Stomatitis

- Stomatitis is the inflammation of the buccal mucosa

Stomatitis

It may be

1) primary stomatitis: →

It results if the irritants entered the mouth directly from outside and injure the oral mucosa.

2) Secondary stomatitis: →

It occurs if the inflammation of the oral mucosa is a sequlae of some specific infectious disease e.g F.M.D. reticular stomatitis

Stomatitis

Classification of stomatitis:-

According to the main constituents of the exudate and the associated degenerative changes into:

1- Catarrhal stomatitis
2- Vesicular stomatitis
3- Ulcerative stomatitis
4- Fibrinous, fibrinonecrotic and necrotic stomatitis
5- Suppurative stomatitis
6- Gangrenous stomatitis

Catarrhal stomatitis

it is a type of stomatitis in which the predominant constituent of exudate is mucus.

Causes:- * physical agents,

*** Chemical agents**

*** Traumatic agents,**

*** Infectious agents**

Catarrhal stomatitis

Macroscopic appearance:-

1- The oral mucosa is red and swollen
2- Enlargement of tongue papillae.
3- Retention of cysts on the buccal mucosa due to occlusion of the mucous gland of the mouth
4- Grayish-white or brownish exudate appears on the tongue
5- There is fetid odor due to bacterial decomposition

Catarrhal stomatitis

Microscopical appearance:-

1- Hyperemia, edema and leucocytic infiltration in the lamina propria of the buccal mucosa.

2- The mucosa is covered with mucus, desquamated epithelium and leucocytes, bacteria and food particles

3- The submucosa shows the dilatation of blood vessels beside infiltration of the submucosa by inflammatory cells and hyperplasia of lymphoid tissue of soft palate tonsils, and pharynx

2- Vesicular stomatitis

It is a type of stomatitis characterized by vesicle formation on the buccal mucosa (mostly occur in horse and cattle)

Causes:-

- **Thermic agents**
- **Chemical agents**
- **In some specific infectious diseases e.g F.M.D and vesicular stomatitis**

2- Vesicular stomatitis

Macroscopical appearance:-

- The main lesion is presence of variable size vesicles in the size of 1-2 mm appear in the mucosa of the gum, lips, tongue, dental pad and hard palate
- The vesicles containing clear fluid on oral mucosa.

Rupture of vesicles leaving an erosion or • ulcer.

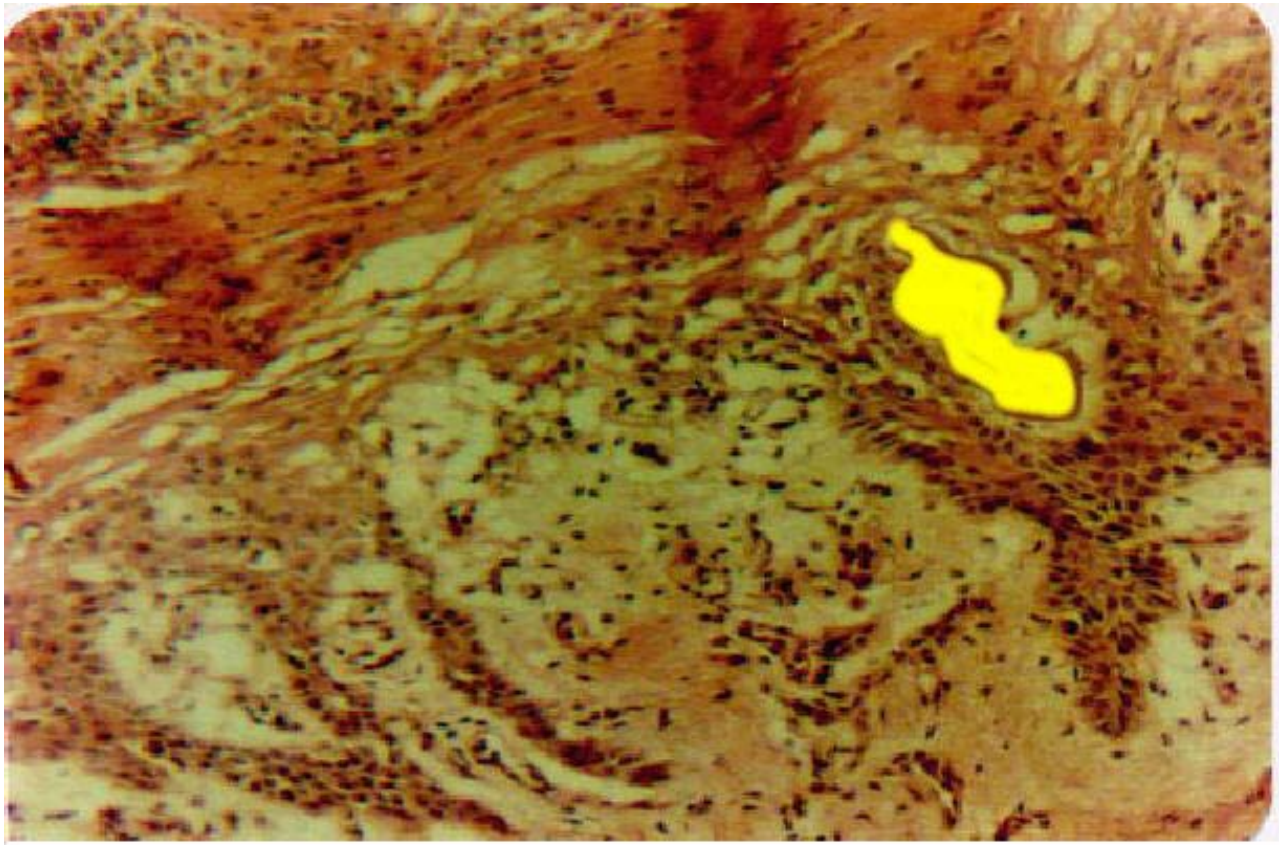
2- Vesicular stomatitis

Microscopic picture:

- The vesicles develop as accumulation of serous fluid within the epithelium or between the epithelium and lamina propria
- The affected epithelial cells show vacuolar and hydropic degenerations.
- Several vesicles may be coalesces with each other to form large one (bullae).
- Some vesicles may be rupture by mouth movement, leaving erosions with intact germinal basal layer.
- The epithelial cover of the vesicles breaks and leaves a hyperemic surface.

2- Vesicular stomatitis

2- Vesicular stomatitis



Vesicular stomatitis - early stage

3- Ulcerative stomatitis

It is a type of stomatitis

It is characterized by erosion or ulcerative lesions ulcer formation on the buccal mucosa.

Causes:-

- **Trauma due to sharp teeth**
- **Chemical → acids, alkalies or erosive salts**

3- Ulcerative stomatitis

Macroscopic appearance:-

1- Multiple ulcerated areas seen on the buccal mucosa

2- Ulcers are in the size of pin-head to 5Cm in diameter

3- Ulcers are round, oval or irregular in shape

4- The base of ulcers are red or covered with threads

3- Ulcerative stomatitis

Microscopic appearances:-

1- The base and borders of the ulcers are hyperemic and infiltrated with leucocytes
2- Erosions heal by regeneration
3- Ulcers heal by formation of scar tissue
4- The epidermis is ulcerated and the underlying dermal connective tissue contains congested blood vessels and inflammatory cells

4- Fibrinous, fibrinonecrotic and necrotic stomatitis

Fibrinous stomatitis: characterized by epithelial necrosis and fibrin formation

Fibrinonecrotic type: characterized by marked coagulative necrosis of the affected epithelial surface.

Necrotic type: characterized by marked necrosis of the entire epithelium.

4- Fibrinous, fibrinonecrotic and necrotic stomatitis

Causes:

1- cornyebacterium pyogenes: in calves lambs, foods and pigs

2- In chickens: monilia albicans (yeast fungi)

3- Rinder pest in cattle

4- Deficiency of niacin in black tongue of dogs

5- In necrotic stomatitis caused mainly by thermal, chemical or bacterial agent such as spherophorus necrophorous.

4- Fibrinous, fibrinonecrotic and necrotic stomatitis

Macroscopical findings:-

1- The fibrinous form is superficial and the fibrinonerotic form is deep membrane.

2-Usually circumscribed and form dirty grayish yellow or grayish in color and they are dry.

3- Fibrinous membrane may be pseudomembrane which peeled away easy without bleeding, but diphtheritic form when removed, it causes tearing the underlying tissue.

In necrotic stomatitis, the alkalies and acids produce gray yellow foci of necrosis surrounded with hyperemic zone, deep necrotic areas in the mucosa resulting in sloughing of necrotic tissue leaves erosions and ulcers which heal leaving a scar.

4- Fibrinous, fibrinonecrotic and necrotic stomatitis

Microscopic appearance:-

* Fibrinous and fibrinoncerotic stomatitis:-

1- The exudate consists of fibrinous network infiltrated with leucocytes and necrotic epithelium

2- In fibrino-necrotic, coagulative necrosis of the affected surface are seen

4- Fibrinous, fibrinonecrotic and necrotic stomatitis

Microscopic appearance:-

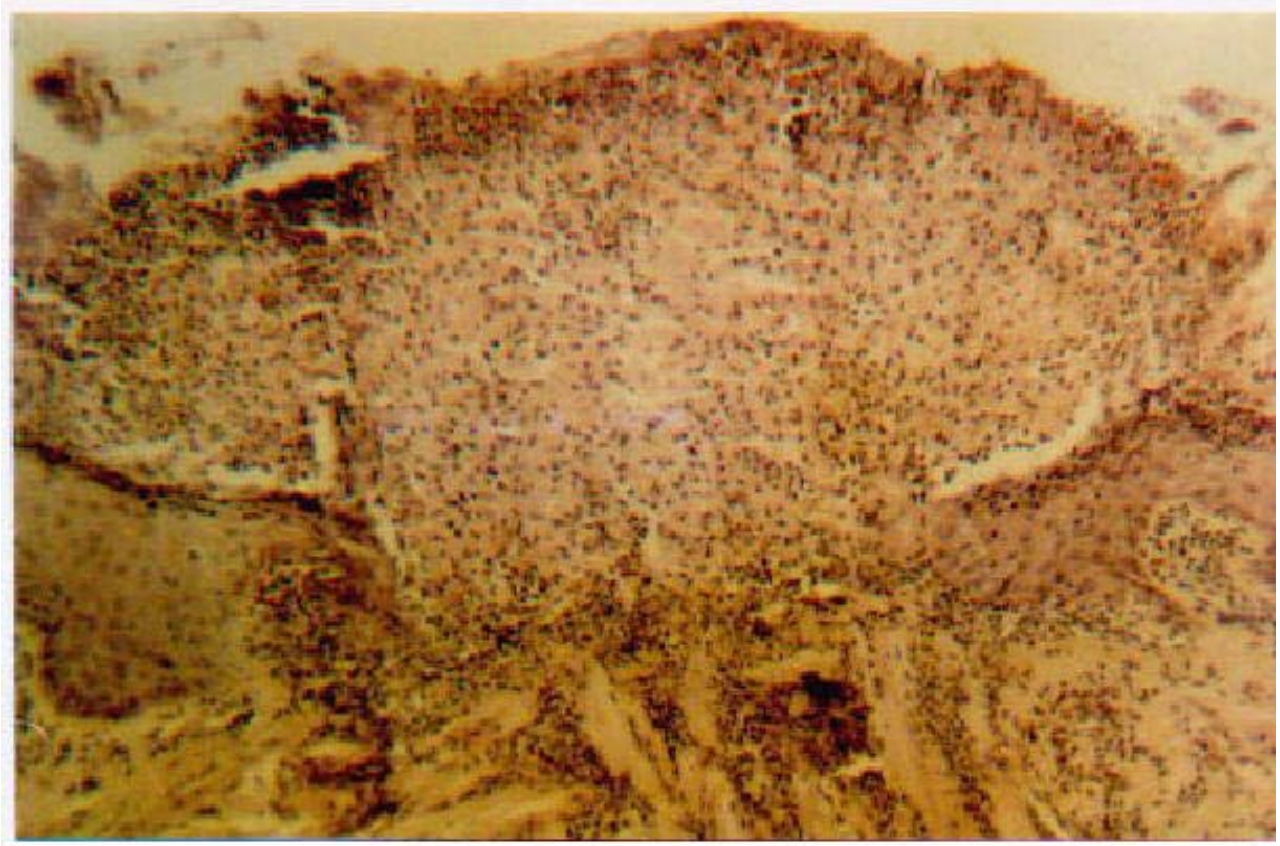
* In necrotic stomatitis:-

1- Coagulative necrosis of the cell

2- The areas of necrosis mostly devoid of fibrin with leucocytic infiltration especially at the margin of the necrotic areas

3- In case of spherophorus necrophorus the organisms are present at the margin of the living tissue

necrotic stomatitis



Necrotic stomatitis

5- Suppurative or purulent stomatitis

- **It occurs associated with wound infected.**
- **The wound may permit the entry of pyogenic bacteria into the connective tissue of the submucosa and muscle with the development of purulent inflammation or cellulitis in the lips, tongue, cheek, soft palate and pharynx.**
- **The inflammation may be focal or diffuse.**
- **The inflamed oral tissue shows redness and swelling. The pus is usually removed by movement of food leaving erosion or ulcer.**

6- Gangrenous stomatitis

- It is caused by trauma of the mouth and putrefactive microorganism gain entrance to the traumatized tissue
- The tissue become soft grayish- green or grayish- black in color and of offensive odor
- Gas vesicles may be seen