

Salivary Gland Calculi



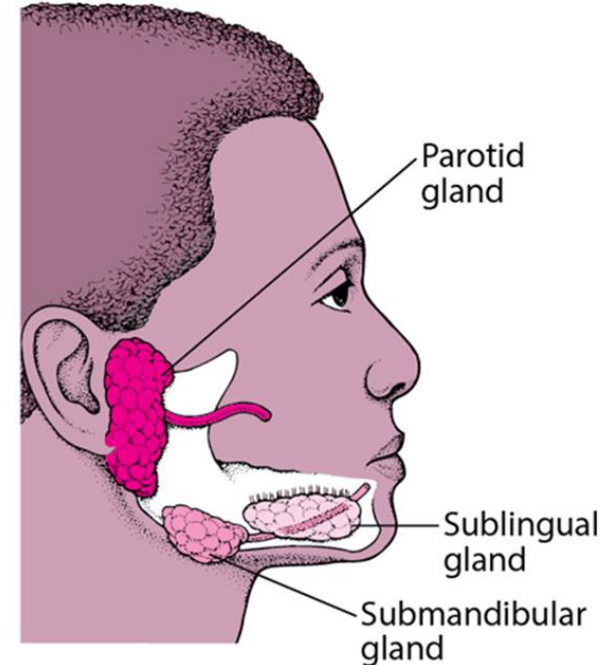
Salivary Glands

There are four main salivary glands

- Two submandibular glands
- Two parotid glands

There are multiple minor salivary glands

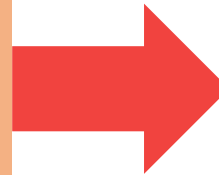
- Two sublingual glands
- Other



Submandibular gland

- Lie below the mandible on either side
- Drains into the anterior floor of the mouth at the sublingual papilla

- Secretions is viscous or mucous
- Secretion contain more calcium
- Drains against the gravity

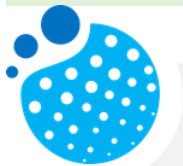


So
Submandibular
calculi are
common



Parotid gland

- Lies in a recess bounded by the ramus of the mandible, the base of the skull and the mastoid process
- Several important structures run through the parotid gland
- Sialolithiasis is less common in the parotid gland



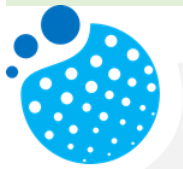
Salivary gland calculi

- Salivary calculi (sialolithiasis) relate to the formation and deposition of concretions within the ductal system of the gland.
- 80% arise from submandibular gland
- 80% calculi are radio opaque
- Component- Calcium phosphate
 Calcium carbonate



Pathogenesis

- Salivary stagnation
- Epithelial injury along the duct resulting in sialolith formation, which acts as a nidus for further stone formation
- Precipitation of calcium salts



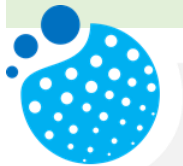
Submandibular gland calculi

- **Complete obstruction** - Acute painful swelling in the region of the submandibular gland precipitated by eating and resolves spontaneously over 1–2 hours after the meal is completed
- **Partial obstruction** - Discomfort and swelling, not confined to mealtimes
- Referred tongue pain (lingual colic)
- Palpable salivary gland on examination



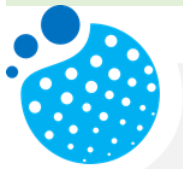
Parotid gland calculi

- Rapid onset pain and swelling at mealtimes
- If left untreated, progressive scarring and fibrosis in and around the parotid duct papilla will produce a permanent stenosis
- Frequently located at the confluence of the collecting ducts or located in the distal aspect of the parotid duct adjacent to the parotid papilla



Investigations

- Submandibular calculi- Intraoral plain X-ray
- Parotid gland calculi - Sialogram
- USS
- FNAC

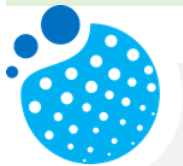


Treatment- Sub mandibular gland

- Treatment is removal of the stone
- **Stone in intraoral duct-** Removal under local anesthesia. Then the duct will be kept open
- **Stone near the gland-** Removal of the gland



Submandibular
Sialadenectomy



Complications of submandibular gland excision

- I. Hematoma
- II. Wound infection
- III. Marginal mandibular nerve injury
- IV. Lingual nerve injury
- V. Hypoglossal nerve injury
- VI. Transection of the nerve to the mylohyoid muscle producing submental skin anesthesia



Treatment- parotid gland

If a stone located in the collecting duct or within the gland

- I. Endoscopic retrieval
- II. Lithotripsy
- III. Surgical removal via a Parotidectomy approach

