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Cavitary rheumatoid nodules: an unusual pulmonary finding

Dear Editor,

A 45-year-old female sought medical treatment at another institution complaining of a 4-month history of dry cough and dyspnea. She reported progressive worsening of the respiratory symptoms, and chest X-rays showed cavitary nodular lesions, predominantly in the periphery of the lungs. She also reported having previously been diagnosed with rheumatoid arthritis, which was treated only sporadically. The patient was admitted

and underwent bronchoscopy with sputum smear microscopy, culture, and direct mycological examination, all of which were negative. Therefore, she was discharged to outpatient follow-up. Despite multiple antibiotic regimens, the clinical condition worsened and empirical treatment for tuberculosis was prescribed. The patient then developed drug-induced hepatitis, again requiring hospitalization. Computed tomography of the chest showed multiple nodular lesions, several of them cavitary, in both lungs (Figure 1). Following transesophageal echocardiography, the diagnostic hypothesis of endocarditis was rejected.

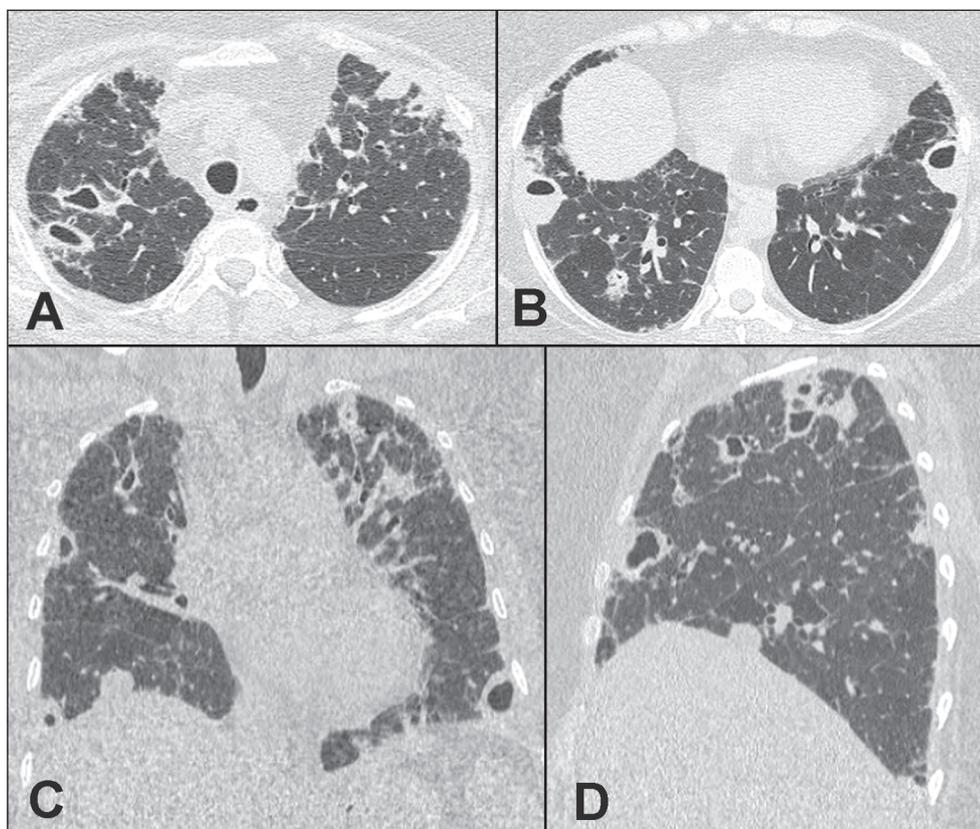


Figure 1. Computed tomography of the chest, in axial views (A,B), a coronal view (C), and a sagittal view (D), showing multiple nodular lesions with different degrees of cavitation, some with air-fluid levels. Note also the discrete subpleural opacities with reticulation.

The patient was then referred to our hospital for a definitive diagnosis. The test for antineutrophil cytoplasmic antibodies was negative. The patient tested positive for rheumatoid factor, although the remaining laboratory tests revealed no significant alterations. Bronchoscopy with bronchoalveolar lavage was performed, and the bronchoalveolar lavage fluid tested negative for fungi by periodic acid-Schiff staining as well as for acid-fast bacilli by Ziehl-Neelsen staining; cultures were also negative. An open lung biopsy showed a cavitary subpleural nodule with extensive central necrosis and fibrosis with a hyaline aspect at the periphery, containing histiocytes and fibroblasts, consistent with a pulmonary rheumatoid nodule. The adjacent pulmonary tissue showed a moderate amount of interstitial mononuclear inflammatory infiltrate, with pneumocyte hyperplasia and mild interstitial fibrosis, consistent with nonspecific interstitial pneumonia. During hospitalization, the patient developed respiratory failure secondary to bacterial pneumonia, and she died in the intensive care unit.

Rheumatoid arthritis is a chronic, systemic inflammatory autoimmune disease, which is characterized by persistent inflammation of the diarthrodial joints with synovial hyperplasia that, if persistent, results in progressive joint destruction^(1,2). Approximately 40% of affected patients present extra-articular manifestations, pulmonary involvement being the second most common cause of death in such patients⁽¹⁻³⁾.

Many recent studies published in Brazil have emphasized the importance of radiology in diagnosing thoracic diseases⁽⁴⁻⁸⁾. Rheumatoid nodules, usually subcutaneous, are the most common manifestation of rheumatoid arthritis. They are most common in male smokers and occur in approximately one third of HIV-infected patients. Although the nodules are typically found in periarticular areas exposed to pressure, they can also be found in other organs^(3,9). Pulmonary rheumatoid nodules are identical to the nodules found in subcutaneous tissue. They usually measure 0.5–5.0 cm in diameter, are located in peripheral areas of the upper or middle zones of the lungs, can undergo cavitation or calcification, can increase in size, and can even be spontaneously reabsorbed^(1,2). In most cases, they are asymptomatic and do not require specific treatment^(3,9,10).

Histologically, pulmonary rheumatoid nodules are similar to their extrapulmonary counterparts, with central necrosis, palisading of epithelial cells, mononuclear infiltrate, and vasculitis^(2,9). Pulmonary rheumatoid nodules should be differentiated from malignant and infectious processes, especially when there is only a solitary nodule. Therefore, radiological follow-up and occasionally a biopsy may be necessary to exclude malignancy^(2,9).

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Spontaneous dissection of the left gastric artery: a rare cause of abdominal pain

Dear Editor,

A 44-year-old man was admitted to the emergency department with a 12-h history of severe epigastric pain. He reported no history of trauma or fall. Physical examination revealed a flaccid abdomen, pain on deep palpation of the epigastrium, and no signs of peritoneal irritation. The results of laboratory tests, including a complete blood count, together with the determination of the levels of amylase and transaminases, showed no relevant changes. Upper gastrointestinal endoscopy showed signs of mild non-erosive distal esophagitis and moderate erosive antral gastritis, as well as some sessile hyperplastic polyps in the gastric body. An abdominal ultrasound did not show any changes. Because of persistent pain, the patient underwent abdominal computed tomography (CT) angiography, which showed high attenuation of the tissue before contrast administration (Figure 1A). Contrast-enhanced axial CT showed diffuse irregular thickening of the left gastric artery (Figure 1B). Multiplanar reconstruction

demonstrated eccentric thickening suggestive of false lumen thrombosis (Figure 1C). Three-dimensional (3D) reconstruction revealed diffuse irregular thickening of the left gastric artery (Figure 1D). These findings are consistent with a diagnosis of spontaneous dissection of the left gastric artery. No aneurysm formations or relevant anatomical variations were found in the evaluated arteries. A multidisciplinary group recommended conservative treatment (with anticoagulant/antiplatelet therapy and analgesics), hospital discharge, and outpatient follow-up.

Spontaneous dissection of a splanchnic artery is a rare event. Although several possible causes, including fibromuscular dysplasia, congenital connective tissue disorders, cystic medial necrosis, trauma, and hypertension, have been proposed, no strong association has yet been established^(1,2). Dissection of the superior mesenteric artery has been the most often described, although its incidence is estimated at only approximately 0.06%. To our knowledge, there has been only one reported case of isolated left gastric artery dissection without aneurysm formation⁽³⁾.

Acute abdomen has been the subject of recent publications in the radiology literature of Brazil⁽⁴⁻⁸⁾. CT angiography is the