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Figure 1. Pallid and cyanotic right hand.



Figure 3. Contrast CT with filling defect in the right axillary artery (arrowhead). Note the patent left axillary artery (arrow).

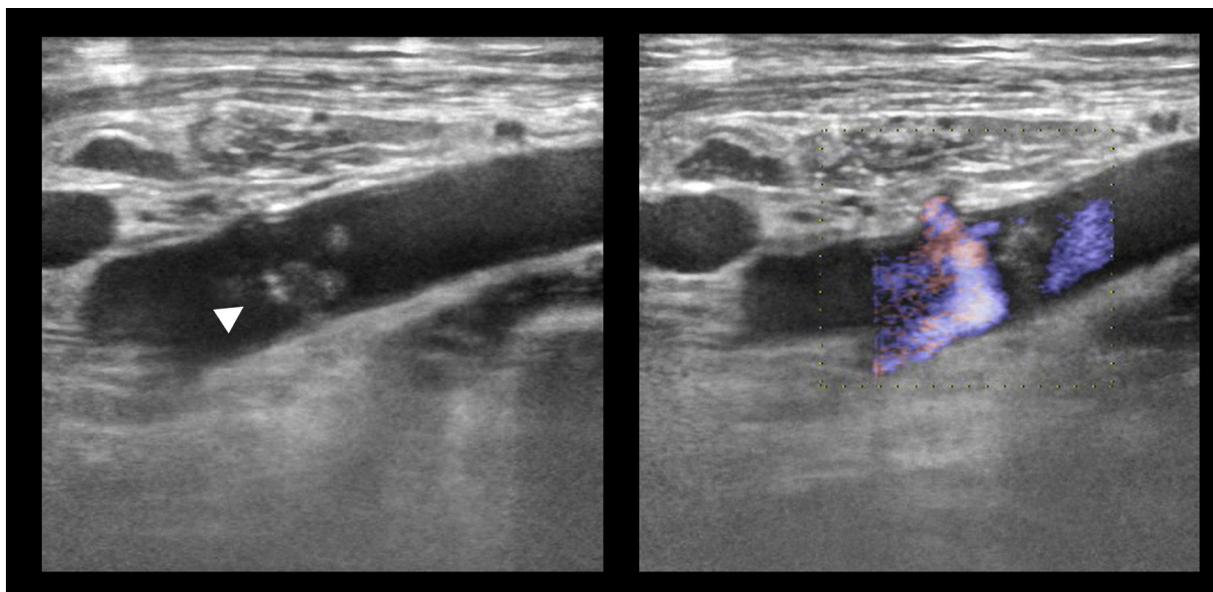


Figure 2. Long-axis ultrasonographic view of the right axillary artery with mixed echogenic lesions (arrowhead, left panel). Color Doppler view showing filling defect (right panel).

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An 88-year-old woman with paroxysmal atrial fibrillation presented to the emergency department with 1 hour of sudden-onset right arm weakness. Physical examination result was remarkable for decreased muscle power (3/5) in the right arm, whereas the hand was cool, pallid, and cyanotic (Figure 1). The emergency physician performed bedside ultrasonography of the right subclavicular area (Figure 2, Video E1 [available online at <http://www.annemergmed.com>]) and confirmed the diagnosis by contrast computed tomography (CT) (Figure 3).

For the diagnosis and teaching points, see page 44.

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DIAGNOSIS:

Axillary artery thromboembolism as a result of atrial fibrillation. Bedside ultrasonography showed mixed echolic lesions inside the noncompressible pulsatile axillary artery, and the CT demonstrated a filling defect in the same region. Under cardiology care, the patient underwent immediate catheter-directed thrombolysis and systemic thrombolysis with urokinase, followed by long-term oral anticoagulation. The thrombus had resolved ultrasonographically by 1-month follow-up.

Acute upper-extremity ischemia is rare compared with that of the lower extremity,¹ and cardiogenic embolism caused by atrial fibrillation is the most common cause.^{2,3} The brachial artery is the most frequent site of injury, followed by the axillary artery. Less common reasons for embolism include traumatic or iatrogenic causes.³ Patients with acute limb ischemia as a result of embolism require prompt thrombolysis, whether catheter directed or systemic, and possible thromboembolectomy.

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