

Figure 1. Ultrasonography showing the right internal jugular vein (arrows), which was incompressible. The Doppler imaging shows there was no flow in the internal jugular vein.

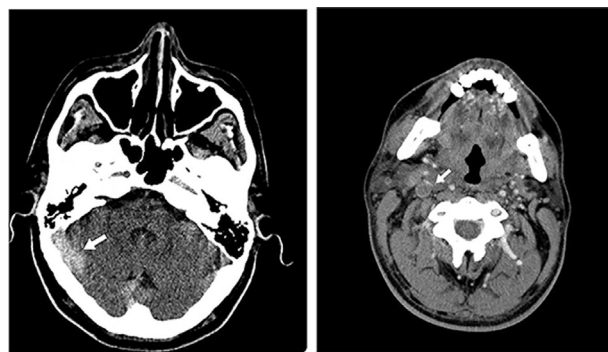


Figure 2. CT without contrast showing the right transverse sinus trace with hyperattenuation (left panel). CT with contrast showing the increased diameter of the right internal jugular vein (right panel).

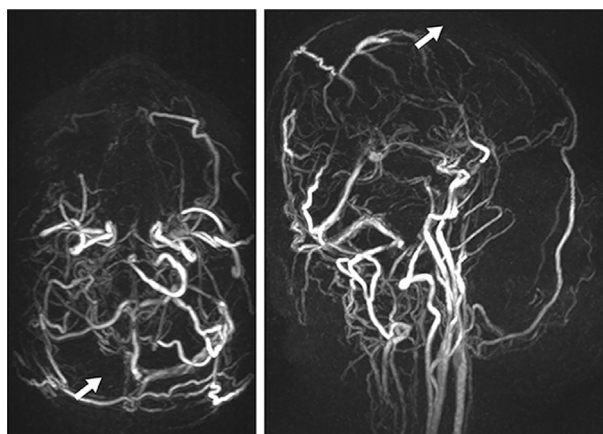


Figure 3. Left transverse sinus flow shown with magnetic resonance venography; there was no contrast in the right transverse sinus (left panel). The signal decrease in the superior sagittal sinus is shown (right panel).

[Ann Emerg Med. 2021;77:e91-e92.]

A 42-year-old male patient presented to the emergency department (ED) because of syncope and headache. The physical examination result was normal. Blood pressure was 90/60 mm Hg, and other vital signs were in normal limits. He had tonic-clonic seizures in the ED, which ended spontaneously. Point-of-care ultrasonography was performed to assess the patient's volume status, and internal jugular veins were also examined (Figure 1, Video). Computed tomography (CT) imaging was obtained to exclude other differential diagnoses (Figure 2). The diagnosis was confirmed by magnetic resonance imaging (Figure 3).

For the diagnosis and teaching points, see page e92.

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*(continued from p. e91)***DIAGNOSIS:**

Cerebral vein thrombosis. Cerebral vein thrombosis is one of the rare causes ($\approx 1\%$) of stroke.¹ The time between complaint onset and diagnosis is 7 days on average.² Therefore, there is a delay in treatment of patients. Internal jugular vein thrombosis, which causes important complications such as pulmonary embolism, occurs in 12% of all cerebral vein thromboses.³

Although our patient did not have cerebral vein thrombosis risk factors, he received the diagnosis and anticoagulation was started rapidly. The patient was admitted to the neurology clinic and was discharged with a modified Rankin Scale score of 0.

Point-of-care ultrasonography is an important diagnostic tool in the ED. Although it is used with many different indications, its use in cerebral vein thrombosis in the ED has also been reported.⁴ Early identification of cerebral vein thrombosis is central to ensuring favorable patient outcomes. Therefore, point-of-care ultrasonography should be used as a fast, easy, and noninvasive method, especially in cases of headache, seizures, syncope, and neck pain.

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