Salivary Gland Diseases

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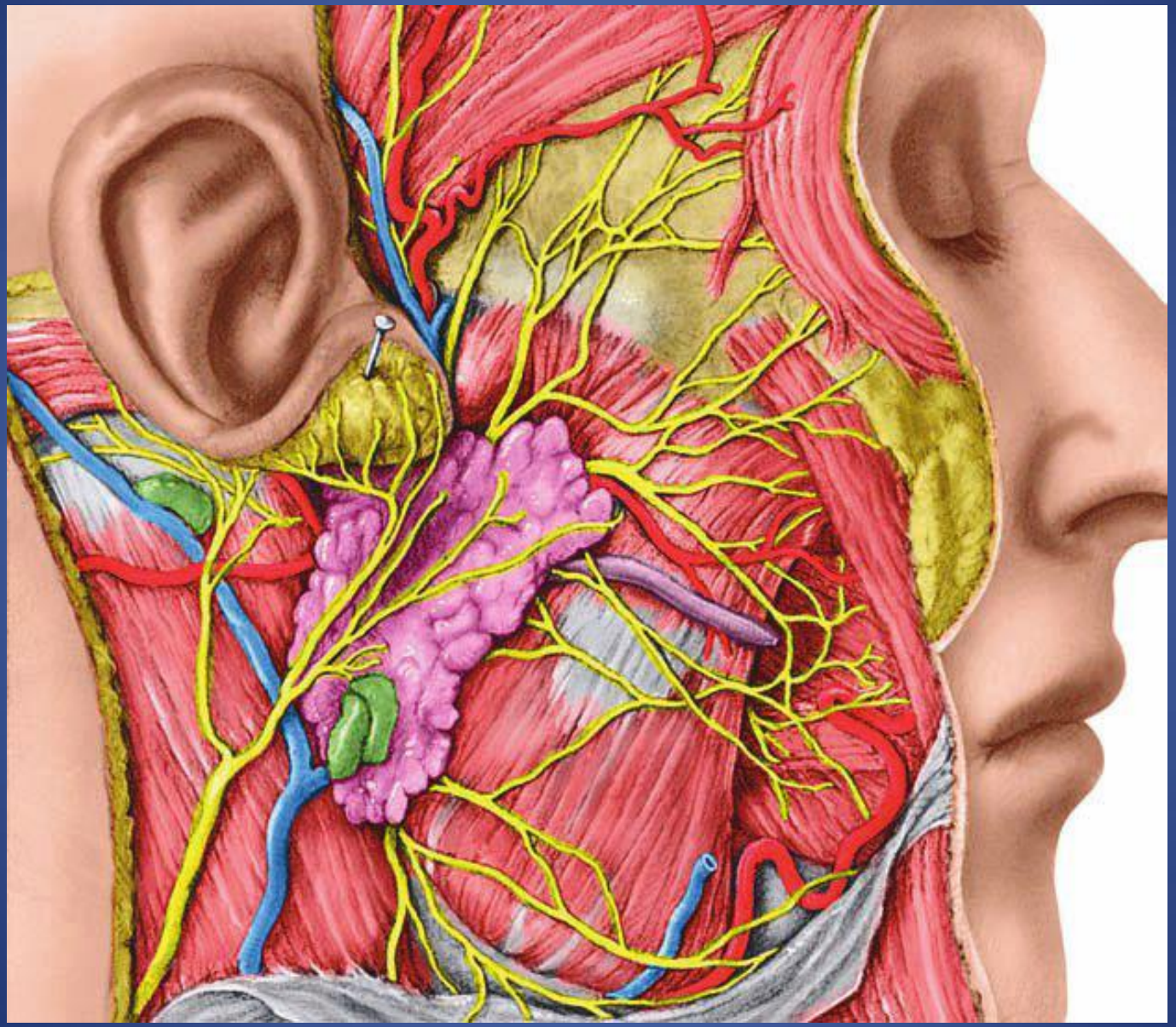
- The salivary glands may be classified as major and minor glands.
- Major glands are paired glands.
- They are: (i) Parotid, (ii) Submandibular and (iii) Sublingual glands.
- There are numerous minor salivary glands, which are widely distributed in the oral cavity

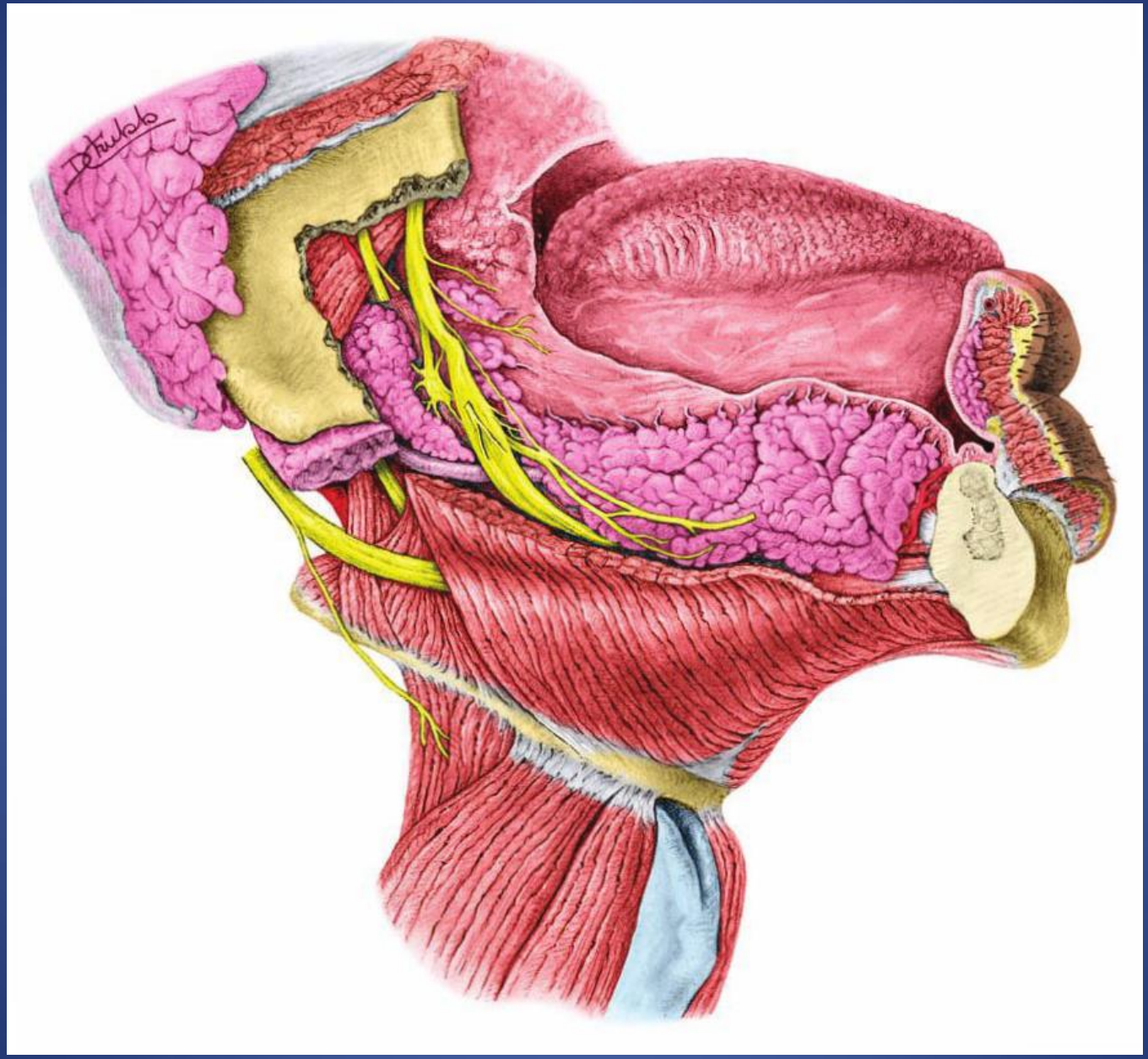
Function

produce saliva

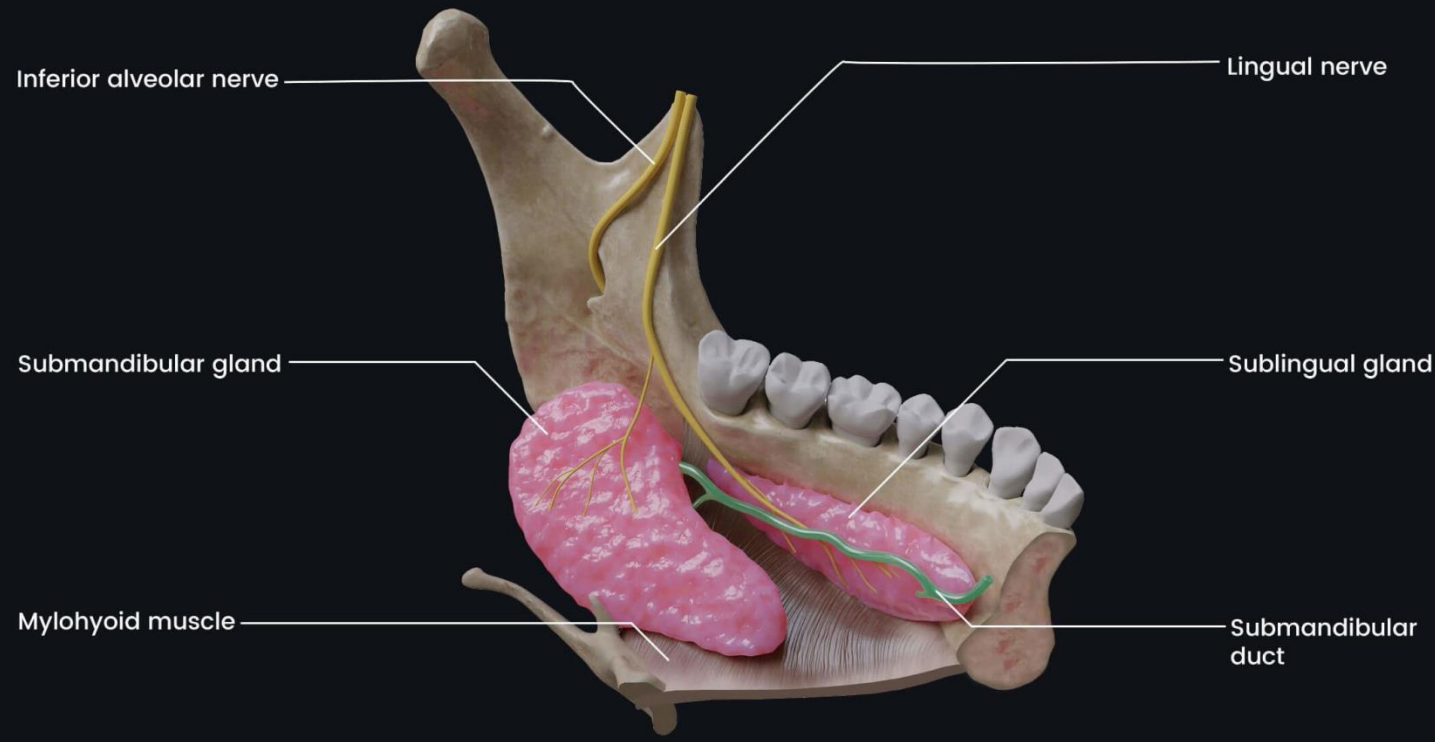
- Lubricant
- Immunologic
- Digestive
- Cleansing

- Based on the type of secretion, the salivary glands may be grouped as:
- (i) Serous
- (ii) Mucous
- (iii) Mixed.



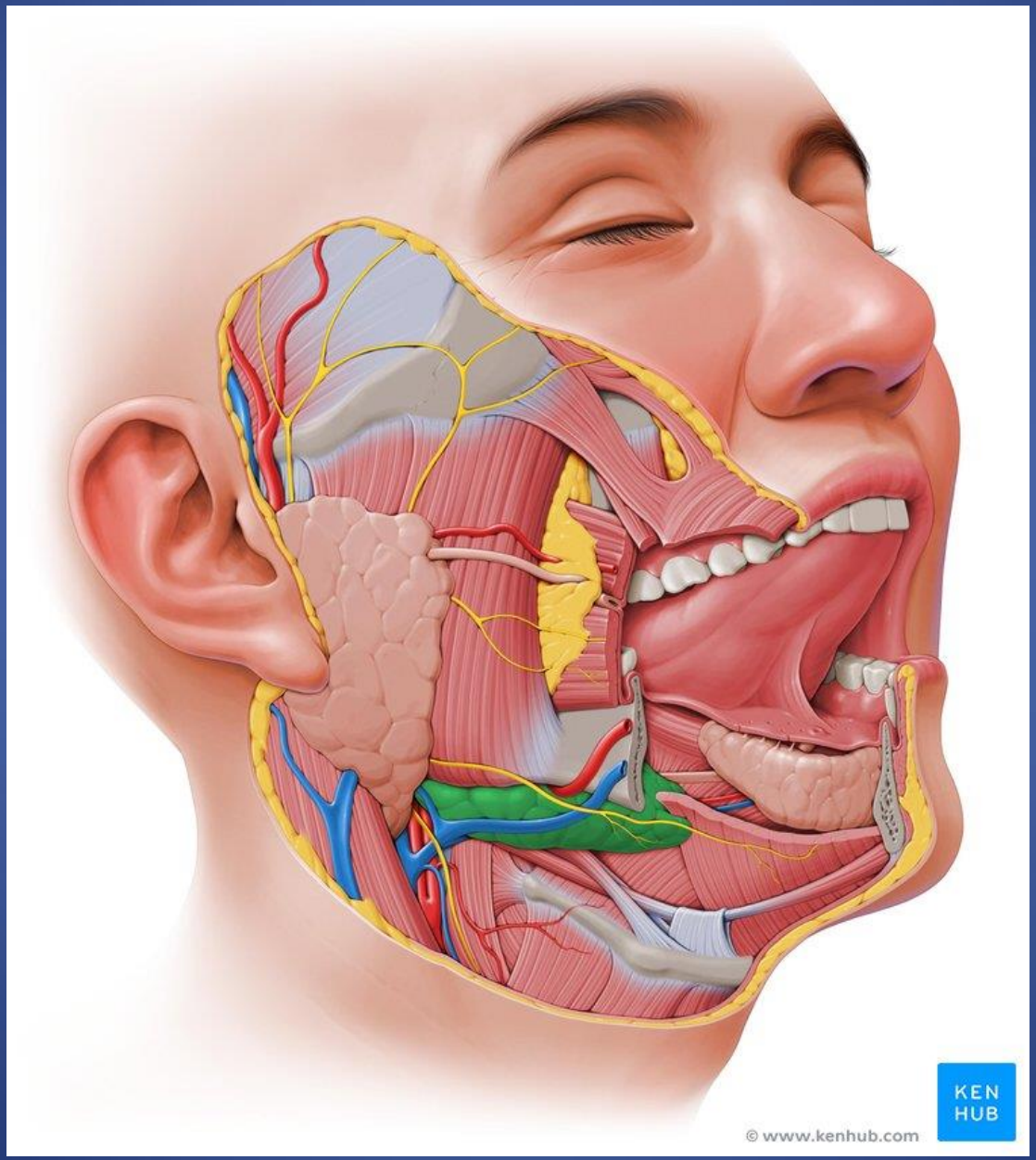


Submandibular gland



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Clinical Considerations

- Because the fibrous fascia is covering the parotid, its inflammatory swelling is tense and hard.
- The right angle turn of the parotid duct also leads to stagnation of saliva.
- The close association of the facial nerve with the gland is very important consideration, during the surgical procedures.

- Retrograde infection by oral flora
- Stagnation of saliva and the organic matter
- The sharp bend of the Wharton’s duct at the posterior border of the mylohyoid muscle allows stasis of the saliva favoring the formation of salivary stones.

Minor Salivary Glands

- More than 800 minor salivary glands may be present in the oral cavity. These are in groups scattered all over the mouth. The minor glands secrete mucous secretions. These glands have numerous small ducts.
- the traumatic lesions such as mucoceles commonly affect these glands.

CLASSIFICATION OF SALIVARY GLAND DISEASES

- I. Developmental:
- 1.Aplasia—absence of the gland
- 2.Atresia—absence of the duct
- 3.Aberrancy—ectopic gland
- II. Enlargement of the gland:
- A. Inflammatory:
- 1.Viral: Mumps, coxsackie A, CMV, echovirus, parainfluenza virus I and influenza virus
- 2.Bacterial
- 3.Allergic
- 4.Sarcoidosis
- 5.Obstructive

- B. Non-inflammatory:
- 1.Autoimmune: Sjögren’s syndrome and Mickulicz’s disease
- 2.Alcoholic cirrhosis
- 3.Diabetes mellitus
- 4.Nutritional deficiency
- 5.HIV associated
- III. Cysts:
- 1.Extravasation cysts
- 2.Retention cysts
- 3.Ranula

- IV. Tumors of salivary glands:
- A. Benign tumors
- 1.Pleomorphic adenoma
- 2.Warthin’s tumor
- 3.Basal cell adenoma
- 4.Myoepithelioma
- 5.Canalicular adenoma
- 6.Ductal papilloma
- B. Malignant tumors
- 1.Mucoepidermoid carcinoma
- 2.Adenoid cystic carcinoma
- 3.Malignant pleomorphic adenoma
- V. Necrotizing sialometaplasia
- VI. Salivary gland dysfunction
- 1. Xerostomia
- 2. Sialorrhea

SIALOLITHIASIS

- Sialolithiasis: is the formation of sialolith (salivary calculi, salivary stone) in the salivary duct or the gland resulting in the obstruction of the salivary flow.
- The factors like inflammation; local irritation or drugs can cause stagnation of saliva.

Complications

- Bacterial infection
- The retention of the saliva
- Atrophy of the gland.

Management

- Number
- Size
- And site



SIALADENITIS

- Inflammation of the salivary glands is known as sialadenitis. Viral infections, bacterial infections, allergic reactions and systemic diseases are the major causes for sialadenitis. It may be acute or chronic.
- Viral Infections
- Mumps (epidemic parotitis) is the most common viral infection affecting the salivary glands; which is caused by a paramyxovirus. It is an acute, contagious disease, usually affecting the parotid gland. Occasionally, the submandibular or the sublingual glands may also be involved.

- Management:
- It is self-limiting. Symptomatic relief can be given by antipyretics. Antibiotics can be given to prevent the secondary infection.

Bacterial infection

- The commensal organisms such as Staph. aureus, Staph. pyogenes, Strep. viridans, Pnuemococcus, Actinomycetes, etc.
- Some drugs like tranquilizers, antiparkinson drugs, diuretics, anti-histamines, tricyclic antidepressants, etc. decrease the salivary flow.

- Clinical features:
- The disease is characterized by sudden onset of pain at the angle of the jaw, which is unilateral. The affected gland is enlarged and tender and extremely painful. The inflammatory swelling is very tense and doesn’t show much fluctuation.

- The overlying skin is warm and red. There is purulent discharge from Stenson’s duct, which can be seen upon pressing the papilla. Patient might present with fever and other symptoms of acute inflammation

- The leukocyte count is high—leukocytosis.
- Sialography should not be performed in the presence of suppuration.

Management

- • Antibiotics
- • Palliative
- a. Hydrating the patient.
- b. Stimulate the salivation by chewing sialogogues.
- c. Improve the oral hygiene by debridement and
- irrigation.

If there is no improvement.

- • Surgical drainage may be done using needle aspiration guided by CT scan or ultrasonography.

- Clinical features: The disease starts as an unilateral swelling at the angle of the jaw.
- The recurrent sialadenitis shows periods of remissions. The gland may undergo atrophy, which results in decreased salivary flow.
- Management:
- 1. Antibiotics
- 2. Intraductal infusion of erythromycin or tetracycline
- 3. Occluding ductal system with a protein solution
- 4. In intractable cases, excision of the gland.

CYSTS OF THE SALIVARY GLANDS

- 1. Mucocele





2. Ranula


ribbit
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- Mucocel Two types of distinct entities described are, the true retention cyst
- the mucous extravasation cyst which occurs because of the pooling of mucus
- Clinical features: Small superficial, painless, well circumscribed swellings on the mucosa. Often vary in size from 1 mm to 2 cm. In deep seated, fluctuation is positive. Color is variable, it may be translucent or bluish. The mucocele may rupture spontaneously with the liberation of a viscous fluid.

Treatment:

- They are best treated by surgical excision together with the associated minor salivary gland tissue and surrounding connective tissue.

- Ranula is variant of a mucocele that is present on the floor of the mouth, beneath the tongue.
- Owing to its resemblance to a frog's belly, it has been termed ranula. Two types have been identified, i.e. superficial ranula and plunging ranula





Treatment

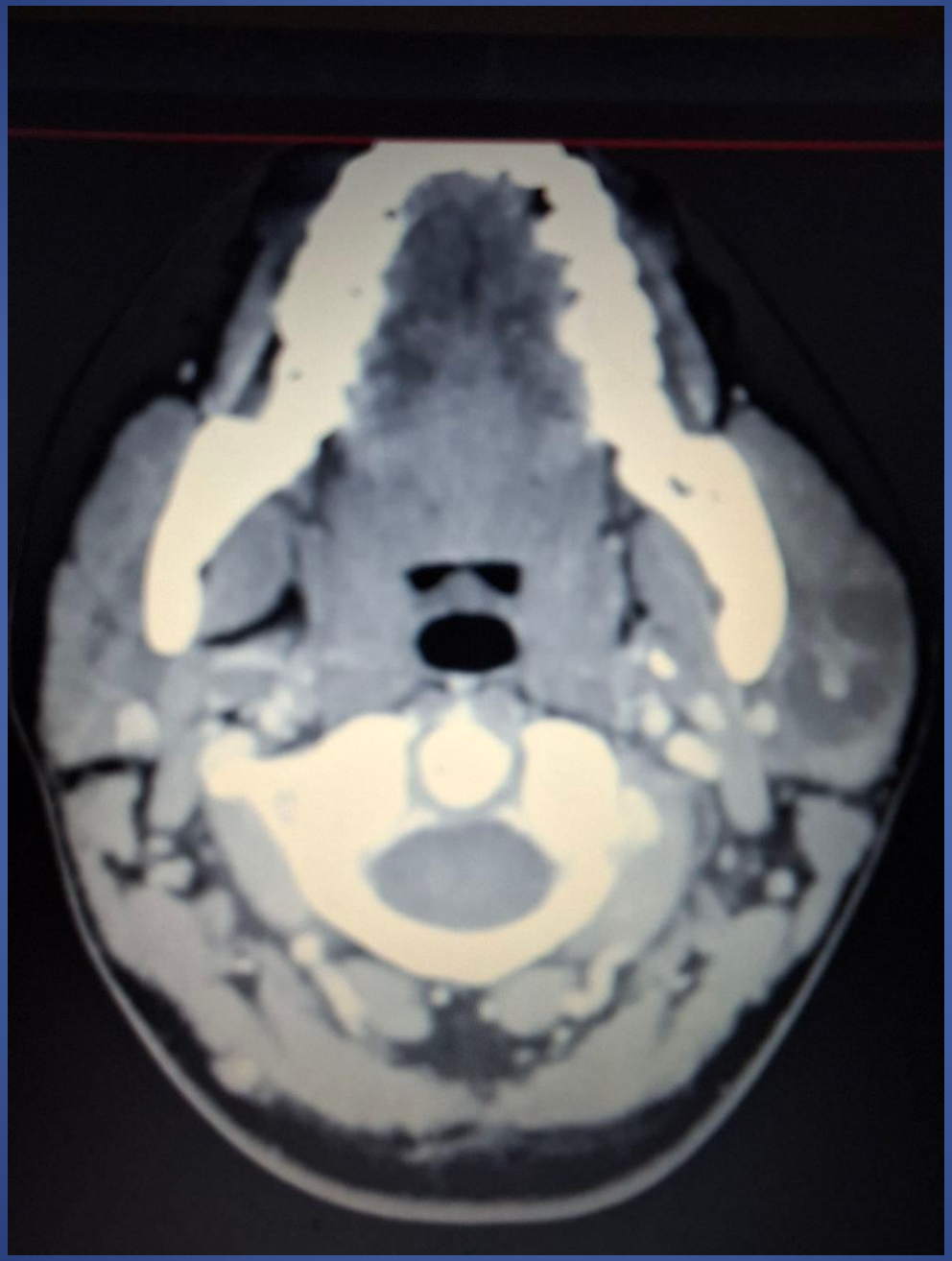
- surgically remove the sublingual gland from an intraoral approach for both the superficial or plunging variety.

TUMORS OF THE SALIVARY GLANDS

- Benign Tumors
- Pleomorphic adenoma, Warthin's tumor, basal cell adenoma, canalicular adenoma, oxyphilic adenoma, myoepithelioma, ductal papilloma, etc. are the benign tumors affecting the salivary glands.

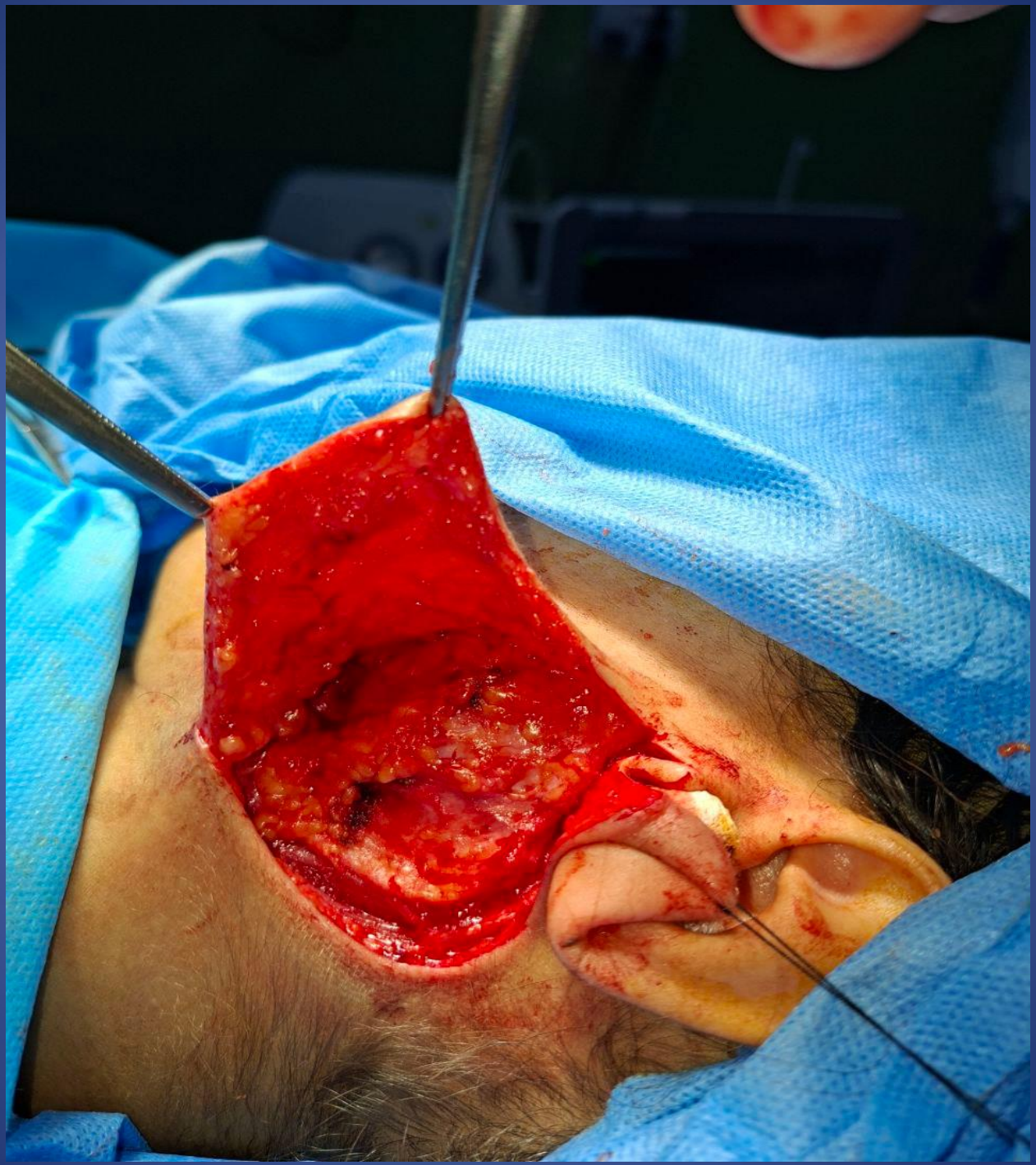
- Pleomorphic Adenoma
- Pleomorphic adenoma constitutes more than 50 percent of all tumors and 90 percent of all the benign tumors of the salivary glands. It can affect both the major and minor salivary glands; it commonly affects the parotid gland.
- This tumor has created lengthy arguments and spirited debate with regards to its histogenesis and management.

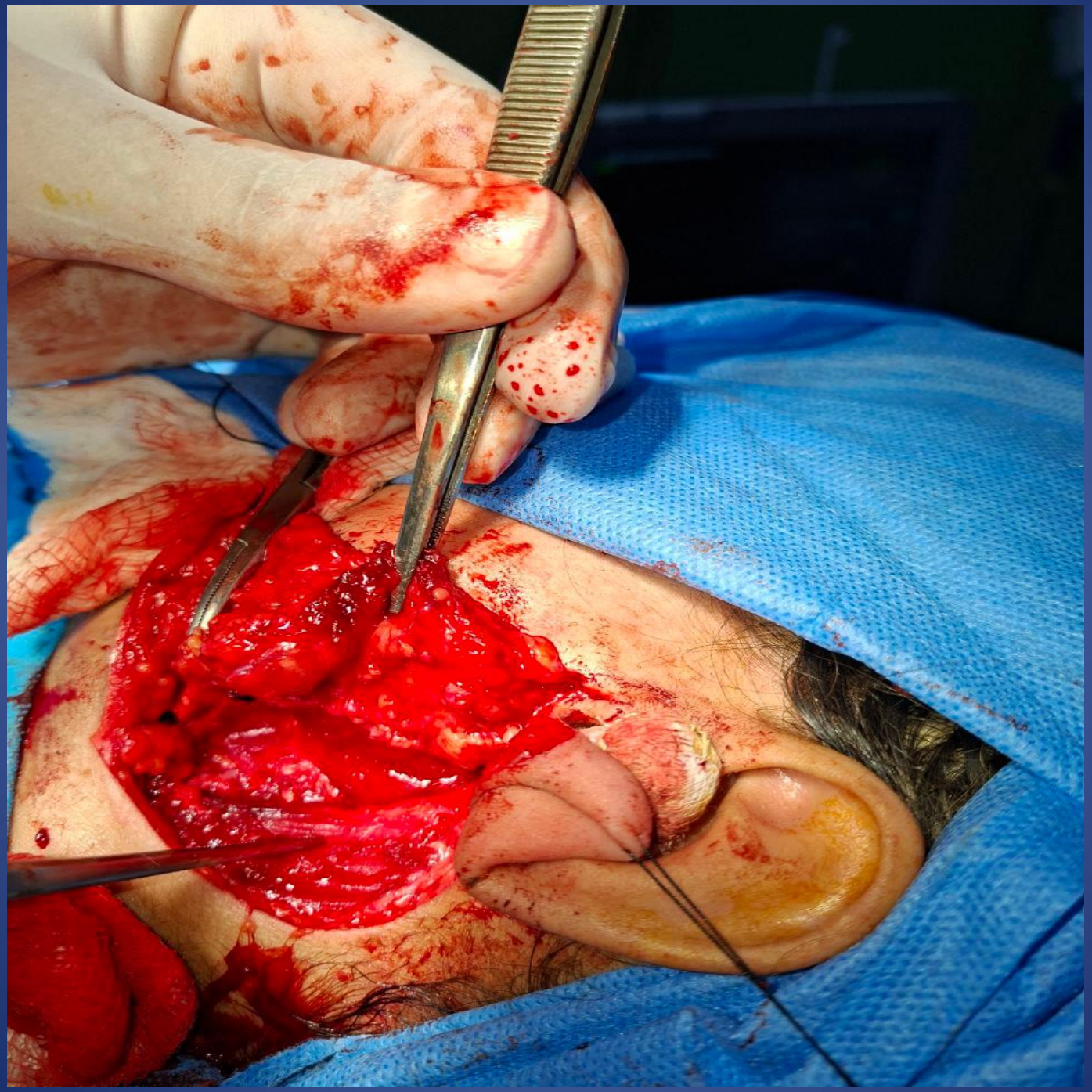


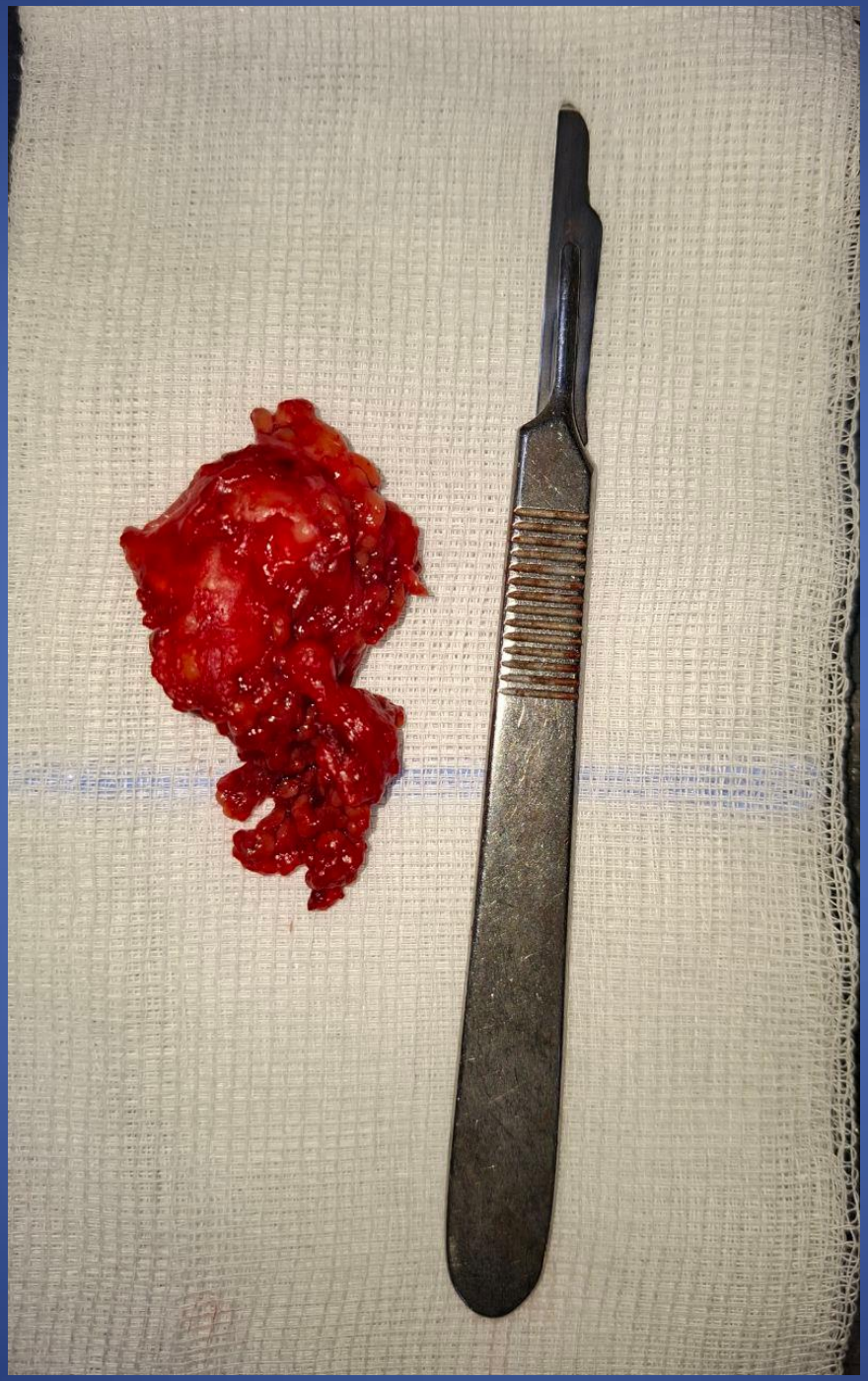










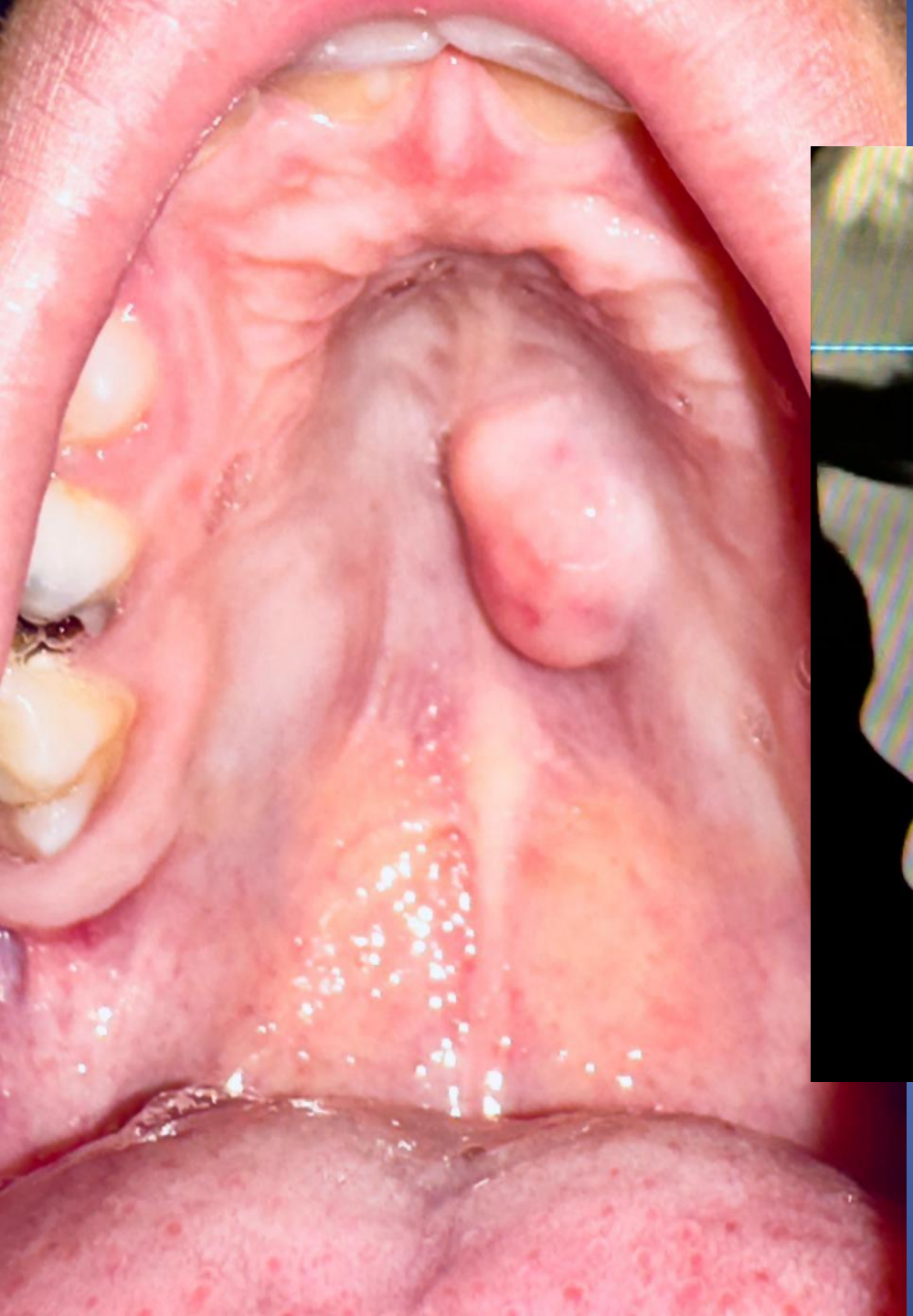


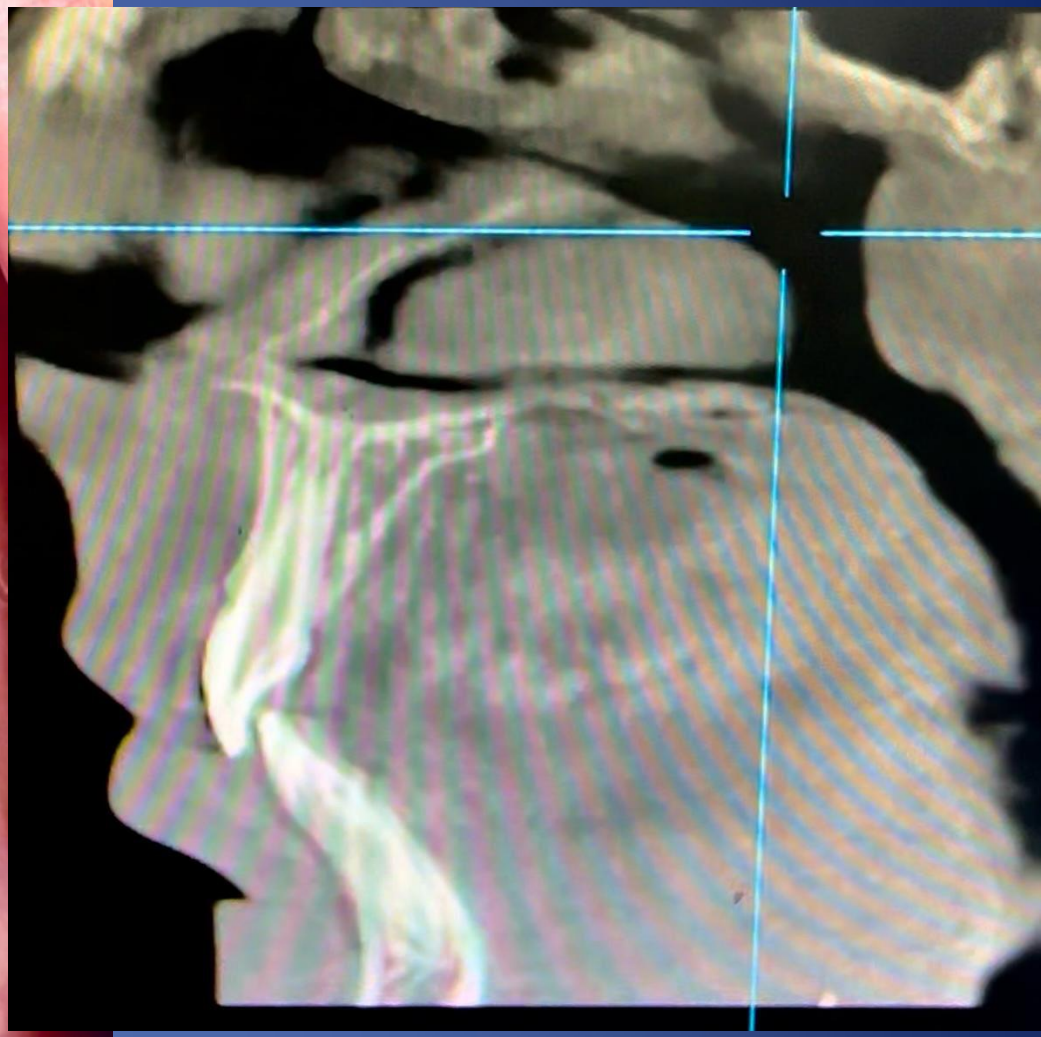


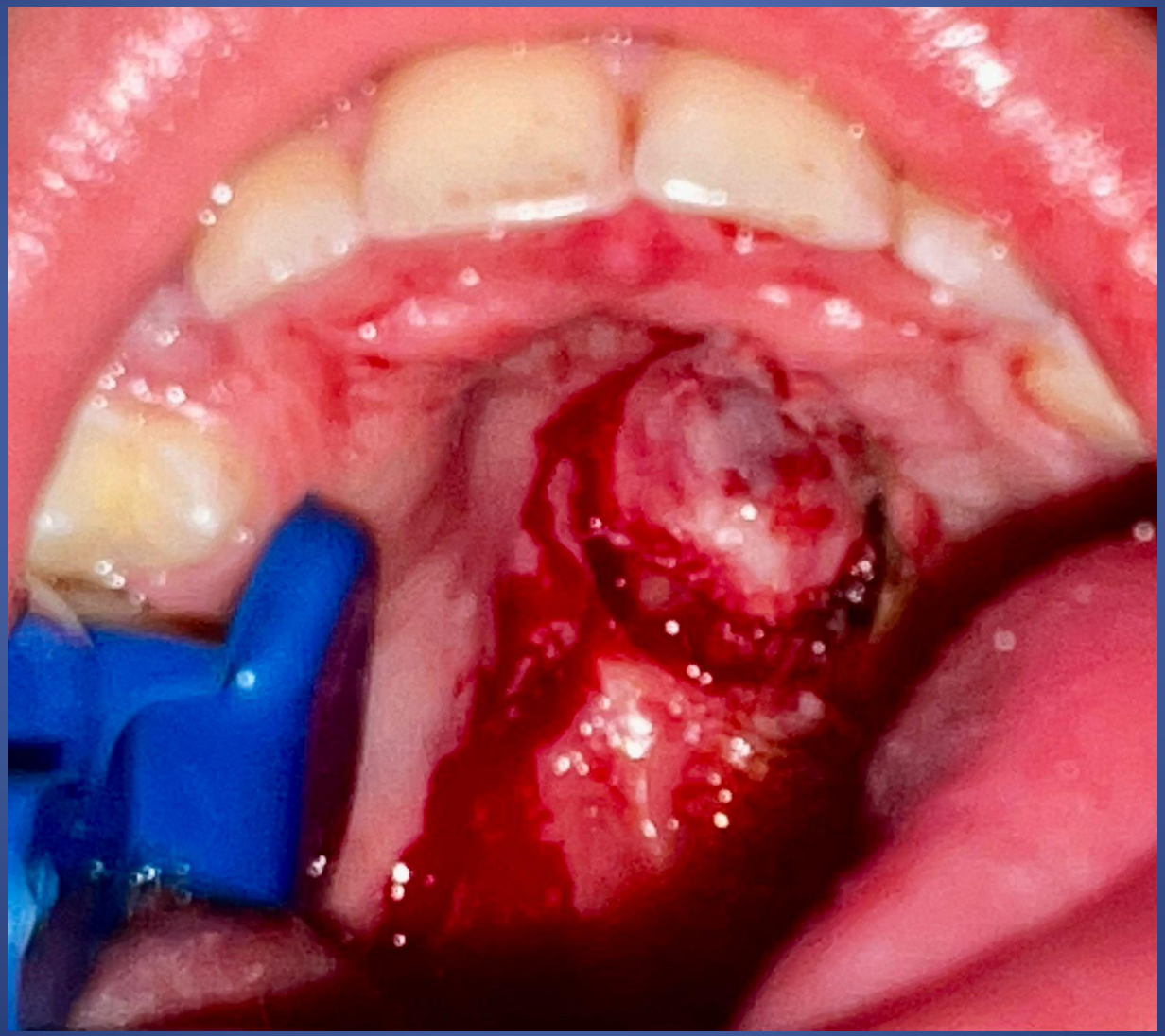












Malignant Tumors

- Mucoepidermoid carcinoma / low- grade, intermediate grade and high-grade
- Adenoid cystic carcinoma, malignant mixed tumor/ commonly perineural invasion
- Acinic cell carcinoma, are the common malignant tumors occurring in the salivary glands.

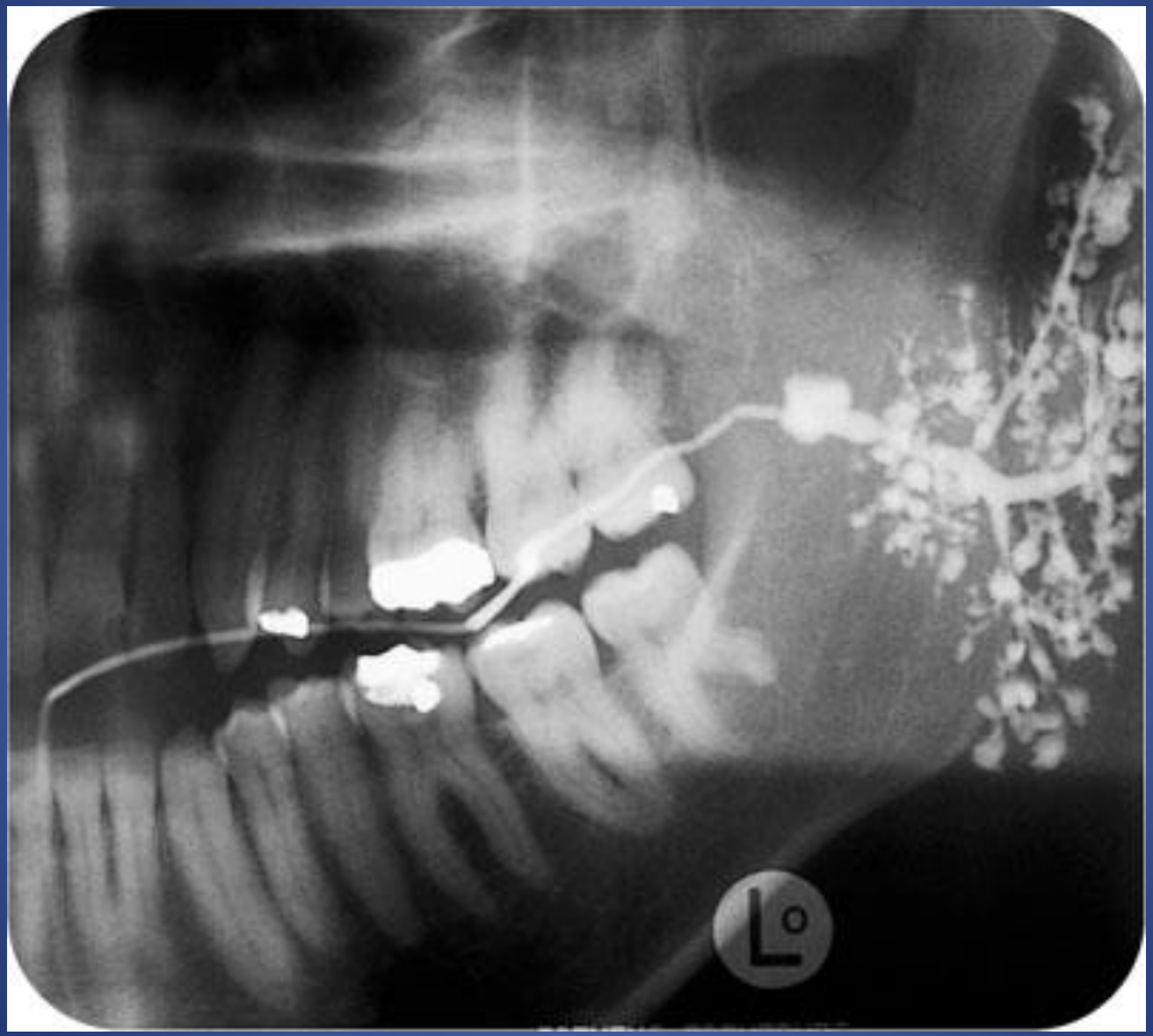
NECROTIZING SIALOMETAPLASIA

- Necrotizing sialometaplasia is an inflammatory lesion of unknown etiology, which affects the minor salivary glands. Trauma leading to ischemia, acinar necrosis and squamous metaplasia of the ductal epithelium is thought to be the pathogenesis. Since the lesion mimics a malignant lesion, both clinically and histologically, the diagnosis should be carefully done.

NON-INFLAMMATORY AUTOIMMUNE DISEASE

- Primary Sjögren's syndrome
- Secondary Sjögren's syndrome
- Genetic, hormonal, infection and immuno- logic.
- Biopsy
- Sialography demonstrates the cavitary

defects which are filled with radiopaque contrast media, producing the "branchless fruit laden tree" or "cherry blossom" appearance


Lo

Sialorrhea or Ptyalism

- Minor sialorrhea
- Idiopathic paroxysmal sialorrhea
- Anticholinergic medication can be tried (atropine). Behavioral modification, physical therapy.
- Submandibular gland resection
- Transposition of parotid duct
- Parotid duct ligation.

Xerostomia

- Subjective sensation of a dry mouth.
- Due to aging as well as due to some medications which reduce the secretion. Antihistamines,decongestants,antidepressant, antipsychotics,antihypertensives,anticholinergics

COMPLICATIONS OF SURGERY OF SALIVARY GLANDS

- Frey's Syndrome (Gustatory Sweating)
- Facial Nerve Paralysis
- Salivary Fistulae and Sialoceles


A
B

THANK YOU