Salivary gland neoplasms

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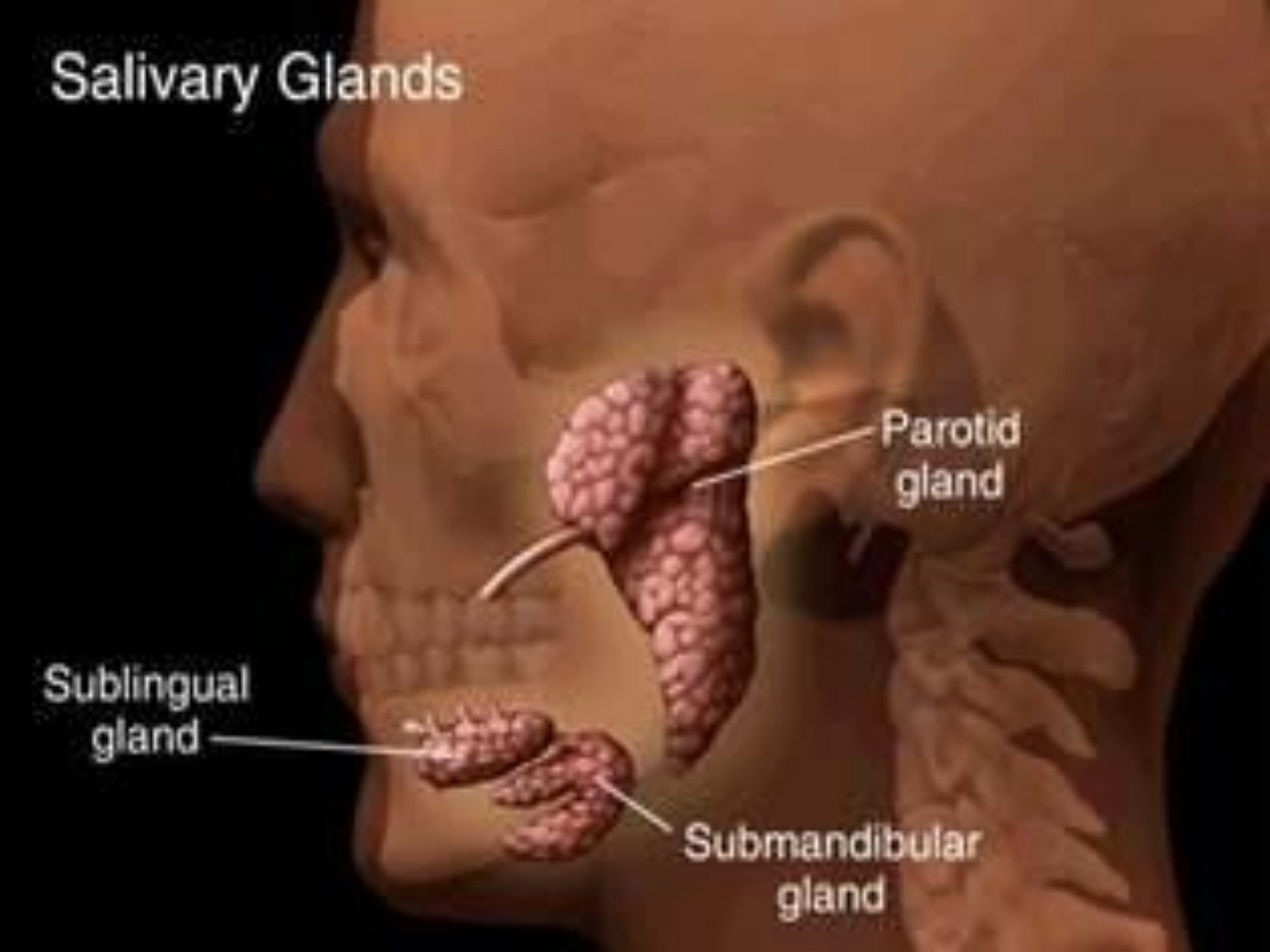

Salivary Glands
Parotid gland
Sublingual gland
Submandibular gland

* Salivary neoplasms constitute 5% of head &neck tumors &1,2% of body neoplasms.

*The majority of these neoplasms are benign , most commonly arise in the parotid gland.

*The incidence of malignancy varies inversely with the size of the gland :

-25% of the parotid gland

-40% of submandibular gland

-70% of sublingual gland

-90% of minor salivary gland

*The larger the gland ,the more common the tumor incidence, the smaller the gland , the higher the malignancy rate .

Benign	Malignant
1-Pleomorphic adenoma 2- Monomorphic adenoma 3-Oncocytoma (oxyphil adenoma)	1-Mucoepidermoid carcinoma. 2-Adenoid cystic carcinoma (cylindroma) 3-Acinic cell carcinoma . 4-Adenocarcinoma. 5-Carcinoma ex pleomorphic adenoma. 6-Lymphoma.

Pleomorphic Adenoma

Incidence :

-Commonest salivary tumor, more common in males.

-commonest in the parotid, less in submandibular gland .

Pathology :

Benign tumor .

Site:

Usually from superficial part of parotid gland .

Macroscopic:

Firm , bossy , irregular,lobulated, encapsulated with grayish white cut surface and strands of tumor cells tend to pentrate the capsule (incomplete capsule) and may extend beyond the main limits of the mass (multicenteric)so enucleation of the tumor carries high risk of recurrence.

Microscopic:

It was reffered to in the past as mixed salivary tumor because of its histological appearance .

Cells: epithelial cells arranged in sheets and duct like structures.

Matrix: blue stained mucinous material (pseudo cartilaginous)

Clinical features:

Symptoms:

Painless slowly growing swelling in the side of the face.

Signs:

Site: in parotid region

Size: variable

Shape: irregular

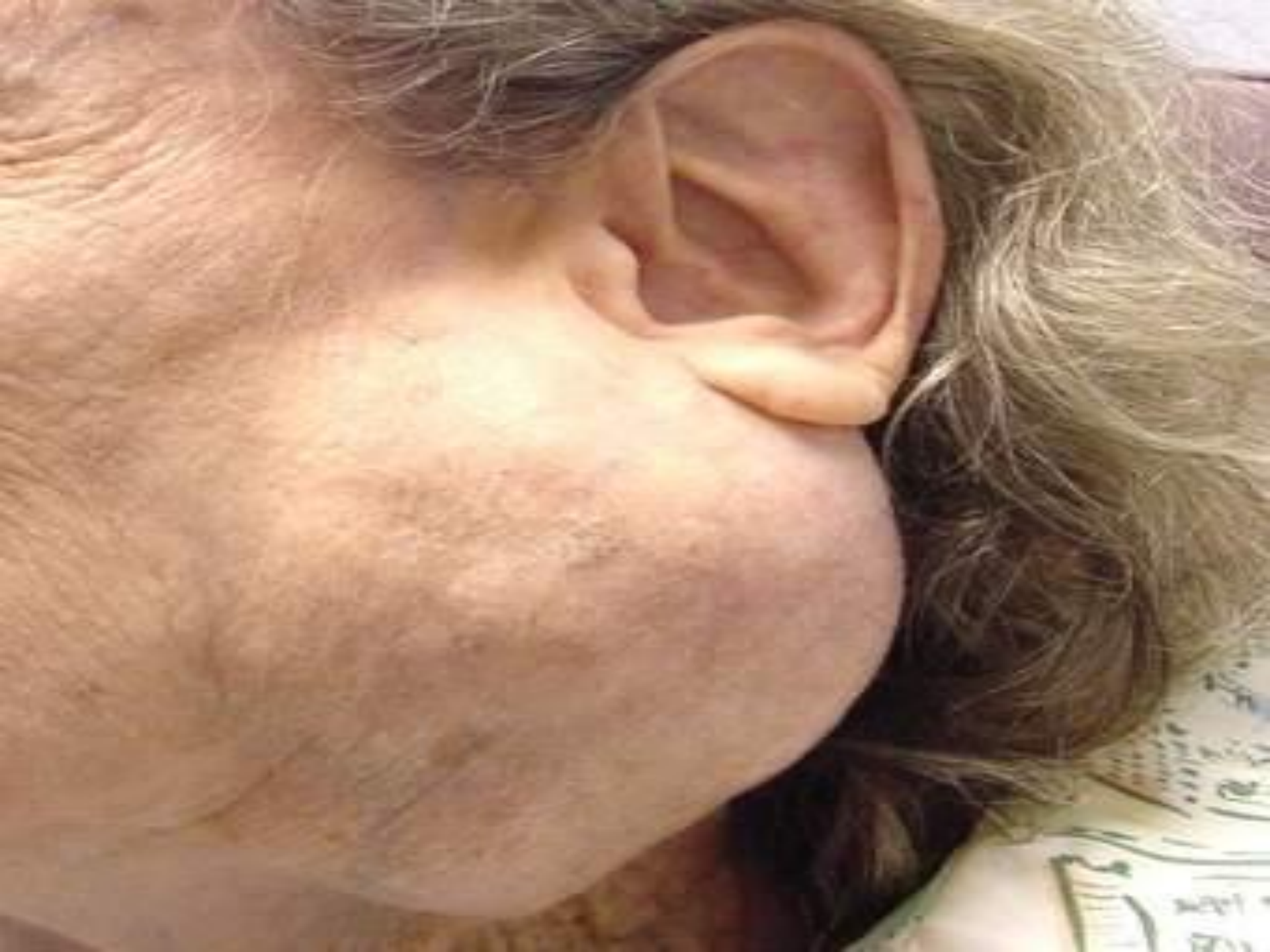
Surface: lobulated

Consistency: variable (firm or cystic but never hard)

Mobility : freely mobile (not attached to skin ,muscles or bones)

Special character: elevating lobule of the ear .

Spread : no cervical LNs enlargement or facial nerve infiltration .



Complication:

1-Disfigurement .

2- Malignant transformation after 10 years is rare (2-3%)

Investigations:

1-CT scan: for assessment of tumors arising from deep part of the parotid .

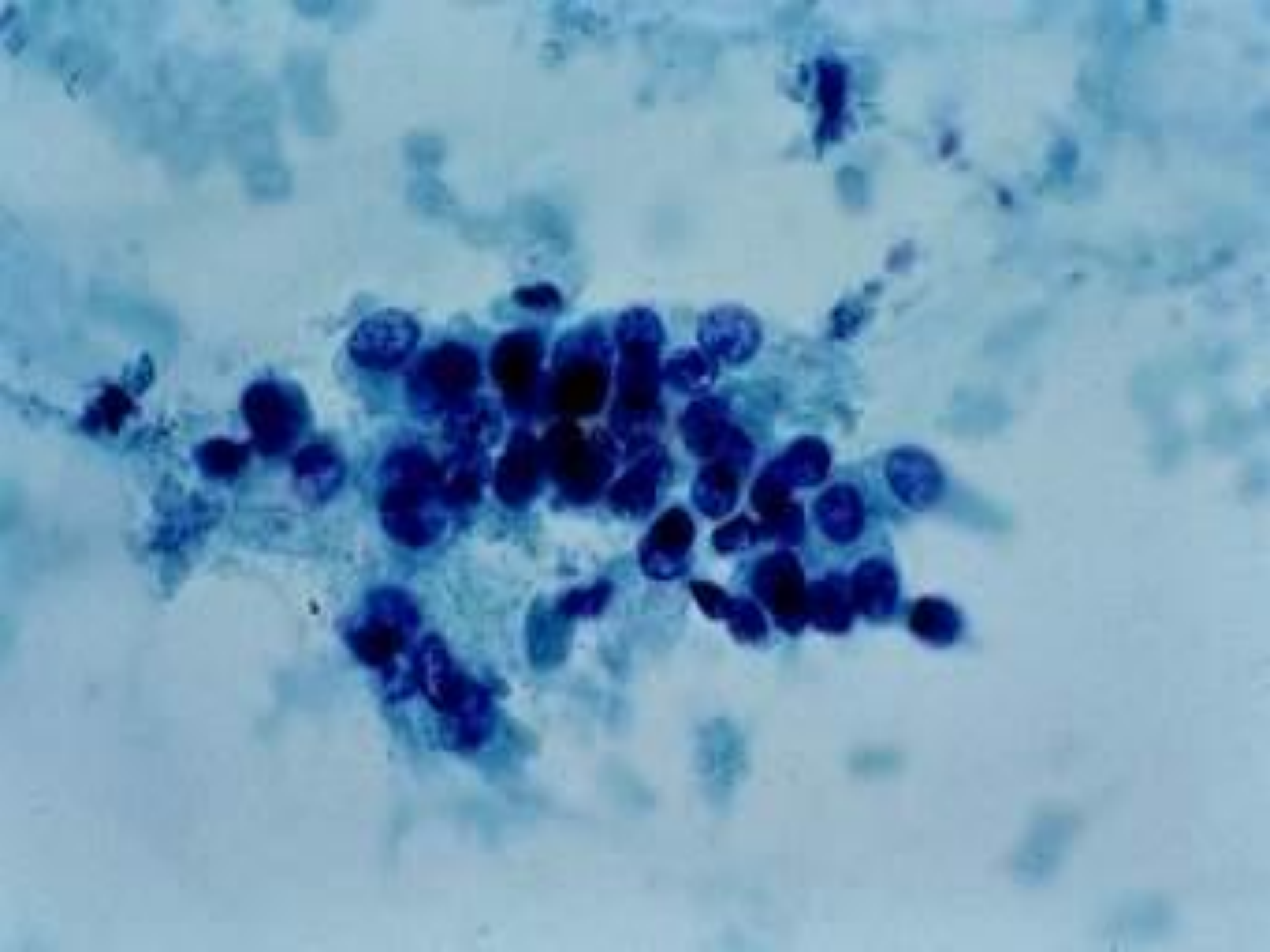
2-Tc99 scan :cold spot (avascular)

3-Open biobsy: is'nt advised to avoid fistula , facial N. injury&spillage of the tumor .

4- fine needle biobsy : ay be required .

Parotid gland

A "core" sample of the gland is taken with a needle to be biopsied



Treatment:

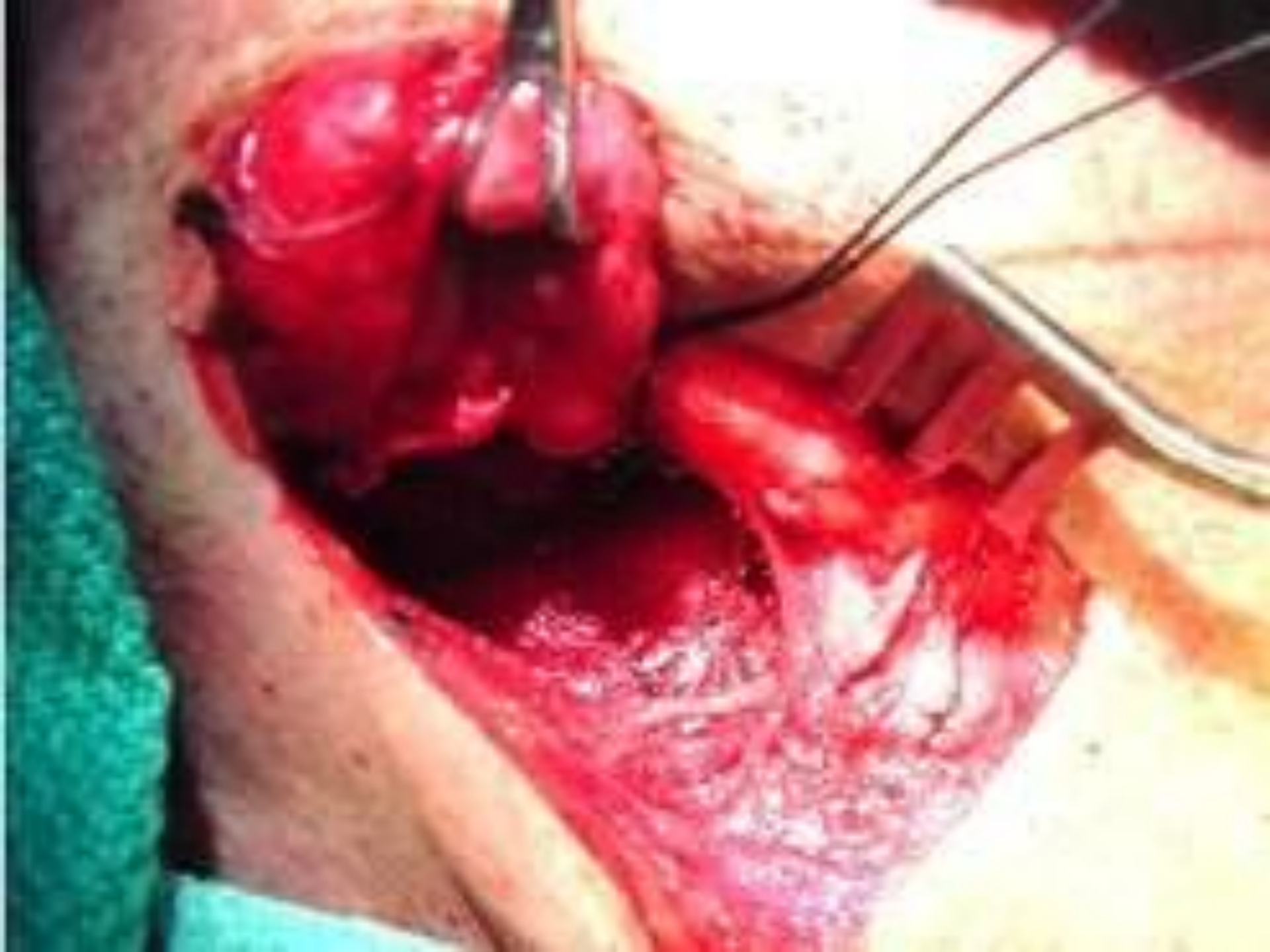
-The tumor should be excised with safety margin (less recurrence rate than enucleation)

1- Benign tumor in parotid:

a-Conservative superficial parotidectomy: all parotid tissue that is superficial to the nerve and its branches is excised.

b- Total conservative parotidectomy:

- removal of both superficial and deep lobes with preservation of facial nerve (indicated for tumor of the deep lobe and for recurrent tumors)



2- Benign tumor in submandibular gland:

-treatment is submandibular sialadenoctomy and take care not to injury 3 nerves :

a- cervical &mandibular division of facial nerve: protected by making an incision parallel to and 2 cm from lower border of mandible .

b- Lingual and hypoglossal nerves: are at risk during excision of deep part of the gland :protected by exposure of these nerves .

3- Minor salivary gland tumors (rare): simple exicision with safety margin.

What to do if facial nerve is injured ?

-in case of accidental nerve injury :immediate repair by microsurgical techniques either by :

1- Direct suturing

2-Nerve graft taken from great auricular nerve

3-Hypoglossal sling: anastmosing peripheral branches of facial nerve to hypoglossal nerve

Monomorphic Adenoma (Adenolymphome) (warthin`s tumor) (Papillary cystadenoma lymphatosum)

Incidence:

10% of parotid tumors and bilateral in 10% of cases especially in old age &smokers .

Pathology:

(Papillary cystadenoma lymphatosum)

Site:

Superfacial part and lower lobe of parotid gland .

Macroscopic :

Cystic,encapsulated benign tumor

Microscopic:

Columnar epithaluim surrounded by lymphoid tissue

Clinical picture:

Symptoms:

Elderly male > 50 years,presents with painless, slowly growing swelling in side of the face.

Signs:

Same as pleomorphic adenoma but always cystic or soft in consistency, in front of targus of the ear, bilateral , never to turn malignant.

Investigations:

Tc99 scan: hot spot

CT scan

Treatment:

Conservative superficial parotidectomy .

Pleomorphic adenoma	Monomorphic adenoma
-Commonest (salivary tumor, in females,in parotid)	-Commonest in elderly male &smoker.
-Incomplete capsule ⇒ multicentric-high risk of recurrence	-Complete capsule
-Firm lobulated swelling elevates the lobule of the ear	-Soft swelling doesn`t elevate the lobule of the ear &bilateral (10%)
-It is dangerous ⇒ turns malignant after 10 years (in 2-3% of cases)	-It isn`t dangerous ⇒ never turn malignant .
-Tc99 scan ⇒ cold spot	-Tc99 scan ⇒ hot spot
-TTT; excision with safety margin	-TTT: conservative superfacial parotidectomy .

DD of (swelling in the parotid region):

- parietal lesions: lipoma, neurofibroma,…….

-Musculoskletal :

Muscular (from masseter muscle) :fibrosarcoma, masseter muscle hypertrophy (usually bilateral)

Bony(from the ramus of mandible): Burkitt`s . lymphoma .

- Pre-auricular LN swelling :

Lymphadenitis : acute& chronic (non specific & specific e.g. TB lymphadenitis .

Malignancy : lymphoma & metastatic carcinoma .

-Parotid Gland :

Infilmation

Chronic(TB, sarcidosis)

Acute (viral , bacterial)

Autoimmune:

Sjogern`s Syndrome

Benign lymphoepithelial

*Tumors:

Benign :

Pleomorphic adenoma

Adenolymphoma

Monomorphic adenoma

Oncocytoma

Malignant :

-Mucoepidermoid carcinoma

-Adenoid cystic carcinoma

.- Carcinoma ex pleomorphic adenoma

-Acinic cell carcinoma

Malignant neoplasms of salivary glands (Carcinoma of salivary glands)

Etiology :

1- De-novo

2-on top of mixed parotid tumor

Pathology:

Macroscopic

Non capsulated infiltrating tumor with grayish areas of hemorrhage and necrosis.

Microscopic :

a- Mucopeidermoid carcinoma:

The commonest type , usually affects the parotid arises from the duct epithelium, consists of sheets of columnar (mucoid) and squamous (epidermoid) cells of 3 grades of differentiation (low, intermediate, high)

The low grade is the commonest &can affect children .

b- Adenoid cystic carcinoma (cylindroma):

-The commonest malignancy affecting minor salivary gland,characterized by slow rate of growth & peril neural spread (painful) making tumor resection usually incomplete& tends to recur .

-(swiss – cheese pattern) composed of myoepithalial cells (basophils)

+epithelial cells (esinophils) :cribriform (swiss – chesses appearance)

c- carcinoma ex pleomorphic adenoma .

Spread :

1-Direct :To mandible , masseter, facial nerve in parotid tumors , lingual and hypoglossal nerve in submandibular tumors .

2- Lymphatic :

To parotid and submandibular LNs – upper deep cervical LNs

3- Blood spread :

Rare and late to lung and bone .

Complications :

1- ulceration .
2- infection .
3- hemorrhage .
4- nerve palsy .

Clinical picture:

Symptoms:

1- pain : may radiate to the ear , increase by mastication (through Arnold branch of vagus N.)
2- Swelling : slowly growing on the side of the face .
3- Disturbance of function : complications (e.g. facial N.paralysis)

Signs:

1- Swelling :

-Firm or hard in consistency .

- Irregular in shape .

-Nodular surface .

-Ill defined edge .

Infiltration of skin , vessels, nerve , LN -

2- Cervical LNs :

Enlarged, stony hard , mobile then fixed .

Investigattions:

For diagnosis :

1- Tc99 scan : cold spot

2- biobsy : from the gland

For Staging :

1- CT scan to determine local extent of tumor

2- FNAB from LNs

3-Metastic work up

Treatment:

Operable

-According to site of tumor ;

1- Cancer in parotid gland :

Total radical parotidectomy + total block dissection of the neck LNs+ postoperative radiotherapy to dercease recurrence

2- Carcinoma in submandibular gland :

Comman do operation (total radical submandibular sialadenectomy + hemimandibulectomy with adjacent part of tongue in continuity + block dissection of the neck LNs

-facial nerve should be sacrified and if injured repair by microsurgical technique

Inoperable:

Palliative resection +radiotherapy

Tumors that are clinically malignant :

If pathological diagnosis not obtained: intra operative frozen section :

-High grade & -ve LN -Block neck dissection .

-Low grade &-ve LN- no block neck dissection .

*Pstoperative radiotherapy of limited value , but it is administrated as post operative adjvant in high grade malignancies .

N:B:

Salivery malignancies do not usually grow as fast as other cancers in the body.

Hyperthophy of the masseter is bilateral in most cases . it is usually seen in ladies who have the habit of involuntary grinding of their teeth . or in those hwo have had orthodontic treatment .the condition is sometimes so difficult to differentiate from a true parotid enlargement , that a CT scan is sometimes resorted to for diagnosis .

-Open surgical biobsy are contraindicated in major salivery gland neoplasm ,FNAB is safer , for tumors of minor salivary glands of the mouth cavity .exicision biobsy is feasible .

The commonest indication of submandibular sialadenectomy is stone disease.


Thank You