Common Dermatoses in Children & Adults
Erin Amerson, MD
Department of Dermatology
UC San Francisco

Outline
- Infections & Infestations
- Skin cancer
- Common dermatologic disorders
- Less common but important diseases

Impetigo
- Organism
  - 50-70% staphylococcus aureus
  - Remainder group A beta-hemolytic streptococcus or both
- 2 Forms:
  - Honey-colored crusts
  - Bullous Impetigo-staphylococcus

Conflicts of Interest
- None
Impetigo Treatment

- Systemic Abx + topical therapy is best
- Soak off thick crusts, may use mupirocin oint
- Beta-lactamase resistant antibiotics x 7 days
  - Dicloxacillin
  - Cephalexin
- To eradicate nasal Staph carriage
  - Rifampin 600 mg qd X 5 days with your other Abx OR
  - Mupirocin (Bactroban) to nares bid

Methicillin Resistant Staph Aureus (MRSA)

- 40-59% MRSA at UCSF/SFGH
- Culture for organism and sensitivities
- Consider if recurrent infection
- Oral antibiotics that still work:
  - Doxycycline or minocycline
  - Trimethoprim-sulfamethoxazole
  - Clindamycin
  - Can combine any of the above with rifampin
- Save IV Vanco or Linezolid for MRSA resistant to EVERYTHING
**Dermatophyte and Yeast Infections**

- **Tinea cruris**
  - Scaly, crusted plaque with central clearing
  - Nystatin not effective

- **Candida**
  - Moister, more red, satellite pustules
  - Drying agents like Domeboro’s soaks, then Nystatin/Imidizoles

**Fungal/Yeast Infections of the Groin**

- **Tinea Cruris**
  - Scaly, crusted plaque with central clearing
  - Nystatin not effective
  - Imidizole/Allylamines x 2-4 weeks as for tinea corporis

- **Candida**
  - Moister, more red, satellite pustules
  - Drying agents like Domeboro’s soaks, then Nystatin/Imidizoles
Treatment of Onychomycosis

- Trichophyton rubrum

Why treat?

- Confirm fungal infection before treating
  - DDx: psoriasis, trauma, lichen planus

- No longer use
  - Griseofulvin: 12-18 months rx & poor efficacy
  - Ketoconazole: risk ↑ LFT’s with long-term use

Nail Psoriasis

- Terbinafine (Lamisil)
  - 250 mg/day x 3-4 months
  - Pulsing being studied
  - Liver toxicity

- Itraconazole (Sporonox)
  - Pulse at 400 mg/day x 7 days/ mo x 3 months
  - Drug-drug interactions
  - Liver toxicity/CHF/$$$
**Tinea Capitis**

- What to look for:
  - Black dot (hair breaks)
  - +/- scale
  - +/- alopecia
  - + fluorescence some types
  - KOH and Culture

**Tinea Capitis Treatment**

- p.o. Griseofulvin
- 10-25 mg/kg bid X 6-12 weeks
- reculture = test of cure
- examine siblings
- Terbinafine and fluconazole being investigated for dosing and safety in children

**Kerion**

- Inflammatory reaction to tinea infection
- **Not** bacterial infection
- do not treat with antibiotics
- tx the tinea
- +/- Prednisone with antifungals to reduce scarring

**Lyme Disease**

- Borrelia burgdorferi spread by Deer Tick
- THREE STAGES OF DISEASE
  - ECM + flu symptoms
  - Cardiac/Neuro disease
  - Arthritis and chronic neuro symptoms
- LABS: screening ELISA
- TX: Doxycycline or amoxicillin if suspect
- DEET repellant for prophylaxis

Erythema (Chronicum) Migrans (Avg 7 days after bite)
Scabies Infestation

- Pruritic papules/burrows in web spaces, axillae, umbilicus
- Itchy papules on the genitalia = scabies until proven otherwise
- In infants and immunosuppressed, may involve the face and be pustular

Sarcoptes Scabei

- Transmitted by close physical contact
- Rx:
  - Clothing and linen instructions essential
  - treat contacts and household members simultaneously, even if not itchy!
  - Permethrin 5%, (elimite) safe
  - Lindane (neurotoxic in babies or systemic)
  - Crotamiton (Eurax) and sulfur safe
  - Ivermectin po for crusted/institutional outbreaks
Treatment of Lice (Pediculosis)

- Head lice
  - Permethrin (1% Nix or 5% Elimite)
  - Pyrethrin (Rid)
  - Malathion – consider for resistant cases
  - Lindane (Kwell-neurotoxic & not very effective)
- Body lice
  - get rid of clothes, bathe patient, no prescriptions
- Pubic lice (crabs)
  - check axilla, abdominal hair and eyelashes
  - Treat same as head lice, and treat sexual contact
Basal Cell Carcinoma

- Pearly papules or scaly patches with “rolled” or “threadlike” border
- Risk factors: fair skin, sun exposure
- Location: head & neck most common
- Rarely metastasize but locally invasive
- Dx:
  - shave or punch biopsies

BCC Treatment

- Curette and Desiccate-- superficial or nodular BCC on body
- Excision-- face
  - consider Mohs surgery here
- Radiation
**Actinic Keratoses**

- Adherent red scaly lesions in sun-exposed areas
- 1-2% evolve into SCC
- Rx:
  - liquid nitrogen
  - Topical “field” therapy
    - 5 FU-topical
    - Imiquimod (Aldara)

**Squamous Cell Carcinoma**

- Non-healing papules/plaques/ulcers
- Less aggressive SCC
  - ↑ cumulative sun exposure
- More aggressive SCC
  - Prior radiation or burn
  - Chronic ulcer or draining sinus
  - Immunosuppression (HIV or organ transplant)
- Can metastasize (.5-5%) more common with lip, ear, scars
- Treatment: Surgical Excision
Melanoma

- Risk factors for melanoma
  - Personal or family history of melanoma
  - CDKN2A (p16) gene mutation
  - >50 regular nevi
  - Atypical nevi
  - Sun exposure with fair skin (but can occur in patients of color – more likely acral)

- Indicators of worse outcome
  - Age >45, male sex, axial location
  - Tumor thickness >1mm
  - Ulceration
  - SENTINEL LYMPH NODE+ (done for tumor >1mm)

Melanoma Diagnosis

- Total excision of pigmented lesion
- Do not shave biopsy
- Never freeze or electrosurgically destroy nevi

Eczema/Psoriasis/Lichen Planus

- Red scaly plaques
- All can be pruritic
- Scrape it and do KOH to differentiate from tinea
**Eczema/Atopic Dermatitis**

- **Infants**: cheeks, face, scalp, neck, wrists
- **Children**: antecubitals, popliteals, wrists, ankles, eyelids
- **Adults**: chronic hand eczema, variable sites

**Atopic Dermatitis Treatment**

- Appropriate skin care & EMOLLIENTS
- First line Rx= topical steroids
  - Site and thickness determine strength
- Topical calcineurin inhibitors (tacrolimus/pimecrolimus)
  - 2006 black box warning: malignancy (skin and lymphoma)
  - 2nd Line therapy
    - Patients >2 years, normal immune system
    - Intermittent use
- Oral antihistamines
- Phototherapy & Immunosuppressive drugs
Psoriasis Sites of Predilection
- Scalp, nails
- Extensors: elbows, knees
- Folds: gluteal cleft
- May be widespread, but often spares face

Psoriasis: Topical Therapy
- Topical steroids
- Calcipotriene (Dovonex): Vitamin D analog
- Tazarotene (Tazorac): retinoid
- Tar
- Anthralin (derived from trees)
- Combinations often safer and ↑ effective

Psoriasis: Phototherapy and Systemic Therapy
- Phototherapy
  - Broad band or Narrow band UVB
  - Psoralen + UVA (PUVA)
- Oral drugs
  - Acitretin (oral retinoid)
  - Methotrexate
  - Cyclosporine
- Injectable biologic drugs
  - Etanercept, adalimumab* or infliximab
  - Efalizumab or alefacept

Lichen Planus
- 5 P’s: pruritic, purple, planar (flat-topped), polygonal papules
- Wickham striae
- wrists/ankles classic
- Etiology unknown
- May be associated with Hep C

*Current approval only for psoriatic arthritis
Lichen Planus Treatment

- 2/3 clear in 1st year, many in 2nd year
- Steroids
  - Topical, intralesional or systemic
- Phototherapy (NB UVB or PUVA)
- Other: antihistamines, retinoids, cyclosporine

Pathophysiology of Acne

- Dyskeratinization
  - Corneocytes clump & form micro-comedones
- Androgen derived sebum overproduction
- Resident Bacterial overgrowth
  - P. acnes metabolizes sebum to free fatty acids and releases inflammatory mediators

Acne Treatment

- Topical therapy
  - Retinoids
  - Benzoyl peroxide & antibiotics
- Oral antibiotics
  - TCN, Doxy, MCN
  - Keflex or septra for more resistant
- Hormonal
  - OCP’s or spironolactone for women
Acne Treatment

- Isotretinoin (Accutane): for cystic acne recalcitrant to treatment with antibiotics
  - Side effects
    - Teratogenic
    - Increased triglycerides & cholesterol
    - Increased LFT’s
    - Night blindness
    - Depression (suicidality controversial)
    - Xerosis, cheilitis, hair loss

Erythema Multiforme

- Etiology
  - Usually preceding orolabial HSV (1-3 wks ago)
  - Less often drugs (Septra, other Abx, anticonvulsants) or mycoplasma
  - Target lesions: acral and symmetric
- Tx: Prevent HSV outbreaks
  - Suppressive ACV, sun protection
  - Prednisone controversial for acute flares
Stevens Johnson Syndrome (SJS) & Toxic Epidermal Necrolysis (TEN)

- SJS: ≥ 2 mucous membranes involved
- TEN: Usually >30% body surface area involved
- Atypical targets or broad erythema, full thickness desquamation
- Eye findings with scarring common
- Higher severity, more likely drug induced
  - 50% SJS and 80% of TEN drug induced
  - Drugs: sulfa, anticonvulsants, ampicillin, allopurinol, NSAIDS
  - Mycoplasma important cause SJS in children

Management
- Support as for extensive burn (pain, fluids, infection)
- D/C offending drug
- Consider IVIG for TEN
- Immunosuppressants/steroids controversial as can increase infection & death
- Average mortality:
  - SJS 5%, TEN 30%

Stevens Johnson Syndrome

Mycoplasma a trigger in pediatric patients

Differential Diagnosis: Widespread Blistering Eruption

- Acutely ill
- Biopsy: frozen section 1st
- TEN
  - Full thickness exfoliation
- SSSS (Staph Scalded Skin Syndrome)
  - Superficial blisters/skin loss
  - No mucous membrane disease
  - Children & renal failure pts
  - Toxin mediated with distant focus of Staph infection
Herpes Simplex Infection

- dsDNA virus
  - HSV 1 causes most orolabial herpes
  - HSV 2 causes most genital herpes
- Diagnosis: Direct fluorescent Ab (DFA), culture or tzanck smear
- Prolonged, atypical course if immunosuppressed

Orolabial Herpes

- Herpetic gingivostomatitis
- Classic, newly infected patient
- Fever, adenopathy
- Pain, dehydration

- 95% of orolabial HSV are typical “cold sore”

Herpes Treatment

- Acyclovir 400mg 3 x per day
  - OR famciclovir 250 mg tid
  - OR valacyclovir 1000 mg bid
- Suppression for frequent genital outbreaks
  - ACV 400 mg bid
  - OR valacyclovir 500-1000 mg q day
- Chronic suppression ↓ asymp shedding by 95%
Herpes Zoster

- Diagnosis by DFA or tzanck
- ACV 800 mg 5 X’s day until crusting. Start within 96 hrs of onset or ASAP
- Prednisone does NOT prevent post-herpetic neuralgia
- Pain treatment: motrin, tylenol, codeine, gabapentin, amitriptyline

NEXT CASE

- Painful, erythematous subcutaneous nodules
- Anterior shins most common
- Usually young women
- May have fever, arthralgia, arthritis

Erythema Nodosum

- Reactive Process
- Infections
  - Group A Strep
  - TB
  - Mycoplasma
  - Cocci
  - Yersinia
- Pregnancy

- Drugs
  - Sulfa / PCN
  - Oral contraceptives
- Systemic Disease
  - Sarcoidosis
  - Leukemia/lymphoma
  - Inflammatory Bowel Disease

Erythema Nodosum Treatment

- Work up to r/o associations
- Bed rest
- NSAIDS
- Potassium iodide (SSKI)
- Corticosteroids
### Urticaria

- **Acute urticaria**: < 6 weeks
- **Chronic urticaria**: > 6 weeks

**Triggers**
- Drugs: PCN, other Abx
- Foods for acute
- Infection: strep URI or occult source, candida
- >50% chronic is idiopathic

### Urticaria Treatment

- **Not prednisone for chronic** (V rarely for acute)
- **Non-sedating antihistamines by day** (Claritin, Zyrtec, Allegra)
- **Sedating histamines by night** (Benadryl, Atarax, Doxepin)

### Erythema Infectiosum

- **Fifth disease**
- **Parvovirus B19**
- **Slapped cheeks**
- **Associated with arthritis**
  - aplastic anemia
  - thrombocytopenic purpura
  - fetal death
  - HIV anemia

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**Autoimmune Blistering Diseases**

- Biopsy diagnosis
  - H & E and immunofluorescence
- Patients Not acutely ill
- Both Rx: steroids, immunosuppressants

**Bullous Pemphigoid**

- Tense blisters, full thickness skin
- Elderly patients >60
- Pruritic, urticarial base

**Pemphigus Vulgaris**

- Flaccid, superficial blisters
- 100% have oral disease at some time
- Usually mid age 50-60

**Tip: Know Your Erythemas**

- Erythema nodosum
- Erythema multiforme
- Erythema (chronicum) migrans
- Erythema infectiosum
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Thank you