

Symptomatic Hemothorax Caused by a Ruptured AVM in Pregnancy

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Background:

- Pulmonary arteriovenous malformation (PAVM) = an abnormal communication between the arterial and venous system in the pulmonary vasculature
- PAVMs are rare lesions that are usually congenital
 - Sometimes associated with hereditary hemorrhagic telangiectasia (HHT)
 - May be unmasked during pregnancy due to both increasing estrogen levels and increasing circulating blood volume¹
- Mortality associated with symptomatic PAVM in pregnancy is as high as 11%
 - Mostly attributed to hemorrhage²

Case: A 34yo G4P0 at 24w1d diagnosed with PAVM during pregnancy

1. Esplin, et al. (2017) Progression of pulmonary arteriovenous malformation during pregnancy: case report and review of the literature.

2. Gambling, D. R (2011). Obstetric anesthesia and uncommon disorders.

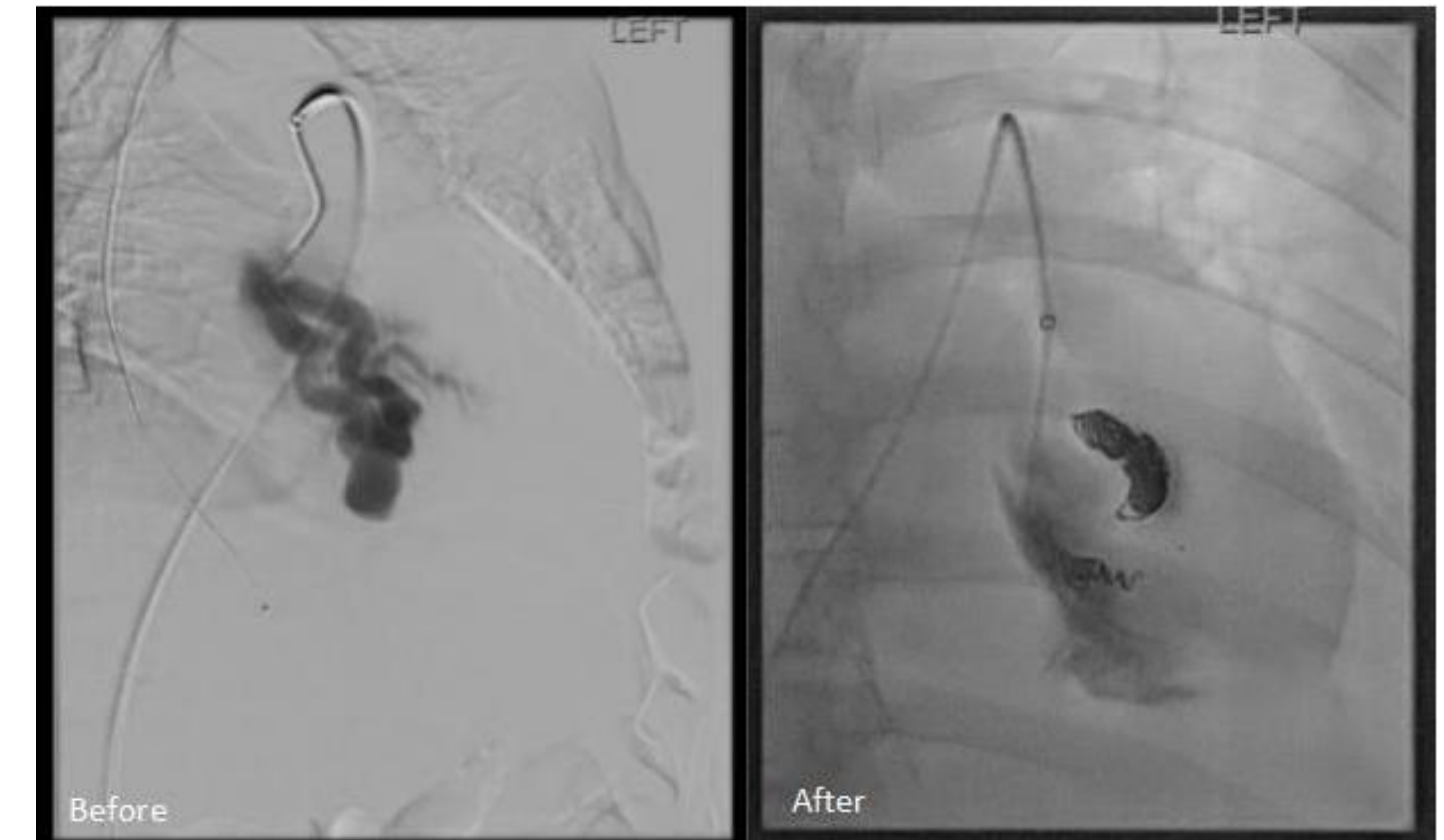
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Case progression:

- Patient initially presented to the ED with left upper quadrant pain
 - Symptoms progressed to include pleuritic pain, pain with palpation, shortness of breath, and anemia
- Imaging and Treatment:
 - CXR: Left pleural effusion
 - CT: 2.5cm LLL AVM and likely acute-on-chronic hemothorax
 - Contained, ruptured pulmonary AVM in communication with the pleural space
 - IR embolization with coils and vascular plugs under general anesthesia
- POD 1: A surgical chest tube was placed for residual hemothorax. A thoracic epidural was placed for post-operative pain control
- POD 3: Chest tube removed, patient discharged home



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Learning Points:

- The differential diagnosis for a patient with dyspnea in pregnancy is large
 - Can range from commonly diagnosed conditions such as pulmonary embolus or simply normal dyspnea that can occur with pregnancy; to more rare causes, such as PAVM
- In a pregnant patient with PAVM, both increasing blood volume and estrogen levels increase the risk of rupture
 - Embolization is a reasonable treatment for PAVM during pregnancy
- Recanalization after embolization can occur, and patients should be closely monitored by a multidisciplinary team for the duration of the pregnancy