

Facial Vein Variation: Implication for Facial Transplantation

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Sir:

The anterior facial veins ensure the venous drainage of the face and have been used as main venous pedicles for facial transplantations. The facial vein starts at the medial angle of the eye like the angular vein. Then, it runs obliquely behind the facial artery, crosses over the body of the mandible, and drains into the internal jugular vein through the thyrolinguofacial trunk. At the end of its course, the facial vein joins the retromandibular vein coming from the parotid gland establishing an anastomosis between external and internal jugular veins.

We studied the course of 660 facial veins in 330 patients who underwent computed tomography angiography. There were 195 men and 135 women, with a mean age of 54.5 years, and none of them had a history of head or neck surgery.

We report 2 cases with facial vein variations. The first case was a 42-year-old woman with bilateral variation of the facial vein, which drained into the jugular system through the parotid gland (Figs. 1 and 2). It could be a retromandibular ending of the facial vein. The vessels were connected with the parotid gland.

The frequency of the variation was 0.3%. The second case was a 42-year-old man with unilateral variation of the right facial vein. The contralateral facial

vein and facial arteries were normal. The frequency of the unilateral variation was 0.3%.

To our knowledge, this is the first description of bilateral variation, whereas a unilateral facial vein variation has already been reported in 4 cases.

In 2001, Peuker et al¹ first described this phenomenon in an anatomically dissected cadaver. In 2004, Renshaw et al² found one case of facial vein draining into the temporal vein in a color Doppler ultrasound study conducted in 100 patients, with a frequency of 1%. More recently, Lohn et al³ found during anatomical dissections the variation in 2 cases, with a frequency of 2%. Among the 4 previously published cases, 2 cases presented the variation on the right side of the face and 2 cases were not documented, so that no conclusion can be drawn about any predominance of one side over the other.

Variations are rare with a rate ranging between 0.3% and 2%. However, anatomical variations of the facial veins and arteries are of great importance for facial transplantations because they are the main vascular pedicles that will be connected to the patient. A good arterial inflow and venous outflow are essential for the free flap survival. Several authors recommend preoperative investigations in a brain-dead donor before performing any facial transplantation.²⁻⁴ The aim is to identify any anatomical vascular variation, allowing surgeons to adapt the dissection during facial flap harvesting.



Fig. 1. Computed tomography angiogram of a 42-year-old woman with bilateral variation on the right side. FA indicates facial artery; FV, facial vein.

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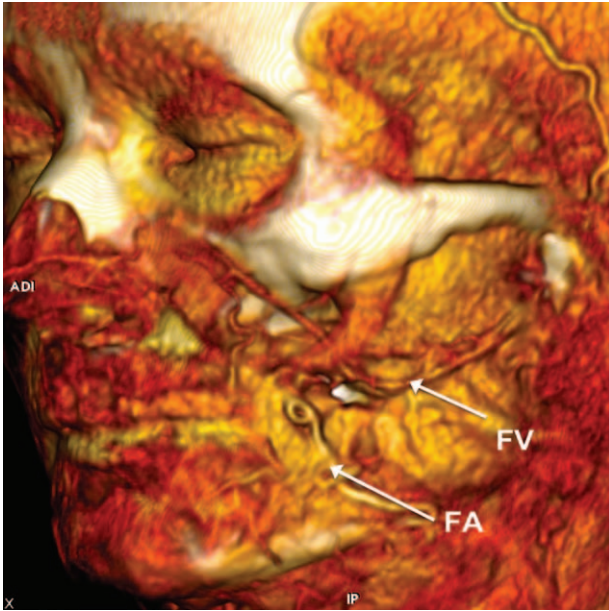


Fig. 2. Computed tomography angiogram of a 42-year-old woman with bilateral variation on the left side. FA indicates facial artery; FV, facial vein.

DISCLOSURE

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