Septic Pulmonary Emboli With Feeding Vessel Sign

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A 42-year-old woman with emphysema and a history of intravenous drug abuse and smoking presented to the emergency department for shortness of breath. She had a 2-week duration of dyspnea at rest, a left foot wound, and fevers. Initial vital signs were 103.8°F, 139 bpm, and 60 rpm. She required supplemental oxygen. Physical examination revealed diffuse bilateral wheezes and a left foot abscess. Blood cultures and polymerase chain reaction revealed methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia. Chest computed tomography angiography demonstrated diffuse bilateral pulmonary cavitation with the dominant lesion having a feeding vessel sign (image). The patient was diagnosed with MRSA endocarditis on echocardiogram with septic pulmonary emboli. Vancomycin was administered; however, the patient needed to be intubated. Lymphatic drainage was contraindicated in the patient because of the risk of systemic infection, bacteremia, and possible further dislodging emboli.¹ Due to further decompensation, the family chose to pursue comfort care measures.

A septic pulmonary embolism is a blood vessel that is obstructed, usually by an infected thrombus. The pathogenesis consists of an embolic or ischemic event followed by an infection causing

inflammation, which may form an abscess.² Abscesses are most commonly caused by staphylococcal species, especially from infective endocarditis.³ On imaging, the “feeding vessel sign,” also known as “fruits on the branch sign,” is a combination of a distinct vessel leading directly to a nodular or mass.⁴ This finding can indicate one of the following: hematogenous origin near the small pulmonary vessels, a lung metastasis, or arteriovenous malformation.^{4,5} (doi:10.7556/jaoa.2020.130)

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