

SARS-CoV-2 Pneumonia: Initial Hypoxemia and Evolution to Bronchiectasis

Pneumonia a SARS-CoV-2: Hipoxemia Silenciosa Inicial e Evolução para Bronquiectasias

Ana Gorgulho^{1*}, Maria Margarida Andrade¹, Beatriz Fernandes¹, Ana Maria Grilo¹

*** Corresponding Author/Autor Correspondente:**

Ana Gorgulho [ana.carmo.gorgulho@gmail.com]

Av. Brigadeiro Victor Novais Gonçalves, 2755-009 Alcabideche, Portugal

Keywords: Bronchiectasis; Coronavirus Infections; COVID-19; Hypoxia; SARS-CoV-2

Palavras-chave: Bronquiectasias; COVID-19; Hipoxia; Infecções por Coronavírus; SARS-CoV-2

Severe cases of COVID-19 can progress to acute respiratory distress syndrome (ARDS) and death. Chest radiography and computed tomography (CT) help to identify other underlying causes of ARDS such as superimposed bacterial pneumonia or congestive heart failure, although findings are frequently nonspecific.¹

In acute exudative phase of ARDS, within the first week, CT demonstrates diffuse ground glass opacities in a posterior and basal predominance, and crazy-paving pattern. In a subsequent phase of ARDS consolidations may develop with reversible bronchiectasis and in the late phase of ARDS, more than two weeks after onset, CT images can show signs of fibrosis, with architectural distortion, reticulation, and traction bronchiectasis.²

On this case a 67-year-old woman, with no history of pulmonary disease, was admitted at our emergency department with cough and feeling of tiredness. The patient was orientated, able to walk, talk, and did not appear severely ill. The blood pressure and heart rate were within normal range but oxygen saturation was 75% on room-air and blood gas analysis revealed a pO₂ of 34 mmHg, with no acidosis. The reverse transcriptase polymerase chain reaction (RT-PCR) for SARS-CoV-2 was

positive. The chest-CT showed extensive bilateral ground-glass opacities (Fig. 1).

The situation worsened rapidly into severe ARDS with need for mechanical ventilation for 21 days. The patient was treated with hydroxychloroquine, antibiotics assuming bacterial co-infection and tocilizumab, according to the best knowledge at that time, even though it does no longer represent the current treatment protocols.

On the 30th day of hospital stay, the CT scan was repeated (Fig. 2). It showed a progression for fibrosis with multiple bronchiectasis.

After 37 days of hospital-stay the patient was discharged with no need for supplemental oxygen but still with complaints of shortness of breath for mild exertion.

Bronchiectasis are progressive, irreversible bronchial dilations that can have multiple etiologies, including post-infection. The long-term consequences of COVID-19 are still a mystery, as there has been not enough time to access individuals at a long-term. There have been already some case reports^{3,4} describing bronchiectasis but there is a lack of multicenter studies to further acknowledge this complication.

1. Department of Internal Medicine, Hospital de Cascais Dr. José de Almeida, Cascais, Portugal.

Received/Recebido: 02/11/2020 • Accepted/Aceite: 12/12/2020 • Published/Publicado: 30/12/2020

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ORCID ID: 0000-0002-2031-2357

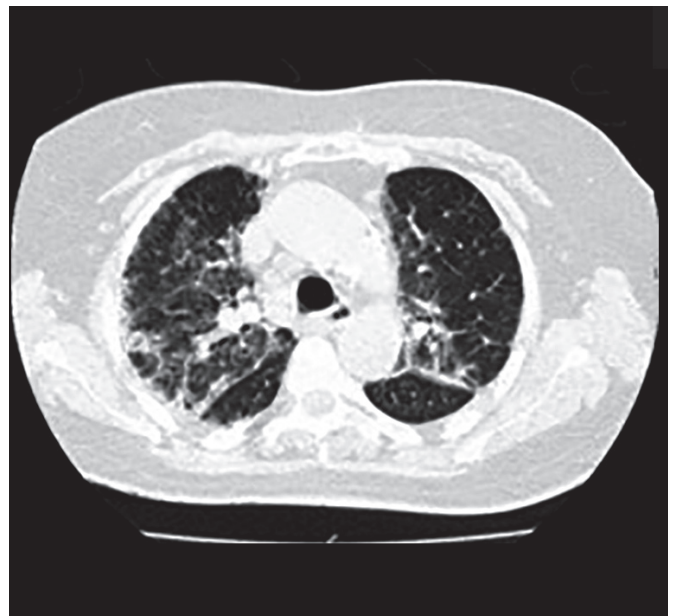
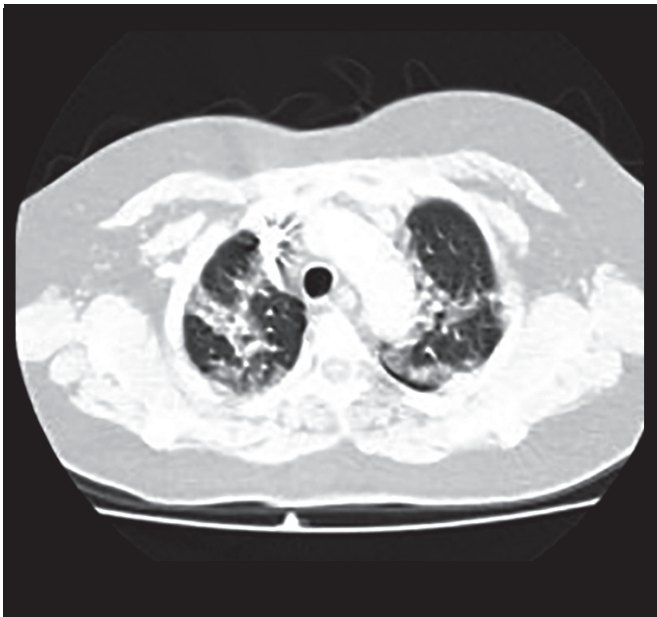


Figure 1. Chest CT on admission showing extensive bilateral ground-glass opacities.

Figure 2. Chest-CT reevaluation after 30 days showing evolution to post-infectious bilateral bronchiectasis.

Responsabilidades Éticas

Conflitos de Interesse: Os autores declaram a inexistência de conflitos de interesse na realização do presente trabalho.

Fontes de Financiamento: Não existiram fontes externas de financiamento para a realização deste artigo.

Confidencialidade dos Dados: Os autores declaram ter seguido os protocolos da sua instituição acerca da publicação dos dados de doentes.

Consentimento: Consentimento do doente para publicação obtido.

Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

Ethical Disclosures

Conflicts of Interest: The authors have no conflicts of interest to declare.

Financing Support: This work has not received any contribution, grant or scholarship.

Confidentiality of Data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Patient Consent: Consent for publication was obtained.

Provenance and Peer Review: Not commissioned; externally peer reviewed.

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