Do's and Don'ts in Pediatric Dermatology

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Disclosures

- Off label use of treatments will be discussed
- Advisor for LEO Pharma
  - Taclonex use in children
  - Not relevant to this talk

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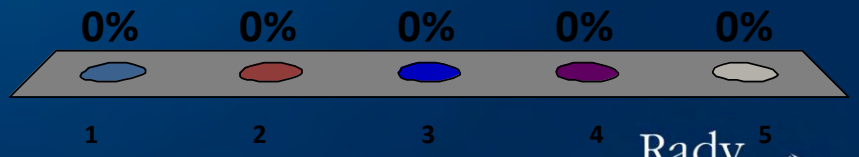
Inflammatory reactions to molluscum virus include all of the following, except:

1. Gianotti crosti like reaction
2. Id reaction
3. BOTE sign
4. Molluscum furunculosis
5. Molluscum dermatitis



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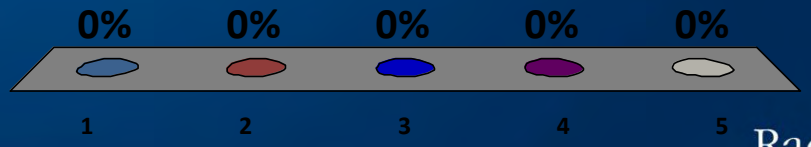
Tinea can be a distinguished from other annular dermatosis, like granuloma annulare, in that tinea lesions are characteristically:

1. Indurated
2. Have an elevated border
3. Are scaly
4. Are tender
5. Are itchy



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Tinea can be a distinguished form other than annular dermatosis like granuloma annulare, in that tinea lesions are characteristically:

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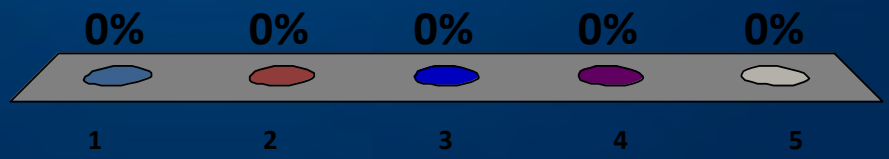
The most common cause of allergic contact dermatitis in children is:

1. Poison Ivy
2. Nickel
3. Latex
4. Peanuts
5. Fragrances



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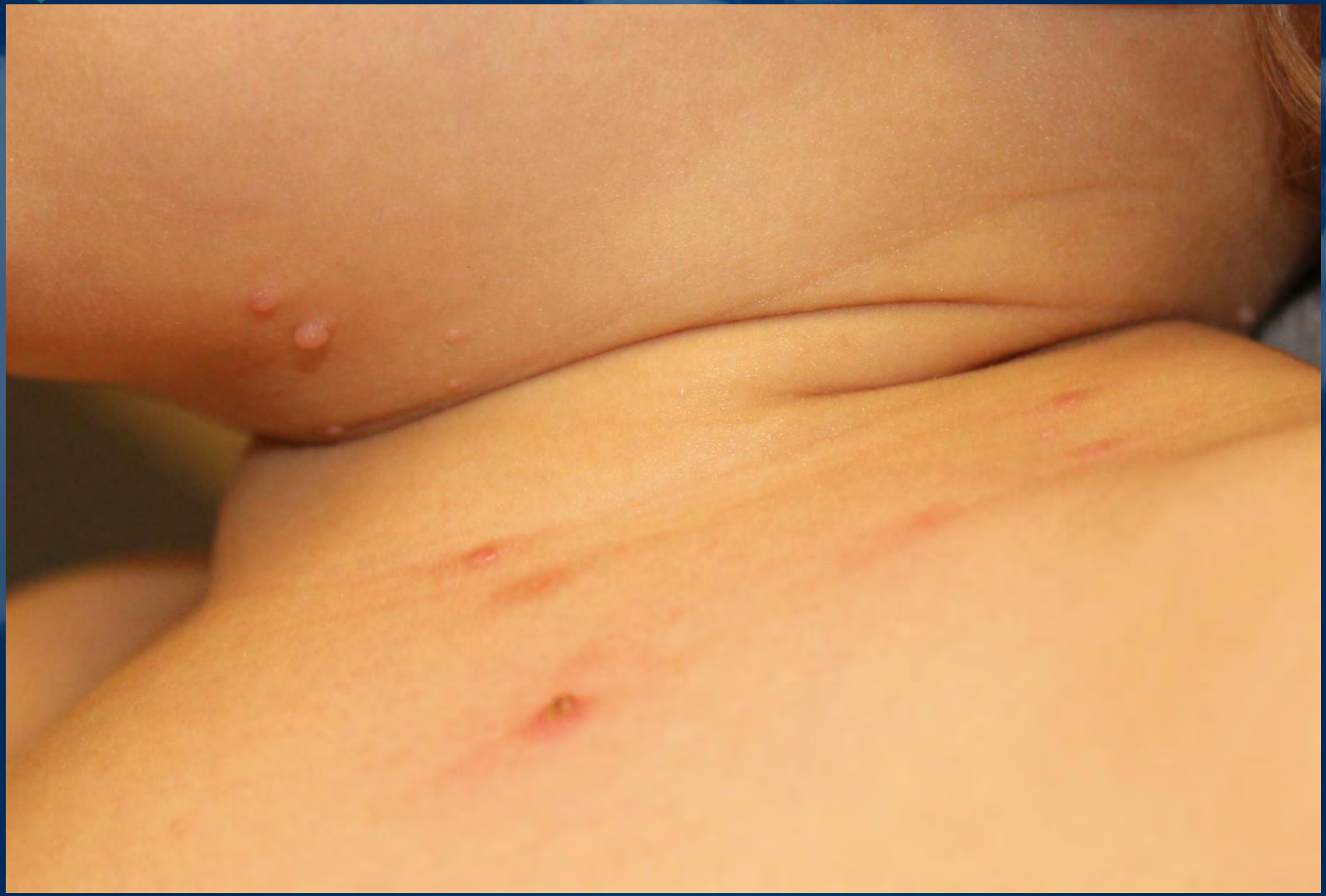


The Myth

- “lesions are infected”
- “the patient also has furunculosis”
- “the lesions are bug bites”

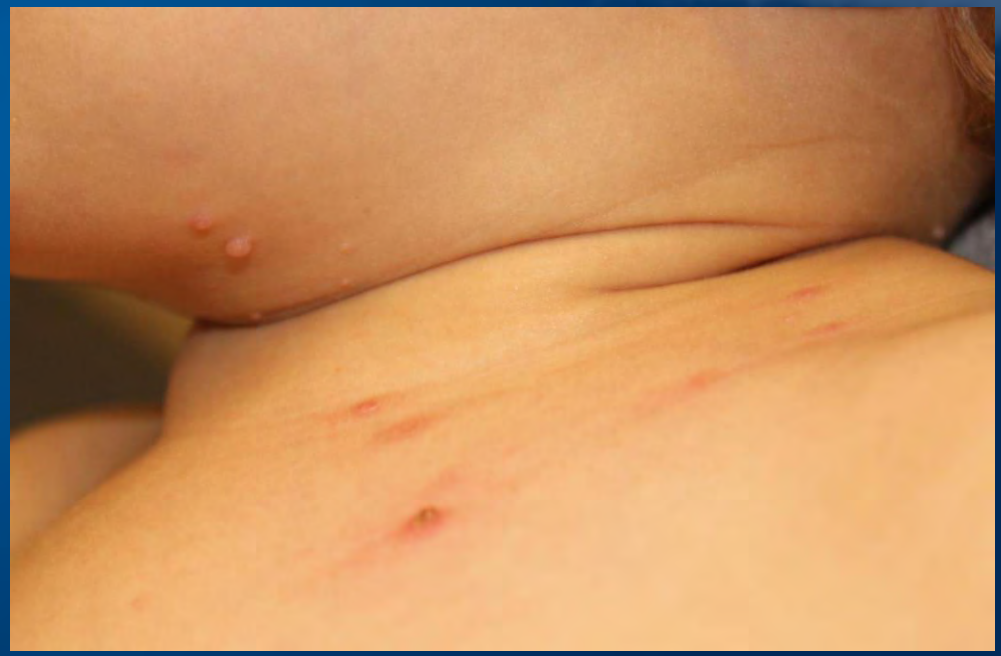
The Misconception

- Lesions need to be treated with topical antibiotics
- Lesions need to be treated with oral antibiotics
- Lesions need to be treated with topical benadryl

Inflammatory reactions to Molluscum

Inflamed Molluscum lesions The "BOTE" sign (beginning of the end)

- Lesions may be mistaken for bacterial infections like furuncle and cellulitis
- Purulent material is usually sterile
- Superinfection with *Staph aureus* can occur but is rare
- Represent cell mediated immune reaction to the molluscum virus



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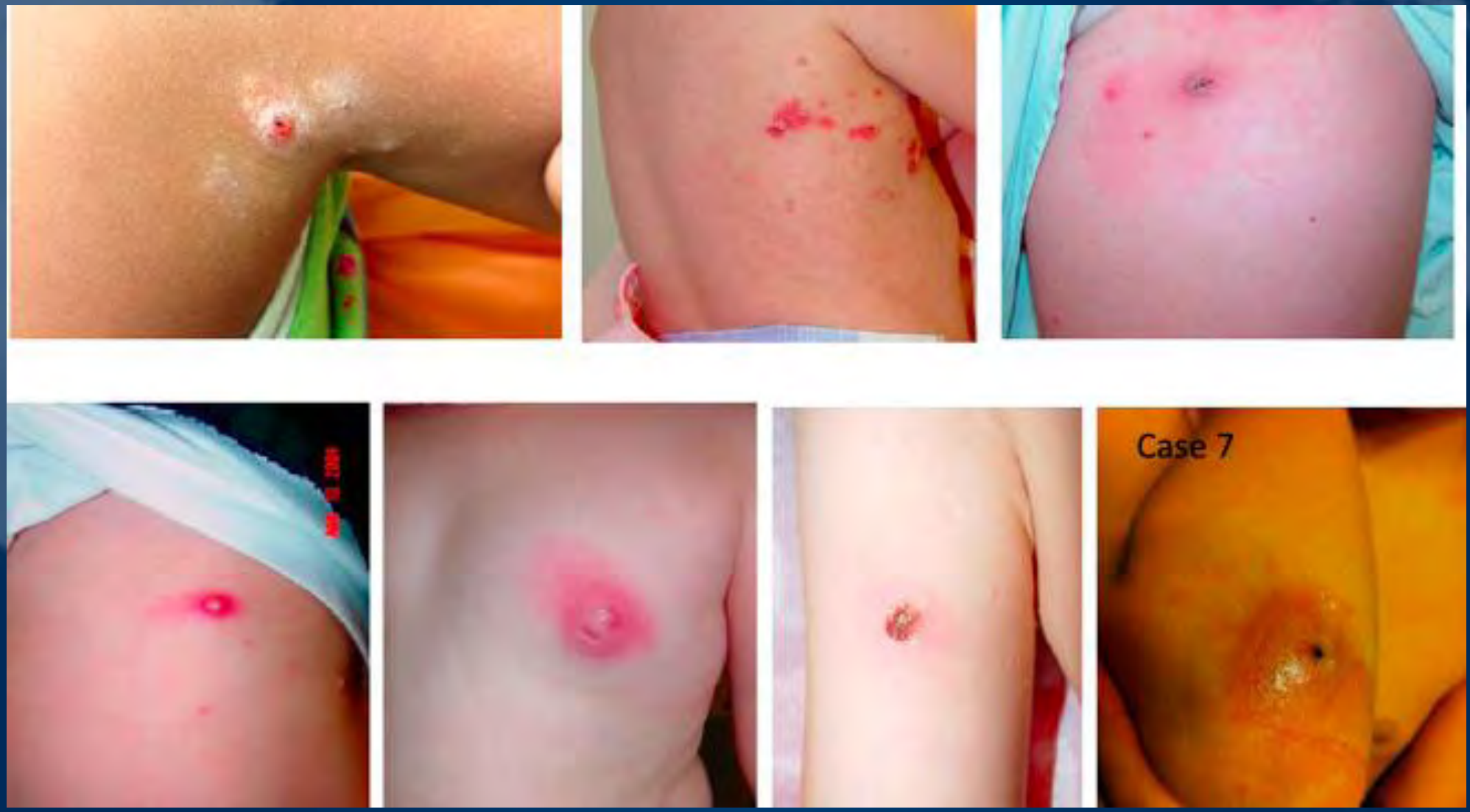
Pediatrics. 2013 May;131(5):e1650-3.

The "BOTE" sign



Butala et al. Pediatrics. 2013 May;131(5):e1650-3.

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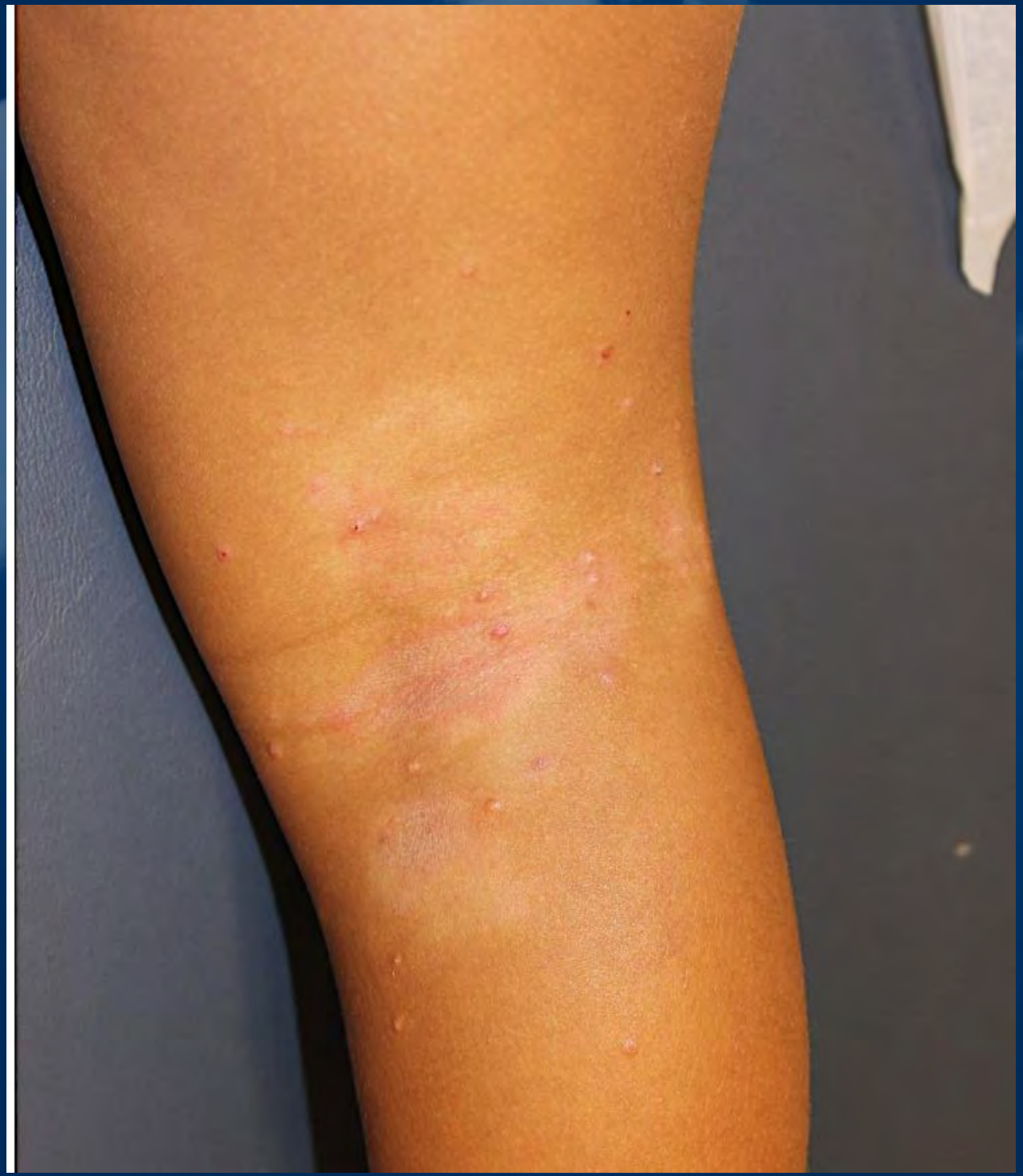
Do's & Don'ts…

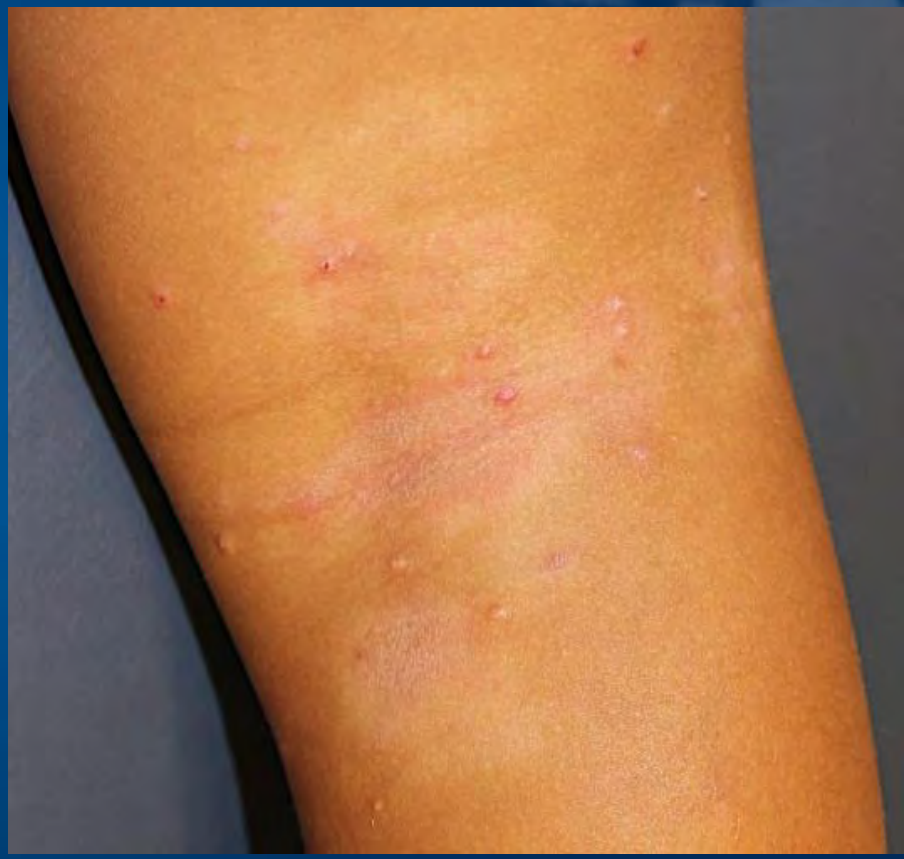
- The BOTE sign
  - Usually no need to start topical or systemic antibiotics
  - Reassure the parents that this represents the body recognizing the virus and fighting it!!
  - Topical benadryl not recommended, not effective and can cause contact dermatitis



Molluscum dermatitis

- Seen more often in pts with AD
- If severe treat with topical corticosteroid prior to treat with cantharidin
- In a study by Berger et al. more lesions were seen at f/u in patients treated with CS than those that where not.

  Not statistically significant
- Liberal use of emollients



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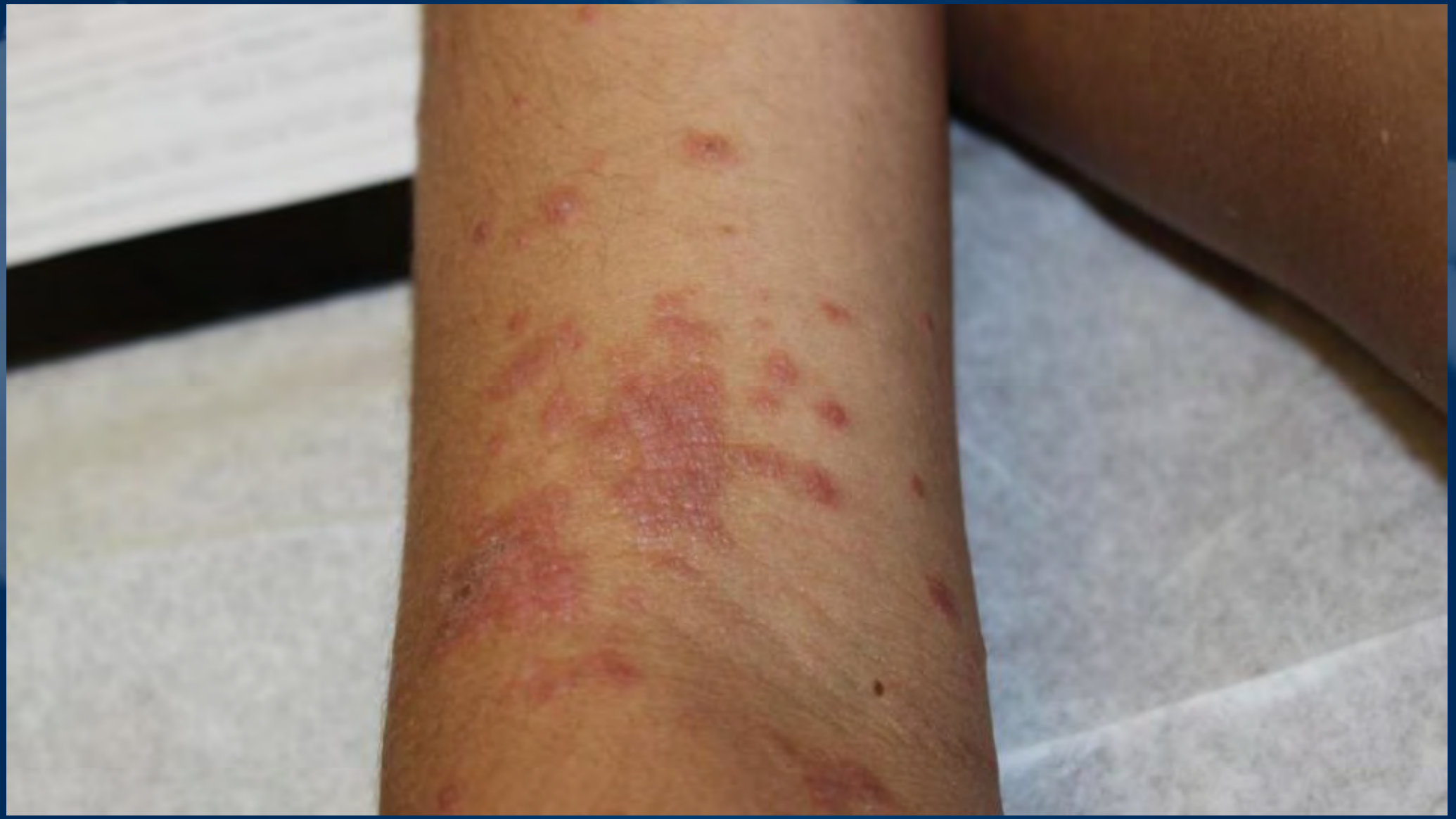
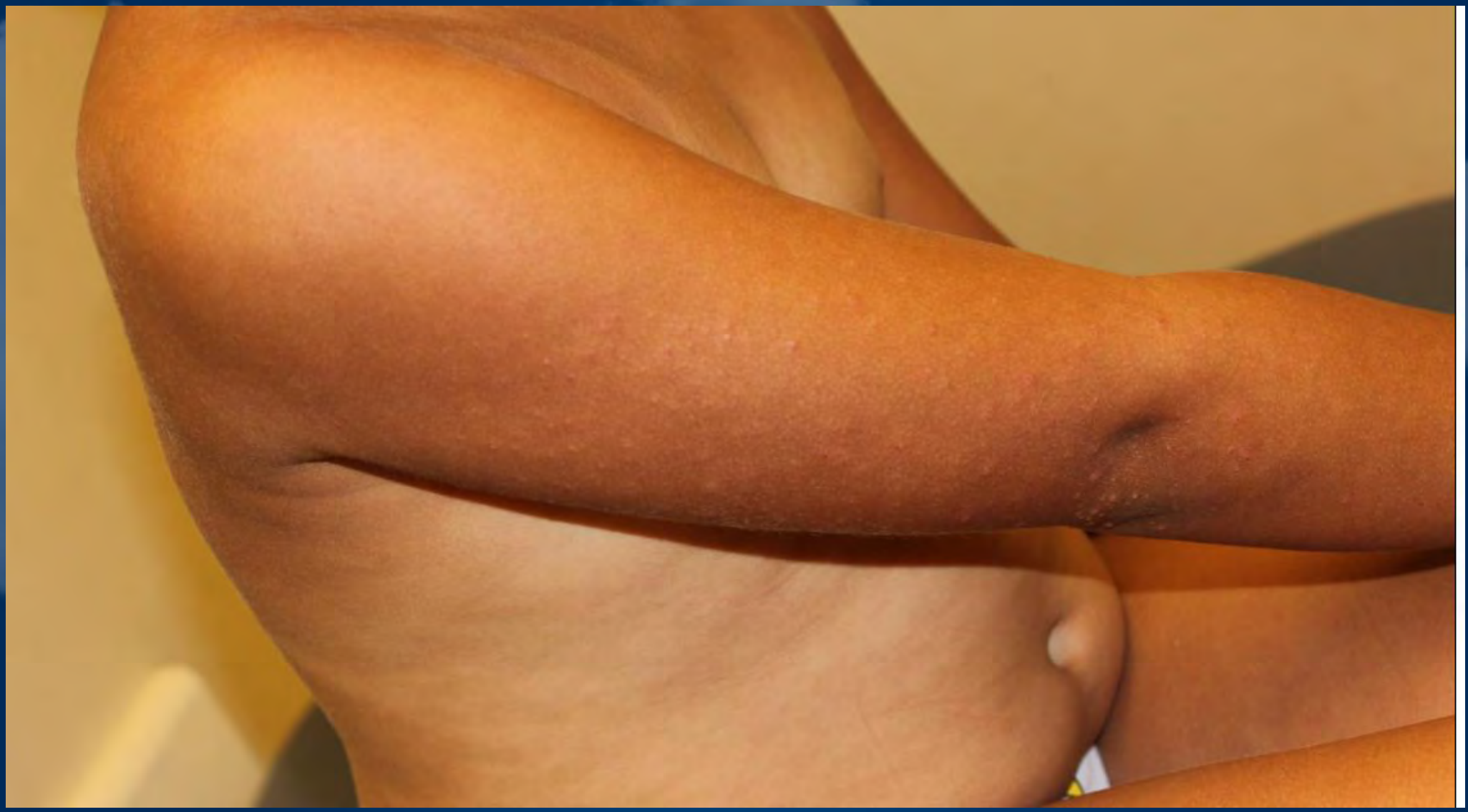
Berger EM, et al. Arch Dermatol. 2012 Nov;148(11):1257-64





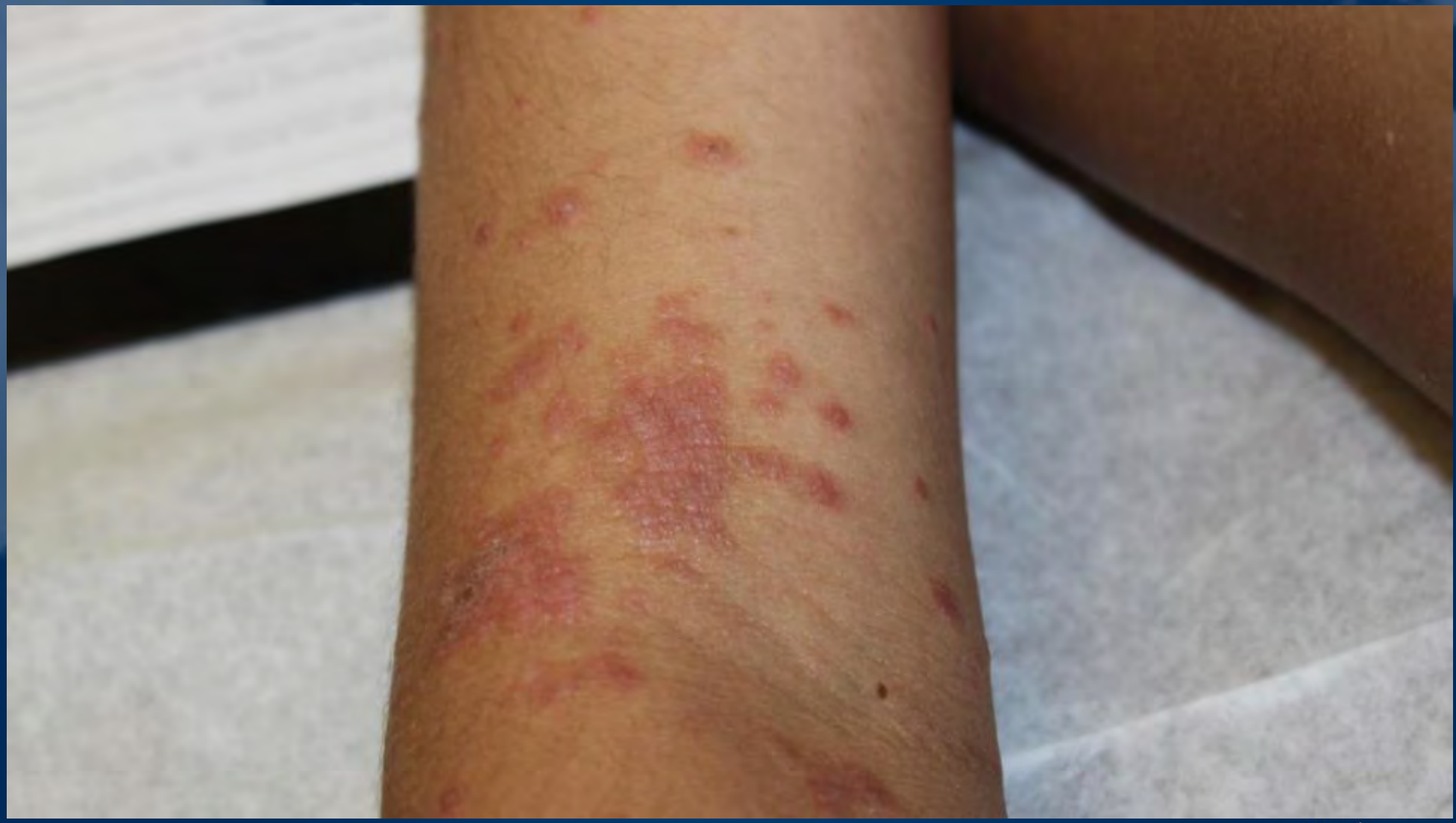
The Misconception

- Rash consistent with scabies
- Rash consistent with hand foot mouth disease
- Rash consistent with eczema

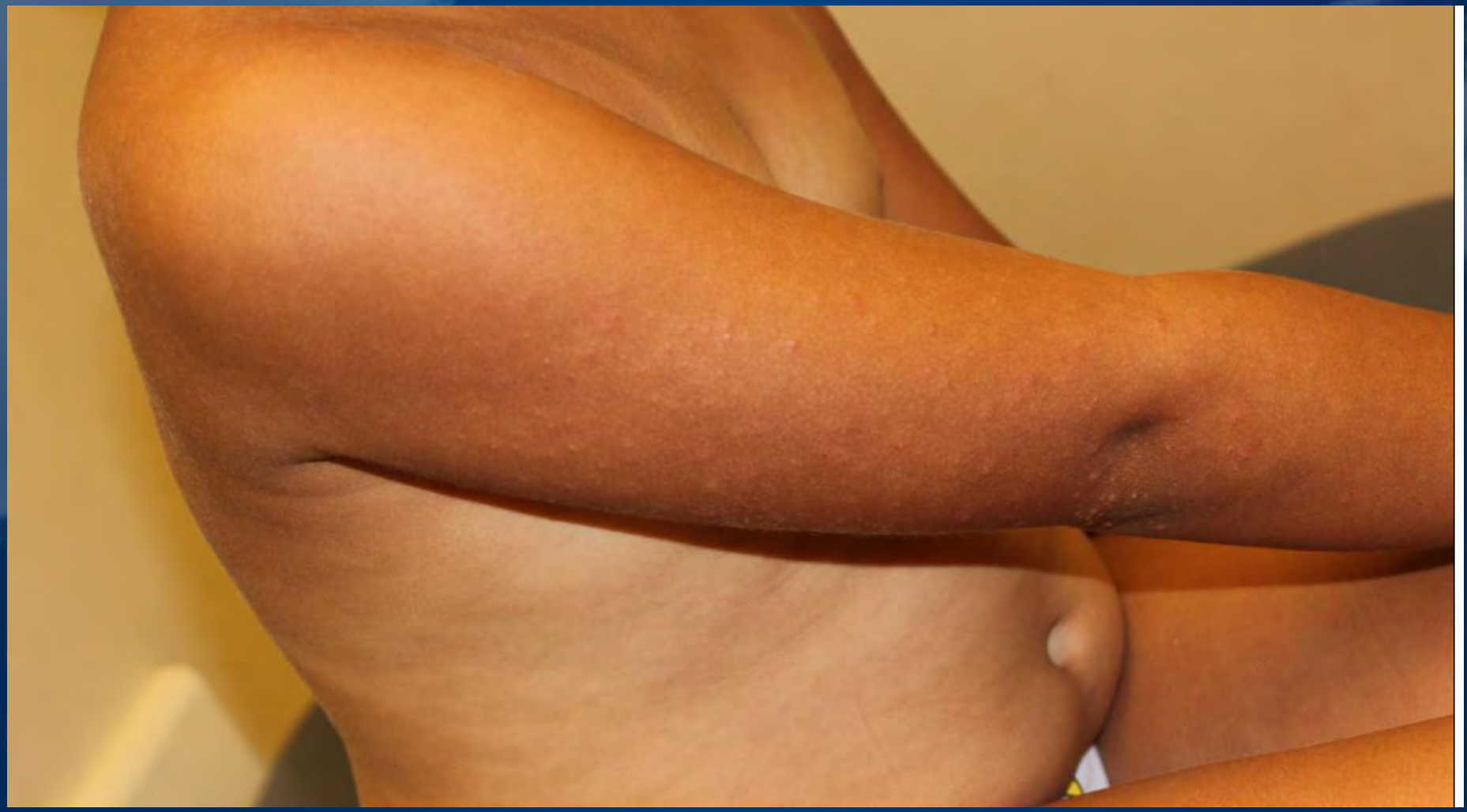
Treatment

- Permethrin
- Nothing
- Topical Corticosteroids
- Systemic Corticosteroids

Gianotti-Crosti syndrome–like reactions



Gianotti-Crosti syndrome–like reactions



Gianotti-Crosti syndrome-like reactions

- Reaction can occur with or without treatment
- Most commonly seen on extremities specially on the extensor surfaces.
- Mean duration → 6 weeks
- Complete resolution of MC lesions was seen about 2 months after presentation of GCLR

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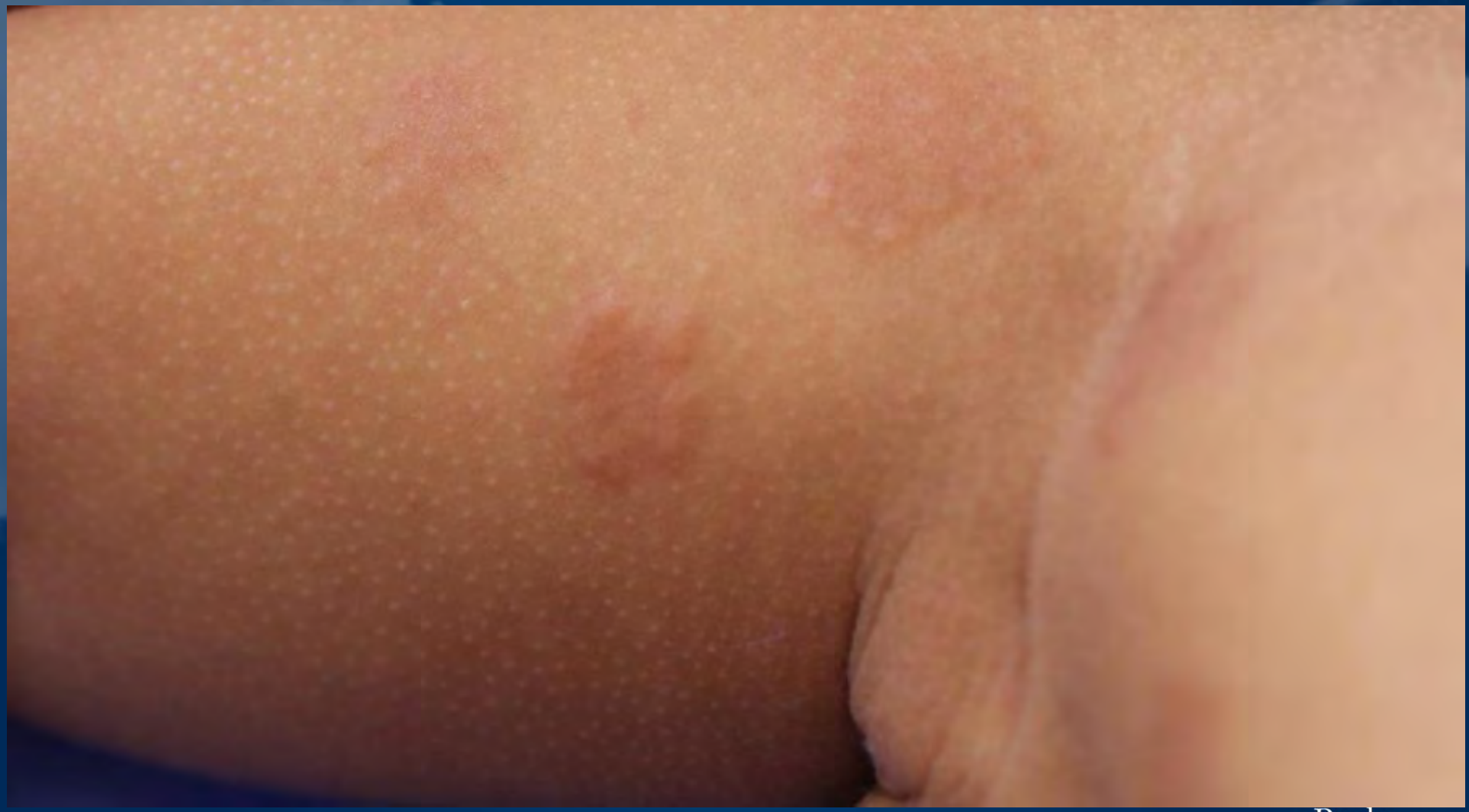
Berger EM, et al. Arch Dermatol. 2012 Nov;148(11):1257-64

Do's & Don'ts

- If prior hx of molluscum this rash may represent most likely an inflammatory reaction to the virus
- If suspect scabies look in web spaces, groin and axillas.
- Treatment
  - If not symptomatic → reassurance
  - If itchy -→ may use mild-mid potency topical corticosteroids
  - If not sleeping because of itch→ May try systemic antihistamines

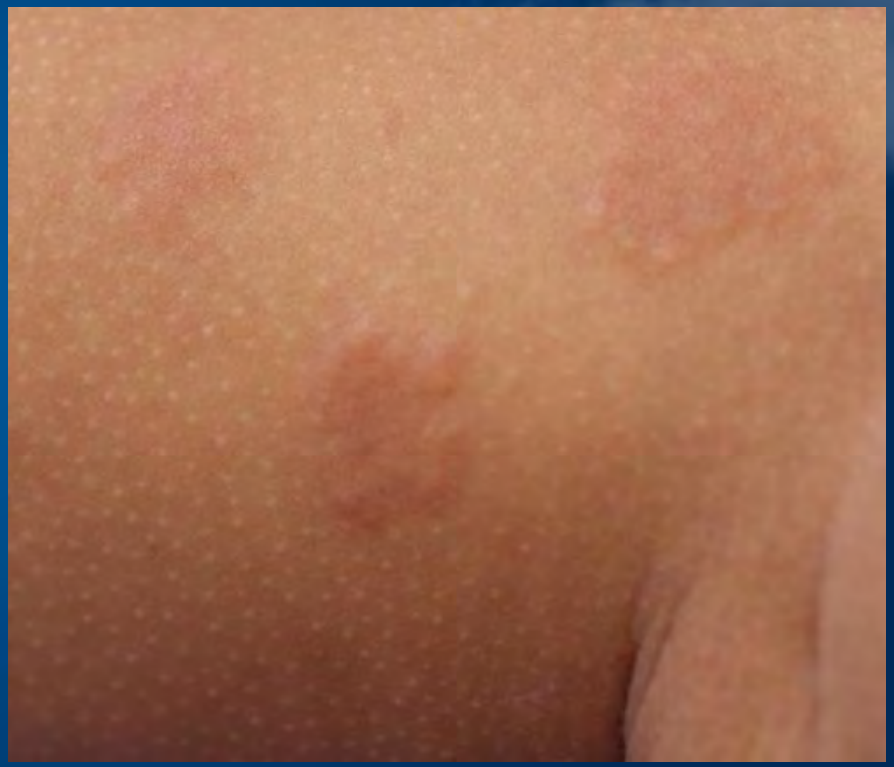
What looks like tinea is not always tinea

Tinea or not tinea?



Not tinea Granuloma Annulare

- Fairly common condition in children
- Lesions are annular, smooth, **non-scaly** plaque with a border composed of numerous small papules
- Common locations, dorsum of hands, feet, ankles and wrists.
- Types
  - Generalized
  - Subcutaneous
  - Perforating.
- Treatment
  - Observation
  - Topical corticosteroids
  - Intralesional corticosteroids
  - Phototherapy
  - In some rare cases cyclosporine, prednisone, dapsone, isotretinoin.



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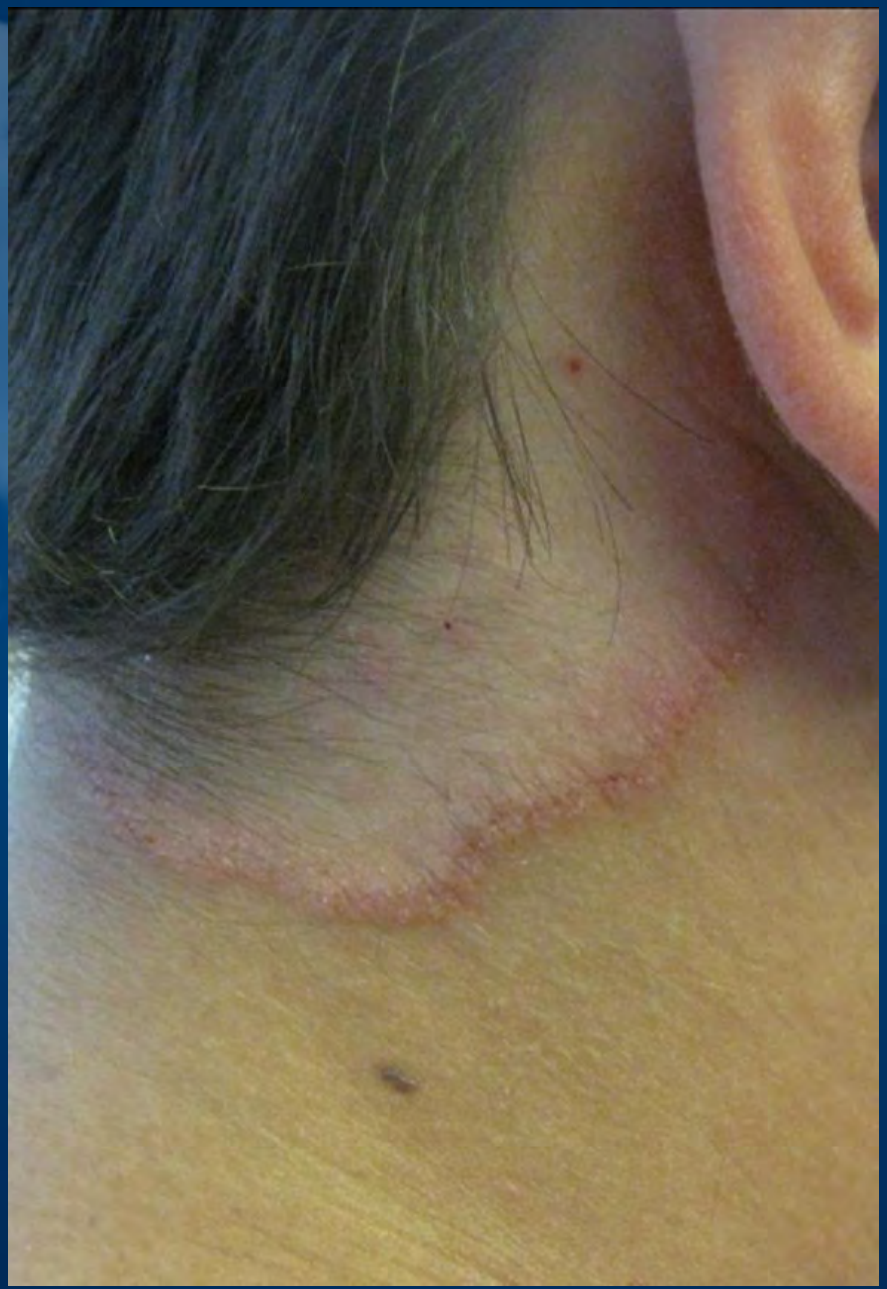

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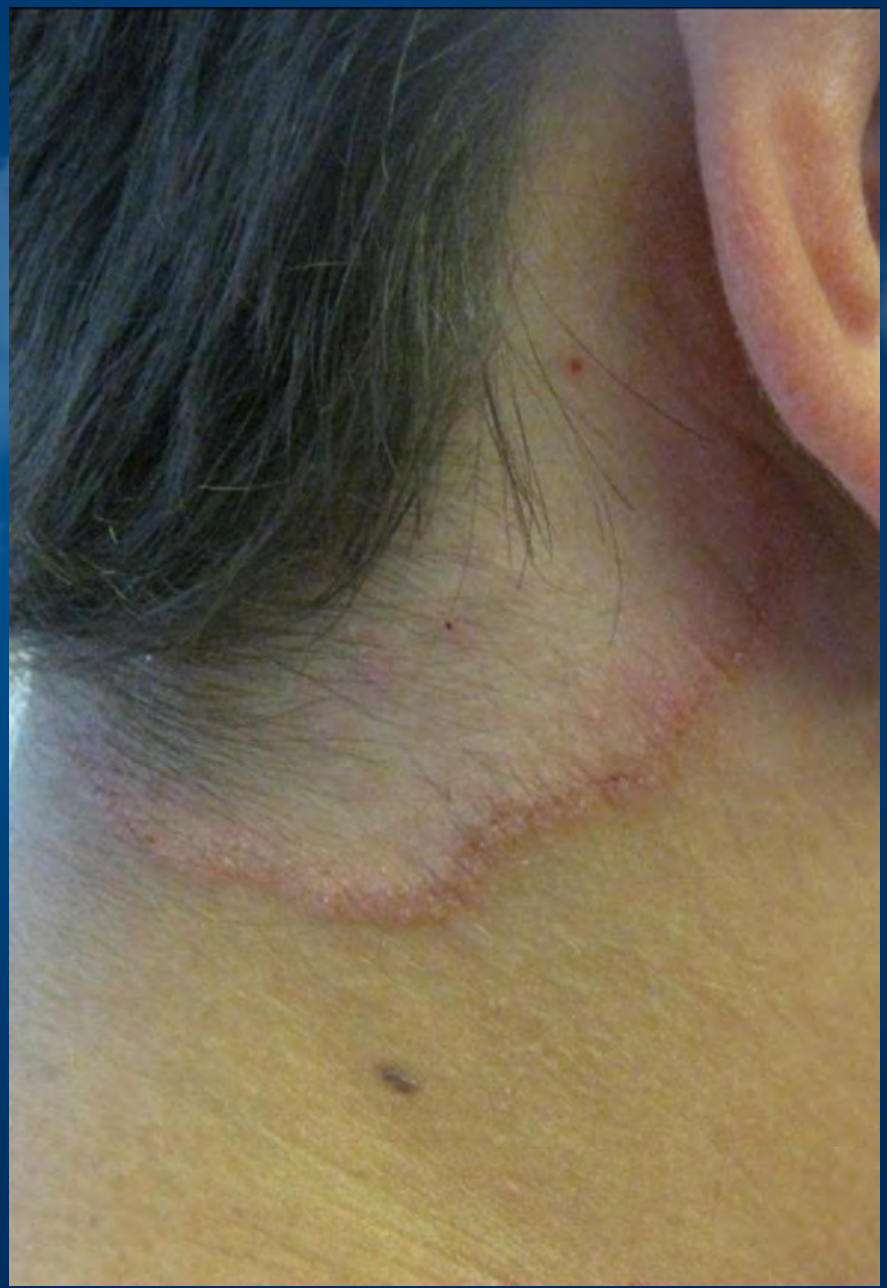
Tinea or not tinea?

Yes!!
This is Tinea



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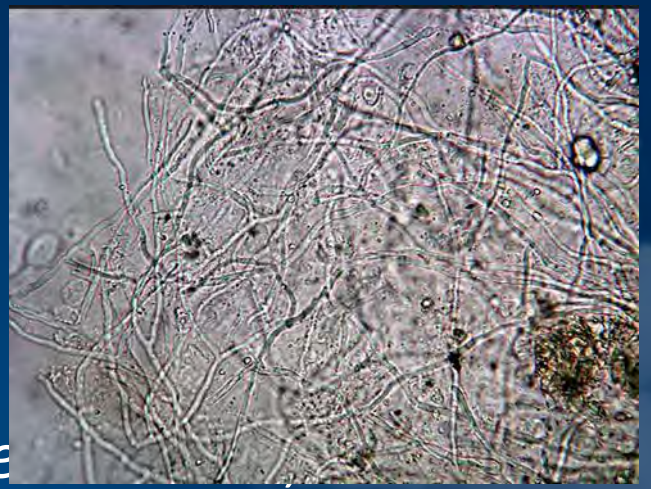
Tinea

- Usually present as annular, **scaly** plaques
- Locations
  - non-hairy areas of the face, the trunk, and extremities
  - Other areas
    - scalp, bearded areas, groin, hands, feet, and nails
- Who is at risk
  - wrestlers, contact with domestic animals such us puppies and cats
  - Children living in warm humid climate
  - Children with DM, immunodeficiency or leukemia

Tinea

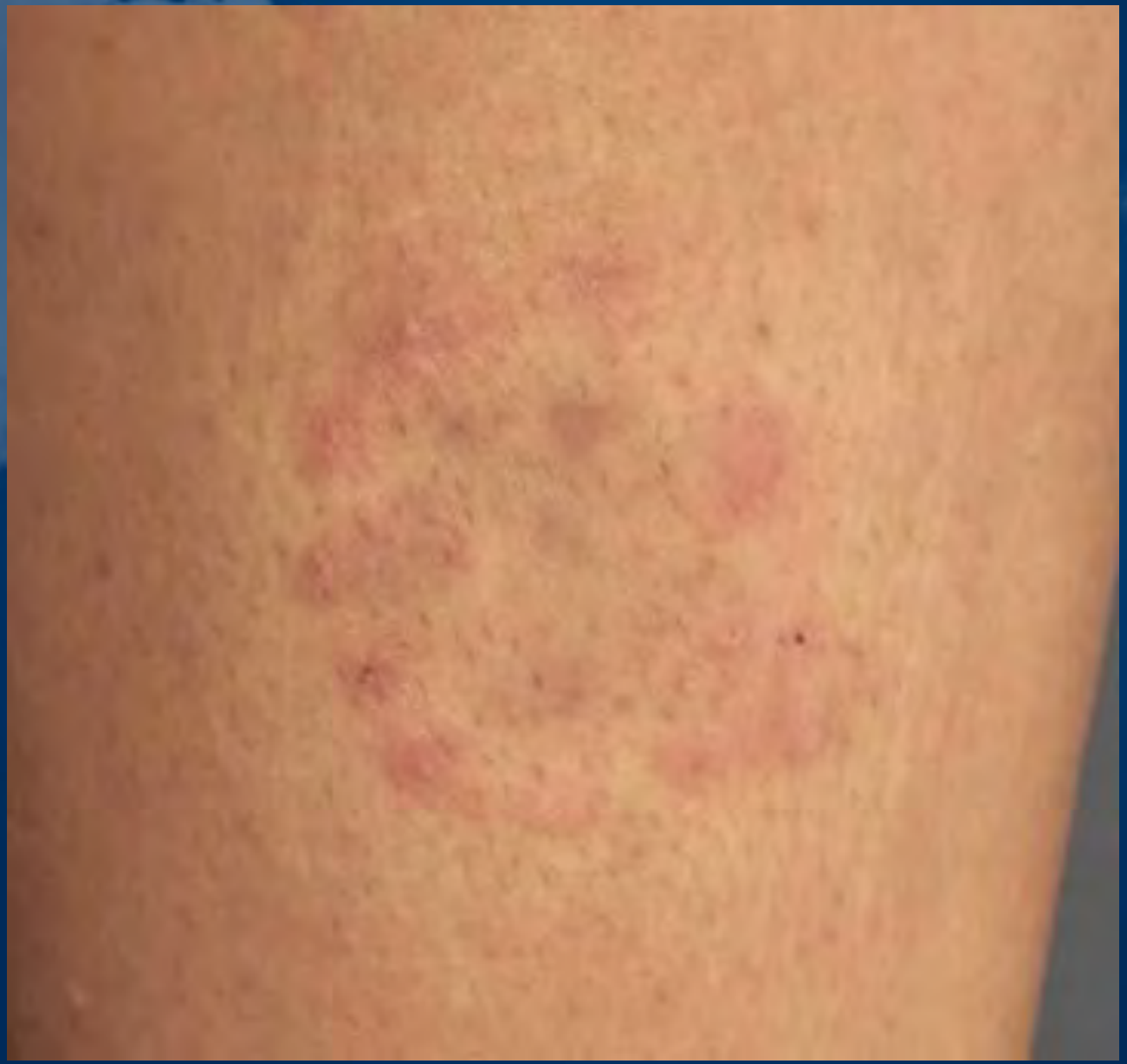


- What organisms
  - *M. canis* occasionally *M. audouinii* or *T. mentagrophytes*.
  - In older children and adults, *T. rubrum*, *T. ve* *T. mentagrophytes*, or *T. tonsurans*.
- How to diagnose it
  - KOH
  - **Culture**
  - Biopsy
  - Wood's lamp (not useful for tinea corporis)

Treatment

- For non hairy areas on the face, torso and extremities
  - topical antifungals for 2 -3 weeks
    - Nystatin not effective against dermatophytes
- For the scalp, hairy areas of the face, beard, and extremities
  - Systemic antifungals
- AVOID COMBINATION PRODUCTS OF CORTICOSTEROIDS AND ANTIFUNGALS

Tinea or not tinea?



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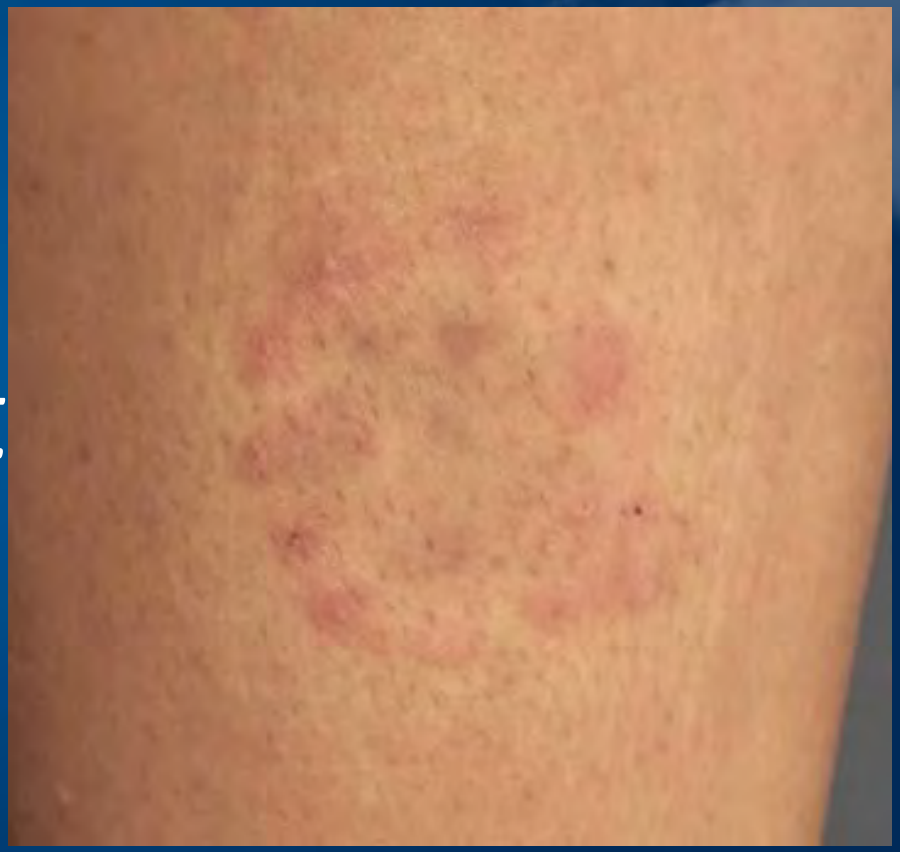
Tinea Majocchi's granuloma

- Perifollicular granulomatous lesions
- Caused by *T. rubrum* or *T. mentagrophytes*
- Systemic therapy recommended



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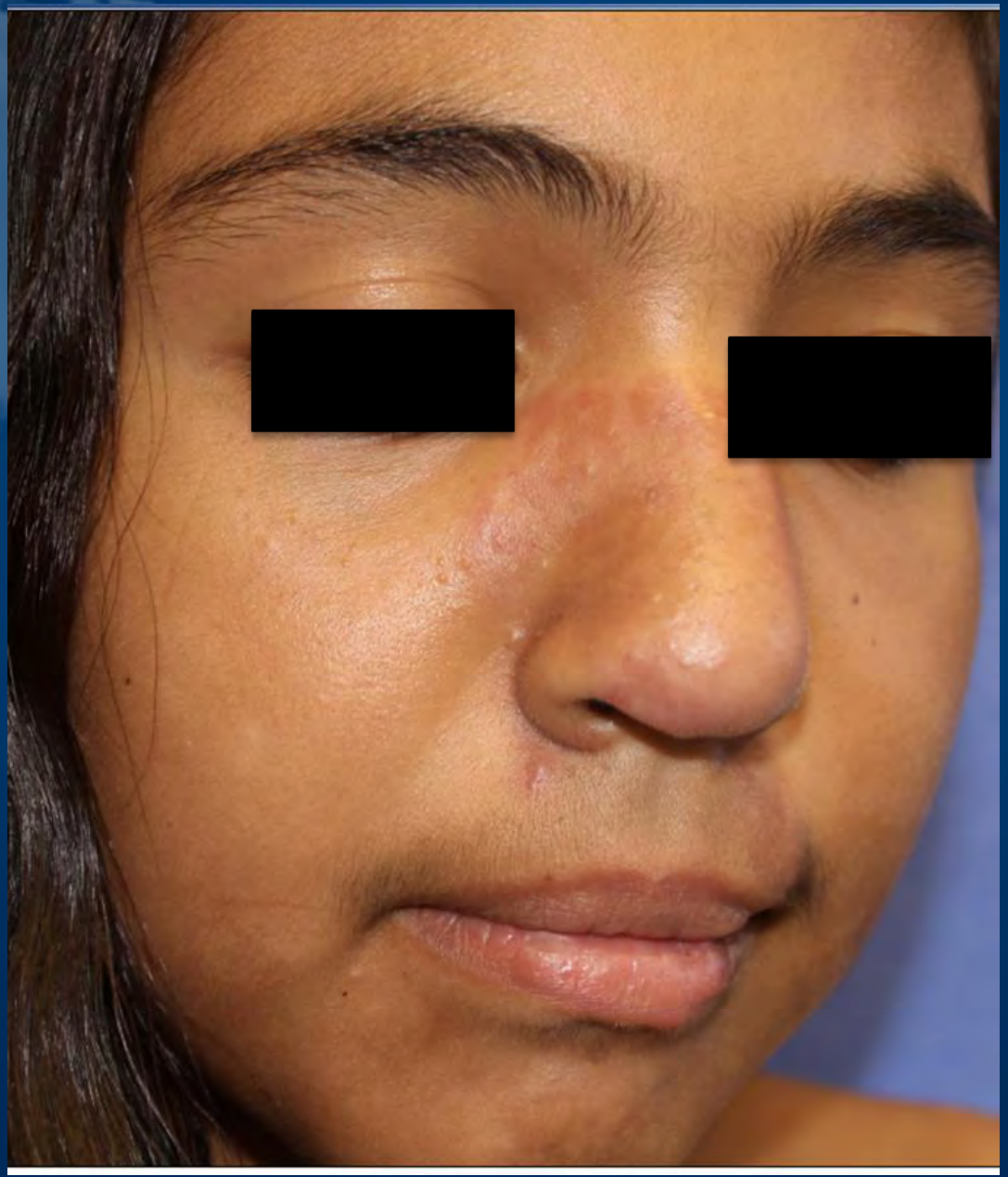

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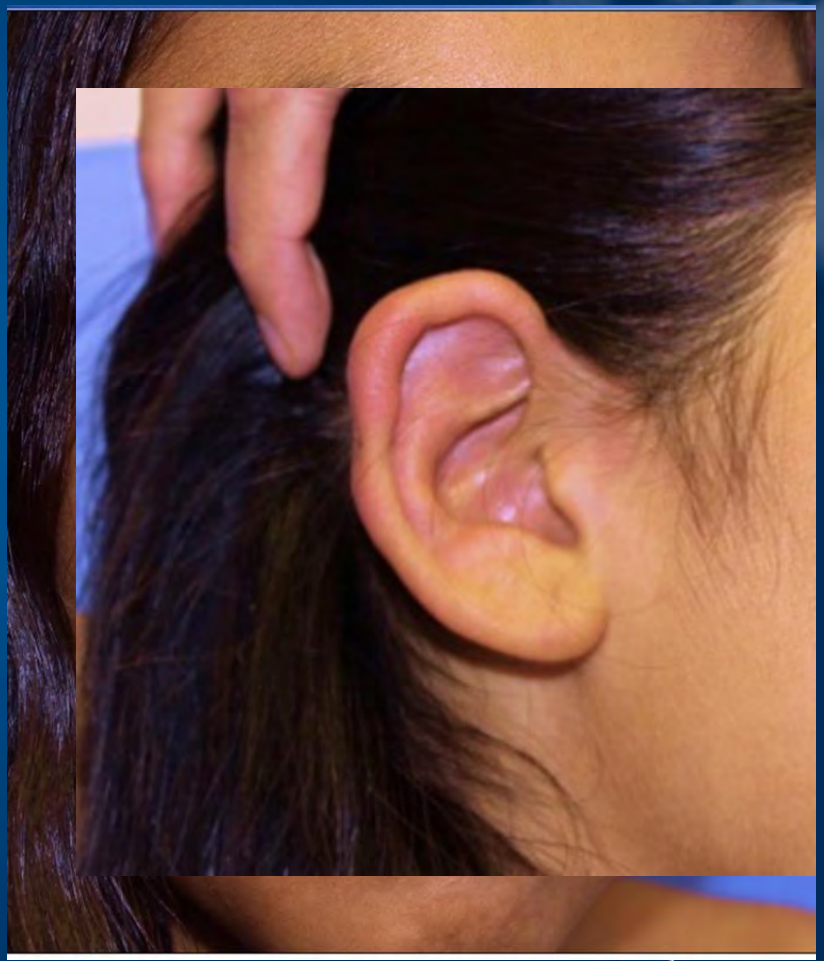
NOT Tinea
Discoid lupus

- Discoid lesions in children usually present on the face, ears, cheeks.
- Can be confused for tinea
- Key features
  - Not scaly
  - Lesions more indurated
  - Always look in the ears!!
- 5 -25% risk of progression to SLE, higher than what is seen in adults.
- May require biopsy for diagnosis
- Treatment
  - Topical corticosteroids
  - Antimalarials
  - Strict sun protection and sunscreen use



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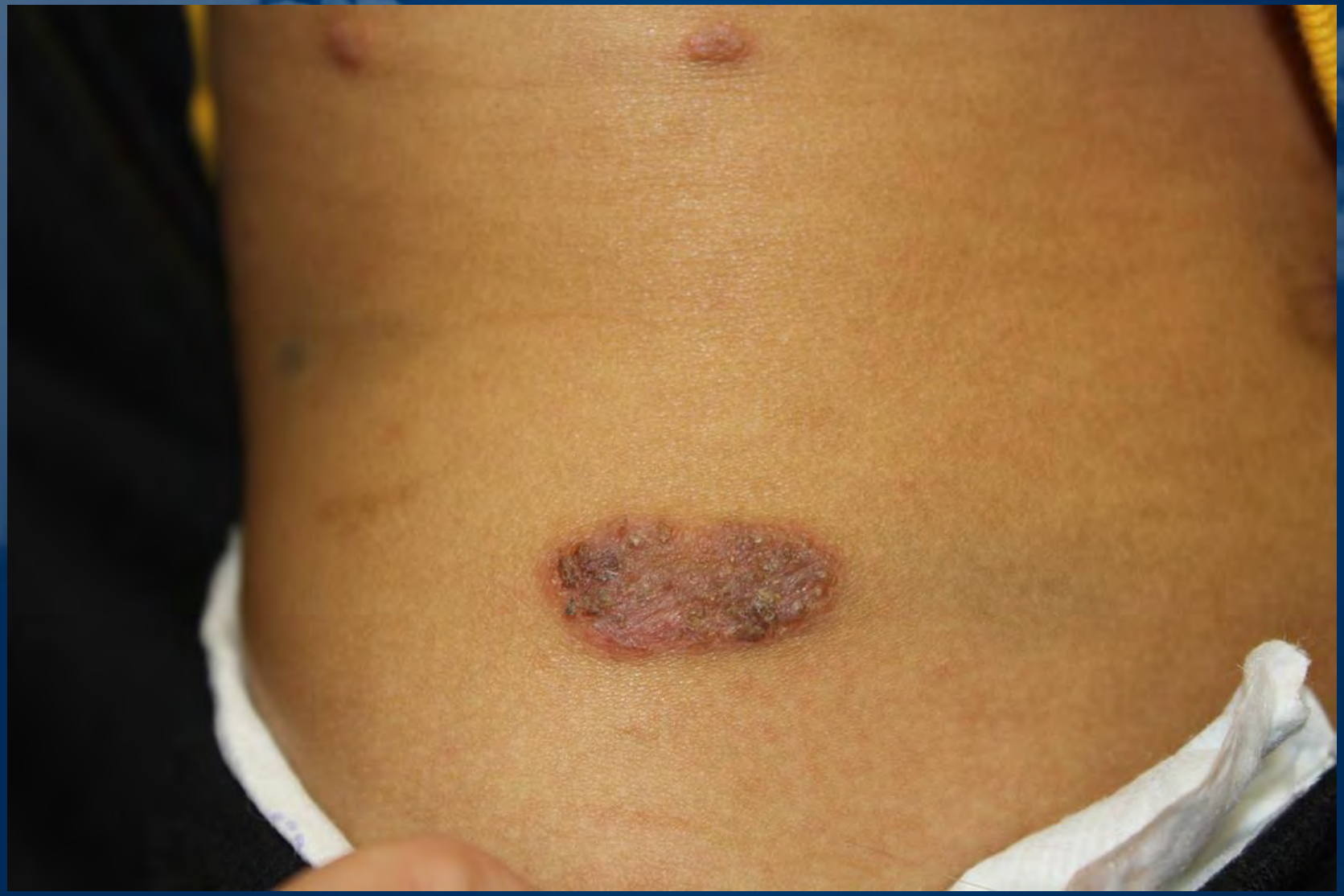
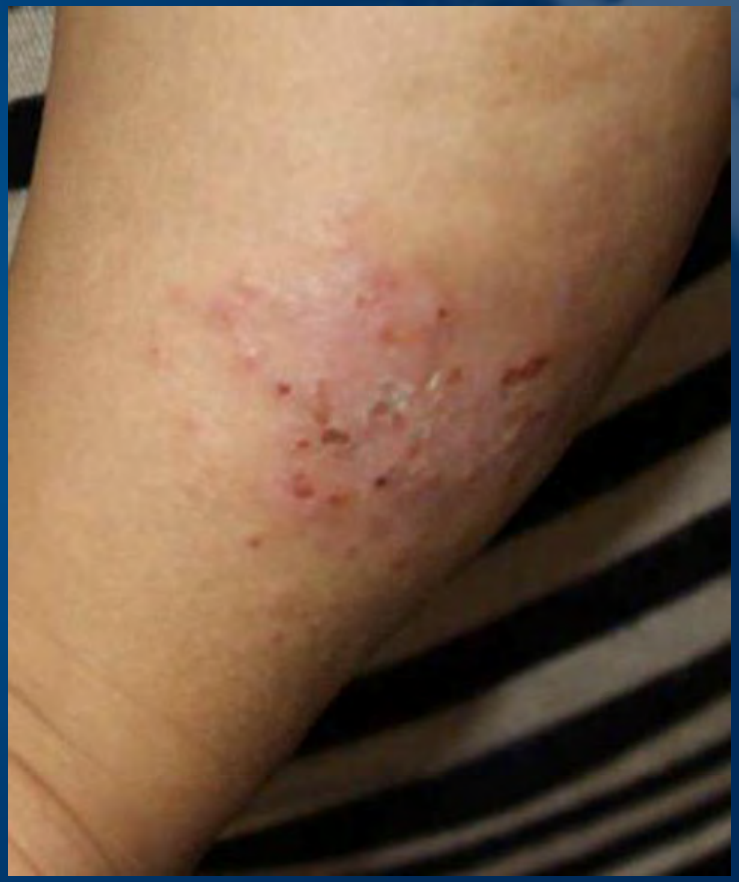
Sampaio MC, et al. *Pediatr Dermatol.* 25:163-167 2008

Tinea or not tinea?



Not tinea
Nummular eczema

- *Nummulus* =‘coin-like’
- Common presentation of eczema in children
- Lesions are annular, usually more excoriated, crusty and lichenified
- Will need treatment with mid to mid-high potency topical corticosteroids to improve
- Wet wraps usually recommended for thick lesions
- If lesions are recalcitrant a secondary staphylococcal infection should always be considered
  - Culture the lesion
  - Start systemic antibiotic.



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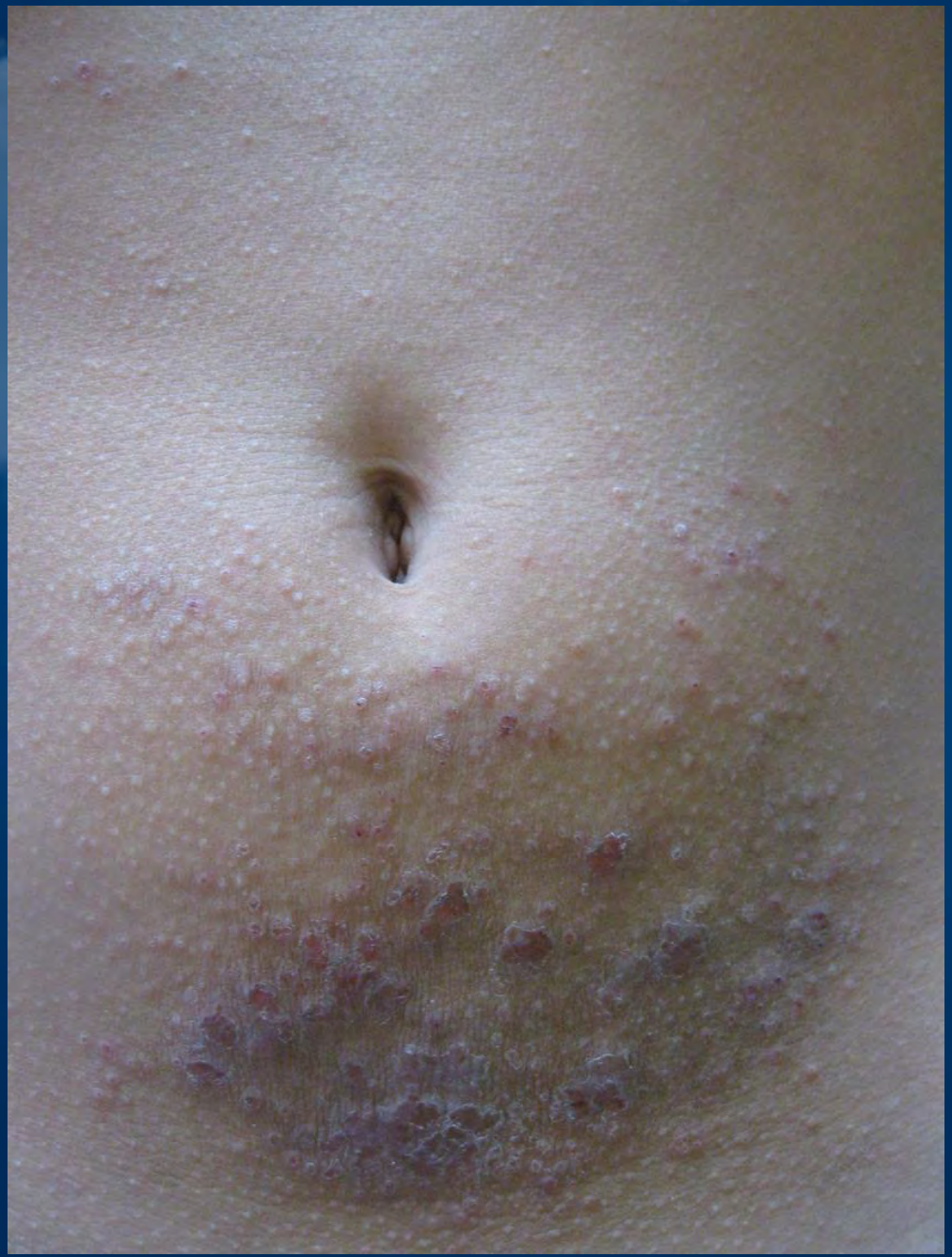

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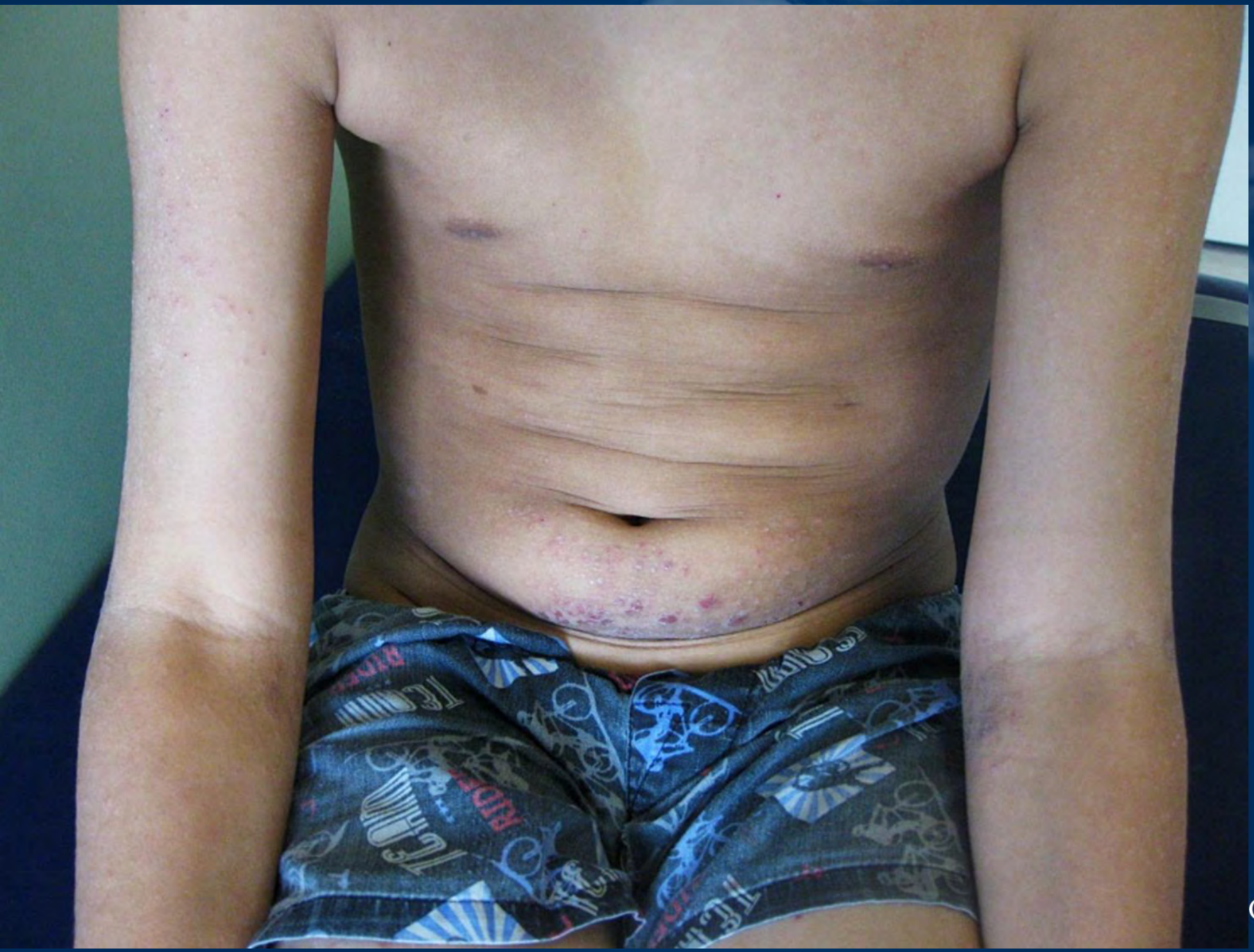
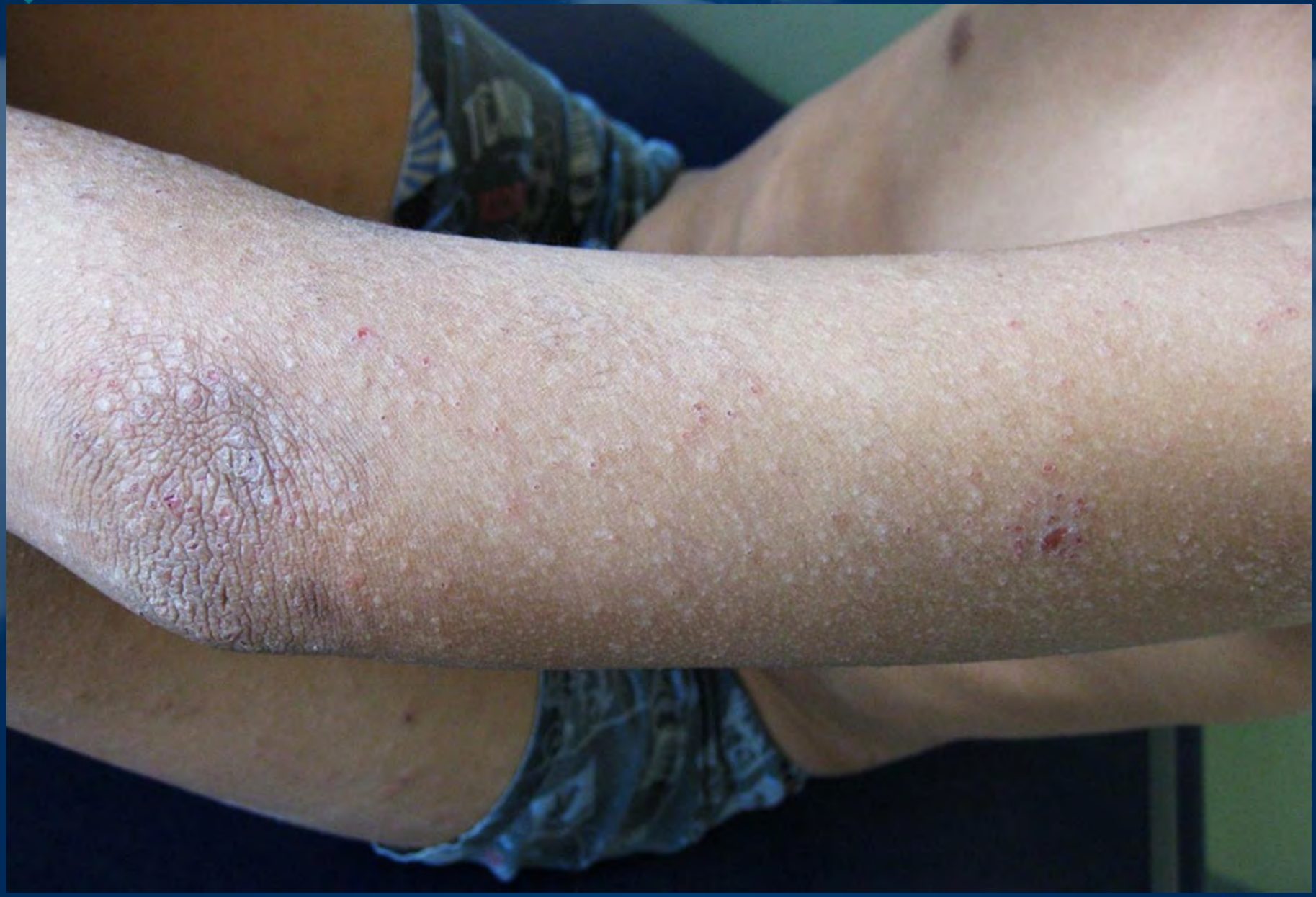
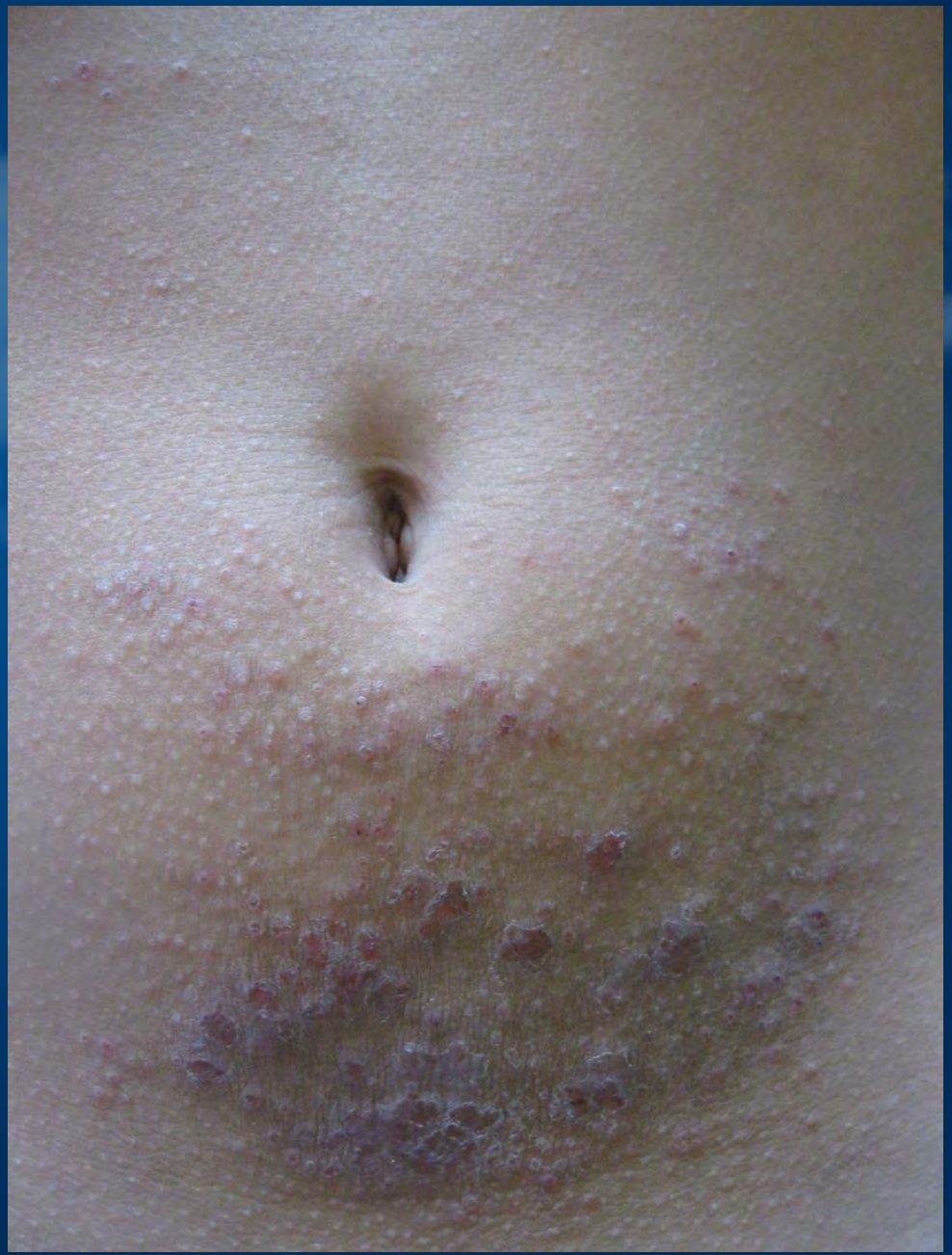




Nickel allergic contact dermatitis with ID reaction



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Allergic contact dermatitis

- Type IV hypersensitivity reaction- cell mediated
- Most common allergen – Urushiol
  - poison ivy, poison oak
- Most common allergen tested

  –Nickel!!

Top allergens in Children with & without AD

Ten most common allergens* and their relationship to atopic dermatitis and nonatopic dermatitis

ALLERGEN NAME	AD	NON-AD	TOTAL	Z-SCORE	STATISTICAL SIGNIFICANCE
	% REACTION (N)	% REACTION (N)	% (n)		(Y=YES, N=NO)
1. Nickel sulphate	35% (19)	26% (12)	31% (31)	1.05	N
2. Wool alcohols	24% (13)	11% (5)	18% (18)	1.76	N
3. PTBPFR	15% (8)	15% (7)	15% (15)	−0.01	N
4. Myroxylon pereirae	20% (11)	2% (12)	12% (12)	2.83	Y
5. Cobalt	13% (7)	9% (4)	11% (11)	0.72	N
6. Formaldehyde	15% (8)	4% (2)	10% (10)	1.77	N
7. Fragrance mix 1	19% (10)	0% (0)	10% (10)	3.11	Y
8. Colophonium	13% (7)	4% (2)	9% (9)	1.53	N
9. Potassium Dichromate	11% (6)	4% (2)	8% (8)	1.27	N
9. Neomycin sulphate	7% (4)	9% (4)	8% (8)	−0.2	N
10. Tixocortol-21-pivalate	11% (6)	2% (1)	7% (7)	1.77	N

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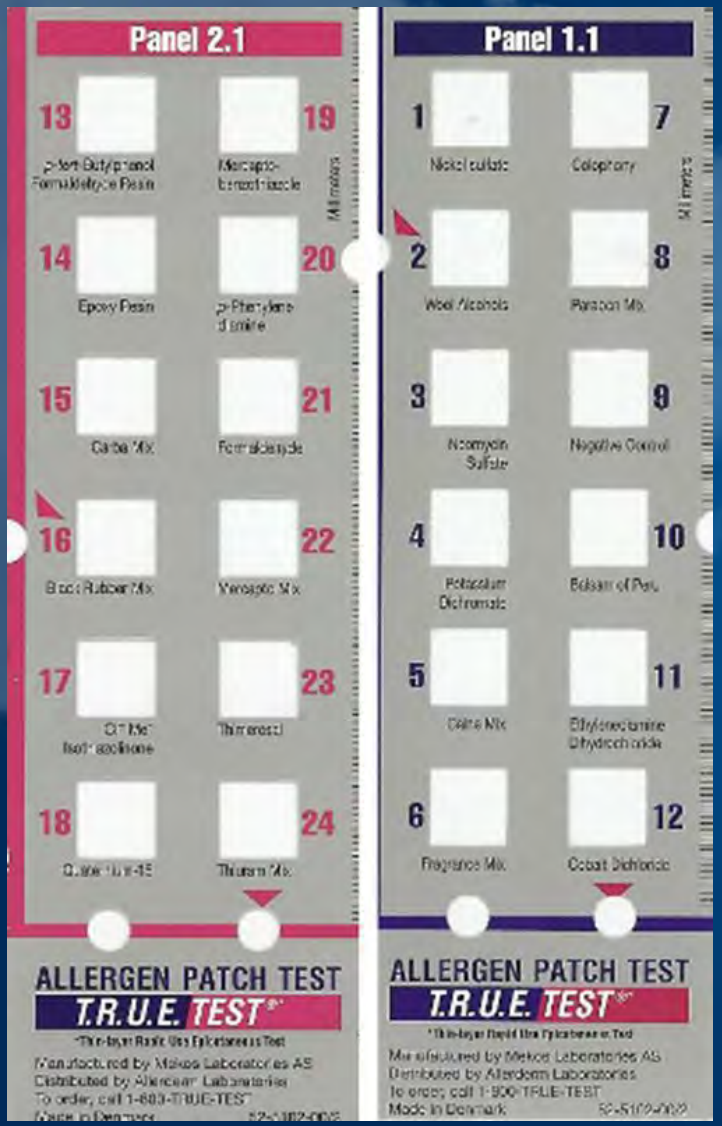
Herro E, Matiz C, Sullivan K, Hammann K, Jacobs S. J Clin Aesthet Dermatol. 2011 November; 4(11): 39-41.

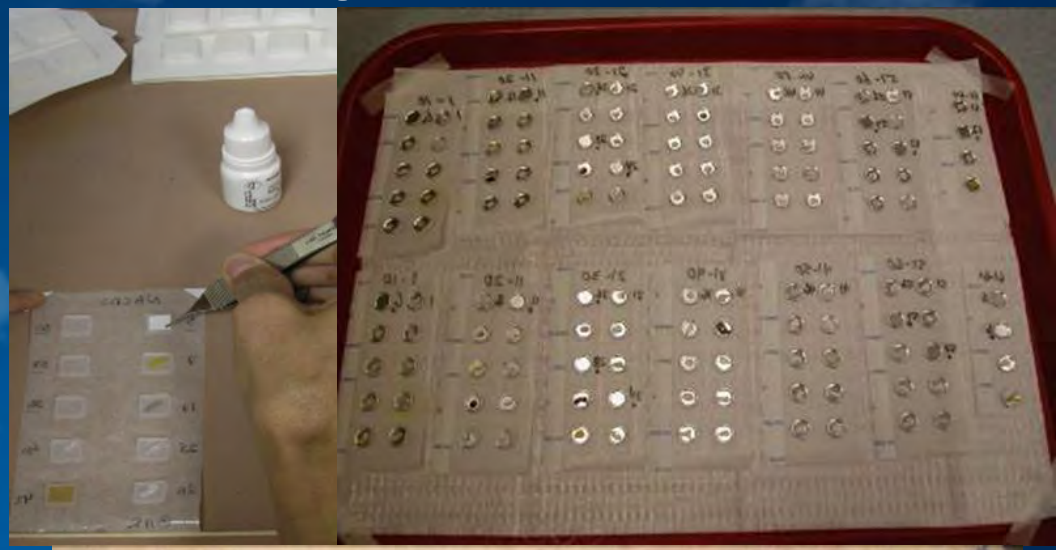
How do we test

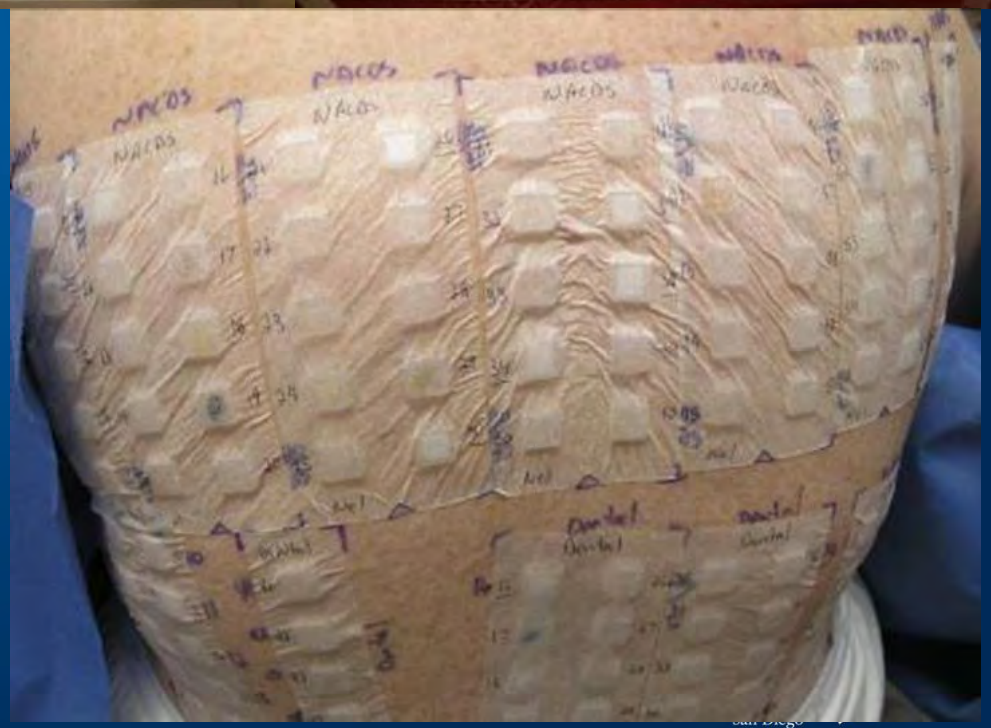
- If lesions are classic there is no need to test
  - Avoidance recommended first
- If unclear or no improvement with Avoidance
  - Patch testing
    - TRUE test
    - Comprehensive patch testing

T.R.U.E. test

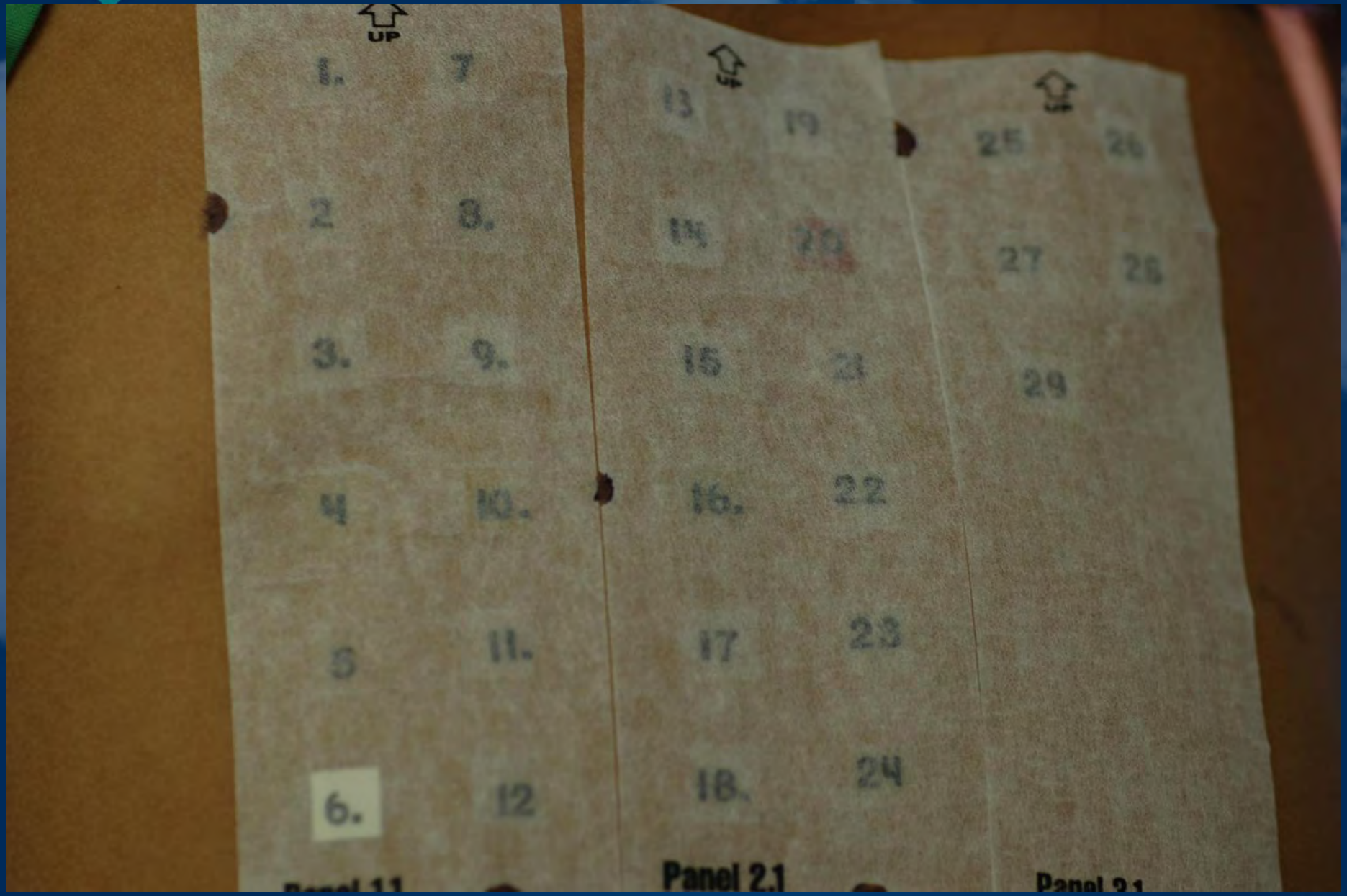


Comprehensive





Slide courtesy of S. Jacob- basics on patch testing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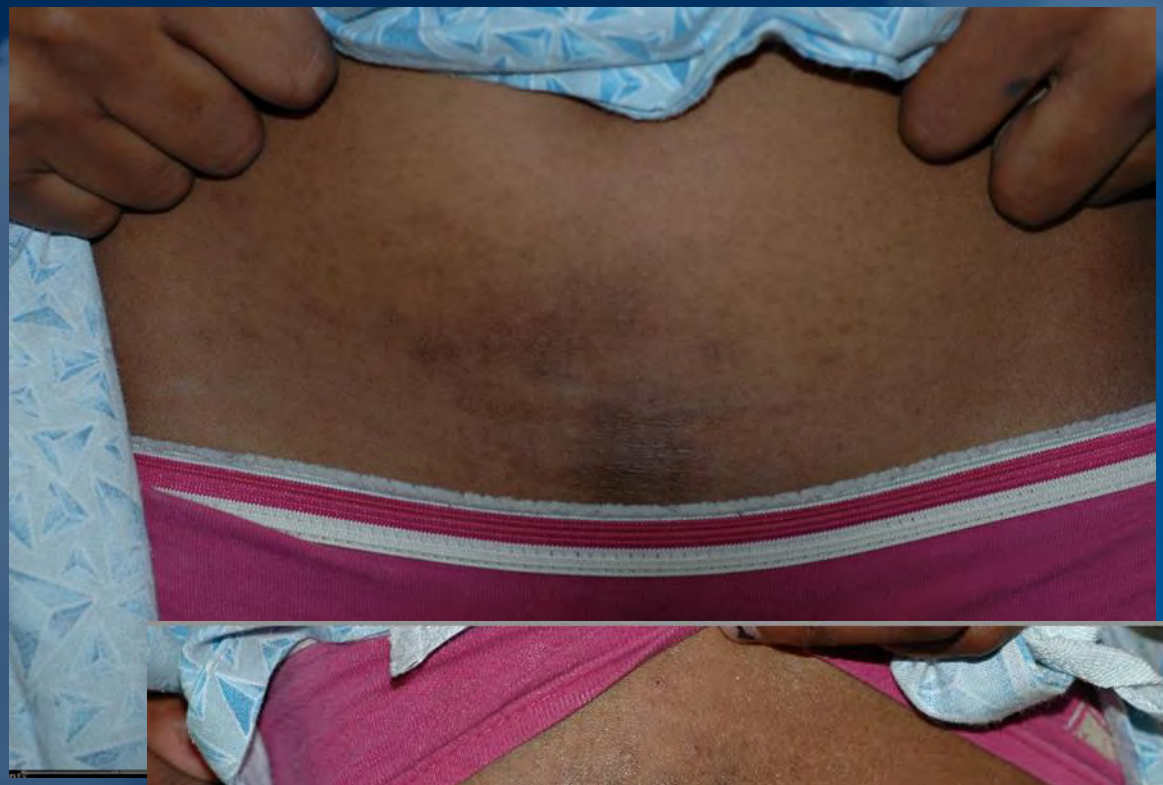

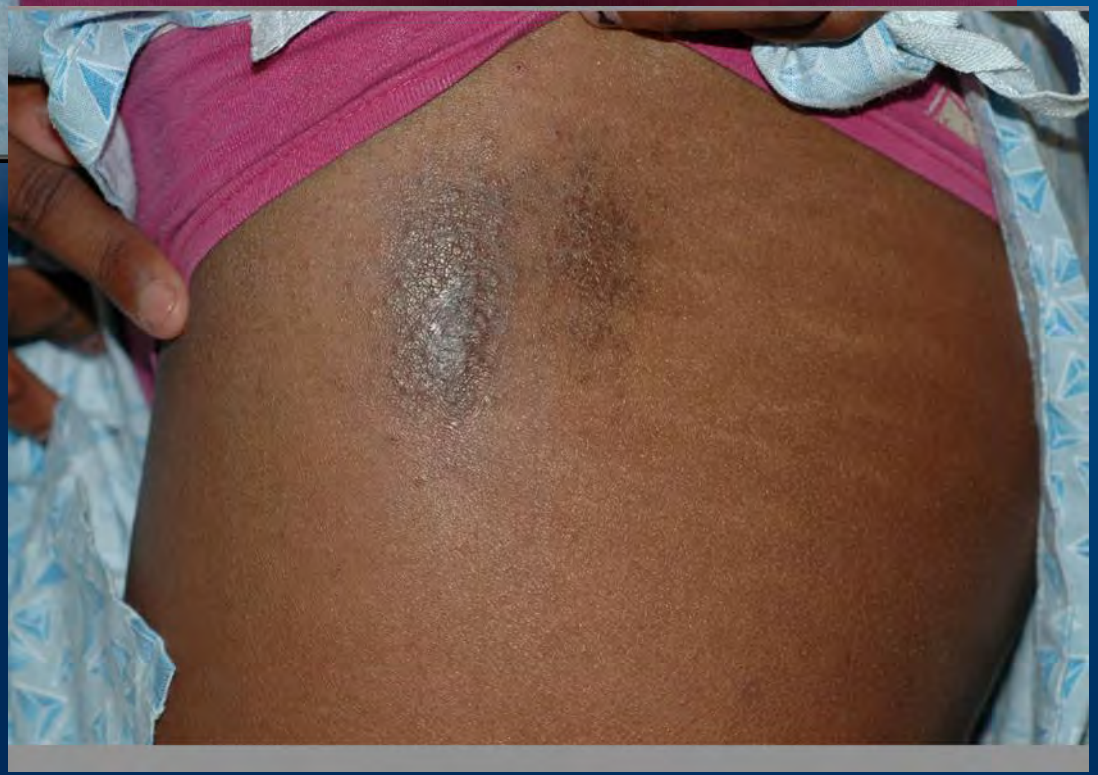

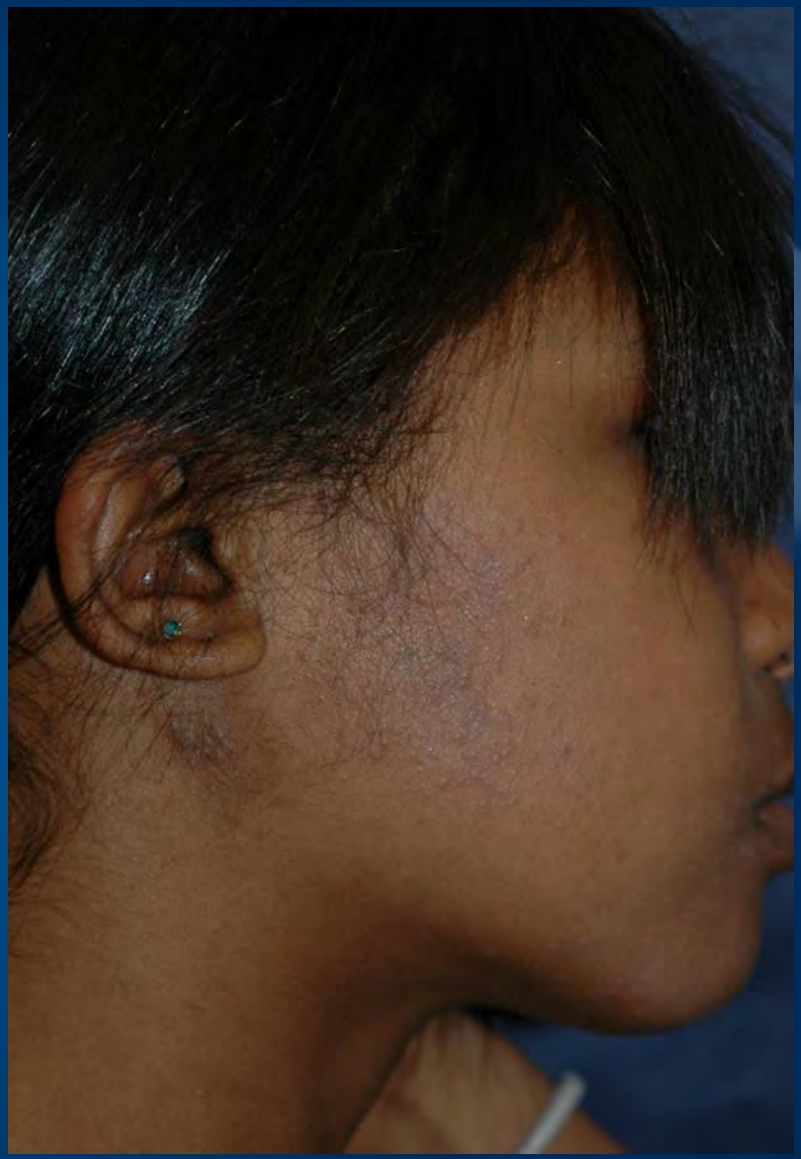

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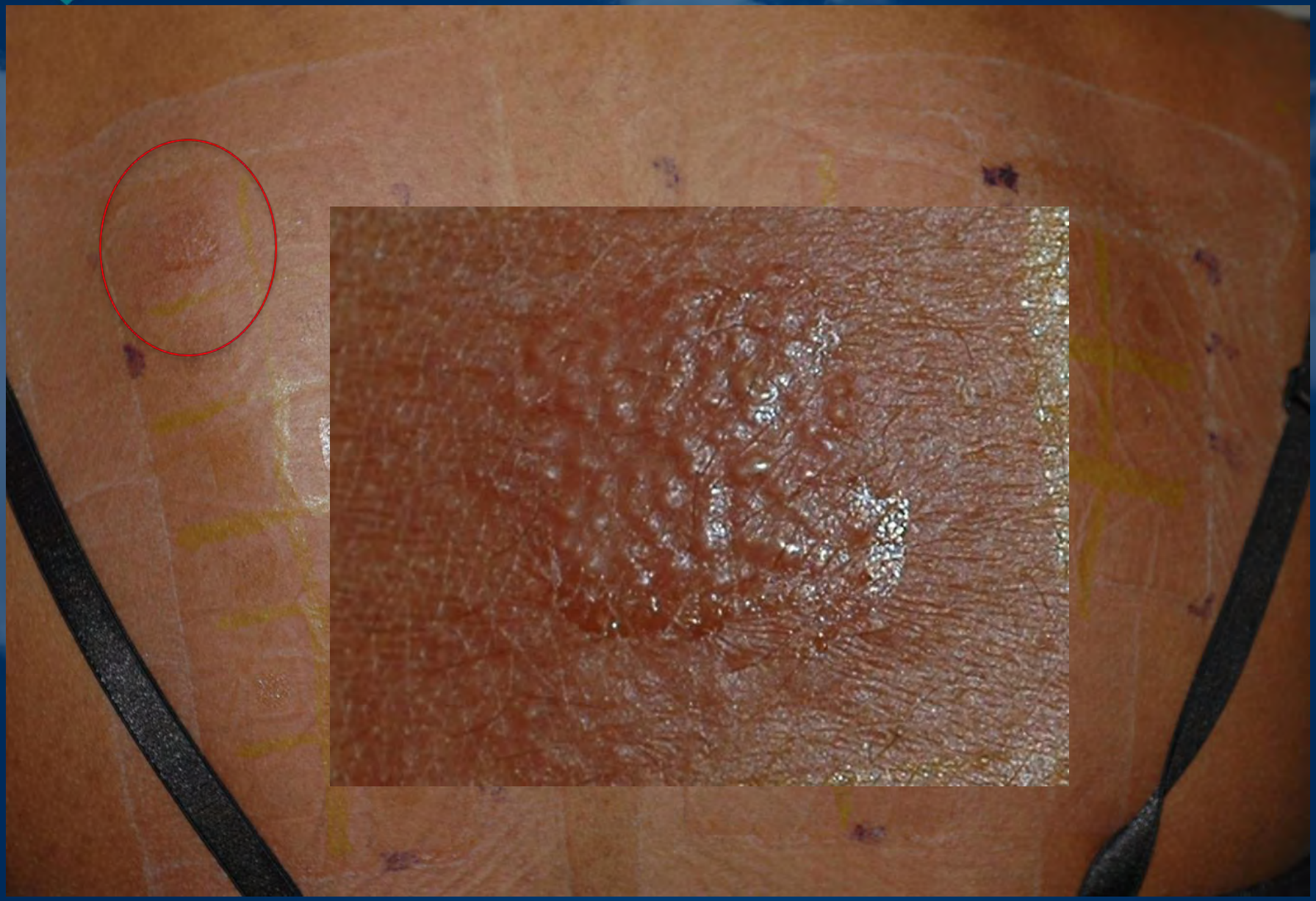
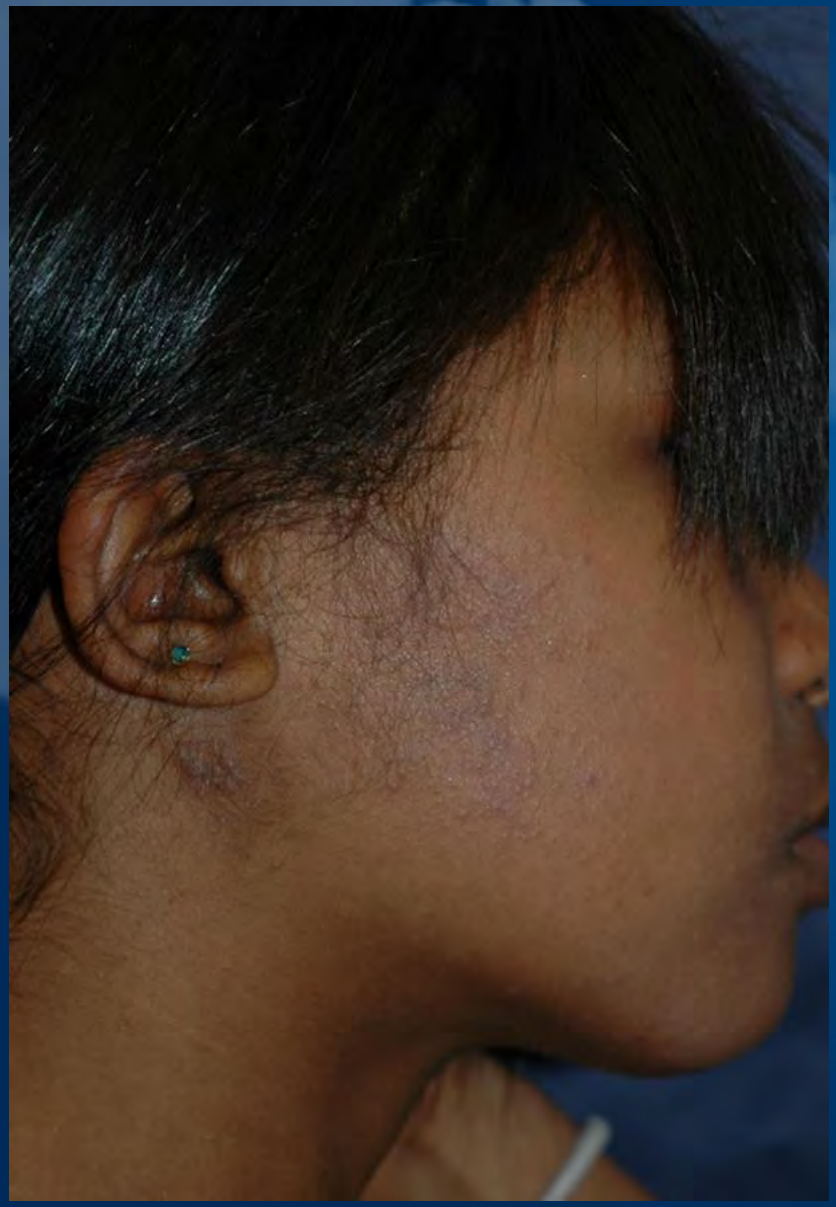


NICKEL IS EVERYWHERE



ELECRONICS WITH METAL COATING

- Cellphones
- IPADs
- video games

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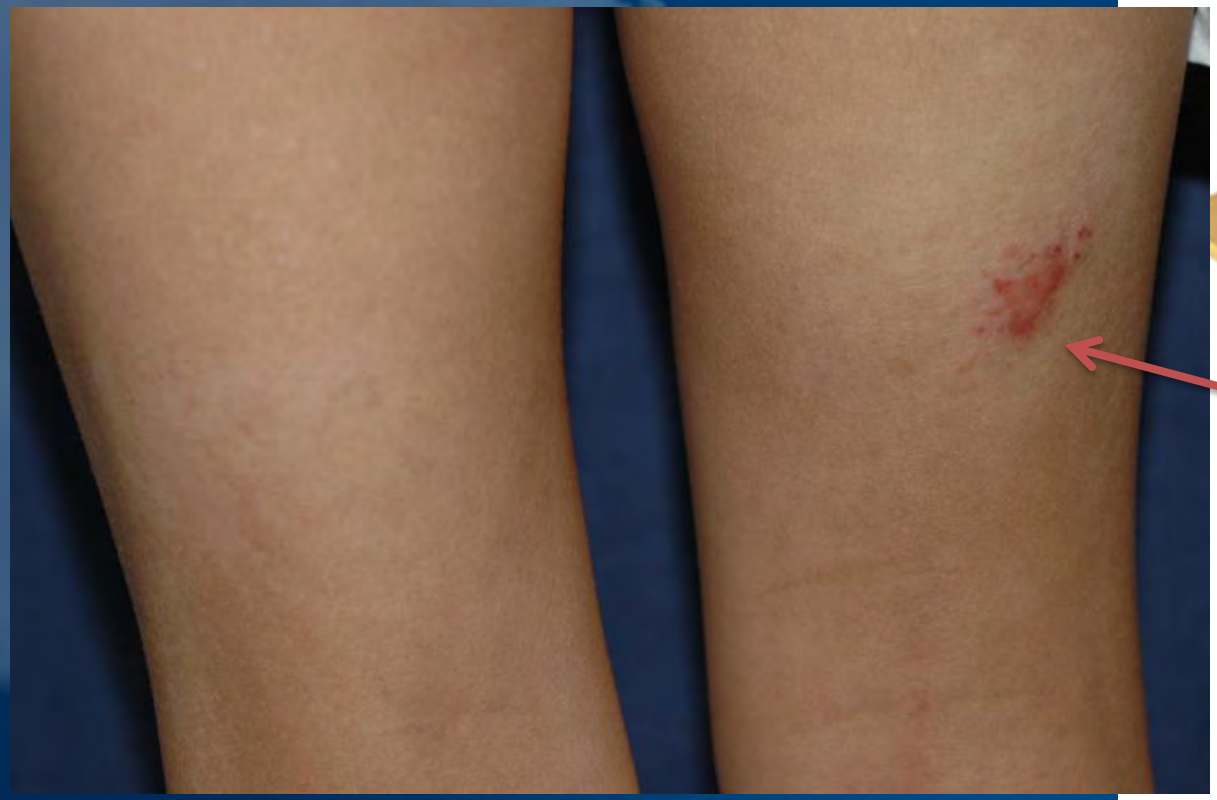
Nickel at School



School chair sign

Hamann DJ, JPediatr Dermatol. 2014 Mar-Apr;31(2):e59.

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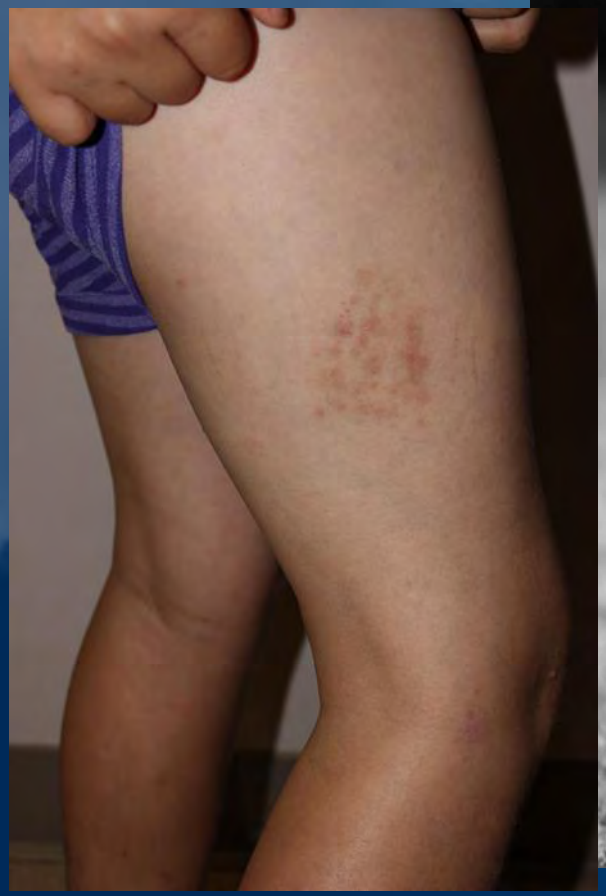
What's in your pockets



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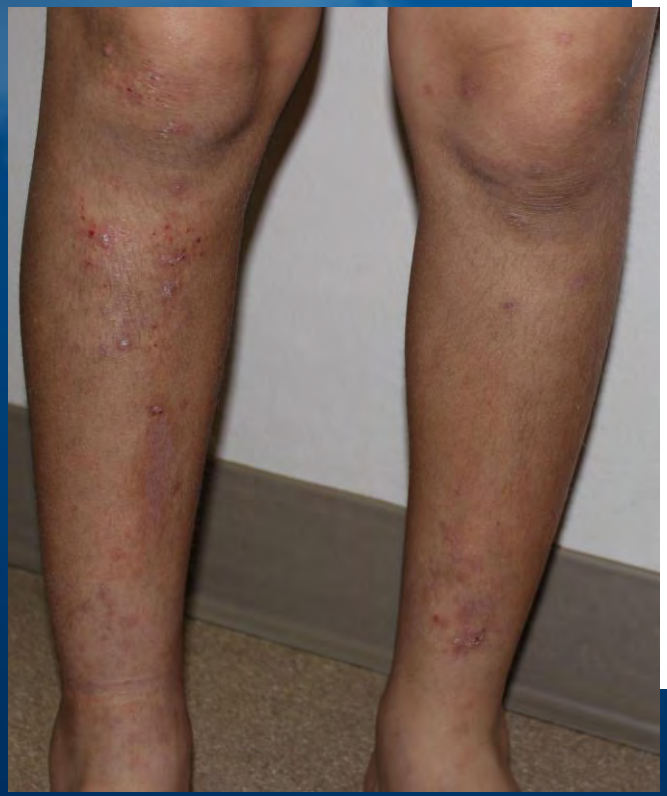
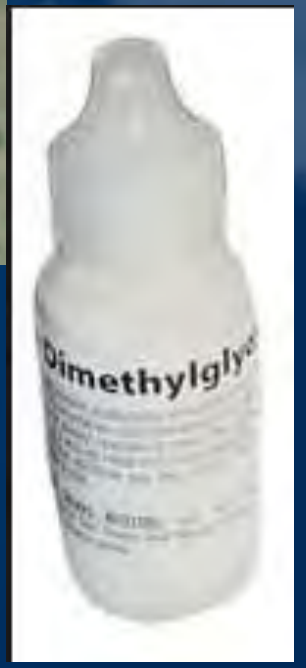
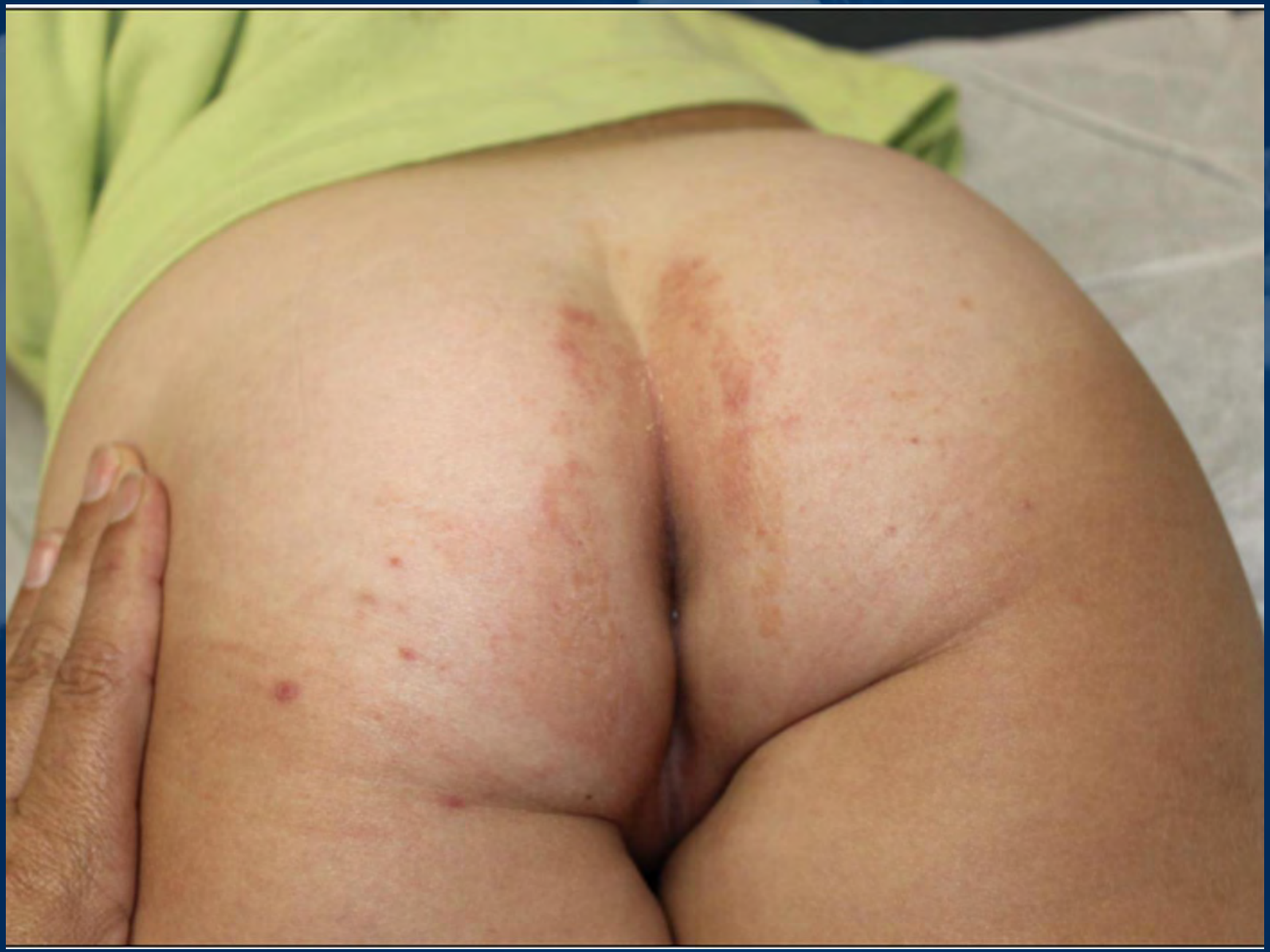
Nickel in leather

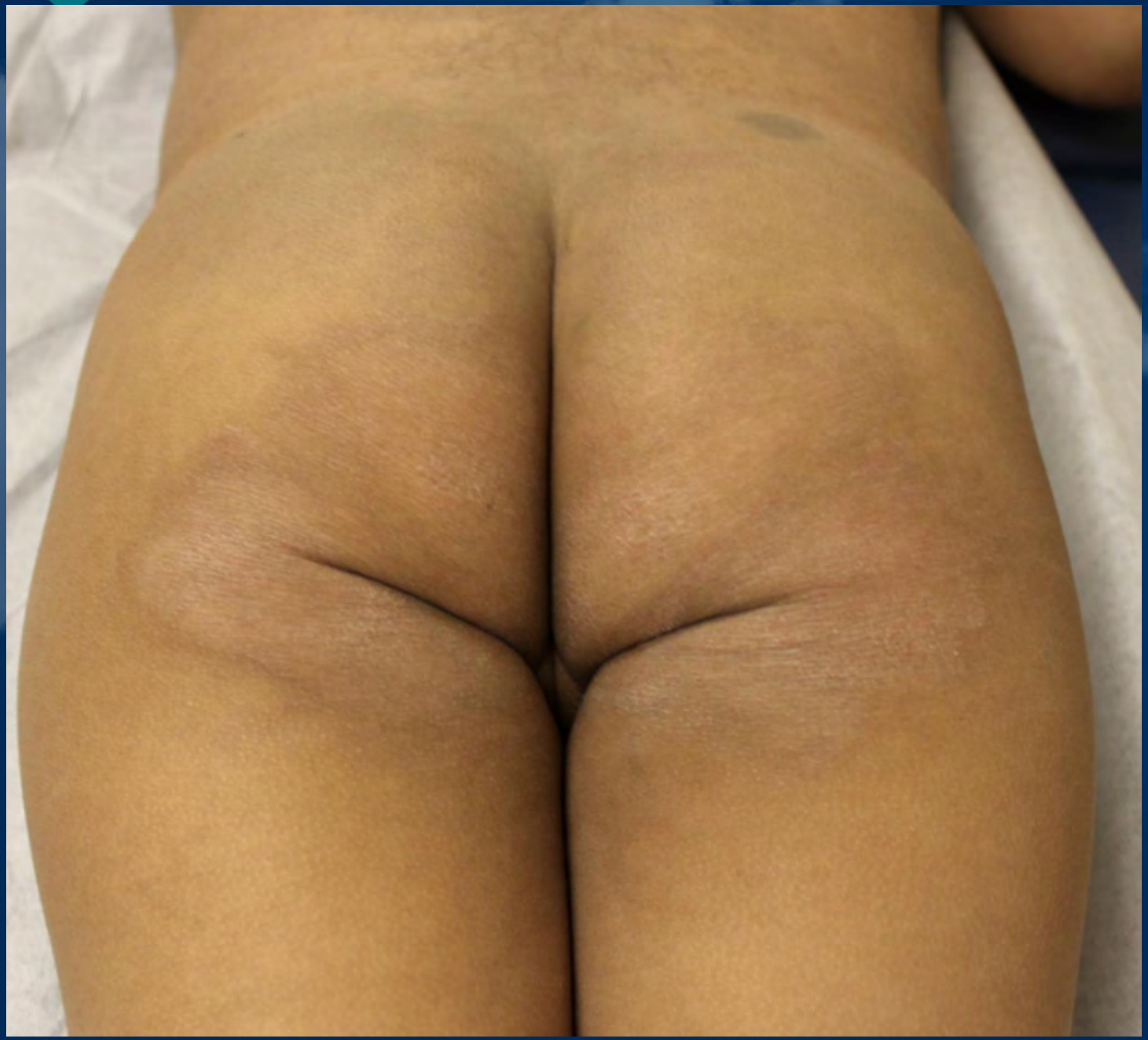


Treatment

- AVOIDANCE AVOIDANCE AVOIDANCE
- Stop active reaction with topical corticosteroids
- Teach patients about dimethylglyoxime test to test for nickel on products







WET WIPES & METHYLISOTHIAZOLINONE

- Multiple reports of ACD in face and perianal area related to wet wipes.
- Allergen of the year in 2013
- Used as a preservative in multiple personal health care products including wet wipes, shampoos, moisturizers, cosmetics
- MCI/MI mix in True test, but can miss up to 40% of reactions to MI
- Recommend testing for MI as well
- Avoidance and use of topical corticosteroids for treatment.

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Admani et al. Pediatr Dermatol. 2014 May-Jun;31(3):350-2

Thank You!

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