

Embolization as an alternative approach to surgical intervention in the treatment of bilateral pulmonary sequestration

René Agustín Flores-Franco^{*,1}, Luis Raúl Ramos-Duran[†] and Carola Mullins[‡]

^{*}Department of Internal Medicine, Hospital General Regional No. 1, Unidad "Morelos", Instituto Mexicano del Seguro Social (IMSS), Chihuahua, Chih., Mexico, [†]Diagnostic Outpatient Imaging, El Paso, TX, USA, [‡]Department of Radiology, Texas Tech University Health Sciences Center, El Paso, TX, USA

Teaching Point: Interventional therapy may present a safe alternative to surgical intervention in the treatment of bilateral pulmonary sequestration.

A 6-year-old girl with a history of recurrent uncomplicated respiratory tract infections presented with another episode. Diagnostic imaging was obtained, and a computed tomography (CT) of the chest and 3D volume rendering CTA showed evidence of large bilateral intralobar pulmonary sequestration (Pryce type II) with systemic arterial supply (Figure 1). It was decided to embolize aberrant feeding arteries via Amplatzer vascular plugs to reduce blood supply to non-functional lung tissue and diminish hemodynamically significant short cuts. Standard of care entails embolization of the afferent artery and surgical removal of the pulmonary sequestration.¹ Surgical resection is deemed the most effective and safest approach but was denied by the patient's parents in this case.

Embolization may reduce the risk of hemoptysis but not the risk of recurrent infections due to possible collateral ventilation of the sequestration.² However, after embolization, the patient remained asymptomatic, and a long-term follow-up 6 years later showed cystic degeneration of both sequestrations (Figure 2). This case illustrates that embolization alone may present a safe alternative to

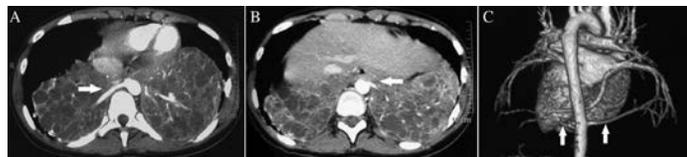


Figure 1 Axial (A,B) and 3D volume rendering CTA (C) of the thorax in soft tissue window demonstrate aberrant segmental lung tissue isolated from the bronchial tree with systemic vascular supply from the distal aorta (white arrows).

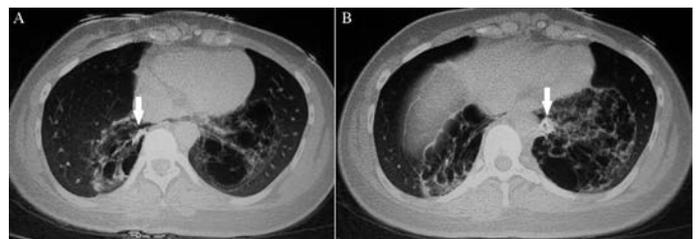


Figure 2 Six years later, follow-up CT without contrast (lung window) in axial view (A) demonstrates vascular plugs (white arrows) and cystic degeneration of the bilateral (B) lung sequestration.

the common approach of surgical intervention. It falls in line with previous reports that have described a positive outcome in pediatric patients with endovascular treatment alone and further illustrates its possible long-term benefits.^{1,3}

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