

**Introduction**

Localization of the facial nerve trunk (FNT) (i.e., the extratemporal segment of the facial nerve between the stylomastoid foramen [SMF] and pes anserinus) may be required during various surgical interventions such as, parotidectomy, hypoglossal-facial anastomosis, paragangliomas resections, among others. Several landmarks have been proposed for efficient identification of the FNT. This study sought to assess the anatomical features of the digastric branch of the facial nerve (DBFN) and its potential to be used as a landmark to identify FNT.

**Methods**

Five cadaveric heads (10 sides) were dissected to localize the DBFN. The relevant anatomical features of DBFN including its point of origin relative to SMF, length, and important relationships, as well as the distance between the insertion point on the digastric muscle and mastoid tip were recorded.

**Results**

DBFN was found in all specimens with and average length of 13.7 ± 1.9 mm. In all specimens, the DBFN inserted on the superomedial aspect of the posterior belly of the digastric muscle (PBDM). It universally originated from the post-foraminal facial nerve. In 4/10 specimens, DBFN was accompanied by the stylomastoid artery on its medial side. Average distance between the mastoid tip and nerve insertion point on PBD was 12.4 ± 1.3 mm.

**Learning Objectives**

- (1) Understanding different anatomical landmarks to localize the extratemporal segment of the facial nerve
- (2) Describing the major anatomical features and relationships of the digastric branch of the facial nerve
- (3) Naming the relative advantages and disadvantages of using the digastric branch of the facial nerve as a landmark to find the facial nerve

**References**

1. Tabb HG, Scalco AN, Fraser SF. Exposure of the facial nerve in parotid surgery. (Use of the tympanomastoid fissure as a guide). *Laryngoscope* 1970; 80:559-567.  
2. Keefe MA, Castro JR, Keefe MS. Identification of the facial nerve main trunk by retrograde dissection of the postauricular branch. *Otolaryngol Head Neck Surg* 2009; 140:126-127.  
3. Wong DS. Surface landmarks of the facial nerve trunk: a prospective measurement study. *ANZ J Surg* 2001; 71:753-756.  
4. Rea PM, McGarry G, Shaw-Dunn J. The precision of four commonly used surgical landmarks for locating the facial nerve in anterograde parotidectomy in humans. *Ann Anat* 2010; 192:27-32.

**Conclusions**

The DBFN is a reliable landmark for identifying FNT. It could be constantly found within 13.7 mm of the mastoid tip on the superomedial aspect of the PBD. DBFN may be used as a standalone or supplementary landmark for efficient localization of the FNT.

