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Images

Hemorrhagic venous infarction from thrombosis of vein of Labbe

Andrew Leland Waack[1], Meghana Ranabothu[1], Venkatramana R. Vattipally[2]

[1]University of Toledo College of Medicine and Life Sciences, Toledo, Ohio, [2]Department of Radiology, Advanced Radiology Services, PC, Grand Rapids, Michigan, United States.

A 39-year-old woman presented with complaints of a progressive headache over the preceding several days. No specific neurological deficits were apparent, although the patient did report that she was currently taking oral contraceptives. The patient underwent emergent computed tomography (CT) imaging, which demonstrated venosinus thrombosis with associated cortical infarction [Figure 1a-e]. The patient was treated with anticoagulation therapy and mechanical thrombolysis.

The superficial and deep venous systems of the brain drain into the larger dural venous sinuses, and venous thrombosis may develop at any location within this venous system. Increased retrograde pressure from venosinus occlusion can result in vasogenic edema, cytotoxic edema/ischemia, and possibly

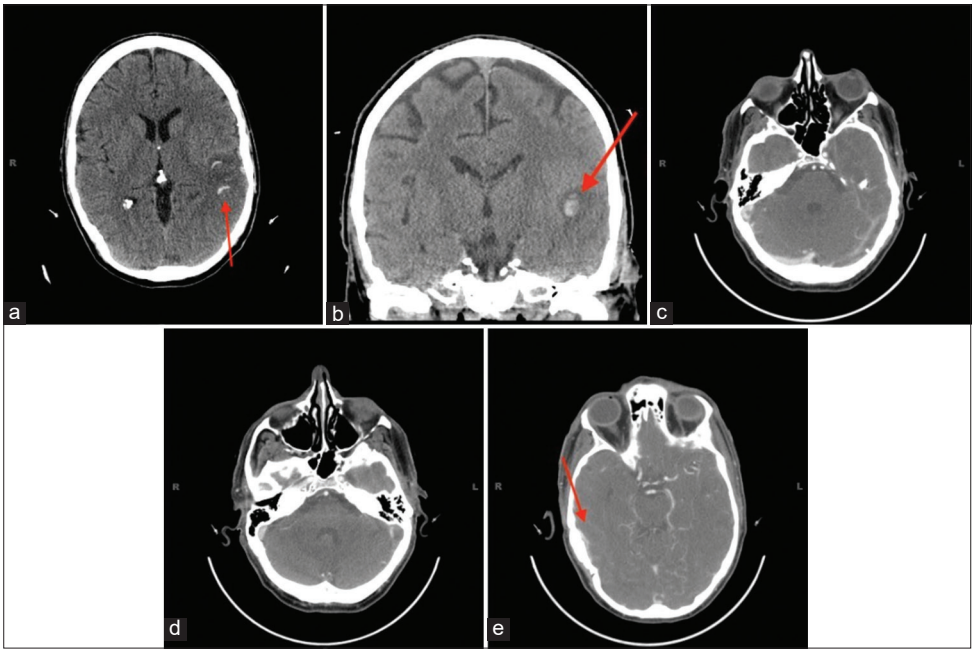

Figure 1: (a). Axial non-enhanced computed tomography (CT) demonstrating areas of hemorrhagic infarction in the left temporal lobe (red arrow) (b). Coronal non-enhanced CT demonstrating posterior temporal hemorrhagic infarction secondary to venous thrombosis (red arrow) (c). Axial contrast-enhanced CT demonstrating a filling defect in the left sigmoid and transverse sinus (d). Axial contrast-enhanced CT demonstrating a filling defect in the left sigmoid and transverse sinus (e). Axial contrast-enhanced CT demonstrating "empty delta sign" at the sinus confluence. The red arrow indicates the absence of opacification of the vein of Labbe.

***Corresponding author:** Andrew Leland Waack, University of Toledo College of Medicine and Life Sciences, Toledo, Ohio, United States. awaack98@gmail.com

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intracranial hemorrhage.[1] Patients often present non-specific symptoms with variable onset, making diagnostic imaging imperative for diagnosis.[2] Non-enhanced CT (NECT) is the initial imaging modality, followed by contrast-enhanced CT (CT C+) cerebral venography. NECT allows for direct thrombus visualization, in which the thrombus presents as a hyperattenuating lesion. On CT C+ imaging, the dural sinus, but not the thrombus, is hyperattenuated.[1,2] The characteristic "empty delta sign" may be demonstrated if the thrombus is located in the superior sagittal sinus or the transverse sinus. Non-specific indirect signs, such as ischemia or hemorrhagic infarction, may be suggestive of thrombosis as well.[1,2] MRI imaging may be confounded by paramagnetic properties of thrombus; although, a lack of T1/T2 flow voids can be suggestive of cerebral venous thrombosis (CVT).[1,2] CVT is initially treated w/anticoagulation therapy; if unsuccessful, follow-up with mechanical thrombolysis.

Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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