Outline

- Recurrent aphthous stomatitis
- Human herpes virus, type I
- Mucous membrane pemphigoid
- Pemphigus vulgaris
- Lichen planus
Synopsis

- Major clinical signs and symptoms
- Diagnostic criteria and tests
- Currently accepted therapeutic modalities

References

COLOR ATLAS OF COMMON ORAL DISEASES
Fourth Edition

REFERENCES
Aphthous Ulcers

Etiology and Epidemiology
- Immune dysfunction
- Microbial cross-reactivity
- Nutritional deficiency
- Hormonal imbalance
- “Stress”
- Most common oral ulcer
  - 50% of adults in USA affected

Clinical Features
- Never preceded by vesicles
- Only affect non-keratinized mucosa
  - NOT hard palate
  - NOT attached gingiva
- Multiple clinical forms
Minor Aphthous Ulcers
- Most common form
- Small (<1.0 cm)
- Shallow ulcer
- Pseudomembranous covering
- Erythematous halo
- Persist for 7 – 10 days
- Heal without scarring

Major Aphthous Ulcers
- More severe form
- Larger (>1.0 cm)
- Deeper (into muscle)
- Persist for 2-6 weeks
- Heal with scarring

Herpetiform Aphthous Ulcers
- NOT due to infectious agent
- Cluster of multiple small aphthae
- Extremely painful
- Soft palate
- Alveolar mucosa
Behçet’s Syndrome
- Oral ulcers
- Ocular ulcers
- Genital ulcers

Differential Diagnosis
- Other viral infections
- Traumatic ulcers
- Pemphigus vulgaris
- Cicatricial pemphigoid
- Other systemic disease

Diagnosis
- History
- Clinical signs and symptoms
- Biopsy ONLY to rule out other entities
Treatment

- OTC medications
- Immunosuppressives
- Occlusive dressings
- Chemical cautery
- Ablation
- Topical antimicrobials
- Thalidomide

Lynch’s Law

When in doubt, treat conservatively

Lynch’s Corollary

When something works, keep using it until it doesn’t
Lynch’s Paradox

What works for me
may not work for you
and vice versa

Occlusion

Chemical Cautery
Herbals and Lysine

Sodium Lauryl Sulfate
- Extracted from palm oil and coconut oil
- Anionic surfactant (detergent)
  - Makes toothpastes “foamy”
- At higher concentrations, also an effective biocide, pesticide and shark repellent (!)
- Decreases effectiveness of topical F⁻
- Triggers oral aphthae in some patients

Topical Anesthetics
Coating Agents

Non-steroidal Anti-inflammatory Agents

Corticosteroids
Cortisone
- Described in 1935
- Converted to hydrocortisone in the liver (active form)

Topical Corticosteroid Potency
- Class I (superpotent) – clobetasol
- Class II (high potency) – fluocinonide
- Class V (moderate potency) – triamcinolone
- Class VII (low potency) – hydrocortisone

Kenalog in Orabase
- Only FDA-approved topical corticosteroid for oral mucosal use
- Least potent topical corticosteroid used in dentistry
**Systemic Corticosteroids**

- Increased glucocorticoid activity
  - Prednisone (converted to prednisolone in the liver (active form))
  - Prednisolone
  - Methylprednisolone

**Daily Cortisol Production**

- 20-30 mg (equivalent to 5 - 7.5 mg prednisone)
- 50-75 mg minor stress production
- 300 mg maximum stress production

**Corticosteroid Equivalent Dose (mg)**

<table>
<thead>
<tr>
<th>Corticosteroid</th>
<th>Equivalent Dose (mg)</th>
<th>Glucocorticoid Potency</th>
<th>Biologic Half-Life (hr)</th>
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<tbody>
<tr>
<td><strong>Short-acting</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cortisone</td>
<td>25</td>
<td>0.8</td>
<td>8-12</td>
</tr>
<tr>
<td>Hydrocortisone</td>
<td>20</td>
<td>1</td>
<td>8-12</td>
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<tr>
<td><strong>Intermediate-acting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prednisone</td>
<td>5</td>
<td>4</td>
<td>24-36</td>
</tr>
<tr>
<td>Prednisolone</td>
<td>5</td>
<td>4</td>
<td>24-36</td>
</tr>
<tr>
<td>Methylprednisolone</td>
<td>4</td>
<td>5</td>
<td>24-36</td>
</tr>
<tr>
<td>Triamcinolone</td>
<td>4</td>
<td>5</td>
<td>24-36</td>
</tr>
<tr>
<td><strong>Long-acting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dexamethasone</td>
<td>0.75</td>
<td>20-30</td>
<td>36-54</td>
</tr>
<tr>
<td>Betamethasone</td>
<td>0.6 – 0.75</td>
<td>20-30</td>
<td>36-54</td>
</tr>
</tbody>
</table>
Prognosis

- Excellent
- Variable recurrences

Recurrent Herpes Simplex

Etiology and Epidemiology

- Human Herpes Virus 1 (HHV-1)
- #2 most common viral disease
- Majority of individuals in USA exposed
- 50% of individuals give history of contact
- 15% asymptomatic shedders
Clinical Features

- Prodrome
  - Burning
  - Itching
  - Tingling

- Recurrences due to stress
  - Trauma
  - Emotion
  - Endocrine

Clinical Features

- Herpetiform cluster of vesicles
  - Vermillion border
  - Attached gingiva
  - Hard palate

- Infectious for 5-7 days

- Heal in 14 days

Differential Diagnosis

- Impetigo

- Recurrent aphthous ulcers

- Traumatic ulcers

- Other viral stomatitis
Diagnosis
- History
- Clinical signs and symptoms
- Serology
- Viral culture
- Tzanck test

Treatment
- Non-prescription topical antiviral drugs
  - Abreva®
- Prescription topical antiviral drugs
  - Denavir®
  - Zovirax®
- Prescription systemic antiviral drugs
  - Zovirax®
  - Famvir®
  - Valtrex®

Lysine
Topical Antivirals

Systemic Antivirals

Treatment
- OTC remedies
- Iontophoresis
- Do not use corticosteroids
Prognosis

- Excellent prognosis
- Variable recurrence pattern

Mucous Membrane Pemphigoid

Also Known As . . .

- benign mucous membrane pemphigoid
  (but it’s not a neoplasm)
- cicatricial pemphigoid
  (but oral lesions rarely scar)
- ocular pemphigus
  (no relationship to pemphigus)
Etiology and Epidemiology
- Auto-immune phenomenon
  - Attack basement membrane proteins
  - BP-180; epiligrin (laminin-5); other
- Middle-age
- Females >> males

Clinical Features (Skin)
- Skin lesions uncommon
- Face, neck and upper trunk
- Scalp
  - Scarring
  - Atrophy
  - Alopecia

Clinical Features (Mucosa)
- Mucosal lesions common
  - Oral
  - Ocular (symblepharon)
  - Genital
Clinical Features (Ocular)

Clinical Features (Genital)

Clinical Features (Oral)

- Pain
- Gingival erythema
- Intact blisters rare
- Scarring uncommon
- Variable Nikolsky’s sign
**Differential Diagnosis**
- Periodontal disease
- Pemphigus vulgaris
- Lichen planus
- Erythema multiforme
- Primary herpetic gingivostomatitis

**Diagnosis**
- Routine biopsy
  - Sub-basilar cleft
  - No acantholysis
  - No Tzanck cells
- Direct immunofluorescence
  - IgG and C3 at the BMZ
- Indirect immunofluorescence not useful

**Treatment**
- Corticosteroids
- Antimetabolites / immunosuppressants
  - Dapsone
  - Cyclophosphamide (Cytoxan®)
  - Azathioprine (Imuran®)
  - Calcineurin inhibitors (Tacrolimus®)
  - Tetracycline and niacinamide (B3)
  - Thalidomide (Thalomid®)
- Ophthalmology consult
Etiology and Epidemiology

- Auto-immune phenomenon
- Attack desmosome-tonofilament complex
- Multiple clinical forms
  - Vulgaris is the most severe
- Middle age
- No gender differences
- More common in Ashkenazic Jews
Clinical Features (Skin)
- Fragile blisters
- Wide-spread distribution
- Rupture with minimal manipulation
- Shallow ulcers

Clinical Features (Oral)
- Oral lesions precede skin disease (65%)
- Blisters and ulcers
- Stomatodynia
- Fetor oris
- Positive Nikolsky’s sign

Differential Diagnosis
- Cicatrical pemphigoid
- Primary herpetic gingivostomatitis
- Bullous lichen planus
- Erythema multiforme
- Dermatitis herpetiformis
Diagnosis

- Routine biopsy
  - Supra-basilar cleft
  - Acantholysis
  - Tzanck cells
- Direct immunofluorescence
  - Interepithelial IgG and C3
- Indirect immunofluorescence
  - Titers parallel clinical disease

Differential Diagnosis

- Cicatricial pemphigoid
- Primary herpetic gingivostomatitis
- Bullous lichen planus
- Erythema multiforme
- Dermatitis herpetiformis
**Treatment**

- Corticosteroids
- Antimetabolites / immunosuppressants
  - Azathioprine (Imuran®)
  - Cyclophosphamide (Cytoxan®)
  - Mycophenolate mofetil (CellCept®)
  - Cyclosporine (Sandimmune®)
  - Methotrexate (Trexall®)
  - Niacinamide (B3) with tetracycline
- Plasmapheresis

**Prognosis**

- Fair
  - High morbidity
  - <5% mortality

**Lichen Planus**
Etiology

- T-cell mediated autoimmune damage to basal keratinocytes that express altered self-antigens on their surface
- Multiple potential triggers
  - Hepatitis C; HBV immunization
  - Primary biliary cirrhosis
  - Other viruses – HHV-6, HHV-7
  - Contact allergens
  - Drugs

Epidemiology

- Middle age
- Females >> males
- Exacerbated by “stress”

Clinical Features (Skin)

- Purple, polygonal, pruritic papules
- Peripheral Wickham’s striae
- Flexor wrists, dorsal hands, ankles, feet, thighs, glans penis
- >65% with oral lesions
Clinical Features (Nails)
- 10% of patients
- May be the only feature in children
- Lateral thinning
- Longitudinal ridging and splitting
- Onycholysis
- Red lunula
- Pterygium formation

Clinical Features (Genital)

Clinical Features (Esophagus)
Clinical Features (Oral)

- Widespread involvement
  - 75% buccal mucosa and tongue
  - 20% labial mucosa and gingiva
  - <5% palate and floor of mouth
  - <35% with skin lesions

- Multiple clinical forms
  - Reticular/plaque forms - asymptomatic
  - Erosive/atrophic/bullous forms - symptomatic

Differential Diagnosis

- Leukoplakia
- Lupus erythematosus
- Aphthous ulcers
- Pemphigus vulgaris
- Cicatricial pemphigoid
- Erythema multiforme

Diagnosis

- Biopsy is mandatory

- Routine histopathology

- Direct immunofluorescence
  - BMZ fibrinogen to rule out LE
Treatment
- No treatment for asymptomatic cases
- Corticosteroids
- Antimetabolites
- Dapsone
- Cyclosporine
- Occlusive dressings

Prognosis
- Good prognosis
- Moderate morbidity (symptomatic forms)
- Exacerbations and remissions
- (?) premalignant potential
  - <2%
  - Lichenoid dysplasia