cough in areas endemic to coronavirus infection.

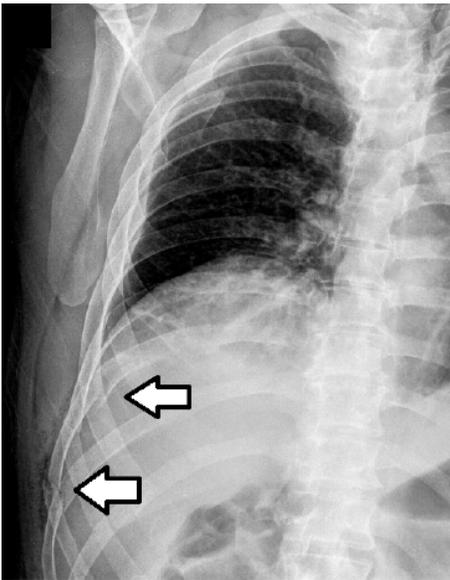


Figure 1: x-ray: evidence of two rib fractures

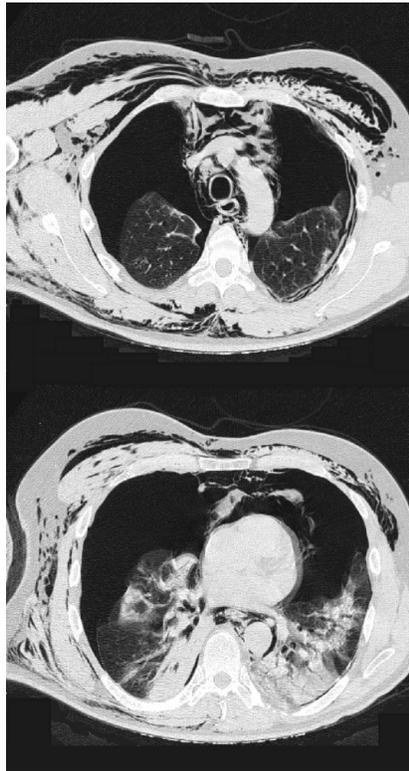


Figure 2: ct scan: bilateral pneumothorax with pneumomediastinum



Figure 3: ct scan: severe bilateral pneumonia

References

1. Yang X, Yu Y, Xu J et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *Lancet Respir Med.* 2020.
2. Chen N, Zhou M, Dong X et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. *Lancet.* 2020.

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