Oral Medicine in 2011

What’s Hot and What’s Not

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Outline
- Recurrent human herpes virus, Type 1
- Aphthous ulcers
- Lichen planus
- Oral cancer
- Candidiasis
- Xerostomia
Synopsis

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

References

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®
- Prescription systemic antiviral drugs
  - Zovirax®
  - Famvir®
  - Valtrex®
Treatment
- OTC remedies
- Iontophoresis
- Do not use corticosteroids

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

Prognosis
- Excellent
- Variable recurrences
Lichen Planus

Etiology and Epidemiology
- Immunologically-mediated
- Attack basal cells and basement membrane
- Middle age
- Females >> males
- Exacerbated by "stress"

Clinical Features (Skin)
- Scales, papular, pruritic rash
- Peripheral Wickham’s striae
- Arms, thighs, sacrum
- >65% with oral lesions
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 lupus erythematosus

Treatment
- No treatment for asymptomatic cases
- Corticosteroids
- Antimetabolites
- Dapsone
- Cyclosporine
- Occlusive dressings
Prognosis

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

Oral Cancer

Etiology

- Intrinsic factors
  - Nutrition
  - Anemia
  - Immunosuppression
  - Oncogenes
**Etiology**

- **Extrinsic factors**
  - Tobacco
  - Alcohol
  - Tobacco AND alcohol (40x risk)
  - Ultraviolet radiation
  - Microbes

**Epidemiology**

- 3% of all cancers (#6 in men; #12 in women)
- Increasing incidence beginning in middle age
  - 8 per 100K overall; 30 per 100K after age 75
- 35% associated with pre-existing leukoplakia
- 31,000 new cases annually
- 8,500 deaths annually

**Clinical Features**

- 90% of cases
  - lower lip
  - ventral tongue
  - floor of mouth
- Most cases present for at least 1 year as an asymptomatic lesion
Clinical Features

- Leukoplakic (white)
- Endophytic (ulcerating)
- Exophytic (fungating)
- Erythroplakic (red)

Differential Diagnosis

- Frictional hyperkeratosis
- Lichen planus
- Traumatic ulcer
- Erythematous candidiasis

Diagnosis

- History
- Clinical signs and symptoms
- Punch biopsy
- Scalpel biopsy
Treatment
- Surgery
- Radiation therapy
- Combination therapy
- Periodic reassessment

Prognosis
- Depends on location and progression
- More anterior location
- No regional lymph node involvement
- No distant metastasis

Grading
- Assessment of biologic behavior based on microscopic features of pleomorphism, cellular maturation, keratin production, etc.
- Grade I – well-differentiated
- Grade II – moderately well-differentiated
- Grade III – moderately differentiated
- Grade IV – poorly differentiated
Staging

- Assessment of survival based on a combination of factors
  - tumor size (T)
  - regional lymph node involvement (N)
  - distant metastasis (M)
- TNM system

TNM Staging

<table>
<thead>
<tr>
<th>TNM</th>
<th>STAGE</th>
<th>5 YEAR SURVIVAL</th>
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<tbody>
<tr>
<td>T1N0M0</td>
<td>Stage I</td>
<td>85%</td>
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<td>T2N0M0</td>
<td>Stage II</td>
<td>66%</td>
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<tr>
<td>T3N0M0</td>
<td>Stage III</td>
<td>41%</td>
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<tr>
<td>T1-3N1M0</td>
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<tr>
<td>Any T4</td>
<td>Stage IV</td>
<td>9%</td>
</tr>
<tr>
<td>Any N2-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any M1</td>
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Candidiasis
Etiology and Epidemiology

- *Candida albicans*
- Most common fungal infection
- 35% of healthy adults
- 90% of denture wearers
- Females > males

Predisposing Factors

- Antibiotics
- Xerostomia
- Immunodeficiency
  - Infancy
  - Antimetabolites
  - Acquired
- Malnutrition
- Endocrine dysfunction
  - Diabetes mellitus
  - Pregnancy
- Oral contraceptives
- Corticosteroids

Pseudomembranous Candidiasis

- Infants and debilitated adults
- White, non-adherent plaques
- Erythematous base
- Stomatopyrosis
- Stomatodynia
**Differential Diagnosis**
- Chemical burn
- Allergy
- Hypersensitivity
- Mucous patch
- Morsicatio buccarum / lingualis / labialis

**Erythematous candidiasis**
- Most common form
- Diffuse erythema
- Variable symptoms
- “denture sore mouth”
  - Limited to denture bearing mucosa
  - Frequently painless

**Perlèche**
- Angular cheilitis
- Moist, macerated, cracked
- Variable symptoms
- (?) role of decreased vertical dimension
- (?) role of vitamin B complex deficiency
Median Rhomboid Glossitis

- Not a congenital defect
- Posterior dorsal tongue
- Red, depapillated area
- Frequently painless
- Unknown significance

Differential Diagnosis

- Erosive / atrophic lichen planus
- Chemical burn
- Allergy / hypersensitivity
- Impetigo
- Geographic tongue

Diagnosis

- Smear
- Culture
- Biopsy
- Latex agglutination
Systemic Antifungals
- Ketoconazole (Nizoral®)
- Fluconazole (Diflucan®)
- Itraconazole (Sporanox®)

Topical antimicrobials
- Gentian violet
- Chlorhexidine
  - Peridex
  - Periogard

Prognosis
- Excellent prognosis
- Frequent recurrences
- Treat predisposing factors
Xerostomia

Etiology

- Drug side-effect
- Prescription medications
  - Antidepressants
  - Antihypertensives
  - Psychotherapeutic agents
- OTC medications
  - Antihistamines
- Head and neck radiation therapy

Antidepressants

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<th>RANK</th>
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<tbody>
<tr>
<td>Prozac® (fluoxetine)</td>
<td>9</td>
</tr>
<tr>
<td>Zoloft® (sertraline)</td>
<td>13</td>
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<tr>
<td>Paxil® (paroxetine)</td>
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<td>Elavil® (amitryptyline)</td>
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<td>Pamelor® (nortriptyline)</td>
<td>163</td>
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<td>Effexor® (venlaxafine)</td>
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<td>DRUG</td>
<td>RANK</td>
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<td>--------------------------</td>
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<tr>
<td>Dyazide® (triamterene/HCTZ)</td>
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<tr>
<td>Lasix® (furosemide)</td>
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<tr>
<td>Esidrix® (hydrochlorothiazide)</td>
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<tr>
<td>Tenormin® (atenolol)</td>
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<table>
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<tr>
<th>DRUG</th>
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<tbody>
<tr>
<td>Xanax® (alprazolam)</td>
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<tr>
<td>Klonopin® (clonazepam)</td>
<td>48</td>
</tr>
<tr>
<td>Ativan® (lorazepam)</td>
<td>79</td>
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<tr>
<td>Valium® (diazepam)</td>
<td>133</td>
</tr>
<tr>
<td>Restoril® (temazepam)</td>
<td>149</td>
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- One of the most common drug side effects
Clinical Features

- Temporal relationship to medication use
- Resolution when medication changed or dosage regimen altered

Clinical Features

- Subjective ≠ objective
- Decreased salivary volume
  - Resting versus stimulated
  - Thick / ropey submandibular saliva
  - Foamy parotid saliva
- Mucosal "tackiness"
- Fissured, atrophic tongue
- Dysgeusia and dysphagia
- Increased incidence of candidiasis
- Increased Class V and root caries

Differential Diagnosis

- Sjögren's syndrome
Diagnosis
- By exclusion

Treatment
- Change medication
- Alter dosage regimen
- Sialogogues
- Artificial saliva

Salivary Stimulants
- OTC sialogogues
  - Sugarless candy
  - Sugarless gum
Treatment

- Water
- Artificial saliva / moisturizers
  - MedOral®
  - Salivart®
  - Oasis®
  - Glandosane®
  - Mouthkote®
  - Oral Balance gel®

- Ethyol® (amifostine) – IV before XRT
- Salivary stimulants
  - Salagen® (pilocarpine)
  - Evoxac® (cevimeline)
  - Urecholine® (bethanechol)
- Topical fluoride
  - Prevident® (1.1% neutral NaF)
  - NeutraCare® (1.1% neutral NaF)

Side Effects

- Sweating
- Lacrimation
- Urinary frequency
Dental Caries

- Aggressive therapy
  - Scrupulous oral hygiene
  - Dietary alterations
  - Chlorhexidine mouth rinses
  - Topical fluoride
  - Salivary stimulation

Prognosis

- Variable
  - Excellent if medication can be changed or dosage altered
  - Poor if permanent damage (radiation)