

## Medical Image of the Week: Bronchial Artery Embolization

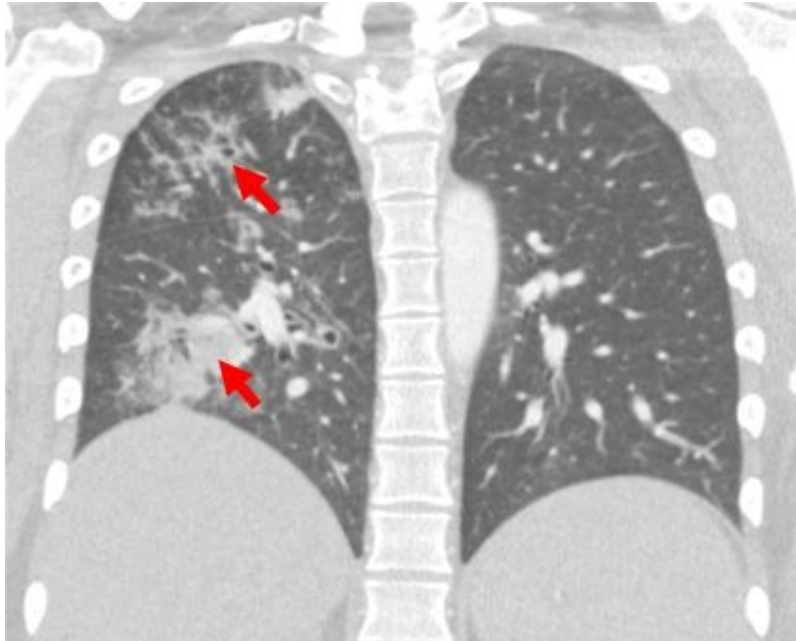


Figure 1. Thoracic CT with contrast demonstrating right upper and lower lobe tree-in-bud and ground glass opacities (arrows) consistent with progressing pulmonary coccidioidomycosis.

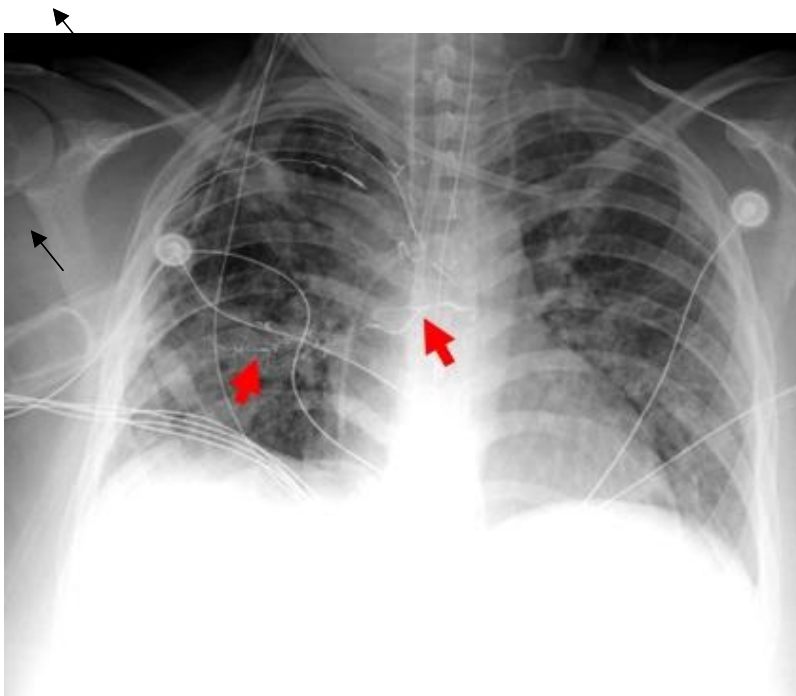


Figure 2. Chest radiograph demonstrates the ethylene vinyl alcohol polymer retained in the bronchial arteries after the embolization procedure (arrows).

A 25-year-old woman with a past medical history significant for pulmonary coccidioidomycosis and poorly controlled type I diabetes mellitus presented to the emergency department with a chief complaint of 4 days of progressively worsening shortness of breath and 3-4 days of intermittent hemoptysis. Initial CT scan demonstrated progressive tree-in-bud and ground glass opacities in the right upper and lower lung lobes suggesting worsening of her ongoing coccidiomycosis (Figure 1). On hospital day 3 she began to have worsening hypoxemia and hemoptysis requiring transfer to the intensive care unit. Interventional radiology was consulted who performed an emergent right sided bronchial artery embolization with the ethylene vinyl alcohol polymer, Onyx<sup>tm</sup>. After embolization her chest radiographs demonstrated evidence of the embolization material in the pulmonary vasculature (Figure 2).

Ethylene vinyl alcohol polymer, Onyx<sup>tm</sup> is a liquid embolic substance which solidifies after contact with ionic materials (1). This results in a rapid, irreversible and permanent embolization of the bleeding target vessel (2). It was initially approved for use in the embolization of cerebral arteriovenous malformations, however has been used for rapid embolization of other hemorrhagic conditions such as hemoptysis from bleeding bronchial arteries (3). The most common complication after embolization is chest pain that is self-limiting. Transverse myelitis from spinal cord ischemia is the most serious complication associated with bronchial artery embolization however the occurrence is significantly decreased by spinal arterial identification during initial angiography (4). This patient's embolization was without complications. She was successfully extubated on hospital day 15 without evidence of ongoing hemoptysis and will continue to follow up in the pulmonary and infectious disease clinics for ongoing treatment of her *Coccidioides* pulmonary disease.

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### **References**

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