Common Dermatoses in Children & Adults

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Conflicts of Interest

- None

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
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 staph carriage
  - Rifampin 600 mg qd X 5 days with your other Abx OR
  - Mupirocin (Bactroban) to nares bid
  - Bleach baths, benzoyl peroxide, chlorhexidine

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
Groin Fold Rash  DDx

- Tinea cruris
- Seborrheic dermatitis
- Erythrasma
- Intertrigo
- Candida
- Inverse psoriasis

Dermatophyte and Yeast Infections

Fungal/Yeast Infections of the Groin

- Tinea Cruris
  - Scaly, crusted plaque with central clearing
  - Nystatin not effective
  - Topical or oral Imidizole/Allylamines x 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

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Nail Psoriasis

- *Terbinafine (Lamisil)*
  - 250 mg/day x 3-4 months

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

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Treatment of Onychomycosis
**Tinea Capitis**

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

**Tinea Capitis Treatment**

- p.o. Griseofulvin
- 20-25 mg/kg divided bid X 6-12 weeks
- reculture = test of cure
- examine siblings
- Terbinafine 5mg/kg/d x 4 wks

**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, confirmatory western blot
- TX: Doxycycline or amoxicillin if suspect
- DEET repellant for prophylaxis

**Erythema (Chronicum) Migrans**

(Avg 7 days after bite)
Herpes Simplex Infection

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

Orolabial Herpes

- Herpetic gingivostomatitis
- Classic, newly infected patient
- Fever, adenopathy
- Pain, dehydration
- 99% of orolabial HSV are typical “cold sore”

Herpes Treatment

- Acyclovir 400mg 3 x per day
  - OR famciclovir 250 mg tid
  - OR valacyclovir 1g 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

Erythema Infectiosum
- Fifth disease
- Parvovirus B19
- Slapped cheeks
- associated with arthritis
  - aplastic anemia
  - thrombocytopenic purpura
  - fetal death
  - HIV anemia
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

Sarcopes 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

Skin cancers
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
- Imiquimod, 5FU (superficial BCC)
- Excision– face
  - consider Mohs surgery here
- Radiation, vismodegib (very advanced cases or debilitated patient)
**Actinic Keratoses**

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

**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, scalp, 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 >0.75mm
- Ulceration
- SENTINEL LYMPH NODE+ (done for tumor depth >0.75mm)

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

2006 black box warning—malignancy (skin and lymphoma)
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
- 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
- Biologics
  - Etanercept, adalimumab or infliximab
  - Ustekinumab, apremilast

Lichen Planus

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

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
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)

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
- Younger (age 30-60)
Tip: Know Your Erythemas

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

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Thank you