Clinical Dermatology for the Primary Care Provider

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Conflicts of Interest – None

Many of the photographs and diagrams contained in this talk can be referenced in Clinical Dermatology, 5th Edition By Thomas P. Habif, MD
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Perioral Conditions

Atopic Dermatitis
Perleche
Allergic Dermatitis
Lip Licker’s Dermatitis
Herpes
Impetigo
Aphthous Ulcerative Disease
Actinic Chelitis
Squamous Cell Carcinoma
Atopic Dermatitis
Perleche

AKA (cheilosis, angular stomatitis) noted for fissures and inflammation of the labial commissures.

**Primary causes** – chemical irritant, nutritional deficiencies (B2, Fe, Zinc)
Can be associated with Plummer-Vinson syndrome (esophageal web, iron deficiency anemia, glossitis, cheilitis)

**Secondary causes** – Overlying infection, Candida or Bacterial

**Treatment**
- correction of underlying medical or physical problem
- Treatment of any secondary bacterial or fungal infection

Allergic Contact Dermatitis

Allergic Contact Dermatitis – Scaling eczematous inflammatory reaction affecting areas in direct contact or neighboring regions to agents typically used in or around the oral cavity.
Mango- has within its tree sap a compound called ‘Urushiol’. Contact with the sap externally can cause the same reaction in people as poison ivy.
Toothpastes and Mouthwashes

- **Flavorings**
  - Mints (Spearmint, Peppermint, Menthol, Carvone)
  - Cinnamal (cinnamon)
  - Anethole (star anise)

- **Antiseptic**
  - Propolis

- **Plaque control**
  - Hexylresorcinol

- **Anti-Inflammatory**
  - Azulene

- **Florides**

- **Preservatives**
  - Parabens

Dental Floss

- **Colophony Rosin** - from pine and spruce trees
  - (colophonium, colophony, resinterethinae, tall oil, abietic acid, methyl abietate alcohol, abietic alcohol, abietyl alcohol)
Contact and Trauma

Lip Licker’s Dermatitis-
Perioral Conditions

Herpes Simplex-
Aphthous Ulcers of the lip
Venous Lake of the Lip
Actinic Chelitis
Squamous Cell Carcinoma of the Lip
Squamous Cell Carcinoma of the Lip
Intertriginous Conditions

- Candidiasis
- Inverse Psoriasis
- Hailey-Hailey Disease
- Erythrasma (bacterial infection (C. minutissimum))
- Tinea Corporis
- Hidradenitis Suppurativa
Intertriginous Conditions

- Tinea Corporis
- Hidradenitis Suppurativa
Erythrasma

- Cause - bacterial infection (C. minutissimum)
- Findings - half-moon–shaped plaque non inflammatory
- Clarified with - floresce oral-red with woods light
- Diagnosis - Microscopic appears as filaments, but is made up of gram positive rods.
- Treatment - responds to erythromycin clarithromycin and to miconazole.
Lichen Planus presenting as Squamous Cell Carcinoma
Nail Abnormalities

- Distal Onychomycosis
- Paronychia Acute/Chronic
- Melanonychia
- Periungual Verruca
- White Superficial Onychomycosis
- Proximal Subungual Onychomycosis
- Onycholysis Traumatic
- Habit-tic Deformity
- Median Nail Dystrophy
- Psoriasis
- Deformity – glomus tumor
Distal Onychomycosis
Acute Paronychia
Periungual Verucca
Proximal Superficial Onychomycosis
Traumatic Onycholysis
Median Nail Dystrophy
Habit tic Deformity
Findings of Lower Legs

- Ichthyosis
- Atopic Dermatitis
- Stasis Dermatitis
- Cellulitis
- Necrobiosis Lipoidica
- Vasculitis
- Tinea
- Schamberg’s Disease
- Idiopathic Guttate Hypomelanosis
- Pyoderma Gangrenosum
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Pyoderma Gangrenosum
Facial Findings

- Seborrheic Dermatitis
- Rosacea
- Acne
- Herpes Zoster
- Allergic Contact
- Tinea
- Erysipelas
- Lupus
Scalp Dermatitis

Seborrheic Dermatitis
Psoriasis
Tinea Capitis
Psychogenic/Neurogenic Dermatologic Findings

- Prurigo Nodularis
- Habit-tic deformity
- Trichotillomania
- Body Dysmorphic (Dysmorphophobia)
- Delusions of Parasitosis
- Morgellons Syndrome
Few uncommon tumors of the skin that may be commonly encountered

- Desmoplastic Trichoepithelioma
- Microcystic Adenocarcinoma
- Sebaceous Carcinoma
- Extramammary Pagets Disease
- Merkel Cell Carcinoma
- Mycosis Fungoides CTCL
- Dermatosarcoma Pertuberans
- Atypical Fibroxanthoma
- Spindle Cell Carcinoma of the Skin
- Kaposi Sarcoma
Advances in Dermatology that may be of interest

- **FDA approved Vismodegib (Erivedge) 1/30/2012**

  First medicine for the treatment of metastatic, aggressive, and recurrent Basal Cell Carcinomas

  Utilizes the Hedgehog signal pathway - Significant in ~90% of Basal Cell Carcinomas - Inhibits this abnormal signaling

  43% response among locally advanced disease

  30% response among metastatic BCC patients

  Pregnancy Risk, stillborn or defects

  Birth control required for at least 7 months post treatment (Erivedge pregnancy pharmacovigilance program)

  No donation of blood products for at least 7 months post treatment

  Side effects: muscle spasms, hair loss, taste issues, weight loss, vomiting…etc.
FDA approved Zelboraf (vemurafenib) for the treatment of unresectable or metastatic melanoma with BRAF $^{V600E}$ mutation.

- Not recommended for the wild-type BRAF melanoma
- Mechanism of Action – BRAF is a protein kinase within the RAS-RAF signaling pathway. Mutations in BRAF result in constitutive activation of the protein. 50% of melanomas have the BRAF mutation at position V600 and over 90% of these have the BRAF$^{V600E}$ mutation.

- 48.4% experienced tumor shrinkage;
- 1% complete response 47.4% partial
- Increased median time until growth or spread by 4 months

- 24% incidence of SCC’s or KA’s; time to first presentation is 7-8 weeks. Risk factors >65, prior skin cancers, chronic sun exposure.

- All patients should have derm eval prior to initiation of therapy and then every 2 months while on therapy and for at least 6 months following therapy.
BRAF Inhibition by Zelboraf

Growth Factors → Normal RAS-RAF pathway signaling → Normal cell proliferation and survival

Growth Factors → Oncogenic BRAF pathway signaling → Excessive cell proliferation and survival

BRAF → MEK → ERK

Mutated BRAF → MEK → ERK

(ZELBORAF (vemurafenib) tablets)
Keratoacanthoma
Keratoacanthoma
Imatinib (Gleevec) an oral chemotherapy, was introduced in 19 to treat certain types of leukemias (Philadelphia chromosome-positive chronic myeloid leukemia) and KIT (CD117)-positive unresectable or metastatic GI stromal tumors (GIST)

- Received indication for treatment of unresectable, recurrent, and/or metastatic dermatofibrosarcoma protuberans (DFSP)

- Adverse Reactions include: Fluid retention and edema, hepatotoxicity, CHF, left ventricular failure, hepatotoxicity, hemorrhage, GI disorders, hypothyroidism, etc.
DFSP is a soft tissue sarcoma of low to intermediate grade that arises in the dermis and invades deeper tissues. Locally aggressive with a high rate of recurrence.
This spring a new medication, Ingenol mebutate (Picato) derived from the Euphorbia peplus plant, is slated for release for the treatment of actinic keratoses. Picato from Leo Pharma.

This will be a once a day treatment for 2 or 3 days.

60-68% of pts with lesions of the face had a >75% improvement and 44-55% of the patients treated on the trunk had a >75% improvement.

37-47% complete clearance on the face and 28-42% complete clearance on the trunk.

Adverse reactions – erythema, edema, pain, pruritus, etc.
Alopecia Areata

Habif 2010
Alopecia Areata (AA) – an autoimmune disease characterized by hair loss and histologically associated with perifollicular inflammation.

July 1, 2010 issue of *Nature*, Angela M. Christiano, Ph.D. identified the upregulation and mutations involving gene, ULBP3 which encodes a protein that serves to attract cytotoxic T-cells. These T-cells express a receptor protein named NKG2D.
Advances in Dermatology that may be of interest

- Targeting this interaction may prevent the disease.
- Characterizing patterns of gene expression is being looked at to establish a predictor of disease progression. Specific gene pair number has been found to be predictive of disease progression.
- Work was sponsored by the National Alopecia Areata Registry
Nearly 100% of all transplant patients that are on chronic immunosuppression develop skin cancers.

Reversal of Incidence – Develop 5x more SCC’s than BCC’s.

As part of preparation for an organ transplant, all patients should undergo a complete skin exam, special emphasis for patients with history of skin cancer or extended sun exposure history.