

Common Pediatric Dermatologic Disorders

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Disclosures

- No financial conflicts of interest.

Learning Objectives

- Recognize features of several common skin conditions in children.
- Describe the features that support the correct diagnosis.
- Understand the recommended therapy for each condition.

Case #1

- 2 yr old female
- History of atopic dermatitis
- Flare worsening despite use of topical steroids
- Fever, malaise



Diagnosis?

- a) Eczema exacerbation
- b) Impetigo
- c) Eczema herpeticum
- d) Viral exanthem

Eczema Herpeticum

- HSV infection
- atopic dermatitis, other skin disease
- fever, malaise, widespread vesicles and erosions
- Complications:
 - keratoconjunctivitis
 - bacterial superinfection

Eczema Herpeticum

- Diagnosis
 - History and physical appearance
 - HSV culture
 - PCR

Eczema Herpeticum

- Inpatient Management:
 - IV Acyclovir: 10 mg/kg/dose q 8 hr
 - antibiotic as indicated (bacterial cx!)
 - hydration, pain and fever control
- Outpatient management (po)
 - Acyclovir: 20 mg/kg/dose four times a day
 - Max dose = 800 mg four times a day

Eczema Herpeticum

- Topical
 - No topical steroids!
 - Domeboro's soaks
 - 10 min each bid-tid
 - Bland emollients
- Lesions on eyelids
 - OPHTHO consult!



Cutaneous HSV



Beware Impetigo!





Case #2

- Previously healthy 2 mo old female
- 1 month of “worsening rash”
- treated with unknown oral antibiotic
- ? Mild itch
- No fever or other signs of illness
- No known sick contacts
- No contacts with rash





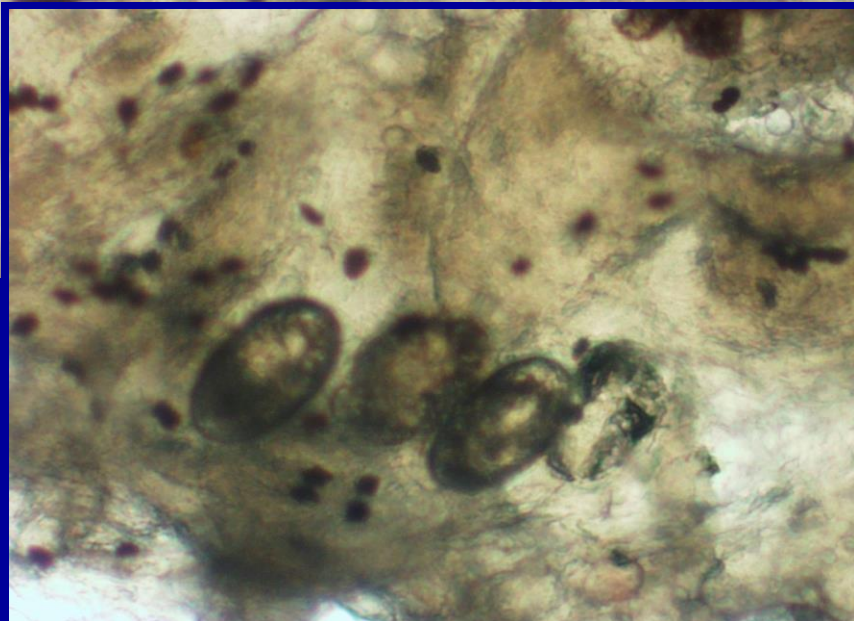
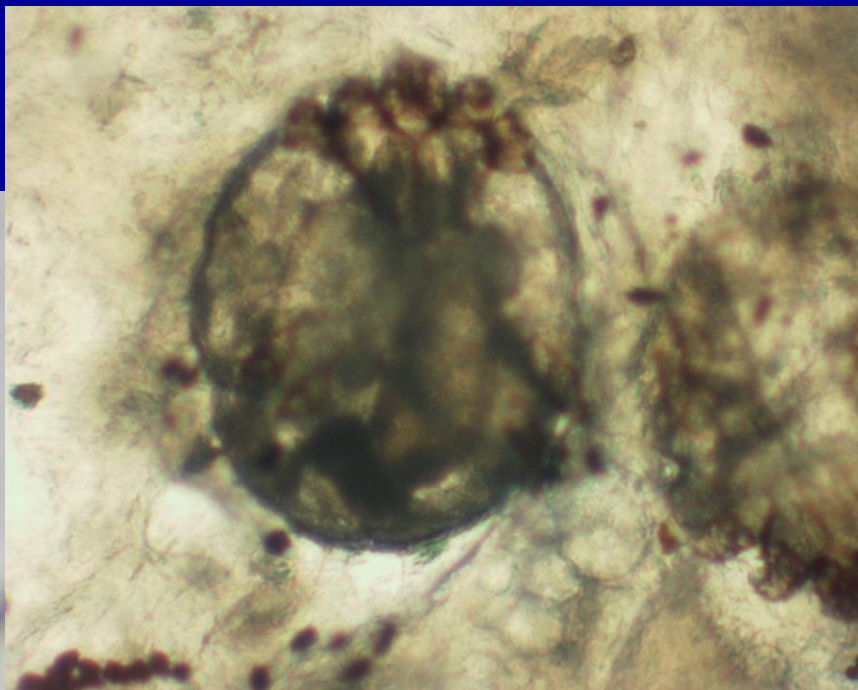
Diagnosis?

- a) Langerhans cell histiocytosis
- b) Leukemia cutis
- c) Viral exanthem
- d) Scabies



Burrows





Scabies

- Treatment (off label for <2 mos or pregnant/BF)
 - Permethrin cream 5% (Elimite)
 - Neck down for children/adults
 - Include scalp/face for infants
 - Leave overnight (8-14 hours)
 - Wash off in a.m.
 - Repeat treatment in one week
 - Launder clothing/bedding
 - Hot water, hot dryer
 - Large items: dry-clean or seal in bag for 1 week

Quarterman et al. Pediatr Dermatol 1994; 11(3):264-6.

Modi et al. Dermatol Online J 2018 May 15; 24(5).

Scabies

- Education!
 - Treat all household members/close contacts at least once
 - Even if asymptomatic!
 - Treat twice if itch/rash
 - Itching/rash may take several weeks to clear
 - Antihistamines
 - Mild topical steroid

Case #3

- 2 mo old FT healthy male
- Rhinorrhea/congestion
- Fussiness
- Red/tender skin
- Crusting around mouth
- Blisters and “peeling” of skin







Diagnosis?

- a) Impetigo
- b) Stevens Johnson Syndrome (SJS)
- c) Staph Scalded Skin Syndrome (SSSS)
- d) Toxic Epidermolysis Necrosis (TEN)

Staph Scalded Skin Syndrome (SSSS)

- Staph aureus
 - Exfoliative toxin
 - Cleavage at superficial epidermis
 - Stratum granulosum
 - Pathogenesis:
 - Target Desmoglein 1
 - Why neonates and young kids?
 - Lack of antitoxin antibodies
 - Low renal excretion of toxin

SSSS

- Source?
 - Eyes, nares, perioral, perineum, umbilicus
- Clinical
 - Fever, malaise, irritability
 - Tender erythema, fragile bullae, erythematous erosions
 - Flexural creases
 - + Nikolsky sign

SSSS

- Diagnosis
 - Clinical
 - Culture? Where?
- TEN?
 - Mucosal involvement
 - Sub epidermal split

SSSS

- Treatment
 - Clindamycin
 - PCNase resistant PCN
 - Cephalosporin
 - MRSA: vancomycin
- Supportive care
 - IVF's
 - Pain control
 - Wound care
 - Gentle cleansing, soaks, emollient





Case #4

- Previously healthy 14 yr old male
- Hospitalized for three days for “facial cellulitis”
- After d/c, rash/swelling of face recurred
- Returned to the ED and was referred to dermatology



Diagnosis?

- a) Cellulitis
- b) Eczema herpeticum
- c) Allergic contact dermatitis
- d) Pustular psoriasis

ACD

- Acute lesions
 - Erythema, edema, papules, vesicles/bullae, oozing
 - Sharply defined
 - Intense pruritus
 - Multiple areas
 - Secondary bacterial infection possible
 - More purulent
 - More tender

Bacterial Cellulitis

- Factors that may be helpful
 - Tenderness/pain prominent
 - Borders less sharply defined
 - Malaise/fever
 - Elevated wbc
 - Child looks sicker
 - Especially if facial

Treatment of ACD

- Systemic steroids
 - 1-2 mg/kg/day (max of 60 mg/day)
 - Slow taper
 - 10-14 days
 - Domeboro's soaks
 - Bland emollient

ACD



Facial Cellulitis



Case #5

- Previously healthy 14 mo old female
- 2 day history of fever, URI
- Seen by PMD yesterday and started on Augmentin for OM



Diagnosis?

- a) Erythema multiforme
- b) Stevens Johnson syndrome
- c) Urticaria
- d) “Serum sickness”

Urticaria

- Transient, erythematous wheals
- Small, localized vs. large, generalized areas
- SQ involvement- giant urticaria, acute annular urticaria
 - Swelling of face, distal extremities
 - Acrocyanosis
 - Central duskiness
 - “urticaria multiforme”





Urticaria

- Etiology
 - Acute <6 weeks
 - Children, viral infection
 - Other infection(s)
 - Foods
 - 10% drug-related
 - » Penicillins
 - Chronic >6 weeks
 - Less common in children
 - 80% idiopathic

Urticaria

- Treatment
 - Eliminate trigger
 - Symptomatic
 - Antihistamines
 - sedating/non-sedating H1 and H2
 - Other
 - Cool baths, cool compresses
 - Cooling lotions (Sarna®, Eucerin® Calming)
 - ? Steroids

Erythema Multiforme



Erythema Multiforme

- Triggers
 - HSV
 - *Mycoplasma pneumoniae*
 - Drugs

Erythema Multiforme

- Eruption is symmetric
 - Any area of body
 - Often on palms/soles
- Appears over 3-7 days
- Fixed for several days
- Usually asymptomatic
 - Slight burning/itching

Erythema Multiforme

- Up to 50% with oral lesions (mild)
 - Swelling/crusting of lips
 - Erosions on tongue/buccal mucosa
 - Must have 2 or more mucous membranes for SJS!
- Lesions heal over 2-3 weeks
 - Post-inflammatory pigmentary changes

Erythema Multiforme

- Treatment is largely symptomatic
 - Oral antihistamines
 - Domeboro's soaks
 - Bland emollient
- Close monitoring for progression
- Steroids not indicated

Stevens Johnson Syndrome (SJS)



Case #6

- 2 yr old healthy male
- Spent his first week at daycare
- Now has a fever and diffuse rash of small erythematous macules and papules on the lower face, trunk, arms, and legs







Diagnosis?

- a) Eczema herpeticum
- b) Varicella
- c) Atypical HFM
- d) Impetigo

Atypical HFM

- Classic HFM
 - CV A16, EV 71
 - Fever, malaise, herpangina
 - Rash
 - Papules, vesicles
 - Palms, soles, distal extremities, buttocks

Atypical HFM

- Coxsackie A6
 - Mild viral illness
 - Rash
 - Papules, vesicles, bullae, petechiae/purpura
 - Gianotti Crosti-like distribution
 - Cheeks, buttocks, extensors
 - “Eczema coxsackium”

Ventarola D et al. Clinics in Dermatology 2015 (33): 340-346.

Atypical HFM

- Transmission
 - Fecal/oral, oral/oral, respiratory
- Incubation
 - 3 to 6 days
- Viral shedding
 - Stool
 - 4 to 8 weeks

Atypical HFM

- Course
 - 1 to 2 weeks
- Treatment
 - supportive

















Case #7

- 2 yr old female
- 2 month history of recurrent crops of pruritic erythematous papules, primarily on arms and legs
 - Few lesions on neck, waist
- Has been treated for impetigo and scabies







Diagnosis?

- a) Scabies
- b) Varicella
- c) Papular urticaria
- d) Impetigo

Papular Urticaria

- Hypersensitivity reaction to insect bites
- Chronic/recurrent papular eruption
- Erythematous, edematous papules
 - Grouped, clustered
 - Distal extremities

Papular Urticaria

- Pruritic
 - excoriated, eroded
 - crusted
 - secondary bacterial infection

Papular Urticaria

- Insect repellent
 - Picaridin vs. DEET
 - Off Family Care™ with picaridin
- Antihistamines
 - Cetirizine in am
 - Benadryl/Hydroxyzine qhs prn

Papular Urticaria

- Potent topical steroid
 - Wet wraps
- Topical antibiotic
- Education!

Case #8

- 6 yr old healthy female
- 1 month history of rash on lower face, neck, and chest
- Mildly itchy
- New guinea pig at home



Diagnosis?

- a) Psoriasis
- b) Subacute cutaneous lupus
- c) Tinea corporis
- d) Nummular eczema

Tinea Corporis

- Superficial fungal infection of skin
- Transmission via contact with infected person or animal
- Dermatophytes
 - Microsporum
 - Trichophyton

Clinical Manifestations

- Classic: one or more well-defined annular scaly erythematous plaques with central clearing and a scaly, vesicular, papular, or pustular border



Tinea Corporis (cont.)

- Use of topical steroids may alter appearance
 - Tinea incognito



Majocchi's Granuloma

- Granulomatous folliculitis
 - Erythematous plaques or patches studded with papules and/or nodules
 - Deeper infection of follicles
 - Systemic therapy



Diagnosis

- Clinical presentation
 - History and physical examination
- KOH prep
 - Scrape active border
- Fungal culture

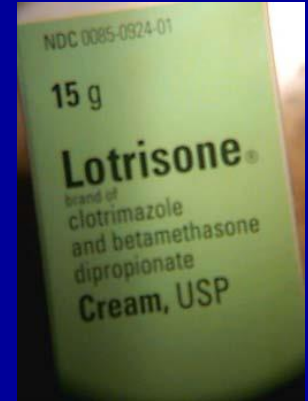
Treatment

- Topical for superficial/localized
 - bid for at least 2-4 weeks
 - Treat affected area and rim of “normal” skin
- If no improvement
 - Reconsider diagnosis
 - If culture +, proceed to oral therapy
 - Griseofulvin, terbinafine

Agent	Dermatophyte	Yeast	Tinea versicolor
Butenafine	+		
Ciclopirox	+	+	+
Clotrimazole	+	+	+
Econazole	+	+	+
Ketoconazole	+	+	+
Miconazole	+	+	+
Naftifine	+		
Nystatin		+	
Oxiconazole	+		
Terbinafine	+		
Tolnaftate	+		+



Combination Products



- Combination antifungal/topical steroid
 - Lotrisone®
 - clotrimazole and betamethasone propionate
 - Mycolog II®
 - nystatin and triamcinolone acetonide
- Often result in persistent/worsening infection
- Relatively strong topical steroids
 - Atrophy, striae, telangiectasias
- Generally not recommended

Nummular Atopic Dermatitis

- Not annular!
- Very pruritic



Psoriasis

- “dull pink” erythema
- silvery or white micaceous scale
- nummular lesions
- distribution



Case #9

- 15 yr old healthy female
- 6 month history of “rash” on chest and back
- Asymptomatic



Diagnosis?

- a) Confluent and reticulated papillomatosis
- b) Subacute cutaneous lupus
- c) Tinea corporis
- d) Tinea Versicolor

Tinea versicolor

- Pityriasis versicolor
- Common superficial fungal disorder of skin
- Caused by yeast forms of dimorphic fungus *Malassezia furfur*
 - *Pityrosporum orbiculare*, *Pityrosporum ovale*
- Normal skin flora
- Usually presents in adolescence

Clinical Manifestations

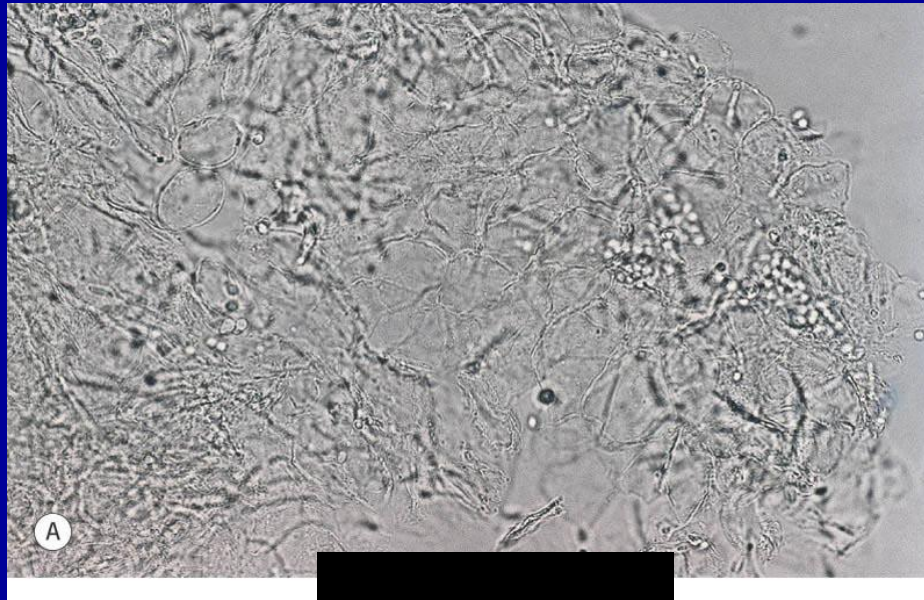
- Multiple scaling, oval macules, patches and thin plaques over upper trunk, proximal arms, sometimes peripheral face and neck
- Hyper- or hypopigmented
 - Azelaic acid production
- More prominent in summer

Tinea versicolor



Making the Diagnosis

- KOH prep
 - “spaghetti and meatballs” (hyphae and spores)



Treatment

- Education
 - Tends to be chronic
 - Recurrences common
- Topical therapy
 - Selenium sulfide lotion/shampoo 2.5%
 - Ketoconazole shampoo 2%
 - Applied for 10 min. daily for 1-2 weeks, then 2-3 times per week for maintenance

Treatment

- Severe, recurrent, fails topical therapy
 - Systemic therapy (adult dosing)
 - Fluconazole 200-400 mg po x 1
 - May repeat in 1 week if severe
 - Should still use topical for maintenance

Pityriasis alba

- Most common on face
- Usually atopic background
- Less extensive
- Blotchy, poorly defined



Thank You!

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