








Hemophagocytic syndrome: a potential COVID-19 complication

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A 62-year-old male smoker who was an alcoholic and had diabetes was being treated for mediastinitis after surgical myocardial revascularization when he presented with worsening of the respiratory pattern despite overall improvement, requiring endotracheal intubation. The patient underwent a CT scan of the chest that showed findings consistent with COVID-19 (Figures 1A and 1B), which was later confirmed by RT-PCR. Seventeen days after the diagnosis of COVID-19, the patient presented with pancytopenia and increased levels of ferritin and IL-2 receptor. Hemophagocytic syndrome (HPS) was therefore suspected. A myelogram confirmed the diagnosis of HPS. Treatment consisted of i.v. immunoglobulin for two days. Thirteen days after the diagnosis of HPS, the patient experienced decreased oxygen saturation and tachypnea. A new CT scan of the chest showed

new cavitating pulmonary lesions, superimposed on the pulmonary findings of COVID-19 (Figures 1C and 1D). Bronchoscopy revealed grossly necrotic tissue and bronchial infection with *Aspergillus fumigatus* (Figure 1E). The patient was started on anidulafungin in an attempt to contain the fungal infection; however, given the severity of his condition, he died three days after treatment initiation.

HPS is a rare and severe complication characterized by fever, hepatosplenomegaly, cytopenia, and activated macrophages in hematopoietic organs. It is often related to infectious diseases, and it can increase the risk of developing opportunistic infections.⁽¹⁾ New evidence indicates that HPS can occur in the context of COVID-19,^(2,3) carrying an ominous prognosis.

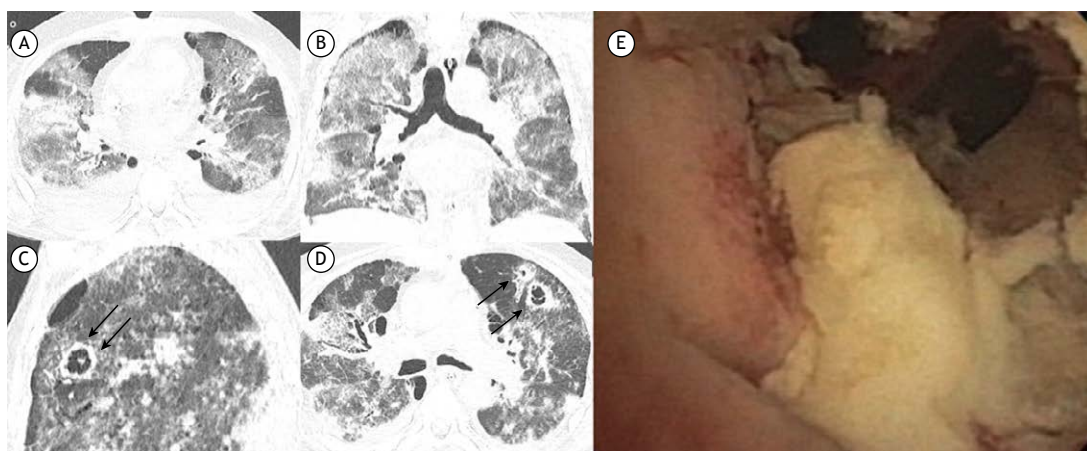


Figure 1. In A and B, respectively, axial and coronal CT scans of the chest showing extensive bilateral ground-glass opacities, associated with fine reticulation and small foci of consolidation, consistent with COVID-19. Note also bilateral pleural effusions. In C and D, respectively, sagittal and axial CT images of the chest showing cavitated pulmonary lesions (arrows) in the left upper lobe, superimposed on the findings of COVID-19. In E, bronchoscopic findings of grossly necrotic tissue and yellowish secretion, suggesting fungal colonization.

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