

ALLERGIC & IMMUNOLOGIC DISEASES OF ORAL CAVITY

LEARNING OBJECTIVES

- At the end of the lecture student should describe-
- Etiology, Classification, Clinical features & histological features of aphthous ulcers

- ◉ Allergy' - It is a broad term used generally to encompass the hypersensitive state acquired by exposure to a specific material and the altered capacity of the living organism to react upon re-exposure to it.

○ Two general types of allergic reactions :

1) The immediate reaction, is that associated with antibodies circulating in the serum of the allergic person and includes anaphylaxis, hay fever and asthma, serum sickness, angioedema, and the wheal-and-erythema skin reaction.

2)The delayed reaction, is generally not associated with circulating antibodies since the causative agents are not strictly antigens.

They attain antigenic properties by combining with the tissues of the individual.

RECURRENT APTHOUS STOMATITIS (CANKER SORE, APHTHOUS ULCER, APHTHAE)

- ◉ Common disease characterised by development of painful recurrent solitary or multiple ulceration of oral mucosa
- ◉ Similarity to herpes simplex with respect to ppt factor leading to development, clinical appearance, & duration

- ⦿ Patient otherwise healthy.
- ⦿ Onset in childhood, peak in adolescence or early adult life.
- ⦿ Self limiting nature.
- ⦿ Intermittent attack at fairly regular intervals

ETIOLOGY

- It can be divided in Precipitating & Etiological factors

Etiological factors

- 1) Bacterial infection (a pleomorphic, transitional L-form of alpha haemolytic streptococci, *Streptococcus sanguis*)
- 2) Immunological abnormalities- Autoimmune response of the oral epithelium.

3) Iron, B12, folic acid deficiency-

Prompt response to replacement therapy.

Deficiency allows expression of unrelated tendency of ulceration and it plays secondary role or coincidental finding

4) Genetic- genetic predisposition, family history +.

Variety of HLA association detected but it is more stronger in Bachet's syndrome

Precipitating factors

- 1) Local trauma- may act as ppting factor as early symptom, simulate pricking of mucosa by tooth bristle, self-inflicted bites, OS procedures, needle injections
- 2) Endocrine-women- apthous during premenstruation period, pregnancy, menopause

3) Stress or Psychic factor-psychological problems

4) Allergic factor- H/O of asthma, hay fever, food or drug allergy

CLASSIFICATION

- Recurrent aphthous minor- commonest (canker sore)
- Recurrent aphthous major-
Severe form (peradenitis mucosa necrotina recurrens or Sutton's disease)
- Recurrent herpetiform ulceration-
Clusters of ulcer resembling viral lesion but lacking evidence of virus and low antibody to mucosa
- Recurrent ulcer with Behcet's syndrome

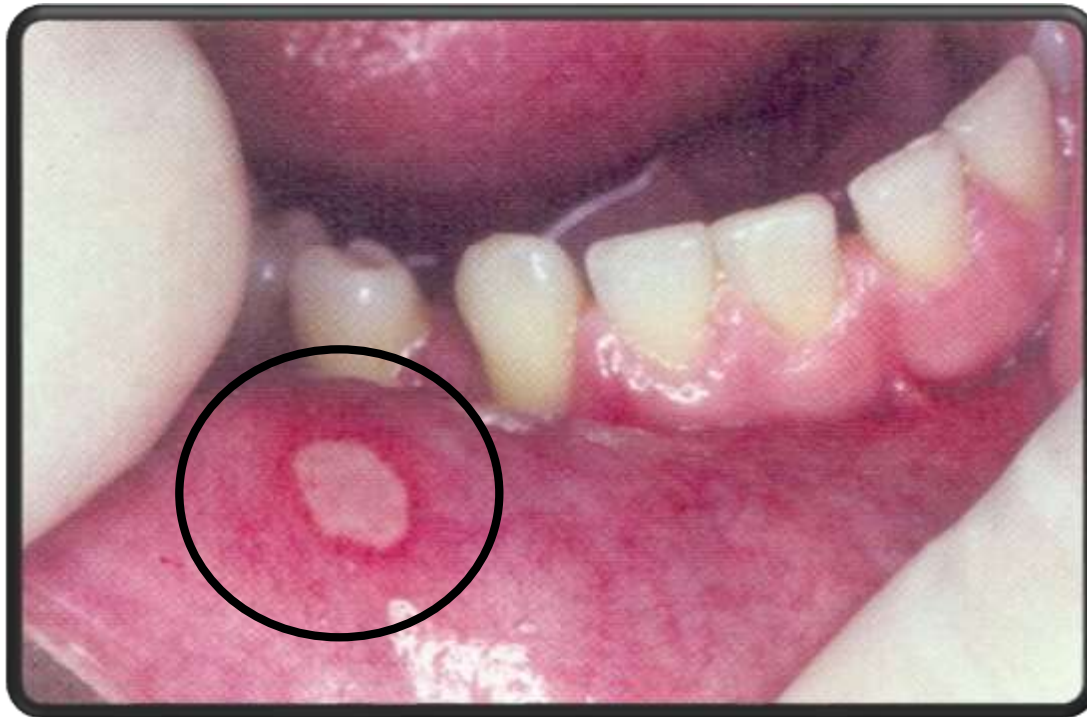
RA MINOR-CLINICAL FEATURES

- ◉ Frequently in females, 10 to 30 years
- ◉ Frequency of outbreaks varies
- ◉ Recurring attacks for many years
- ◉ 20% population affected one or other time
- ◉ Family tendency

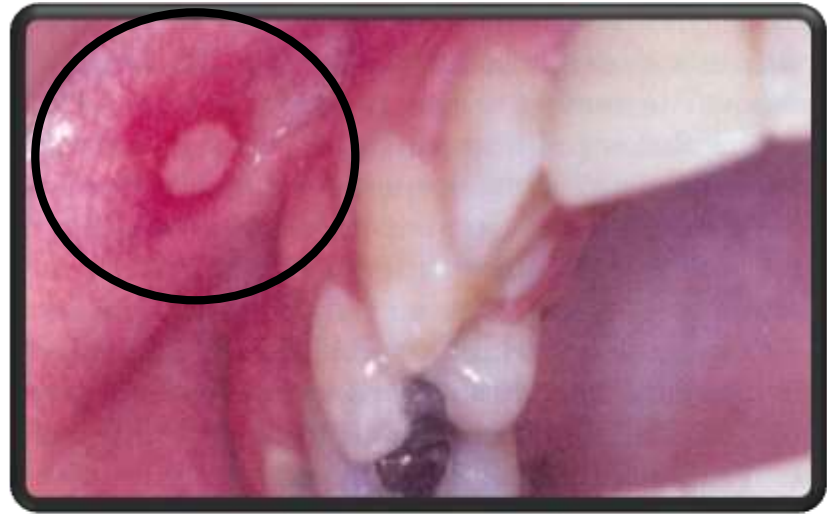
Onset may occur with variety of manifestations

- ◉ One or more nodules
- ◉ Burning sensation
- ◉ Erythema
- ◉ Generalized edema of oral cavity, specially tongue
- ◉ Paraesthesia, malaise, low grade fever, localized lymphadenopathy and vesicle like lesion containing mucus

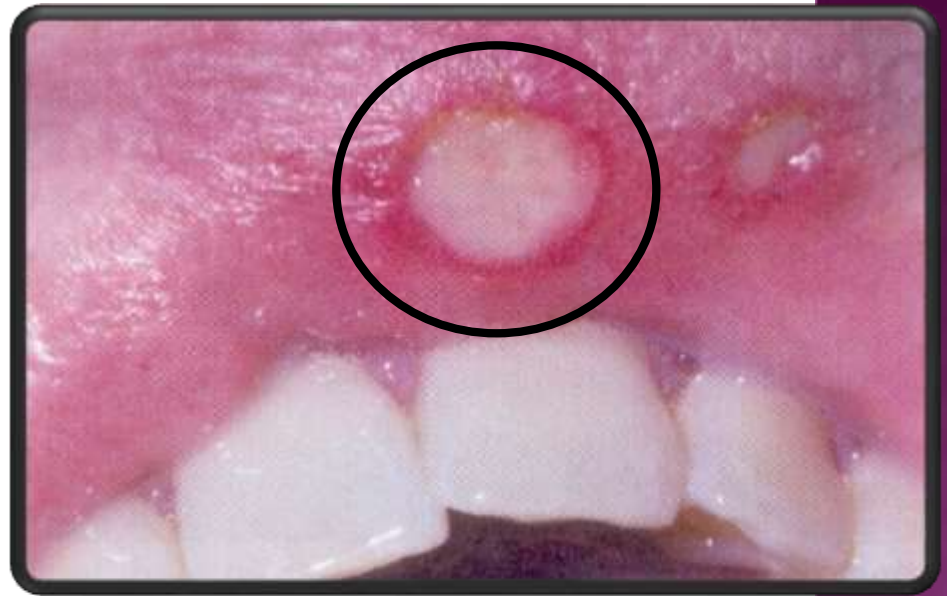
- ◉ Begins as single or multiple superficial erosion covered by gray membrane.
- ◉ Well circumscribed margin with erythematous halo



- ◉ Painful and interfere with eating ,& speech
- ◉ Vesicle formation (previously thought) does not appear
- ◉ No of lesion varies-1 to 100



- Size-generally less than 2- 3 mm to over 10 mm
- Site-buccal, labial mucosa, tongue, soft palate, pharynx, all locations of labile mucosa, not bound to periosteum.
- 7-14 days for healing and without scar

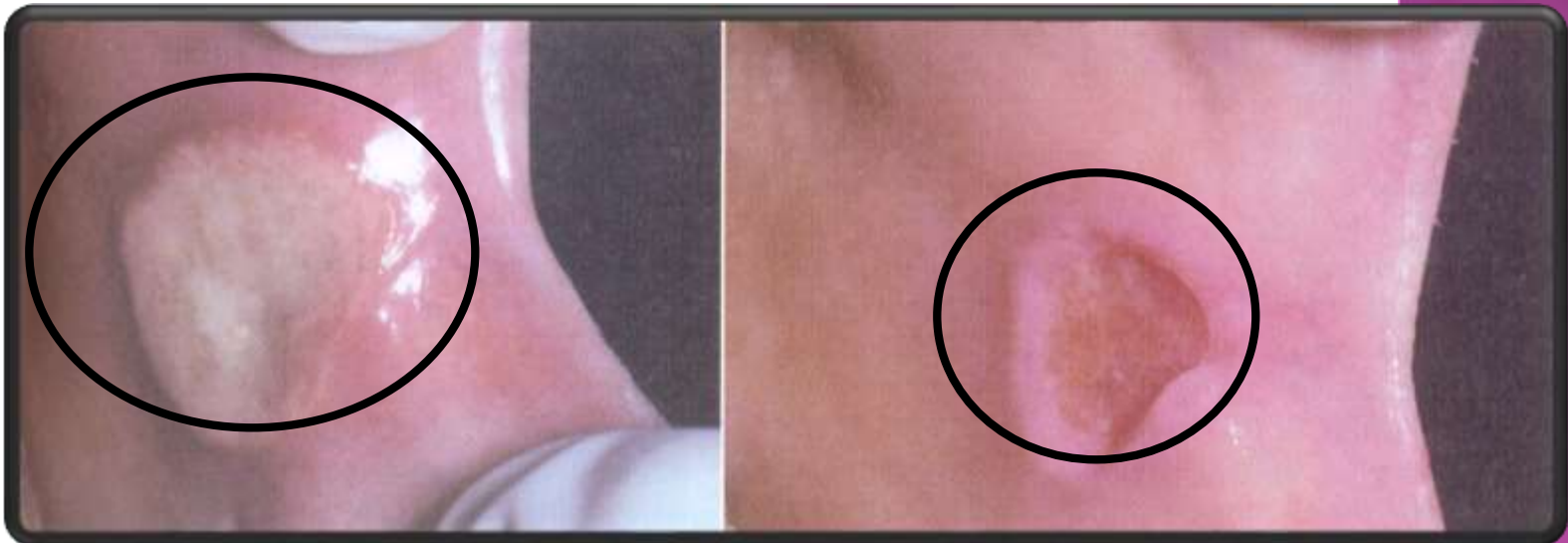


RA MAJOR-CLINICAL FEATURES

- ⦿ Large, painful ulcer
- ⦿ 1-10 in no.
- ⦿ On lip, cheeks, tongue, soft palate
- ⦿ Patient seldom free from disease

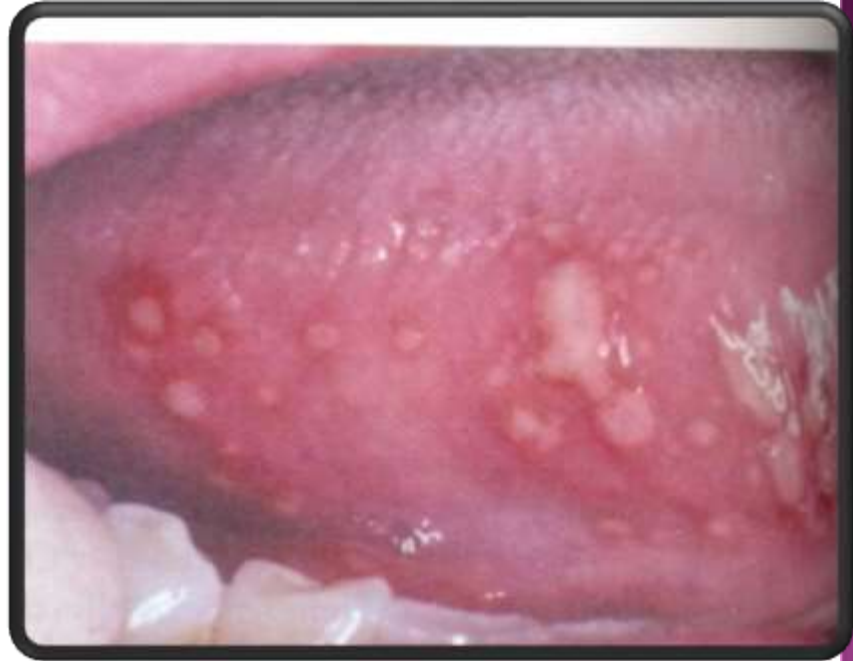


- ◉ Lesion persist for 6 wks and leave scar upon healing, mucosa show scarring
- ◉ Associated with Rheumatic arthritis
- ◉ Females more affected



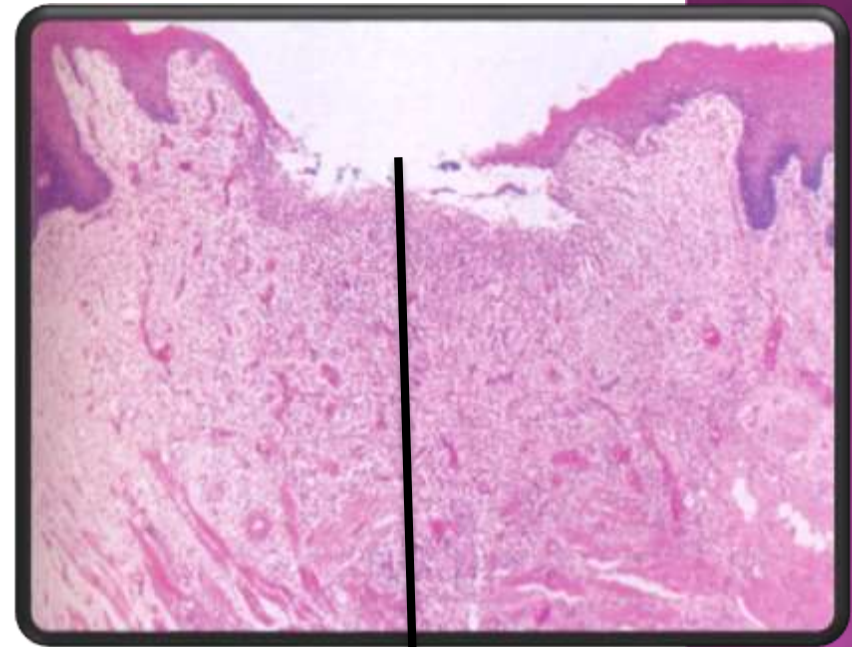
RECURRENT HERPETIFORM ULCERATION

- ◉ Crops of multiple small, shallow ulcer (100 in no), occur at any sites
- ◉ Small pinhead size lesion which unite
- ◉ More painful than size
- ◉ 1-3 years continuously with short remissions
- ◉ Immediate relief with 2% tetracycline



HISTOPATHOLOGIC FEATURES

- Fibrinopurulent membrane on ulcerated area, intense inflammatory cell infiltration of connective tissue, necrosis of tissue near surface.
- PMN below ulcer but lymphocytes surrounding it. Granulation at base. Epithelial proliferation at margin of lesion



ulcerated area,
intense inflammatory
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- ◉ Accessory salivary tissue show periductal or perialveolar fibrosis, chronic inflammation
- ◉ Cytology- epithelial cell-
 - **Anitschkow cell**- elongated nuclei with linear bar of chromatin with radiating process of chromatin towards nuclear membrane (sickle cell, megaloblastic deficiency anemia, cancer, chemotherapy)

Treatment modalities for recurrent aphthous stomatitis

- ◉ Immune enhancement
- ◉ Immunosuppression, inflammatory suppression
- ◉ Antibiotics
- ◉ Antiseptic
- ◉ Diet supplementation
- ◉ Symptomatic treatment

SUMMARY

- ◉ Stress avoidance
- ◉ Soft tooth brush
- ◉ Supplements-B₁₂, folic acid, B₃, C, iron
- ◉ Steroids with orabase
- ◉ Local anaesthetic, tetracycline mouthwash
- ◉ Systemic steroids-severe cases



Herpes simplex

Recurrent aphthous stomatitis

SUMMARY

- ◉ Etiology
- ◉ Classification
- ◉ Clinical features
- ◉ histological features of apthous ulcers

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Thank You