last lecture was about types of candidal infection

chronic candidal infection that showa as white lesions and other as red lesions

**Pseudomembranous candidosis (thrush);** its acute or chronic depending on the predisposing factors.

How do we clincally identify thrush?

1- soft, friable

2-creamy coloured,white

3- isolated patches, these patches could be close to each other and appear as raised plaques.

condensation on mucosal surfaces ,but not all, we mostly notice them in depth of the vestibules

4- wiped off but leaves behind it atrophic plane, red lesion and bleeding (to confirm diagnosis).

5- asymptomatic but could cause burning sensation

Found in old aged (chronic) and young aged (the infant from the birth canal gets infected with the candida) patients whose immunity is weak.

Its a clinical diagnosis, but to confirm it we do scrapping to the white lesions onto a glass slide stain them and send it to the lab. We'll notice candidal hyphae surrounded by acute inflammatory cells, that get out from the lamina proprea through the epithelium until they reach the candidal hyphae, we'll also notice a lot of neutrophils with small projections(microabsecess).

Why does it appear as a white lesion?

due to hyperplasia, parakeratosis and immune response around the candidal hyphae.

The epithelium has rest bones hyprplasia and immune cells comming from the lamina propria

**Erythematous candidosis:**

Red lesion patients plane atrophic tongue we don't see the atrophic pilliform clearly with burning sensation.

(red candidal lesions) its mostly noticed on the dorsum of the tongue.

Usually there are predisposing factors such as broadspectrum antibiotics or steroids; which leads loss of the balance between the fungus and the bacteria, and overgrowth of fungus as a result.

It sometimes could be generalized all over the oral cavity, in this case we should start thinking of other predisposable factors such as xerostomia (dryness of the mouth).

Histologically:

1- thin epithelium -atrophy-,no hyperplasia or hyperkeratosis

2- we could notice candidal hyphae, but not always, you would need a smear to notice it with the inflammatory cells

**Chronic hyperplastic candidosis (candidal leukoplakia)** (its not more common but of a worse prognosis)

as we notice by its name:
chronic: long time
hyperplastic: hyperplastic epithelium

candidosis: fungal -candida-

Clinical manifestation:

1- dense, white patches

2- slightly elevated

3- irregular thickness

4- rough surface (white and red -spickled- areas)

**Males of middle age, heavy smokers** are mostly affected by chronic hyperplastic candidosis.

It appears posterior to the angle of the mouth, triangular in shape, appearing as a white patch(plaque),chronic, persistant part of the mucosa and does not disappear with the gauze.

Could appear on at the lateral border of the tongue but the buccal mucosa is the most common type, and its often **bilateral** which helps in diagnosis.

Redness, fissuring and inflammation at the angles of the mouth due to the case that the patient wets it with his tongue leading the candida to that site (angular chelitis).

Burning sensation

Difficulty in opening his mouth .

Histologically:

1- persistant plaque white in colour so we expect that he has parakeratosis with hyperplasia

2- spickled (areas of atrophy).

3- candidal hyphae and neutrophils (microabsecess)

why is it one of the worst prognosis?

because these lesions already contain dysplasia, where there could be trasformation to squamous cell carcinoma.

**Candida associated denture stomatitis:**

This lesion is associated with patients who wear their dentures for long periods of time, especially those wear them at night. It is most associated with female patients and upper dentures because it blocks saliva from washing out and cleansing the area.

It is most apparent with old dentures and patients having bad oral/denture hygiene, or irritating faulty dentures .
The typical presentation of the lesion is a red asymptomatic patch beneath the area of the denture. Candida is not the only organism that causes denture stomatitis, some other bacterial types are involved. Also candida isn’t always found when culturing the area.

It is found in 50% of patients having old dentures.

Denture stomatitis can be found in young patients undergoing orthodontic treatment with removable upper appliances.

Q: is there a material to be used in dentures to inhibit the process of denture stomatitis?
-- you have to find the answer :D

Clinically the presentation is as follows:
It can happen as a red patch covering the whole area of the denture “diffuse or grade 2” or reddish spots underneath the denture area” grade 1” .
Also, it can happen as red granular lesions called inflammatory papillary hyperplasia which is grade 3 “ most severe” of denture stomatits

Denture stomatitis is always limited to the area of the denture regardless of the grade.
It can happen in complete or partial dentures.

Histologically:

1- It is an area of atrophy and inflammation with abundance of vascular tissue “ that’s why it is red” .

2- chronic inflammatory cell infiltrate.

3- Great number of blood vessels in the lamina propria.

4-Candidal hyphae which are present on the fitting surface of the denture. That’s why the smear is taken from the denture not the palate.

**Angular chilitis:**
Another lesion caused by a candidal infection and other species “ important to know, found bilaterally in the corners of the mouth. Soreness, erythema, and fissuring is the typical clinical presentation.

30% of patients having denture stomatitis also have angular chelitis; thus angular chelitis is the most frequently occurring infection with denture stomatitis, this is explained by the fact that patients having candidal infections in their mouth are more prone to having the candida on the corners of the mouth by salivary wetting of that area than patients free of candidal infections.

People prone to angular chelitis are old aged having loss of vertical dimension due to their old dentures or people having the habit of licking the angle of the mouth providing a rich media for candida to grow.

It can be associated with patients having thrush.
Other species are staph aureus and strep viridians.

Angular chelitis can be a candidal infection alone or a bacterial infection or a a mixed one. Knowing this help in deciding on the management. Most of the time a cultur is not needed and a drug to cover both species is applied.

Nutritional deficiencies can also cause angular chelitis. Iron, B1\1\6, folate. This means that one of the symptoms anemic patients might have is angular chelitis and fungal infections.

**Muco-cutaneous candidiasis or candidiosis:**It is a rare candidal infections affecting the oral cavity, skin, scalp and nails.

MCC is a persistent/ refractory to treatment.
It resembles candidal leukoplakia in its clinical appearance having a whitish color, only candidal leukoplakia appears in the mouth while MCC appear on other areas of the body “ mentioned earlier”/ family history, young patients, and this is important for diagnosis.

Different forms :
AD, AR, or sporadic.
diffuse or limited
can be associated with endocrine deficiencies “ diabetes, addison’s, hypothyroidism”
patients having a thymoma, or primary amylo deficiency.

Deep micosis:
Can candidal infections be situated deeply in inner organs?
 yes.

Rare fungal infections internally in rare areas of the world, south America, india.
patients most probably are immune compromised.
Nodular ulcerated areas. Chronis infiltration with myltu-nucleated giant cells.
can also happen in the mouth on the palate and tonsils.
can cause respiratory infections.

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sorry for being late