

Large saddle pulmonary embolism in a woman infected by COVID-19 pneumonia

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A 50-year-old woman was admitted to the Accident & Emergency department of Baqiyatallah hospital in Tehran (Iran), with symptoms of fever, dyspnoea, dry cough, and fatigue for the past 4 days.

At physical examination, she had enhanced body temperature (38.1 °C), a heart rate of 100 b.p.m., a respiratory rate of 22 breaths/min, and O₂ saturation of 92%. Laboratory tests revealed an increased white blood cell count (WBC = $13.5 \times 10^3/\mu\text{L}$), increased platelets (PLT = $475 \times 10^3/\mu\text{L}$), polynuclear (80%); partial thromboplastin time (PTT = 5 s), PT_{Lab}/INR_{Lab} (=1.31 s); prothrombin test (PT = 18.2 s); and D-dimer (10 ng/mL). Further elevated values were found for C-reactive protein (CRP = 30.3 mg/L), erythrocyte sedimentation rate (ESR = 57 mm/h); serum glutamic-pyruvic transaminase (SGPT = 108 μL); lactate dehydrogenase (LDH = 983 μL); and amylase serum (278 μL). Reverse transcription-PCR for COVID-19 was positive and the patient was given oxygen and treated with hydroxychloroquine, dimenhydrinate, and naproxen.

On day 2 after admission, a chest CT scan without contrast evidenced bilateral diffuse multiple patchy and subpleural consolidations with left pleural effusion—radiological findings consistent with COVID-19 pneumonia (Panel A). On day 3 following admission, the patient suddenly developed severe dyspnoea, with O₂ saturation decreasing to 74%. A chest computed tomography angiography (CTA) was performed, which revealed a large saddle pulmonary embolism in the main pulmonary artery (MPA), right pulmonary artery (RPA), and left pulmonary artery (LPA) (Panel B). From day 3 of hospitalization, the patient received anticoagulation therapy with heparin and antithrombotic treatment.

The patient remained in hospital for a further 7 days before being discharged in stable condition, with O₂ saturation increased to 98%, body temperature of 37.2 °C, negative PCR, and normal laboratory tests.



