

## Images in Clinical Tropical Medicine

### Peribronchial Consolidation with Surrounding Ground-Glass Opacity in COVID-19 Pneumonia: 3D Reconstruction of a Chest Computed Tomography

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A 54-year-old man presented with a 5-day fever, cough, dyspnea, and chest pain. Physical examination revealed bilateral crackles on lung auscultation; temperature was 39°C. C-reactive protein was 27.2 mg/L (normal range: 0–5 mg/L) and serum lactate level was 274 U/L (normal range: 135–225 U/L); other blood tests showed normal results. COVID-19 was detected in two oropharyngeal swab samples by RT-PCR on consecutive days; *Legionella* and *Streptococcus pneumoniae* urinary antigens and PCR for other respiratory viruses on nasopharyngeal swabs were all negative. A bronchoalveolar lavage excluded pulmonary aspergillosis. On day 3, the patient developed severe dyspnea with decreased oxygen saturation (90%). Unenhanced chest computed tomography (CT) imaging showed diffuse bilateral peribronchial consolidations surrounded by ground-glass opacities (Figures 1 and 2).

The typical CT pattern of COVID-19 pneumonia consists of ground-glass opacities (GGO) with bilateral and peripheral distribution.<sup>1</sup> However, less common imaging findings have also been reported. A pattern of peribronchial infiltrate with surrounding GGO is not well described in COVID-19, let alone to this extent.<sup>2</sup> Radiologists should be aware of the wide spectrum of CT manifestation of this infection.

Received May 3, 2020. Accepted for publication May 7, 2020.

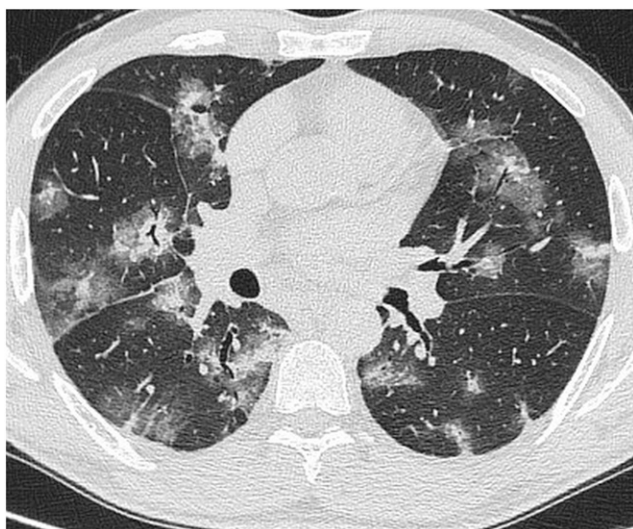


FIGURE 1. Chest computed tomography showing bilateral nodules and consolidations, surrounded by ground-glass opacities, and resulting in a halo sign, with prevalent peribronchovascular distribution. Air bronchograms are bilaterally recognizable.

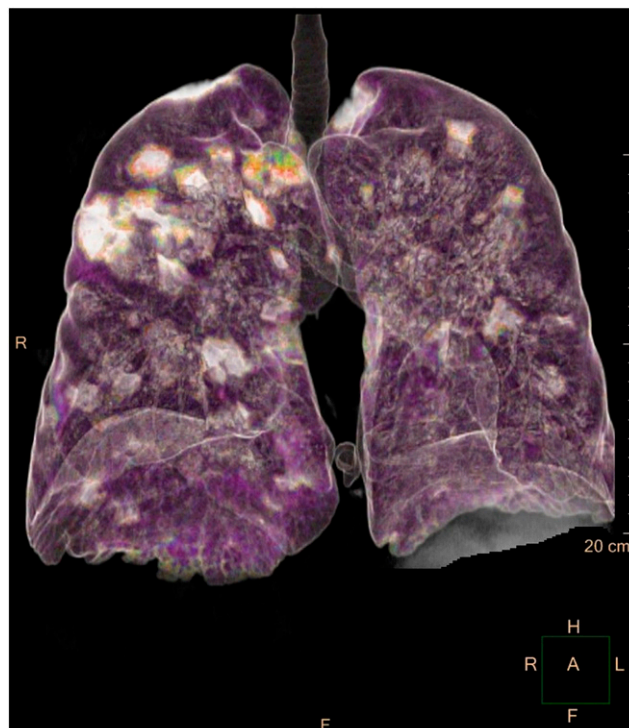


FIGURE 2. Volume-rendered three-dimensional reconstruction chest CT image shows the presence of bilateral opacities, with prevalent peribronchovascular distribution and sparing of the peripheral lung zones.

Published online May 14, 2020.

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