

Vein of Labbe Thrombosis-A missed culprit

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Abstract

Thrombosis of vein of Labbe is an uncommon finding and usually tends to occur along with extensive dural venous sinus thrombosis. Clinical presentation varies from headache to aphasia, dysarthria and upper motor neuron weakness symptoms. Recognized risk factors for thrombosis should be considered while diagnosis. MR venogram remains investigation of choice for detection and to look for the extent of thrombosis.

Keywords: cerebral venous sinus thrombosis, venous infarction, vein of Labbe

Figure-1: Axial T2 (a) and coronal FLAIR (b) images show high-signal intensity involving the left posterior temporal lobe with gyriform thickening of the cortex and swelling (white arrows). Surrounding vasogenic oedema and local mass effect noted.

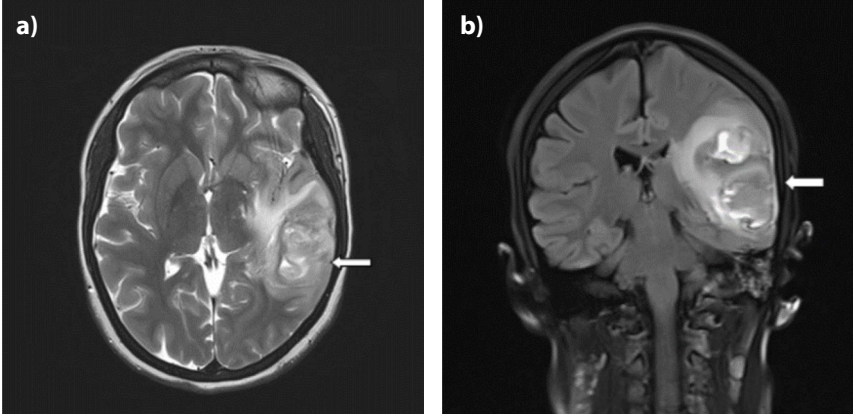
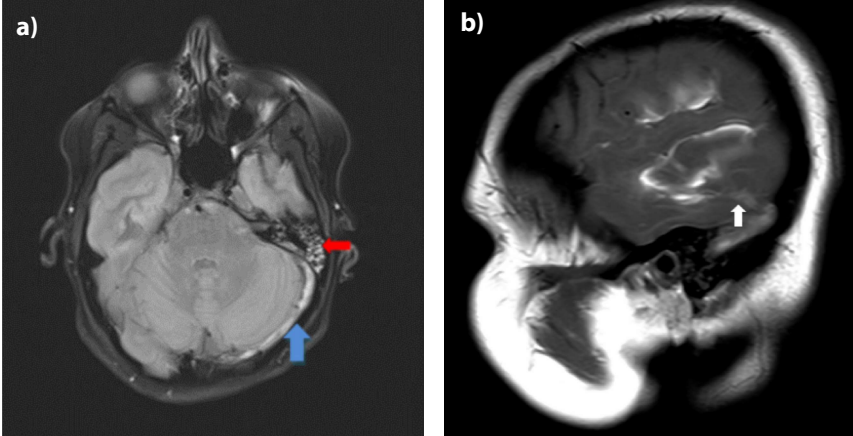


Figure-2: Axial FLAIR (a) images shows high signal on FLAIR sequences in the left transverse and sigmoid sinus representing thrombosis (blue arrow), left mastoiditis is also noted (red arrow). Sagittal T1 (b) shows vein of Labbe thrombosis (white arrow).



A 27 years old female presented with history of severe headache for one week along with memory loss and behaviour changes. There was no past history of oral contraceptive pills and no physical deformity or neurological deficit was noted on clinical examination. Her headache got better after intravenous analgesics but for other symptoms she underwent CT at an outside facility which showed left parietotemporal lobe lesion with differential possibilities of large acute infarct versus encephalitis. She was referred for MRI brain which demonstrated high-signal intensity involving the left posterior temporal lobe with gyriform thickening of the cortex and swelling representing haemorrhagic venous infarct with oedema and local mass effect (Figure-1) and on FLAIR sequences left transverse and sigmoid sinus venous thrombosis was noted along with left mastoiditis and an unusual finding of thrombosis of vein of Labbe, identified on sagittal T1 images (Figure-2).

Discussion

The vein of Labbe also known as inferior anastomotic vein is one of superficial vein tracking along the Sylvian fissure and joins the middle cerebral vein which itself drains into the transverse sinus. Vein of Labbe thrombosis is rare and usually occurs with other main venous sinus thrombosis. In the few reported case it occurs more on the left than right.^{1,2}

Since it occurs with thrombosis of other venous sinuses, variable extent and location of thrombosis define the clinical symptoms. Headache, seizures and focal neurological defects including aphasia, dysarthria and pyramidal weakness remain the most common among all. Multiple known risk factors can account for dural venous sinus thrombosis ranging from infections to malignancies. Among females; pregnancy and oral contraceptive pills ingestion remain triggering events. Unlike our case left sided dural venous along with vein of Labbe thrombosis cases have been noted in females with history of oral contraceptive intake.^{3,4} Few cases of post traumatic thrombosis have also been reported.⁵

Haemorrhagic infarct wherever seen within temporal lobe should raise suspicion of vein of Labbe thrombosis which at times get difficult to detect radiologically due to diverse anatomy of cerebral venous system and presence of anatomical variants. In case of doubtful situations MR venography should be considered.

References

1. D.C. Park, Y.H. Sohn, P.H. Lee Neurologic deficits with isolated cortical venous congestion *Neurology*, 1999; 52: 671-672
2. D. Dorndorf, K. Wessel, C. Kessler, D. Kömpf Thrombosis of the right vein of Labbe: radiological and clinical findings *Neuroradiology*. 2005; 65: 202-204
3. J. Rudolf, R. Hilker, K. Terstegge, R.I. Ernestus Extended haemorrhagic infarction following isolated cortical venous thrombosis *Eur Neurol*. 1999; 41:115-116
4. S. Chakraborty, K. Terbrugge, R. Farb, D. Mikulis Answer to case of the month # 140. Isolated cortical vein thrombosis of left vein of labbe *Can Assoc Radiol J*. 2008; 59:271
5. Kinal ME: Traumatic thrombosis of dural venous sinuses in closed head injuries. *J Neurosurg*. 1967; 27:142-14.