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Figure 1. Marked swelling and blue discoloration of the right upper extremity.

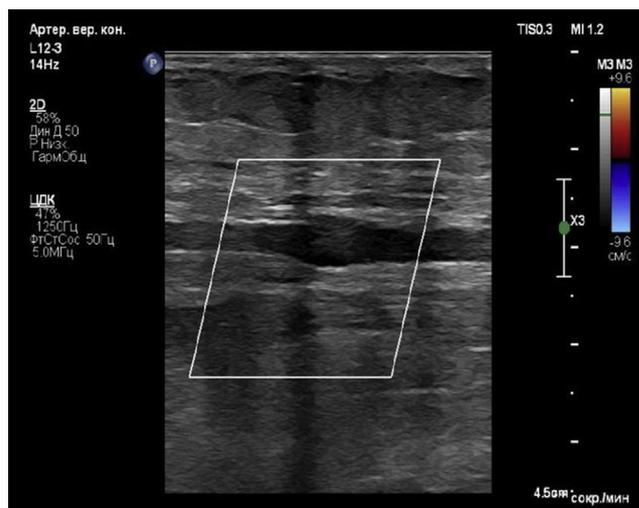


Figure 2. Longitudinal venous ultrasonography with color-flow Doppler, showing thrombosis of the right brachial vein, without color Doppler flow.

[Ann Emerg Med. 2021;77:650.]

A 61-year-old woman with a history of type 2 diabetes mellitus and hypertension presented to the emergency department with sudden onset of right hand pain, swelling, and a dark blue discoloration (Figure 1). She also reported a fever, dyspnea, and dry cough that began 3 days before. Coronavirus disease 2019 infection was confirmed by detection of severe acute respiratory syndrome coronavirus 2 ribonucleic acid from a nasopharyngeal swab. Venous duplex ultrasonography revealed occlusive thrombus in the right brachial vein (Figure 2). Anticoagulation with intravenous administration of heparin was started, and the patient was taken to the operating room for emergency percutaneous mechanical thrombectomy.

For the diagnosis and teaching points, see page 657.

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IMAGES IN EMERGENCY MEDICINE

*(continued from p. 650)***DIAGNOSIS:**

Phlegmasia cerulea dolens. Phlegmasia cerulea dolens is a rare, life-threatening complication of acute deep venous thrombosis. It usually results from acute massive obstruction of the venous drainage, leading to fluid sequestration and edema of surrounding tissues.^{1,2} Risk factors include malignancy, hypercoagulable states, trauma, and surgeries.³ Coronavirus disease 2019 may also be considered a risk factor for phlegmasia cerulea dolens because emerging evidence shows the high burden of thrombotic complications in the disease.⁴

Phlegmasia cerulea dolens presents with pain and marked swelling; its pathognomonic feature is the presence of discoloration and cyanosis. Venous duplex ultrasonography is a preferred imaging modality for diagnosis of deep venous thrombosis. Complications of this disease include venous gangrene (40% to 60%), amputation (10% to 25%), and pulmonary embolism (50%).¹ Current therapeutic options include surgical thrombectomy, catheter-directed thrombolysis, and percutaneous mechanical thrombectomy.⁵

Because of timely treatment, the patient's condition improved, and after a prolonged hospital course, she was discharged while receiving apixaban.

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