



Multiple vascular nodules

Edson Marchiori¹, Bruno Hochhegger², Gláucia Zanetti¹

A 17-year-old man presented with complaints of sudden-onset hemoptysis. Chest CT showed bilateral pulmonary nodules (Figure 1A), which were opacified after injection of iodinated contrast medium (Figure 1B).

Unenhanced CT showed multiple nodules with partially defined borders, predominantly in the lower lobes. The differential diagnosis of multiple nodular lesions is wide, including neoplastic and infectious diseases, among others. However, this patient had two findings—a clinical finding (hemoptysis) and a CT finding (all nodules were adjacent to bronchi)—that raised the possibility of vascular origin, which mandatorily led to the intravenous injection of contrast medium. Contrast-enhanced imaging demonstrated that the nodules corresponded to pulmonary artery aneurysms.

Pulmonary artery aneurysms may be due to numerous causes, such as congenital, infectious, and neoplastic diseases, as well as vasculitis, iatrogenic and traumatic causes, among others. Multiple bilateral lesions are most commonly associated with vasculitis. The two major types of vasculitis that cause this finding are Hughes-Stovin syndrome and Behçet's disease. Hughes-Stovin syndrome is characterized by the combination of multiple pulmonary artery aneurysms and deep vein thrombosis. Since the

radiological findings of Hughes-Stovin syndrome are indistinguishable from those of Behçet's disease, some researchers have suggested that this syndrome is part of a spectrum, along with Behçet's disease.⁽¹⁻³⁾

In our case, because of the finding of aneurysms, the patient underwent clinical reassessment, which detected painful, recurrent oral and genital ulcerations, thus characterizing the diagnosis of Behçet's disease. The diagnosis of Behçet's disease is based on the presence of recurrent oral ulcerations together with two of the following criteria: genital ulcerations, eye lesions (uveitis or retinal vasculitis), skin lesions, or a positive skin pathergy test. On the basis of the findings of oral and genital ulcerations and pulmonary artery aneurysms, our patient met the criteria for the diagnosis of Behçet's disease.

Pulmonary vascular changes, such as aortic and pulmonary artery aneurysms, are rare complications of Behçet's disease, suggest a poor prognosis, and are the main cause of mortality due to the possibility of rupture. Hemoptysis is the most common presenting symptom of pulmonary artery aneurysms. More than half of patients die from pulmonary hemorrhage within three years.⁽¹⁻³⁾ Our patient has been followed on an outpatient basis for six months, and there have been no complications.

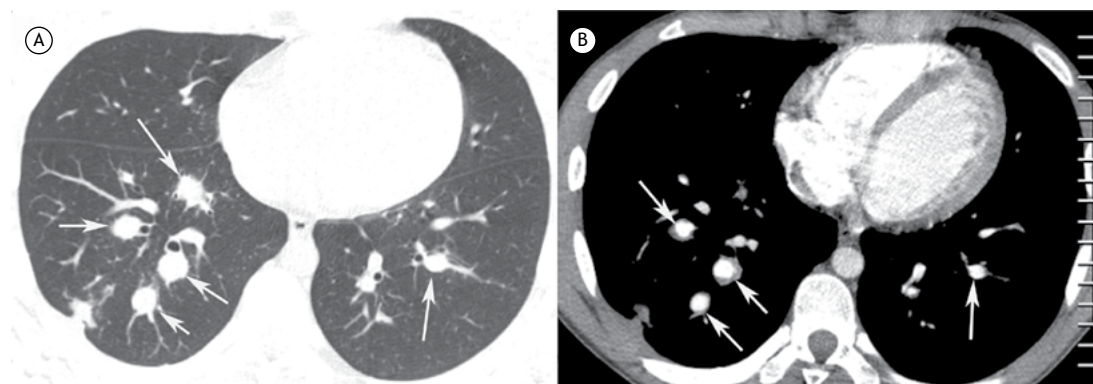


Figure 1. In A, unenhanced CT scan of the chest (lung window) showing multiple nodules (arrows) in the lower lobes, adjacent to the bronchi. In B, iodinated contrast-enhanced CT image (lung window) showing contrast opacification of the nodules (arrows), characterizing pulmonary artery aneurysms.

REFERENCES

1. Marchiori E, Zanetti G, Rodrigues RS, Hochhegger B. Pulmonary arterial aneurysms. *Am J Respir Crit Care Med.* 2013;187(2):212. <https://doi.org/10.1164/rccm.201209-1652IM>
2. Chae EJ, Do KH, Seo JB, Park SH, Kang JW, Jang YM, et al. Radiologic and clinical findings of Behçet disease: comprehensive review of multisystemic involvement. *Radiographics.* 2008;28(5):e31. <https://doi.org/10.1148/rg.e31>
3. Ceylan N, Bayraktaroglu S, Erturk SM, Savas R, Alper H. Pulmonary and vascular manifestations of Behçet disease: imaging findings. *AJR Am J Roentgenol.* 2010;194(2):W158-W164. <https://doi.org/10.2214/AJR.09.2763>

1. Universidade Federal do Rio de Janeiro, Rio de Janeiro (RJ) Brasil.
2. Universidade Federal de Ciências da Saúde de Porto Alegre, Porto Alegre (RS) Brasil.