

Ulcerativ

e

and

Vesicul

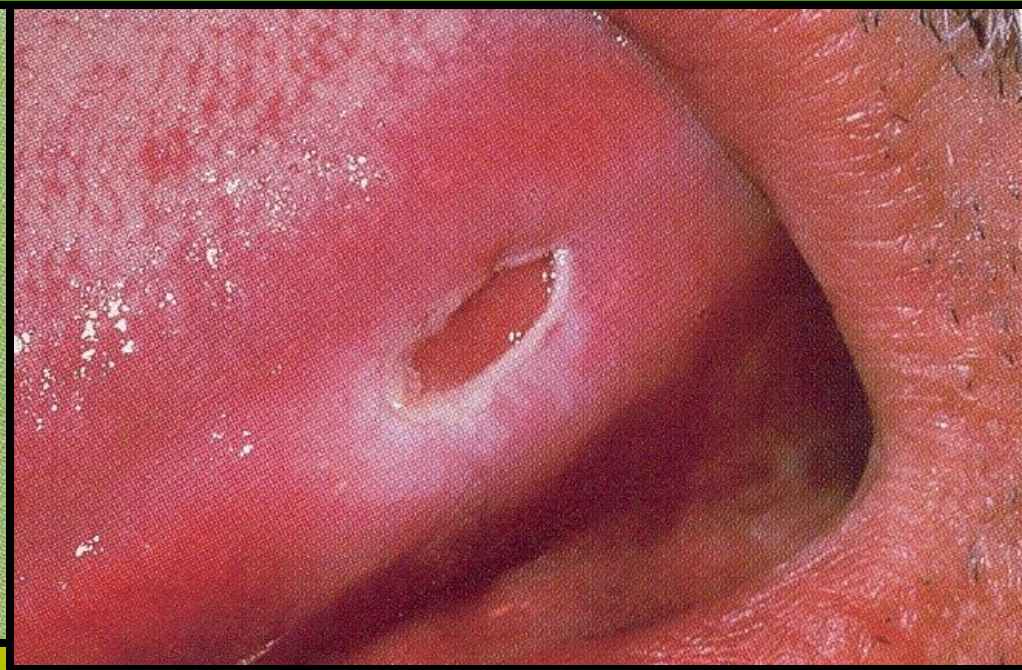
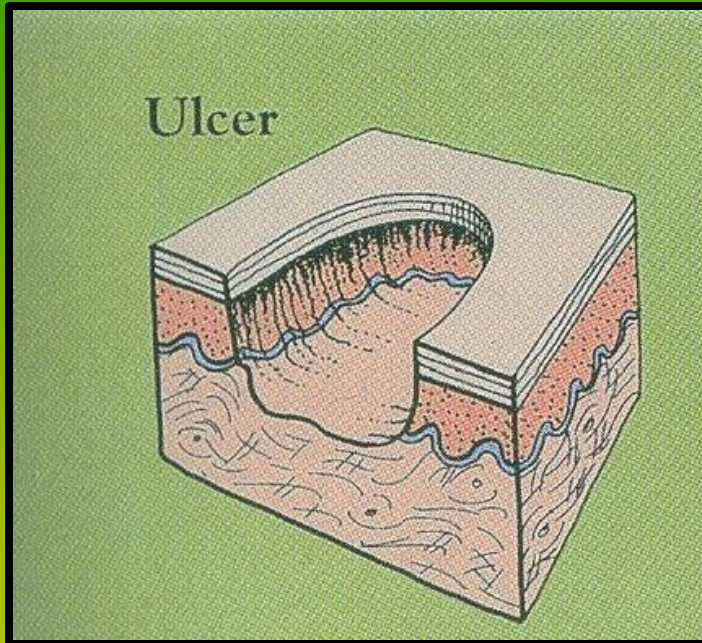
o

Bullous

lesions

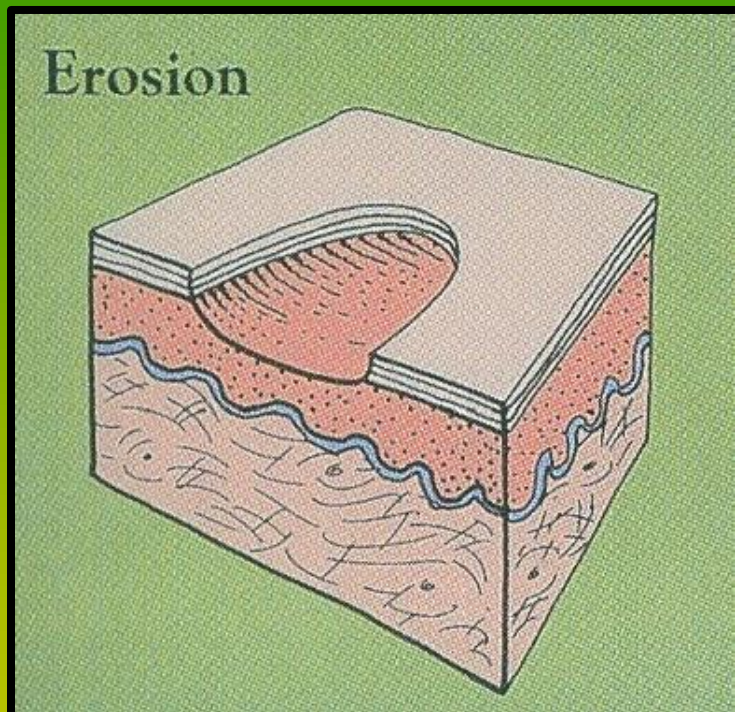
Of Oral Cavity

ULCER



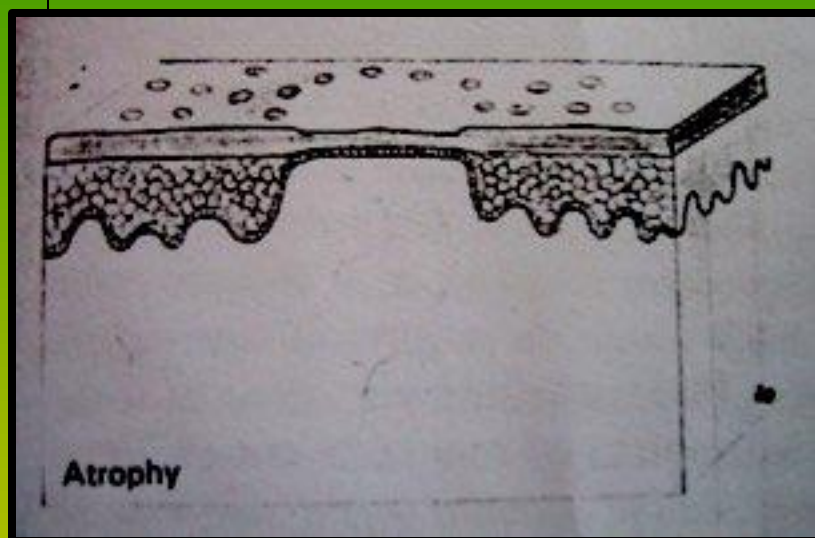
An ulcer is a discontinuity in surface epithelium extending to the connective tissue due to molecular death of cells

EROSION



Erosion is the loss of superficial layers of epithelium. The area appears red in color.

ATROPHY

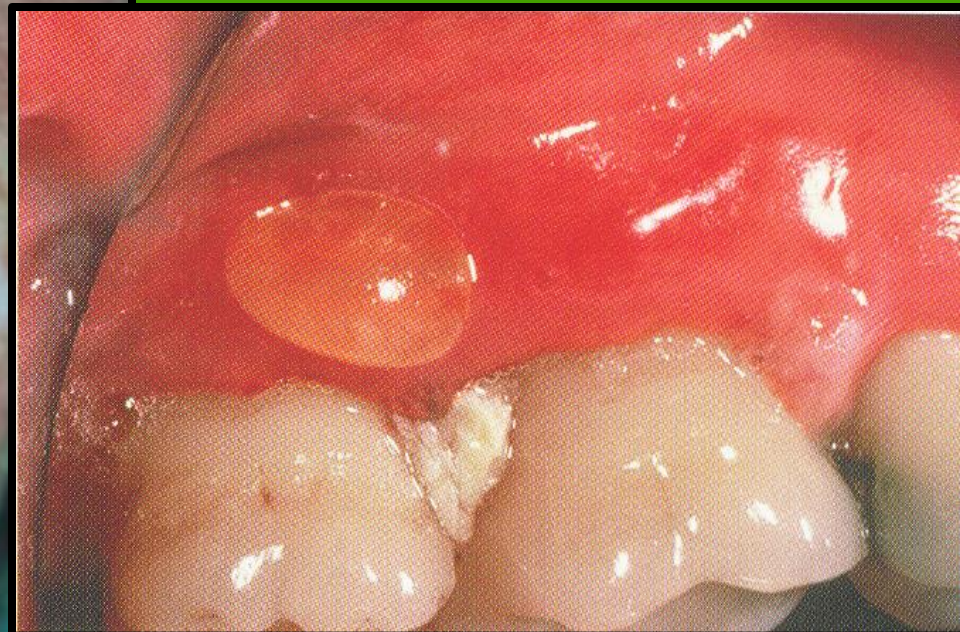


Atrophic epithelium refers to reduction in thickness of the epithelium. The area usually appears red in color.

VESICLES



Vesicle is a fluid filled blister less than 5 mm in diameter.

BULLAE

A bulla is a fluid filled blister more than 5 mm in diameter. In other words a large vesicle is a bulla.

HISTORY

- Length of time
- Past history of similar lesions
- Number of lesions present
- Presence of skin, eye, genital lesions
- presence of symptoms such as joint pains, muscle weakness, dyspnea, diplopia, and chest

Classification**I. Traumatic**

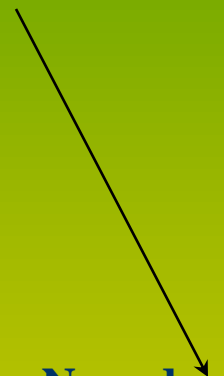
Physical



Odontogenic



Sharp teeth

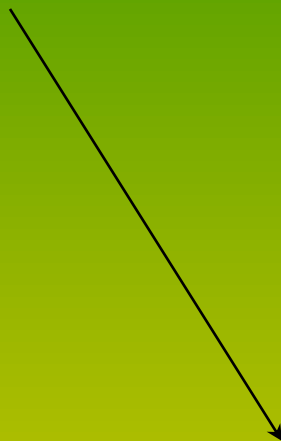
AppliancesRestorationsNonodontogenic
(Iatrogenic)

Post Injection

Post Extraction

Classification**Thermal**

→ Heat

Pizza burnReverse smoking**Cold****CO₂ snow****Ethyl chloride**

Classification

Chemicals



Local application of drugs

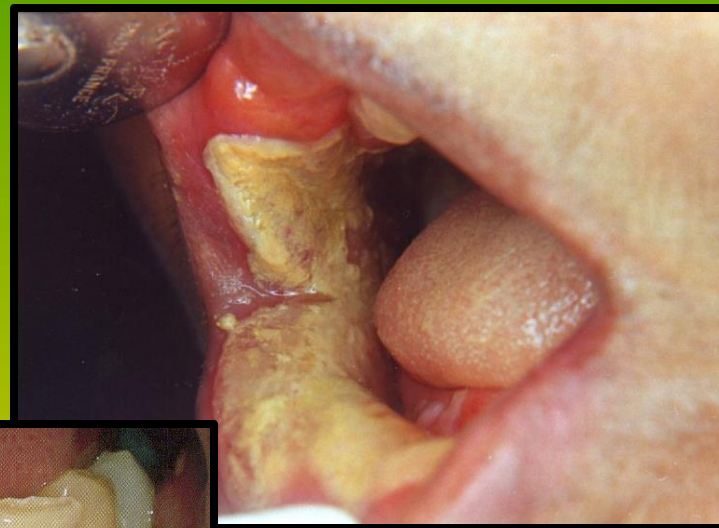
- Aspirin burn
- Silver nitrate burn
- Hydrogen peroxide
- Sodium hypochlorite
- Dentifrices, mouthwashes

Classification**Chemicals****Chemotherapy for Cancer**

- Formocresol
- Camphor Phenol
- Eugenol

Classification

Radiotherapy for Ca



Classification

II. Infectious

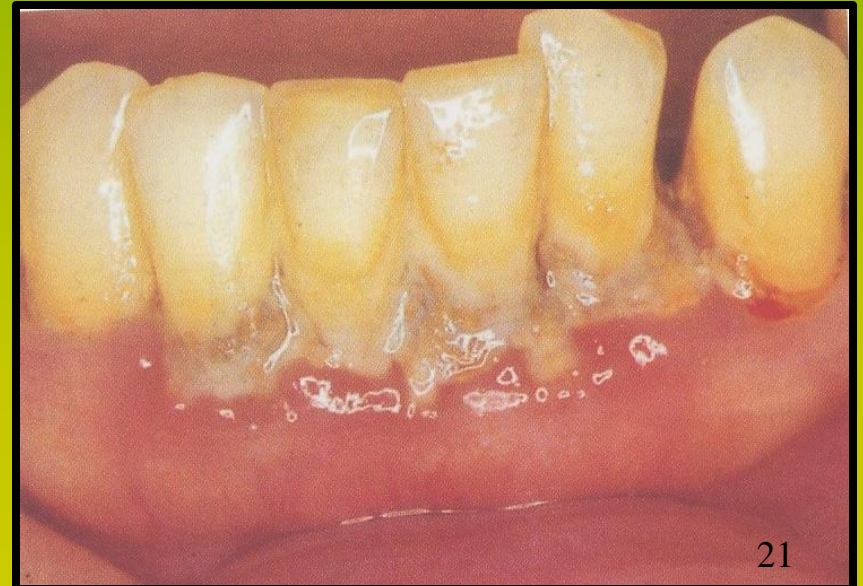
Bacterial



•Scarlet Fever

•Diphtheria

•A N U G



Classification

II. Infectious

Bacterial

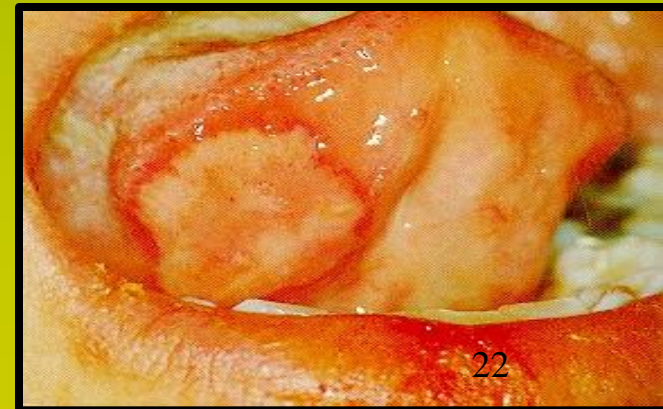


•Scarlet Fever

•Diphtheria

•A N U G

• Syphilis



Classification

II. Infectious

Bacterial

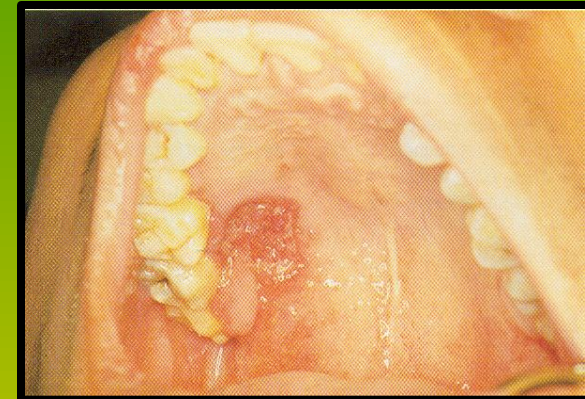


- Scarlet Fever
- Diphtheria

- A N U G

- Syphilis

- Tuberculosis



Classification

II. Infectious

Viral



•Herpes Simplex



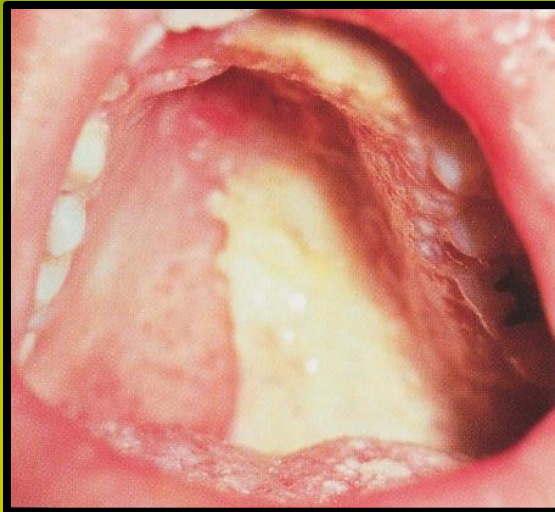
Classification

II. Infectious

Viral



- Herpes Simplex
- Herpes Zoster



Classification

II. Infectious

Viral



- Herpes Simplex
- Herpes Zoster
- Herpangina

Classification

II. Infectious

Viral



- Herpes Simplex
- Herpes Zoster
- Herpangina
- Chicken pox

- Cat scratch fever

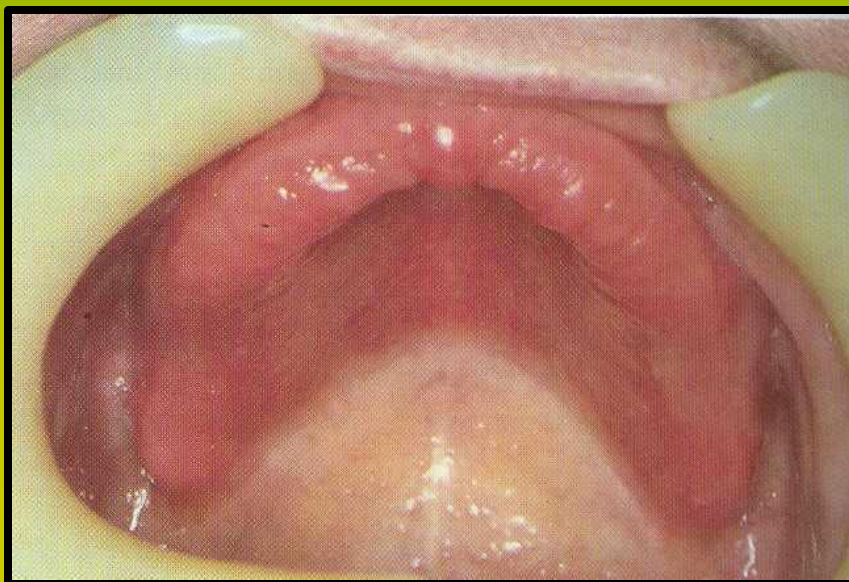
Classification

II. Infectious

Fungal



- Candidiasis
- Histoplasmosis
- Blastomycosis



Classification

III. Allergic

**Stomatitis
venenata**



- acrylic
- amalgam

**Stomatitis
medicamentosa**



- Drug allergy

Classification

IV. Systemic

Blood
Dyscrasias



- Agranulocytosis
- Neutropenia
- Iron deficiency



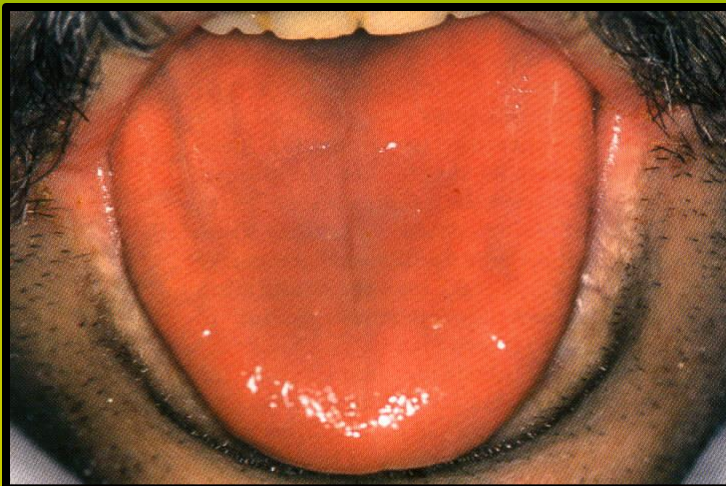
Classification

IV. Systemic

Blood
Dyscrasias



- Agranulocytosis
- Neutropenia
- Iron deficiency
- Sickle cell anemia
- Pernicious anemia



Classification**IV. Systemic****Blood
Dyscrasias**

- Agranulocytosis
- Neutropenia
- Iron deficiency
- Sickle cell anaemia
- Pernicious anaemia

Nutritional

- B-Complex deficiency
- Vitamin C deficiency



Classification

IV. Systemic

Blood Dyscrasias



- Agranulocytosis
- Neutropenia
- Iron deficiency
- Sickle cell anaemia
- Pernicious anaemia

Nutritional



- B-Complex deficiency
- Vitamin C deficiency

Metabolic



- Diabetes mellitus
- G I T disturbance
- Metallic poisoning

Classification

V. Malignant



- Squamous cell Ca.
- Basal Cell Ca.
- Melanoma
- Mucoepidermoid Ca.

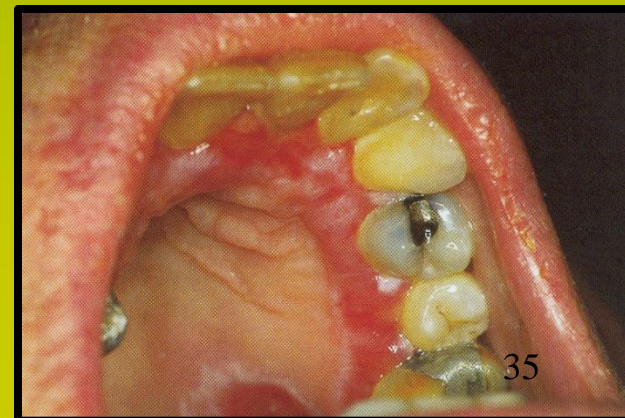
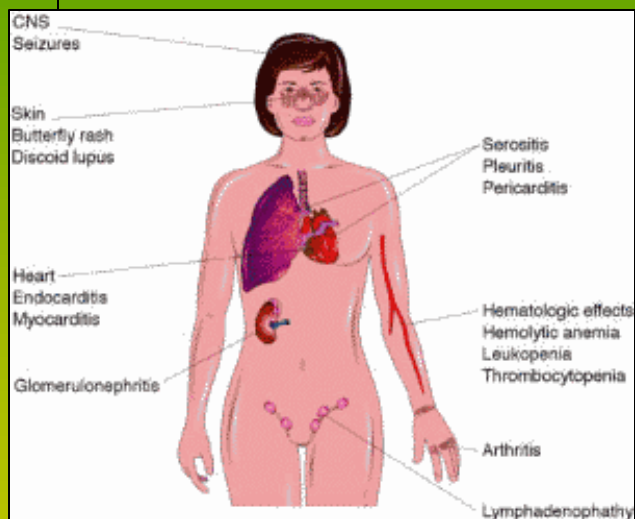


Classification

VI. Unknown etiology



- Apthous ulcer
- Erythema multiforme
- Pemphigus
- B M M P
- Lichen planus-erosive
- S L E



Classification

VII Syndromes



- Behcet' syndrome
- Steven Johnson' syn.
- Reiter's syn.

ClassificationViral Diseases Herpes Simplex Infections

- Primary herpetic gingivostomatitis
- Secondary herpes simplex infection

 Varicella Zoster infections Hand, foot and mouth disease Herpangina Measles

Classification

Conditions associated
with immunologic defects 

- Pemphigus
- Benign Mucous Membrane Pemphigoid
- Cicatricial Pemphigoid
- Dermatitis Herpetiformis

Classification

Hereditary Diseases



□ Epidermolysis Bullosa

Remember !

Some pathologies manifest only as **ULCERS**, e.g. *aphthous stomatitis*. Some as only **VESICLES**, e.g. *herpes simplex infection*. Some manifest as only **BULLAE**, e.g. *pemphigus*. Some pathologies may manifest in **MULTIPLE FORMS**, e.g. *erythema multiforme*

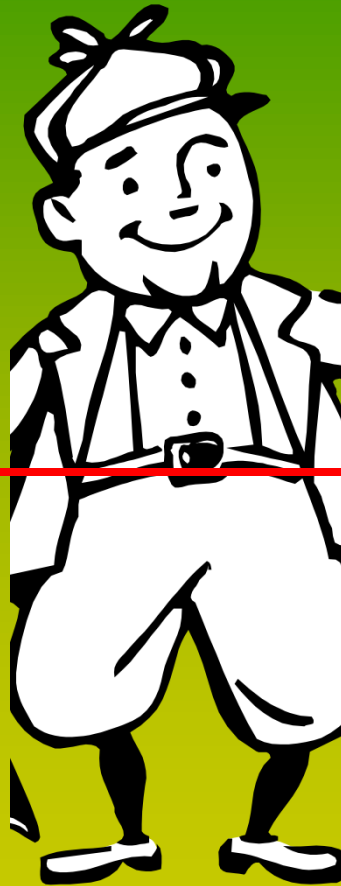
Ulcerative

Hence



V.B

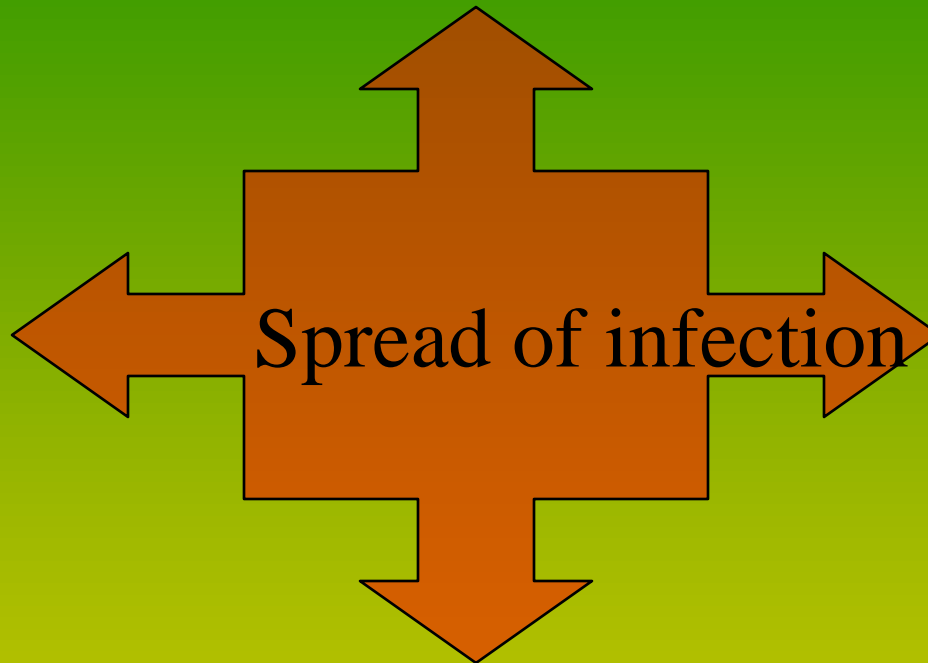
Herpes Simplex Infections



 HSV 1

 HSV 2

Herpes Simplex Infections



- Saliva
- Genital

Herpes Simplex Infections

H S V infection



Primary infection



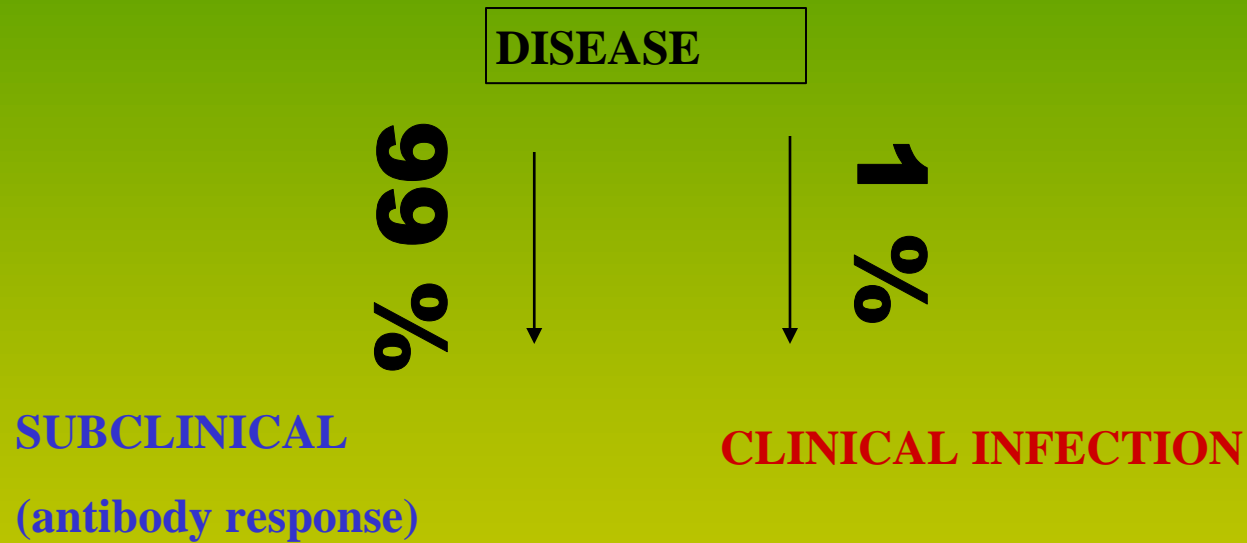
Latency



Recurrent disease

Herpes Simplex Infections

Primary herpes simplex

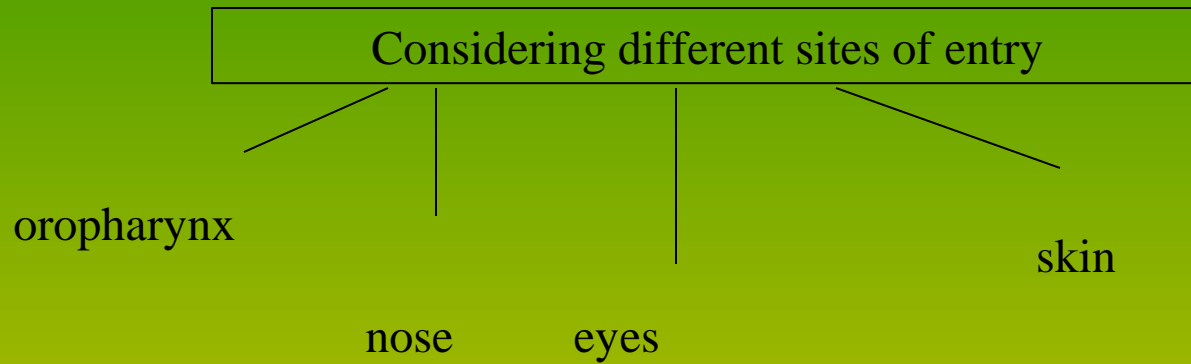


Herpes Simplex Infections

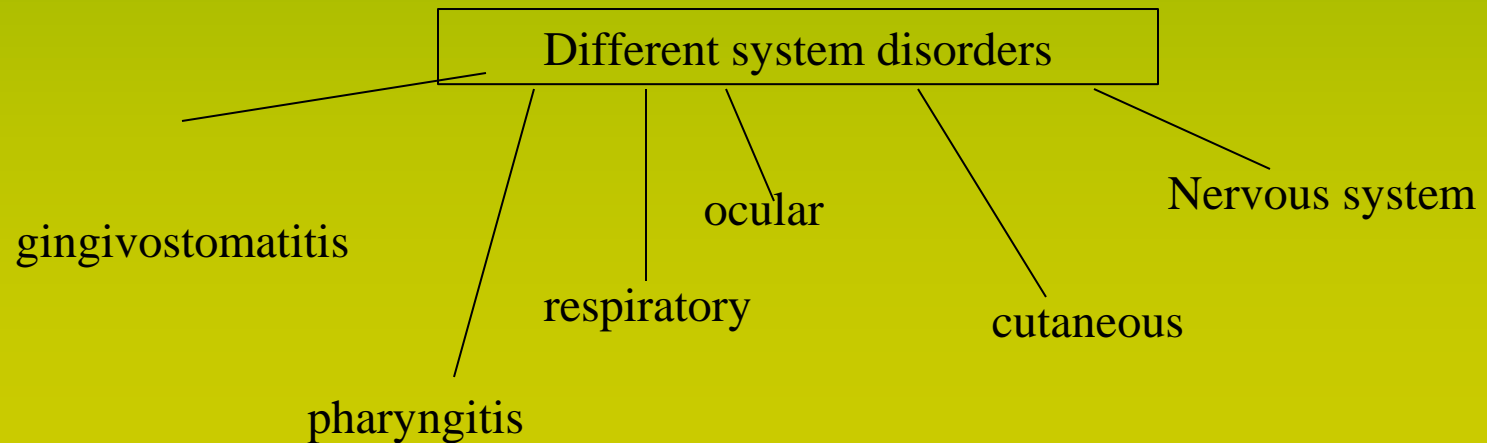
Clinical features

Herpes Simplex Infections

Clinical features



HENCE



Herpes Simplex Infections

Oral lesions



Herpes Simplex Infections



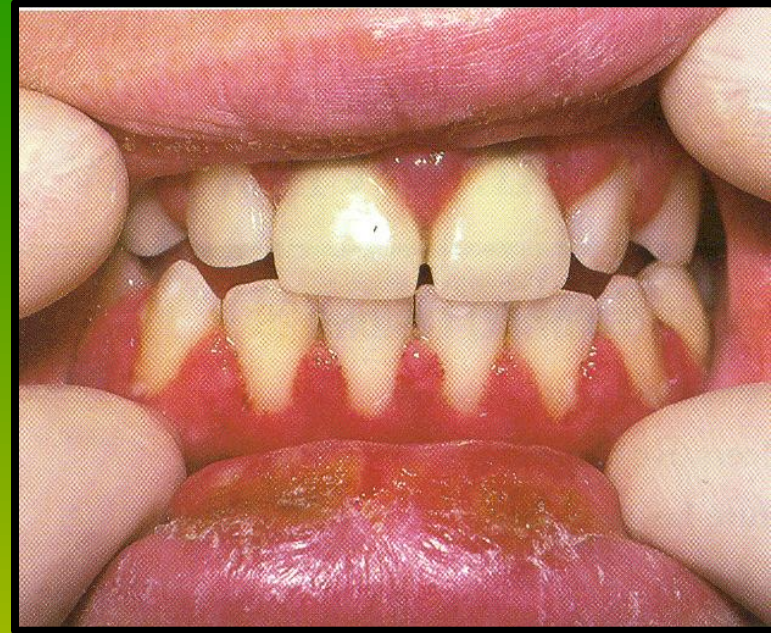
Discrete ulcers



gingival erosions

Herpes Simplex Infections

Oral lesions

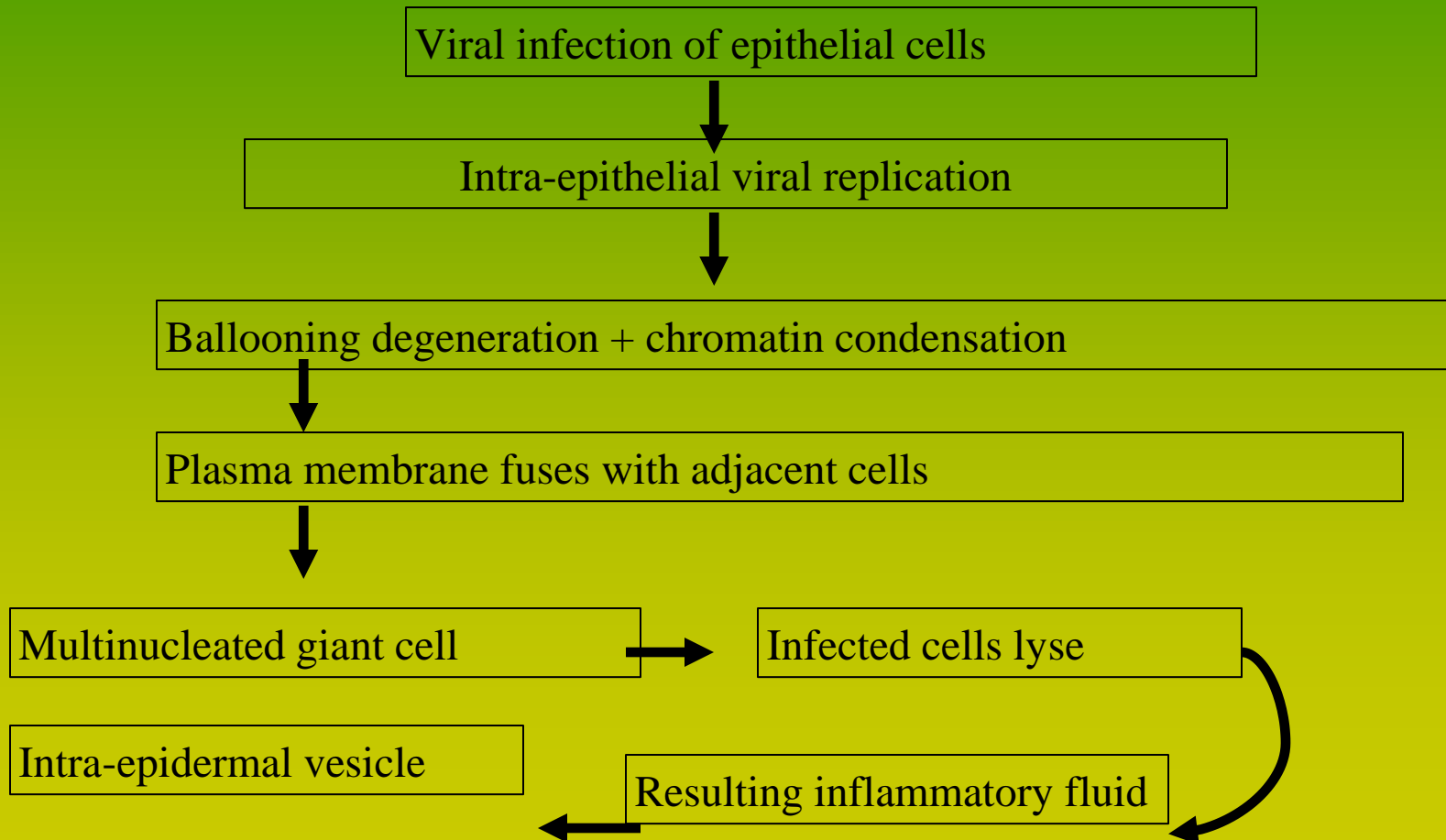


Fever 3 – 4 days

Healing – 10 days

Herpes Simplex Infections

Pathology



Herpes Simplex Infections

Differential Diagnosis

- A N U G
- Erythema multiforme
- Allergic stomatitis
- Herpes Zoster
- Herpangina
- Streptococcal pharyngitis

Herpes Simplex Infections

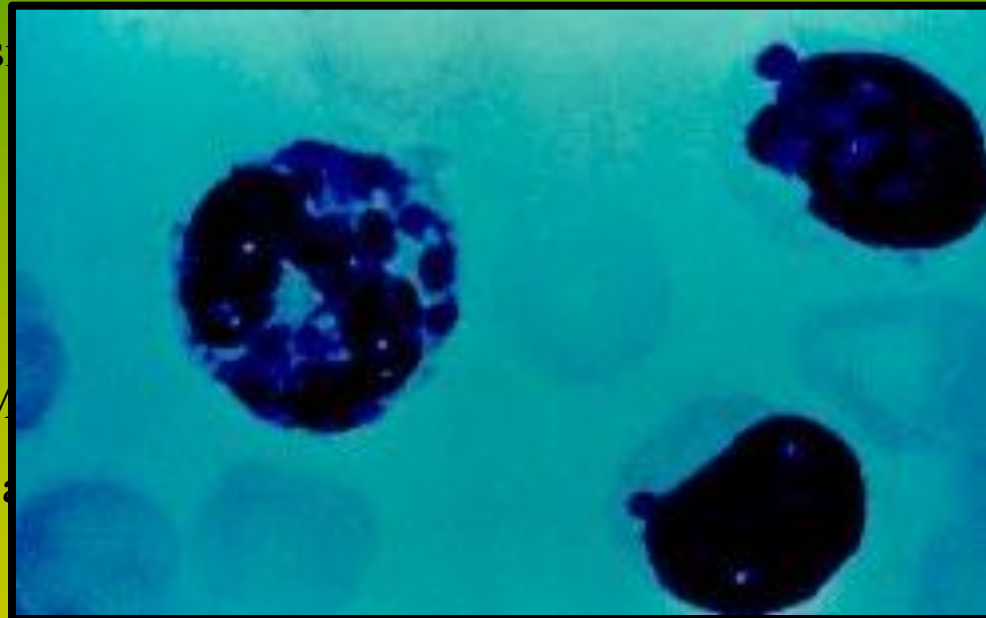
Diagnosis- Primary Herpes Infection

▲ In children-s

Lab Tests

•Cytology- M

Ba



Herpes Simplex Infections

Diagnosis- Primary Herpes Infection

Lab Tests

- Viral Isolation –Most sensitive
- Viral antigen detection
- Serologic antibody assay

Herpes Simplex Infections

Treatment - Primary Herpes Infection

General

- Bed rest & isolation (limit transmission)
- Adequate hydration and nutrition
- Fluids, oral/I.V to balance fluid loss due to decreased intake
- High protein diet, liquid and soft diet when minimal solid food

Herpes Simplex Infections

Treatment - Primary Herpes Infection

Specific

PAI

N



Topical anesthetic mouthwash/application

- Diphenhydramine elixir
- Dyclonine hydrochloride 0.5%
- Diphenhydramine hydrochloride 5mg/ml mixed with equal qty. of milk of magnesia
- Viscous lignocaine
- Systemic NSAID

Herpes Simplex Infections

Treatment - Primary Herpes Infection

Specific

Anti - Viral

- Acyclovir – limits the number of virions that replicate in sensory ganglia if take early



Topical- 5% acyclovir applied 5 times/day (*Herpex ointment*)



Systemic-200 mg tab 5 times/day for 10 days(*Zovirax*)

Newer- Valacyclovir, Famciclovir

Herpes Simplex Infections

Latency

Initial infection



Virus present at sensory nerve endings



Transported by neurons to ganglia (most commonly trigeminal gang.)



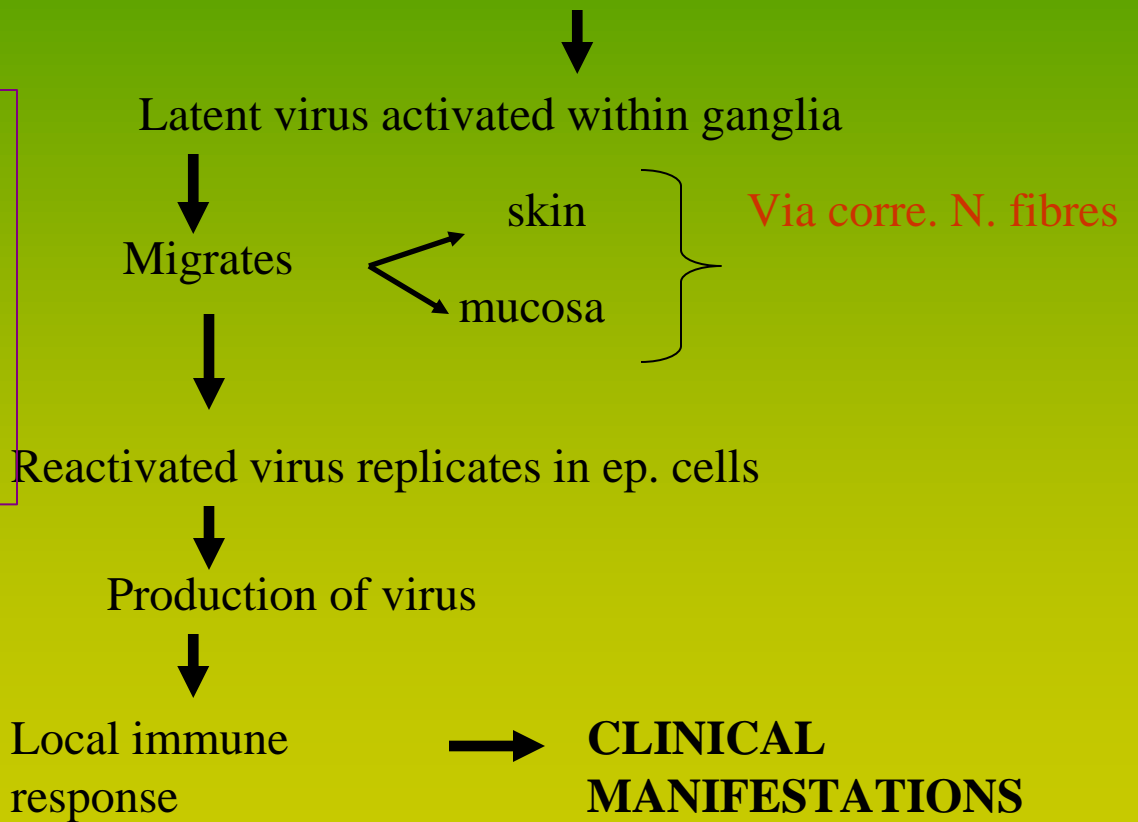
Persists in non replicating state without destroying the site of residence

Herpes Simplex Infections

Reactivation

- Sunlight
- Heat
- Stress
- Trauma
- immunosuppression

Spontaneous/**Stimuli induced**



Herpes Simplex Infections

Recurrent herpes simplex infection

Occurs in individuals who have experienced primary herpes simplex infection

Recurrent intraoral herpes(RIH)

Recurrent herpes labialis(RHL)

Herpes Simplex Infections

Recurrent herpes simplex infection

Clinical features

- Tingling, itching at site 1-2 days before actual onset
- Small (1-2 mm), round vesicles on labial skin or keratinized mucosa (palate, gingiva).
- Vesicles rupture in 1 or 2 days, to form small ulcers with irregular margins surrounded by a zone of redness, spread to perioral skin
- Most of the episodes are mild and self-limiting, healing in 7 – 10 days

Herpes Simplex Infections

Recurrent herpes simplex infection

Clinical features

RHL



Herpes Simplex Infections

Recurrent herpes simplex infection

Clinical features

RHL

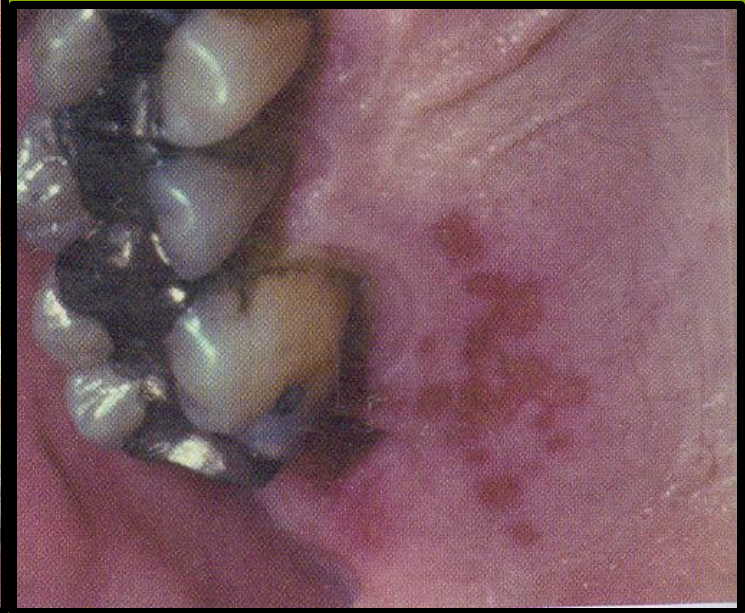
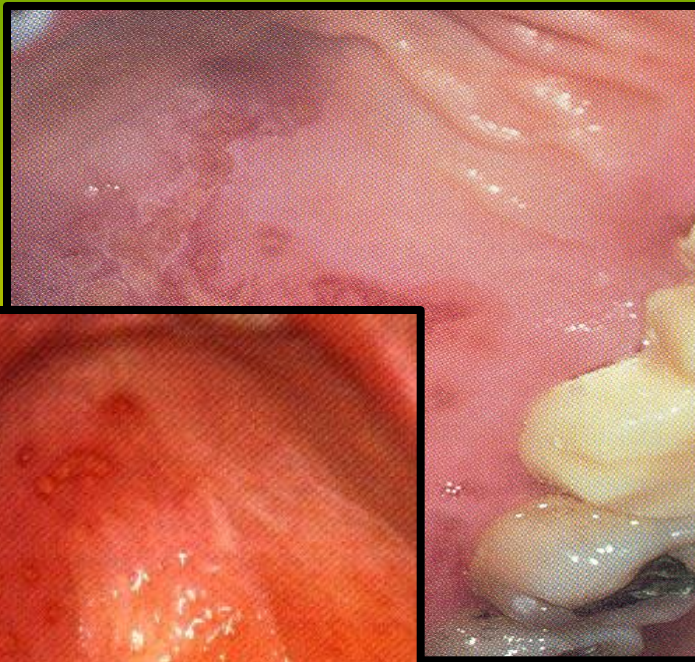


Herpes Simplex Infections

Recurrent herpes simplex infection

Clinical features

RIH

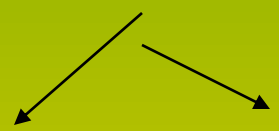


Herpes Simplex Infections

Recurrent herpes simplex infection

Management

- Topical anesthetics
- Anti- viral - **Acyclovir**



Topical

Systemic



Herpes Simplex Infections

Herpetic Whitlow

Recurrent infection of fingers and hands

- Thumb suckers
- Health care workers – (hands unprotected)

Infected patient's mouth

Saliva of asymptomatic carriers



Herpes Simplex Infections

Herpetic Whitlow

Recurrent infection of fingers and hands

•Initial infection → Virus latent in dorsal root ganglion

Later

Trauma → Recurrence

Herpes Simplex Infections

Herpetic Whitlow

Initially- **Red**, inflamed swollen tissue



n

s fluid



Healing (7 to 10 days)



Herpes Simplex Infections

Dental considerations of HSV infection

- Do not treat patients with active lesions
- Placement of rubber dam or emolient on vesicles



Infectious fluid to adjacent dermal tissue

Use of rotary instrument → Aerosolization of virus → Eye infection

Rx of pt. with active inf.



Risk of inf. To dentist if break in aseptic technique

Warning !!

HSV shown to survive 2-4 hours on environmental and skin surfaces !!

Herpangina

- Coxsackie virus infection

Prodrome (24 – 48 hrs)

macules

Papu



Herpangina

		<u>HSV</u>	<u>Herpangina</u>
1	Virus	Herpes	Coxsackie
2	Virus type	DNA	RNA
3	Severe	✓	✗
4	Epidemic	✗	✓
5	Pharynx & post. mucosa	✗	✓
6	Marginal gingivitis	✓	✗
7	Smaller lesions	✗	✓
8	M.N. giant cells	✓	✗

Recurrent Aphthous Stomatitis

- Minor ulcers: < 1 c.m in diam : heal without scarring
- Major ulcers: > 1 c.m in diam : heal with scarring
- Herpetiform ulcers : Recurrent crops of dozens of small ulcers

Recurrent Aphthous Stomatitis

Etiology or Predisposing factors

- autoimmune disorder
- abnormal immune response or hypersensitivity to oral organisms such as *S.sanguis*
- Hematologic def. of serum iron, folate or vitamin B 12
- Heredity
- Viral infection
- Trauma
- Psychological stress

Recurrent Aphthous Stomatitis

Etiology or Predisposing factors

Contd.

- Anxiety
- Allergy to foods
- Menstruation
- Helminthic infection



Recurrent Aphthous Stomatitis

Clinical features



Recurrent Aphthous Stomatitis

Clinical features

- **Round, symmetrical, shallow ulcers**
- **Covered with yellow to gray fibrin membrane**
- **Surrounded by erythematous ‘halo’**
- **No tissue tags**



Recurrent Aphthous Stomatitis

Clinical features



MINOR APTHOUS

Recurrent Aphthous Stomatitis

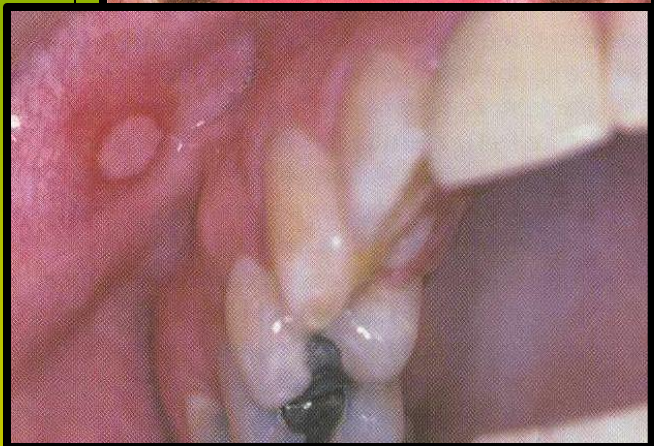
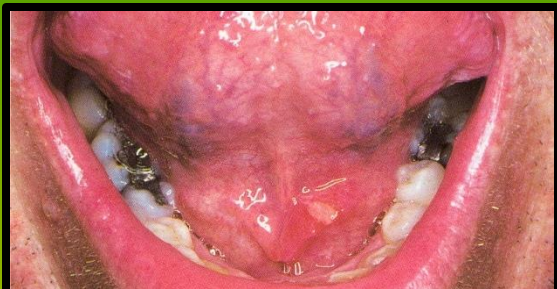
Clinical features



MINOR APTHOUS

Recurrent Aphthous Stomatitis

Clinical features



MINOR APTHOUS

Recurrent Aphthous Stomatitis

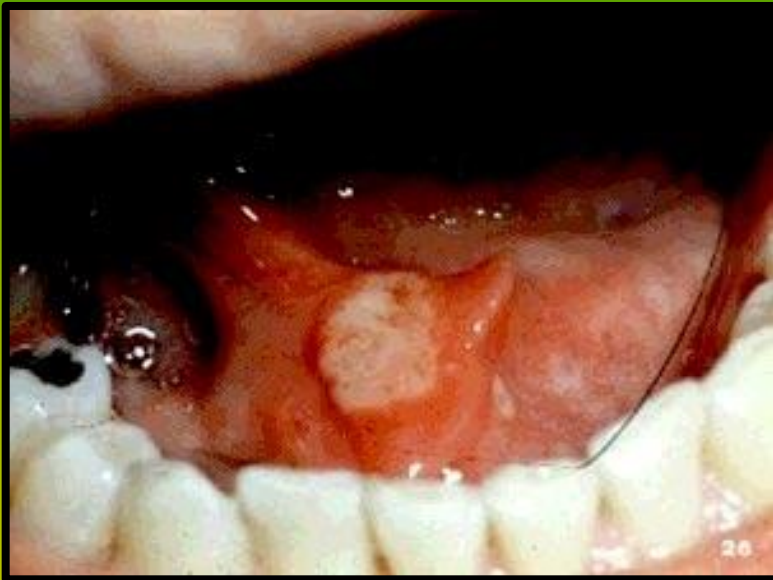
Clinical features



MAJOR APTHOUS

Recurrent Aphthous Stomatitis

Clinical features



MAJOR APTHOUS



Recurrent Aphthous Stomatitis

Clinical features



Herpetiform ulceration

Recurrent Aphthous Stomatitis

Clinical course

- Minor RAS resolves in 10-14 days without scar formation .
- Major RAS may take 10-45 days to resolve and heals with scar formation.
- Herpetiform RAS resolves in 7-30 days and heals with scarification .

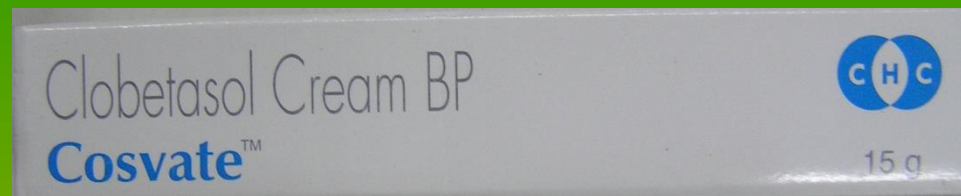
Recurrent Aphthous Stomatitis

Differential Diagnosis

Recurrent Aphthous Stomatitis

Management

- Protective emollient – Orabase
- Topical steroid in Orabase – Triamcinolone acetonide 0.1%
- High potency topical steroid application – flucinonide, betemethasone, clobetasol
- Tetracycline mouthwash- 250 mg in water



Recurrent Aphthous Stomatitis

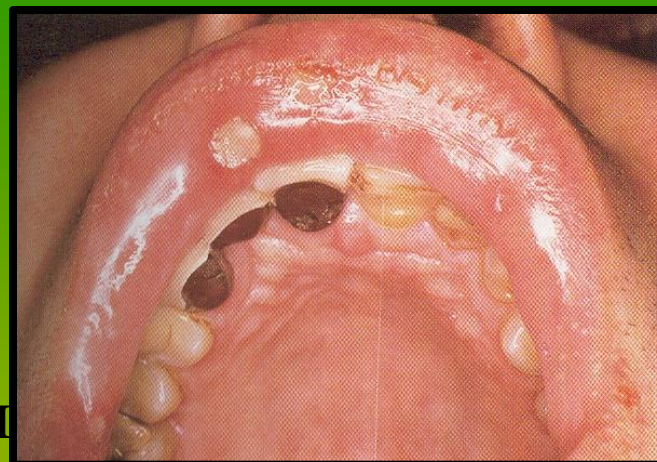
Management

Experimental

Behcet's disease

Triad

- Recurring oral ulcers
- Recurring genital ulcers
- Eye lesions



MI

GIT lesions

Diagnosis

MAJOR

- Recurring oral ulcers
- Recurring genital ulcers
- Eye lesions
- Skin lesions



Ulcerative and V.B lesions

Contd

Varicella Zoster Infections

→ Primary-Chicken pox

→ Secondary-Herpes Zoster

Chicken Pox



ion 2 we
alopapula
mate



405

Varicella Zoster Infections

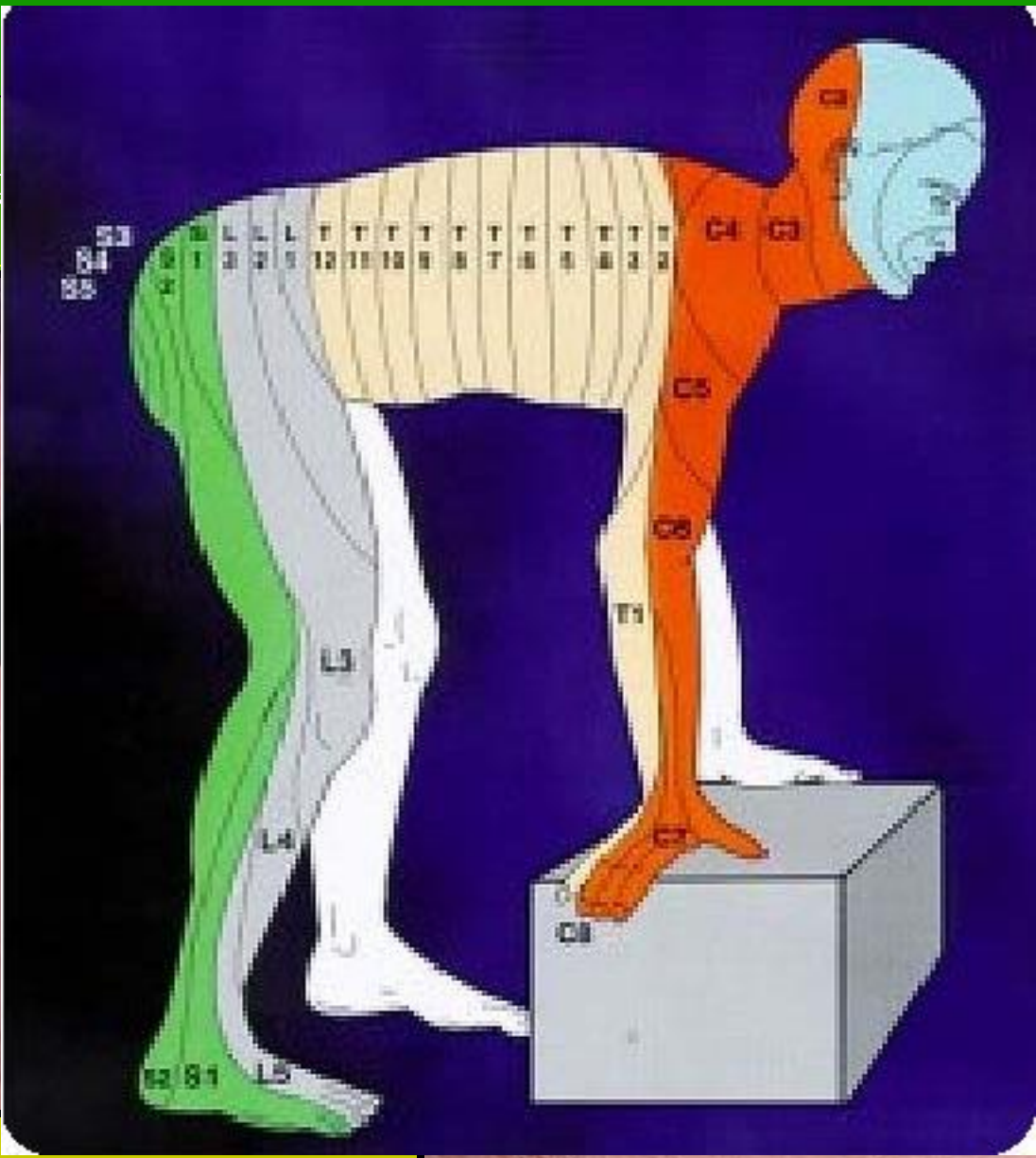
Chicken Pox



- Trauma,
- Immunocompromised (HIV)
- Ca chemotherapy,
- Tumor

Varicella Zoster Im

Herpes Zoster (Z)



Varicella

Herpes

Clinical

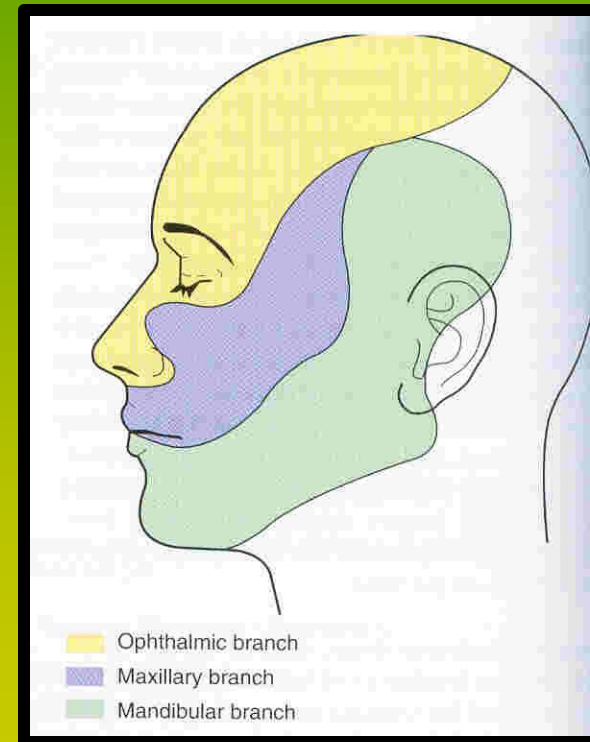
- Lesion
- Scabs
- C₃, T



Varicella Zoster Infections

Herpes Zoster

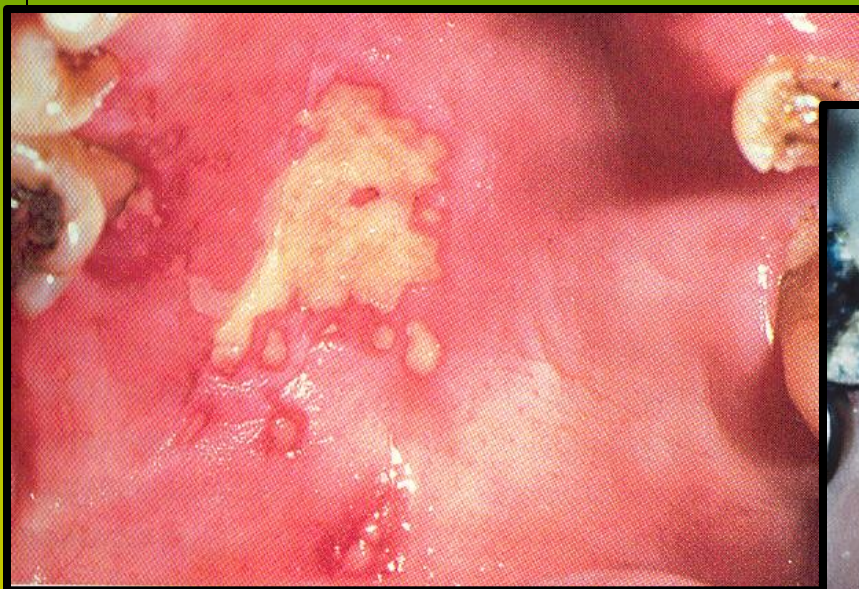
Clinical features



Varicella Zoster Infections

Herpes Zoster

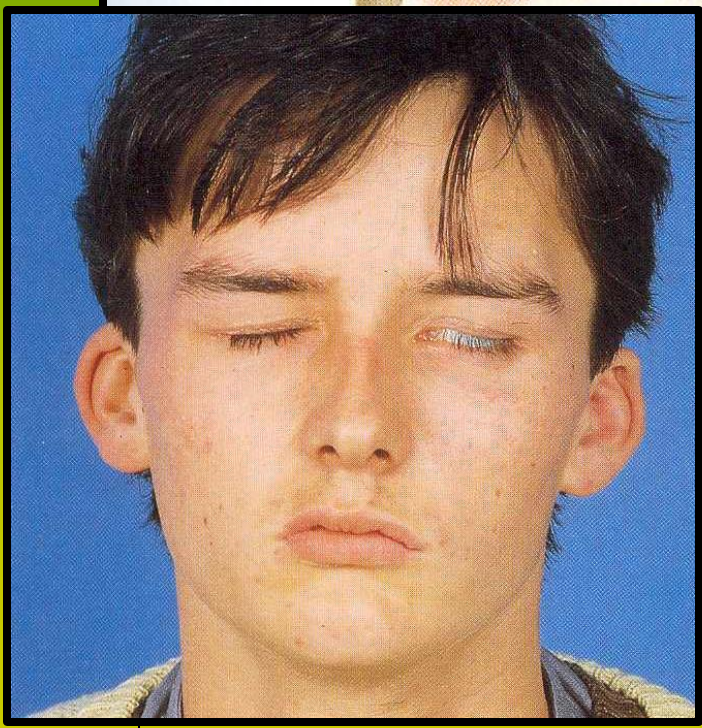
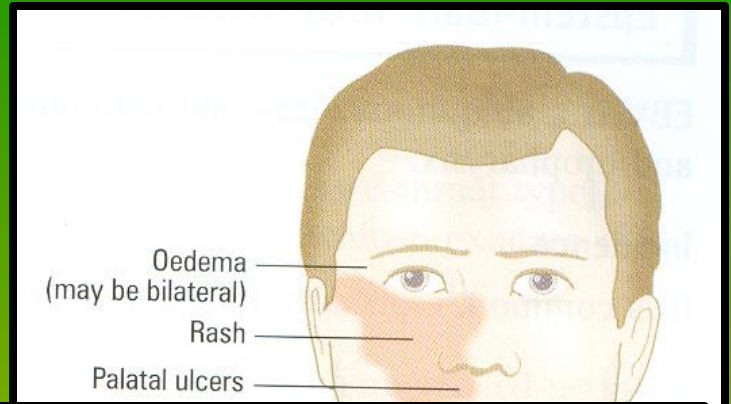
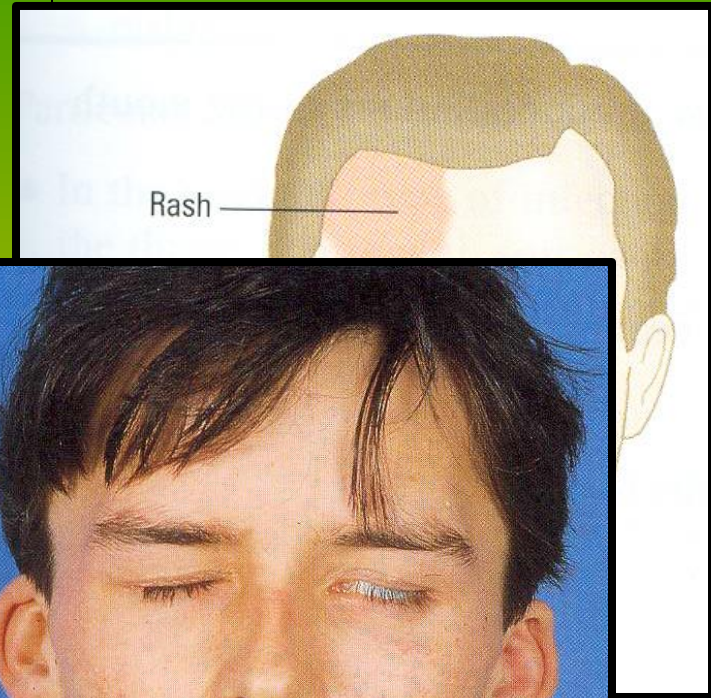
Oral features





Varicella Zoster Infections

Herpes Zoster



nt- facial
oarseness



Varicella Zoster Infections

Herpes Zoster

Diagnosis

- Difficult in prodrome
- Difficult when pain along nerves, no lesions (H.S.H)
- Cytology
- Viral isolation ✓
- Rising antibody titer (H.S.H)

Varicella Zoster Infections

Herpes Zoster

Complications

- Diagnostic problem – appendicitis, cholecystitis, dental pulpitis
- Post herpetic neuralgia
- Generalized HZ with involvement of viscera
- Motor nerve involvement – paralysis of bladder, diaphragm and extremities

Varicella Zoster Infections

Herpes Zoster

Differential Diagnosis

- Herpes Simplex
- Neuralgia

Varicella Zoster Infections

Herpes Zoster

Treatment

- Symptomatic (Uncomplicated cases)
- Anti viral- Acyclovir, valacyclovir, famciclovir
- Prevent/minimize post herpetic n.- corticosteroids/ steroids+ L.A
- Severe pain- phenytoin, carbamazepine
- Topical capsaicin
- Refractory cases – Chemical or surgical neurolysis

Erythema Multiforme

Acute

Disease of skin and mucous membrane

Several types of skin lesions

- Macules
- Ulcers
- Vesicles
- Bullae

M
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Erythema Multiforme

Etiology

Hypersensitivity reaction to a number of antigens



Deposition of immune complexes in superficial microvasculature

- Food allergy
- Drug allergy
- Reaction to microorganisms – recurrent herpes labialis
- Radiotherapy
- Underlying systemic disease
- Neoplasia
- Stress / Emotional factors , IDIOPATHIC

Erythema Multiforme

Clinical features

- Children, young adults
- Skin, and oral, eye and genital mucosa
- Sudden, explosive onset (within 24 hrs)
- Systemic S&S simultaneously (unlike HSV)
- E.M simplex - macules & papules
 - symmetrical distribution

Erythema Multiforme

Clinical features

- Vesiculo bullous form (more severe)

Extensive sloughing of skin

- Severe disability
- Superinfection
- Electrolyte imbalance (dehydration)

- Hands, feet, extensor surfaces of elbows and knees,
- Face and neck, trunk (severe cases)

Erythema Multiforme

Clinical features

- Target lesions



Erythema Multiforme

Clinical features

- Target lesions



Erythema Multiforme

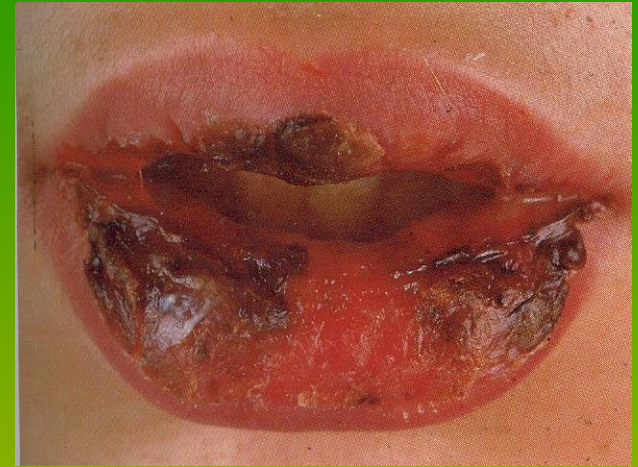
Oral features

- Bullae on erythematous base



Erythema Multiforme

Oral features



Erythema Multiforme

E.M Complex- Steven Johnson's disease



Erythema Multiforme

E.M Complex- Steven Johnson's disease



Erythema Multiforme

EM Simplex- mild to moderate reaction
Characteristic target lesions may be
usually symmetrical and affects hands



EM Complex- maculo-papular rashes and severe vesiculo-bullous involvement of skin, mouth, eyes and genitalia is called as Stevens-Johnson syndrome.

- Bullae begin on erythematous base, and in the mouth rupture rapidly to form deep irregular ulcerations. Large areas of denuded mucosa shall be noticed, with tissue tags at the periphery

Erythema Multiforme

v/s

Herpes Simplex

Skin lesions

Uncommon

Extensive involvement

May be

Large, deep irregular bleeding ulcers

Sh



Gingival involvement

Lip involvement, gingiva No

Histo- Perivascular lymphocytic infiltration

Absent

Erythema Multiforme

Complications

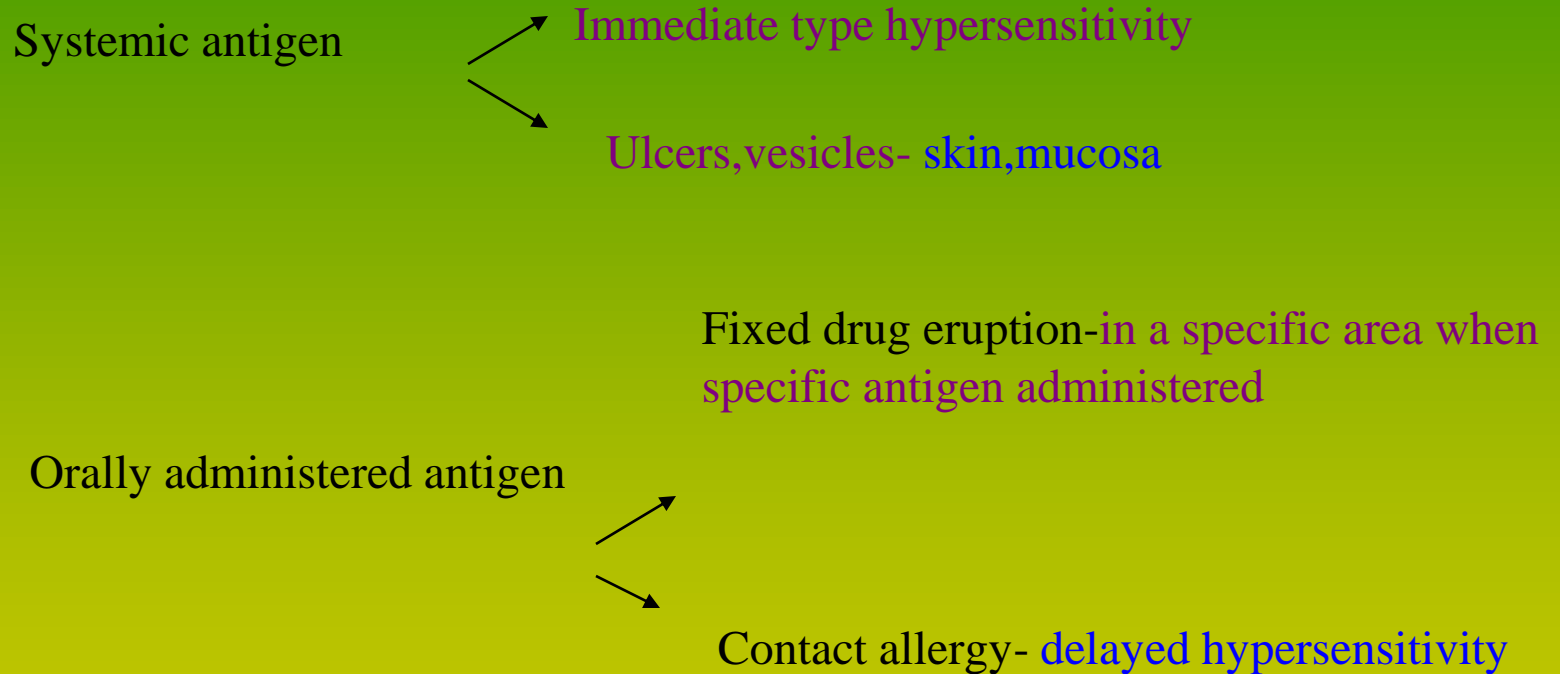
- Secondary bacterial infections
- Severe form can cause extensive denudation of skin and dehydration
- Very severe form called **toxic epidermal necrolysis** can even cause death

Erythema Multiforme

Management

- Palliative, topical anesthetic mouthwash, soft/liquid diet
- Topical steroid application for oral mucosa, systemic steroid in more extensive involvement
- I.V fluids for electrolyte imbalance (severe)
- **Identify agent to prevent recurrence**

Allergic Stomatitis



Allergic Stomatitis

Contact allergy

skin

Oral mucosa

Stomatitis venenata/ contact
stomatitis

Dermatitis venenata/ contact
allergic dermatitis

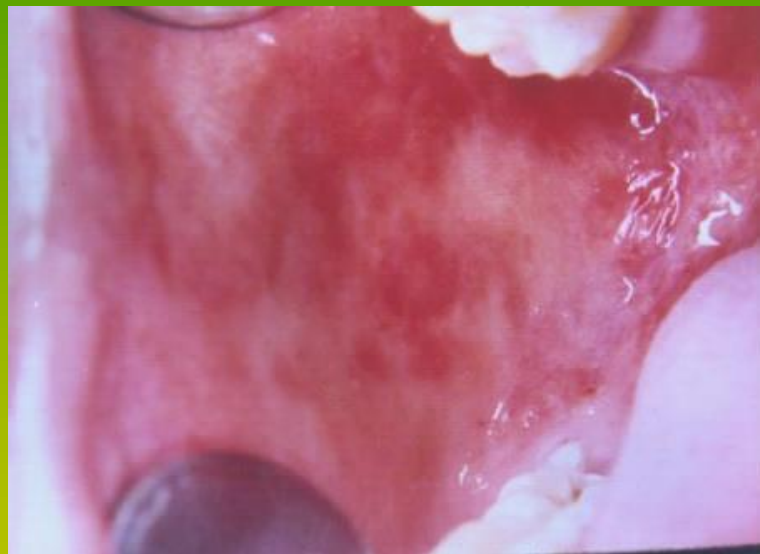
Allergic Stomatitis

Contact stomatitis/stomatitis venenata

- Chrome cobalt
 - Gold crowns
 - Denture soft liner
 - Chewing gum
 - Dental amalgam
 - Acrylic dentures
 - Toothpaste
 - Orthodontic elastics
- Erythema, edema, ulceration at site of contact
 - Diagnosis- patch test
 - Rx- remove allergen, corticosteroid topical



Allergic Stomatitis



Allergic Stomatitis



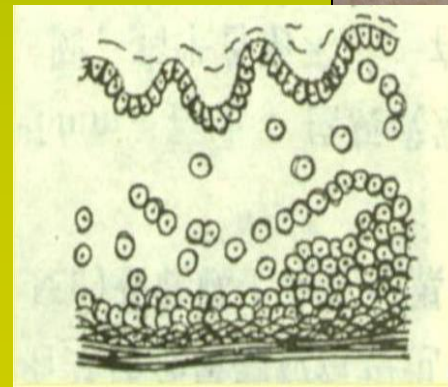
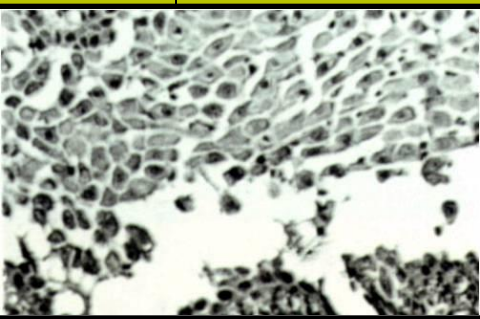
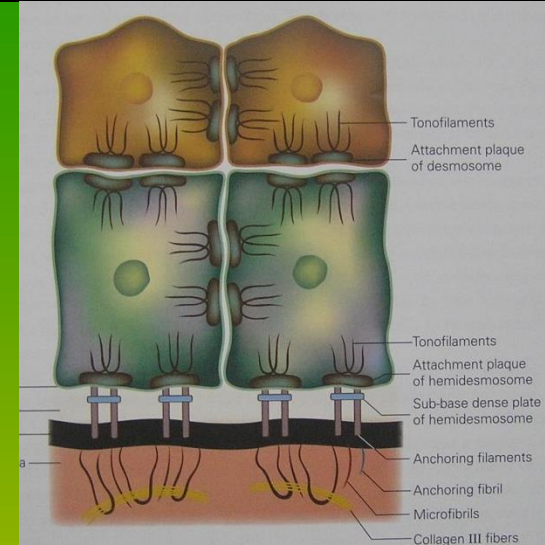
Pemphigus

Vesiculo-bullous disease of serious nature
Chronic disease which occurs in cycles

Antibody against epithelial *desmosomal* glycoprotein

Loss of cell to cell adhesion, *acantholysis*

Intraepithelial bulla



Pemphigus

Vulgaris

Vegetans

Foliaceous

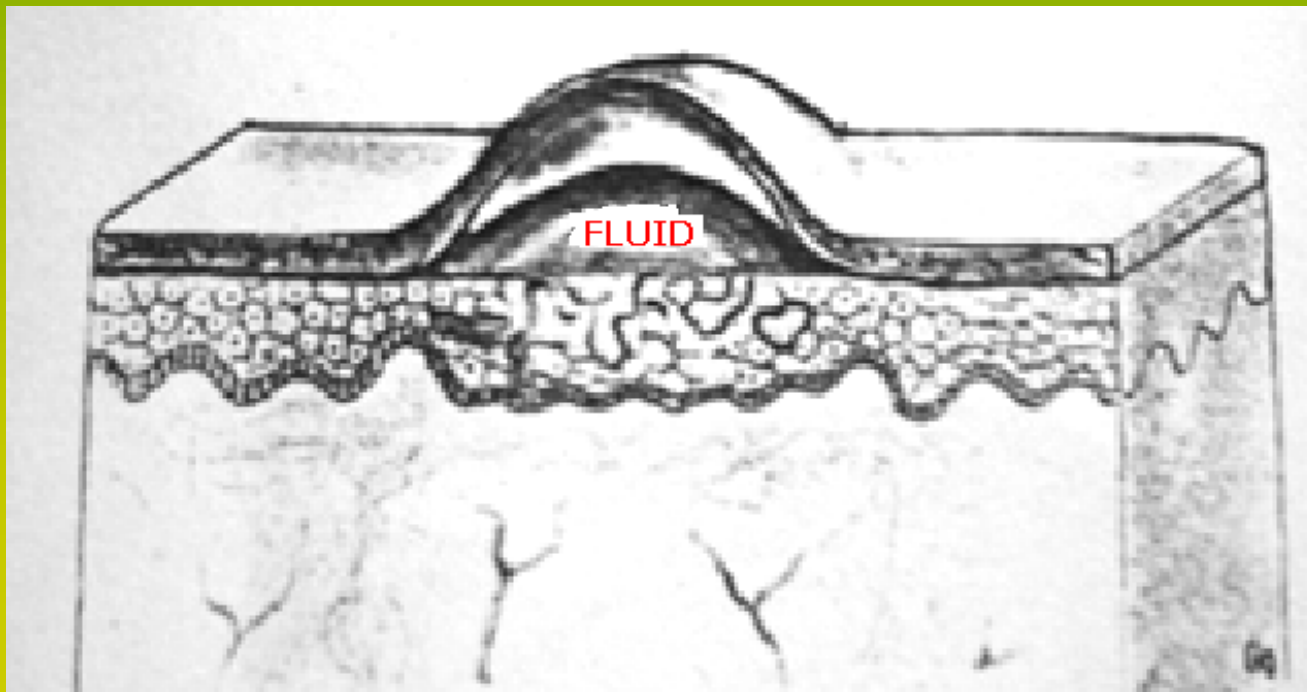
Erythematosus

Association of other connective tissue disease

Pemphigus

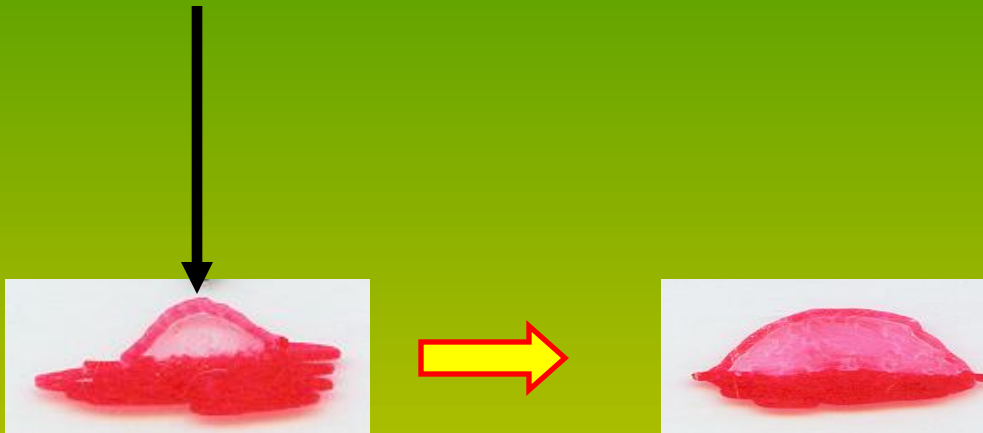
Clinical features

- 4th to 6th decade of life
- Thin walled intraepithelial bullae



Pemphigus

Clinical features



Pressure on intact bullae



Lateral extension

Pemphigus

Clinical features



Nikolsky's sign

- Pemphigus
- Epidermolysis bullosa
- Reiter's disease

Pemphigus

Clinical features

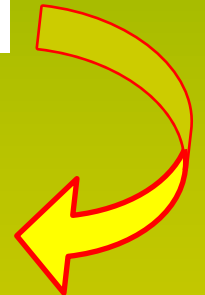
- Initial oral lesions as ↓ intercellular substance
- Bullae on non inflamed base → rupture



rare



rupture



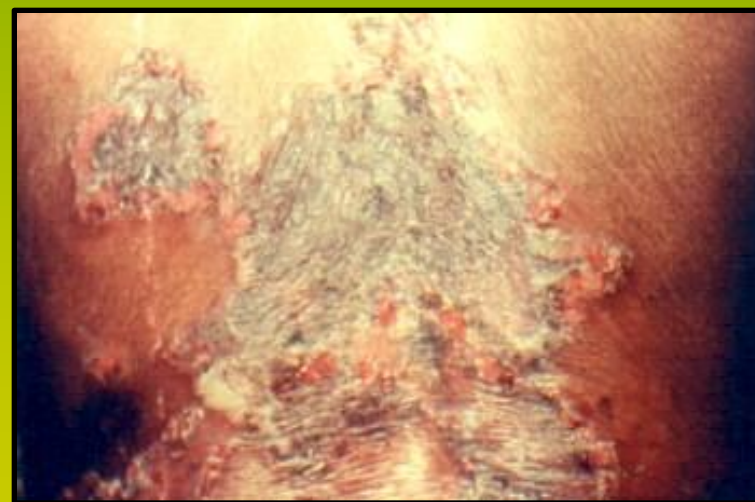
Pemphigus

Clinical features

- Map like irregular ulcers
- Denuded base, **peripheral extension**
- Tissue tags at periphery
- Gingiva → desquamative gingivitis

Pemphigus

Clinical features



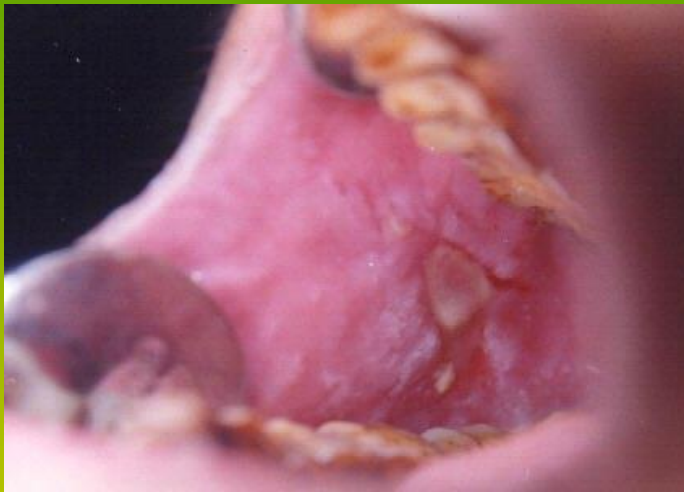
Pemphigus

Clinical features



Pemphigus

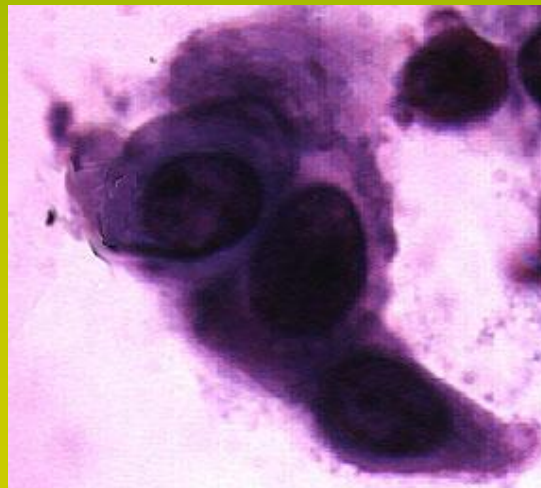
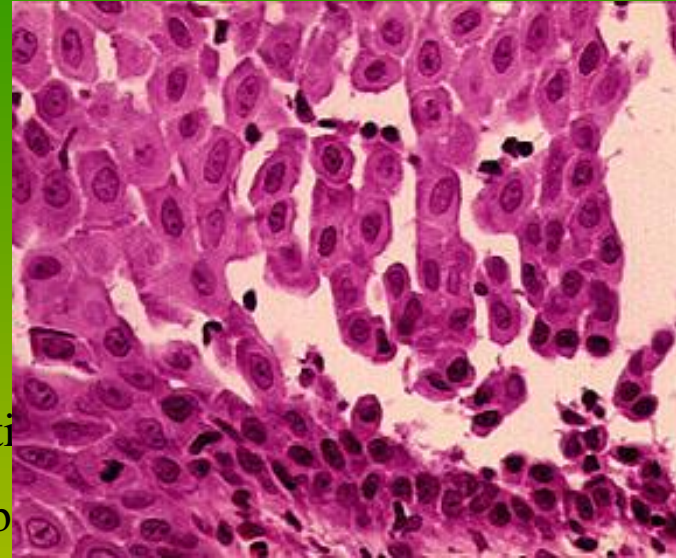
Clinical features



Pemphigus

Lab tests

- Smear – Tzanck cells
- Indirect immunofluorescent anti
- Direct immunofluorescent antib



Pemphigus

Differential diagnosis

Remember !! CHRONIC Disease

- Erythema multiforme
- Recurrent Aphthous stomatitis
- Recurrent herpetic infection
- Erosive lichen planus

Pemphigus

Clinical course

1. Chronic, prolonged course. With therapy, it may resolve in months.
2. Death may occur in severe cases due to loss of fluid and severe infection.

Pemphigus

Management

- High dose steroid – long/short term, prednisone
- adjuvants such as azathioprine or cyclophosphamide
- parenteral gold therapy, dapsone, tetracycline, and plasmapheresis.
- only oral involvement may need lower doses of prednisone,
- Oral lesions- topical steroids, topical anesthetics

Bull



Eye involvement
genital
Trachea
(breathing)



THE END

THANK GOD !



Ah! That's much better than seeing an ulcer!