CLINICAL STOMATOLOGY CONFERENCE

DNSC D9910.00

October 3, 2007

Ulcerative conditions

Overview

Localized
- Aphthous ulcers
- Traumatic ulcer

Generalized
- Erythema multiforme
- Lichen planus
- Mucous membrane pemphigoid
- Pemphigus vulgaris

} *Vesiculo-bullous diseases*

Aphthous ulcers

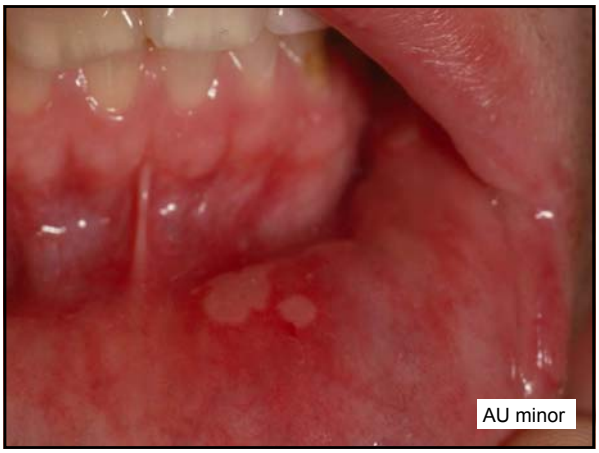
- Etiology:
  T lymphocyte-mediated cytotoxicity
  No one cause – likely multifactorial
  Roles for allergy, genetics, nutritional deficiencies, hematologic abnormalities, hormones, infectious agents, *trauma*, *stress*

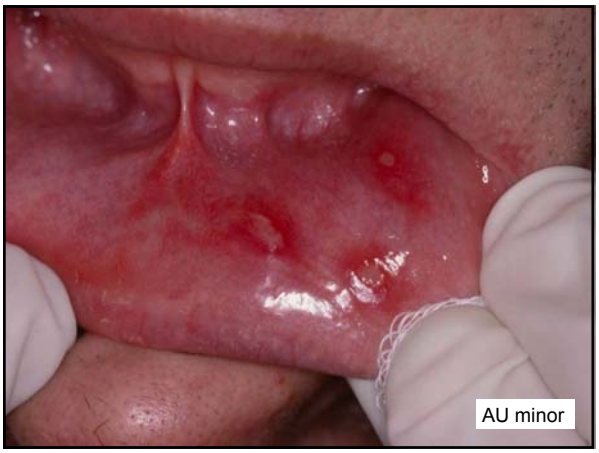
Aphthous ulcers

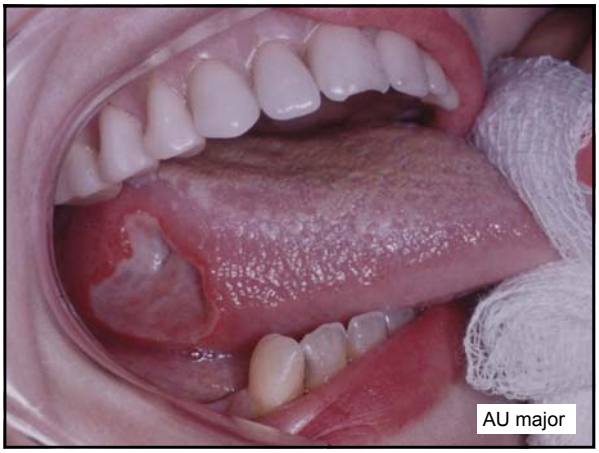
- Gender: No predilection
- Age: Any
- Site:
  Mostly *non-keratinized* mucosa
  - buccal and labial mucosa, ventral tongue, floor of mouth, soft palate
  Rarely occurs on *keratinized* mucosa
  - major and herpetiform variants

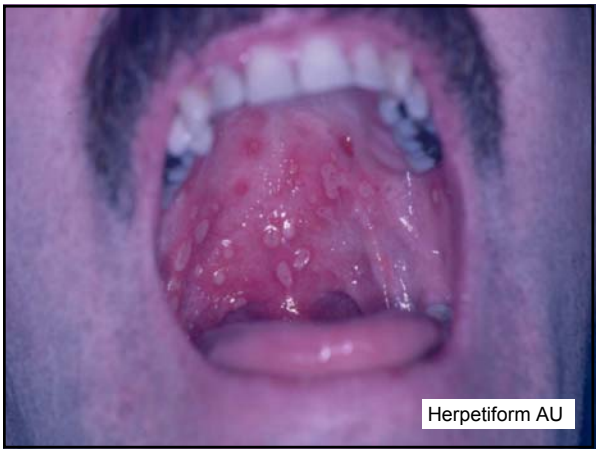
Aphthous ulcers

- Clinical features:
  Yellow-white membrane, red halo
  Painful
  3 clinical variants
  1) **Minor** - most common
     - 3-10 mm
     - heal in 7-10 days, no scarring
  2) **Major** - 1-3 cm
     - heal in 2-6 weeks with scarring
  3) **Herpetiform** - 1-3 mm
     - may have clusters of up to 100 ulcers
     - heal in 7-10 days


AU minor


AU minor


AU major

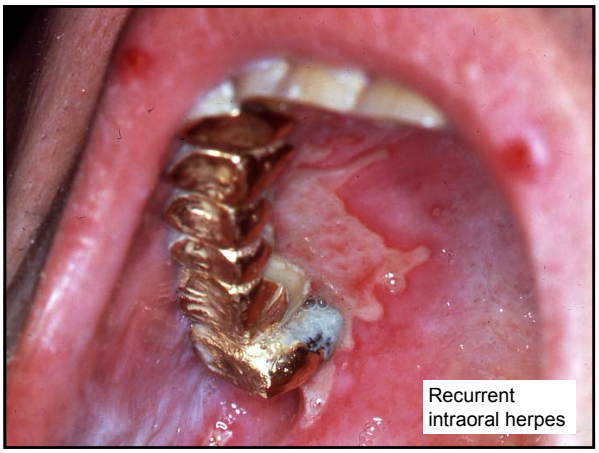

Herpetiform AU

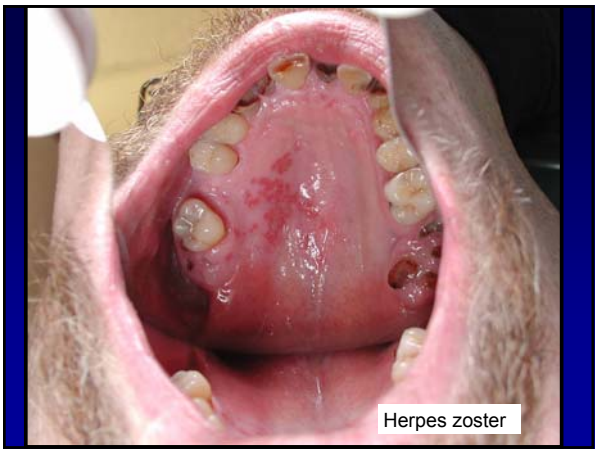
Aphthous ulcers

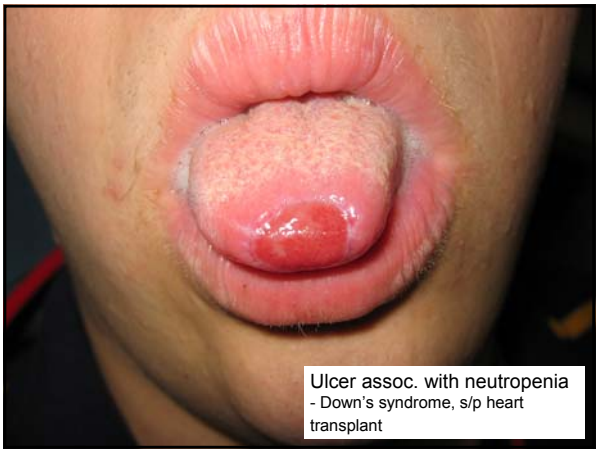
- Association with ***systemic diseases***:
  1) Behçet's syndrome
  2) Inflammatory bowel disease
     - Crohn's disease
     - ulcerative colitis
  3) Celiac disease
  4) Cyclic neutropenia
  5) Reiter's syndrome
  6) Immunocompromised states
     - AIDS, HIV

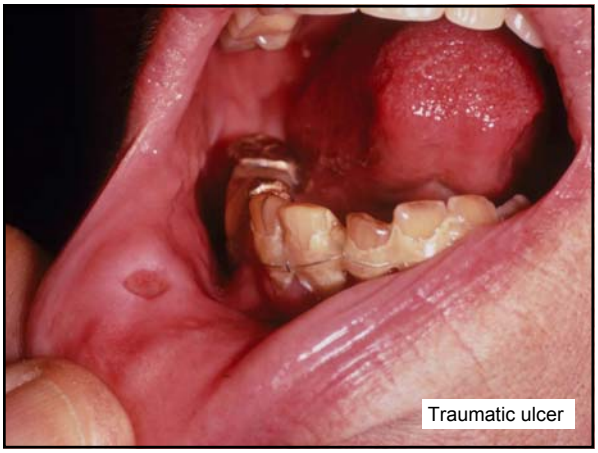
Aphthous ulcers

- Differential diagnosis:
  1) Recurrent herpetic infection, including herpes simplex virus (HSV), herpes zoster
     – HSV: on keratinized mucosa
  2) Other viral infections (e.g. enterovirus, etc.)
  3) Ulcers associated with neutropenia
  4) Traumatic ulcer


Recurrent intraoral herpes

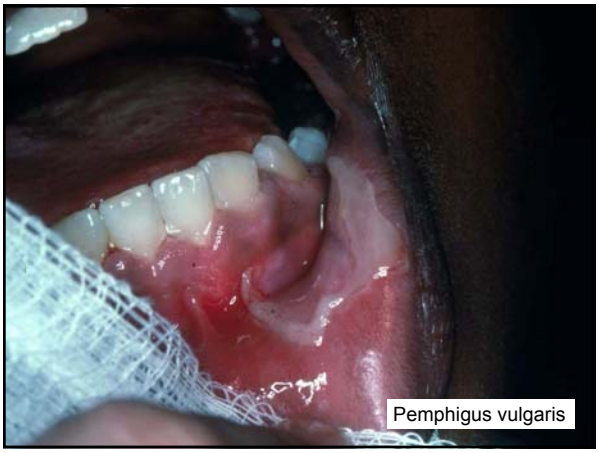

Herpes zoster

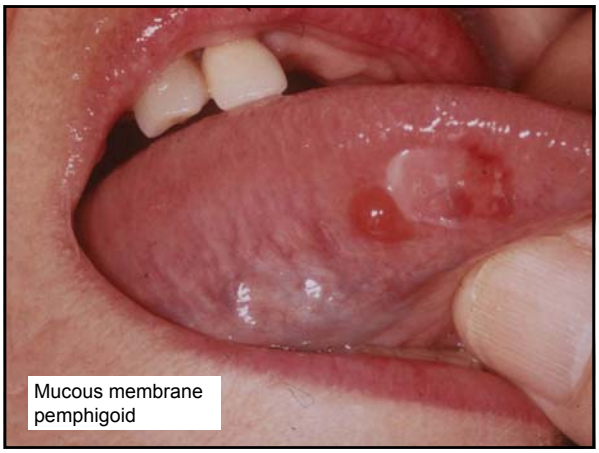

Ulcer assoc. with neutropenia
- Down's syndrome, s/p heart transplant


Traumatic ulcer

Aphthous ulcers

- Differential diagnosis (cont'd):
  If *major aphthous ulcers*, consider:
  1) Pemphigus vulgaris
  2) Mucous membrane pemphigoid
  3) Traumatic ulcer
  4) Squamous cell carcinoma

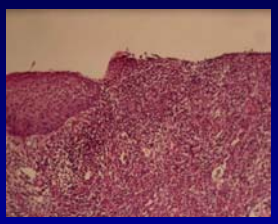

Pemphigus vulgaris



Mucous membrane pemphigoid

Aphthous ulcers

- Histology:
  - fibrinopurulent membrane
  - lymphocytes, histiocytes, neutrophils
  - epithelial spongiosis



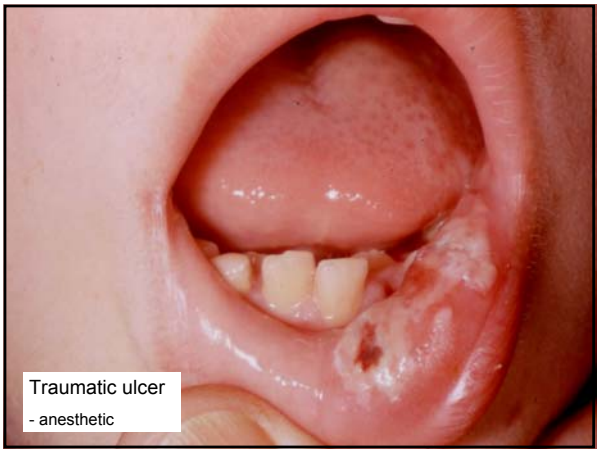
- Treatment: **Minor aphthae** – topical steroids
  Major aphthae – systemic steroids

Topical steroids used in oral pathology

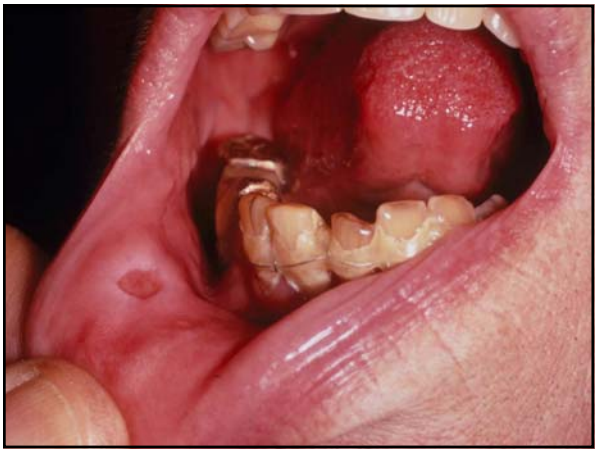
1) Dexamethasone elixir, 0.5mg/5ml
   Disp: 8 oz
   Label: Swish and spit 1 tsp QID
2) Fluocinonide (Lidex) gel, 0.05%
   Disp: 1 tube
   Label: Apply to affected area BID
3) Qvar, 40mg
   Disp: 1 canister
   Label: 2 puffs QID

Traumatic ulcerations

- Etiology: Mechanical, thermal, electrical
  Some factitial in nature
- Gender: No predilection
- Age: Any age
- Site: Tongue, lips, buccal mucosa
- Clinical features:
  Erythema surrounding yellow-white membrane
  Older lesions – elevated/rolled, white borders



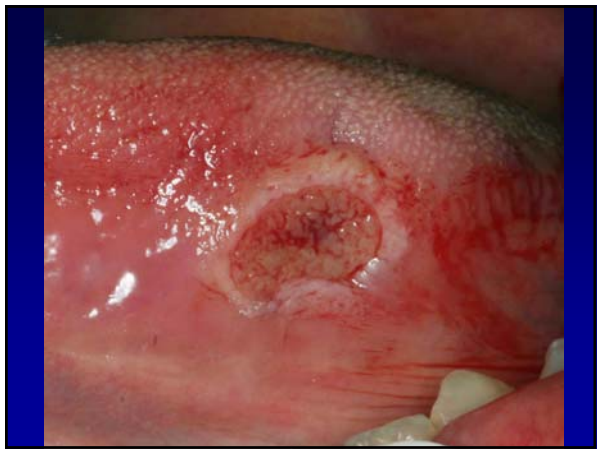
Traumatic ulcer
- anesthetic

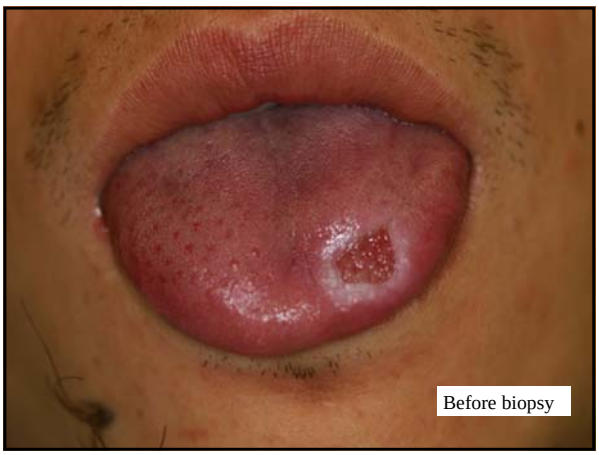


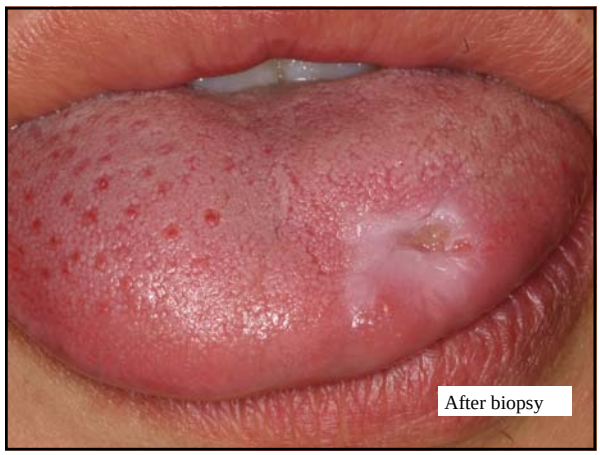
Traumatic ulcerations

Eosinophilic ulcerations (traumatic granuloma)

- Unique variant of traumatic ulceration
- Unique histology
- Gender: Male predilection
- Age: Any age
- Site: Tongue
- Clinical features:
  Ulceration with surrounding erythema
  Exuberant proliferation ~ pyogenic granuloma
  Can appear worrisome clinically for SCC





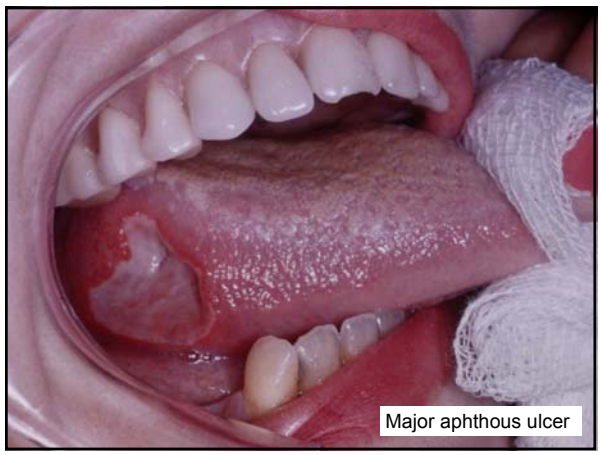


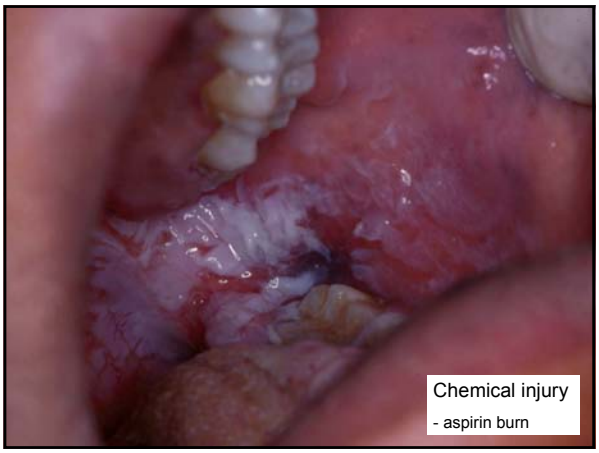
Traumatic ulcerations

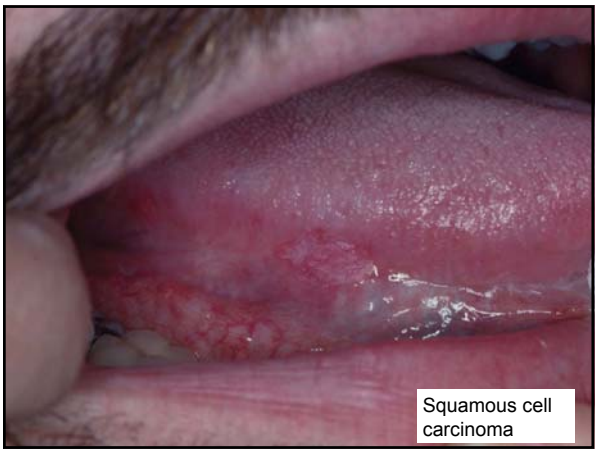
- Differential diagnosis:

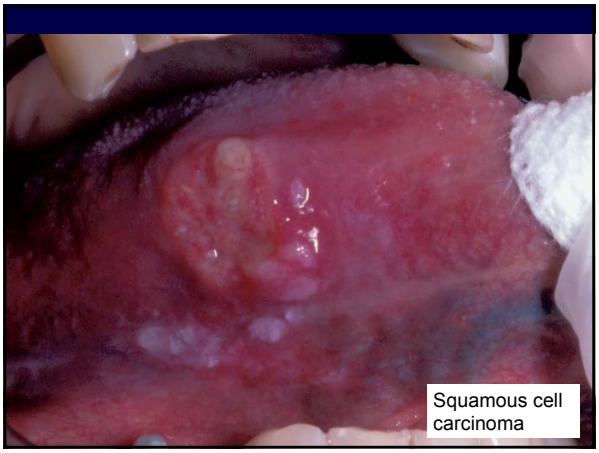
Simple traumatic ulcers

1) Aphthous ulcers/stomatitis
2) Chemical injury
3) Leukoplakia; erythroplakia
4) Squamous cell carcinoma





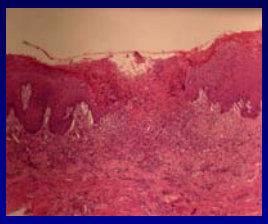




Traumatic ulceration

- Histology:
  - fibrinopurulent membrane and neutrophils (=ulcer)
  - granulation tissue
  - epithelial hyperplasia ± hyperkeratosis

Eosinophilic ulcer:
- deep inflammatory infiltrate; eosinophils and histiocytes



Traumatic ulcerations

- Treatment:
  1) Remove source of irritation
  2) If *symptomatic:*
     a) Topical corticosteroids
        Rx: Lidex gel, 0.05%
        Apply to affected area BID
     b) Topical analgesics
        Rx: Magic mouthwash or KBL
        Swish and spit PRN pain

Traumatic ulcerations

- Treatment (cont'd):

3) If:
   - *high-risk site* (lat./ventral tongue, FOM)
   - patient with *risk factors*
   - *no identifiable source of irritation*
   - *> 2 weeks in duration*
   - *not responding to tx…*

** BIOPSY to rule out malignancy **

Erythema multiforme

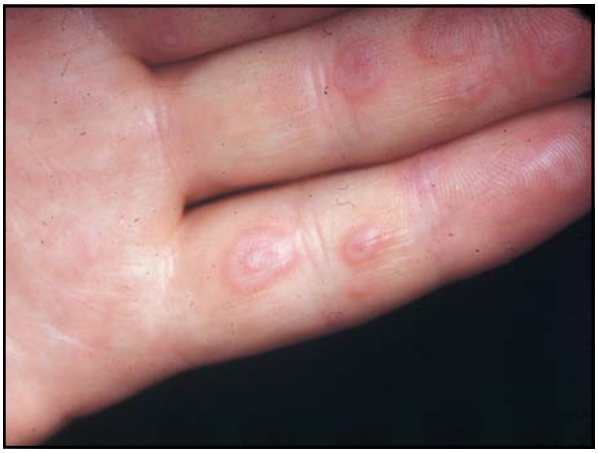
- Etiology: ? Hypersensitivity reaction
  May be induced by:
  1. Herpes simplex infection,
  2. Exposure to medications (esp. antibiotics, analgesics)
  3. Mycoplasma pneumoniae infection
- Types:
  1) EM minor
  2) EM major *(Stevens-Johnson syndrome)*
     - drug exposure
  3) Toxic epidermal necrolysis
     - drug exposure

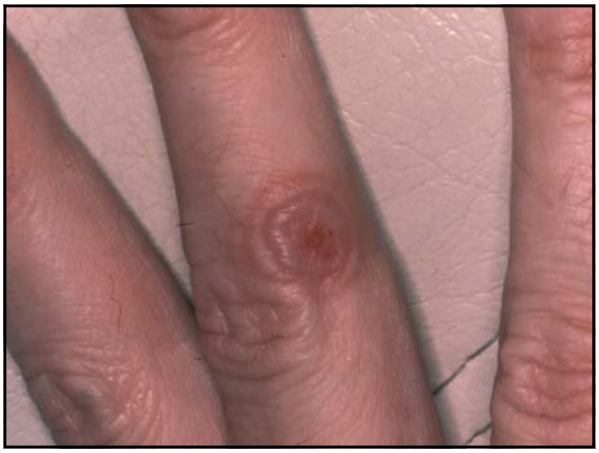
Erythema multiforme

- Gender: M>F
- Age: Young adults (20-30 yo)
- Site: Oral mucosa
  Skin
  If also ocular or genital ➡ SJ syndrome
- Clinical course:
  Sudden-onset
  1) Fever, malaise, headache, sore throat
  2) Skin and/or oral lesions
  Self-limiting disease – resolves in 2-6 weeks
  Recurrences common

Erythema multiforme

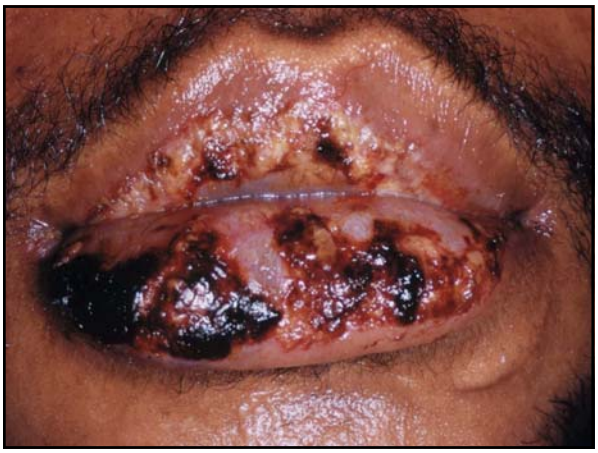
- Clinical features (skin):
  Flat, round, dusky-red
  May become bullous
  May develop "target"/"bulls-eye" lesions

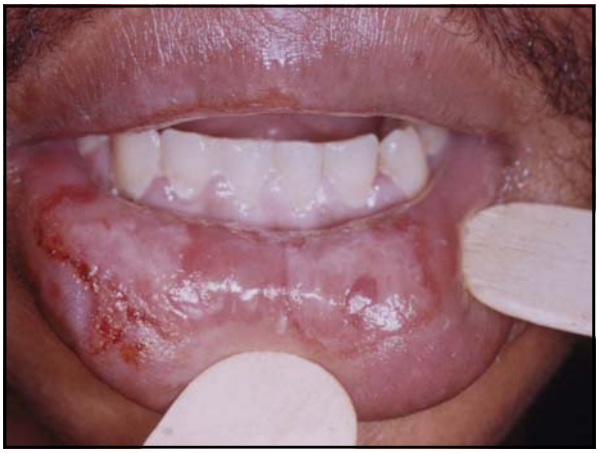


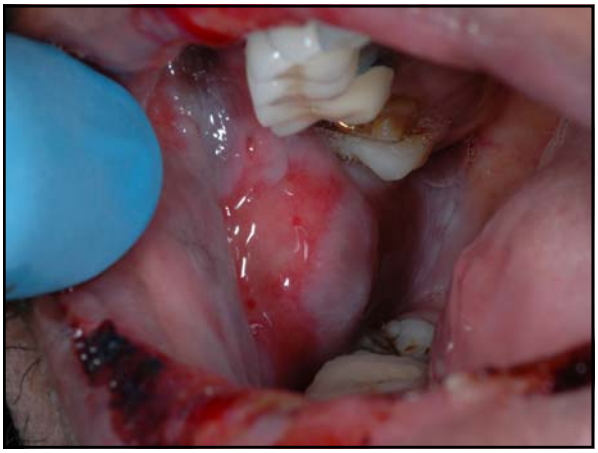


Erythema multiforme

- Clinical features (oral):
  Hemorrhagic crusting of lips
  Lips, buccal mucosa, tongue, FOM, palate
  Erythematous patches ➡ erosions, ulcerations
  Painful; difficult to examine



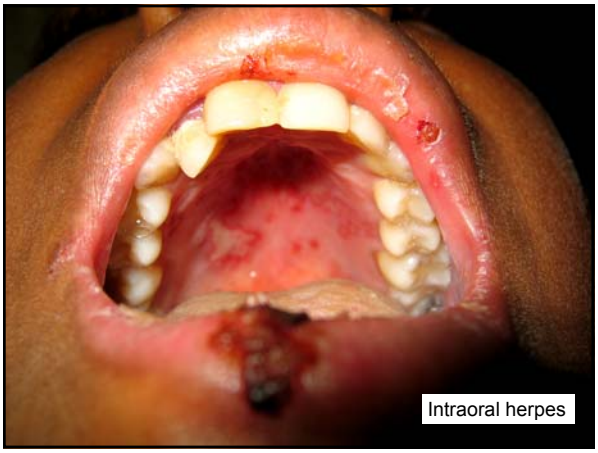


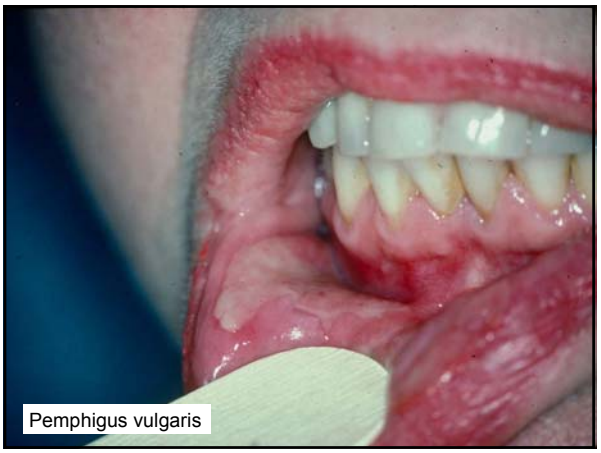


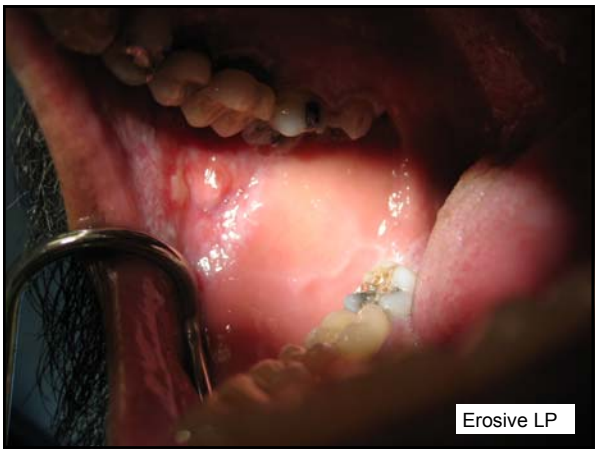
Erythema multiforme

- Differential diagnosis:
  1) Primary herpetic gingivostomatitis (primary herpes)
  2) Pemphigus vulgaris
  3) Mucous membrane pemphigoid
  4) Erosive lichen planus

** ***Histology*** and ***direct immunofluorescence studies*** *can help to rule out some of these entities* **

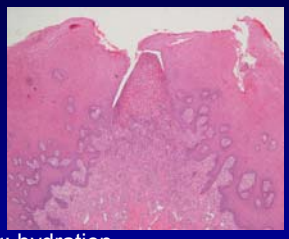



Pemphigus vulgaris


Erosive LP

Erythema multiforme

- Histology:
  - vesicles
  - epithelial necrosis
  - mixed inflammation, including eosinophils
  - perivascular inflammation



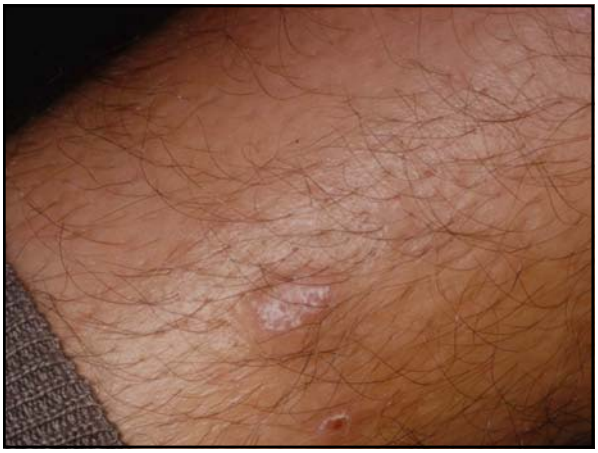
- Treatment: Self-limiting; hydration
  Systemic steroids
  Topical steroids – EM minor
  Discontinue suspected drug
  If HSV-related, prophylactic Acyclovir

Lichen planus

- Etiology:
  Immunologically mediated disease
  ? Role for stress, anxiety
  Association with diseases of altered immunity and *hepatitis C*
- Gender: F>M (3:2)
- Age: Middle-aged adults
  Can affect children

Lichen planus

- Clinical features (skin):
  Site: Flexor surfaces of extremities
  4 P's
  Purple, pruritic, polygonal papules
  White striations
  Nails may also be affected



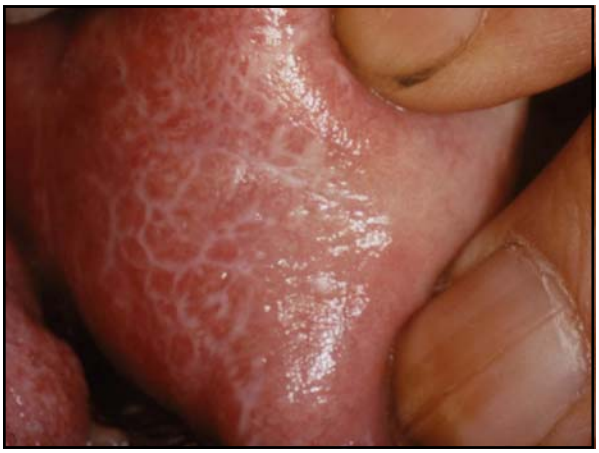
Lichen planus

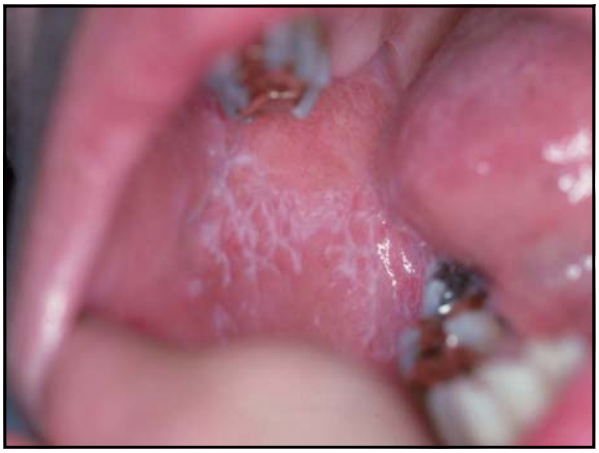
- Clinical features (oral):

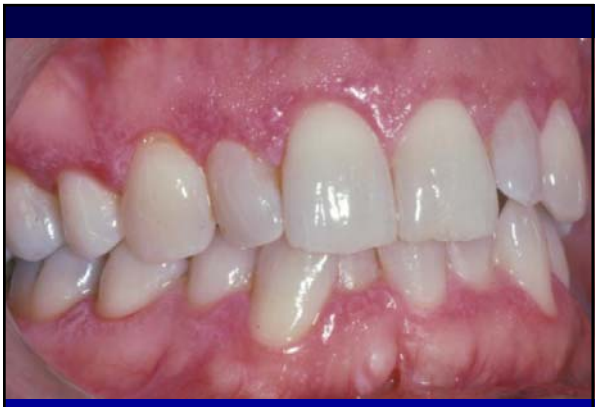
  Site: Posterior buccal mucosa, tongue, gingiva, vermillion of lip

  2 forms

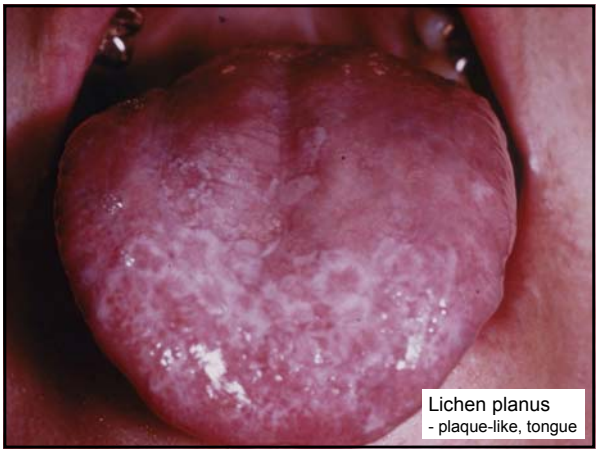
  1) **Reticular LP**
     - more common form
     - usually *asymptomatic*
     - interlacing white striations
     - lesions wax and wane
     - **dorsum of tongue**: plaque-like







Gingival LP, reticular

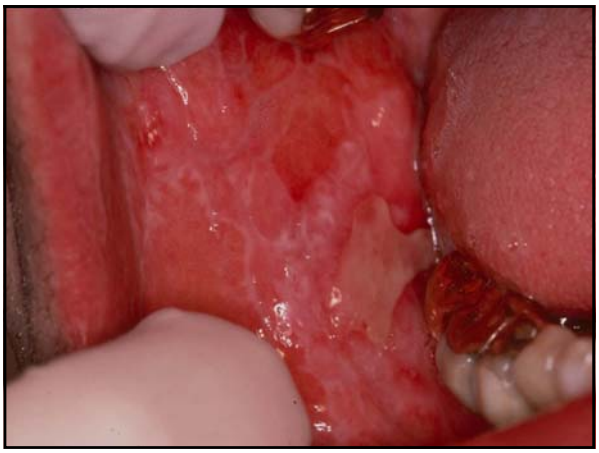


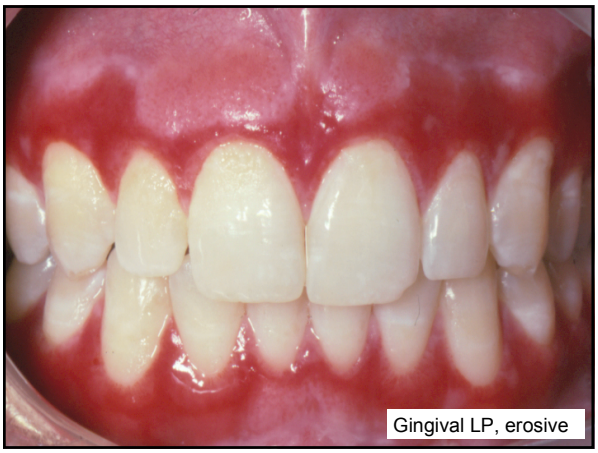
Lichen planus
- plaque-like, tongue

Lichen planus

- Clinical (oral) (cont'd):

  2) **Erosive LP**
     - less common than reticular form
     - usually symptomatic
     - atrophic, erythematous areas, ± ulceration
     - white striations at periphery
  ** - if limited to gingiva, may mimic – *pemphigoid*
     – *pemphigus*





Gingival LP, erosive

Lichen planus

- Differential diagnosis:

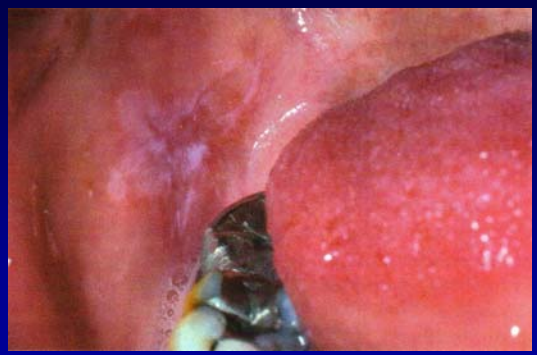
1) Lichenoid drug reaction
2) Contact reaction to amalgam, cinnamon
3) Erythroplakia; speckled leukoplakia

Lichen planus

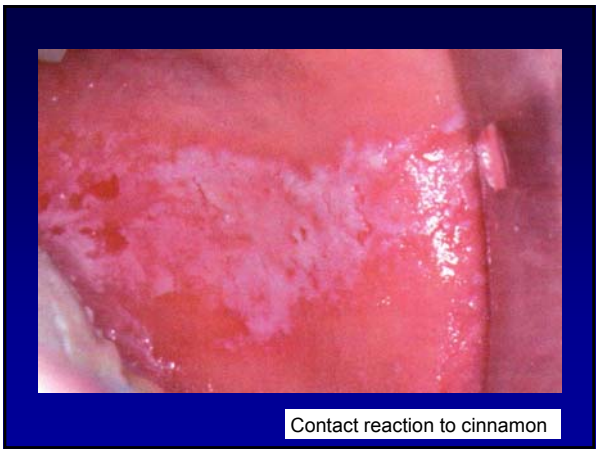
- Differential diagnosis:

4) Oral lesions of ***lupus erythematosus***
   - other skin, hematologic, laboratory abnormalities
   - oral lesions clinically and histologically ~ to LP
5) Graft-versus-host disease
   - h/o transplant
   - oral lesions clinically and histologically ~ to LP
6) Mucous membrane pemphigoid
7) Pemphigus vulgaris

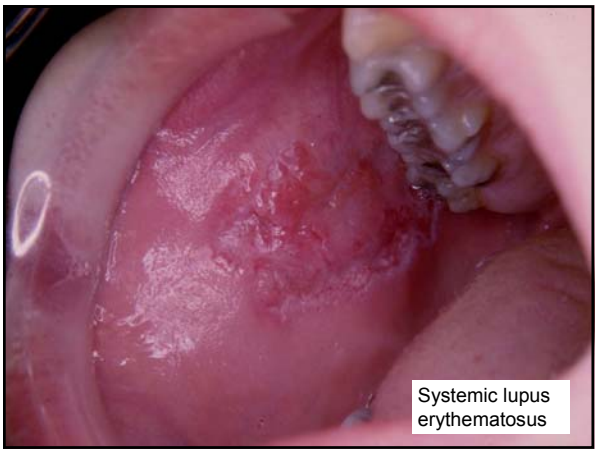
** ***Histology*** and ***direct immunofluorescence studies*** *can help to rule out some of these entities* **



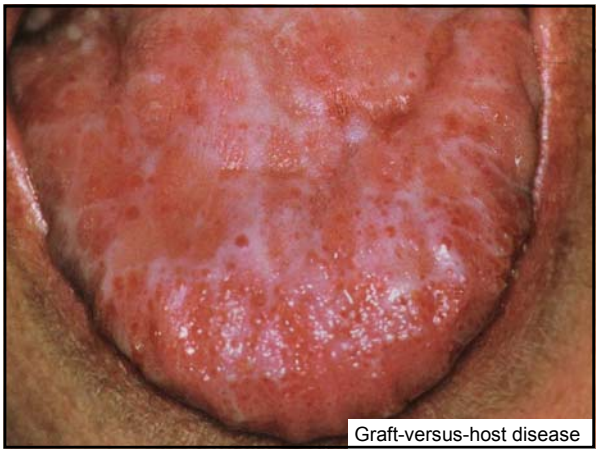
Contact reaction to amalgam



Contact reaction to cinnamon



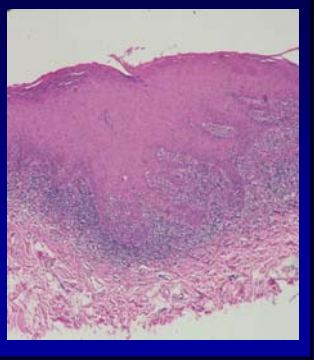
Systemic lupus erythematosus



Graft-versus-host disease

Lichen planus

- Histology:
  - hyperkeratosis
  - "saw-toothed" rete pegs
  - hydrophic degeneration of basal layer
  - band-like infiltrate of lymphocytes



Lichen planus

- Treatment:

Asymptomatic

- usually reticular form
- no treatment necessary

Symptomatic

- usually erosive form
- topical steroids

Periodic follow-up (6mos to 1 year)

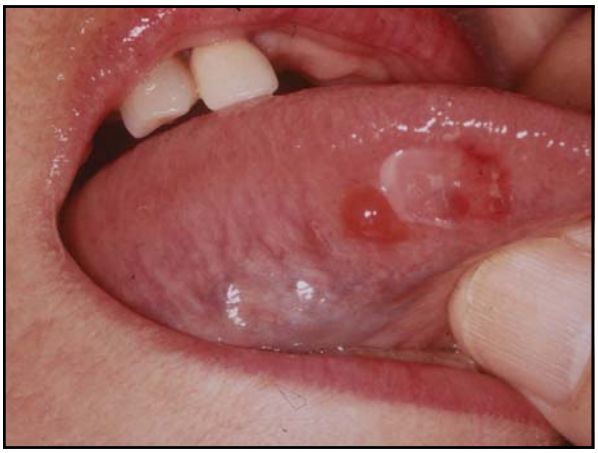
Erosive form – small risk malignant Δ

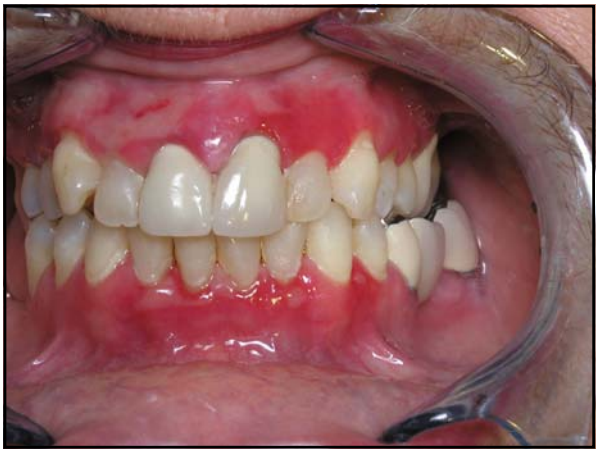
Mucous membrane pemphigoid

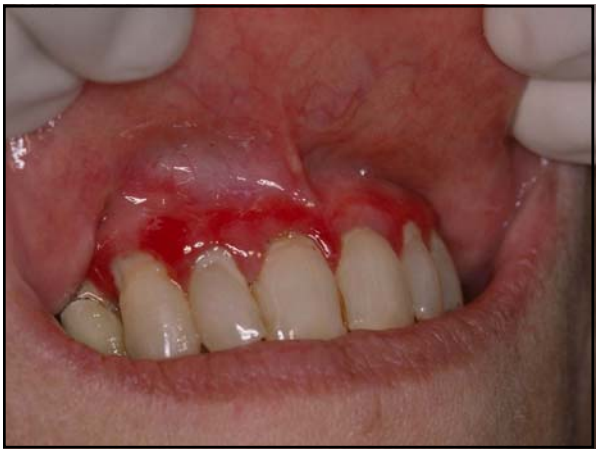
- Etiology: Autoimmune
  Autoantibodies target component of basement membrane
- Prevalence: 2x as common as *pemphigus*
- Gender: F>M
- Age: Older adults (50-60 yo)
- Site:
  Oral mucosa – especially gingiva
  Conjunctiva, nasal, esophageal, laryngeal

Mucous membrane pemphigoid

- Clinical features (oral):
  Vesicles or bullae
  If not intact, erosions and ulcers
  Usually painful
  May persist for weeks to months
  May be limited to gingiva
  - *"desquamative gingivitis"*
  Blisters may be induced by lateral pressure
  - *"+ Nikolsky sign"*

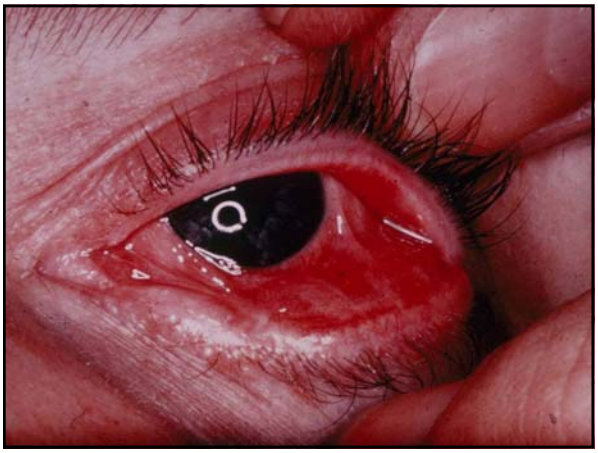


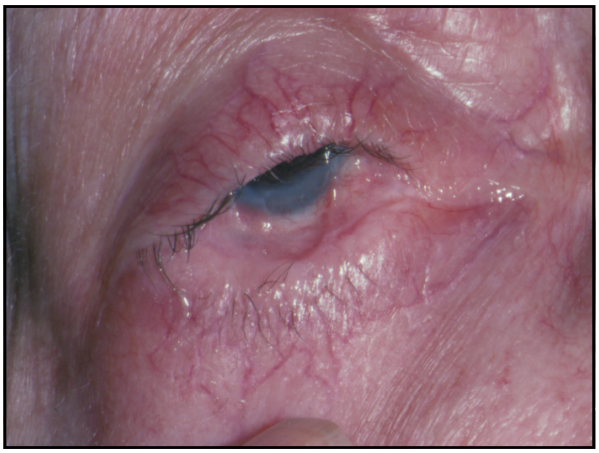




Mucous membrane pemphigoid

- Clinical (ocular):
  ~25% of patients
  Adhesions ➡ scarring ➡ blindness

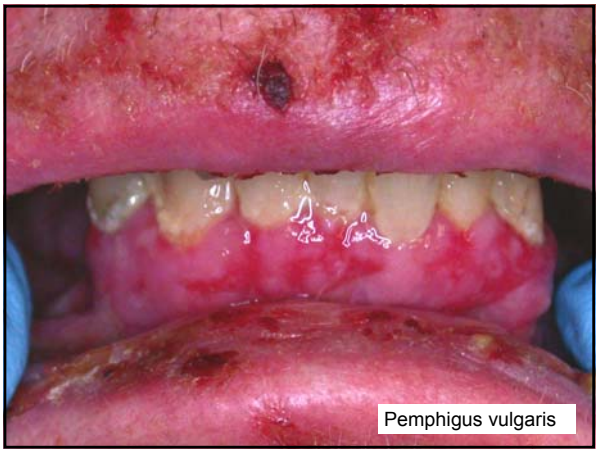


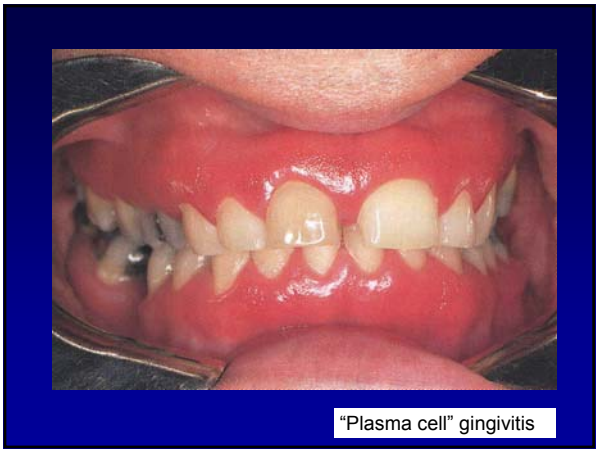


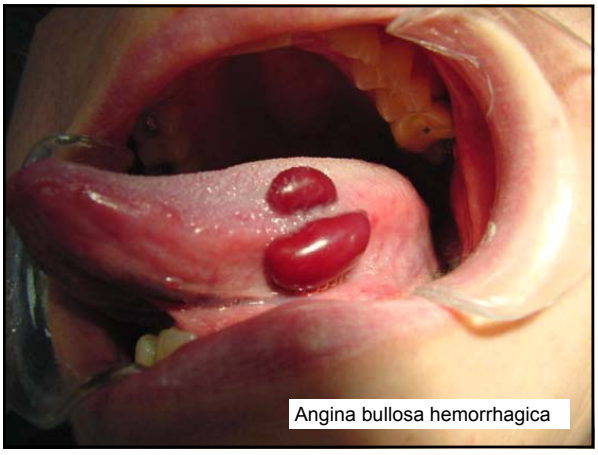
Mucous membrane pemphigoid

- Differential diagnosis:
  1) Pemphigus vulgaris
  2) Lichen planus
  3) Plasma cell gingivitis – related to cinnamon
  4) Angina bullosa hemorrhagica – spontaneously healing, blood-filled blisters
  5) Medication-induced pemphigoid-like reaction

** ***Histology*** and ***direct immunofluorescence studies*** *can help to rule out some of these entities* **



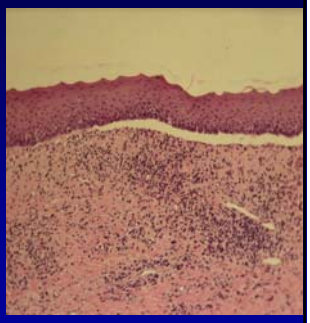




Mucous membrane pemphigoid

- Histology:
  - subepithelial split
  - chronic inflammation

** Biopsy perilesional tissue **



Mucous membrane pemphigoid

- Treatment:

* *Refer to ophthalmologist* *

Topical steroids

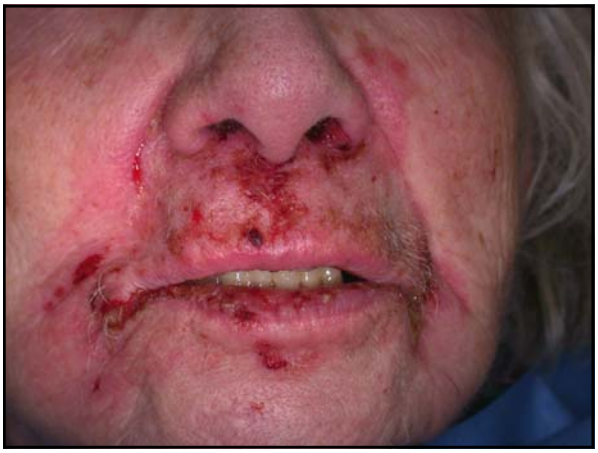
Periostat (doxycycline)

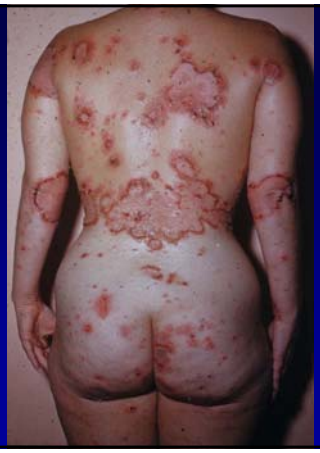
Systemic steroids (if topical therapy ineffective)

Maintain good oral hygiene

Pemphigus vulgaris

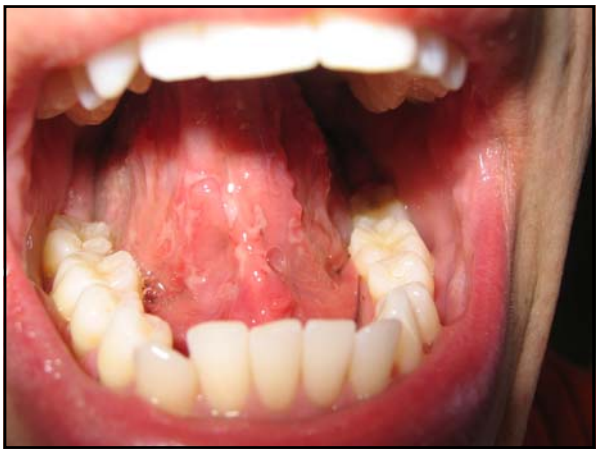
- Etiology: Autoimmune
  Autoantibodies to *desmosome*
  - structures that bind epithelial cells together
- Genetics: HLA-DRw4 (Jewish population)
- Gender: F>M
- Age: Adults (>50 yo)
- Site:
  Soft palate, labial mucosa, ventral tongue, gingiva
  Skin
  Rarely ocular

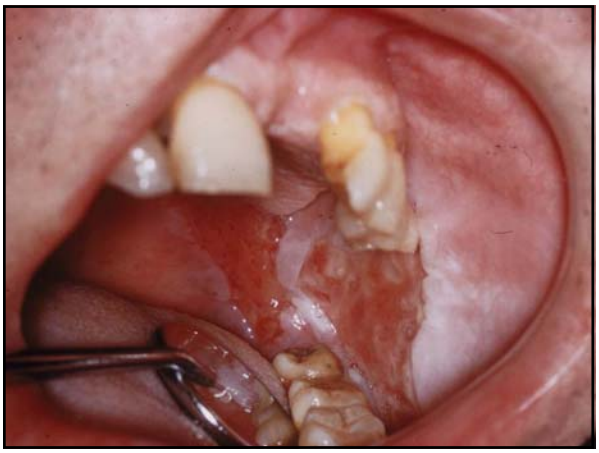


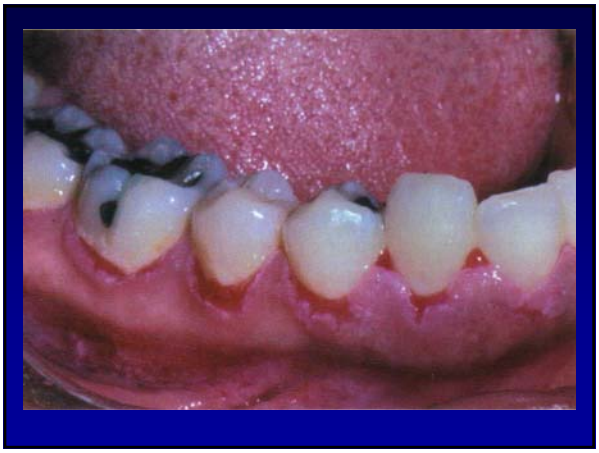


Pemphigus vulgaris

- Clinical features (oral):
  Oral lesions “first to show, last to go”
  Erythematous, denuded lesions
  Ragged borders
  Adjacent epithelium “piled up”
  Rarely intact vesicles
  Desquamative gingivitis
  + Nikolsky sign



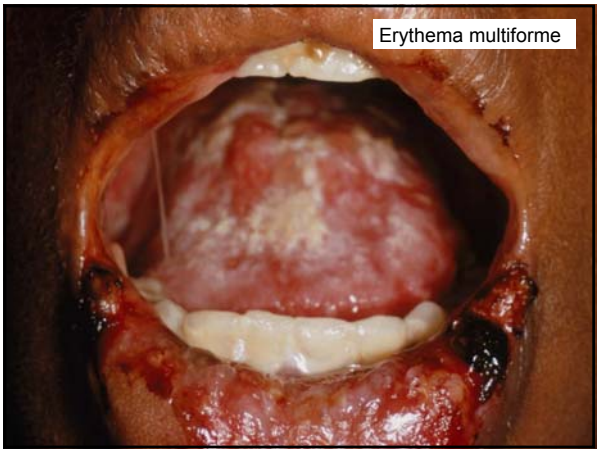


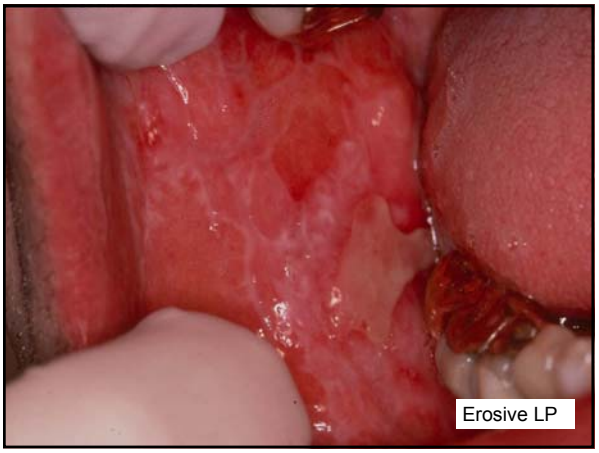


Pemphigus vulgaris

- Differential diagnosis:
  1) Mucous membrane pemphigoid
  2) Erosive lichen planus
  3) Erythema multiforme
  4) Chemical injury
  5) Paraneoplastic pemphigus – associated malignancy
  6) Medication-induced pemphigus-like reaction

** ***Histology*** and ***direct immunofluorescence studies*** *can help to rule out some of these entities* **

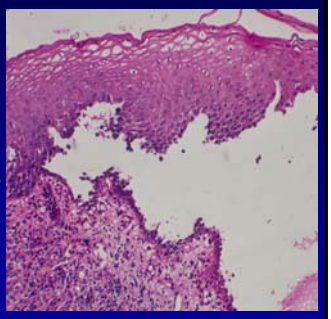




Pemphigus vulgaris

- Histology:
  - ***acantholysis*** = intraepithelial separation
  - basal cells remain attached to basement membrane

** Biopsy perilesional tissue **



Pemphigus vulgaris

- Treatment:
  Systemic steroids ± "steroid-sparing" drugs
  Goal: as low steroid dose as necessary for disease control
  Topical steroids may be of benefit
  Mortality rate of 5-10%