

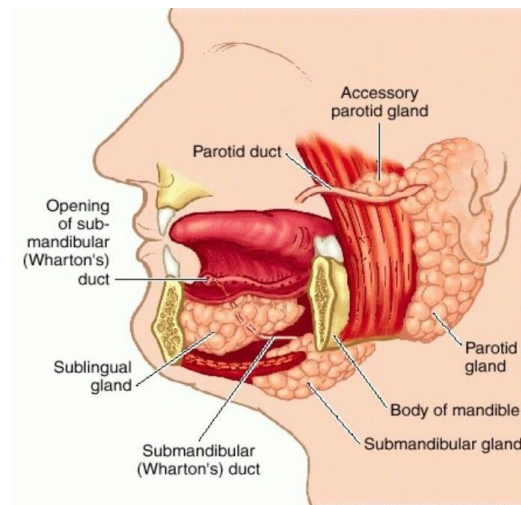


- **Anatomy of salivary glands:**

• **Parotid gland:**

- ✓ It is the largest salivary gland which is enclosed by the deep cervical fascia. The gland is divided into superficial and deep lobes between which the facial nerve passes.
- ✓ This gland drains saliva via “Stensen’s duct” opposite to the second upper molar tooth.
- ✓ Notice that the facial nerve passes through parotid gland and then divided into its five branches:

- ❖ *Temporal:* innervating frontalis and orbicularis oculi.
- ❖ *Zygomatic:* innervating orbicularis oculi.
- ❖ *Buccal:* innervating buccinator and orbicularis ori.
- ❖ *Marginal mandibular:* innervating mentalis.
- ❖ *Cervical:* innervating platysma.



• **Submandibular gland:**

- ✓ It drains saliva via “Wharton’s duct” which opens through a small opening lateral to the frenulum on the floor of the mouth.

• **Sublingual gland:**

- ✓ It is the smallest major salivary gland and opens at the floor of the mouth via numerous small ducts known as “Ducts of Rivinius”

• **Minor salivary glands:**

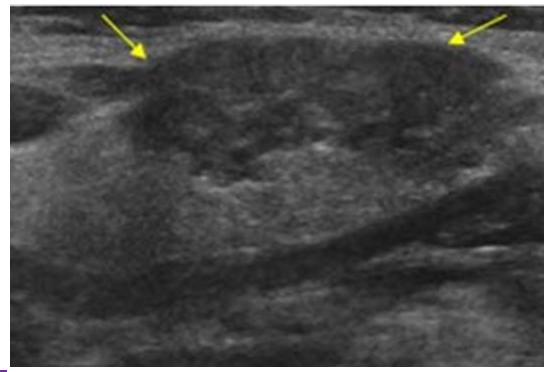
- ✓ Between 600 – 1000 found mostly on the hard and soft palate.

- **Physiology of salivary glands:**

- **Parasympathetic stimulation:** ↑ secretion of saliva; **sympathetic stimulation:** ↓ secretion of saliva.
- A human produces in average 0.5 – 1.5 L of saliva/day.
- **Components of saliva:** ↑ K<sup>+</sup>, ↓ Na<sup>+</sup> and it contains IgA.

- **Sialoadenitis:**

- **Definition:** it is the infection/inflammation of salivary glands (mostly parotid gland).
- **Etiology:**
  - ✓ Viral infection (most common).
  - ✓ Bacterial infection: S. pneumoniae, H.influenzae or S.aureus.
- **Risk factors:** it occurs in debilitated and dehydrated patients mainly after trauma, major surgery, X-ray therapy or the presence of sialolithiasis.
- **Clinical features:**
  - ✓ Salivary gland will be swollen, erythematous and tender.
  - ✓ With bacterial infection there might be purulent discharge from the duct or punctum of the swollen gland.
  - ✓ ± Fever.
- **Diagnosis:** ultrasound to differentiate between obstructive and non-obstructive sialoadenitis (notice that in obstructive sialoadenitis there is salivary stasis and retrograde bacterial flow).
- **Treatment:**
  - ✓ Viral: supportive.
  - ✓ Bacterial: warm compresses, re-hydration, sialogogues and antibiotics (cloxacillin).



- **Sialolithiasis:**

- **Definition:** it is the presence of a stone in the duct of a salivary gland.
- **Epidemiology:** hydroxyapatite stones are the most common; submandibular gland is commonly affected; sialolithiasis is seen among middle-aged males.
- **Clinical features:**
  - ✓ Pain and tenderness over the involved gland.
  - ✓ Intermittent swelling related to meals.
  - ✓ Digital palpation reveals the presence of a stone.
- **Diagnosis:** ultrasound  $\pm$  sialogram.
- **Treatment:**
  - ✓ The condition might resolve spontaneously with hydration, warm compresses, analgesia, massage and sialogogues.
  - ✓ If the stone is in Wharton's duct, it can be surgically removed.
  - ✓ If the stone is close to the hilum of the gland, the gland may need to be removed.



- **Salivary gland tumors (all what you need to know is the following):**

- **The most common benign salivary gland tumor is:** Pleomorphic adenoma.
- **The second most common benign salivary gland tumor is:** Warthin's tumor.
- **The most common malignant salivary gland tumor is:** Mucoepidermoid carcinoma.