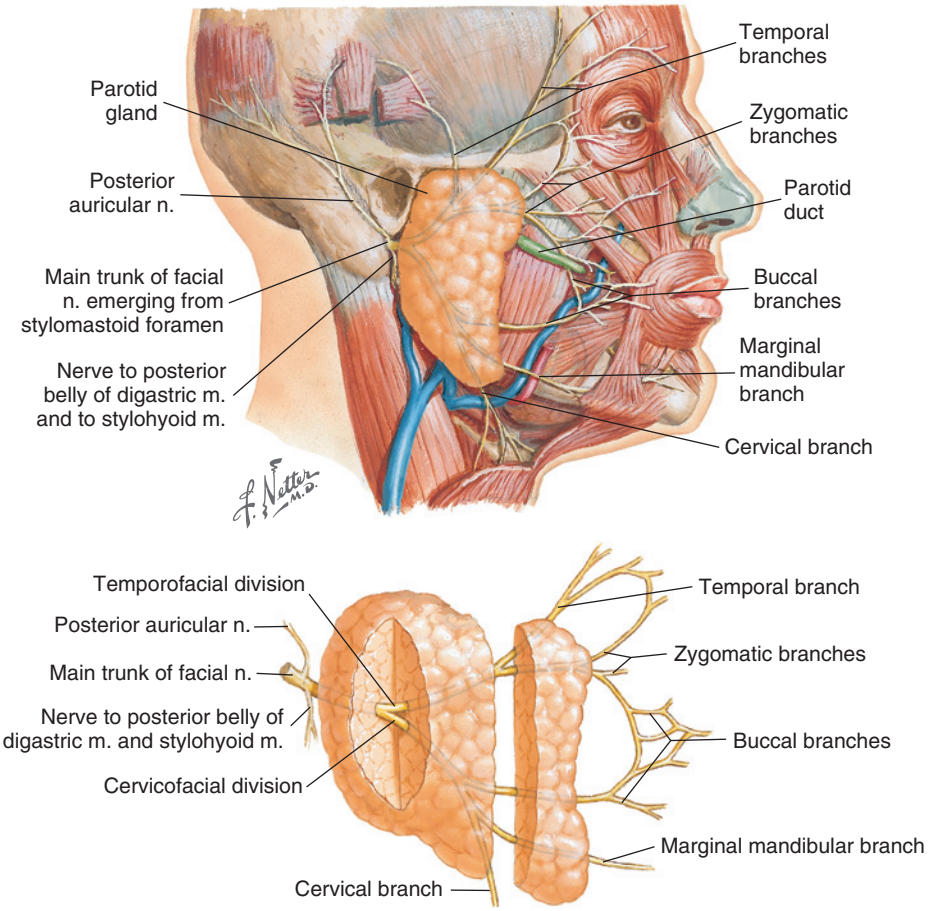

Figure 10.11 The facial nerve. (Reprinted from Netter Anatomy Illustration Collection. ©Elsevier Inc. All Rights Reserved.)

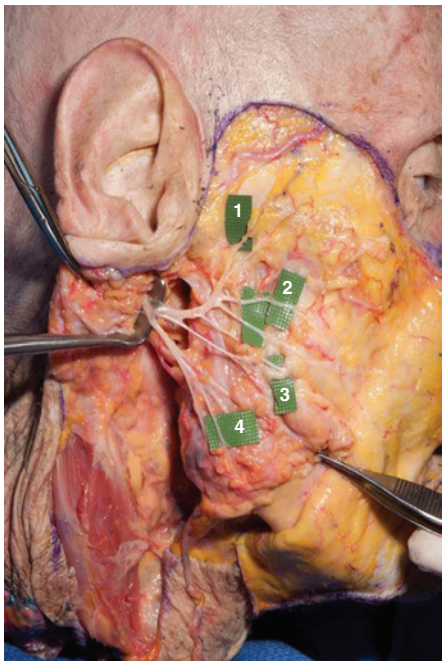

Figure 10.12 Branches of the facial nerve exposed after superficial parotidectomy on a cadaver. Superficial temporal artery. 1. Frontal branch, 2. Zygomatic branch, 3. Buccal branch, 4. Marginal mandibular branch. The cervical branch is not shown.

upon that muscle beneath the platysma to the parotid gland, where it divides into an anterior and a posterior branch.

THE FACIAL NERVE

Important anatomic landmarks to the main trunk of the facial nerve include the tympanomastoid suture, the tragal pointer, and the posterior belly of the digastric muscle (Fig. 10.12). The main trunk of the facial nerve exits the stylomastoid foramen, where it can be found 10 mm medial and inferior to the cartilaginous tragal pointer of the external auditory canal. The tympanomastoid suture line is a useful landmark and lies between the mastoid and tympanic segments of the temporal bone. The tympanomastoid suture is approximately 6–8 mm lateral to the stylomastoid foramen. The styloid process is deeper to the nerve trunk and usually lies 5 cm deep to the skin surface in adults. In children, the facial nerve is more superficial and surgical access should take into consideration its superficial location to avoid injury. The facial nerve supplies the postauricular muscles, stylohyoid muscle and posterior belly of the digastric muscle before it bifurcates into its main branches. The facial nerve pierces the parotid gland and bisects the gland along a plane separating the deep and superficial lobes of the gland. In the parotid gland, it divides to two major divisions: the temporal-facial and the cervico-facial branches.

Significant variability in facial nerve branching exists, even between the left and right sides of the face in the same

individual.[23] After its bifurcation at the pes anserinus, five major branches of the facial nerve exist: the frontal (i.e., temporal), zygomatic, buccal, marginal mandibular, and cervical branches. The frontal branch of the facial nerve is located along a line extending from 0.5 cm below the tragus to a point 1 ± 0.45 cm superior to the supraorbital rim. After exiting the parotid gland, the frontal branch of the facial nerve crosses over the zygomatic arch within the innominate fascia (see Fascia of the head and neck, above), where it remains for a distance 1.5–3.0 cm above the superior border of the arch. After that transition point, the nerve becomes more superficial and travels on the undersurface of the superficial temporal fascia (TPF) until reaching the frontalis muscle.[1,2] On average, three branches enter the undersurface of the frontalis muscle.[23] However, the marginal mandibular branch of the facial nerve runs below the inferior border of the mandible in 81% of dissected specimens, whereas anterior to the facial artery, it was found above the inferior border in 100% of specimens. Two major branches existed in 67% of individuals; a single marginal mandibular branch was seen in 21%, and three branches were found in 9% of specimens.[24]

CONCLUSION

The head and neck regional anatomy is a complex area. This chapter has focused on the relevant anatomy related to head and neck reconstruction, and particularly, the approach to vascular and neural structures.

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