Overview

Red lesions
• Erythroplakia
• [Squamous cell carcinoma]

Mixed red-white lesions
• Geographic tongue
• Morsicatio (chewing injury)
• Chemical injuries
• Contact reaction to cinnamon
• [Squamous cell carcinoma]

Erythroplakia
• Definition: "A red patch that cannot be clinically or pathologically diagnosed as any other condition"
• Most (~90%) do represent epithelial dysplasia, carcinoma in situ, or squamous cell carcinoma
• May be combined with leukoplakic areas = erythroleukoplakia, speckled leukoplakia

Erythroplakia
• Etiology: Likely same as oral SCC and leukoplakia
• Incidence: ~77x less than leukoplakias
• Gender: Male predilection
• Age: Peak incidence at 65-74 yo
• Site: Floor of mouth, tongue, soft palate
• Clinical:
  Red macule or plaque
  Soft, velvety
  * May be combined with areas of leukoplakia *

- histology: SCC
Erythroplakia

- **Differential diagnosis:**
  1) Trauma
  2) Geographic tongue; ectopic erythema migrans
  3) Nutritional deficiency, anemia
  4) Allergic mucosal reactions
     - Contact mucosal reaction

Iron deficiency anemia
- generalized

Erythroleukoplakia
- histology: SCC

Geographic tongue

Contact reaction to cinnamon
Erythroplakia

- Histology:
  - lack of keratinization
  - epithelial atrophy
  - underlying chronic inflammation
  - + dysplasia, usually severe
  - + carcinoma-in-situ
  - + squamous cell carcinoma

Erythroplakia

- Treatment:
  Biopsy should be performed
  Treatment guided by histopathologic diagnosis
  Recurrence, multifocality common
  ** Careful long-term follow-up **

Geographic tongue

- AKA: Erythema migrans
- Etiology: Unknown
  - ? Hypersensitivity reaction
- Prevalence: 1-3% of population
- Gender: F>M
- Age: No predilection
- Site: Dorsum of tongue
  Can occur in other oral sites, including buccal and labial mucosa, soft palate ("ectopic" geographic tongue)

Geographic tongue

- Clinical features:
  Zones of erythema surrounded by white, serpentine borders
  Lesions migrate in days to weeks
  Often associated with fissured tongue
  + burning with spicy foods
Geographic tongue

- **Differential diagnosis:**
  1) Candidiasis
  2) Leukoplakia + erythroplakia
     - rare on dorsum of tongue
  3) Contact allergic reaction
  4) Lichen planus

- **Histology:**
  - psoriasis
  - hyperkeratosis; epithelial spongiosis
  - neutrophils in epithelium
  - lymphocytes and neutrophils in connective tissue

- **Treatment:** No treatment; reassure patient
  If burning – topical steroids
Morsicatio (chewing injury)

- **Etiology**: Frictional irritation from chewing habit
  Similar lesions in glassblowers and some musicians
- **Risk**: Stress; psychological illnesses; edge-edge bite
- **Gender**: F > M
- **Age**: Any age
  After age of 35 yo – stress

Morsicatio (chewing injury)

- **Site**: Buccal mucosa
  Can be seen on la mucosa, lat tongue
- **Clinical features**: White, diffuse
  + erythema
  Shredded/ragged, macerated appearance
Morsicatio

• **Differential diagnosis:**
  1) Leukoplakia
  2) Chemical injuries (e.g. aspirin)
  3) Contact stomatitis – allergic; cinnamon
  4) Inherited mucosal disorders
     - White sponge nevus
     - Hereditary benign intraepithelial dyskeratosis

Morsicatio

• **Histology:**
  - Hyperparakeratosis
  - Ragged surface
  - Intercellular edema
  - Surface bacterial colonies

• **Treatment:** None indicated
  Oral acrylic shield

Chemical injuries

• **Etiology:** Contact with caustic chemicals and drugs (over-the-counter, prescribed)
  **Examples:** Aspirin, hydrogen peroxide (≥3%), products containing phenol (Anbesol), silver nitrate, endo materials (formocresol, sodium hypochlorite)

• **Age and gender:** Any

• **Site:** Any site of chemical/drug contact

• **Clinical:** White, wrinkled
  Later, white slough with red base
  Ulcerated lesions – fibrinopurulent membrane
  Injection into bone – bone necrosis
Chemical injuries

- **Differential diagnosis:**
  1) Candidiasis
  2) Leukoplakia – does not wipe off
  3) Thermal burn
  4) Desquamative gingivitis
  5) Lichen planus; lichenoid reaction
  6) Traumatic ulcer; chronic trauma
Contact stomatitis - Cinnamon

- **Etiology**: Mucosal reaction to cinnamon oil
  - Prolonged/frequent contact
- **Gender**: No predilection
- **Age**: Any
- **Site**: Gingiva – toothpaste
  - Bu mucosa, tongue – chewing gums, candy
- **Clinical features**:
  - *Gingiva* – enlargement, erythema
  - “plasma cell gingivitis”
  - *Bu mucosa, tongue* – white, ragged surface
  - erythematous base

- **Histology**:
  - coagulative necrosis
  - acute and chronic inflammatory cells

- **Prevention**:
  - *Endo materials* – rubber dam, avoid excessive injection pressure
  - *Drugs, chemicals* – pt education

- **Treatment**: Will resolve in 10-14 d
Contact stomatitis - Cinnamon

• Differential diagnosis:
  **Gingiva**
  1) Gingivitis – local factors, desquamative, granulomatous

  **Buccal mucosa, tongue**
  1) Morsicatio (chewing injury)
  2) Candidiasis
  3) Leukoplakia; erythroplakia
  4) Oral hairy leukoplakia
Oral hairy leukoplakia

Contact stomatitis - Cinnamon

- Histology:
  - hyperkeratosis
  - heavy chronic inflammation (lymphocytes, plasma cells, eosinophils)
  - inflammation around blood vessels

- Treatment:
  Disappears after discontinuation of cinnamon products
  Will reappear if cinnamon intake resumed