



Lec 2

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Xerostomia

- is a dry mouth (↓ saliva production) [Symptom of a disease]
- Causes:
 - Sjögren syndrome (autoimmune disease)
 - radiation Therapy
 - Drug side effect (psychotic Drugs)

- Morphology:
 1. Discomfort for patients

↓ after a long time lead to

- Laceration or cleaving

- ulceration (loss of tissue)
 - secondary infection
- maybe retrograde bacterial infection (infectious salivary gland)

Sialadenitis

- inflammation of salivary glands

- Cause:
 1. Trauma
 2. autoimmune disease
 3. Some infections (virus infection as Mumps) or bacterial

Paramyxovirus → bilateral parotid gland swelling



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in viral infection Morphology
there's $\rightarrow$ infiltration by
lymphocytes inside
the glands or around
the lobules and c.T

Mumps Cause salivary gland infection.
But it will resolve $\rightarrow$ it has a serious
complication that it may extend to other
organs as Pancreas

(A) $\rightarrow$ lead to pancreatitis
(B) orchitis $\rightarrow$ lead to infertility or sterility

• in bacterial infection: rich in
neutrophilic cells

The agent is (S. aureus +
Streptococcus viridans)
most frequent

* Duct obstruction by stones
(sialolithiasis) is a common
antecedent to infection.

* Sialadenitis especially (bacterial
Sialadenitis) is painful

neutrophile
tissue
cellular debris
and
dead cells

* bacterial Sialadenitis (especially
S. aureus) can cause tissue destruction
and lead to pus formation

$\rightarrow$ lead to abscess
formation



Salivary gland tumors:

- Salivary gland tumors are relatively uncommon and represent less than 2% of all human tumors, and approximately 65% to 80% arise within the parotid gland. Only 20% of the salivary gland tumors are malignant and mostly seen in 6 to 7 decades (between 50 to 60 year old). the same risk in male and female

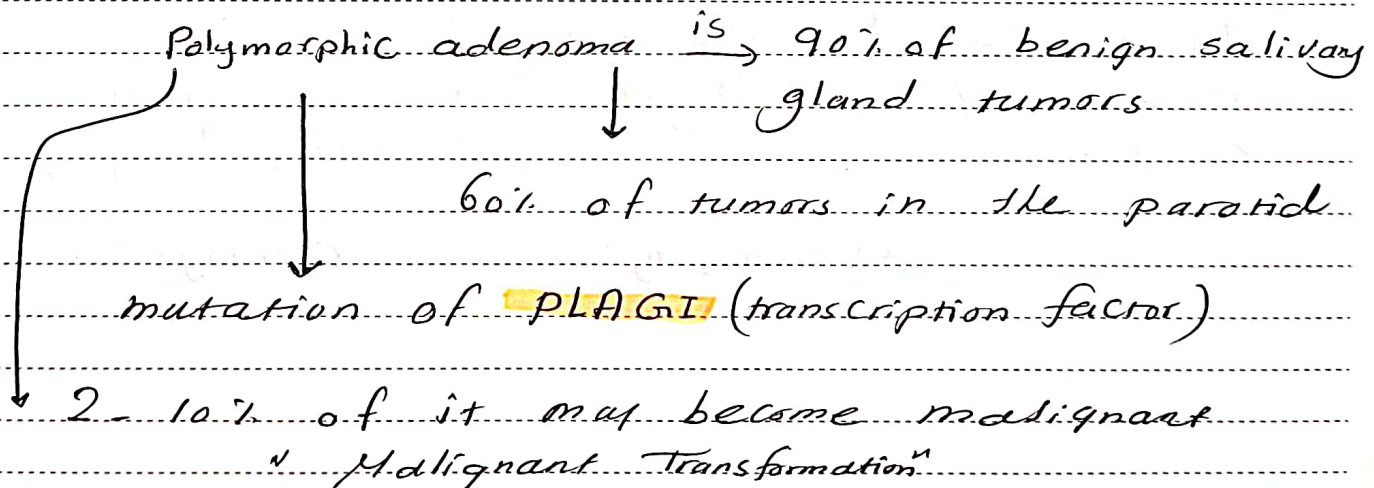
The most frequently tumor is:

polymorphic adenoma

(Benign Mixed tumor)

has the same origin but can differentiate into more than one type

2 types of tissue
epithelial and mesenchymal





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(superficial) (سطحي)

Clinically: is a mass

Caused parotid gland swelling

grossly:

• solid + gray-white

Color or translucent mass

(because the presence of cartilage tissue.)

invasion

"لغني عنه الجراح لفصلها ، ما صار لها" "او" كانه في خاصل بينه ال normal

• has a plane of cleavage

"mass have a capsule"

(كانه خالصة بسنم تاصل)

Bening

وهدي خاصية لها على الرغم من انها

• have a finger like projections from the mass to the normal tissue

لغني لا يجي الجراح يشيل لازم يشبو عنه حتى لو
شال ال mass الى حدوده مسنة كانه لازم يتأكد
انه ما في extensions عنه ما يصير proliferation
منزوع الجراح عنه يتأكد شيل كل ال gland

Recurrence of the tumor

matrix Lacunae
chondrocytes epithelial cells

Microscopically:

1. Cartilage tissue



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Warthin tumor:

papillary cystadenoma lymphomatosum

- Papillary =
- ① has a finger like projections
 - ② Bening
 - ③ Made a cyst
 - ④ have a glandular origin
 - ⑤ contain a lymphoid tissue
- cystadenoma =
- lymphomatosum =

- * Most exclusively parotid location
- * May be ^{10%} bilateral and 10% multifocal

Pathogenesis:

- ① Common in Males
- ② at 5 to 7 decades (40-60 years)
- ③ 8 fold in smokers

Microscopy:

well demarcated with cleavage plane

grossly: (ك الرغيم صه انه cyst) Solid mass + (white areas)
pus or material accumulation

Dark papillary projections inside a space (cyst)
Core of lymphoid tissue lined by double layer of epithelial cells (epithelial tissue Pink color.)
upper bluish

Histogenesis: tumor انه

لكنه للدراسات الأخيرة



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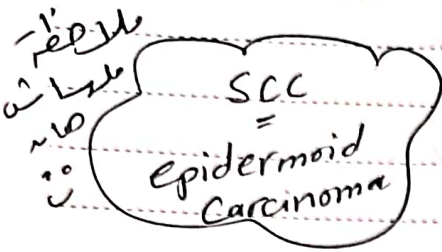
Identical
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Reactive Process (non-neoplastic)
أظهر انه كانه ركنه

Identical mutation (مع كرون الرغيم) و (monoclonal origin) الى انه مجموعة من الخلايا التي



Mucoepidermoid Carcinoma



Muco → Mucus secreting cells
epidermoid → epidermis (الجلد) Squamous epithelium
Carcinoma → Malignant epithelium neoplasm

* The most Common primary malignant tumor of Salivary glands

* 15% of all salivary gland tumors

* 60 - 70% in parotid

Note

So most of minor Salivary gland tumors are Malignant

* large fraction of minor Salivary glands have some genetic mutations
* prognosis: according to grade

1. low grade

2. intermediate grade

3. high grade

لو الفين كوريس و
ال tumor
بالطليانية
نحوه المرضي 1.90
كثيره

لو جراحت واصل ال mass
نحوه المرضي 1.50 أو أكثر
بـ 5 سنوات

The 5 year survival rate

Morphology

Structure is dilated and contain spaces
may form a cyst

cyst is not alarming

But if in parotid there's

a cyst → حدة

Mucoepidermoid Carcinoma

2 type of cells

that lined the cyst

التي تده يترك الغدة

Squamous with
eosinophilic
cytoplasm

mucin
secreting
white to gray





• Adenoid cystic Carcinoma.

* 50% of it occurs in the minor salivary glands

* occurs at sites other than Salivary glands

surround

C-T₂ nerve

* prefer the perineural invasion (epineurium) و nerve (عصب) (عصب) (عصب)

* bad prognosis → Low Long term survival

• Acinic cell Carcinoma.

- Mass resemble the acinus cell blue
- rich in rER most of it is basophilic[↑]
- Apical part eosinophilic
- nucleus part rounded
- 2-3% of salivary gland tumors
- Most in parotid gland
- Maybe bilateral or multicentric
- intermediate prognosis



Esophagus Diseases

Functional obstruction
and
Mechanical obstruction

Peristalsis اله حركة

أنه ليس خلل في nerve
supply و خلل فيها بشكل

muscle contraction أو خلل في

(عدم تقا من زمني في انقباض العضلات)

نما ليس نقل للمحوى

disorganized
contraction

Functional
obstruction
types

[1] Nutcracker esophagus : high
amplitude contraction along the
esophagus [Contracted and
dilated areas]

[2] Diffuse esophageal spasm

=
Corkscrew esophagus

↓
Repetitive simultaneous
contractions with normal
amplitude

[3] Lower esophageal sphincter
dysfunction : (LES dysfunction)

- increased tone and the
Failure to Relax

- High resting pressure or

incomplete
Relaxation
of LES





One of the functional obstruction complication is the formation of Diverticulum (out pouching) occur when there's an increased pressure inside the lumen and ~~may~~ in affect one of the weak points of the wall [as blood vessel entrance] or in area with ↓ Thickness of the wall = oropharynx and esophagus Junction

علم الأكل من فيه

Diverticulum

~~Pseudo~~ diverticulum

true diverticula

↓
outpouching

contain
the mucosa

↓
outpouching

contain all
layers of the
wall

Zenker's Diverticulum: between the esophagus and oropharynx

↓
may lead to
regurgitation or
Aspiration +

infection +

halitosis



Mechanical obstruction

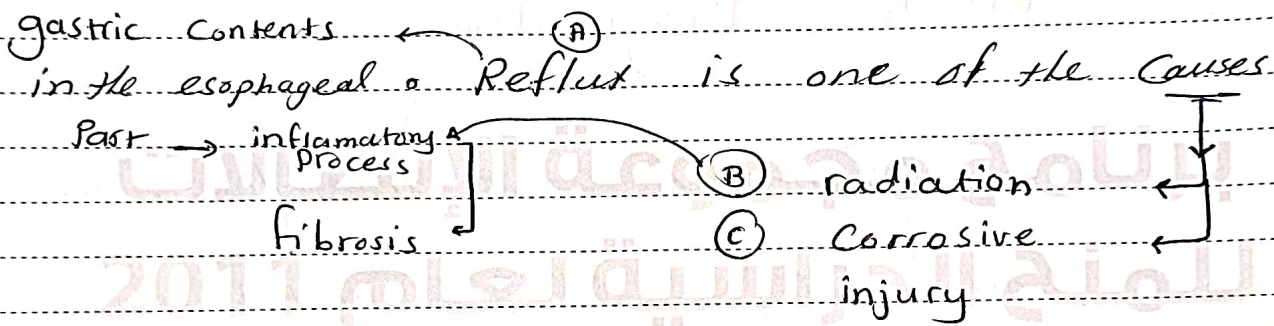
في عناء حاجه سكره (يعني اشئ يعذر امسكه)

as tumors (Mass Cause the obstruction)

types

I] Benign Stenosis:

- Submucosal fibrous thickening and muscular atrophy



webs: shelf like structure or extension of the mucosa & not full circumference.

one of

The donated bone marrow transplantation complications

Core of C.T lines at the lower surface and upper part by epithelium

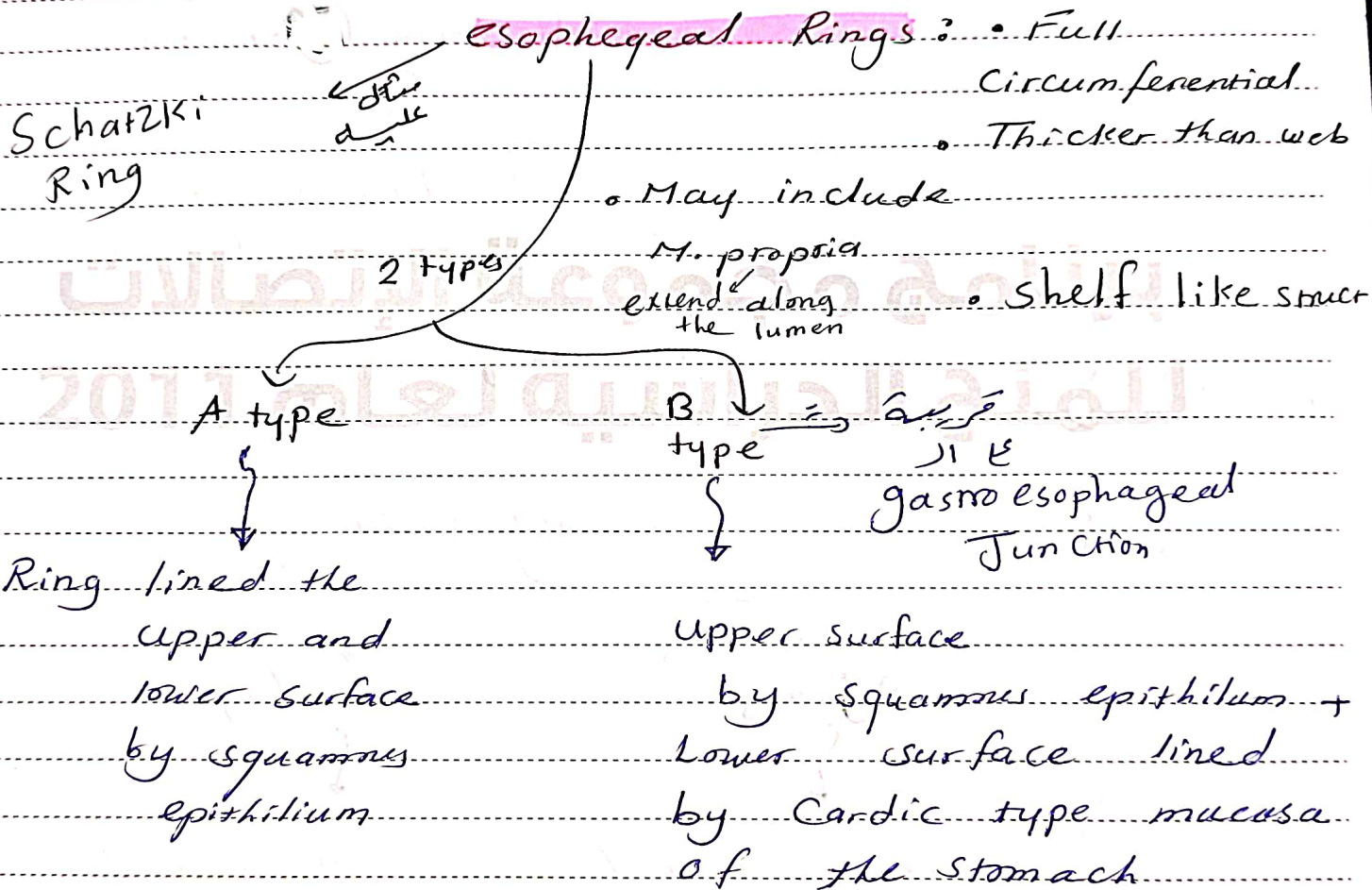
Graft versus Host Disease ← Association with Reflux and GVHD or skin bullous diseases



Plummer - Vinson syndrome:

- iron deficiency anemia
- glossitis (inflammation of tongue)
- cheilitis (1/2 of the angles of the mouth)

grossly: There's a web.





Achalasia:

• Contain triad:



1. incomplete LES relaxation
2. esophageal aperistalsis
3. increased LES tone.

• is a functional obstruction



Caused dilation of
esophagus proximal part.

• Diagnosis by Manometric
Studies:

Achalasia

Primary

Secondary

endothilum
Driven Relaxing
Factor

Not associated
with other disease

associated

with
thing that
lead to
Achalasia

loss of intrinsic
inhibitory innervation

so (Degeration of

Ne producing neurons) or

signal
↓
release
Nitric oxide
↓
dilation

↓

=

↓



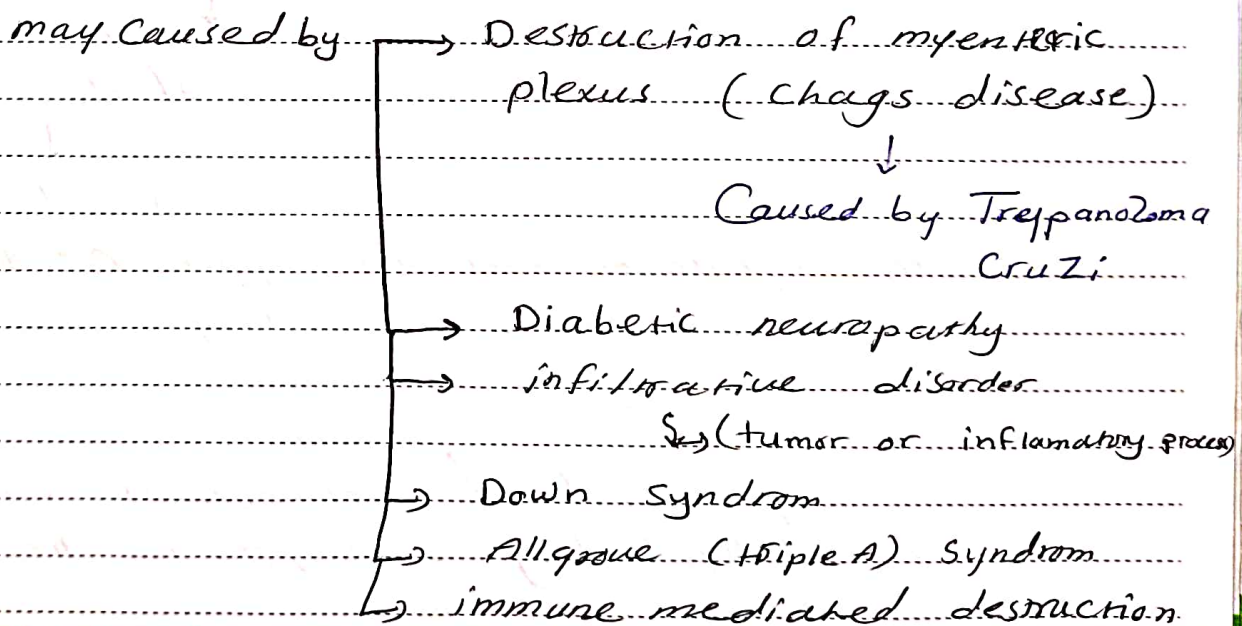
Degerative changes
of the vagal nerve
or dorsal motor nuclei of ^{The} vagus



Primary Achalasia :

- ① progressive dilation ,
wall thickness
- ② Absent ganglia from the body
- ③ May or may not be reduced
in number in the lower
sphincter
- ④ inflammation in the
myenteric plexus (pathognomic)
- ⑤ 5% of these patients
may have SCC in early ages

Secondary Achalasia :





Mallory - Weiss Syndrome

Boerhaave
Syndrome:

1) More serious (أشد)

2) Deep laceration lead to esophageal wall

Rupture may cause acute mediastinitis

acid content
الحمض
المتواجد في
المعدة

• in peoples with recurrent vomiting

as during pregnancy

Chemotherapy patients

alcoholics

psychotic disorder (eating disorders)

(bulimia nervosa + anorexia nervosa)

Vomiting → retrograde wave of peristalsis

So the gastroesophageal sphincter must be relaxed during the wave

if not

→ (excessive increase in intraluminal pressure)

→ tear or laceration of the mucosa

↓
bleeding

So this syndrome has an upper GI bleeding

5 - 10% of this bleeding in upper GI is this syndrome

- Superficial / Not Serious Condition
- rapidly healing + Supportive treatment