Common Pediatric Dermatologic Disorders

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Disclosures

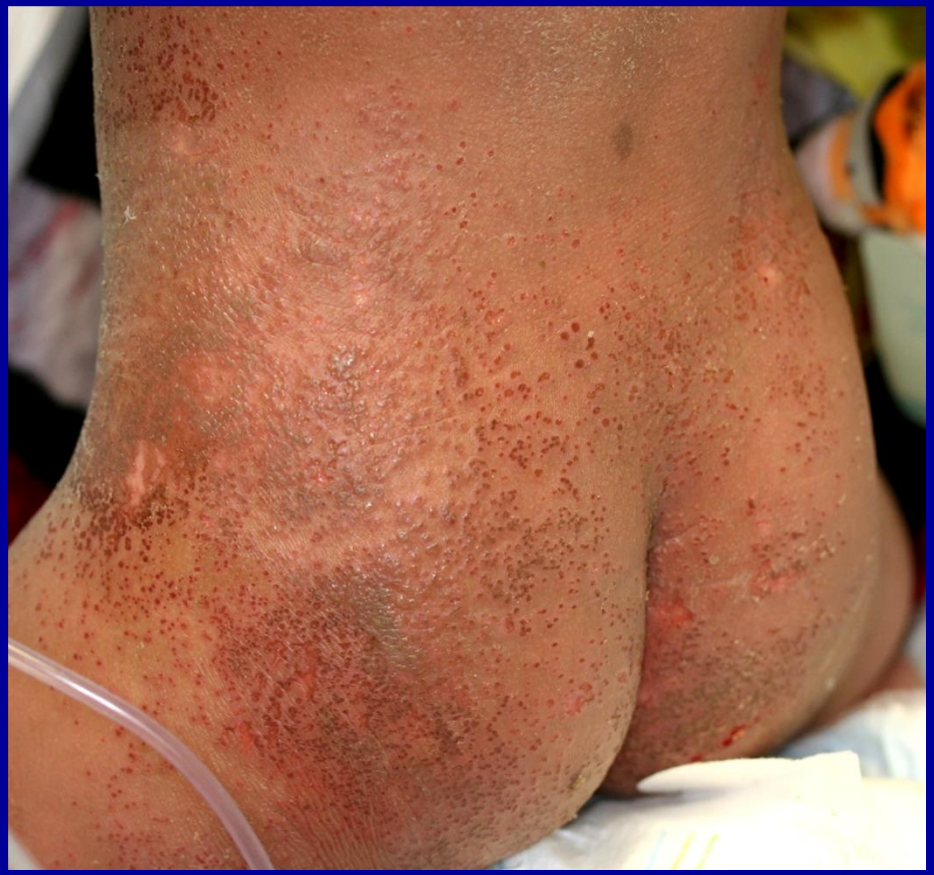
- No financial conflicts of interest.

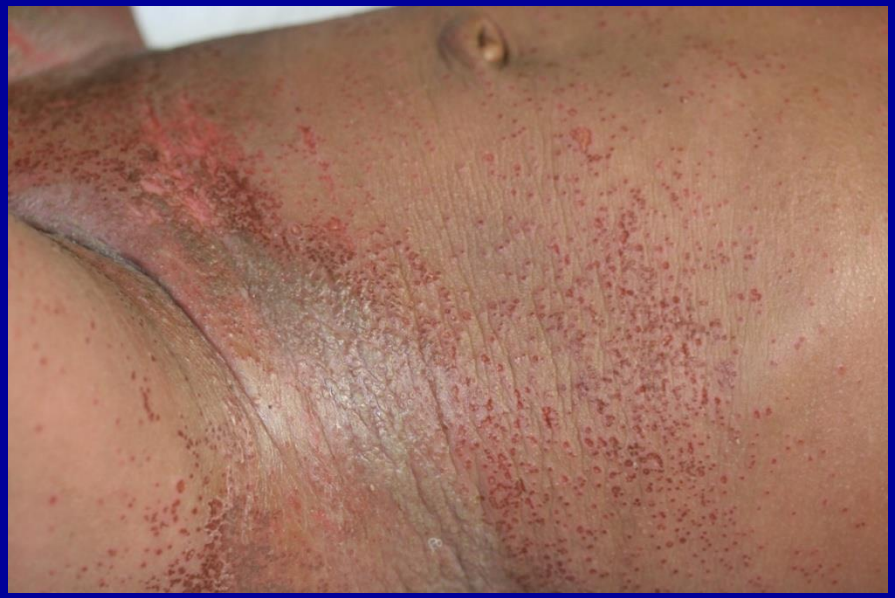
Learning Objectives

- 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

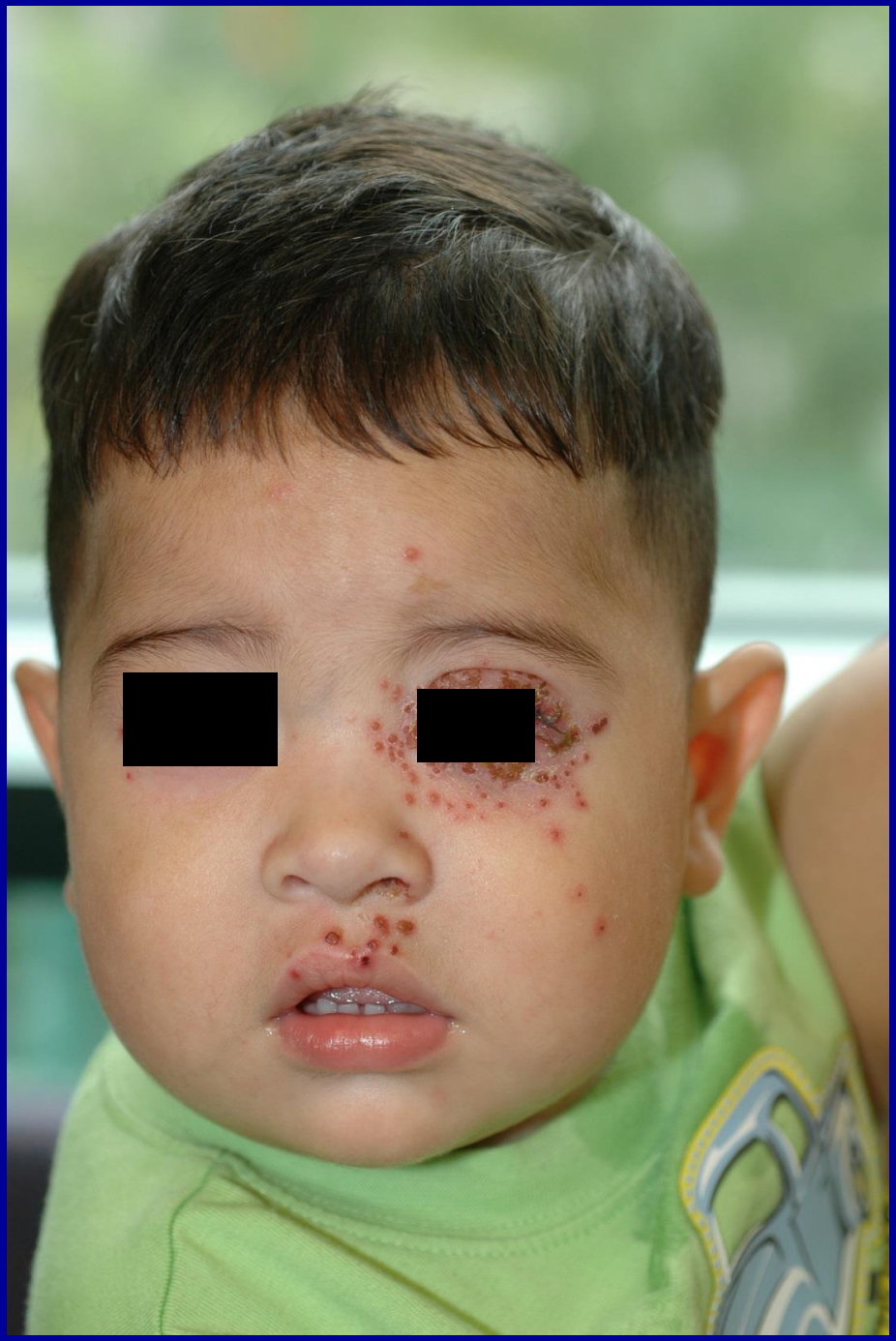
Eczema Herpeticum

- 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

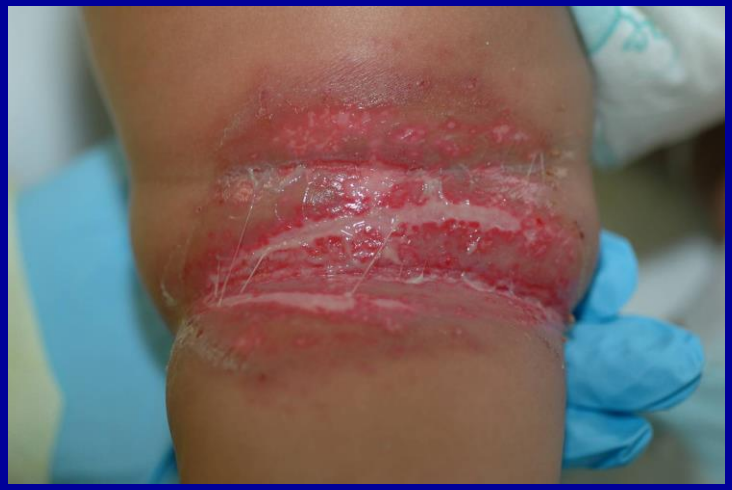
Eczema Herpeticum

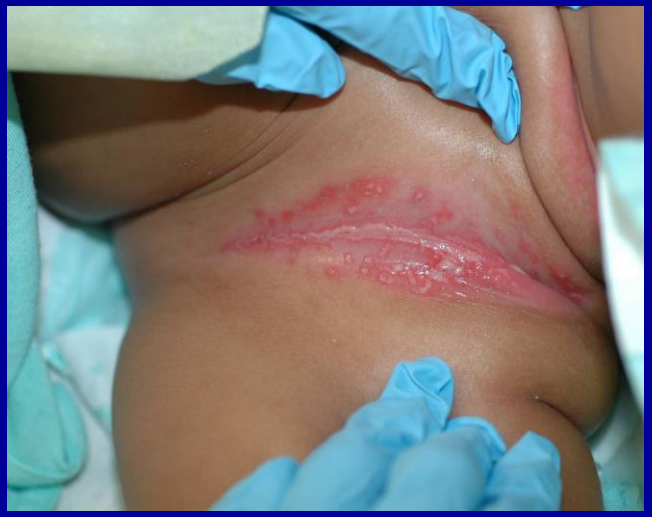
- Topical
  - No topical steroids!
  - Domeboro's soaks
    - 10 min each bid-tid
  - Bland emollients

- Lesions on eyelids
    - OPHTHO consult!

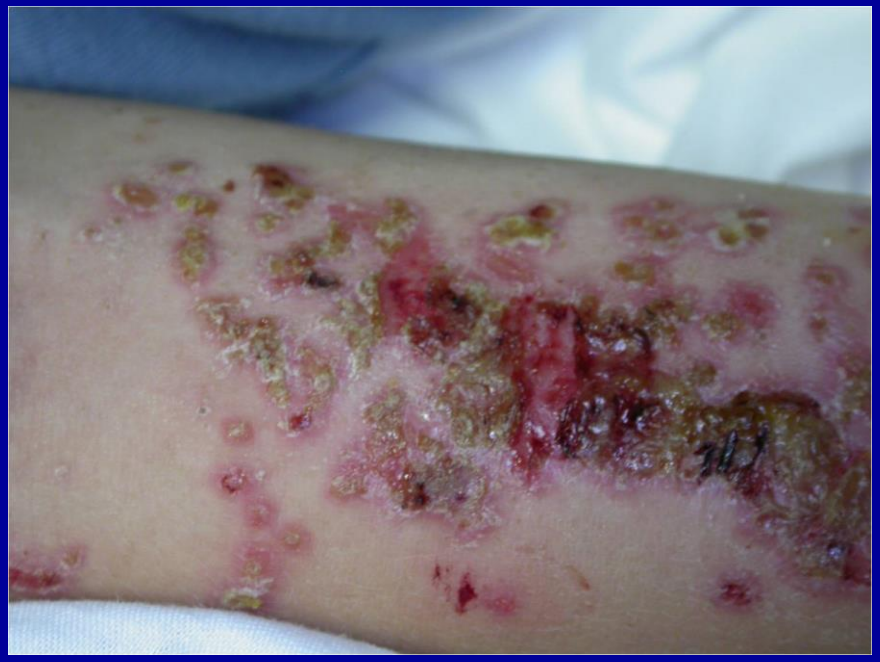


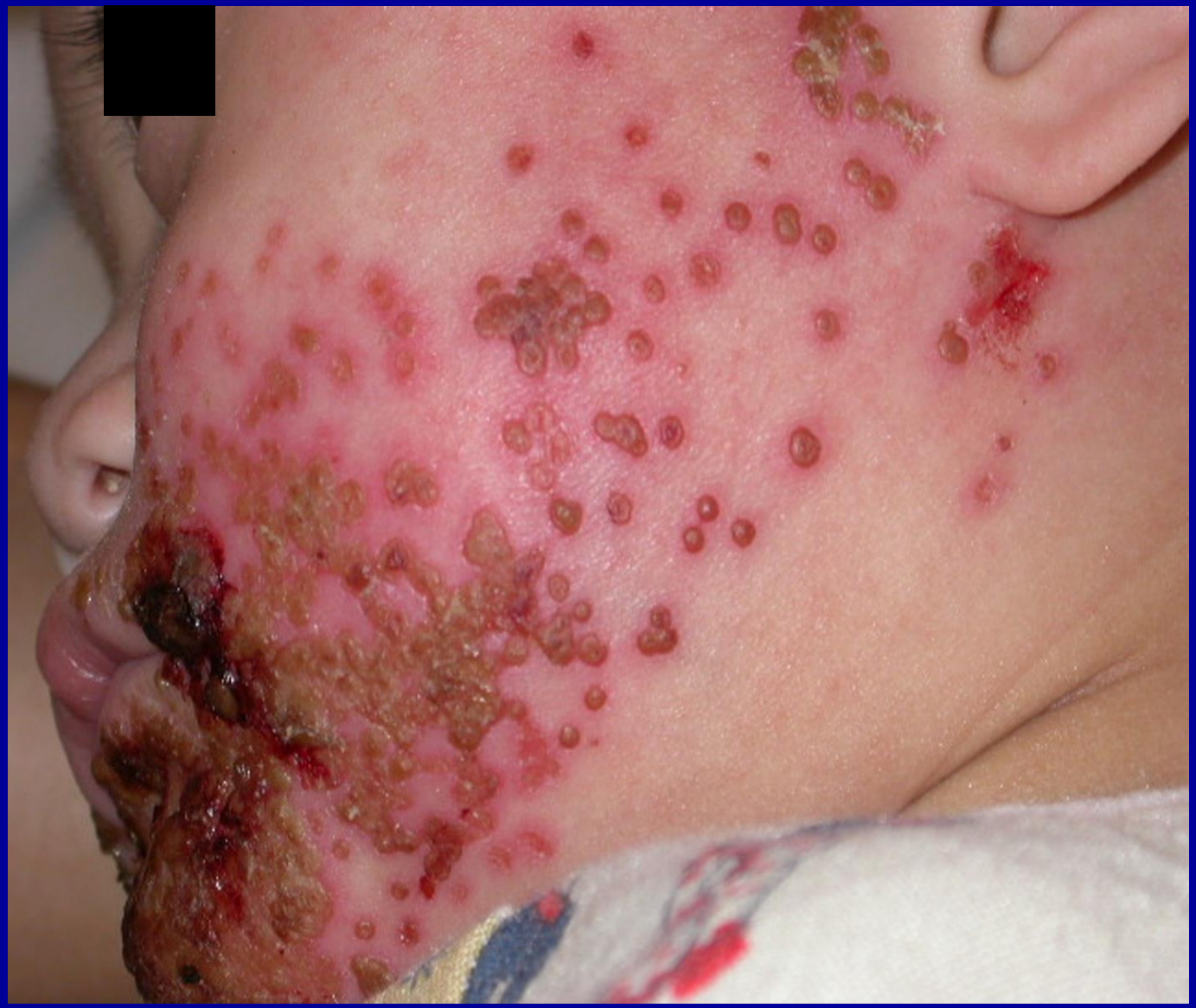
Cutaneous HSV





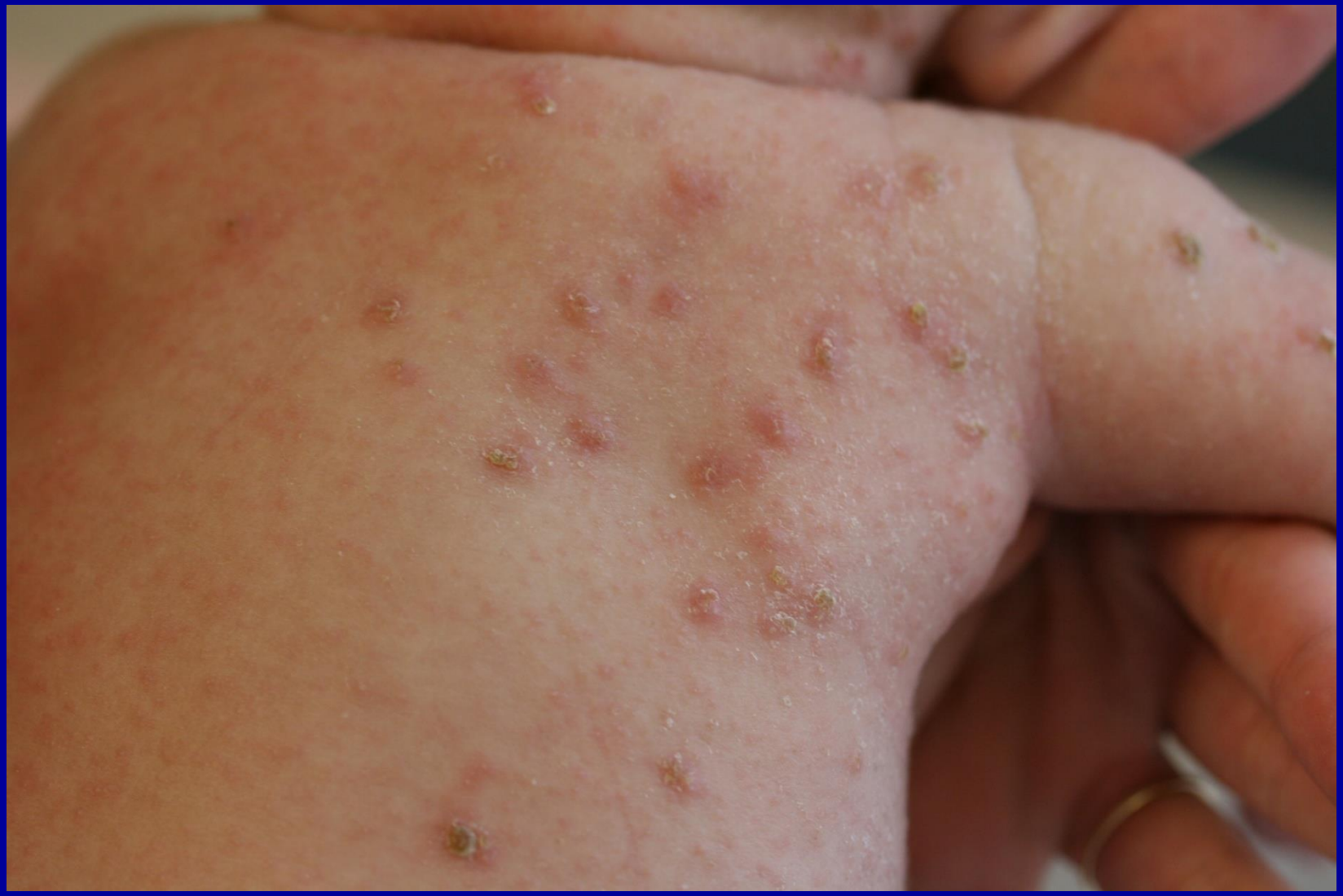
Beware Impetigo!

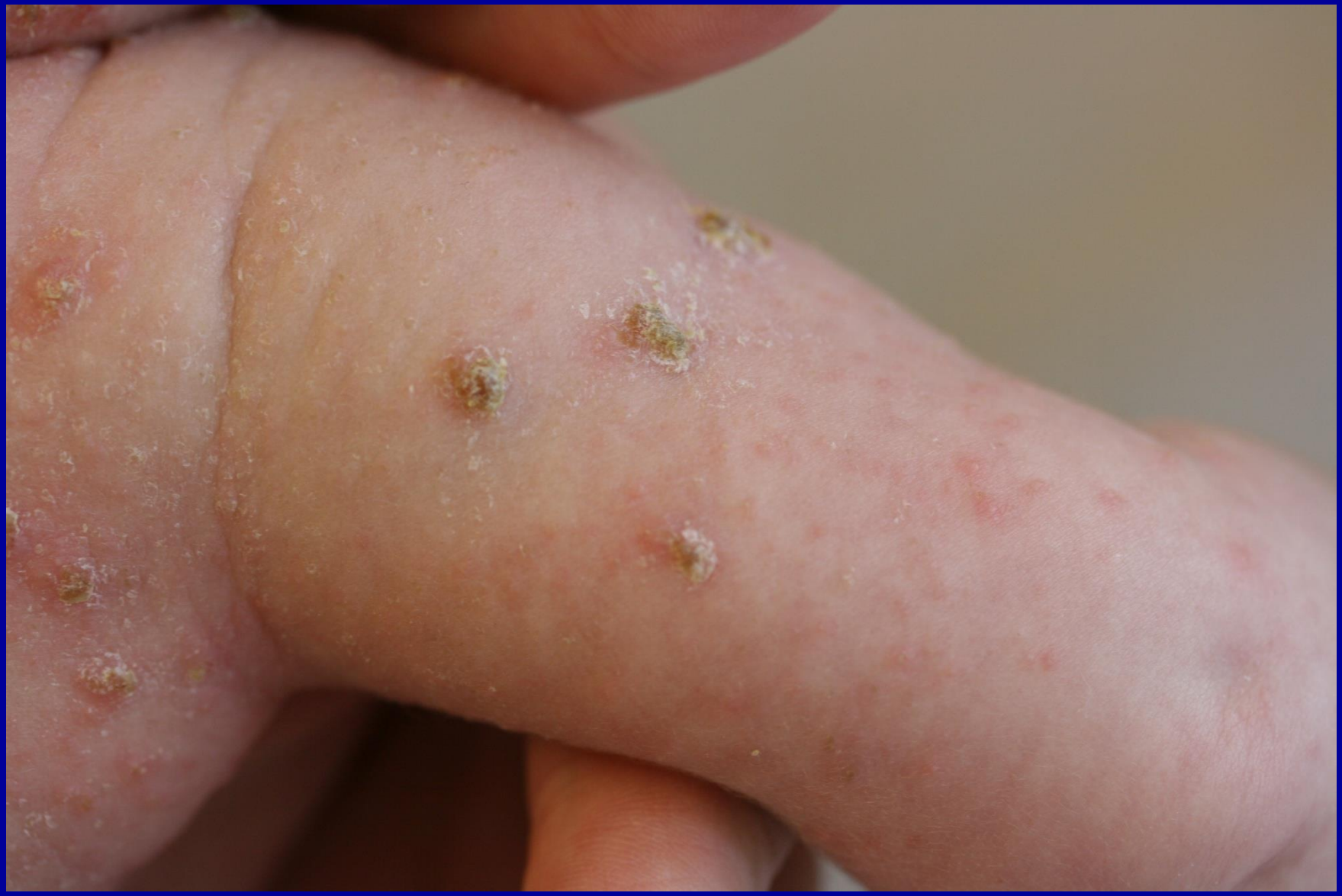




Case #2

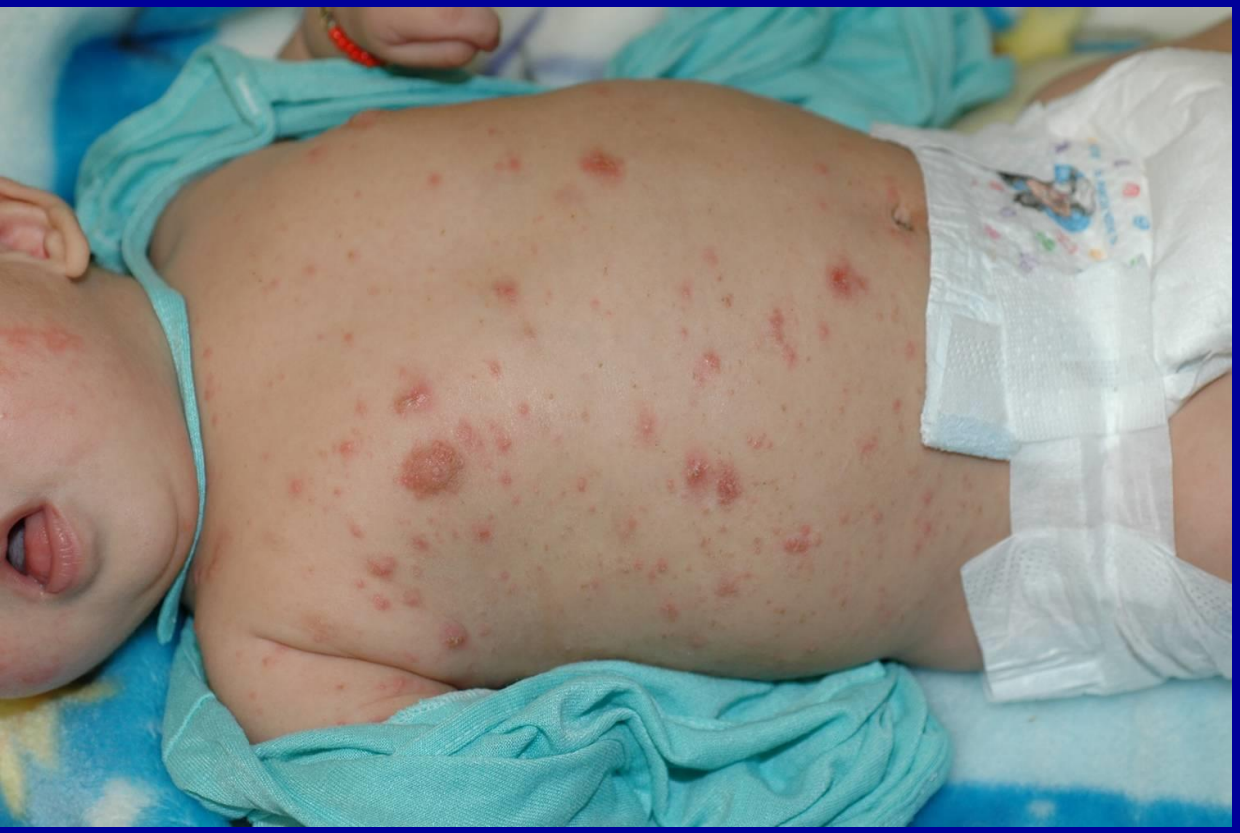
- Previously healthy 2 mo old female
- 1 month of “worsening rash”
- treated with unknown oral antibiotic
- ? Mild itch
- No fever or other signs of illness
- No known sick contacts
- No contacts with rash

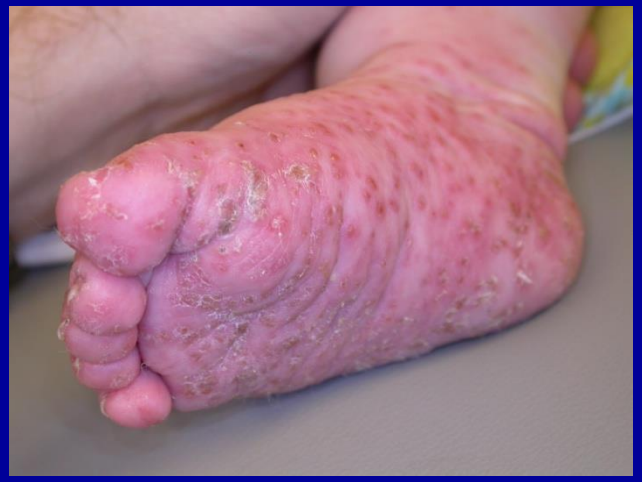




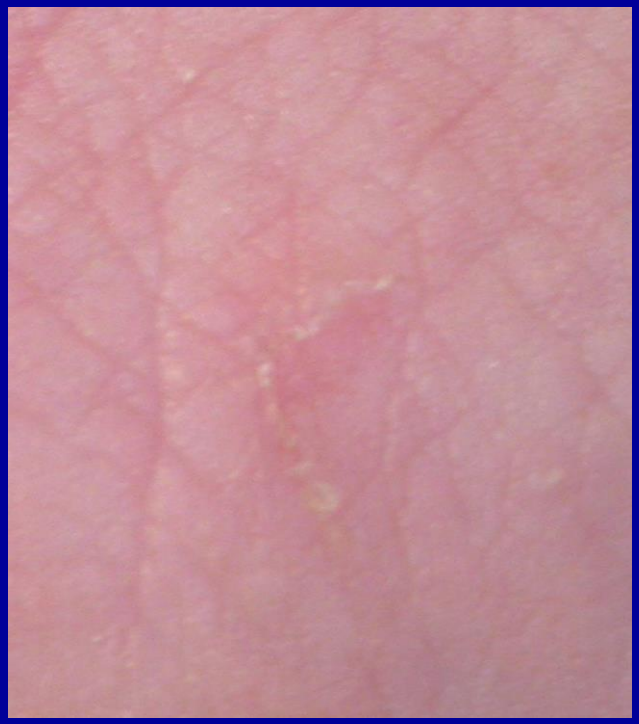
Diagnosis?

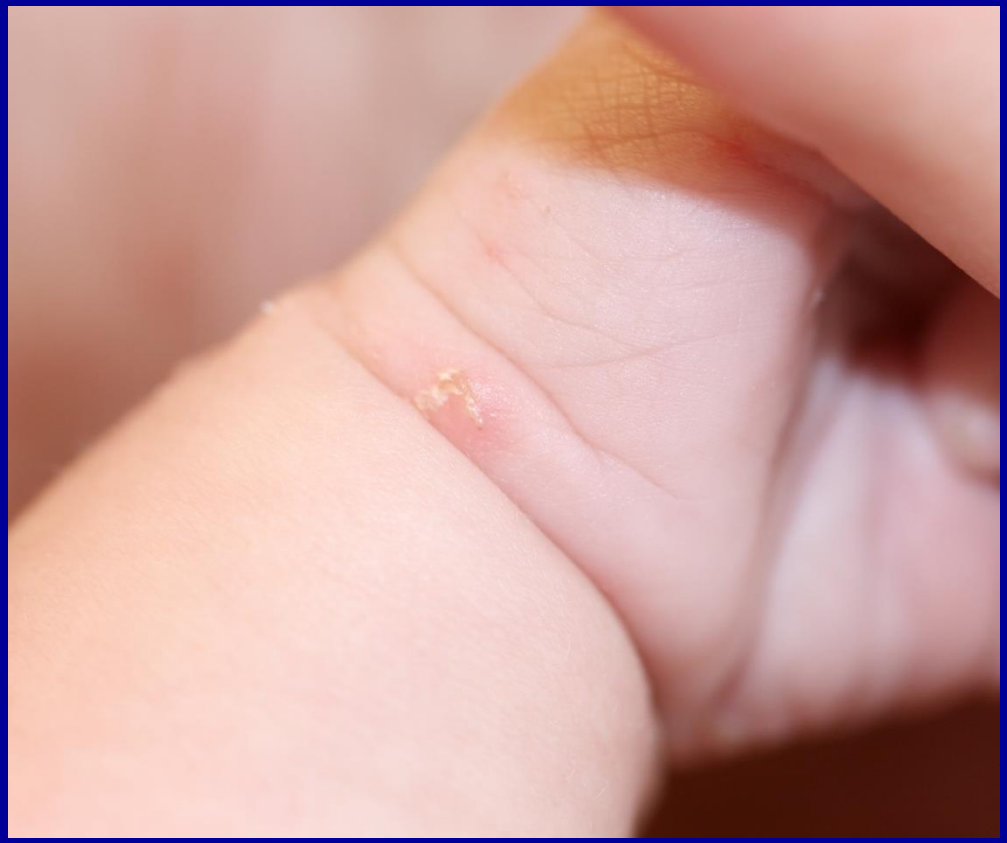
a) Langerhans cell histiocytosis
b) Leukemia cutis
c) Viral exanthem
d) Scabies

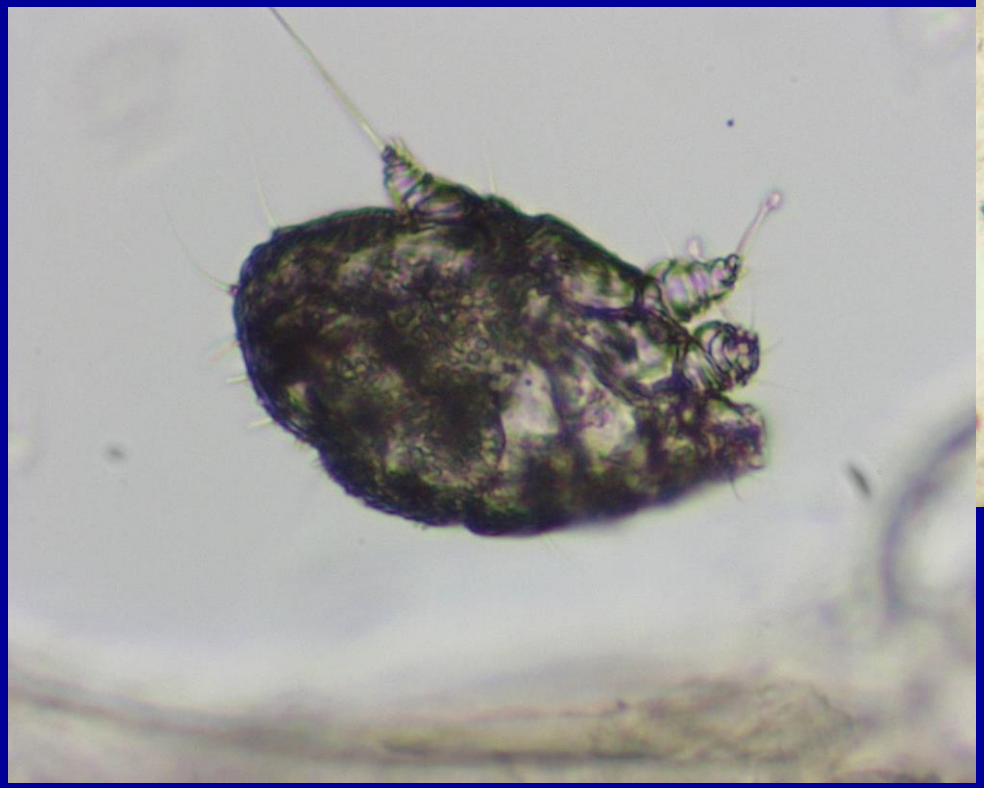


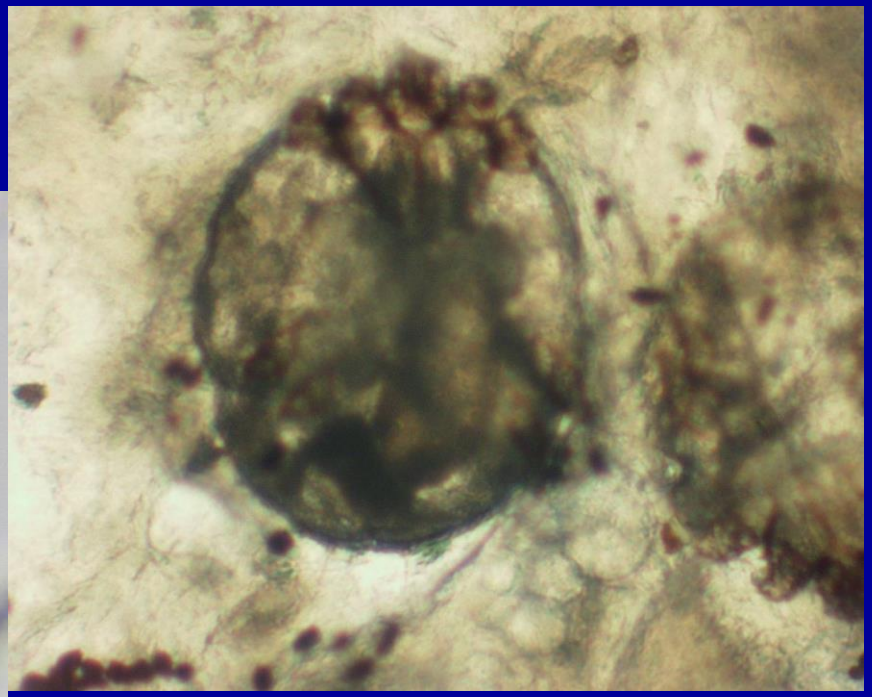


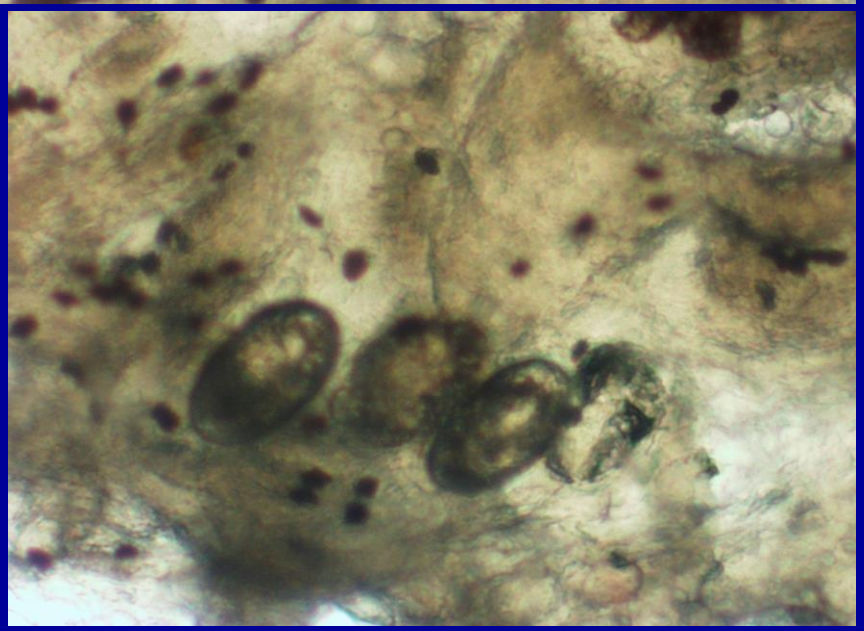
Burrows











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

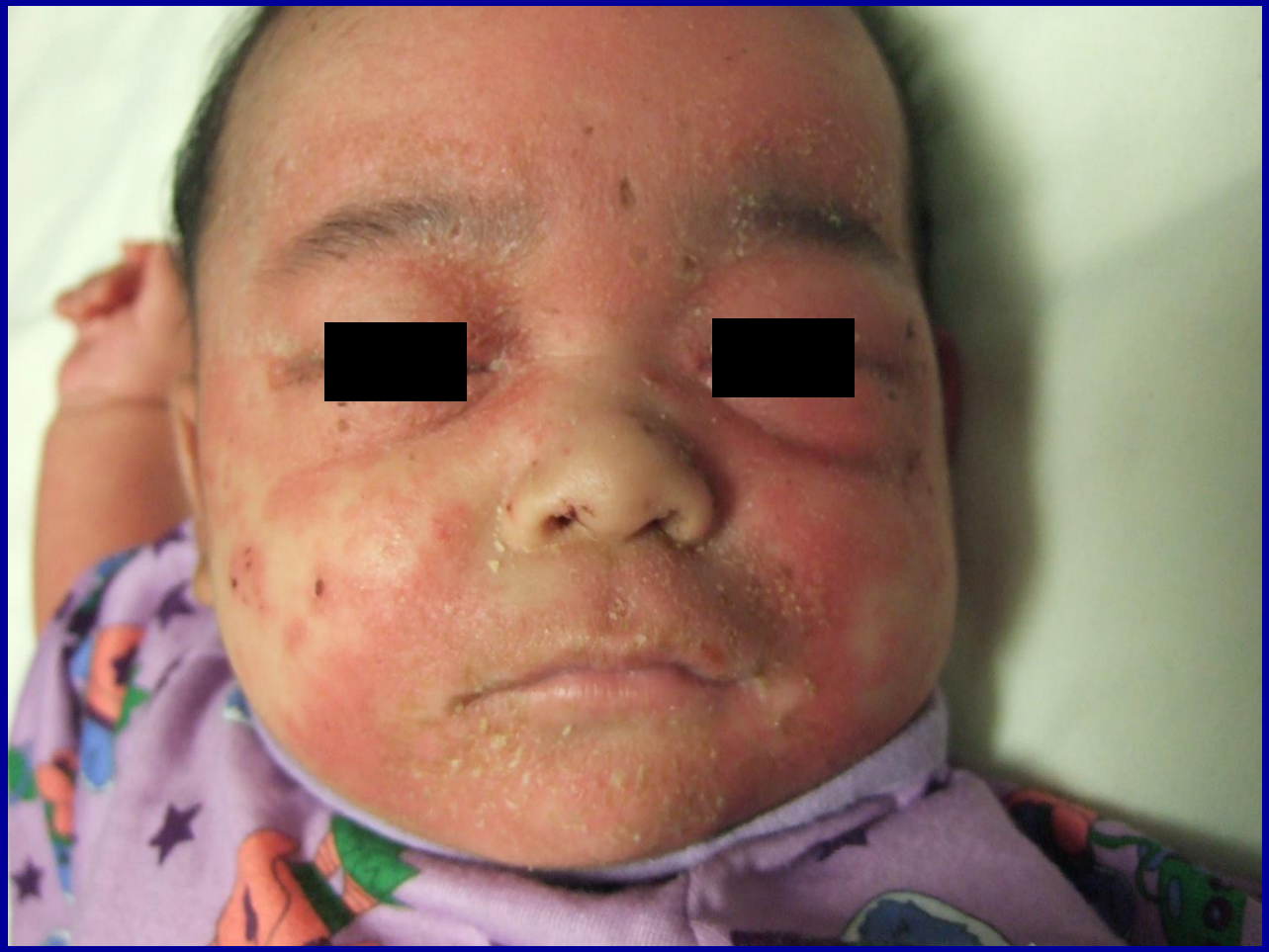
Quarterman et al. Pediatr Dermatol 1994; 11(3):264-6.
Modi et al. Dermatol Online J 2018 May 15; 24(5).

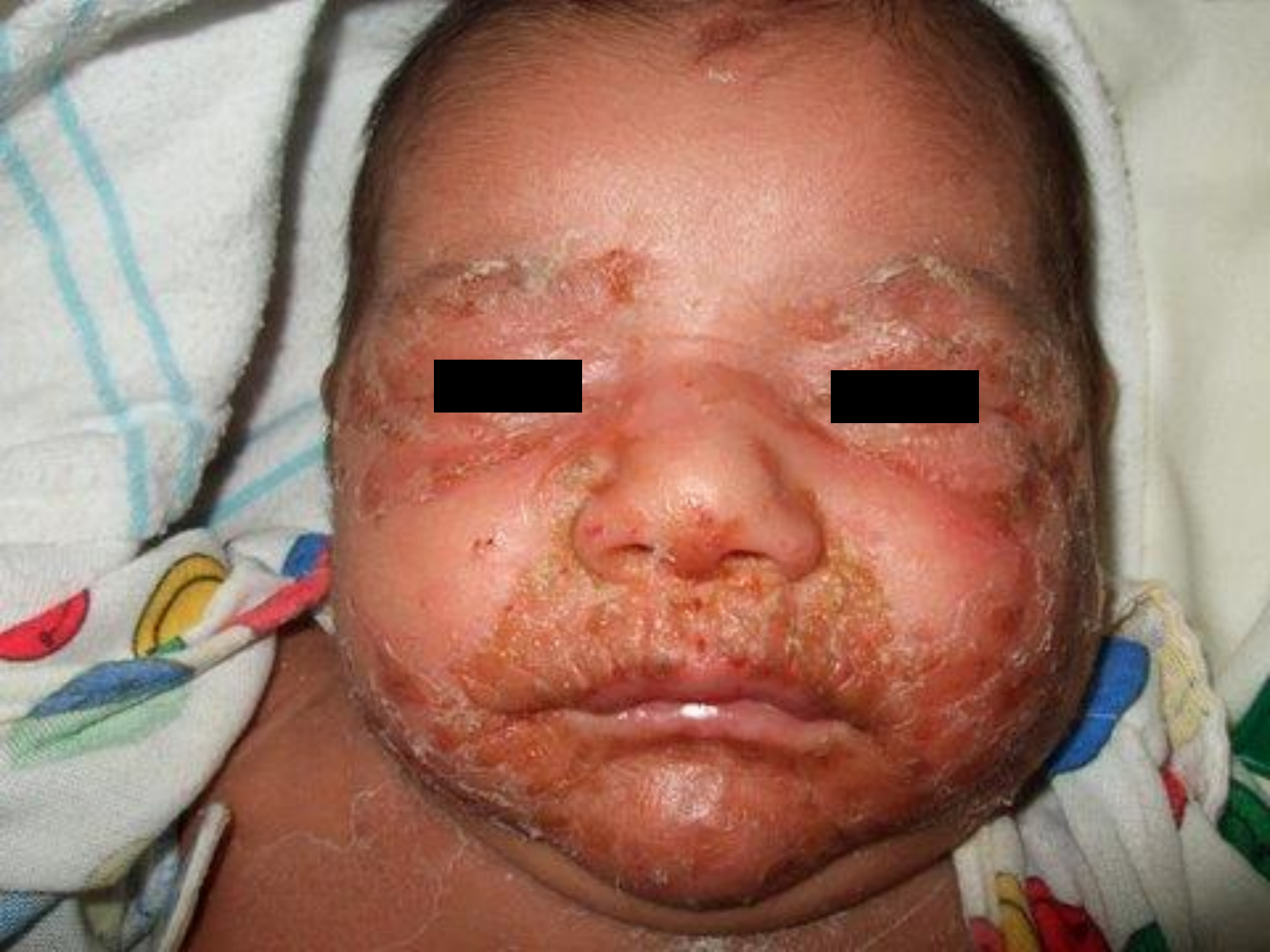
Scabies

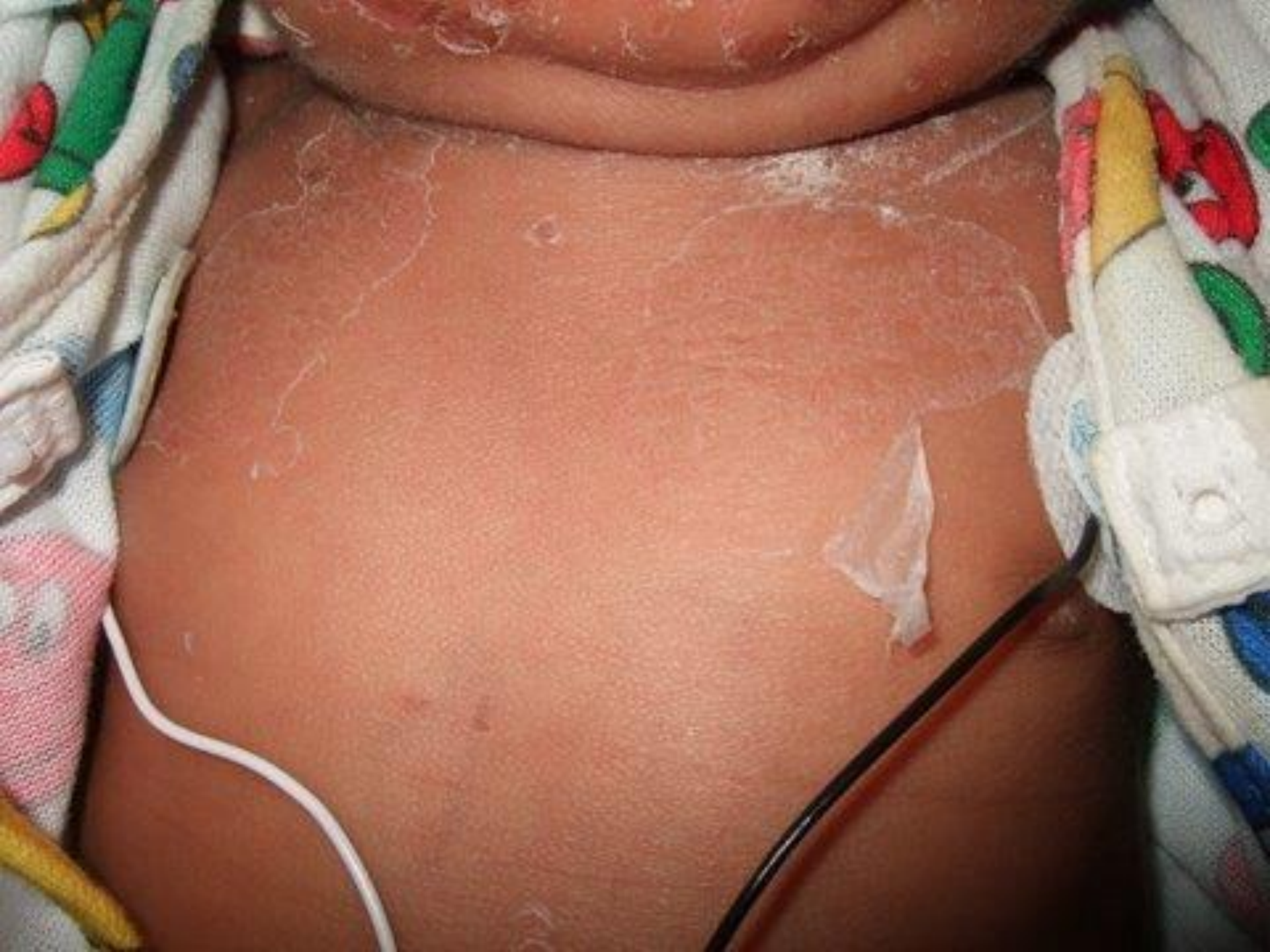
- Education!
  - Treat all household members/close contacts at least once
    - Even if asymptomatic!
  - Treat twice if itch/rash
  - Itching/rash may take several weeks to clear
    - Antihistamines
    - Mild topical steroid

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

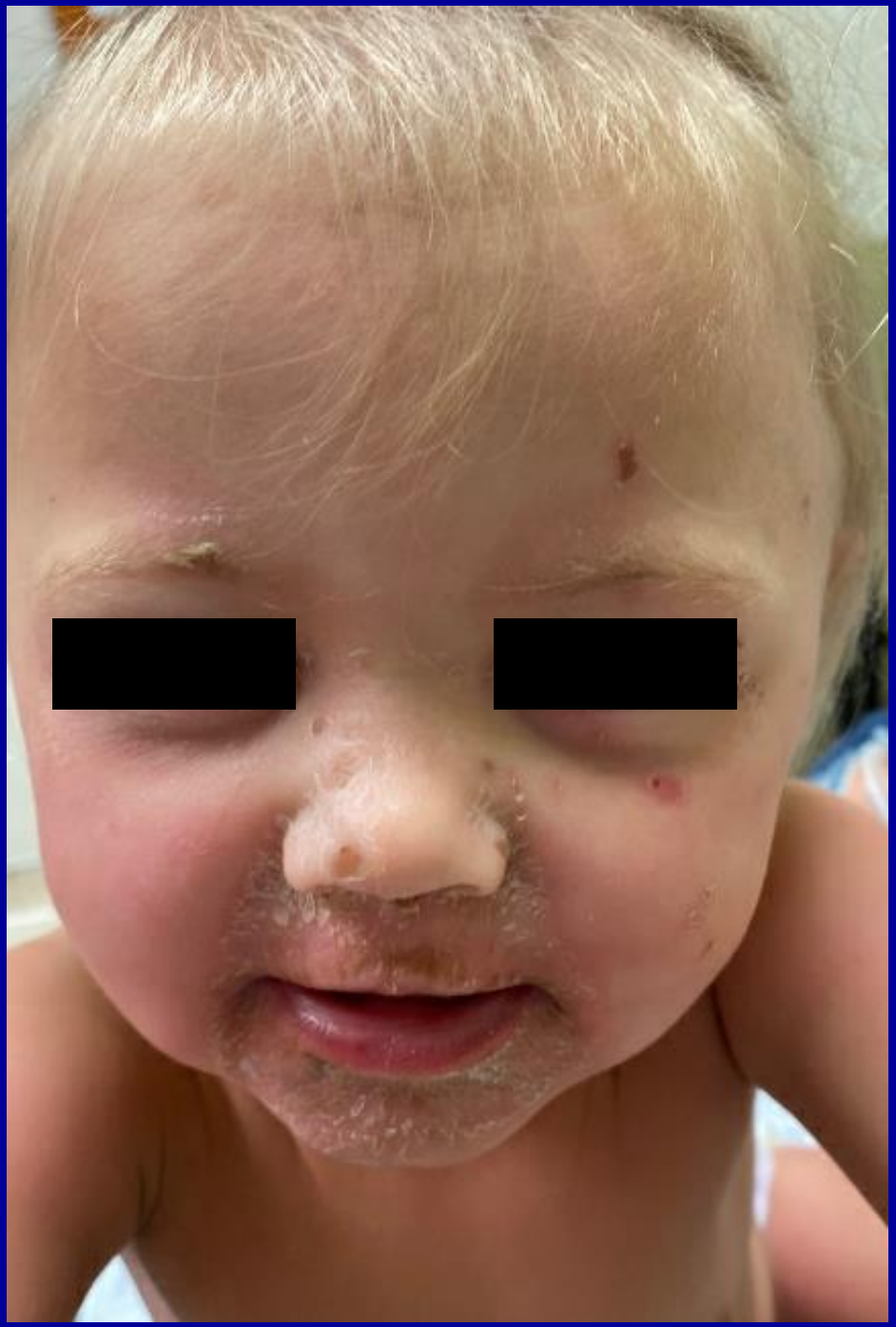
Handler MZ et al. J EurAcad Dermatol Venerol. 2014 Nov; 28(11):1418-23.

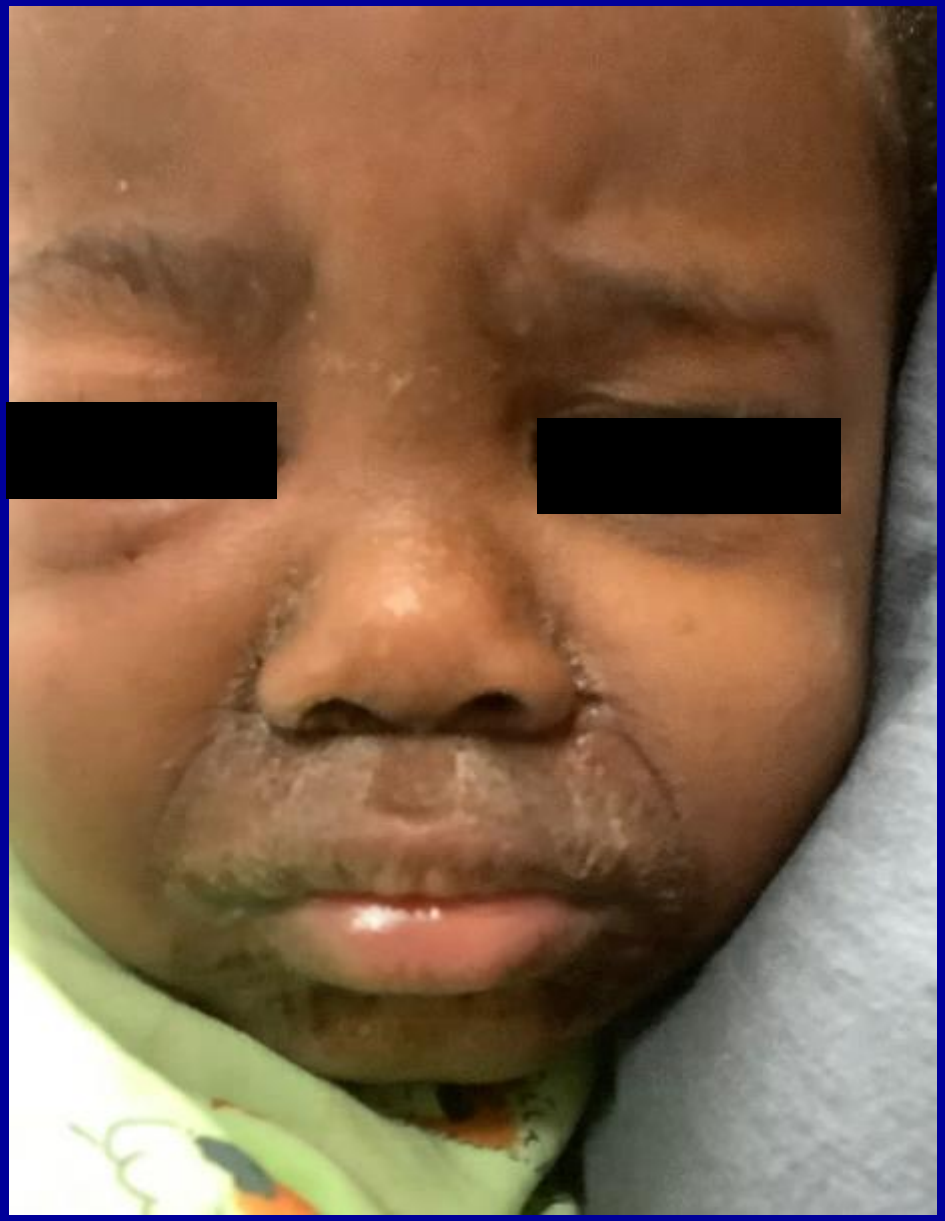
SSSS

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

SSSS

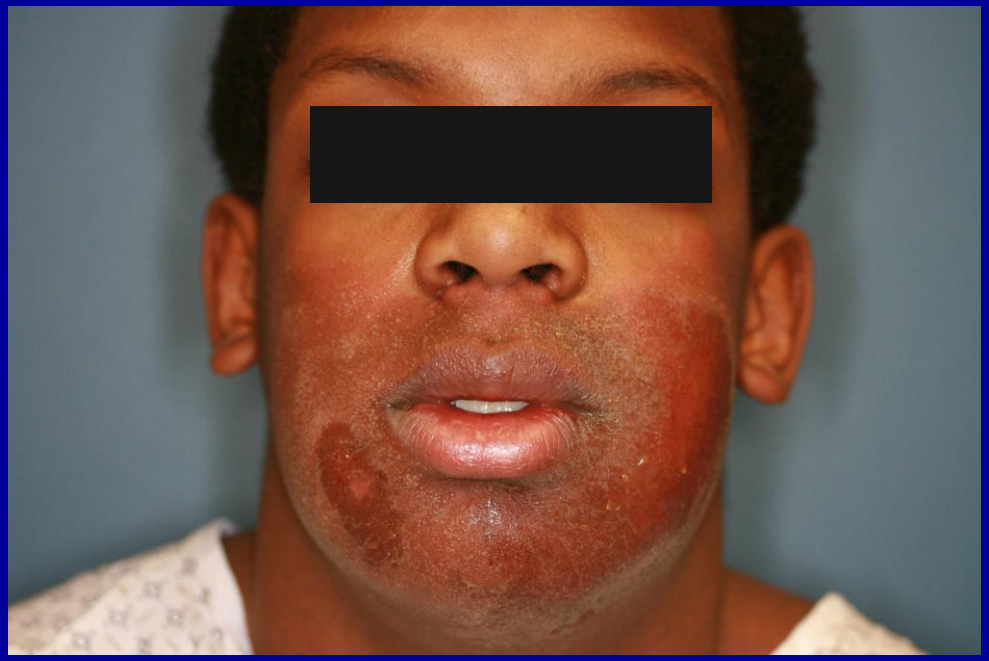
- Treatment
  - Clindamycin
  - PCNase resistant PCN
  - Cephalosporin
  - MRSA: vancomycin
- Supportive care
  - IVF’s
  - Pain control
  - Wound care
    - Gentle cleansing, soaks, emollient





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

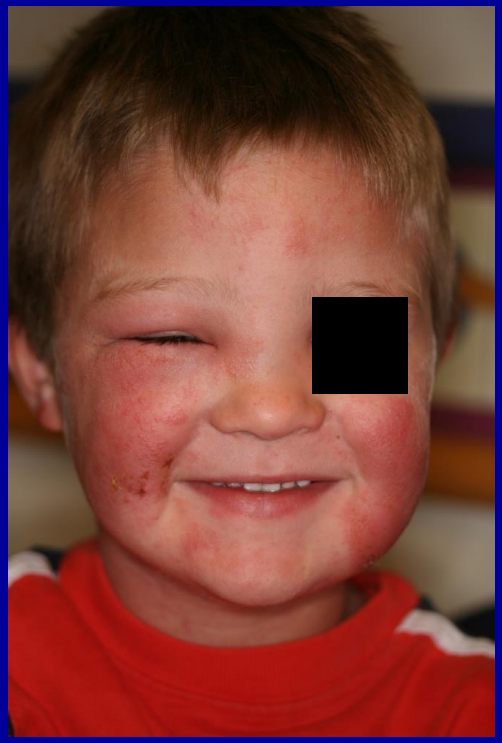
Bacterial Cellulitis

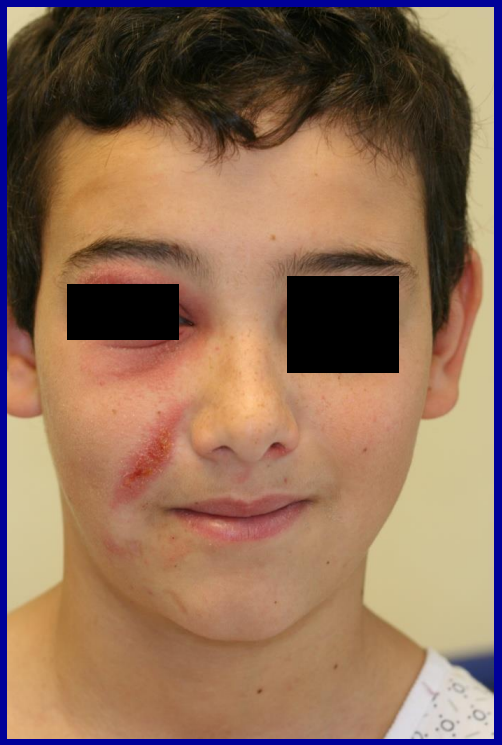
- Factors that may be helpful
  - Tenderness/pain prominent
  - Borders less sharply defined
  - Malaise/fever
  - Elevated wbc
  - Child looks sicker
    - Especially if facial

Treatment of ACD

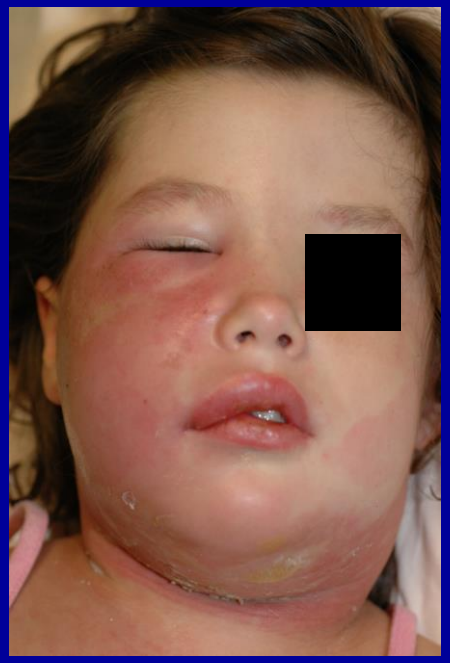
- Systemic steroids
  - 1-2 mg/kg/day (max of 60 mg/day)
  - Slow taper
    - 10-14 days
  - Domeboro's soaks
  - Bland emollient

ACD



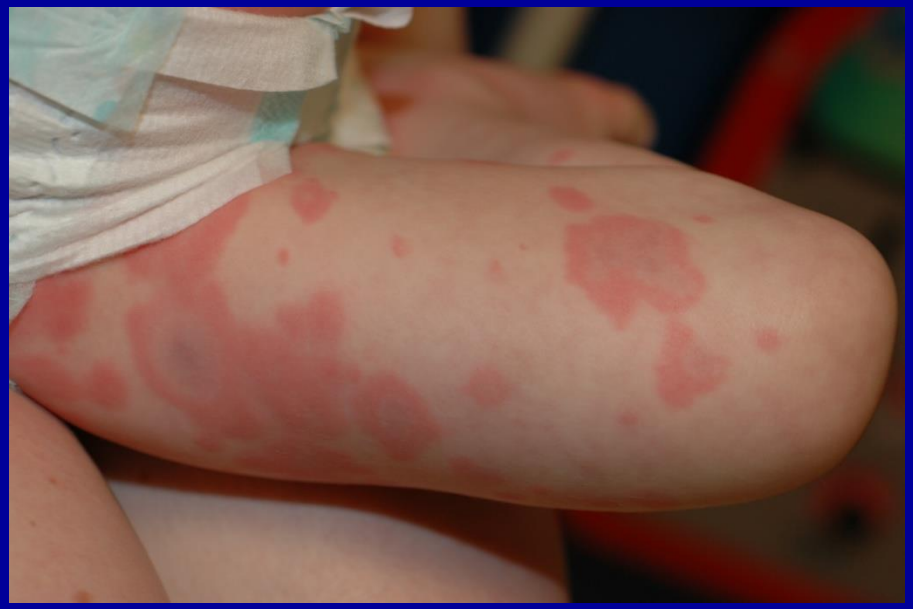


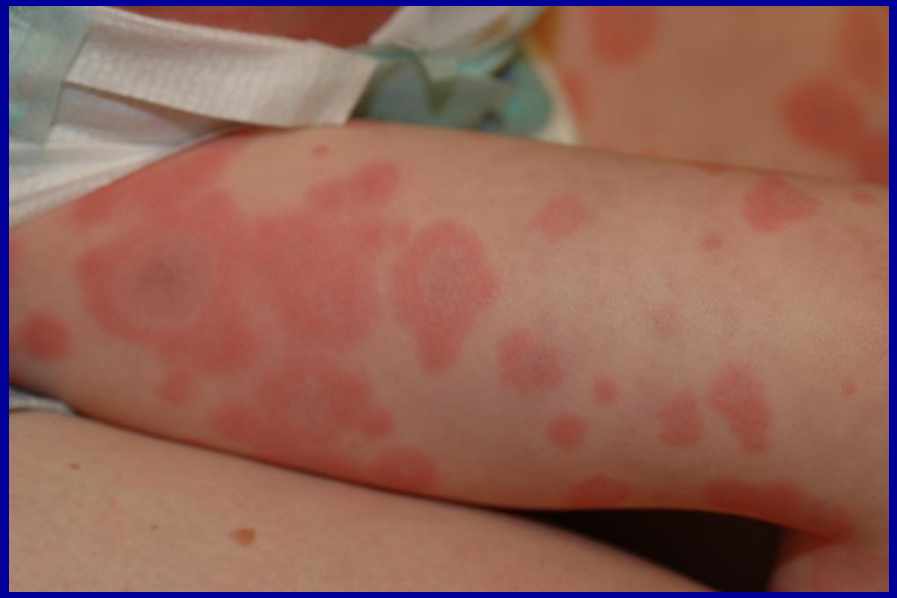
Facial Cellulitis

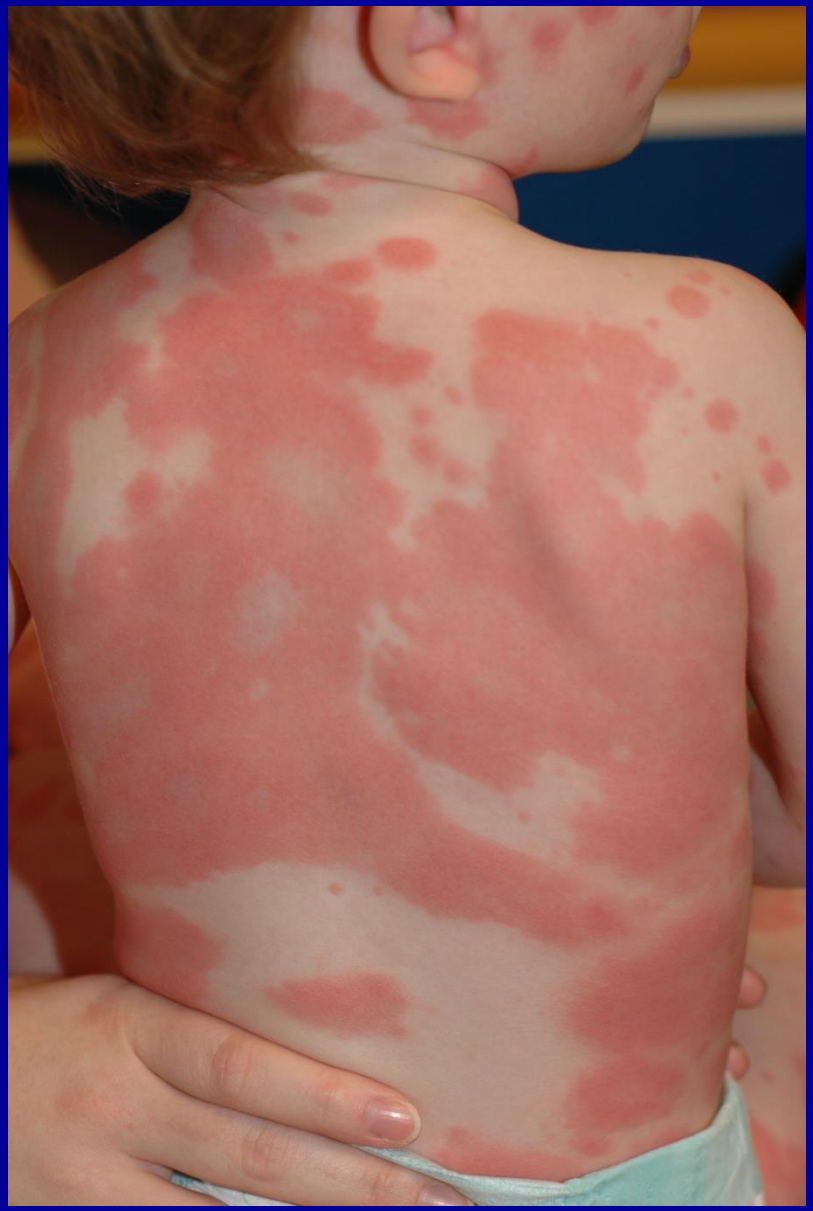


Case #5

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







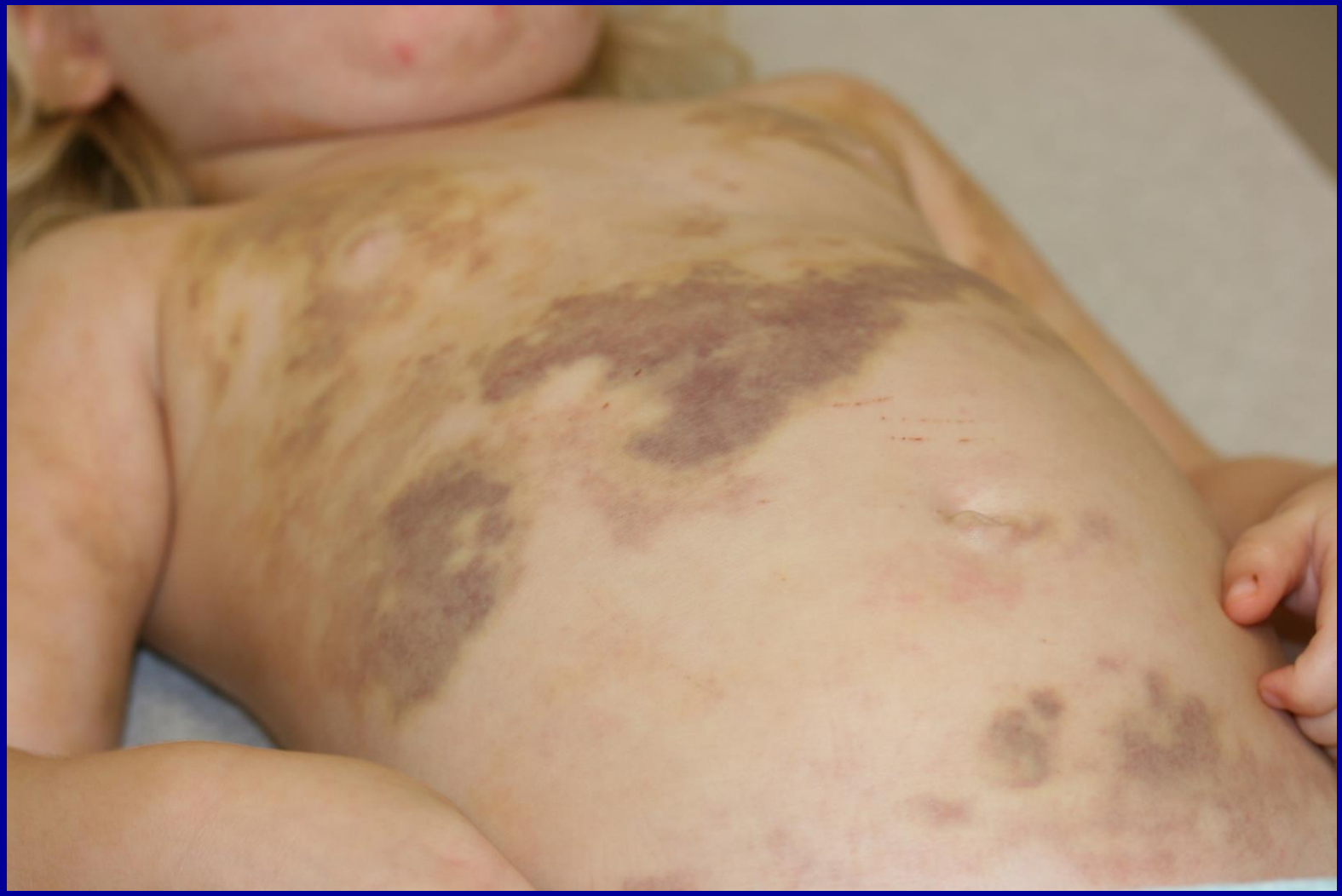
Diagnosis?

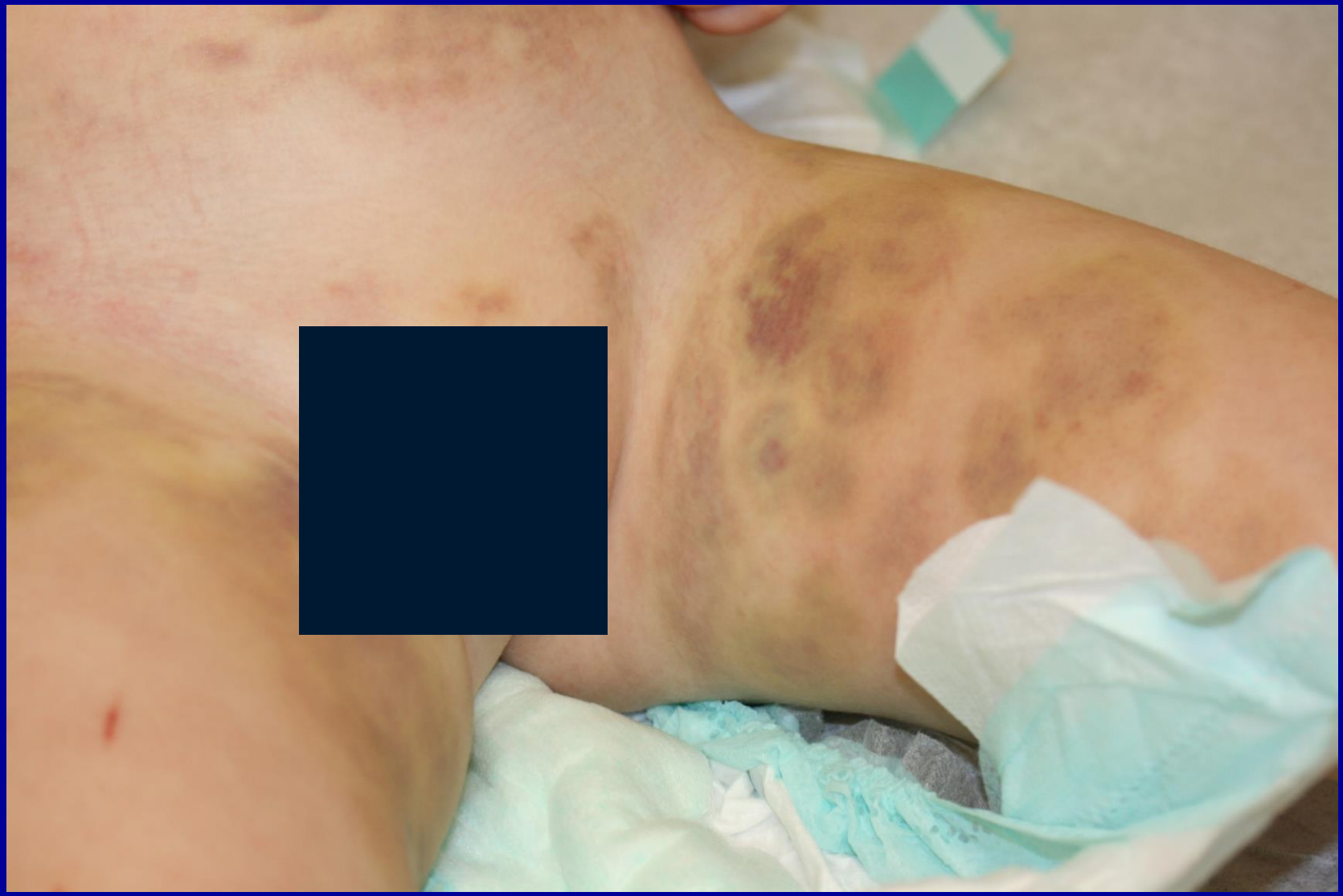
a) Erythema multiforme
b) Stevens Johnson syndrome
c) Urticaria
d) “Serum sickness”

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"

Shah KN et al. Pediatrics 2007 May; 119(5):e1177-83.





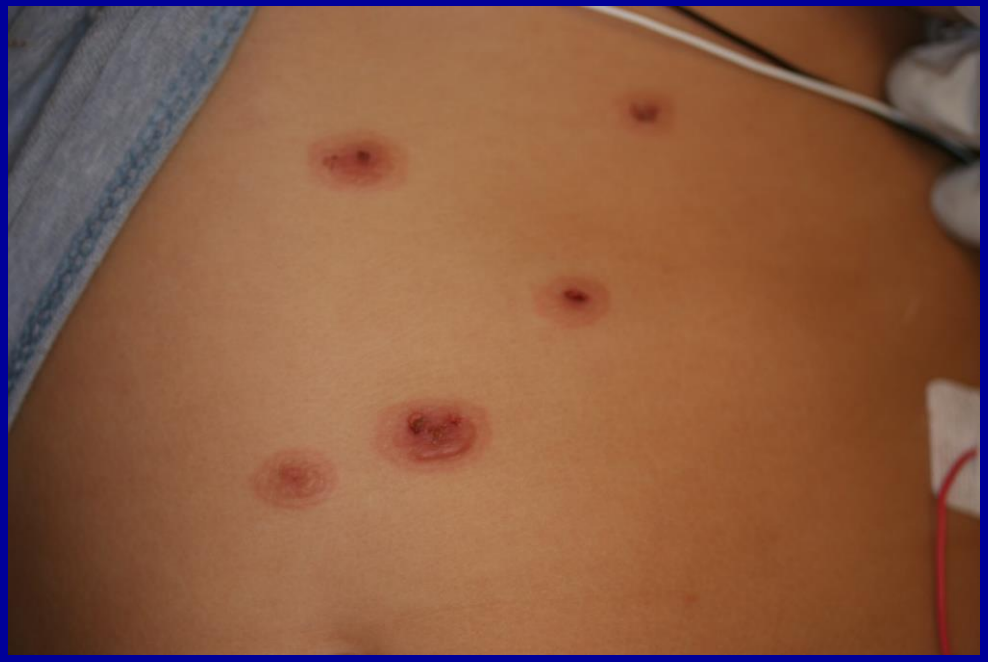
Urticaria

- 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

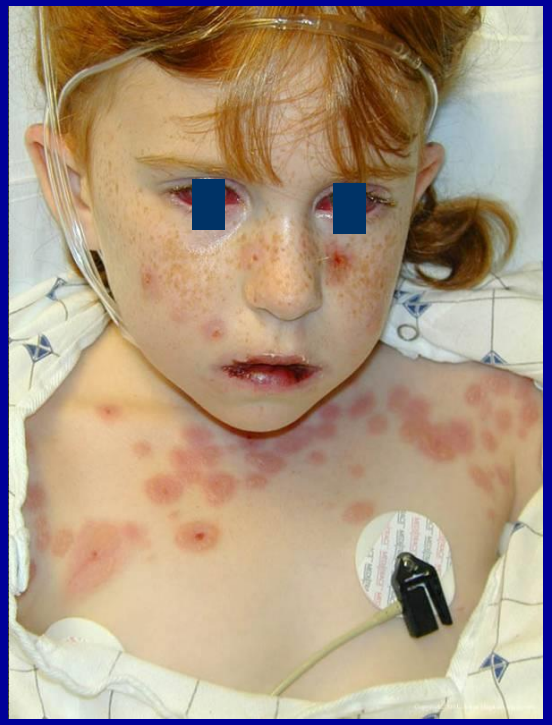
Erythema Multiforme

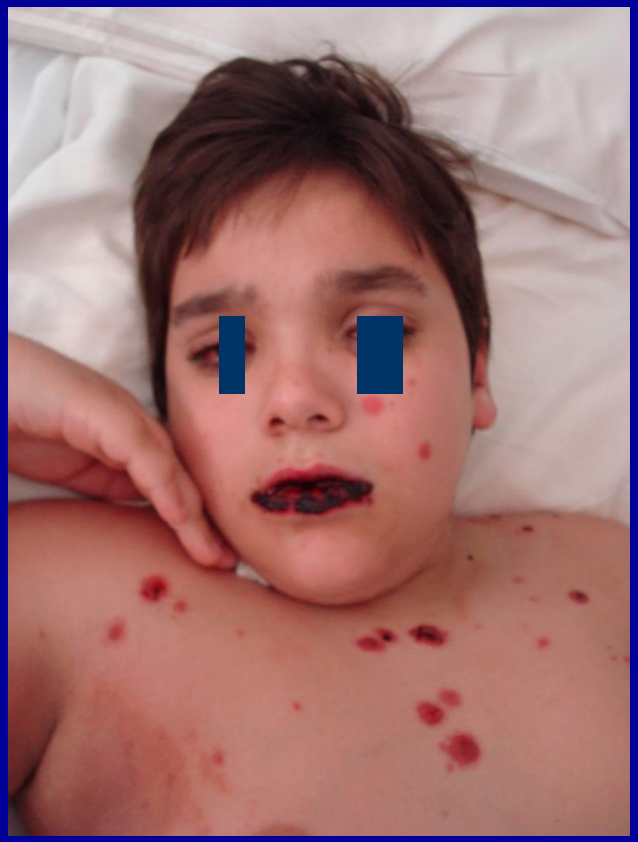
- Up to 50% with oral lesions (mild)
  - Swelling/crusting of lips
  - Erosions on tongue/buccal mucosa
    - Must have 2 or more mucous membranes for SJS!
- Lesions heal over 2-3 weeks
  - Post-inflammatory pigmentary changes

Erythema Multiforme

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

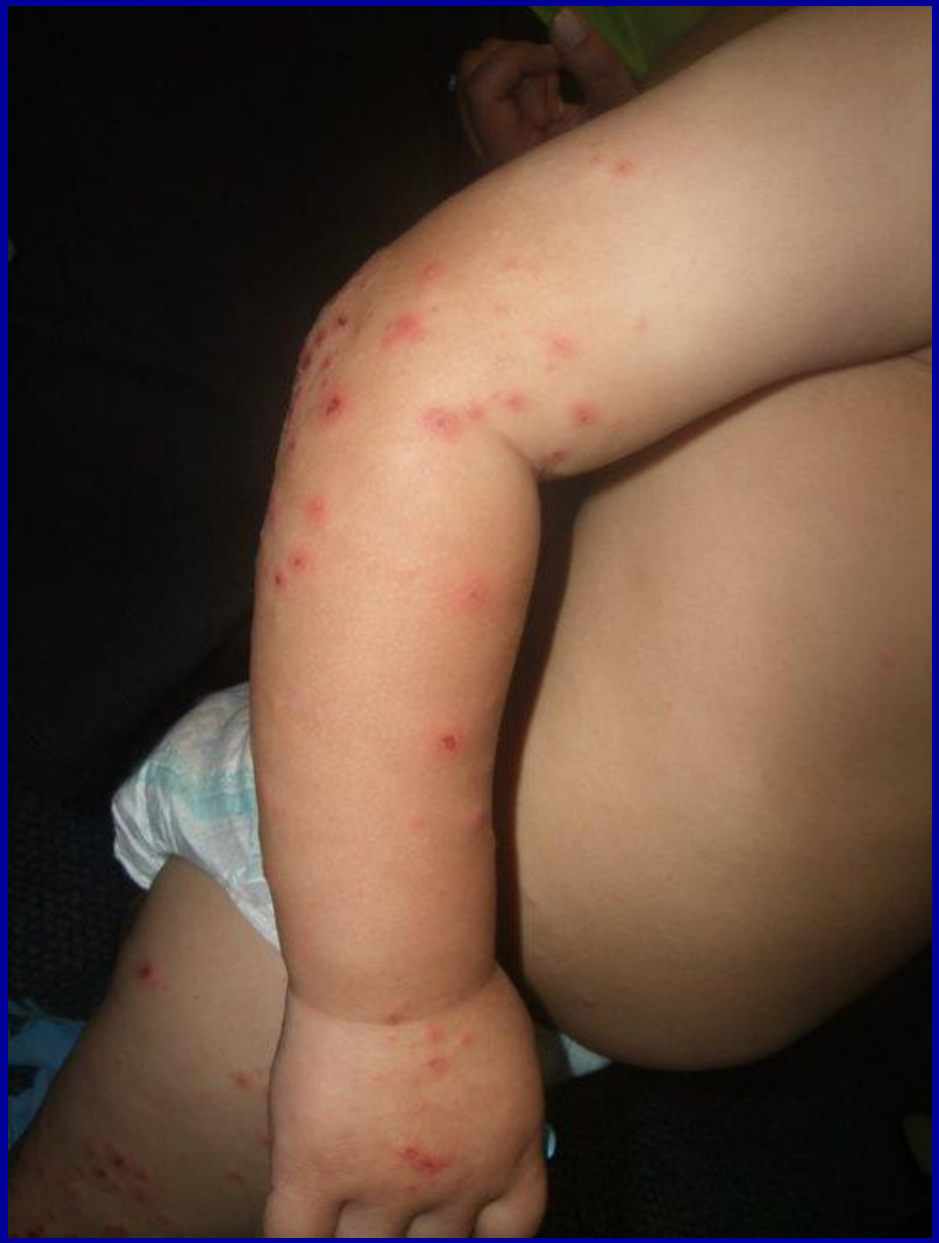
Stevens Johnson Syndrome (SJS)

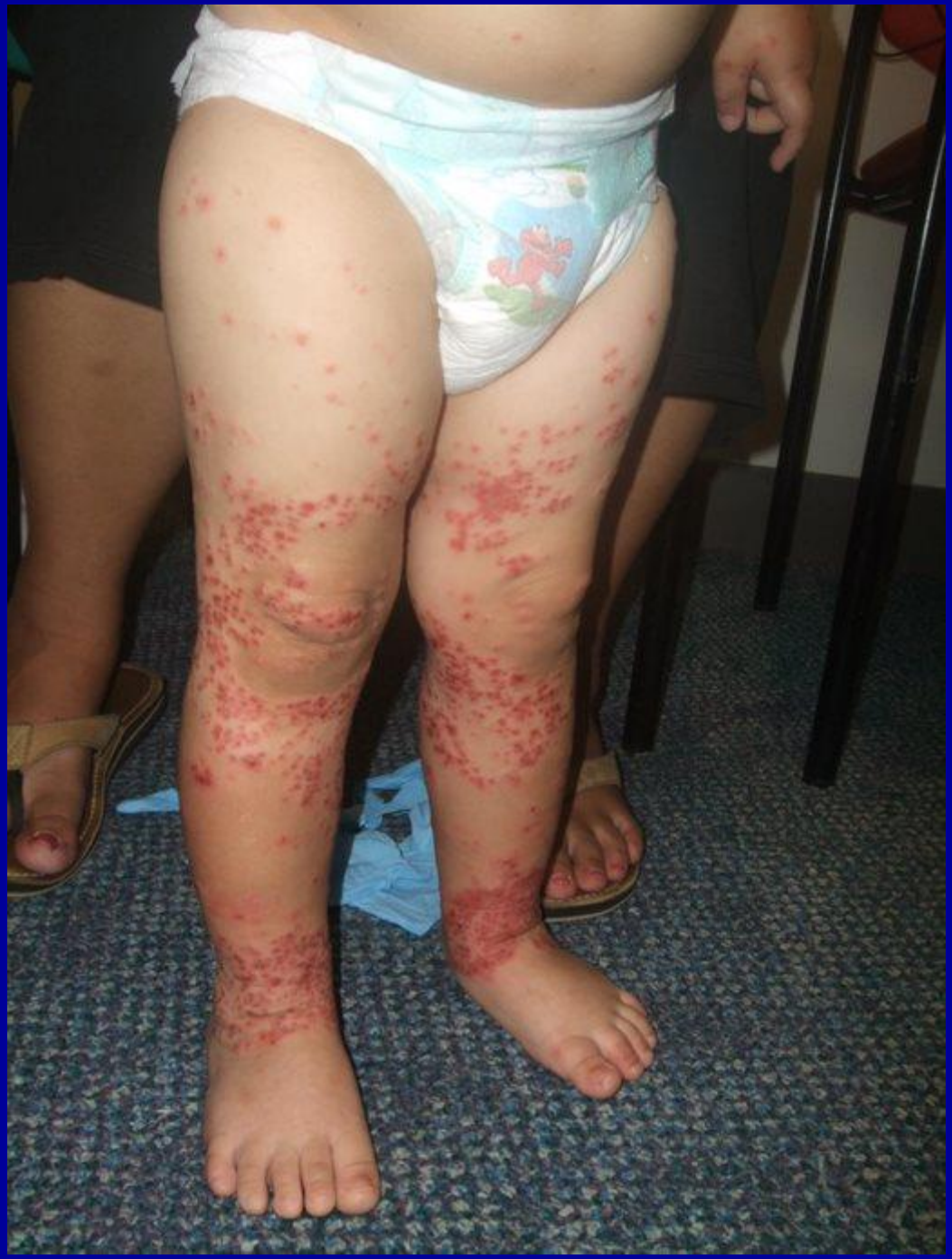


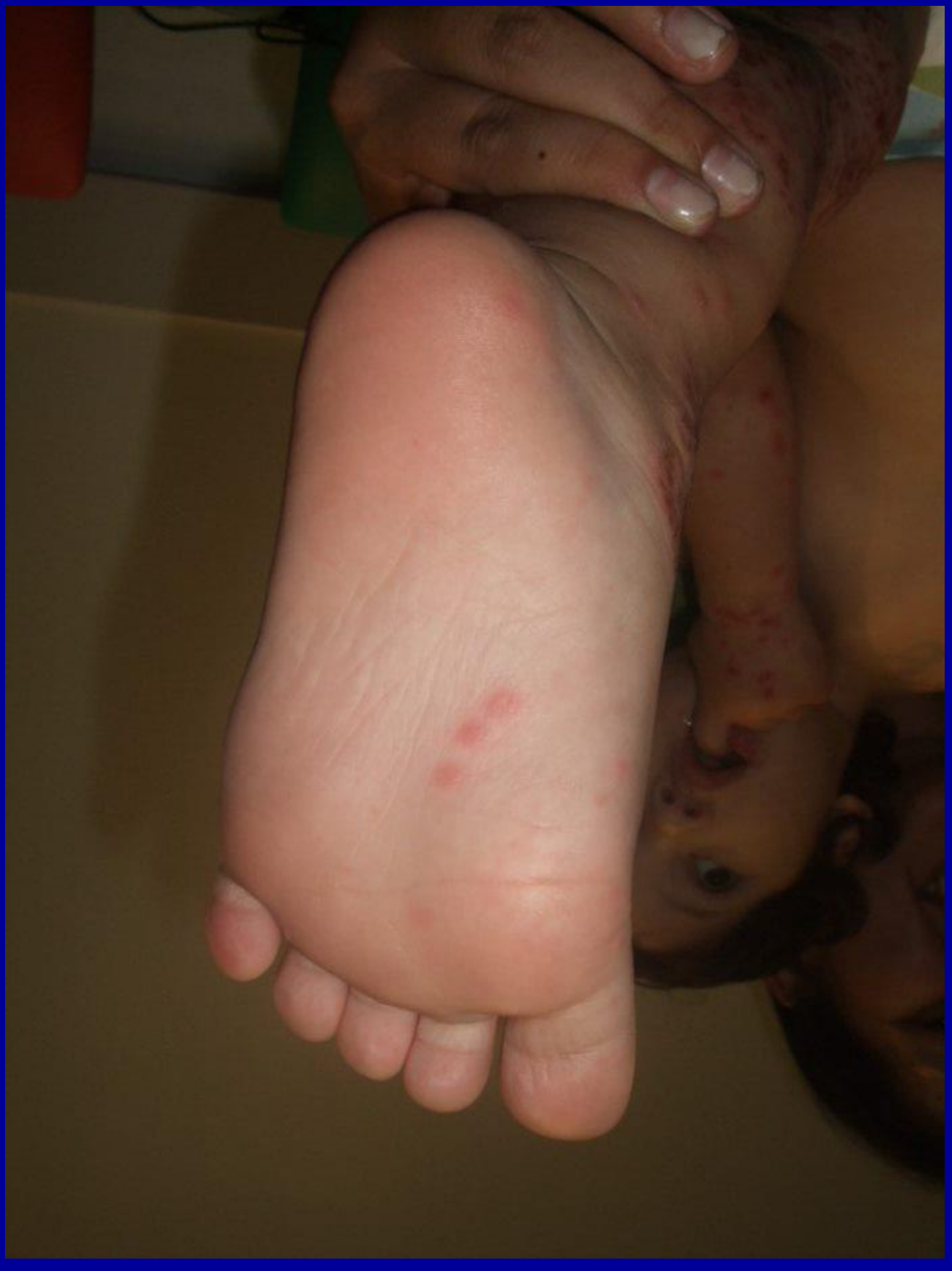


Case #6

- 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”

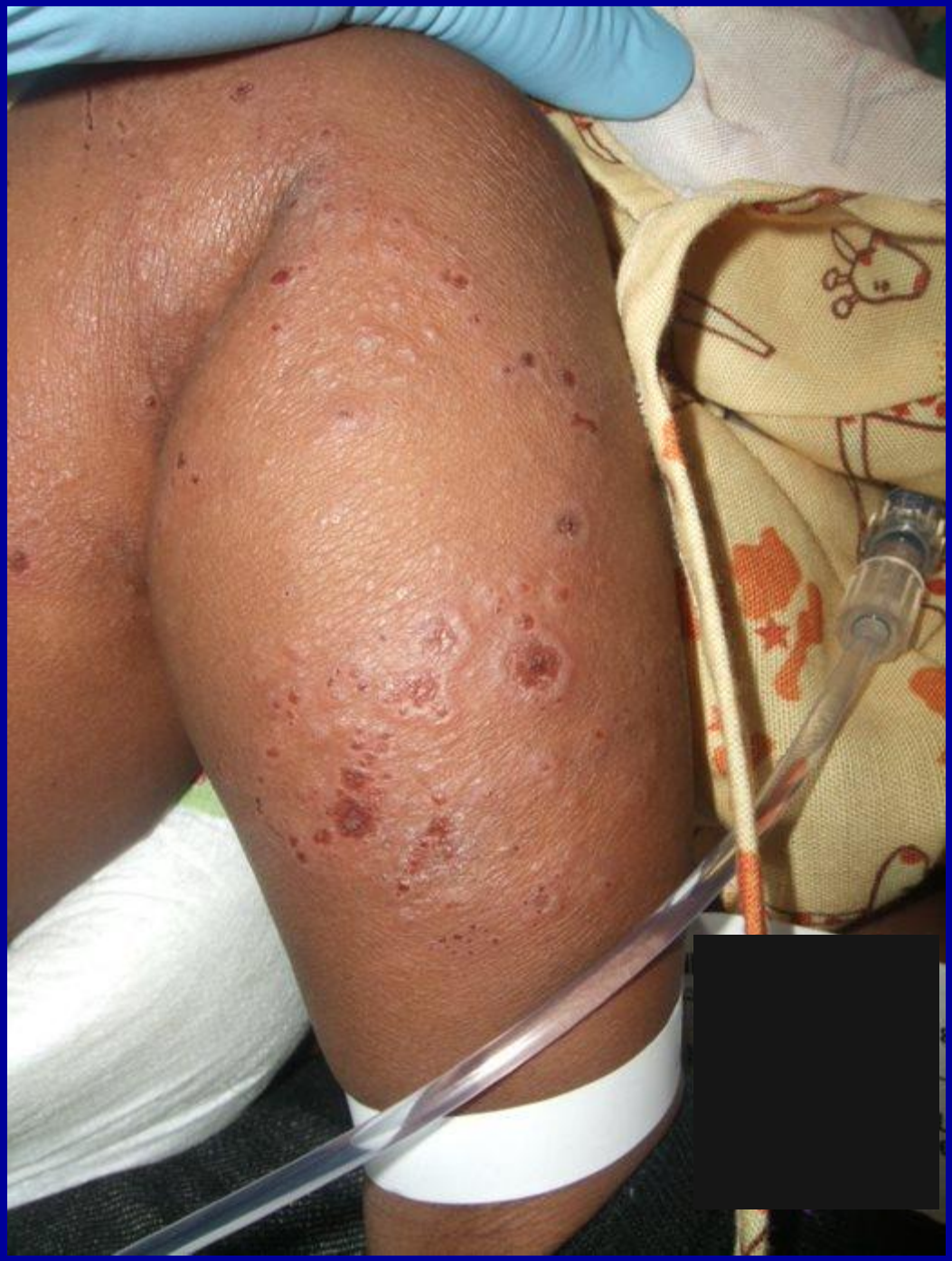
Ventarola D et al. Clinics in Dermatology 2015 (33): 340-346.

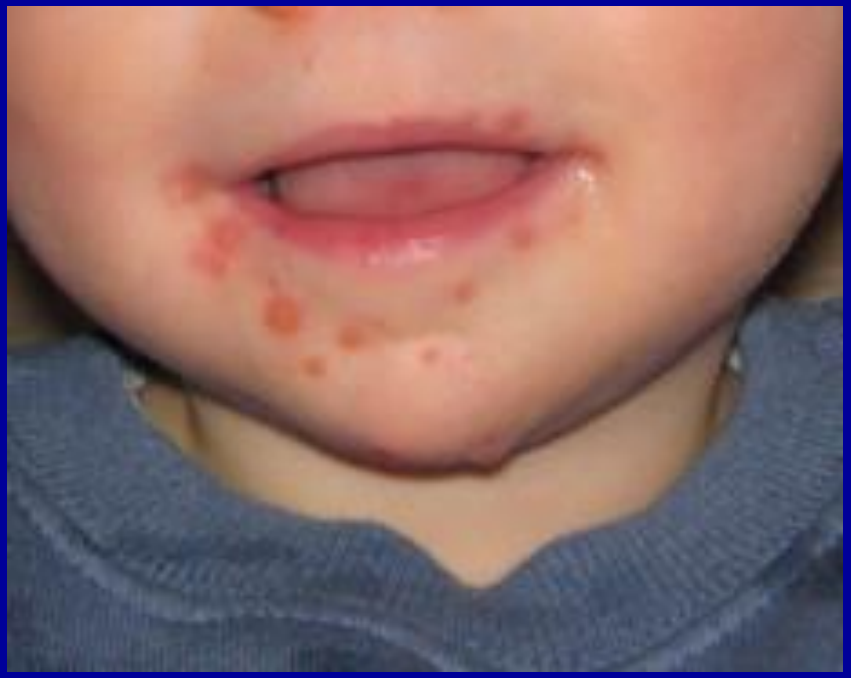
Atypical HFM

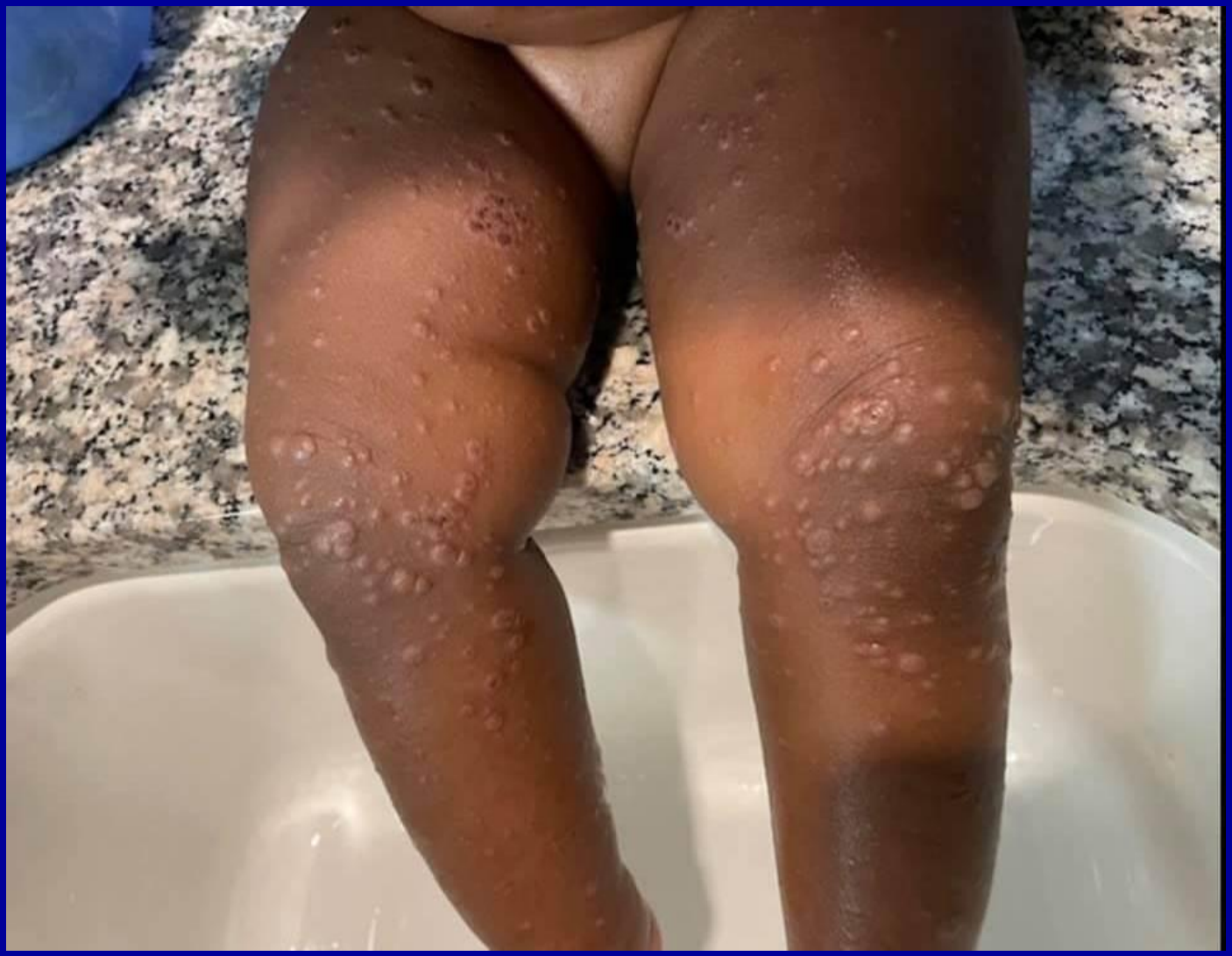
- Transmission
  - Fecal/oral, oral/oral, respiratory
- Incubation
  - 3 to 6 days
- Viral shedding
  - Stool
  - 4 to 8 weeks

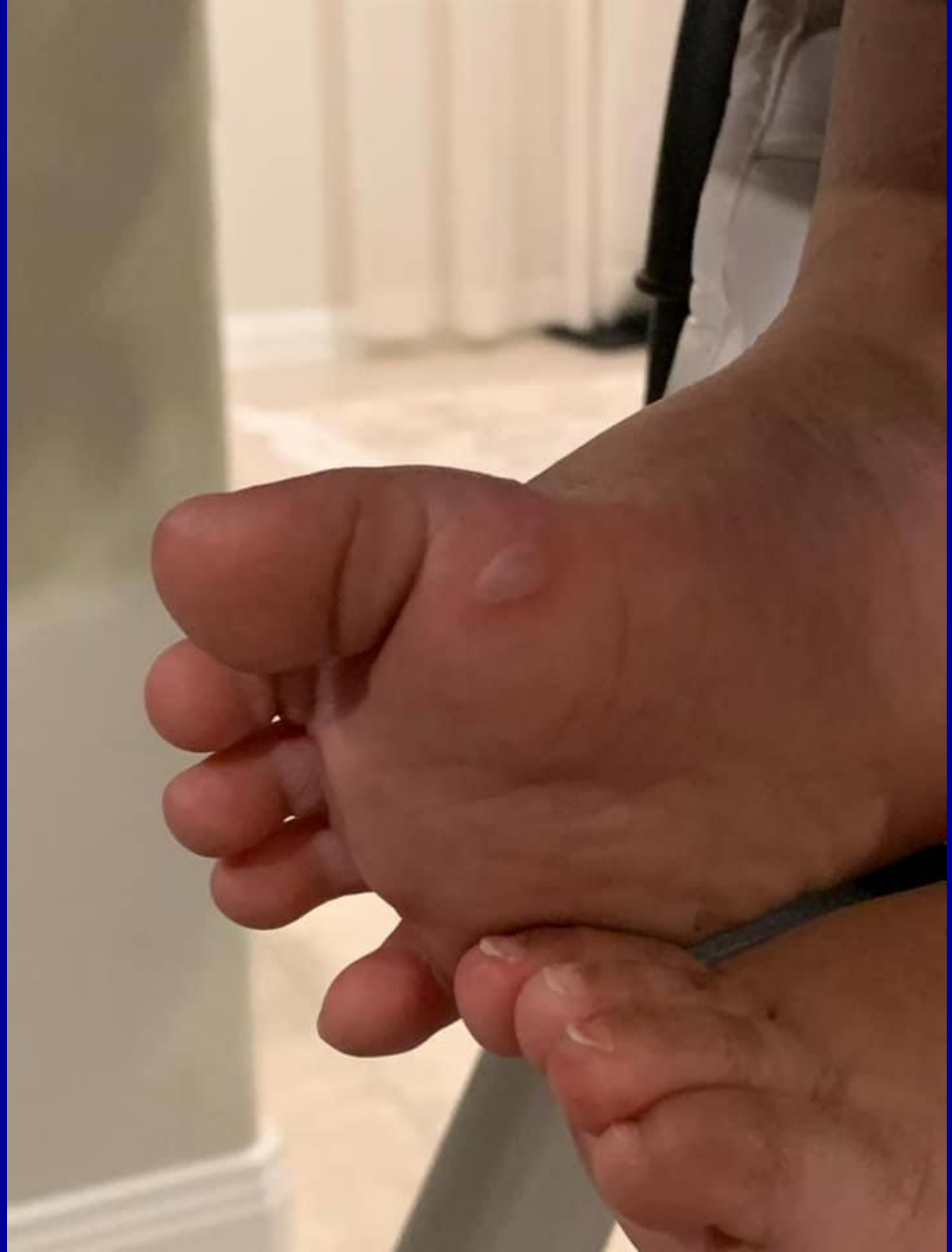
Atypical HFM

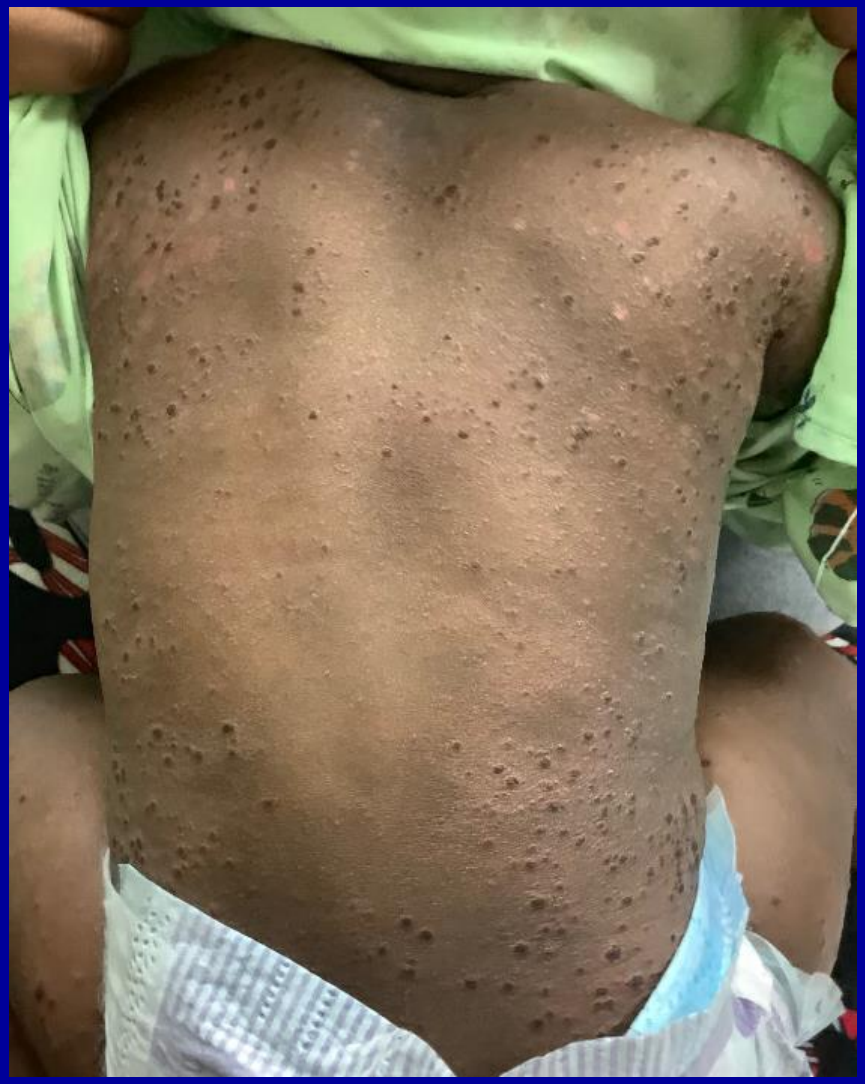
- Course
  - 1 to 2 weeks
- Treatment
  - supportive

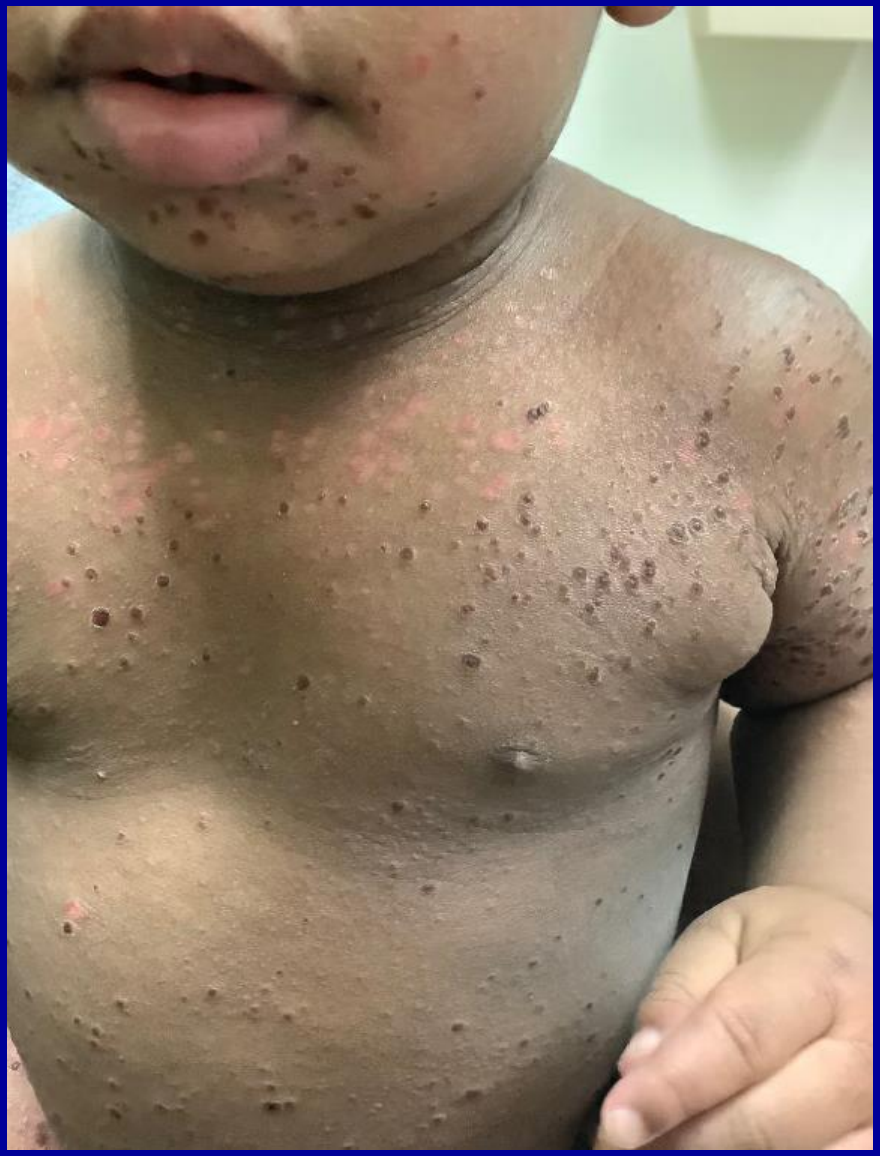






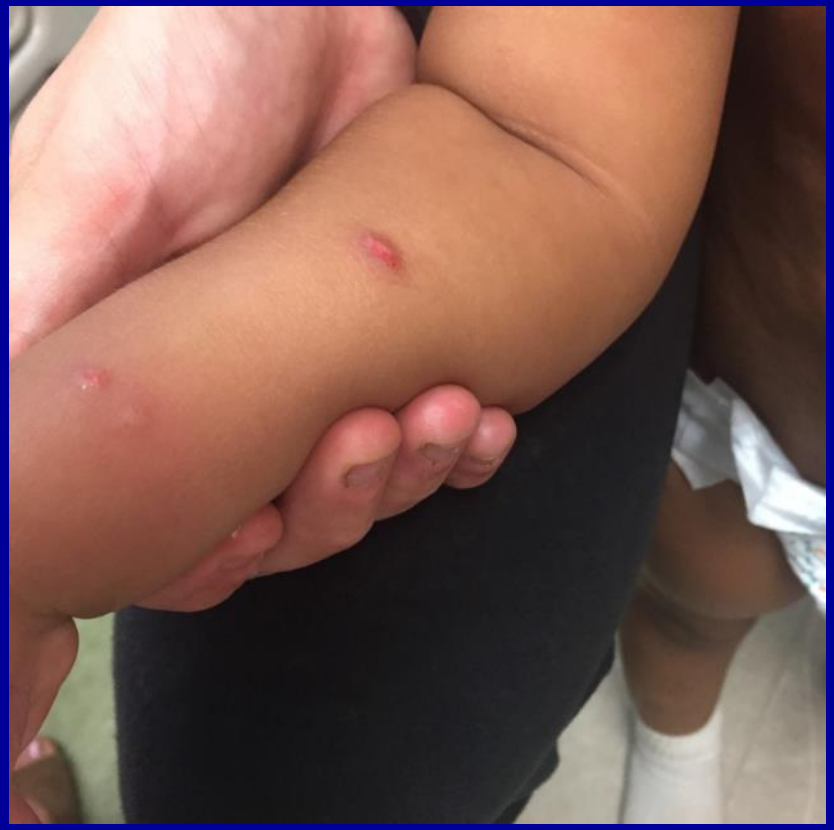


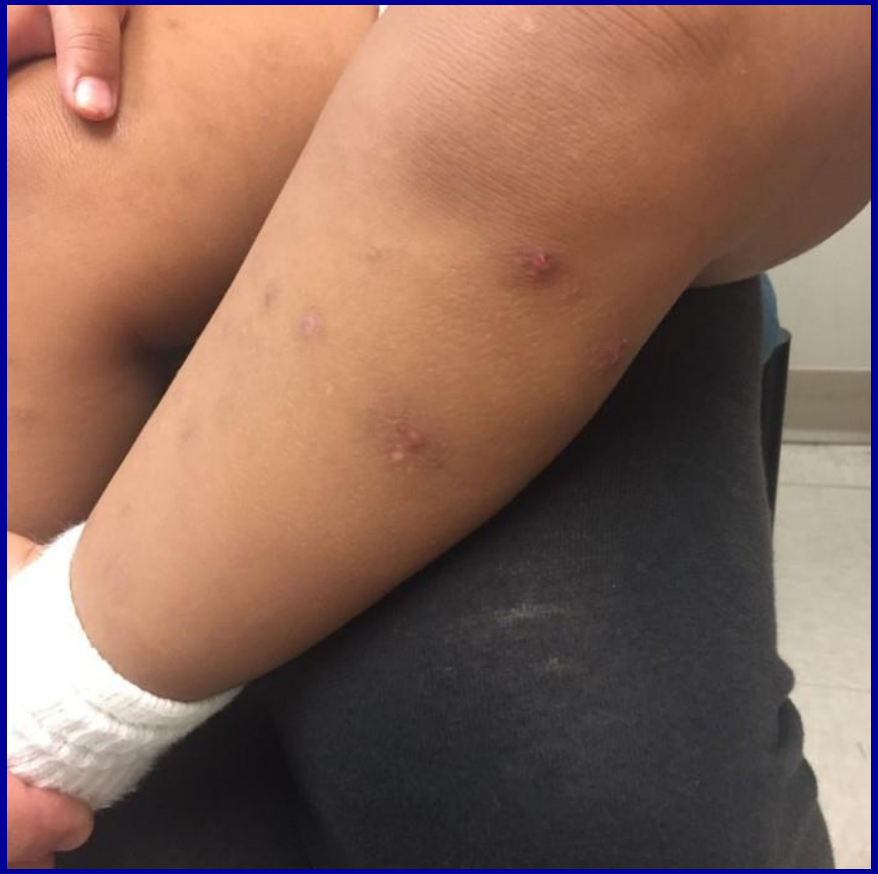


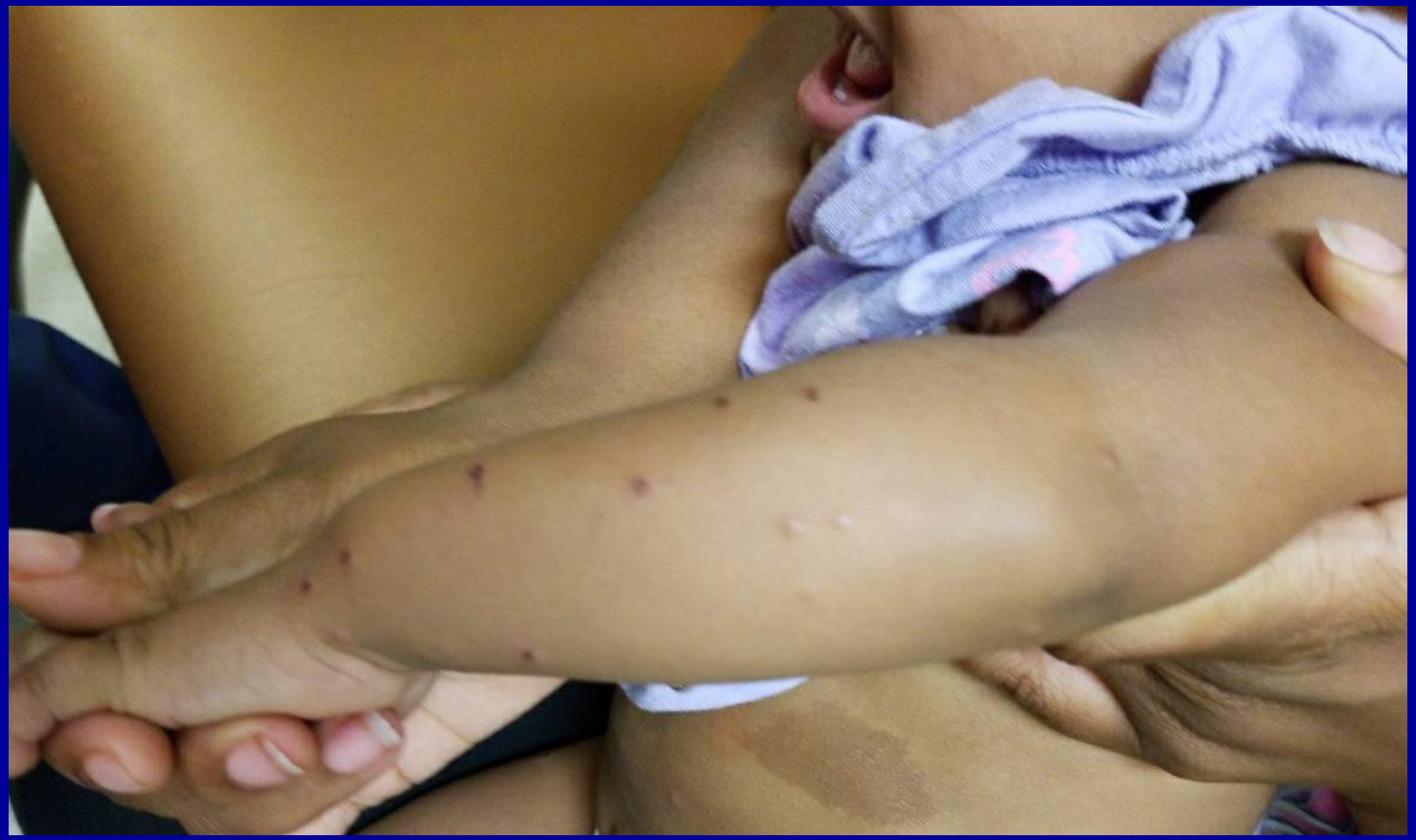


Case #7

- 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

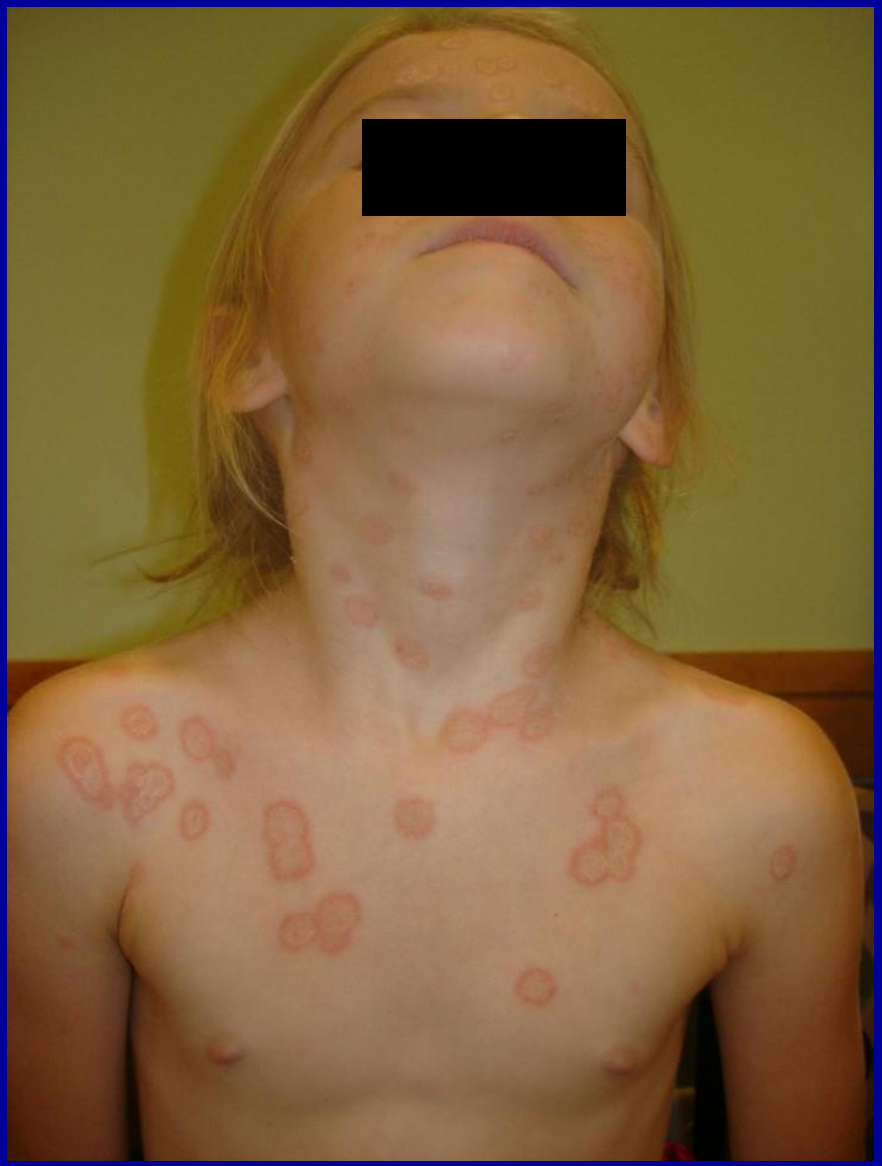
- Insect repellent
  - Picaridin vs. DEET
    - Off Family Care™ with picaridin
- Antihistamines
  - Cetirizine in am
  - Benadryl/Hydroxyzine qhs prn

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

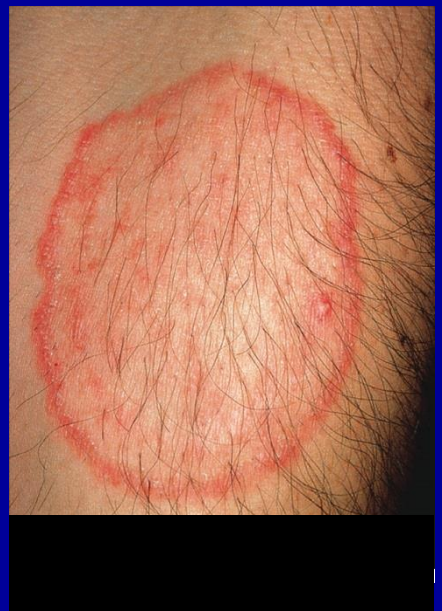
Tinea Corporis

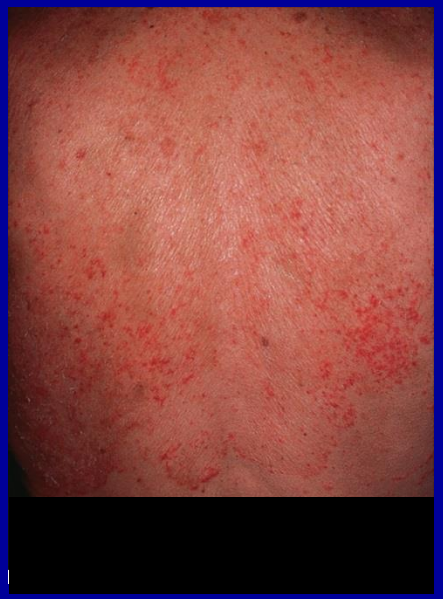
- Superficial fungal infection of skin
- Transmission via contact with infected person or animal
- Dermatophytes
  - Microsporum
  - Trichophyton

Paller A, Mancini A. 2006. Hurwitz Clinical Pediatric Dermatology. Philadelphia: Elsevier. pp. 449-463.

Clinical Manifestations

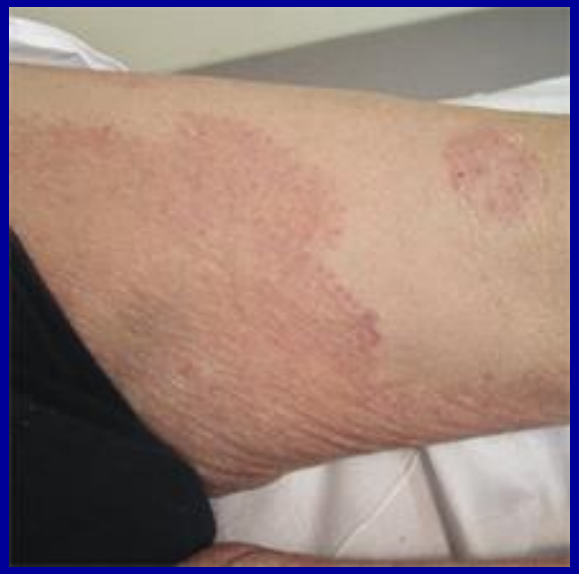
- Classic: one or more well-defined annular scaly erythematous plaques with central clearing and a scaly, vesicular, papular, or pustular border





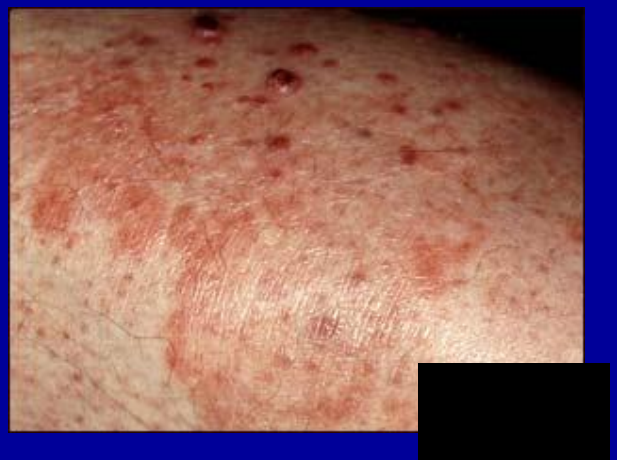
Tinea Corporis (cont.)

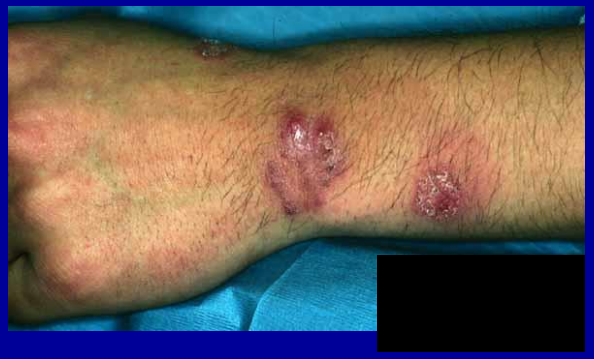
- Use of topical steroids may alter appearance
  - Tinea incognito



Majocchi's Granuloma

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





Diagnosis

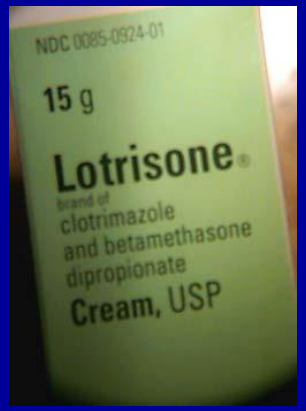
- Clinical presentation
  - History and physical examination
- KOH prep
  - Scrape active border
- Fungal culture

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	+		+

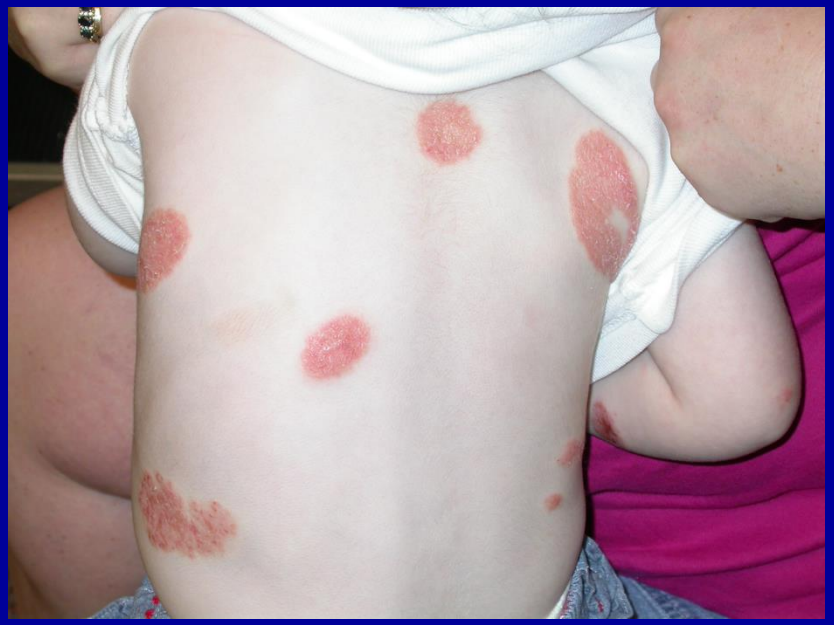
Combination Products



- 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

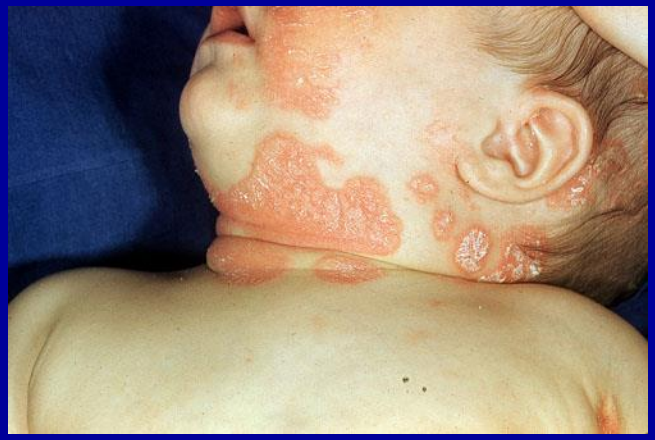
Nummular Atopic Dermatitis

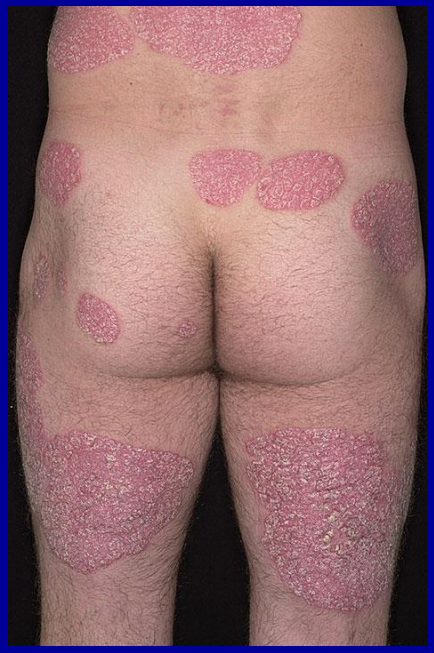
- Not annular!
- Very pruritic



Psoriasis

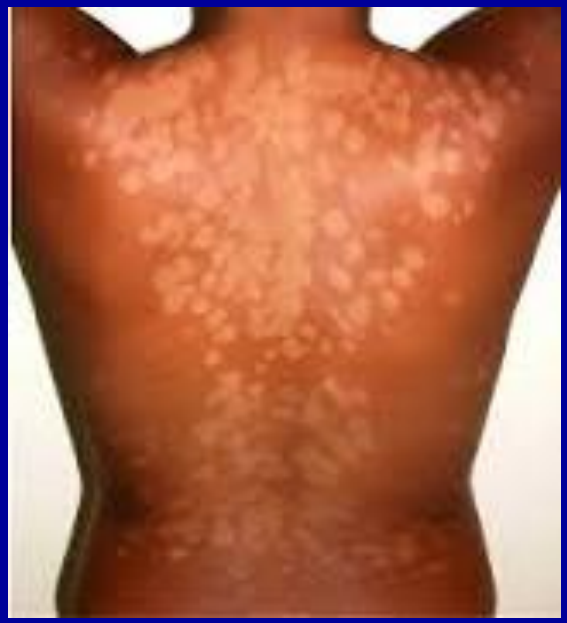
- “dull pink” erythema
- silvery or white micaceous scale
- nummular lesions
- distribution





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

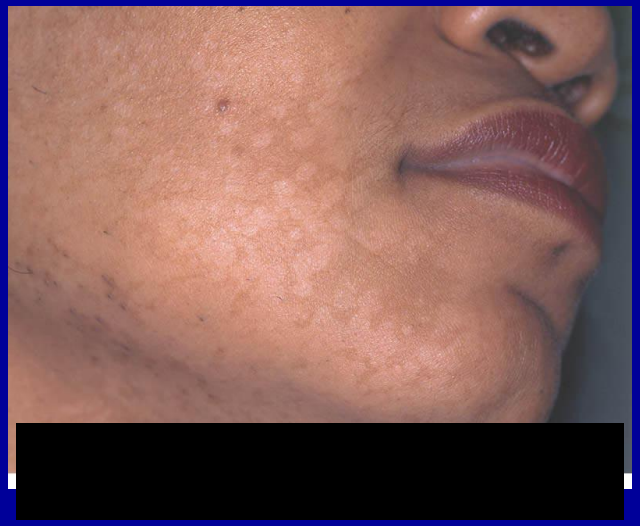
Tinea versicolor

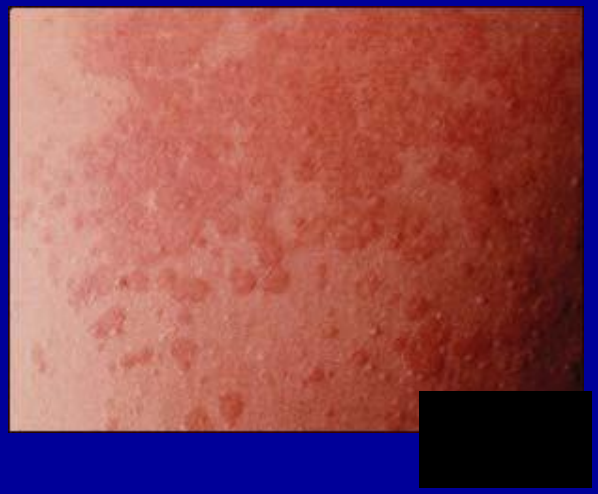
- Pityriasis versicolor
- Common superficial fungal disorder of skin
- Caused by yeast forms of dimorphic fungus *Malassezia furfur*
  - *Pityrosporum orbiculare, Pityrosporum ovale*
- Normal skin flora
- Usually presents in adolescence

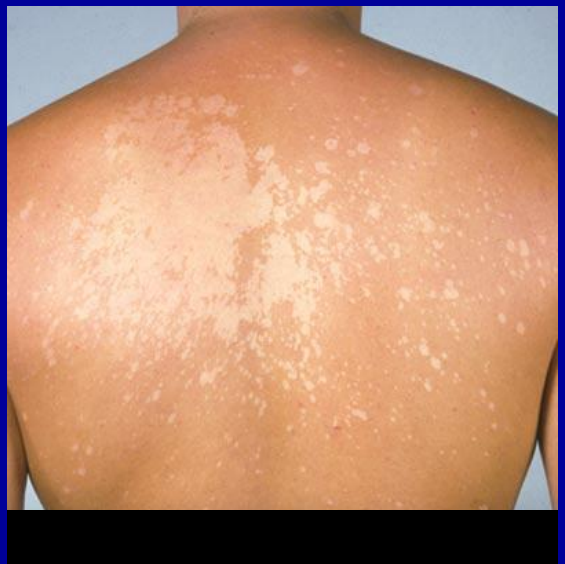
Clinical Manifestations

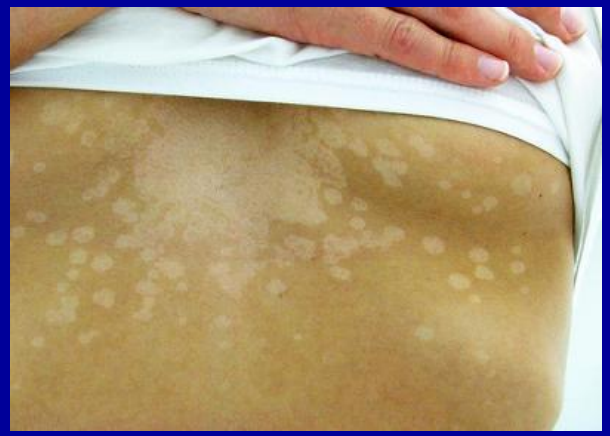
- Multiple scaling, oval macules, patches and thin plaques over upper trunk, proximal arms, sometimes peripheral face and neck
- Hyper- or hypopigmented
  - Azelaic acid production
- More prominent in summer

Tinea versicolor



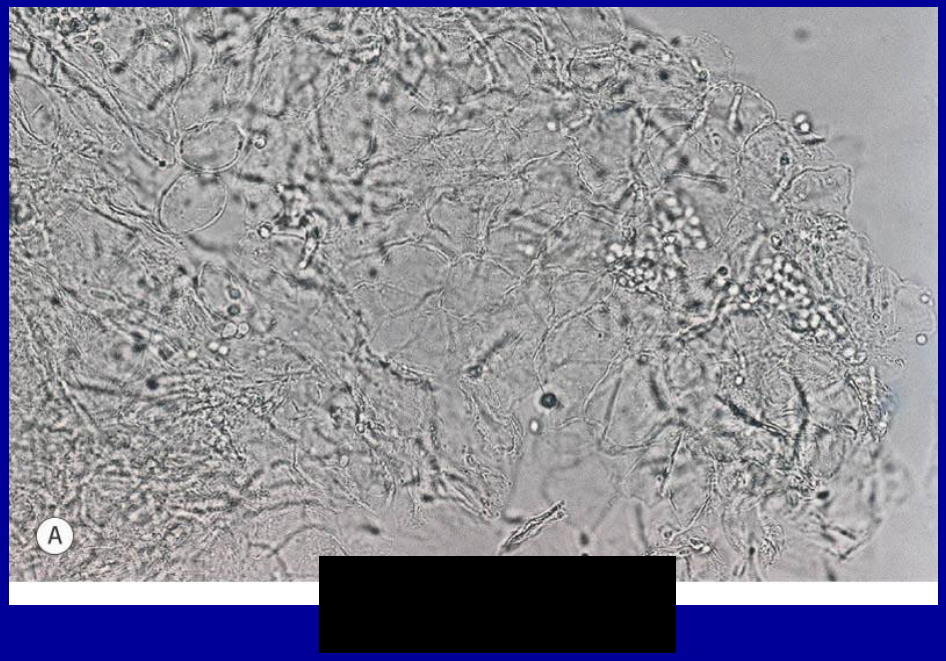






Making the Diagnosis

- 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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