

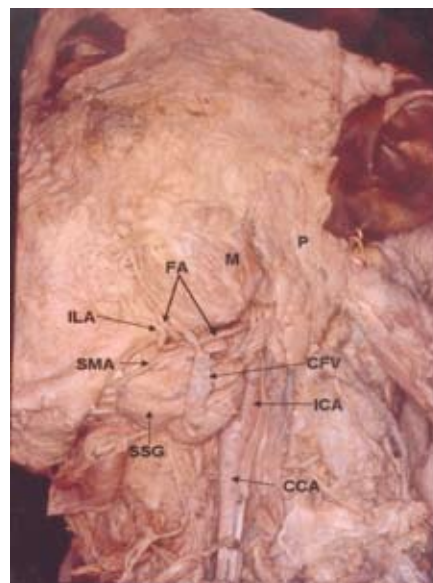
## Clinical Notes

### Abnormal intra-parotid origin of the facial artery

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The facial artery generally arises from the external carotid artery, just above the lingual artery, at the level of the greater cornu of the hyoid bone in the carotid triangle. It then passes upwards and forwards medial to the ramus of the mandible. It passes deep to the superficial part of the submandibular salivary gland, and winds around the base of the mandible to enter the face at anteroinferior angle of the masseter muscle. The artery gives ascending palatine, tonsillar, and submental and glandular branches in the neck.

During routine dissection, variation in the origin and branching of the left facial artery was found in an approximately 50-year-old male cadaver. The facial artery took its origin inside the parotid gland, just behind the ramus of the mandible. Then it descended downwards and forwards in the digastric triangle parallel to the base of the mandible (Figure 1). It did not make any loop around the submandibular salivary gland. It gave a large inferior labial branch, just below the base of the mandible. The inferior labial branch, and the facial artery ascended to the face at anteroinferior angle of the masseter muscle. Further course and branching of the facial artery was normal. Although the facial artery shows considerable variations in its branches and termination, the variations in its origin are rare. The facial artery may be totally absent, in which case, the maxillary artery, transverse facial artery, or the nasal branch of the ophthalmic artery will take over its function.<sup>1-3</sup> The facial artery may arise by a common trunk with the lingual as a linguofacial trunk.<sup>3</sup> Bergman et al<sup>3</sup> have recorded several variations of the facial artery. According to them, the facial artery is frequently rudimentary. It may terminate as a submental artery, or as a labial, or lateral nasal artery. Unusual branches of the facial include an ascending pharyngeal, superior laryngeal, tonsillar, sternocleidomastoid, maxillary, or sublingual.<sup>3</sup> The facial arteries inferior and superior labial branches, are sometimes poorly developed or absent, in which case, they are replaced by the contralateral vessel, which is usually enlarged. In a study conducted by Niranjan,<sup>4</sup> the facial artery terminated as an angular facial artery in 68% of cases, a lateral nasal vessel in 26% of cases, and a superior labial vessel in 4% of cases.



**Figure 1** - Dissection of the left side of the neck and face showing the facial artery. M-masseter, P-parotid gland, FA-facial artery, ILA - inferior labial artery, SMA - submental artery, CFV - common facial vein, ICA - internal carotid artery, CCA - common carotid artery, SSG - submandibular salivary gland.

Intra-parotid origin of the facial artery can cause unexpected bleeding during parotid surgeries. It can also cause compression of the branches of the facial nerve. However, the origin of inferior labial branch in the digastric triangle has not been reported. The knowledge of this may be very useful for the plastic surgeons.

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