

**Department of Neurological Surgery  
Weill Cornell Medical College**

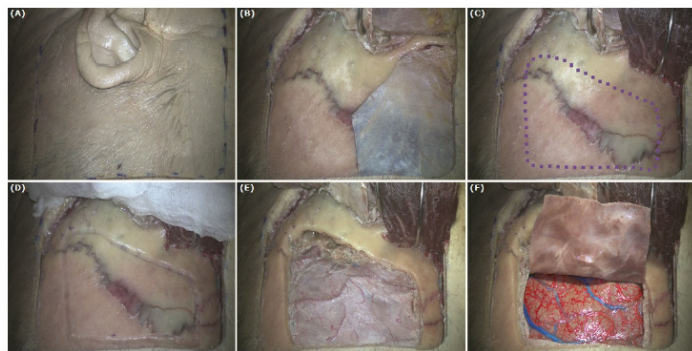
**Introduction**

The vein of Labbé, also known as the inferior anastomotic vein, bridges the superficial middle cerebral vein and the transverse sinus. The vein of Labbé drains blood from the lateral temporal lobe and the adjacent region to the sylvian fissure. It may be lacerated during dural incision or thrombosed due to prolonged or vigorous temporal retraction. Injury to this vessel may lead to postoperative lobar venous infarction associated with impaired speech, memory, and other cognitive disorders. The present study focuses on providing surgically relevant external bony landmarks for identifying the drainage site of this important venous structure.

**Methods**

10 adult cadavers (20 sides) underwent a posterior subtemporal approach (Figures 1 and 2) to expose the vein of Labbé and later the transverse sinus.

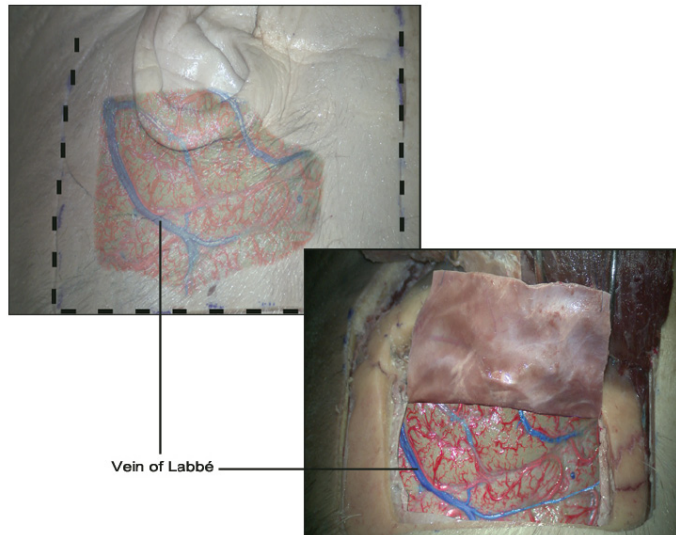
**Figure 1. Left Posterior Subtemporal Approach.**



(A) A parietotemporal horseshoe-like skin incision was made. (B) The zygoma and the temporalis muscle were identified, and (C) the temporalis muscle was elevated and reflected anteriorly and inferiorly. (D) A temporal craniotomy was made 2/3 anterior and 1/3 posterior to the external acoustic meatus, and (E) the bone flap was elevated. (F) The dura mater was opened with an inferiorly based U-shaped incision, exposing the vein of Labbé.

Measurements of the distance from the vessel to several superficial landmarks were made (Figure 3). The exposed surgical targets were also evaluated with using a Brainlab neuronavigation system.

**Figure 2. Left Vein of Labbé.**



Depiction of the vein of Labbé through a subtemporal craniotomy. The skin incision is designated by the black dotted line.

**Results**

The anatomical position of the vein of Labbé was found to be highly variable. The drainage site of the vein of Labbé into the transverse sinus was found to be on average within 1 cm of either the superior or inferior margin of the zygomatic process and 3.5 cm posterior to the external acoustic meatus.

**Conclusions**

A thorough knowledge of the microsurgical anatomy of the vein of Labbé as seen through the parietotemporal region allows for a safer dissection. External landmarks found for the drainage site of the vein of Labbé into the transverse sinus are

paramount during neurosurgical approaches involving temporal lobe retraction in order to decrease postoperative morbidity and mortality.

**Figure 3 and Figure 4.**

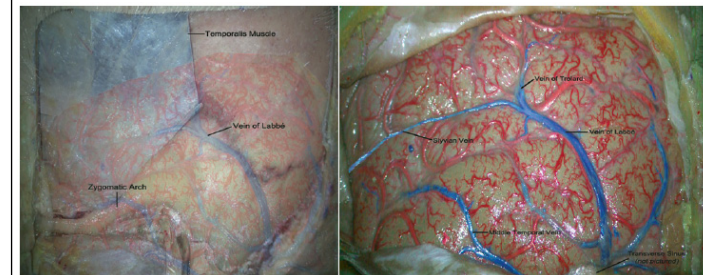


Figure 3 (left): Anatomical Depiction of the relationship between the drainage site of the left vein of Labbé and the root of the zygomatic arch. Figure 4 (right): Anatomical view of the left parietotemporal superficial veins.

**Learning Objectives**

By the conclusion of this session, participants should be able to describe the external landmarks for identifying the drainage site of the vein of Labbé.

**References**

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