



## Peripheral consolidation/ground-glass opacities

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A 27-year-old HIV-positive male-to-female transsexual patient presented with a two-day history of progressive dyspnea. A CT scan of the chest showed diffuse ground-glass opacities predominantly located in the lung periphery (Figure 1).

Although any condition causing airspace filling can result in peripheral consolidation/ground-glass opacities, diseases in which consolidation/ground-glass opacities are predominantly located in the lung periphery include influenza A (H1N1) pneumonia, eosinophilic pneumonia, organizing pneumonia, fat embolism syndrome, and silicone embolism syndrome. Given that in many cases CT findings overlap among different diseases, correlation with clinical and laboratory findings will help narrow the differential diagnosis.

Common clinical findings in influenza A (H1N1) pneumonia include fever, cough, dyspnea, myalgia, headache, and hypotension. Although most patients present with mild symptoms, a small proportion of patients present with severe symptoms. Common laboratory abnormalities include lymphopenia, thrombocytopenia, elevated serum lactate dehydrogenase levels, elevated C-reactive protein levels, and elevated serum creatine kinase levels.<sup>(1)</sup>

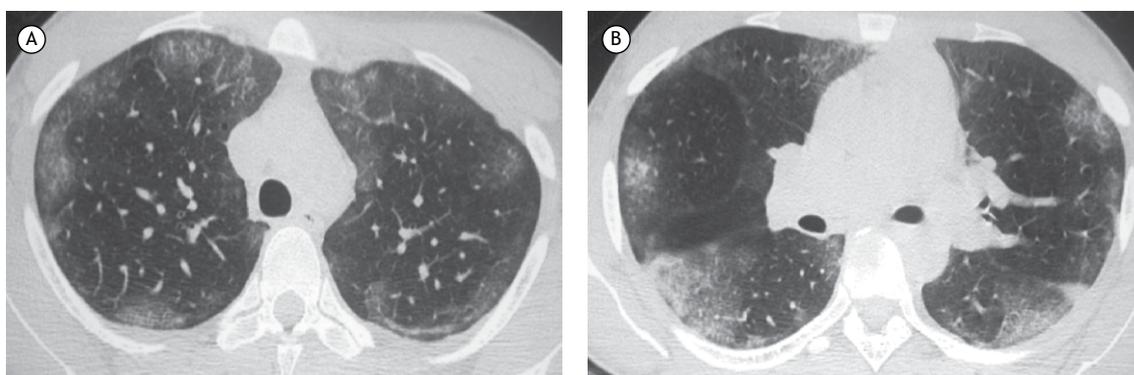
The signs and symptoms of eosinophilic pneumonia are nonspecific and include dry cough, dyspnea, and, less frequently, malaise, myalgia, night sweats, chills, and pleuritic chest pain. The diagnosis of eosinophilic pneumonia is based on the presence of peripheral or BAL

fluid eosinophilia and the exclusion of other diseases that can present with pulmonary infiltrates and eosinophilia.<sup>(2)</sup>

The diagnosis of organizing pneumonia is challenging because clinical, radiological, and laboratory findings are nonspecific. Organizing pneumonia can be idiopathic or secondary to infectious causes, iatrogenic causes (including medication and radiation therapy), and autoimmune diseases, among others. A definitive diagnosis of organizing pneumonia is based on histopathological evidence.<sup>(3)</sup>

Fat embolism refers to fat emboli in the pulmonary arteries (typically from bone marrow) after long bone fractures, orthopedic surgery, or cosmetic surgery (liposuction). Findings suggestive of fat embolism syndrome include respiratory symptoms, confusion, and petechiae in the conjunctiva, neck, or chest. Clinical and radiological manifestations typically occur within 24-48 h after the causative procedure.<sup>(4)</sup>

Our patient had received a liquid silicone injection into the buttocks one day before the onset of symptoms. A BAL revealed pulmonary hemorrhage and macrophages containing silicone vacuoles, thus confirming the diagnosis of silicone pulmonary embolism. Silicone pulmonary embolism is a relatively rare and potentially fatal condition that is largely due to subcutaneous injection of liquid silicone for cosmetic purposes.<sup>(5)</sup> Clinical, pathophysiological, and imaging findings are similar between fat embolism syndrome and silicone pulmonary embolism. The latter is most common in male-to-female transsexuals who inject silicone in order to feminize their bodies.



**Figure 1.** Axial CT scans of the chest (upper and middle lung fields, in A and B, respectively) showing ground-glass opacities and patchy areas of consolidation in the lung periphery.

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