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
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
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

Recurrent intraoral herpes

Herpes zoster

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

Traumatic ulcer

Pemphigus vulgaris
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

- 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

- **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

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

- **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**
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, vermilion of lip
  - 2 forms
    1) Reticular LP
      - more common form
      - usually asymptomatic
      - interlacing white striations
      - lesions wax and wane
      - dorsum of tongue: plaque-like
    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
Lichen planus

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

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

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

- **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*

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

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%