

# Salivary Gland

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## Salivary glands

Are secretory glands secrete saliva of different types:

### 1-Major salivary gland:

A. Parotid: each on side of face anterior and front of each ear, secrete watery saliva open by Stensen's duct on third molar inside the mouth.

B. Submandibular: each behind mandible secrete mucus saliva open by Wharton's duct under side of tongue.

C. Two sublingual: open directly in mouth floor.

2. Minor salivary glands: Many numerous in mucous membrane of mouth, lips, Palates.

### Investigation of general consideration of importance:

1- Proper history of patient complain as in submandibular gland complain of pain, swelling of submandibular area after eating or see the food or fruits as orange. This is stone in submandibular duct.

2- Non tender mass for long time soft to firm in front of ear this parotid tumor (Mixed).

3- Severe redness with pain and swelling at parotid area is parotitis, Sialicosis, May be of many causes:

1- Virus: Mumps

2- Bacterial parotitis due to obstruction by stone or bacteria.

3- Complication of parotid surgery dehydration, autoimmune disease and immunosuppressant.

4- Diabetes Mellitus, Tuberculosis, ill health, bad



hygiene of mouth and teeth.

5-Post severe illness, high fever.

4- Parotid gland of two loops supervised (Anterior and deep and fascial nerve sandwich between them it might be injury and fascial palsy result.

*Lingual* 5-Lingual nerve and fascial art and hypoglossal nerve is close relation to submandibular gland have not to injured them during operation.

6-X-ray plain may show radio-opaque stone in mandible. Ultrasound, scialography, Fine needle aspiration excisional biopsy has to be done.

### Inflammation of salivary gland

Inflammation of salivary gland accompanied by obstruction of duct either by stone or deep bacterial or viral infection., or stricture or outside pressure, is of: Acute, sub acute or chronic types.

**Bacterial Acute Parotitis:** Mainly caused by staph. or strept. Organism infection. is of hard swelling over parotid gland. Tender mass lobules of ear pushed outside. At the same time swelling may be limited to part of gland functional positive as pus being conducted. At same time if light pressure on area pus came from area mouth.

Treatment:

- 1- Improve general condition of patient, fluid for dehydration, Proper Antibiotics, correct anemia and nutrition.
- 2-Proper hygiene of mouth.
- 3-Wide spectrum Antibiotics.
- 4-Surgical drainage.

### Viral Acute Parotitis

Most common condition is mumps. Occur as viral infection in young children in early school as high fever, ill health, mild contagious disease (Uni & bilateral swelling of parotid) sometimes tender soft injury. Complication Orchitis in male.

Post deep X-ray and chemotherapy Parotitis.

Autoimmune Parotitis, Sjogern syndrome

Tuberculosis, Actinomycosis may happen.

## Tumors of salivary gland

The international classification of salivary gland tumor are:

A-Epithelial { Adenoma  
Carcinoma

Adenoma(polymorphic) mixed parotid tumor, is the most common.

B-Monomorphic Adenoma: includes

1-Adenolymphoma

2-oxyphitic adenoma

C- Other types.

3- carcinoma { Adenocystic carcinoma  
Adenocarcinoma  
Carcinoma in polymorphic  
Undifferentiated

4-Non epithelial { Fibroma  
Lipoma

Clinical finding many salivary gland neoplasm are rare .80% are in parotid , 85-90% are benign mixed parotid. Rare 10% are in submandibular. All presents as mass different in size ,hard to soft in nature according to type ,sometimes cystic locally disseminated like ascinic cell tumor.

## Diagnosis of salivary gland tumor

1-Clinical history: lump in front of ear(common), non painful for long time.

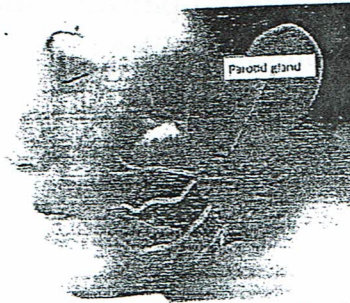
2-Ultrasound,FNA.

3-Treating excisional biopsy.



For superficial lobe try to leave deep lobe, in order not to damage fascial nerve. Deep x-ray treatment is optional, some school is not give, but other do, in mixed tumor in cancer is must as in adnecystic carcinoma and mucoepidermoid cell tumor, these will infiltrate to floor of mouth, causing fascial nerve palsy in result.

### Salivary Fistula



Is tract from parotid gland to skin with continuous secretion of saliva. Result from parotid trauma or injury to gland or parotid surgery. Treatment is complete excision of remaining gland or apply DXT to gland.

### The mouth

#### Inflammation

Stomatitis and gingivitis are the most common due to

1-Erosion

2-Ulceration

of mucus membrane of mouth.

Mouth mucus membrane has defense mechanism due to saliva which will act as continuous wash out of bacteria and monilia and act as antiseptic to kill organisms.

#### Predisposing factors for Inflammation

General drop in defense mechanism of body

1-Diabetu<sup>s</sup> mellitus, dehydration.

2-bad mouth hygiene.

3-Vitamin B1-B12 deviancy.

4-Post cytotoxic drugs and immunosuppressant.

5-Leukopenia and agrnulocytosis.

5-Chemical poisoning.

### Clinical types

A-aphthus ulcer: due to bad mouth hygiene and physical and emotional stress, presented as multiple small yellowish to white painful ulcer in the floor of mucus membrane of mouth, cheeks, inner lips ,it take 2 weeks to heal spontaneously.

Treatment:

1-Good mouth hygiene .

2-Chlorohexidine solution(garger).

3-Triamcilonone oral paste which cover the ulcer.

B-Herpis Simplex: Viral in origin any where mouth, around lips, occur post fever, cured spontaneously

C-Herpes zooster

D-Monleal stomatis : occur in week depleted child and infants , post broad spectrum antibiotics, malignancy and ill adults with TB.

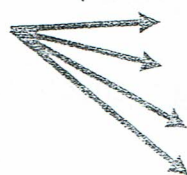
Presented as whitish multiple ulcer or plaque on mouth or tongue.

Treatment :

1-antifungal as nystatin or mycostatin local or systemic.

2-Gention violet locally

E- Specific ulcer



Post trauma

Tuberculosis

Syphilis

Carcinoma

### Cyst in the mouth

1-Simple cyst: collection of fluids or saliva in floor of mouth, cheeks, palate and lip or from minor salivary glands.

1-sublingual salivary cyst.

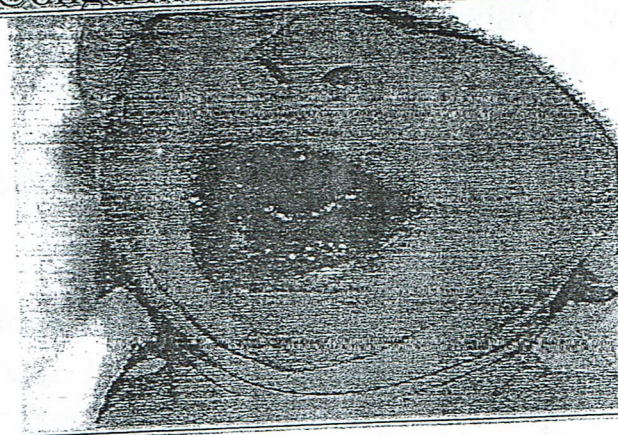


2-Lingual dermoid cyst lined by stratified epithelium all need surgical excision.

### Tumors

- 1-Simple polyp
- 2-Granuloma due to chronic irritation of bad denture (epulis )
- 3-Papiloma.
- 4-Haemangioma, lymphangioma.
- 5-Salivary tumor.
- 6-Neurofibroma.
- 7-Carcinoma of cheeks.

### Congenital anomalies of tongue



1-Tongue tie: Fibrous tissue band connect the tip of the tongue to the floor of the mouth > patient mother wary that child cannot speech in the future. [Which is not true always].

Treatment: excision of fibrous tissue.

2-Lingual Thyroid: failure of thyroid to descend to the neck, hard swelling at base of the tongue.

3-Haemangioma lymphangioma : specially at floor of tongue presented as compressible mass.

## Inflammation

A-Acute pyrogenic infection: of tongue is rare. due to huge blood supply.

B-Tuberculosis ,syphilis-is also not uncommon as primary presented as ulcer or granuloma.

C-Leukoplakia: leuko means white , its whitish moist hyperkeratic spot on tongue caused by 6S:

1-Syphllis 2-Smoking 3-Sepsis 4-sharp teeth

5-spices 6-spirit.its progress may change in carcinoma in situ.

## Ulcer of the tongue

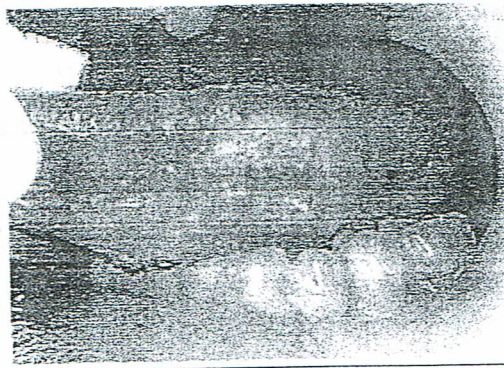
1-Aphthus ulcer: most common.

2- Denture ulcer.

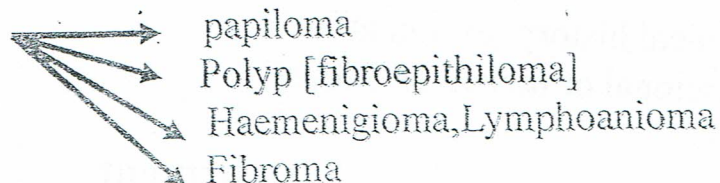
3-Malignant ulcer.

4-Syphilitic ulcer.

## Tumor of the tongue



1-Benign



2-Malignant CA tongue:

Is clinical presentation or following

A-Raised papiloform swelling of keratin on the tip or surface.

B-ulcer

C-Fissure



D-Hard mass

Incidence around 70% are on anterior 2/3 at lateral aspect of tongue,  
25% at the posterior 1/3.

Clinical findings , most commonly is

1-Pain , severely organizing keep the patient awake at night.

2-Excessive salivation .

3- Difficulty swallowing and talking

4-Bad mouth smell plus palpable lymph node in the neck.

### Spread of ca tongue

1: local

2:lymphatic

1: Anterior 2/3

sub mental, superficial and deep jugular  
posterior 1/3

3:distand metas. By blood

### Causes of death

1-Brochopnemonia due to inhalation of infected saliva.

2-Starvation unable to eat or drink.

3-Cachexia.

4-Asphaxia.

### Diagnosis

1-clinical,history ,examination

2-exscional or incisional biopsy

3-FNA

### Treatment

1-Surgery

2-Radiotherapy

3-Chemotherapy



## Definitive treatment

- A-Small dysplasia conservative excision.
- B-Carcinoma in situ early not spread of small= local excision give good progression by deep X-ray treatment.
- C-lesion less than 2cm diameters by radiotherapy.
- D- Carcinoma in lateral border always should be excised and excision of cervical lymph node by block dissemination on affected side.
- E-more than 2cm DXT of primary and block dissemination .
- F-More than 2 cm with palpable lymph node DXT with block dissemination.

## Carcinoma on the Antrior 2/3:

Excision of tumor cervical irradiation , block dissemination if lymph node are mobile positive for carcinoma.

### Radiotherapy:

Only in spread carcinoma and big cervical lymph node. Are preliming irradiation to get lymph node smaller then followed by surgery.  
Chemotherapy also applied as Adjuvant therapy.

END