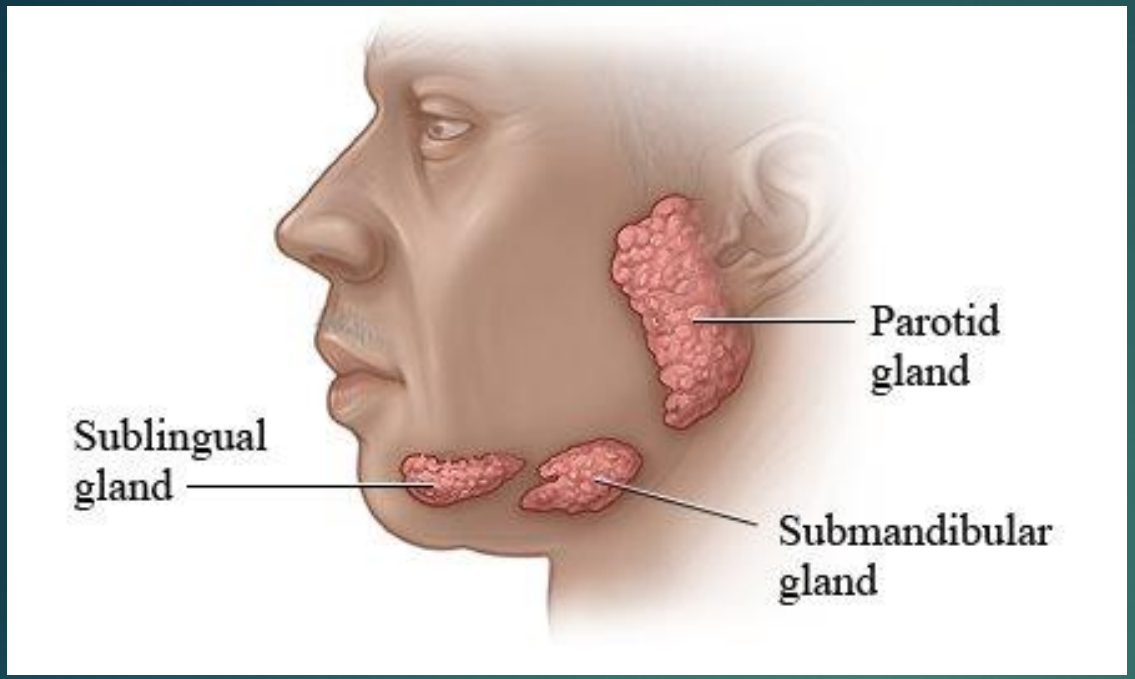


Dr.Hussein Safaa
Plastic Surgeon

Disorders of the salivary glands

- There are three paired major salivary glands:
  - Two parotid glands.
  - Two submandibular glands.
  - Two sublingual glands.

- In addition, there are multiple minor salivary glands: Approximately ~800
  - They are distributed in the mucosa of the lips, cheeks, palate, floor of the mouth.

Common disorders of minor salivary glands

- Cysts
  - common and arise from trauma to the glandular parenchyma.
  - They arise in the loose mucosa of the lower lip and the floor of mouth where saliva can easily collect.
  - The swelling is painless and usually, but not always, translucent.
  - Some resolve spontaneously, but most require formal surgical excision.
  - Recurrence is rare.

- Minor salivary gland Tumors
  - Histologically similar to those of major glands.
  - More are malignant and as are almost all tumors in the sublingual glands.
  - Its origin: in the upper GI tract; however, common sites include the palate, upper lip.
  - Less common sites: include the nasal and pharyngeal cavities.
  - A well-defined rubbery lump is a salivary gland tumor until proven otherwise.
  - Benign minor salivary gland tumors present as painless, firm, slow-growing swellings.
  - Overlying ulceration is extremely rare.
  - Managed by excision to include the overlying mucosa, with primary closure.

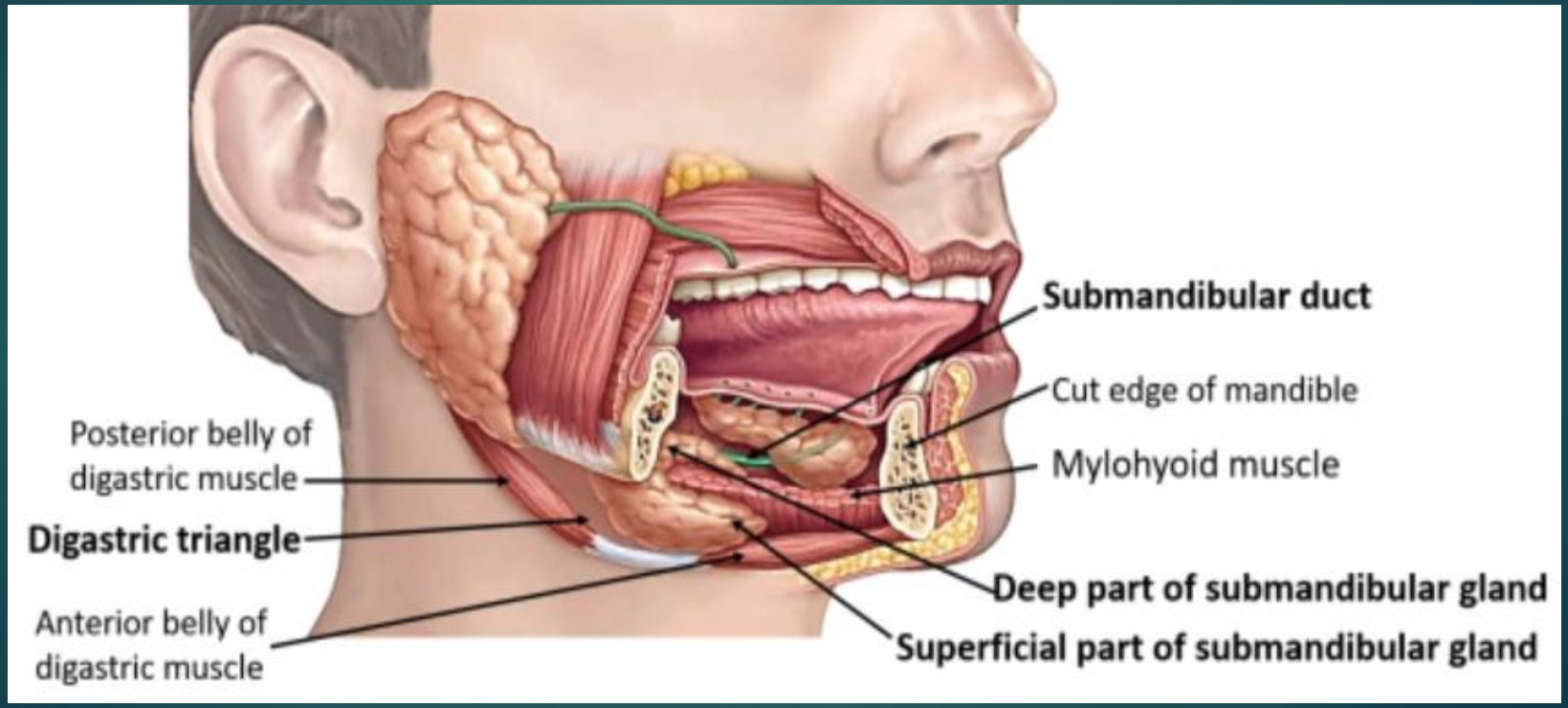
Malignant neoplasms

- Most are low grade and present as apparently benign lumps.
- They have a firm consistency, and the overlying mucosa may have a varied discoloration from pink to blue or black.
- High-grade lesions usually become necrotic with ulceration as a late presentation.
- Malignant minor salivary gland tumors of the palate that are low grade and early stage can be managed by wide excision to underlying bone and then left to heal by secondary intention.
- Those that have perforated the palate may require partial or total maxillectomy.
- The subsequent defect can be managed by either prosthesis or immediate reconstruction.

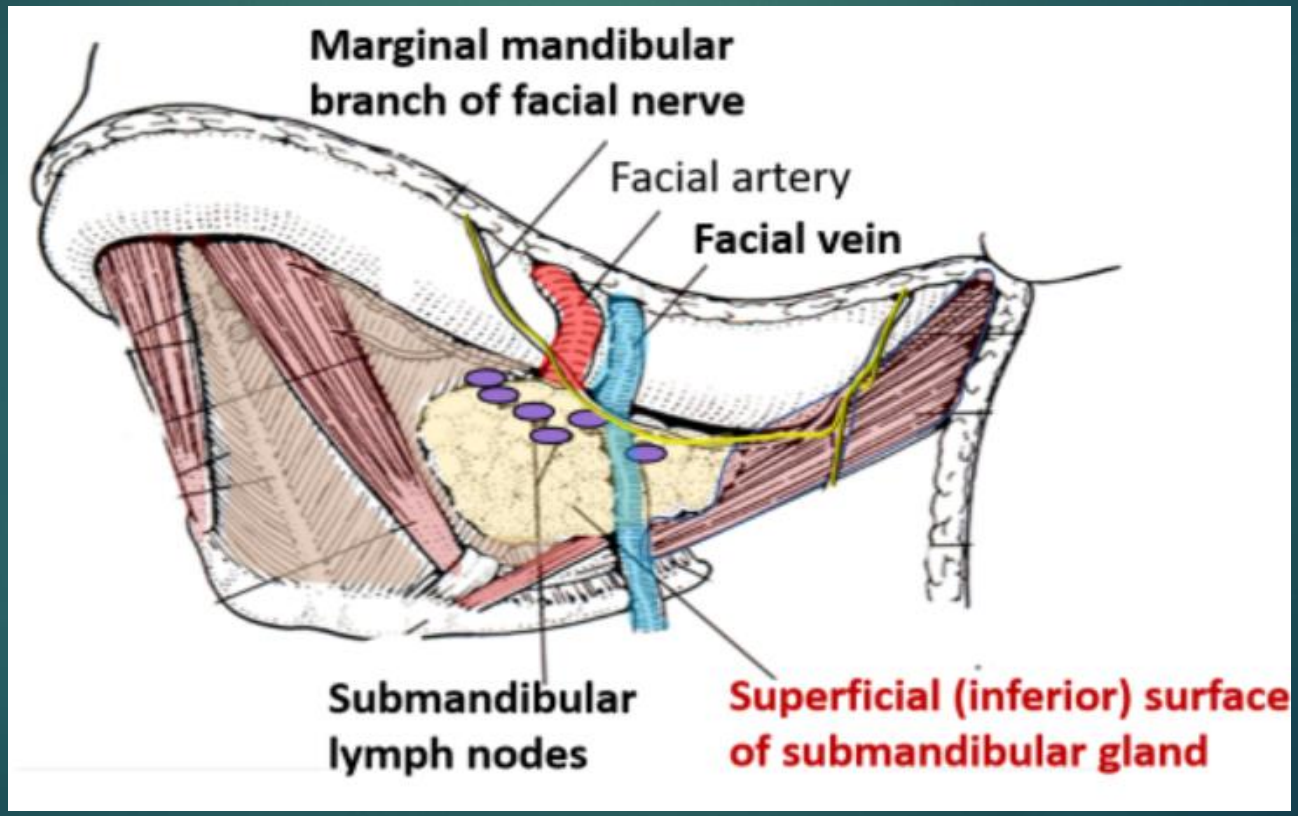
THE SUBMANDIBULAR GLANDS

Anatomy

- are paired salivary glands that lie below the mandible on either side.
- They consist of a larger superficial and a smaller deep lobe that are continuous around the posterior border of the mylohyoid muscle.



- Important anatomical relations include the anterior facial vein and artery running over the surface of the gland in close association with the marginal mandibular branch of the facial nerve.



- The gland is surrounded by a well defined capsule that is derived from the deep cervical fascia which splits to enclose it.
- The gland is drained by a single submandibular duct (**Wharton's duct**) that emerges from its deep surface and runs in the space between the hyoglossus and mylohyoid muscles.
- It drains into the anterior floor of the mouth at the sublingual papilla.
- There are several lymph nodes immediately adjacent and sometimes within the superficial part of the gland.

Inflammatory disorders of the submandibular gland

- Inflammation of the submandibular gland is termed sialadenitis.
- Submandibular sialadenitis may be **acute**, **chronic** or **acute on chronic.**
  - Acute submandibular sialadenitis
    - Viral: paramyxovirus (mumps), causing painful tender swollen glands.
    - Bacterial: Bacterial sialadenitis is more common than viral sialadenitis and occurs secondary to obstruction by stone.
  - Chronic submandibular sialadenitis.

Obstruction and trauma

- The most common cause of obstruction within the submandibular gland is stone formation (sialolithiasis) within the gland and its associated duct system.
- 80% of all salivary stones in the submandibular glands because their secretions are relatively viscous.
- 80% of submandibular stones are radio-opaque and can be identified on plain radiography.
- Stones are mainly composed of phosphate and oxalate salts.
- The second most common cause of submandibular duct obstruction is stricture.
- The remaining 5–10% of cases are secondary to floor of mouth pathology or external pressure, particularly trauma to the floor of the mouth.

Complications of submandibular gland excision

- Hematoma.
- wound infection.
- marginal mandibular nerve injury.
- lingual nerve injury.
- hypoglossal nerve injury.
- transection of the nerve to the mylohyoid muscle producing submental skin anesthesia.