

First Lecture  
27/09/2021

## Pathology of GIT

### Aphthous Ulcer

→ a Aphthous Stomatitis

→ commonly / usually has predisposing agent as - high fever  
- stressful condition  
- improper nutrition

→ in some families a cluster is recognized → genetic background

→ association with some immunogenic diseases

- celiac disease  
- inflammatory bowel disease  
- Crohn disease

} part of it  
مرتبط المرض ←

### Morphology:

Shallow ulcer surrounded by hyperemic area and covered by thin layer of exudate (white blood cells + necrotic cells)  
basilar debrase + fibrin  
looks like membrane (white)

⇒ Prognosis: if left untreated → spontaneous healing

Soft tissue can have some problems in oral cavity, as

## Irritation Fibroma

due to: repetitive trauma, minor trauma, (chewing on cheeks)  
bracelets on teeth,

reactive condition → minor injury → proliferation of C.T.

→ fibrous tissue → clot (Irritation Fibroma)

## Pyogenic Granuloma:

minor injury → ~~reactive~~ [fibroblast, endothelial cells]

- made of blood vessel proliferation (new blood vessel formation)  
with inflammatory cells, edema and fibrin

⇒ purple/red clot

\* grows fast → panic among patients

Morphologically - looks like a mass (red)

surface can be ulcerated and wet  
rich in blood vessels ←

- can be surgically excised (removed)
- can disappear due to regression of causes

## Ossifying fibroma (Parietal Ossifying fibroma)

- in most of the time at least a part of it is due to pyogenic granuloma → ossification or metaplastic bone formation

## Peripheral giant cell granulomas (Reactive granuloma)

- blood vessel proliferation + inflammatory cells

special here = presence of multi nucleated giant cells

## Herpes Infection

two features/forms

### ① Primary

- produces gingivostomatitis (P.E) usually due to when having high fever, stressful conditions

- Sometimes in young ages → no symptoms
- if children have problems in immune system (immunocompromised) → severe conditions, even death
- moves by sensory nerves → 'til it reaches spinal

### ganglia

in Oral cavity → 5<sup>th</sup> nerve → Trigeminal nerve

(incorporate himself inside genome)

تكرر، يستأرجع  
until new stimulator (as stressful event) → reactivation

↓ follows with  
nerve

dermatom

المساحة التي لها في الجلد

connected with level on spinal  
cord

→ Viruses commonly visible with electron microscope, but  
not light microscope

Nuclear inclusion body (inside virus while replication)  
- as well as Herpes Virus -

Herpes infection is morphologically a group of vesicles  
(fluid filled spaces inside  
epithelium)

→ with time → rupture → fluid excretes  
This process is called  
Tzanck-Test  
↓ when stained  
viral inclusion body becomes  
visible → more information about virus

Tzanck test is not needed by Herpes usually

## Oral Candidiasis

→ In general, fungal infections rarely affect healthy adults mostly, in children whose immune system isn't advanced yet and in immunocompromised people (immunosuppressive cond.)

↓  
after organ  
transplantation

↓  
cancer therapy  
AIDS  
HIV

→ Most common in children and immunosuppressive conditions

Morphologically: is featured by the presence of pseudo membrane

Pseudo membrane → Fungal hyphae + exudate fluid + inflammatory + Fibrin cells

→ not adhesive

## Deep fungal infection

⇒ not easy to get affected → it's due to predisposing factors

**Mucormycosis** الفطريات (Fungal infection)

- connected with COVID in some way -

**Leukoplakia**

aka - white plaque

**Hairy Leukoplakia** → usually on lateral side of tongue

→ most common reasons: Epstein Bar Virus

Morphology - irregular surface

- squamous epithelium

- keratinizing layer → white

**Neoplasia**

- When cancer is built - Some type form without any predisposing factors/initiation, others are preceded by precancerous conditions/precancerous lesions → **dysplasia**

Basal layer → maturation → deslited shape } ordered in special form

↓ starts to take shape

round nuclei (small)

change

Changes are visible on nucleus

dysplasia

↓  
raised nuclei  
(small)

} ordered in special form

change

→ Any changes are visible on nucleus

dysplasia

الفترة الملائمة ↓

precancerous period

**Pleomorphism** → Differences in form and color

white

## Leukoplakia & Erythroplakia (Clinical definitions)

✓ red



spitzled Leuko erythro plakia

Note: Epithelium is always found on basal lamina. If  
→ the changes in nucleus are still happening and found  
and not crossing "the borders" of the basal lamina  
it is called **dysplasia**

⇒ if it crossed the basal lamina → cancer/invasion

because spread is here

due to blood / by blood.



↓ if still beyond

Carcinoma insitu

## Squamous cell carcinoma

→ after inversion

→ the majority of carcinomas in head & neck region

Rank 6<sup>th</sup> among carcinomas (common)

IN USA 100,000 new cases every year

In the world 650,000 new cases every year

Pathogenesis Two forms regarding etiology & pathology  
"سبب و اثر" ↓

### ① classic form

1. Usually in elderly

2. connected / related with tobacco & Alcohol

3. In South Asia: PAAN, Betel Kida - Plants to chew

↓  
inner mucosa

- active radiation (due to sun & solar)

⇒ lower limb mostly (not oral cavity)

Squamous cell carcinoma of lower limb is very frequent

- in tongue also but still not understood.

## ② Related to human papillomavirus (HPV)

- Sexual transmitted virus
- important in multiple partner relations (not single)
- indicated mostly in cervix
- common in the west → Vaccination available

⇒ at basal part of tongue, along/dround tonsils or on their surface, oropharynx

Important strains: 16 & 18 (oncogenic)

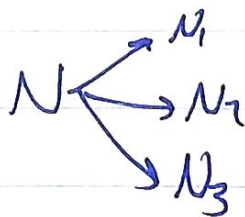
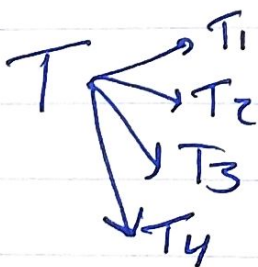
highly related in producing cancer

Prognosis (ex- bio) (in nearly all cancers)

- most important point: the stage

Stage is estimated regarding three reasons

- ① content & primary tumor (T) rate of infiltration
- ② Lymphoid (Local destermination) → cancer stick here (N) → Lymphoid metastasis



- ③ distant metastasis → movement to other organs (M) Stage 4 → hardest (1) survival

M0 → no distant metastasis

M1 → found here

Stage 1 → 80% survival chance

Stage 4 → 10% " "

### Field cancerization

→ Oral cavity, urinary system

- urethra
- kidney
- urinary bladder
- ureter

1. pelvis → ureter → urinary bladder → urethra

if urn contains carcinogenic material → urinary system  
→ but it shows only in one part of system → curing  
→ new clot in other place years later in other part

Heber Eder