UNIT 22. DISSECTION: SUBMANDIBULAR REGION

STRUCTURES TO IDENTIFY:

- Submandibular gland
- Facial artery
- Submental artery
- Facial vein
- Nerve to the mylohyoid
- Hypoglossal nerve
- Lingual nerve
- Lingual artery
- Deep branch
- Dorsal branch
- Sublingual branch
- Submandibular ganglion
- Mylohyoid m.
- Digastric m. – anterior & posterior bellies
- Stylohyoid m.
- Geniohyoid m.
- Genioglossus m.
- Hyoglossus m.
- Styloglossus m.
- C\textsubscript{1}
- Glossopharyngeal nerve
- Sublingual gland

DISSECTION INSTRUCTIONS:

1. Review the branches of the external carotid artery (N. plate 34, 69; G. plate 8.11, pp. 764, 765).

2. Clean the digastric muscle (N. plates 27 – 29, 32, 34, 53; G. plates 7.39B, 7.41B, 8.8, 8.10, 8.11). The two bellies of this muscle form a wide V. The anterior belly arises from the mandible; the posterior belly arises from the mastoid process of the temporal bone. The two bellies narrow to an intermediate tendon that lies just above the lateral part of the body of the hyoid bone, to which it is bound by a slip of deep cervical fascia. In close relation to the posterior belly you will find the stylohyoid m. This slender muscle arises from the base of the styloid process and inserts on the hyoid bone; it is usually pierced near its insertion by the intermediate tendon of the digastric.

3. The submandibular gland occupies most of the space of the submandibular triangle (N. plates 27, 46, 60, 61, 69, 73; G. 8.9, 7.41A). Identify the facial vein passing superficial to the gland and the facial artery going through the gland. Displace the gland downward and observe that a thin-walled duct emerges from the deep surface and passes anteriorly to the oral cavity. As it does this, it goes superficial to the hyoglossus muscle and deep to the mylohyoid muscle.

4. Clean the mylohyoid m., a flat sheet of muscle that forms the floor of the submandibular triangle and the mouth. Arising from the mylohyoid line on the inner surface of the mandible, its fibers pass downward and medially to insert on the body of the hyoid and into a median raphe that extends from the hyoid bone to the lower end of the mental symphysis (N. plate 53; G. plate 8.8). Locate the nerve to the mylohyoid.
5. Dissect the fascia just above the hyoid bone (N. plate 32, 34, 59, 69, 71; G. 8.10, 8.11). The lingual artery is just above the hyoid bone going deep to the hyoglossus muscle on its way to the tongue. Just above the lingual artery is the hypoglossal nerve going to the tongue; it passes superficial to the hyoglossus muscle and deep to the mylohyoid muscle. Above the hypoglossal nerve is the duct of the submandibular gland (superficial to the hyoglossus and deep to the mylohyoid). Above the duct is the lingual nerve (superficial to the hyoglossus and deep to the mylohyoid).

6. Locate the mental foramen on one side and cut through the mandible just anterior to it. Carefully detach the mylohyoid muscle from the mylohyoid line of the mandible and reflect it downward. This should help to expose the sublingual gland, submandibular duct, lingual nerve, submandibular ganglion, hypoglossal nerve and the muscles of the tongue (N. plates 59 - 61; G. plates 7.49 – 7.51, 8.11A & B). Clean these items and identify the hyoglossus, geniohyoid, genioglossus and styloglossus mm. Note the relationship of the lingual nerve and the duct of the submandibular gland as they enter the mouth (N. plates 59 - 61; G. plate 7.50C, 7.51A). The lingual nerve passes inferior and lateral to the duct, turns under it and then ascends to the tongue.

7. Follow the course of the lingual artery from the external carotid artery into the tongue by passing deep to the hyoglossus muscle. Anterior to the hyoglossus, locate the deep and sublingual branches of the lingual artery (N. plate 59; G. plate 7.50B). The dorsal branches are hidden by the hyoglossus muscle.