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TROPICAL DISEASE FOUNDATION

Clueless: Fungal and Viral Skin Infections

Objectives of lecture in Clueless

BE CLUEFUL:

RECOGNITION

MANAGEMENT

Superficial fungal infections

1. Dermatophytes ("Tinea")
   a. ***Trichophyton sp. (hair, skin and nails)***
   b. ***Microsporum sp. (hair and nails)***
   c. ***Epidermophyton sp. (skin)***

2. Yeasts
   a. ***Pityrosporum ovale (skin)***
   b. ***Candida sp. (skin and mucus membranes)***

Fungal Infections

First Clue: Are there predisposing factors?

- ***Trauma to the skin or constant rubbing***
- ***Increased moisture (sweating) and warmth, poor hygiene***
- ***Use of prolonged antibiotics, steroids***
- ***Immunocompromised state***

Dermatophytes: Recognition

TINEA CORPORIS **(Ringworm of the body): may appear on any part of the glabrous skin**

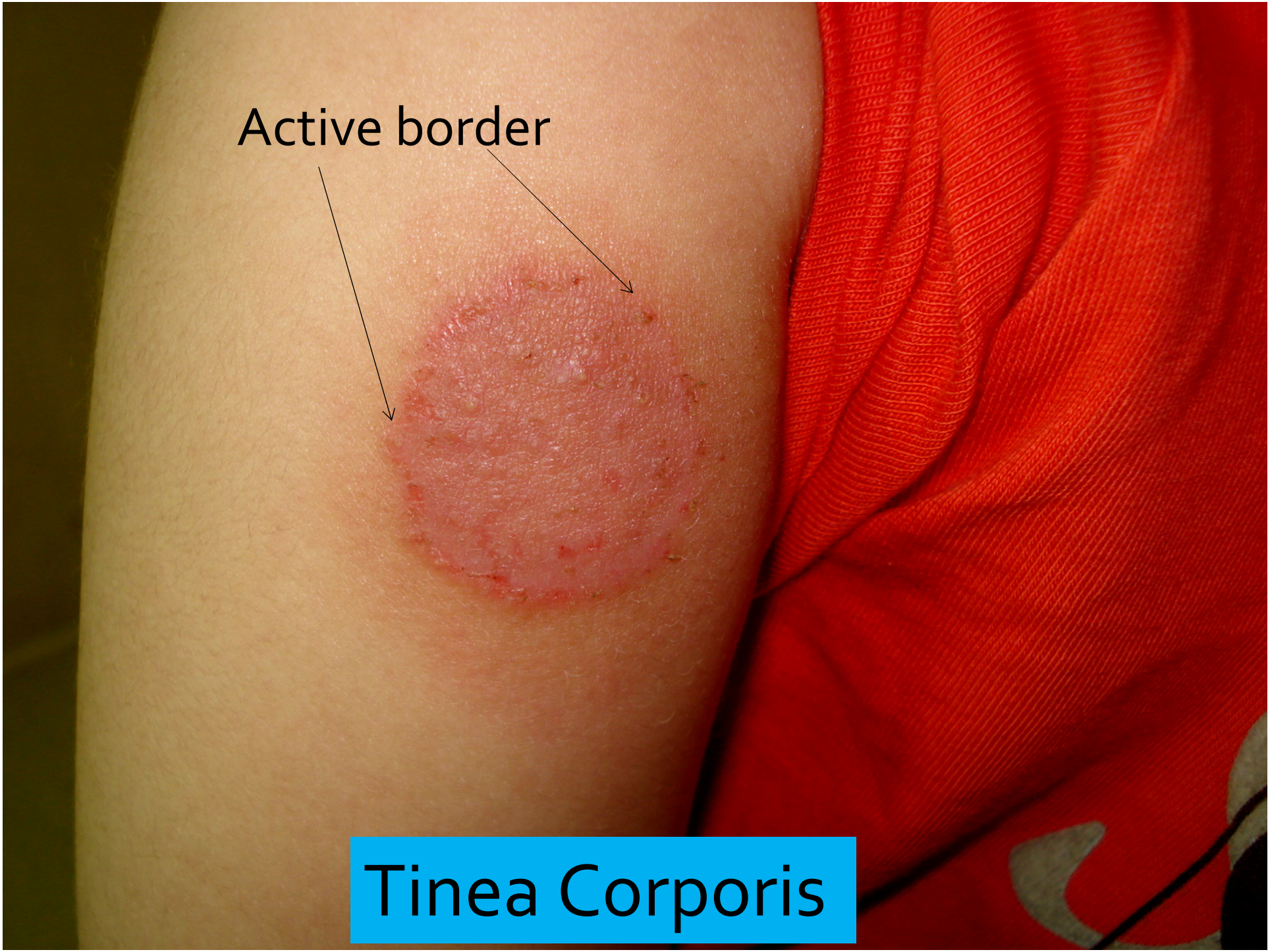
- ***Red, scaly papules that spread peripherally: activity is in the BORDER (SLOW GROWING)***
- ***Papules coalesce and lesion becomes annular***
- ***Itchy if very inflammatory especially in the groin area***

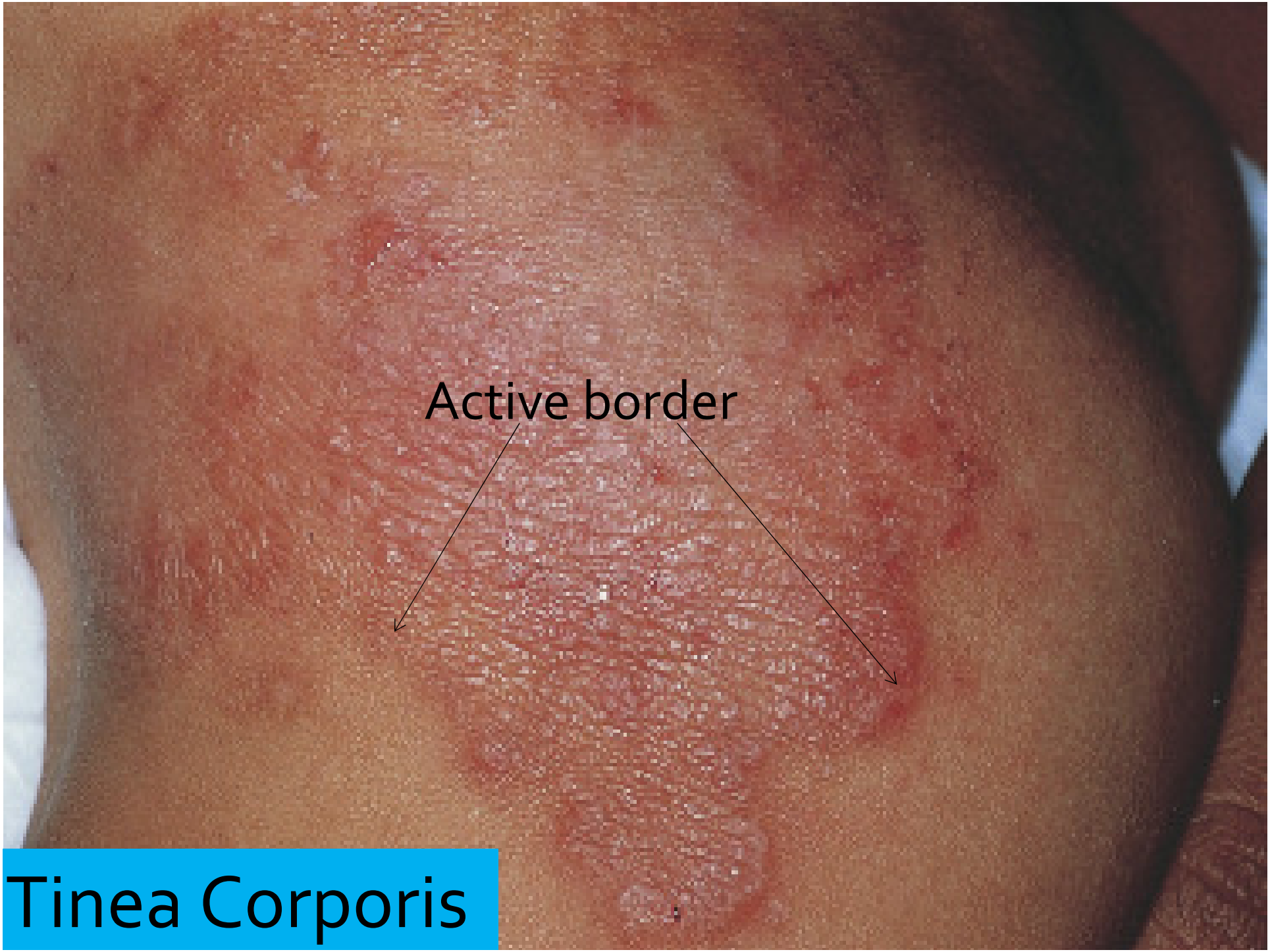
Recognition: CLUES

LOOK FOR AN ADVANCING BORDER:

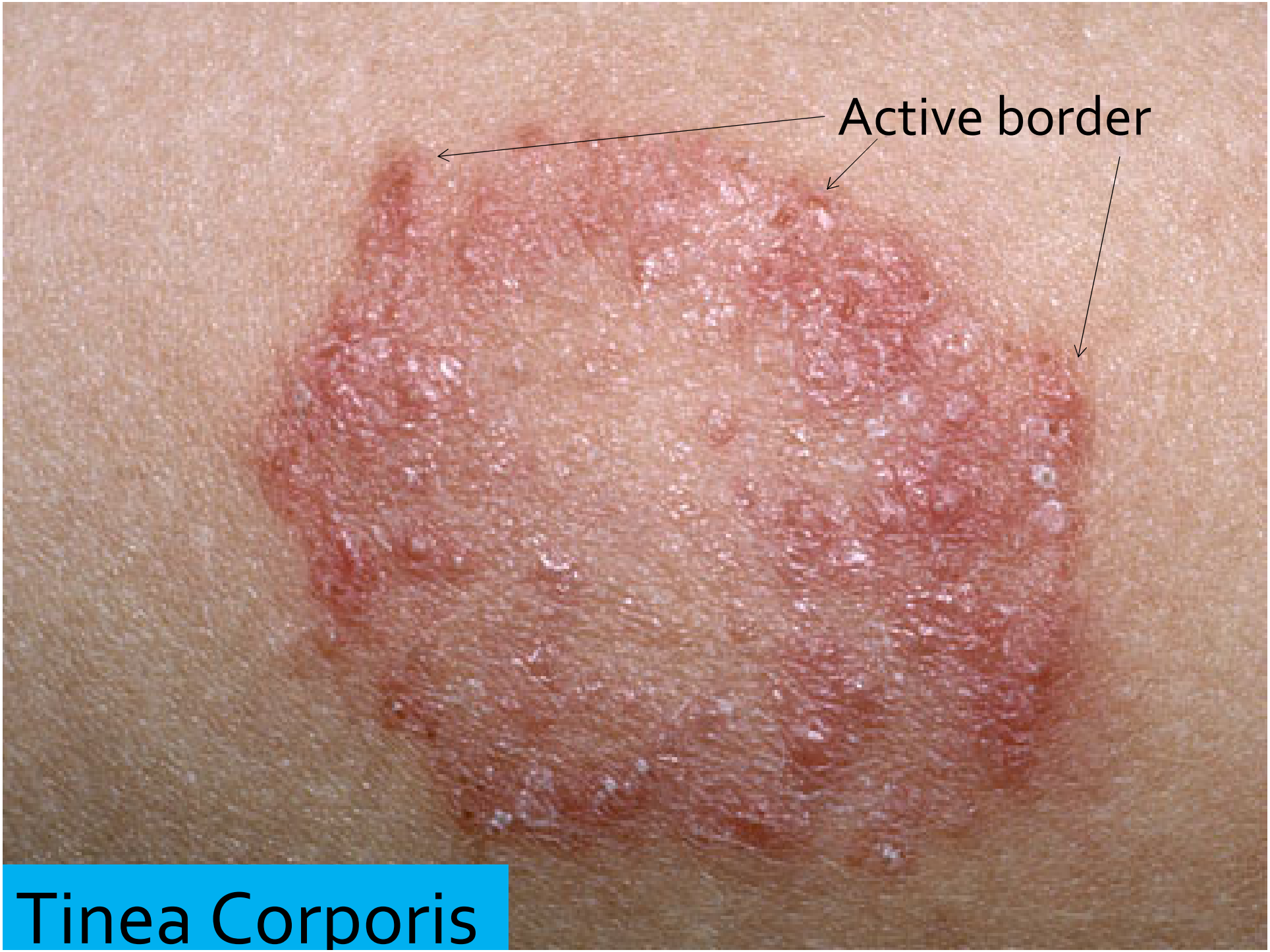
sharp contrast between normal and affected skin

SLOW GROWING

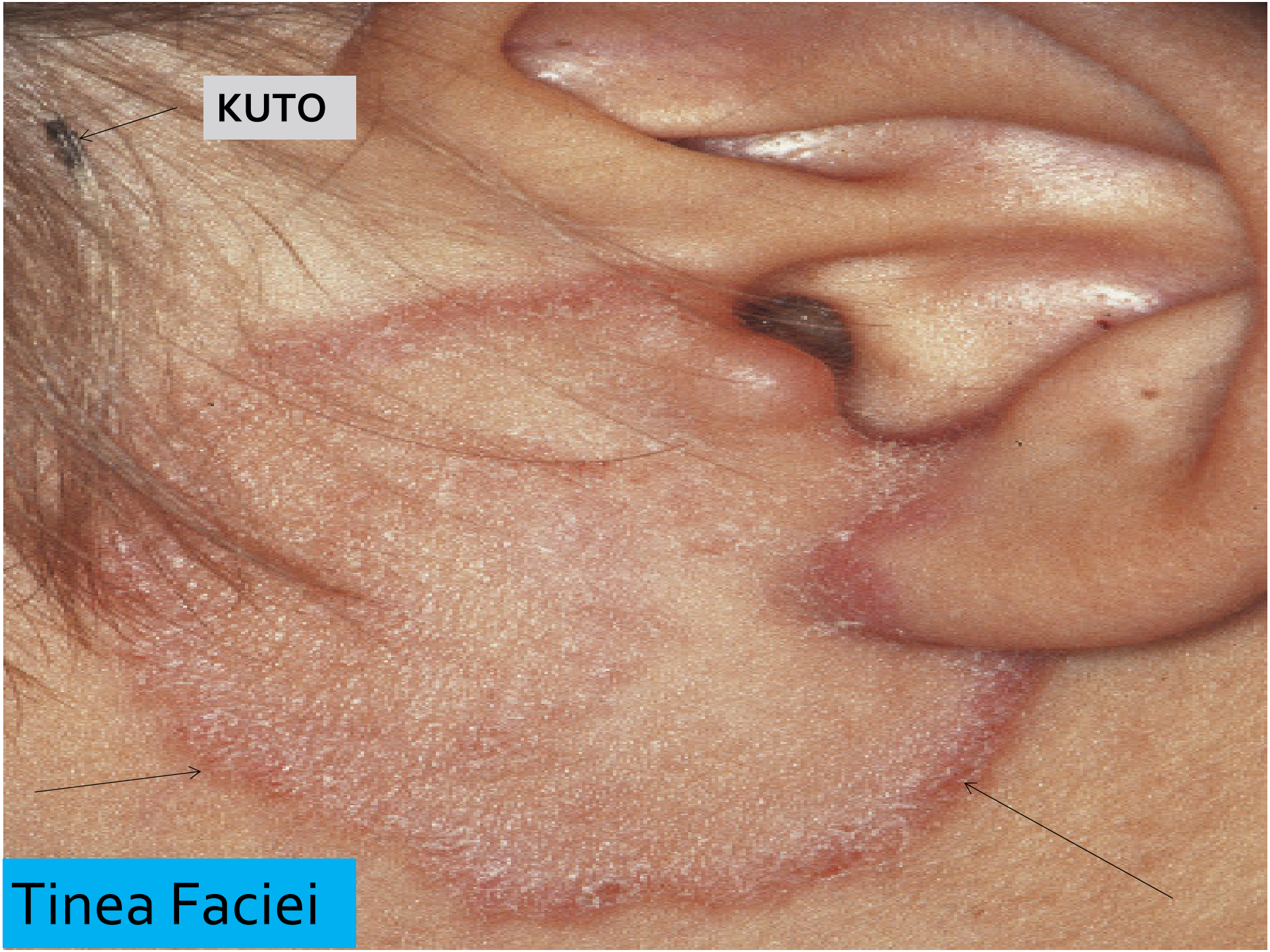

Active border
Tinea Corporis

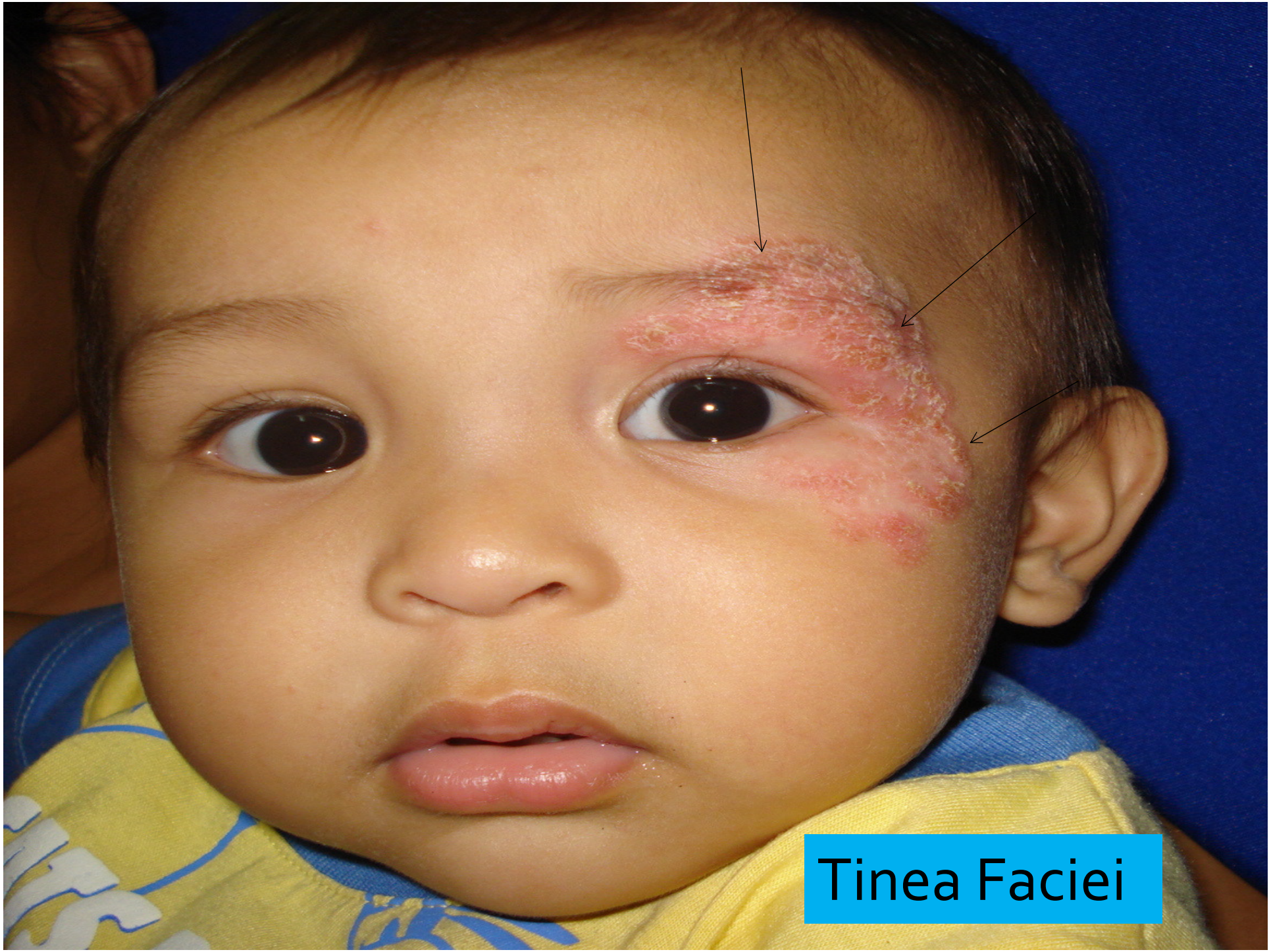


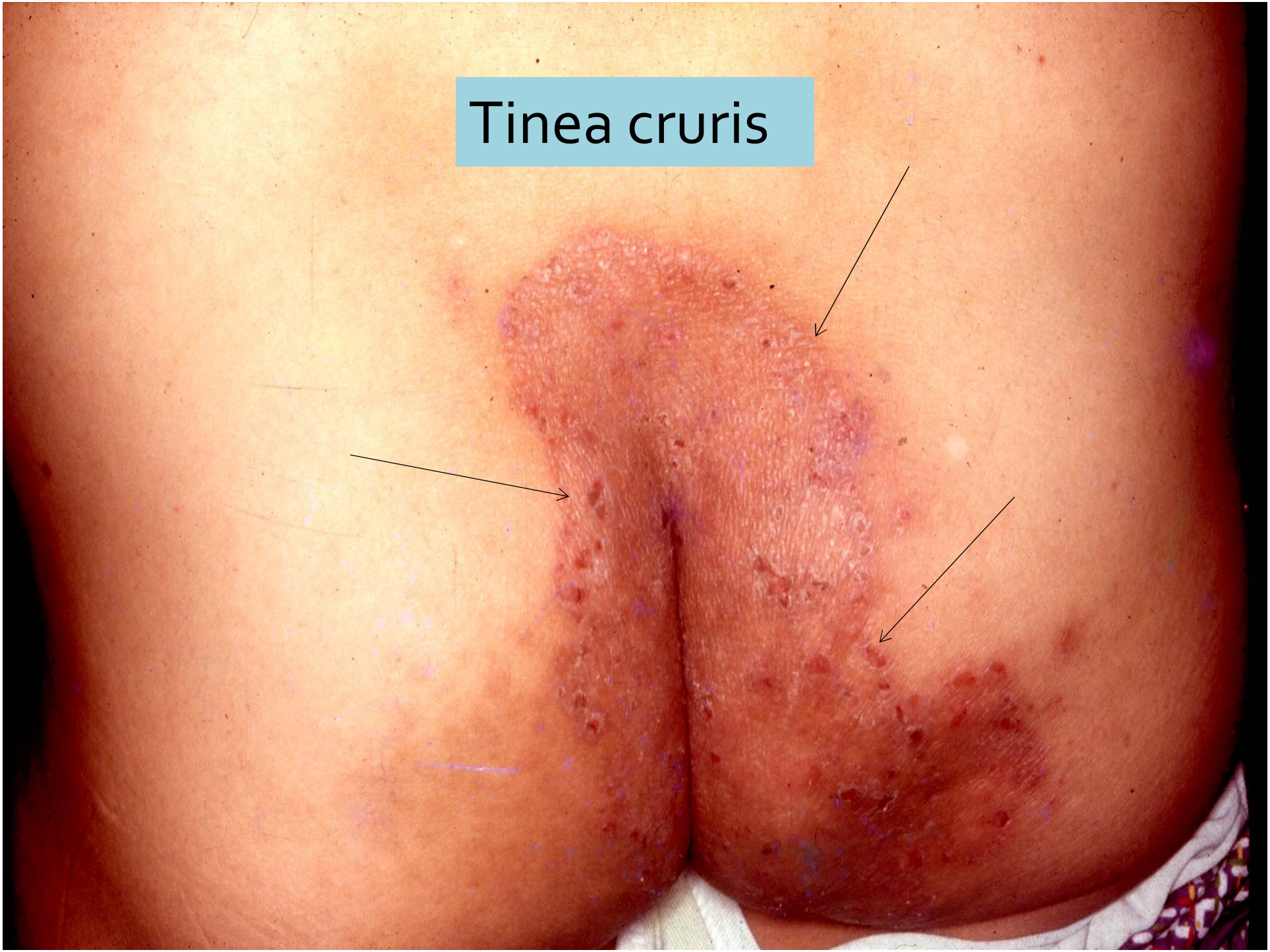
Tinea Corporis



Tinea Corporis


KUTO
Tinea Faciei

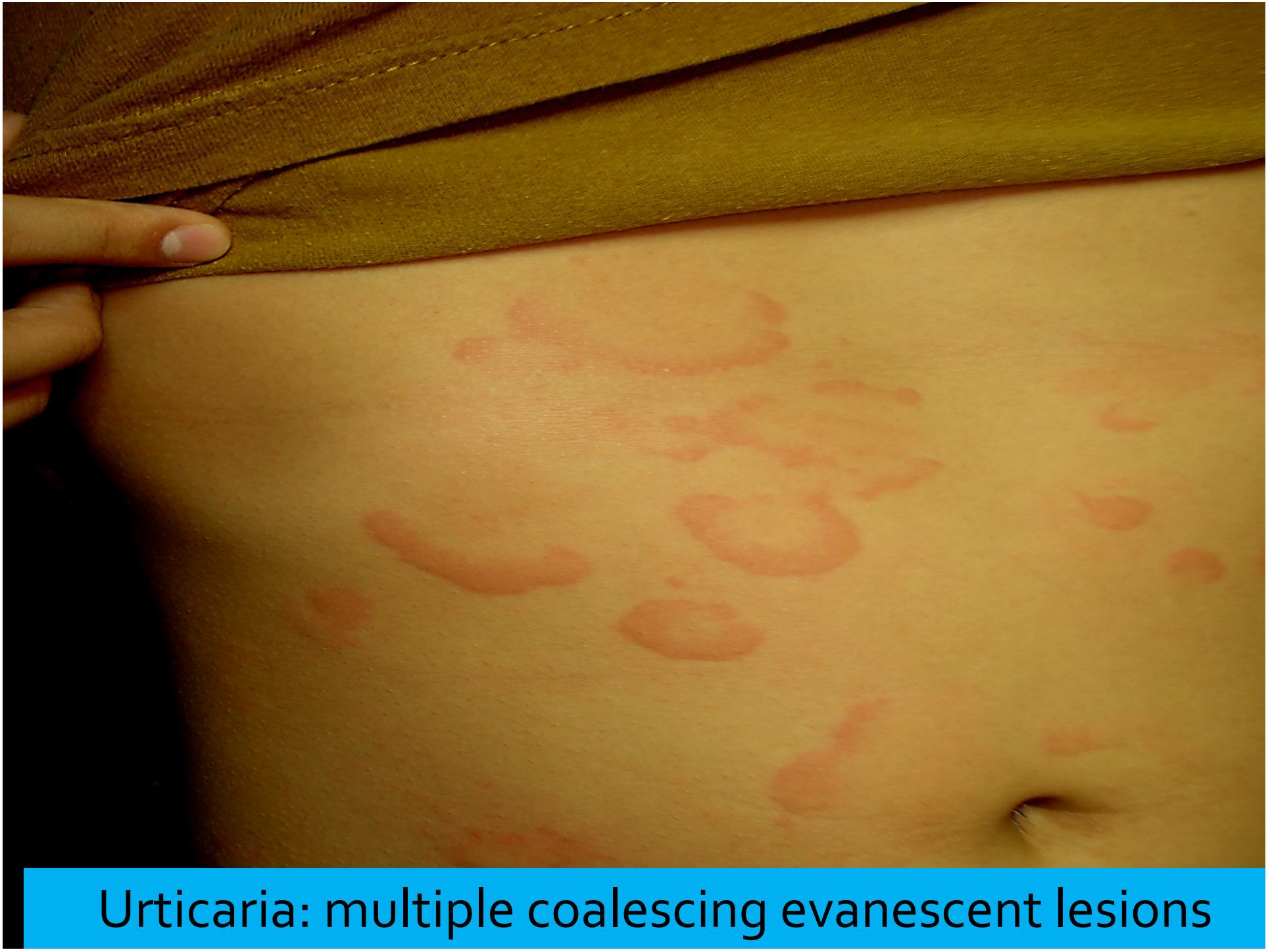

Tinea Faciei


Tinea cruris

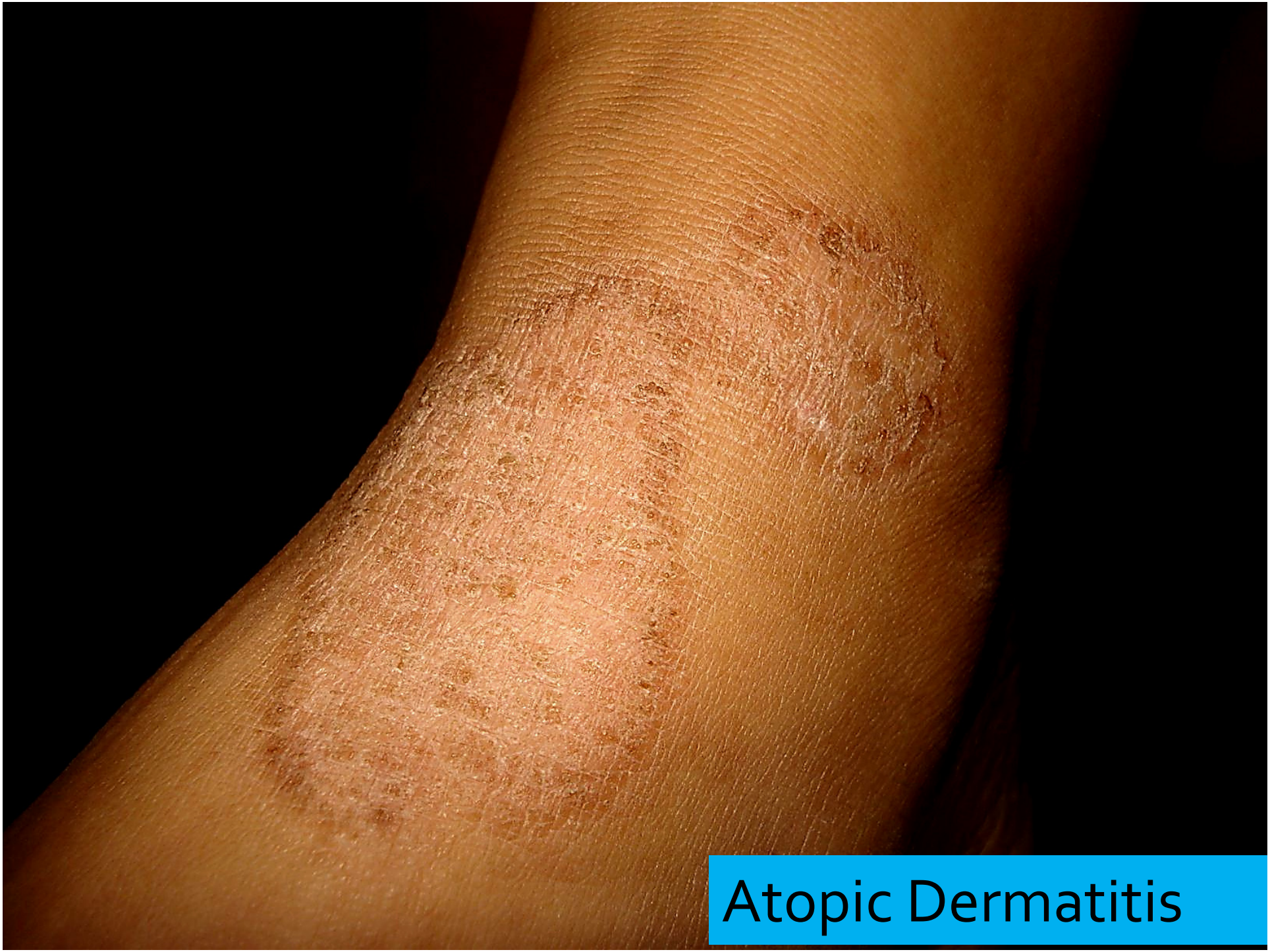
Please Note:

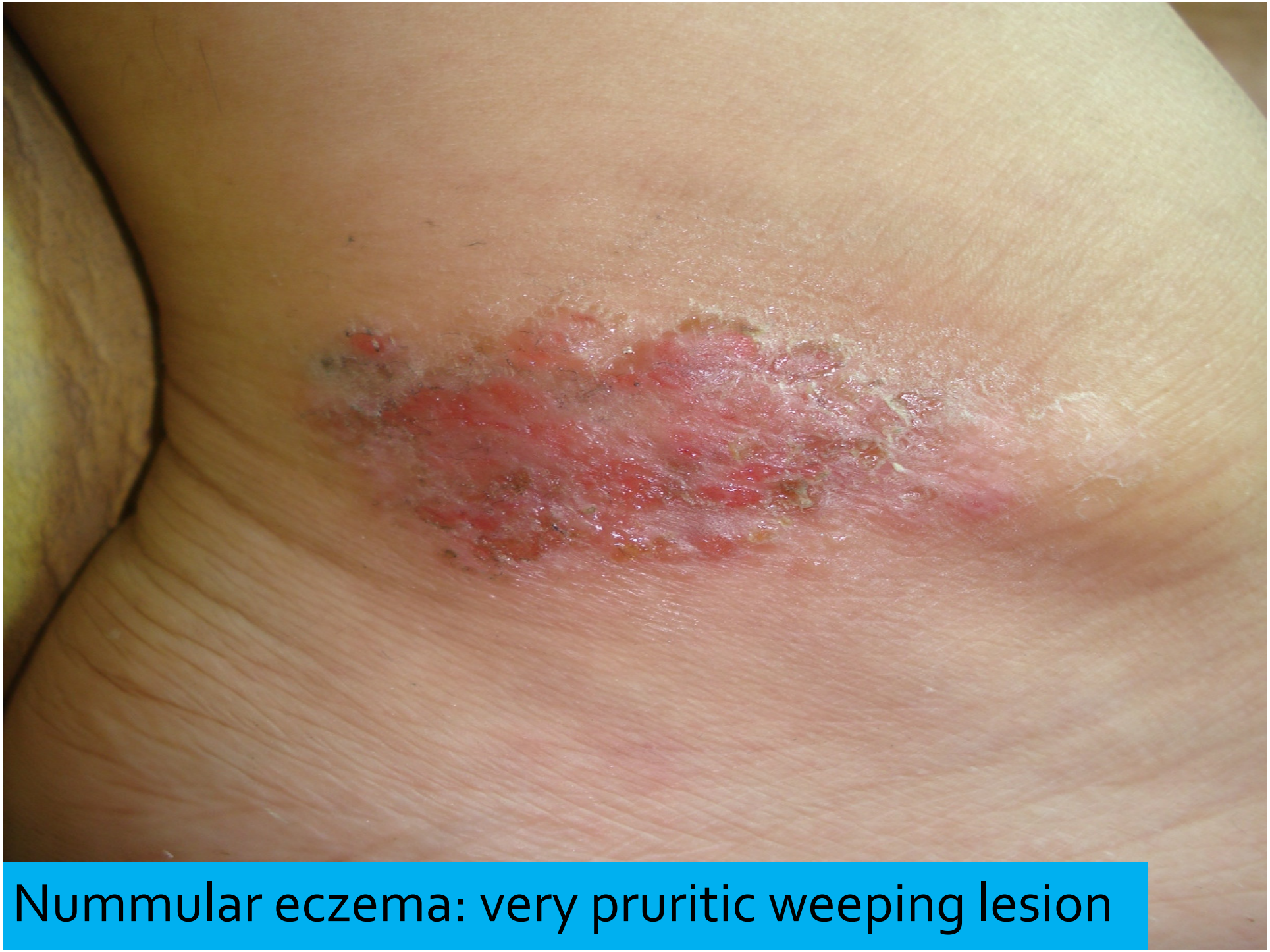
Not all rings are

Ringworm

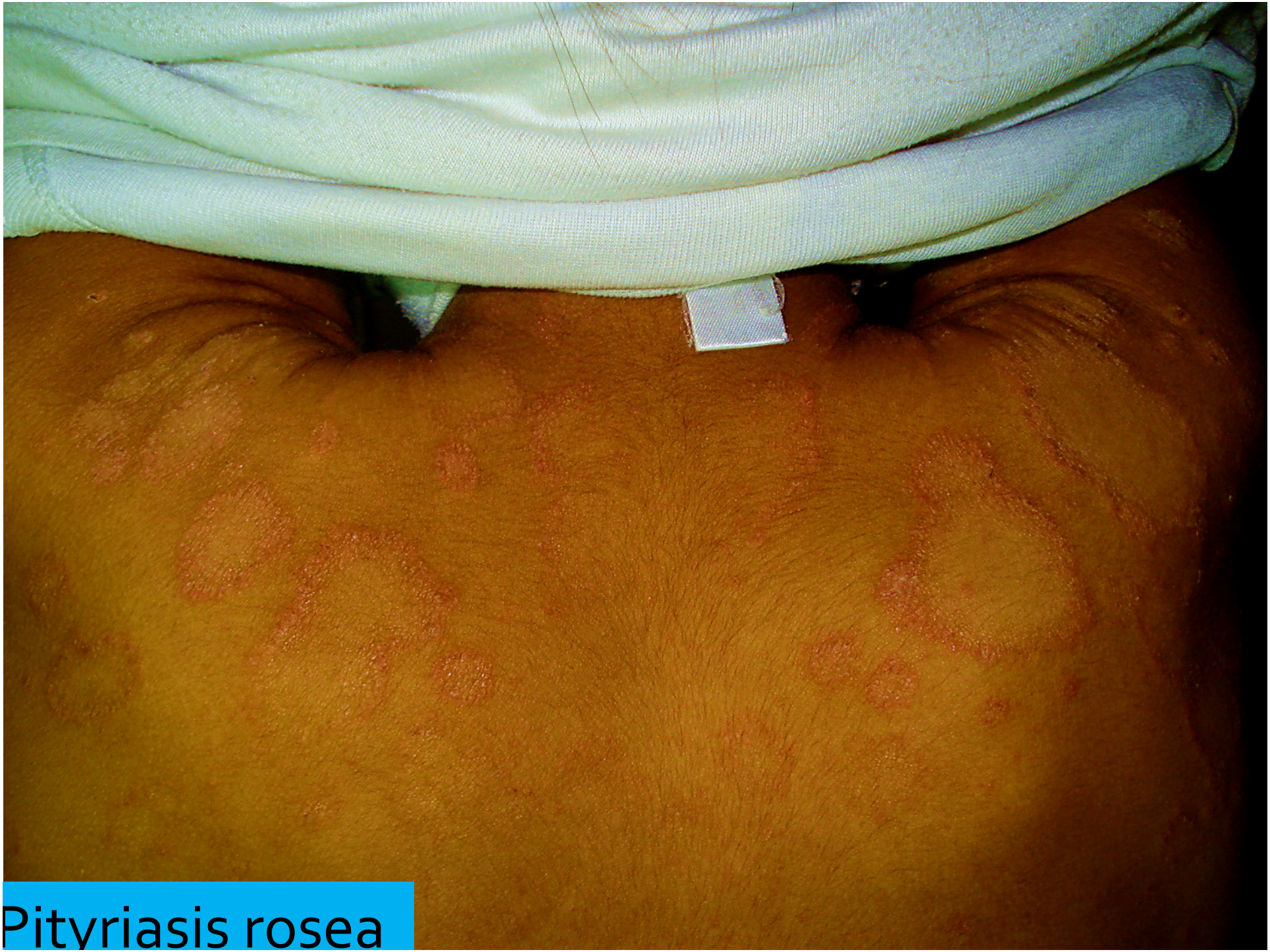


Urticaria: multiple coalescing evanescent lesions

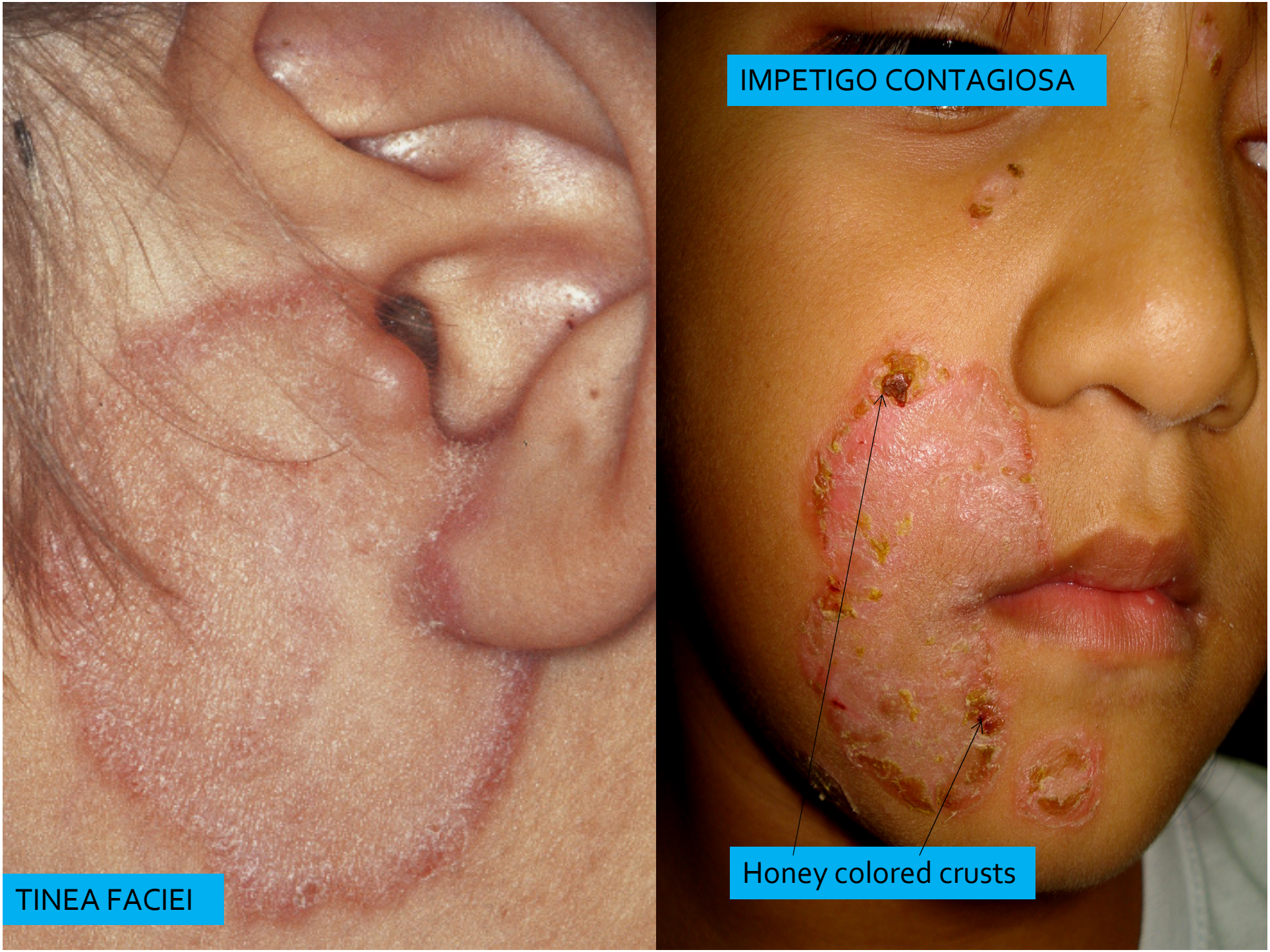

Atopic Dermatitis



Nummular eczema: very pruritic weeping lesion



Pityriasis rosea


TINEA FACIEI
IMPETIGO CONTAGIOSA
Honey colored crusts

Dermatophytes: Recognition

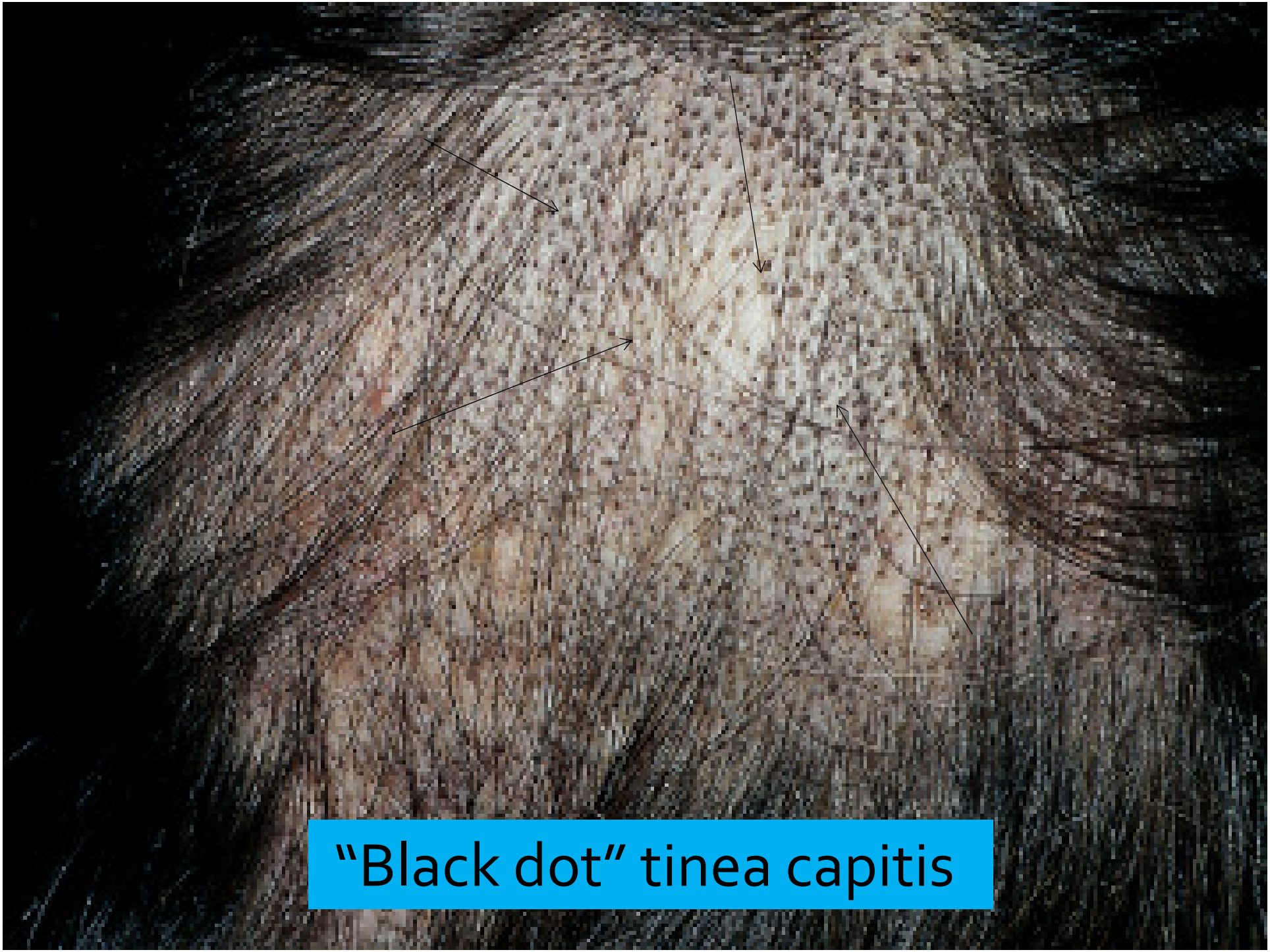
TINEA CAPITIS

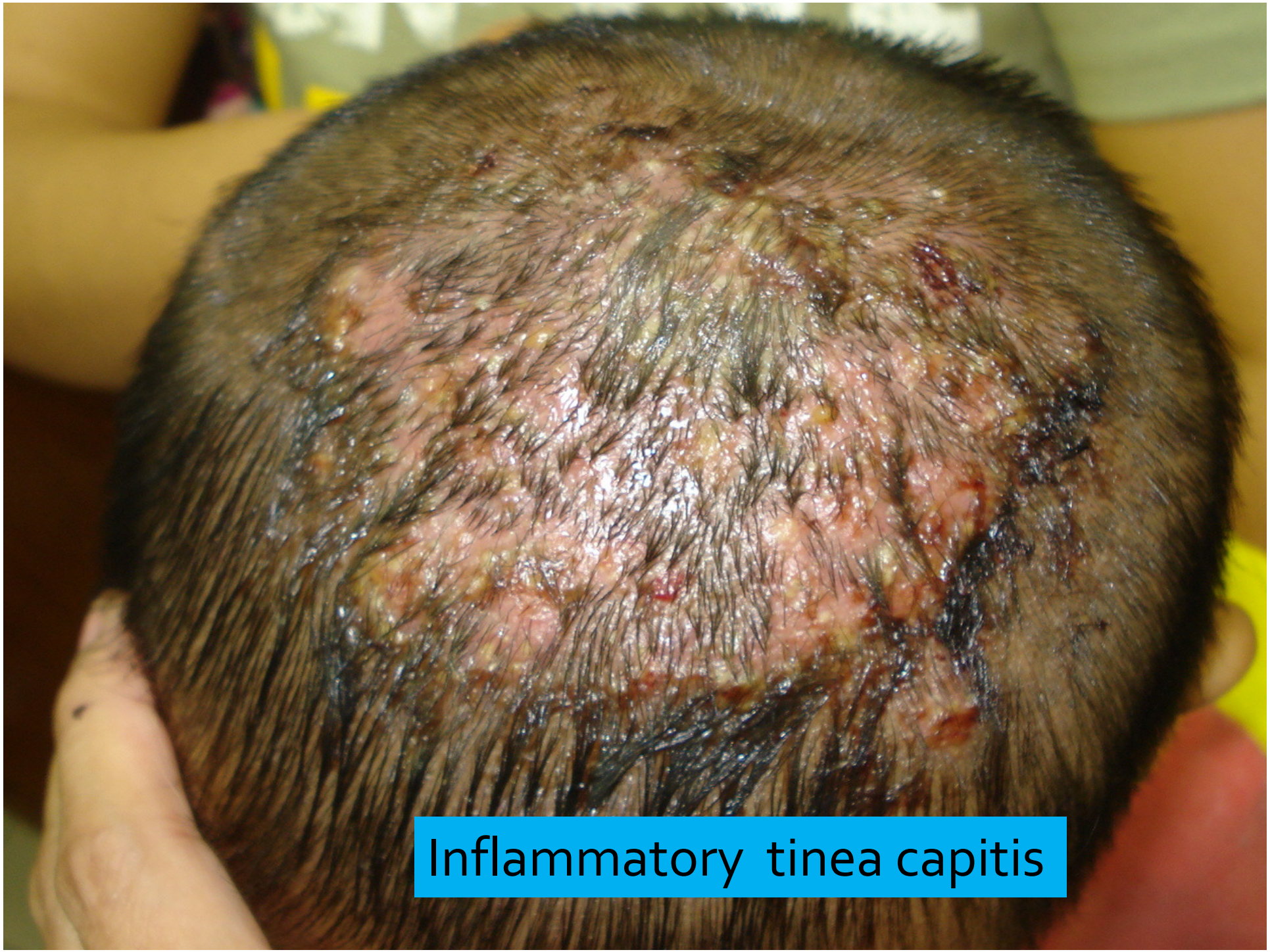
Clue: ***prepubertal child with a scaly scalp*** (low sebum – low antifungal properties)

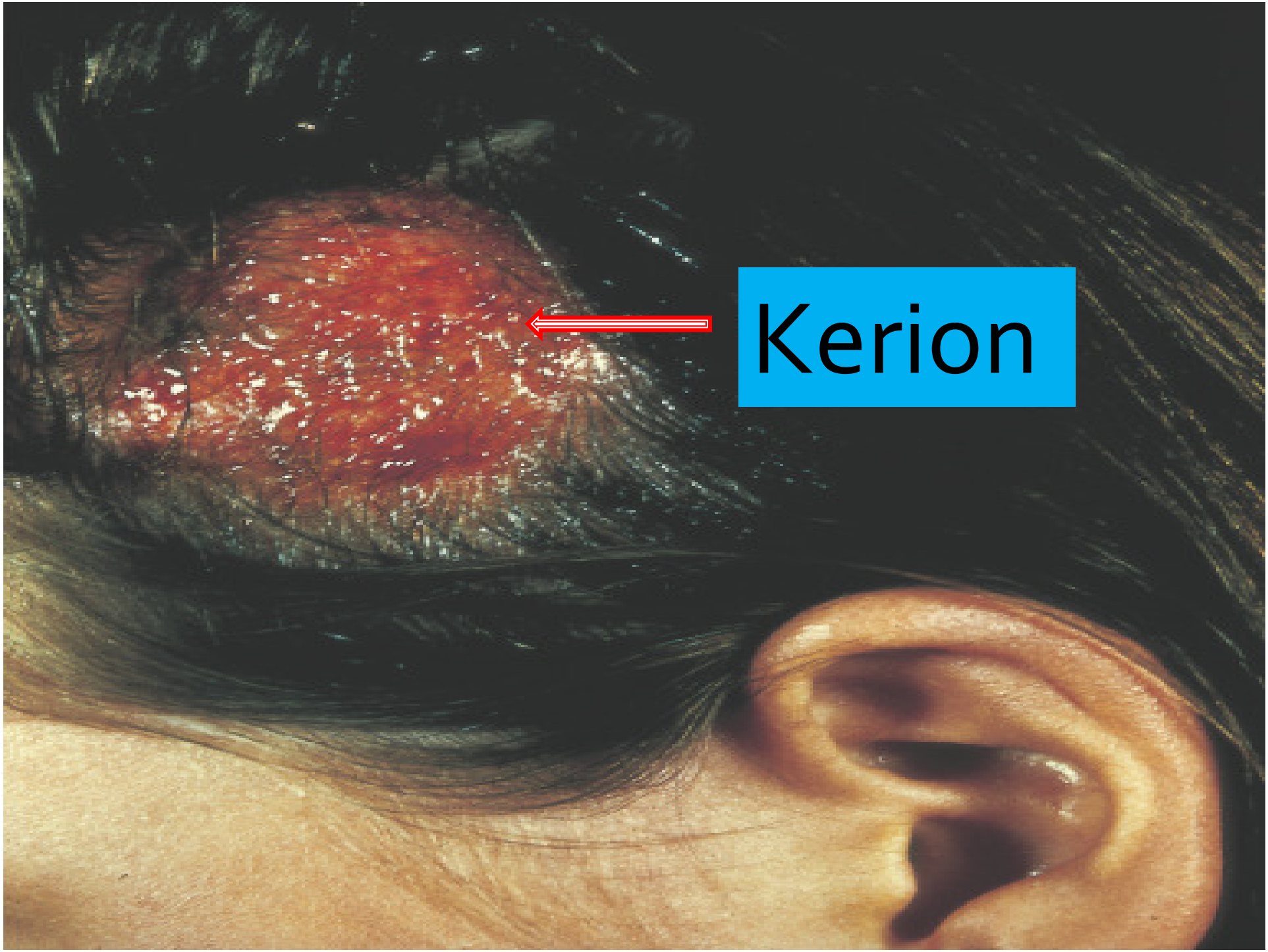
: patchy hair loss with scales

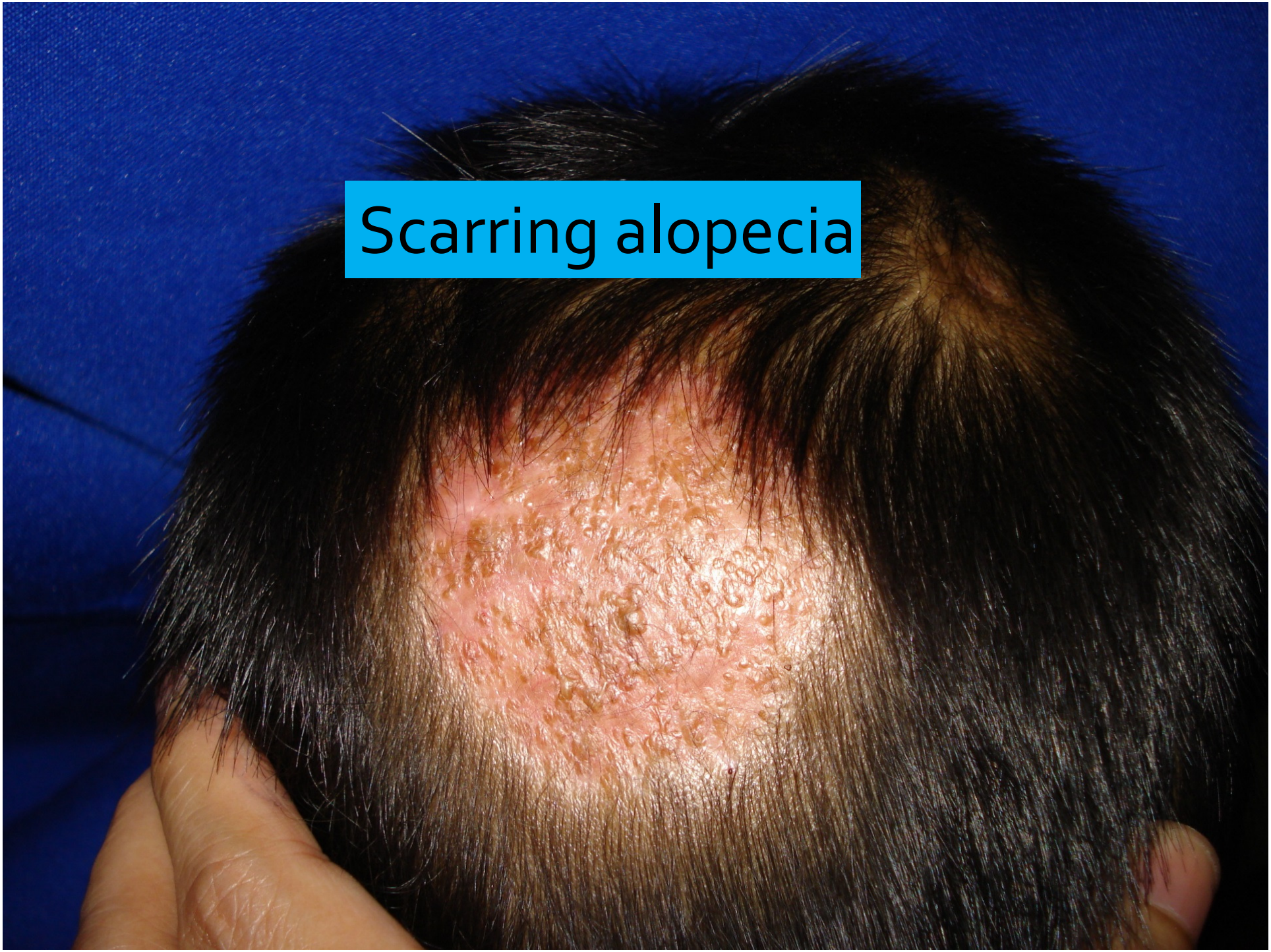
: or inflammatory papules and pustules (may be severe with cervical lympadenopathy)

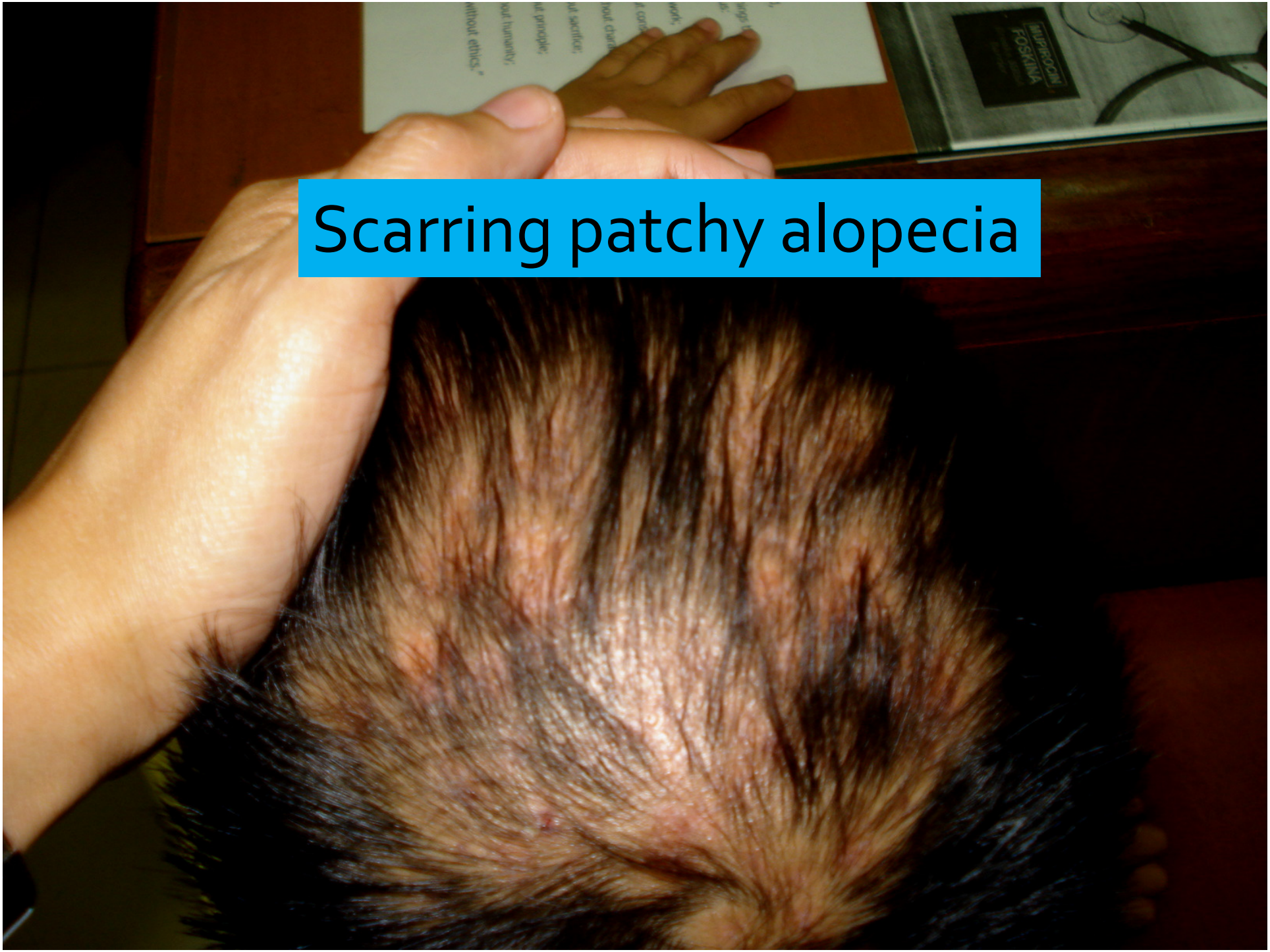

Seborrheic dermatitis like
Tinea capitis


"Black dot" tinea capitis


Inflammatory tinea capitis


Kerion


Scarring alopecia


Scarring patchy alopecia

Dermatophytes: Recognition

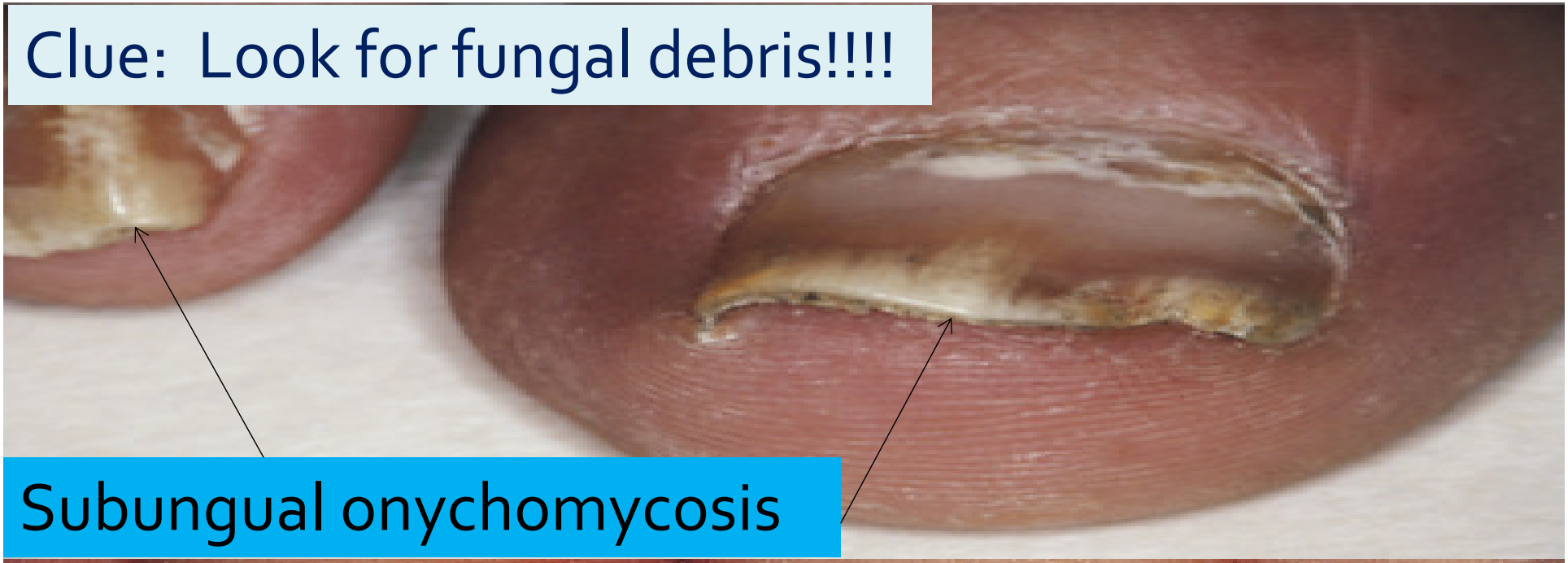
TINEA UNGIUM

Not common in children

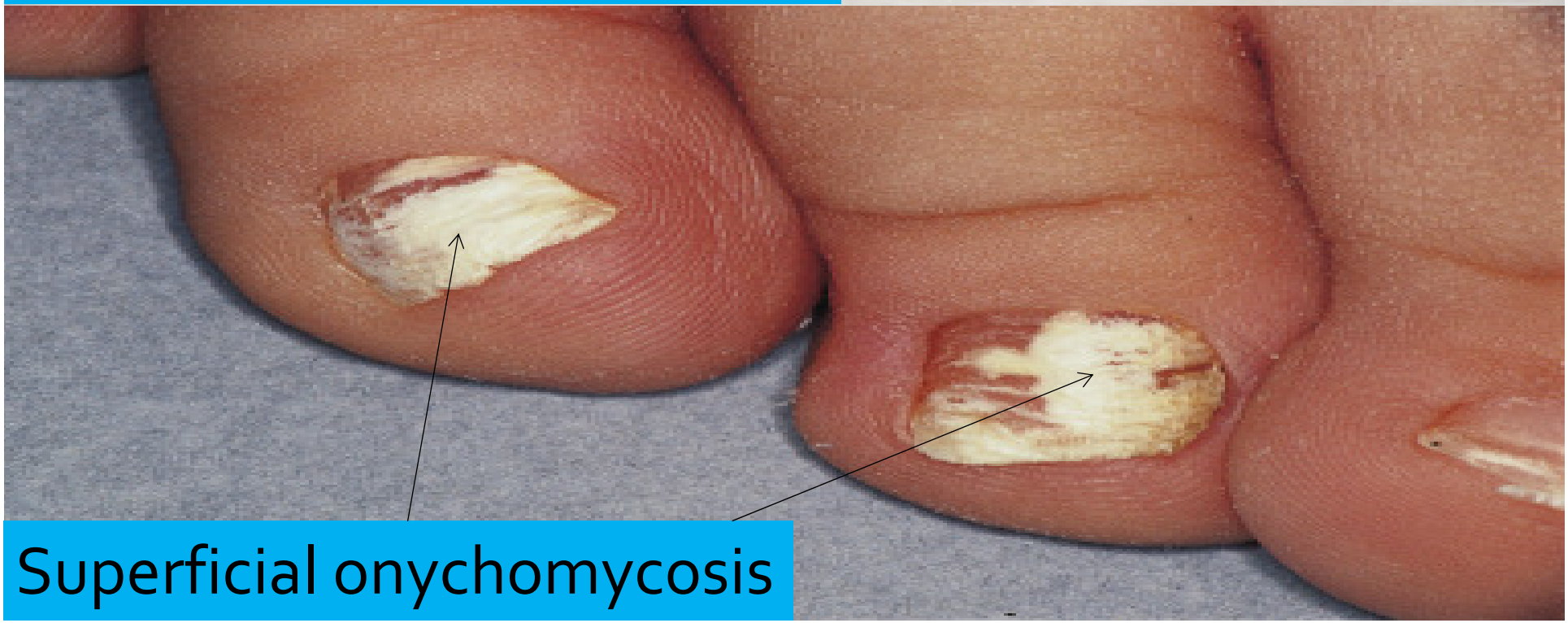
:usually associated with Tinea pedis

:toenails much more commonly involved than fingernails

Clue: Look for fungal debris!!!!



Subungual onychomycosis

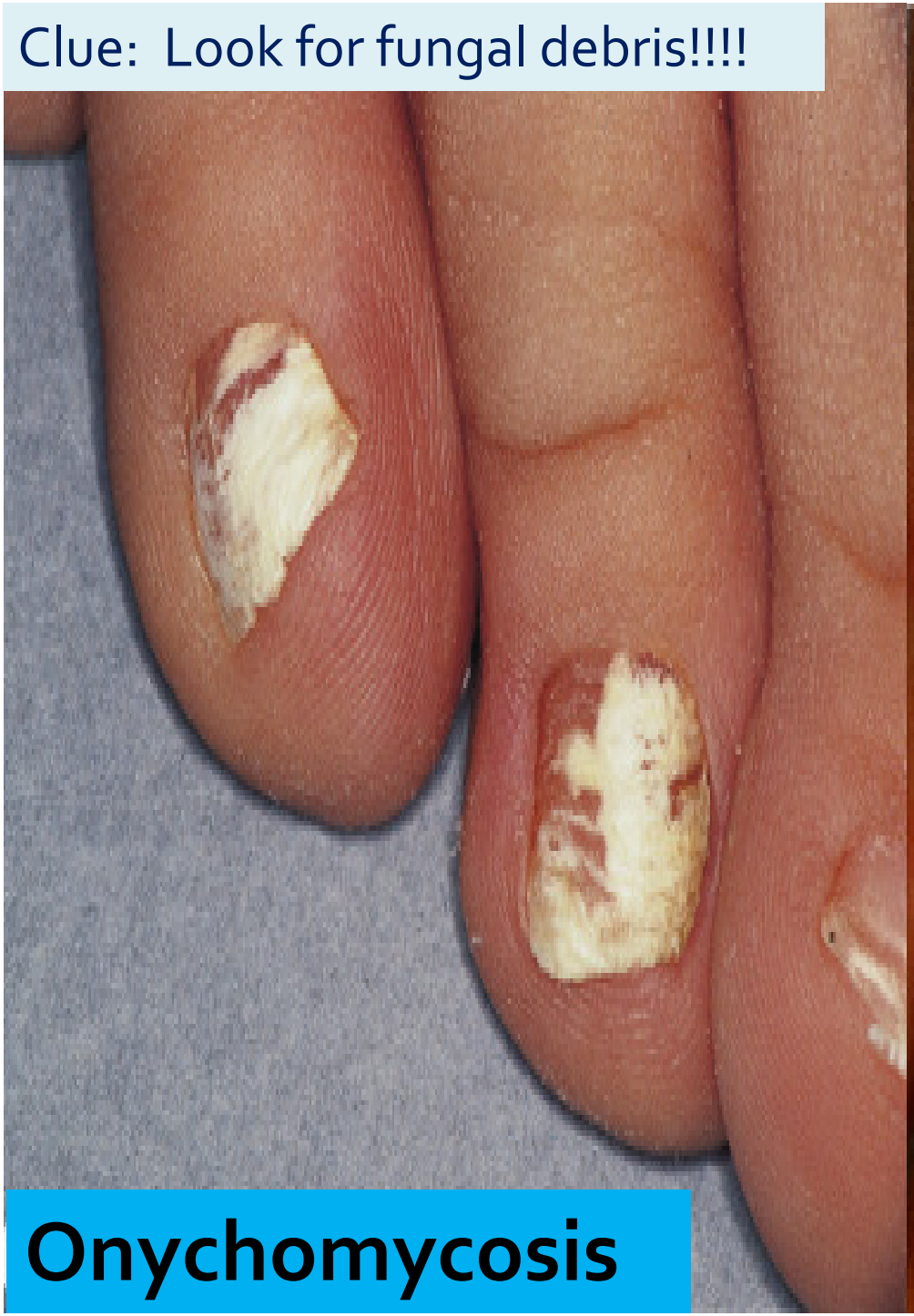


Superficial onychomycosis

50% of nail fungus diagnosis is wrong!!!!!!!!!!!!!!!!!

Not all dystrophic nail changes are caused by fungus!

Clue: Look for fungal debris!!!!



Onychomycosis

20 Nail Dystrophy

Nail pitting in Psoriasis

Onycholysis – distal split

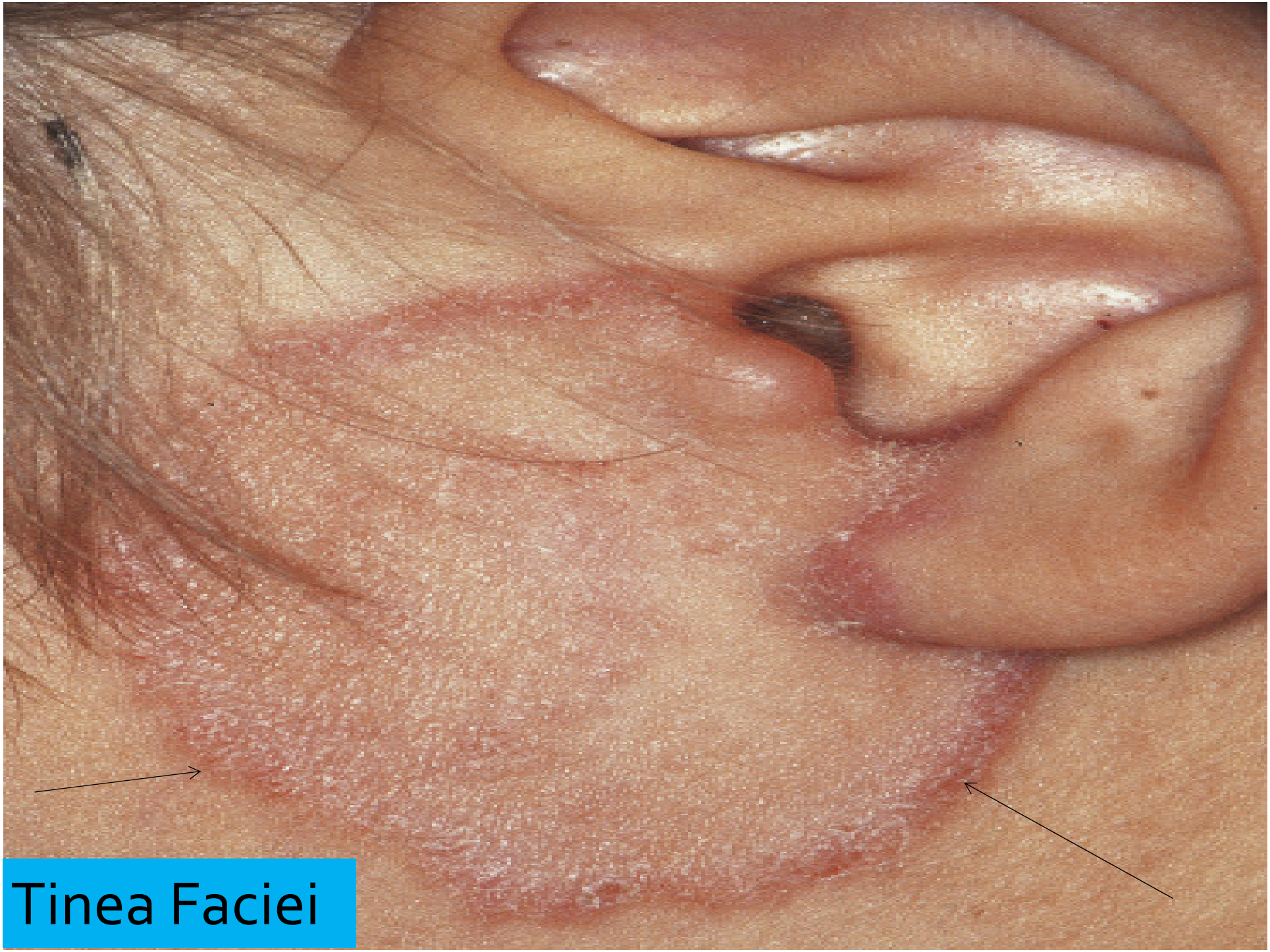
Beau's lines/Onychomadesis

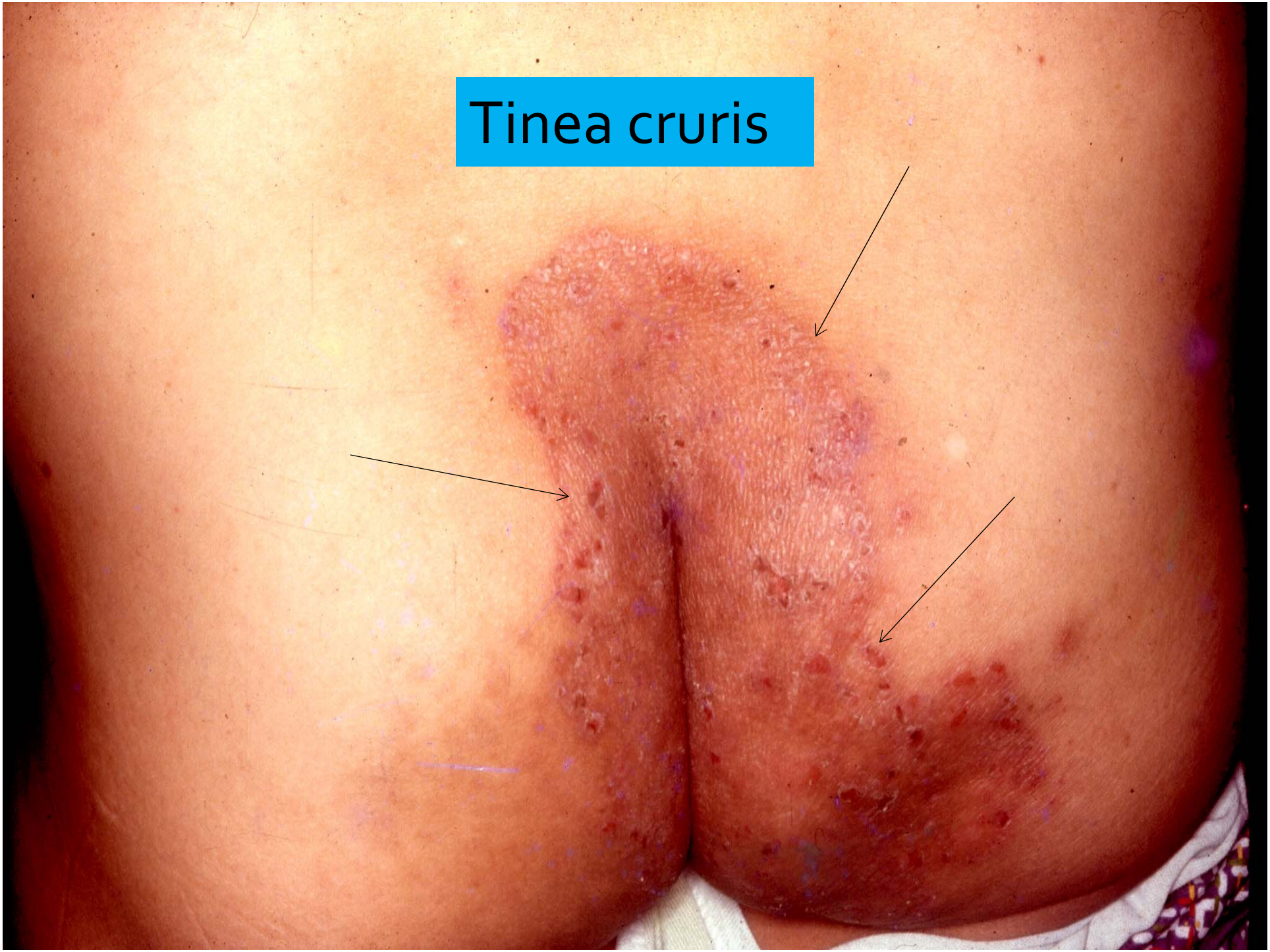
Onychomadesis after Hand Foot and Mouth disease

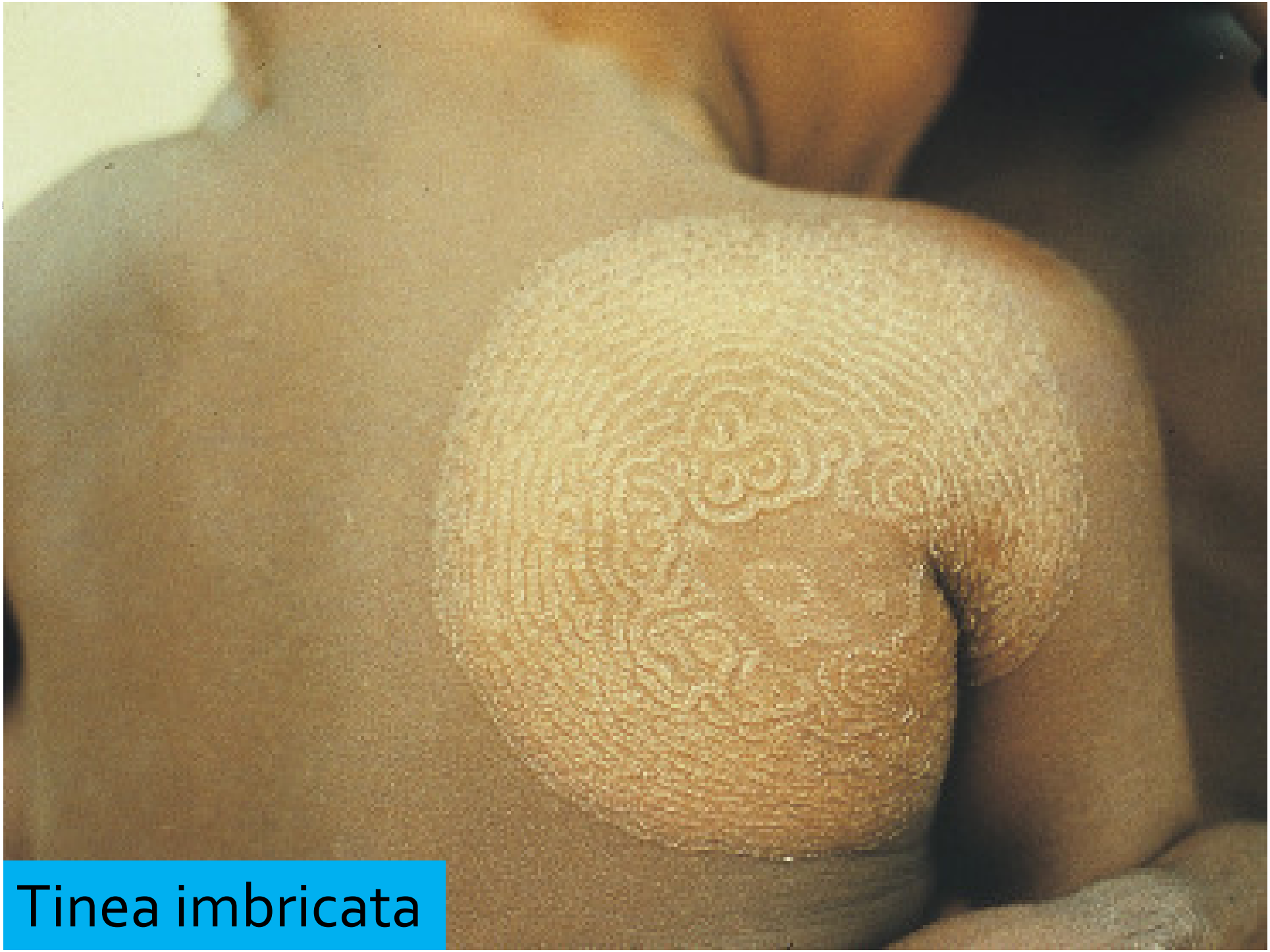
Dermatophytes: Diagnosis

- Clinical picture : often distinctive

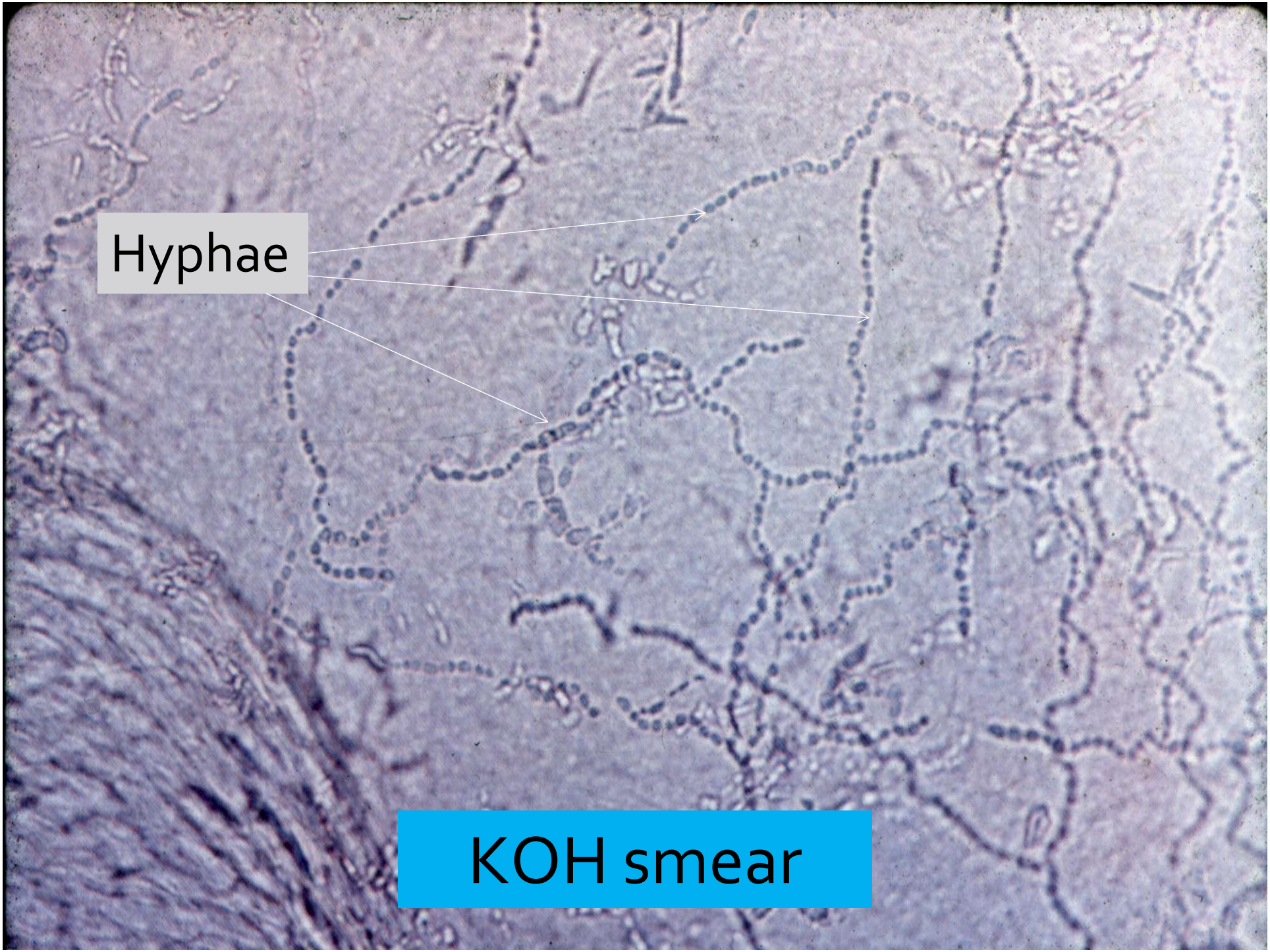
- Laboratory (skin scrapings):
  KOH smear: long, branching
  septate hyphae
  Fungal culture


Tinea Faciei


Tinea cruris



Tinea imbricata


Hyphae
KOH smear


Fungal culture

Dermatophytes: Management

- **Topical anti-fungals (Azoles, Terbinafine):**
  2-4 weeks of treatment (usually continue for 1 week after lesions clear up)

- **Oral anti-fungals:**
  1. ***Not responding to topicals***
  2. ***Hair bearing areas***
  3. ***Nail involvement***

Dermatophytes: Management

- **Oral anti-fungals**:

  1. Griseofulvin: 15-25 mkd (max: 1 g/d)

  face/body: 4-6 weeks

  scalp: 6-12 weeks

  nails: 3-12 months

  2. Terbinafine: 3-6 mkd

  face/body/scalp: 2-4 weeks

  nails: 6-12 weeks

Dermatophytes: Management

- **Oral anti-fungals:**

  3. *Itraconazole: 5 mkd*
     face/body/scalp: 2-4 weeks
     nails: 6-12 weeks
     Note: Ketoconazole has been withdrawn

  4. *Fluconazole:*
     scalp: 6 mkd x 2-4 weeks
     nails: 6 mg/kg/week x 12-26 weeks

Superficial Yeast Infections

- Pityriasis versicolor
- Candidiasis

Pityriasis versicolor

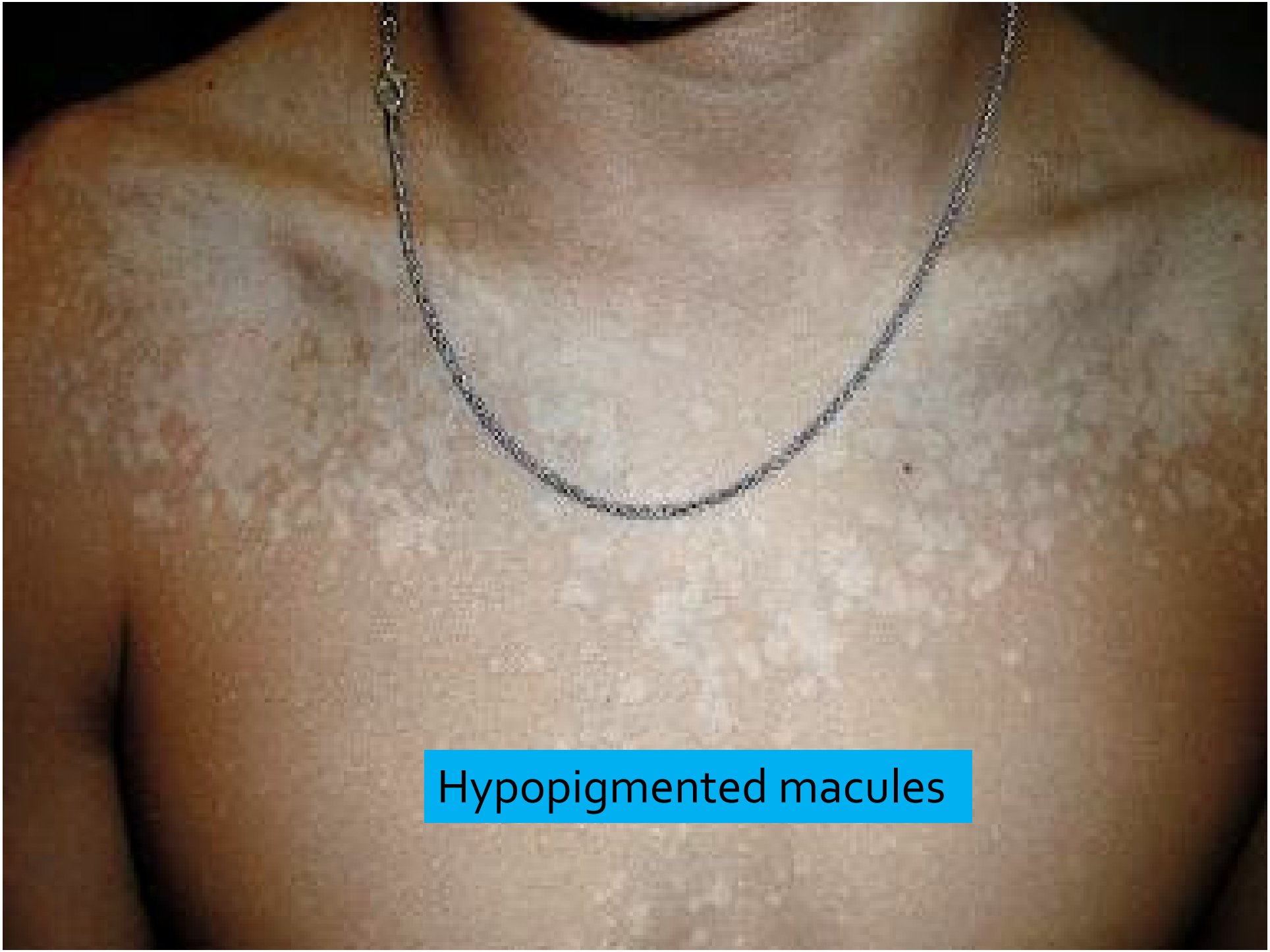
- Etiologic agent: ***Malassezia furfur*** or ***Pityrosporum ovale***
- Factors which make it pathogenic:
  1. high temperature and humidity
  2. hyperhidrosis
  3. increased sebum production
  4. steroid therapy
  5. immunodeficiency
  6. hereditary factors

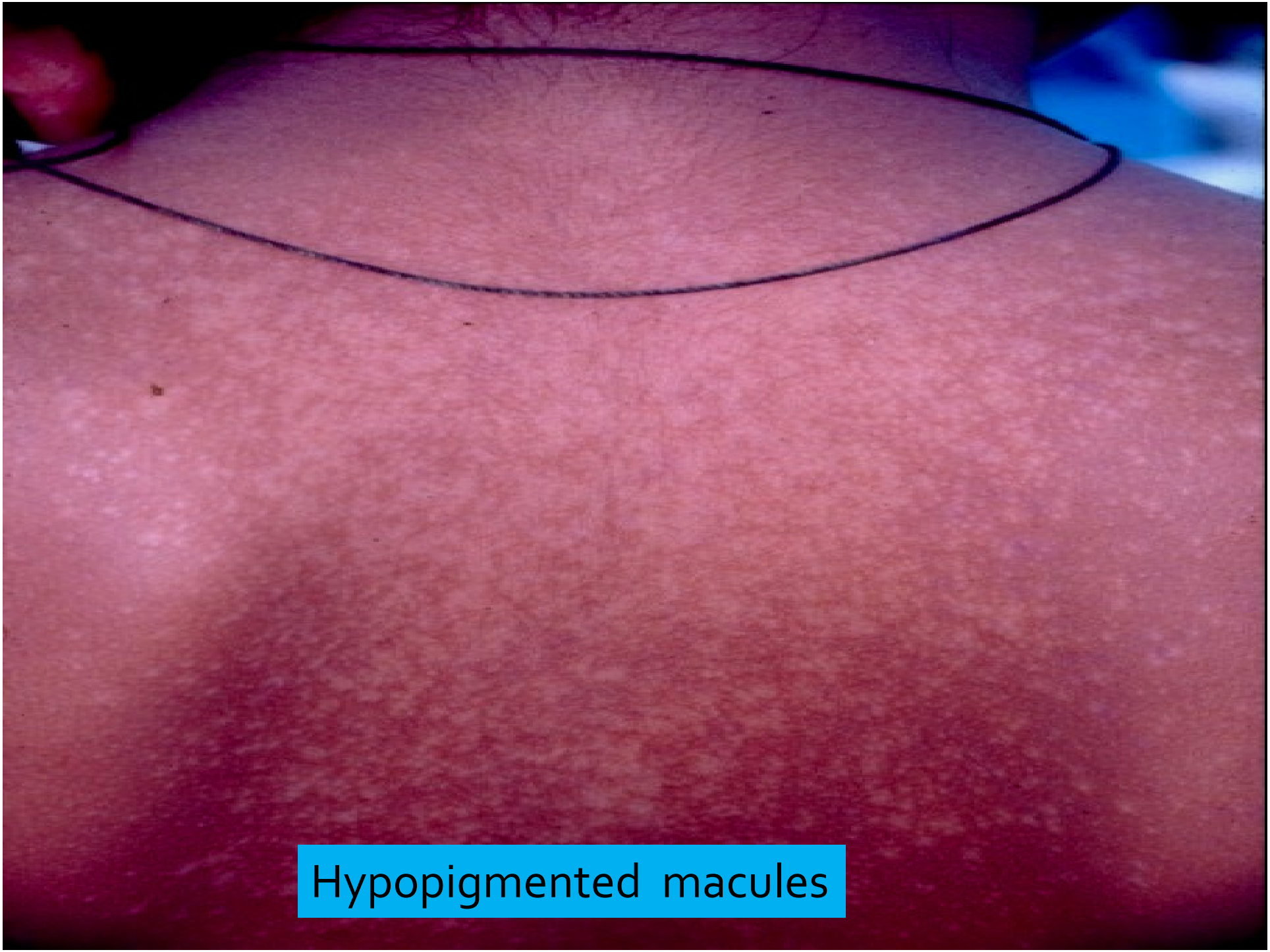
Pityriasis versicolor: Recognition (Multicolored)

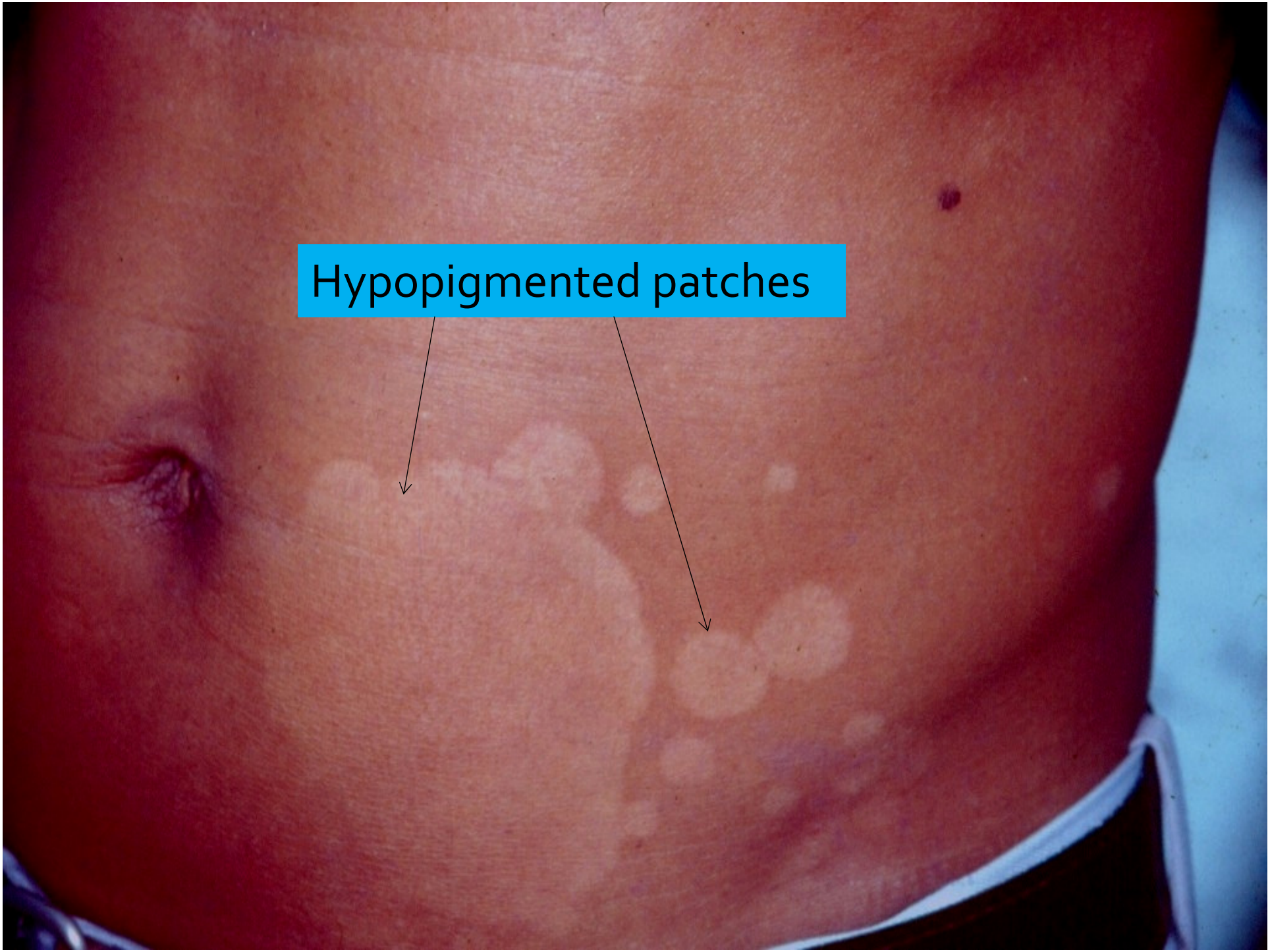
- Hypopigmented to faint pink/red to tan/ dark brown skin lesions: discrete and coalescent ovoid macules

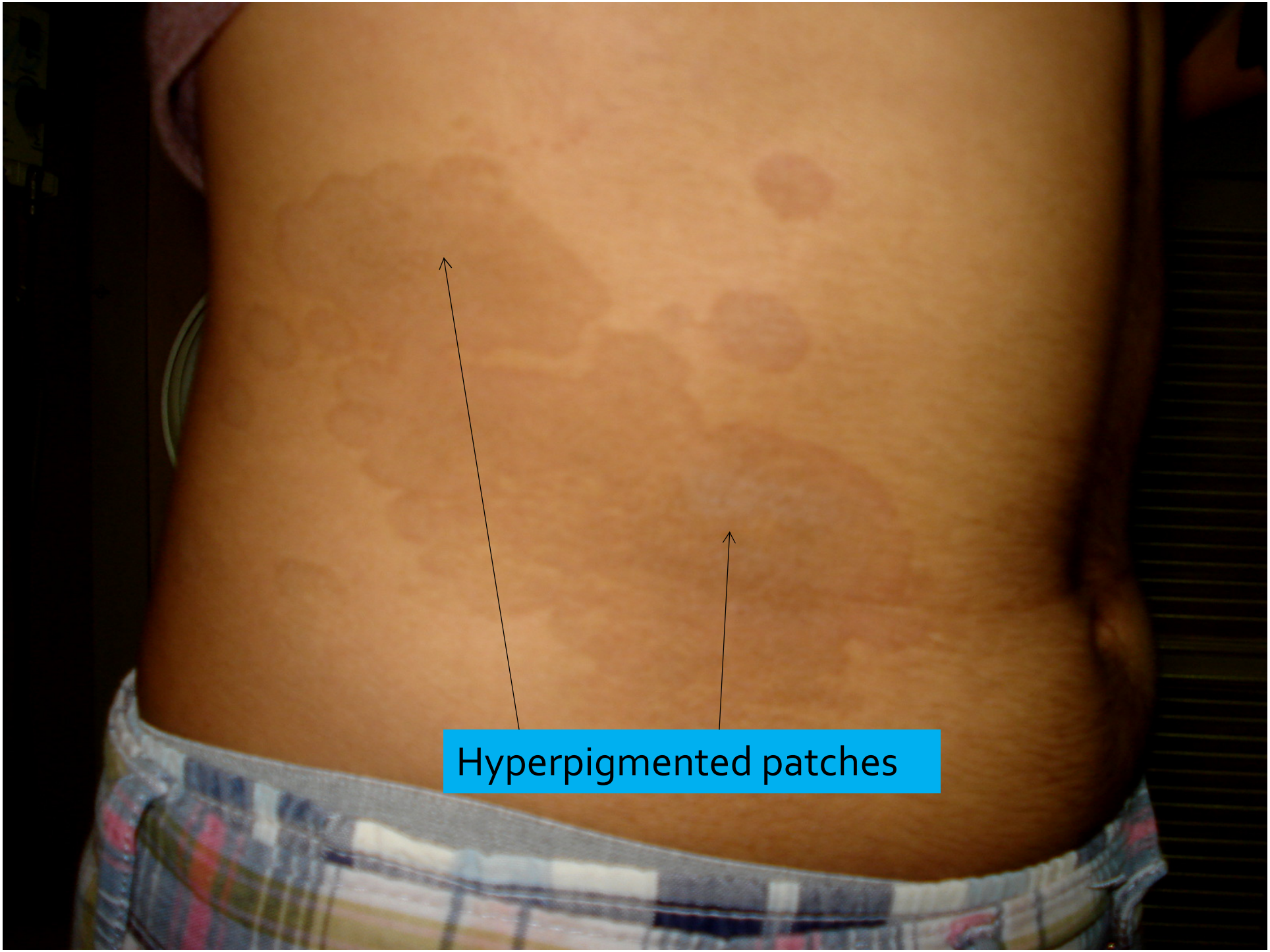
- **CLUE: (+) Fingernail Sign**
  scratching causes fine or branny desquamation (fungal debris)

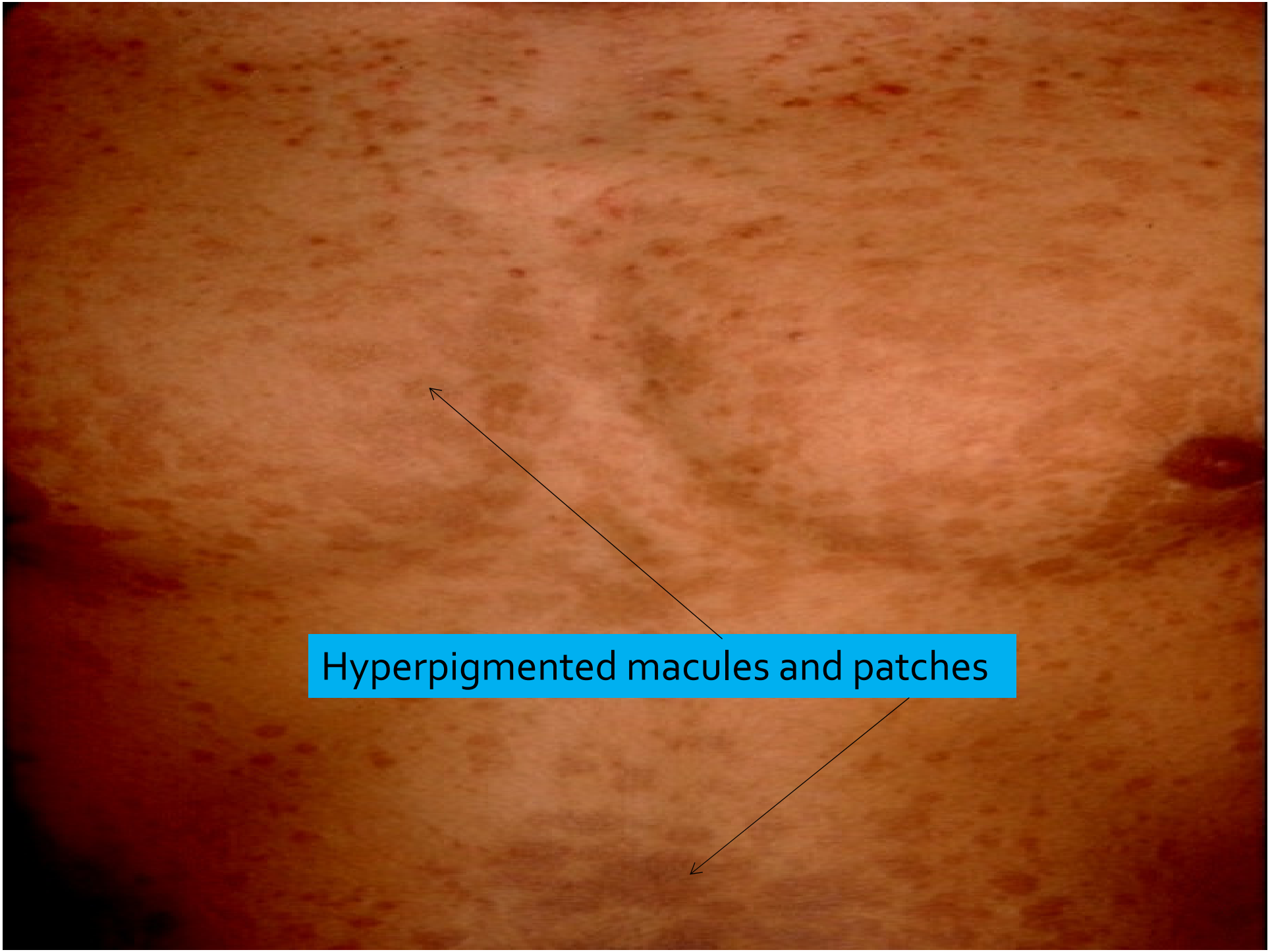
- Areas of predilection: upper back, chest, arms and face (forehead and temples)

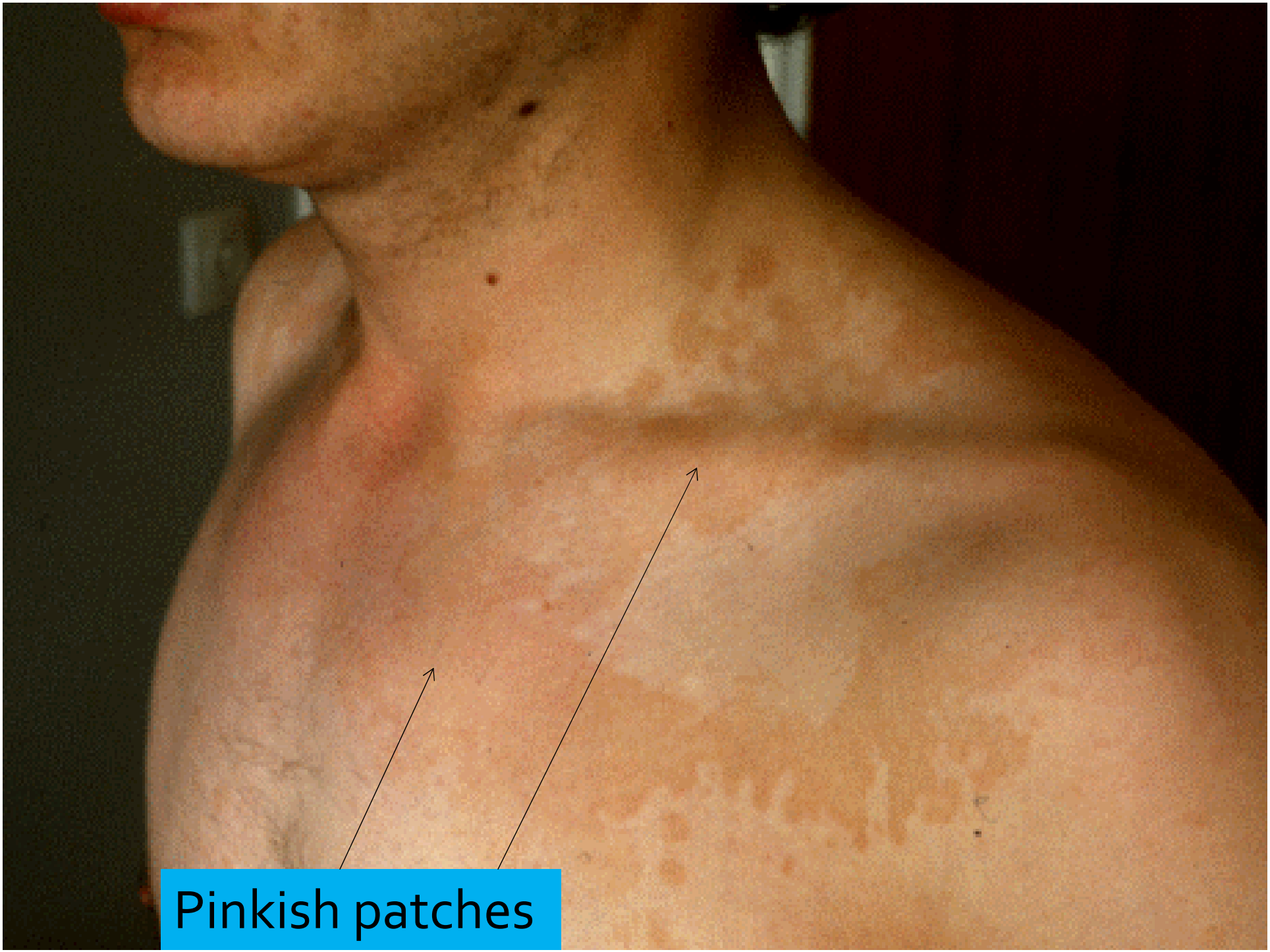

Hypopigmented macules

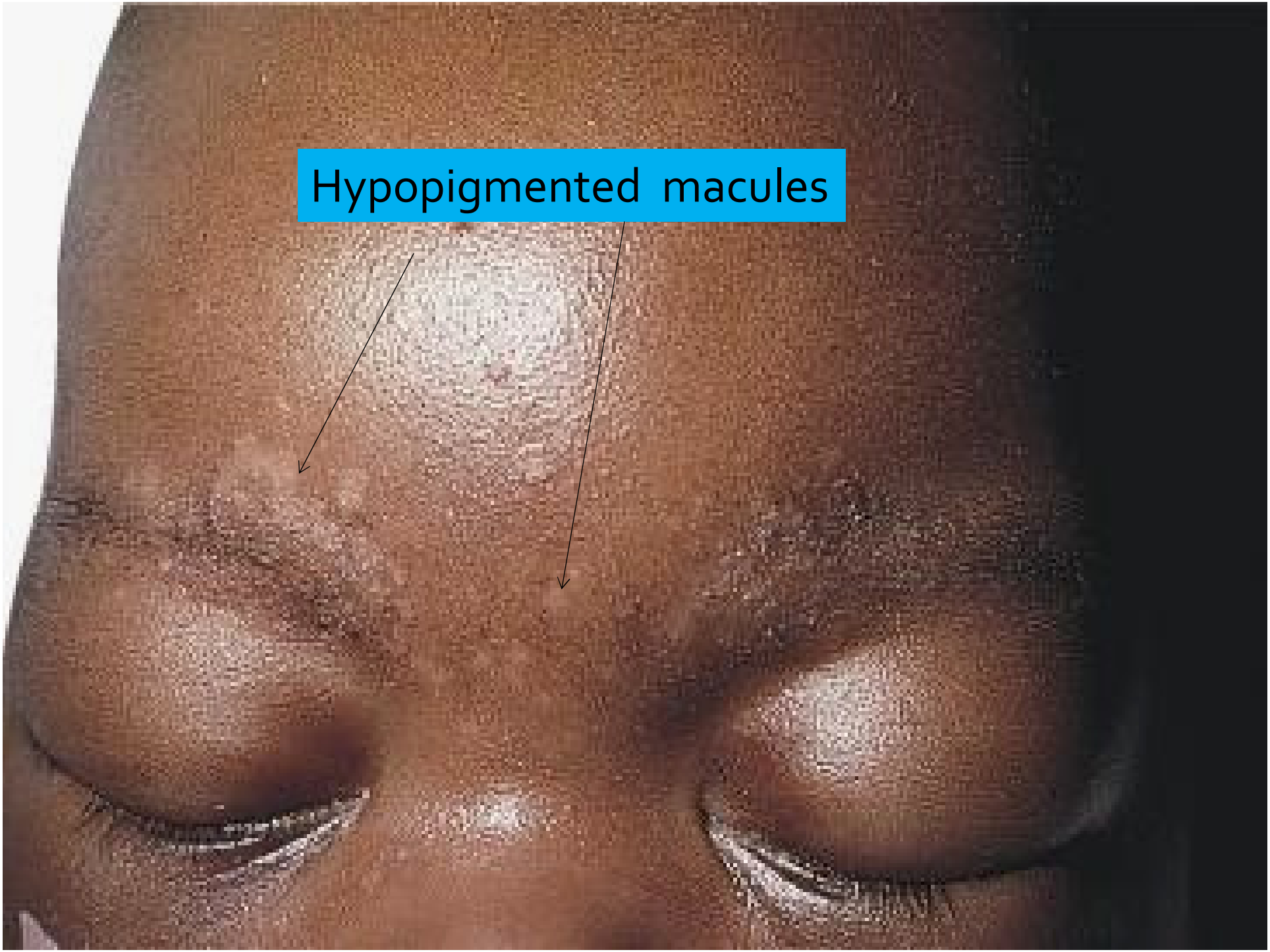

Hypopigmented macules


Hypopigmented patches

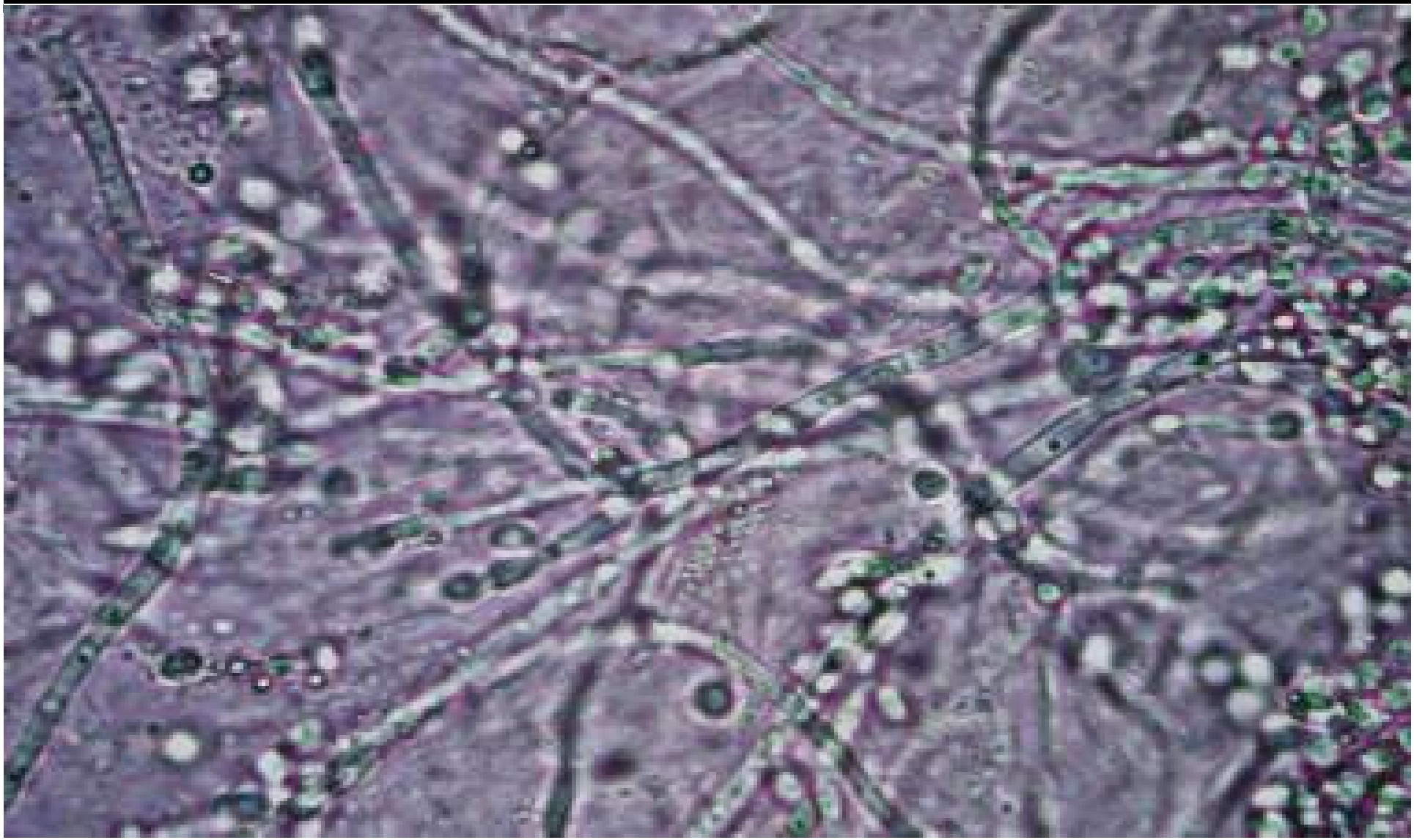

Hyperpigmented patches


Hyperpigmented macules and patches


Pinkish patches


Hypopigmented macules

KOH Smear



Pityriasis versicolor: Management

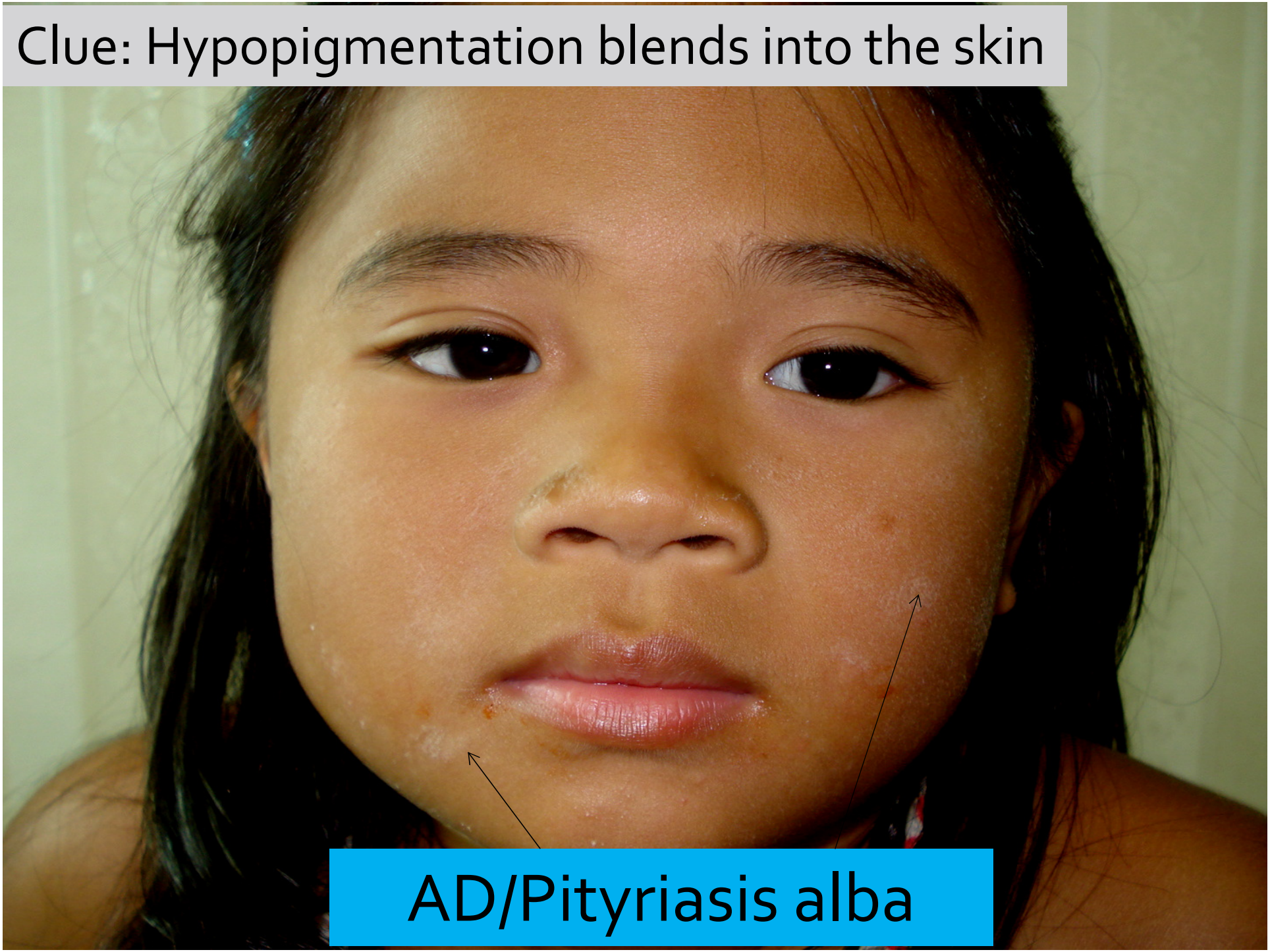
- ***Zinc pyrithione shampoo 10 mins daily for 1-2 weeks (other antidandruff shampoos***
- ***2% Ketoconazole shampoo 5 mins daily for 3 days (other antifungal shampoos)***
- ***Ketoconazole cream***
- ***In young adults: Oral azoles (Itraconazole, Fluconazole) may be used for extensive lesions resistant to topicals or for frequent relapsers***

- Note: Oral ketoconazole tabs withdrawn from market because of liver toxicity

Remember:

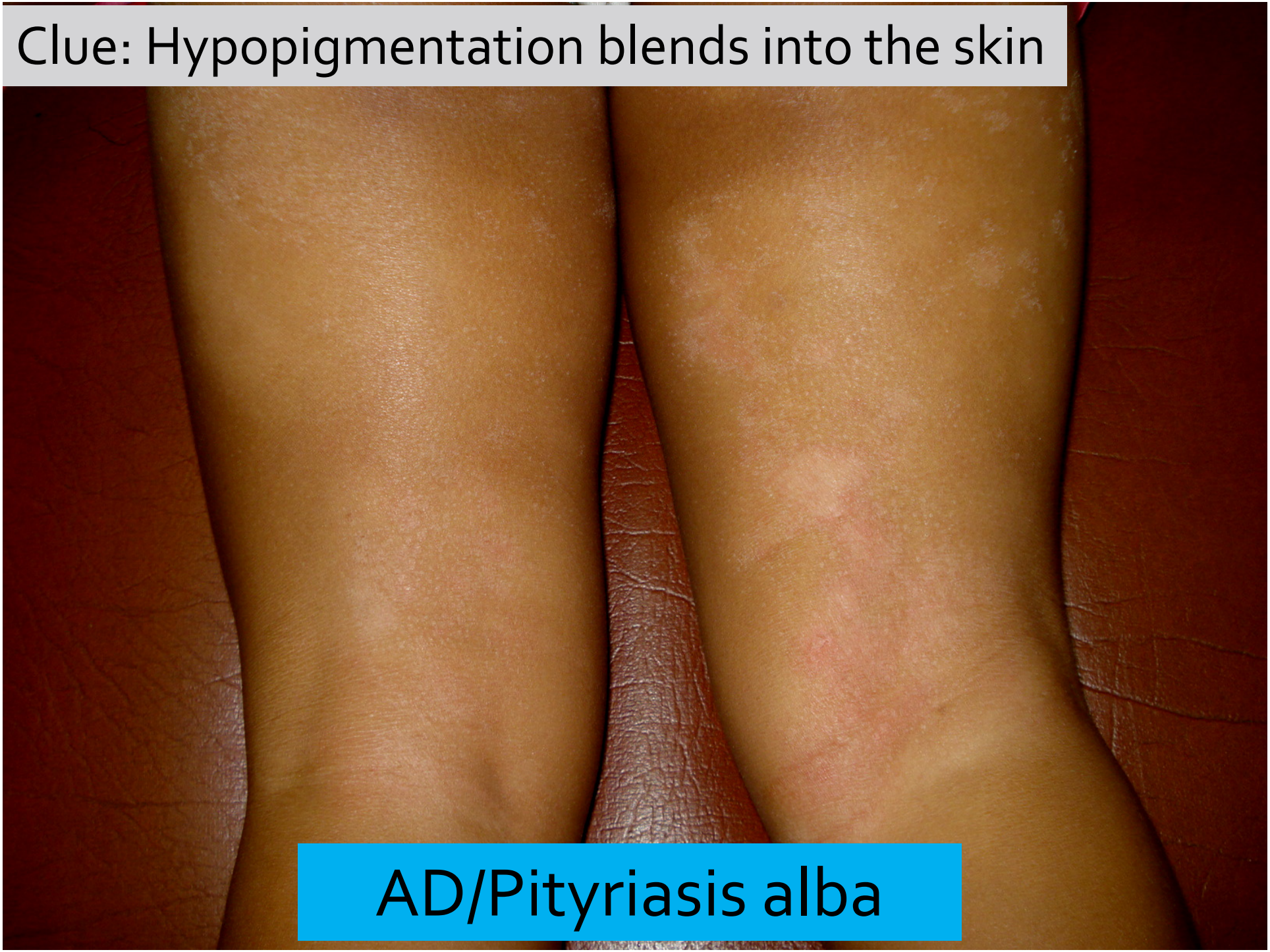
Not all hypopigmented lesions are "an-an" or pityriasis versicolor

Clue: Hypopigmentation blends into the skin



AD/Pityriasis alba

Clue: Hypopigmentation blends into the skin



AD/Pityriasis alba

Yeasts: Candida

- *Limited to skin and mucous membranes when barrier function is disrupted or compromised*
- *At risk: macerated, damaged, inflamed skin*
- *KOH smear: pseudohyphae with ovoid yeast cells*

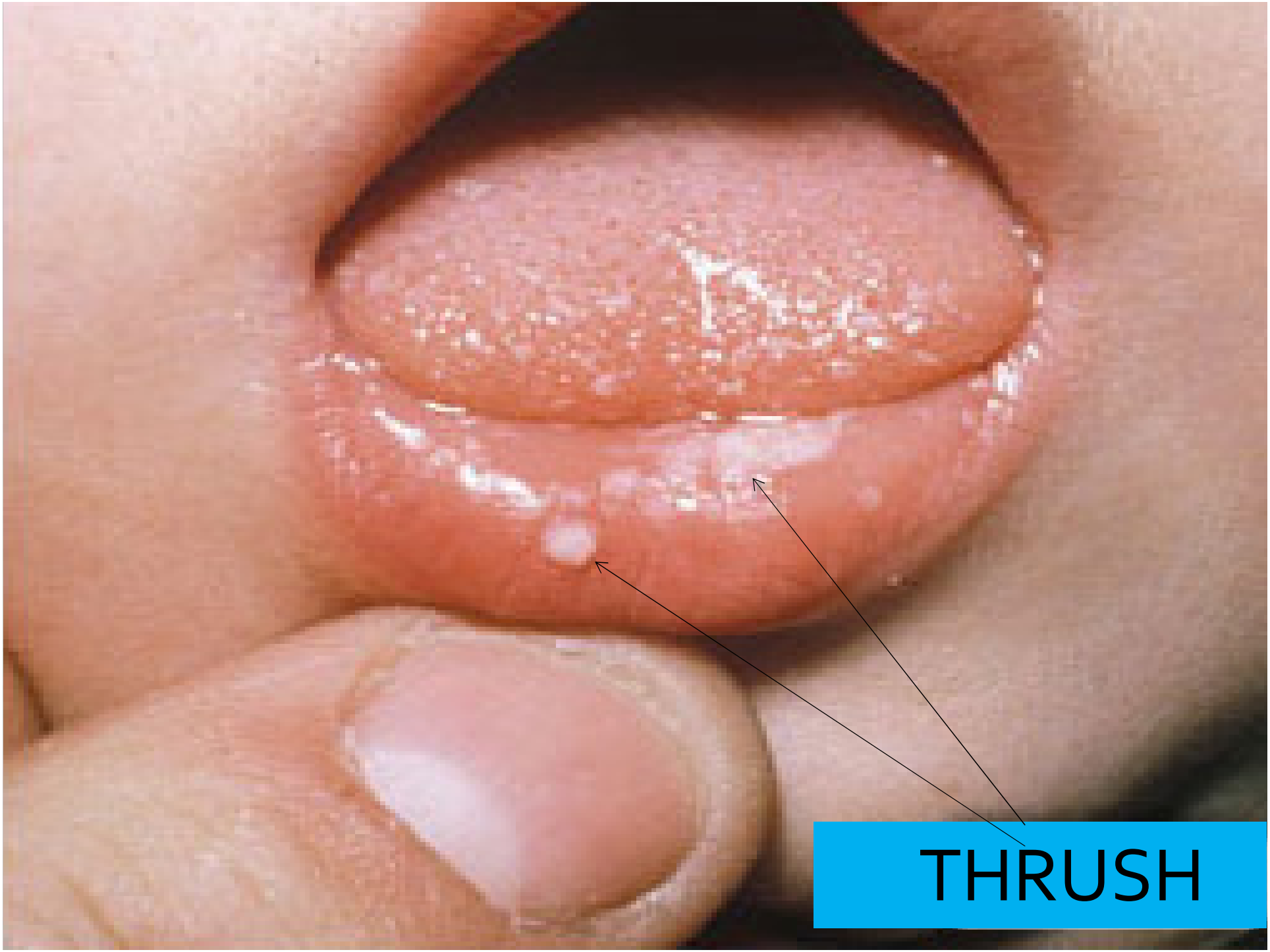
Oral Thrush: Recognition

"Thrush": Acute Pseudomembranous Candidiasis

Clue: white to gray, "cheesy" looking colonies (pseudomembranes)

: gentle removal reveals a raw red base


THRUSH


THRUSH

Diaper Candidiasis: Recognition

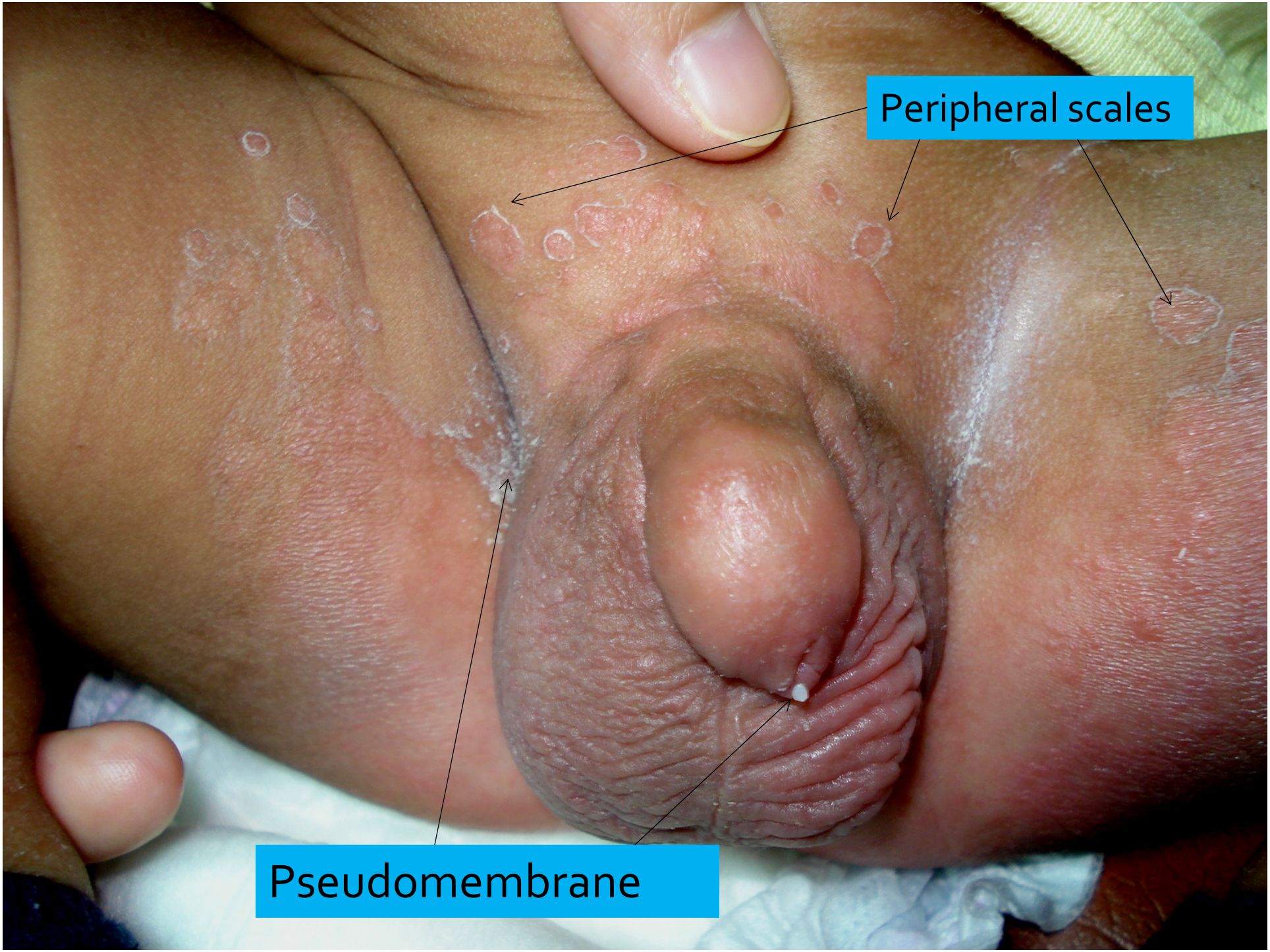
Clues:

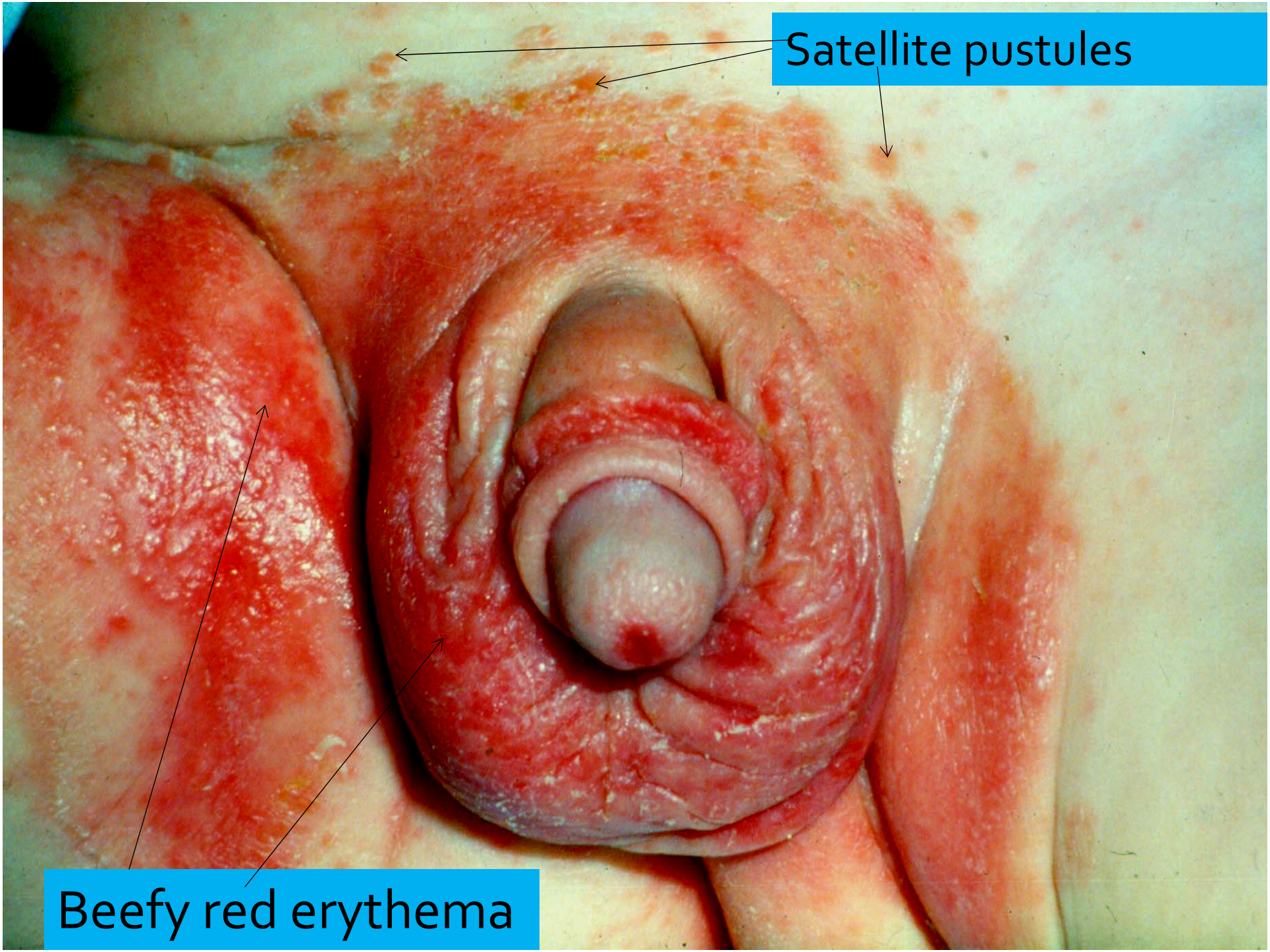
Well demarcated erythema with peripheral scale

Satellite papules/pustules

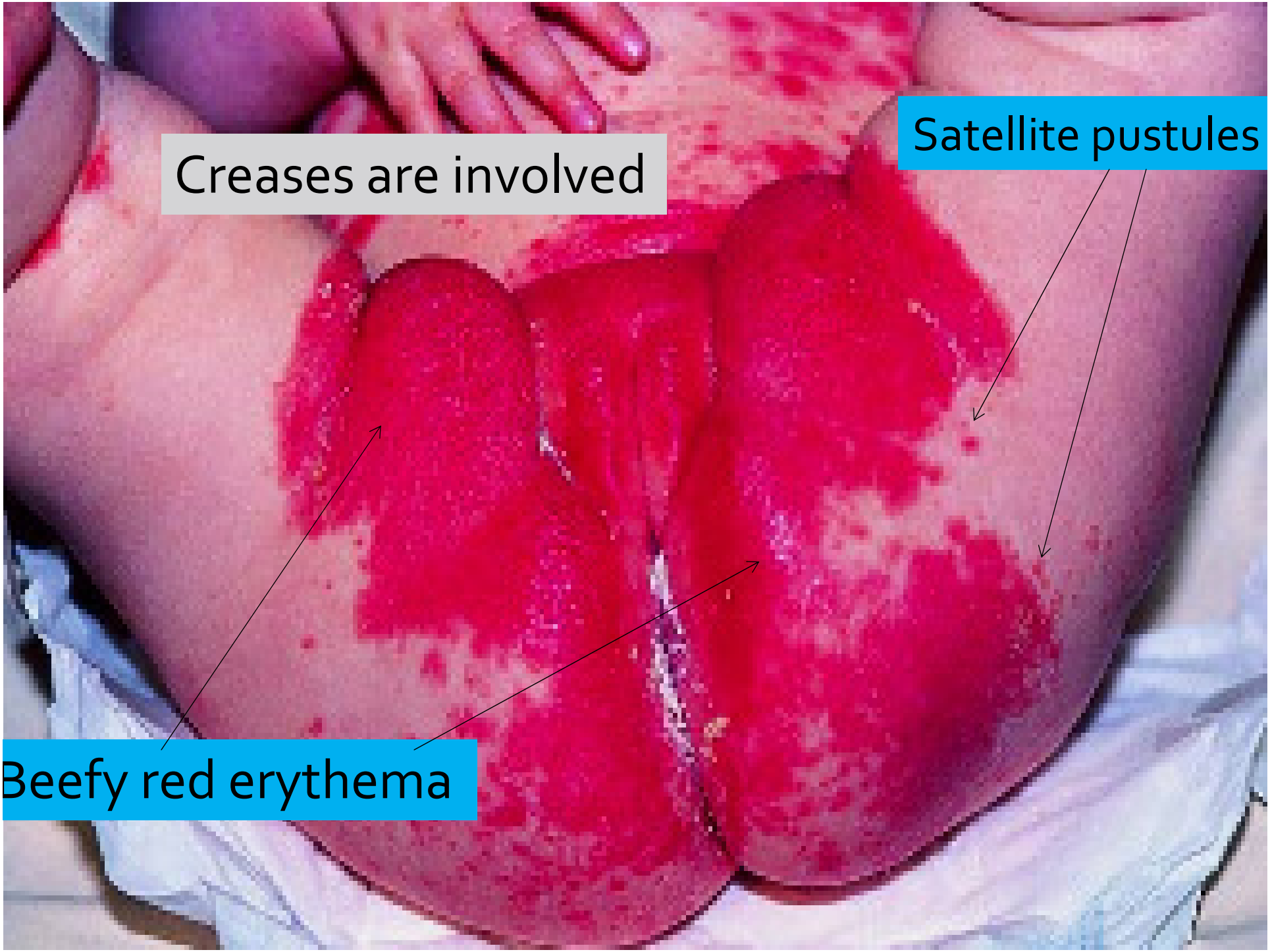
Inguinal creases are involved

"Beefy red" erythema


Peripheral scales
Pseudomembrane


Satellite pustules
Beefy red erythema

Irritant contact diaper dermatitis


Creases are involved
Satellite pustules
Beefy red erythema

Diaper Candidiasis: Management

- ***Topical anti-candidal agent (nystatin or an azole preparation) +/- topical steroid***
- ***Once cleared,continue for three more days***
- ***Oral mycostatin or fluconazole***

Note: Keep area dry. Use barrier creams e.g. zinc oxide paste

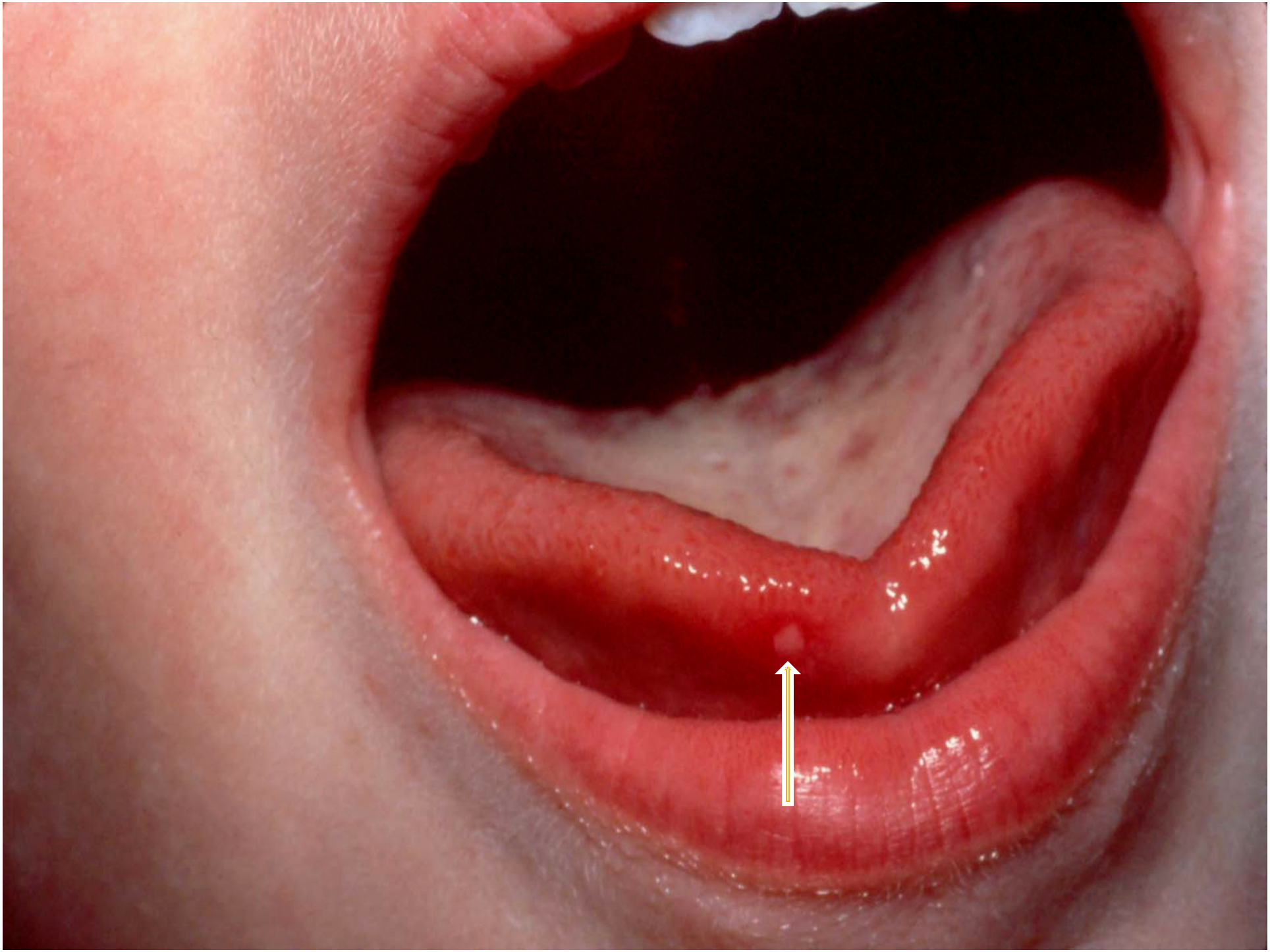
Common Viral Infections

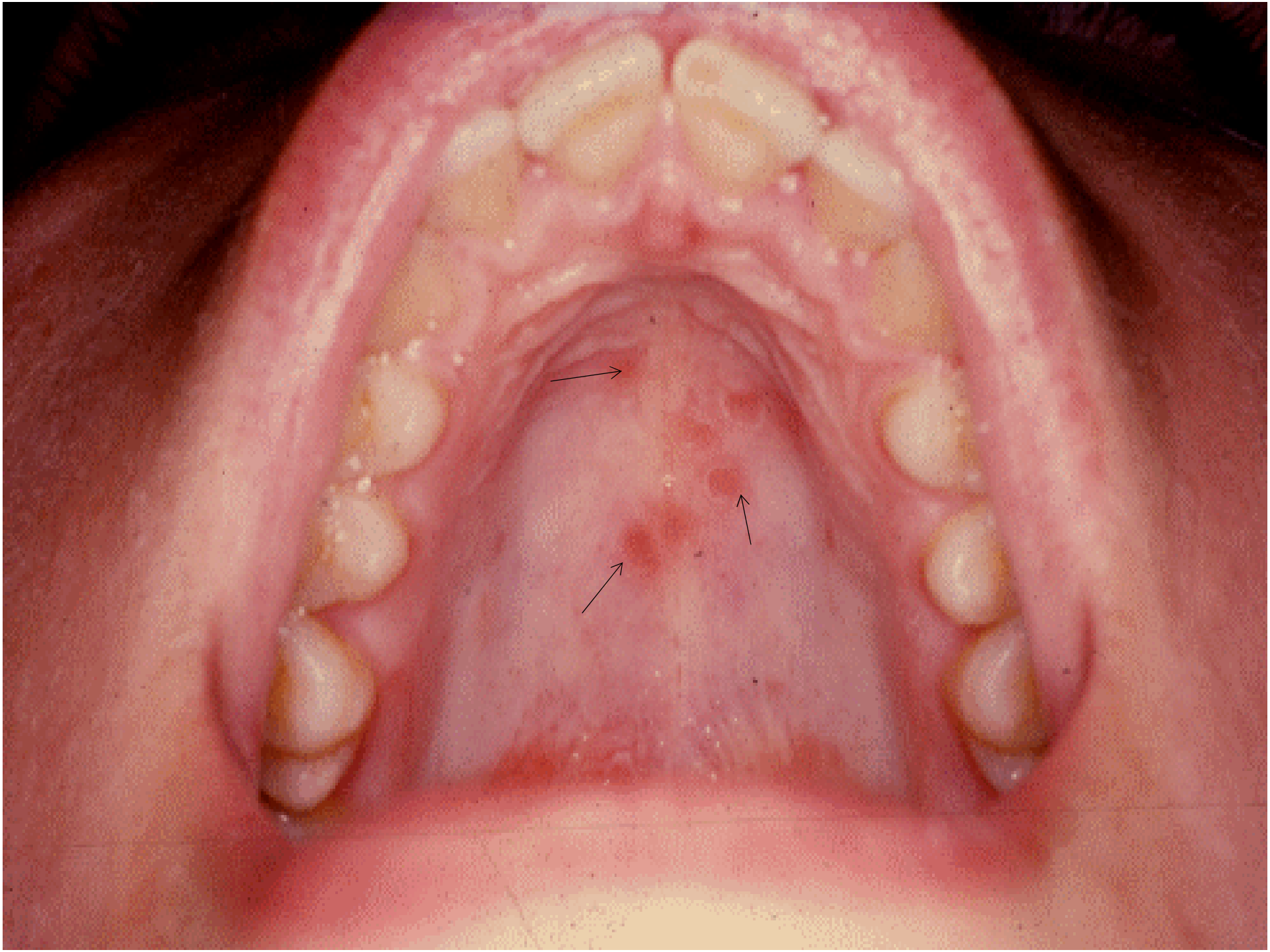
- *Hand Foot and Mouth Disease*
- *Molluscum Contagiosum*
- *Verruca Vulgaris*

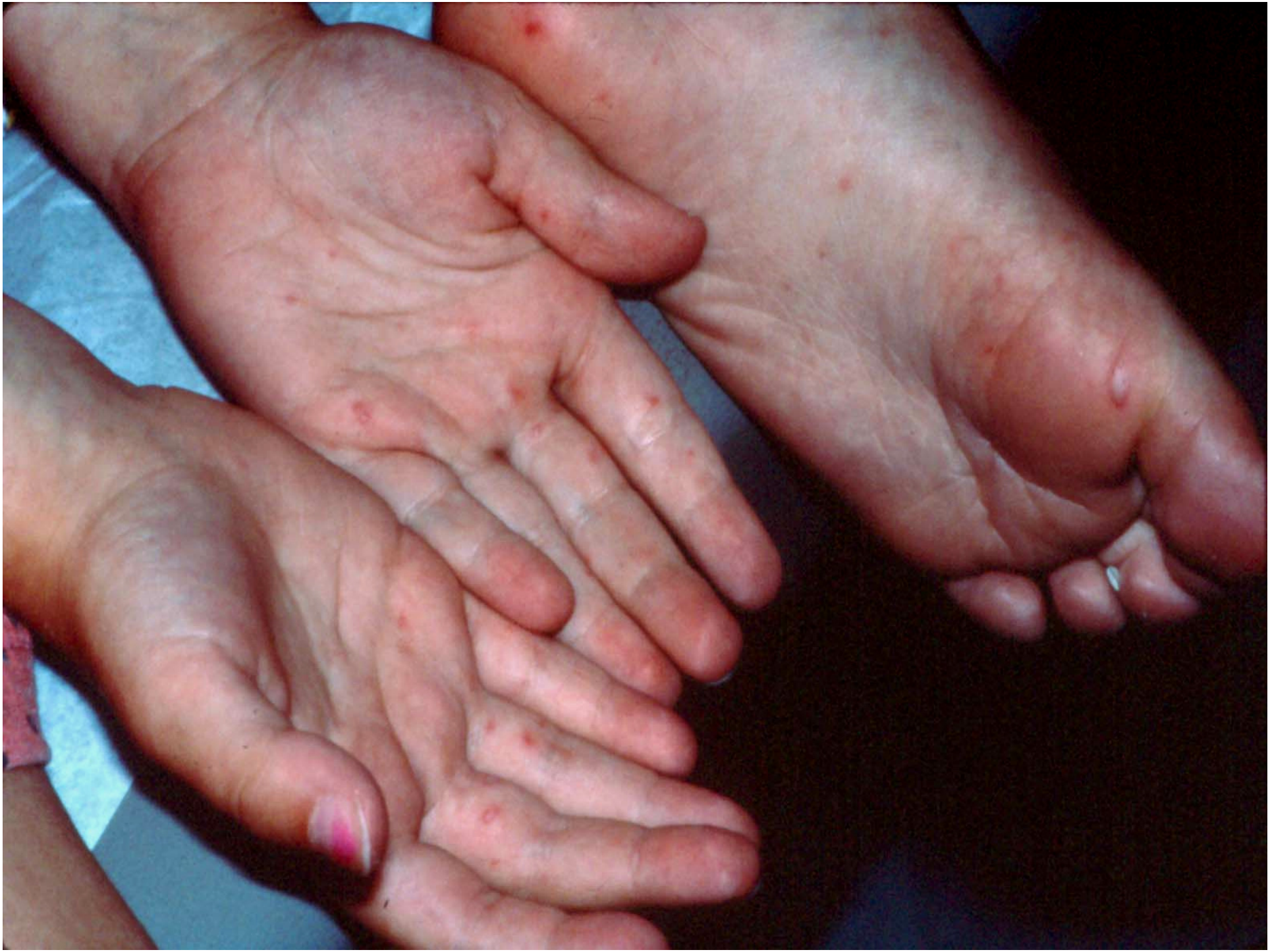
Coxsackie A 16 Virus

Recognition:Hand, Foot and Mouth

- *Areas involved:mouth, hands and feet, buttocks (may also be seen on face and extremities)*
- *Rash usually lasts for 2-7 days*
- *(+/-) fever, sore mouth, anorexia, malaise, abdominal pain*








Shallow grayish ulcer
on erythematous base

Hand Foot and Mouth Disease

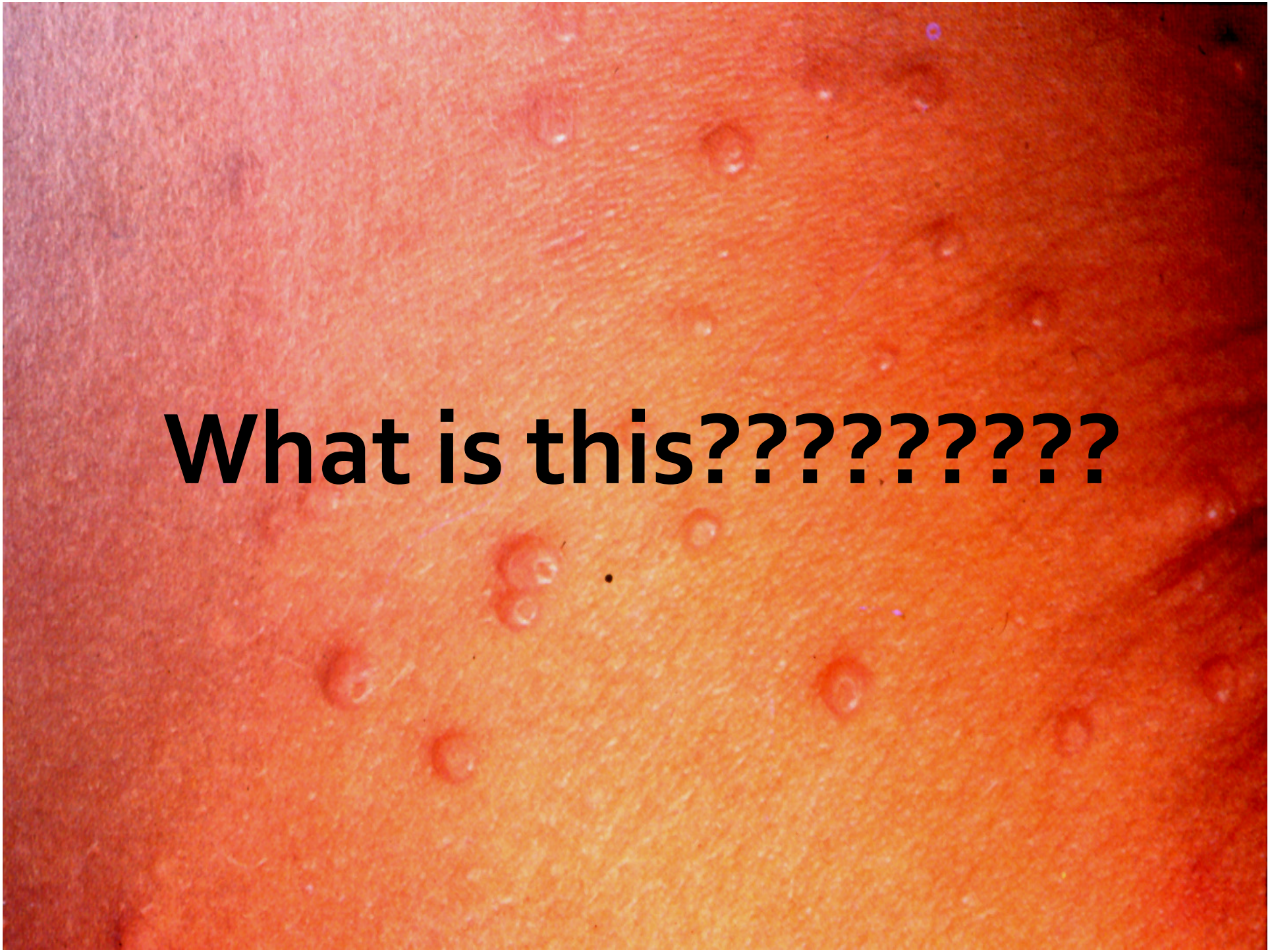
Clues:

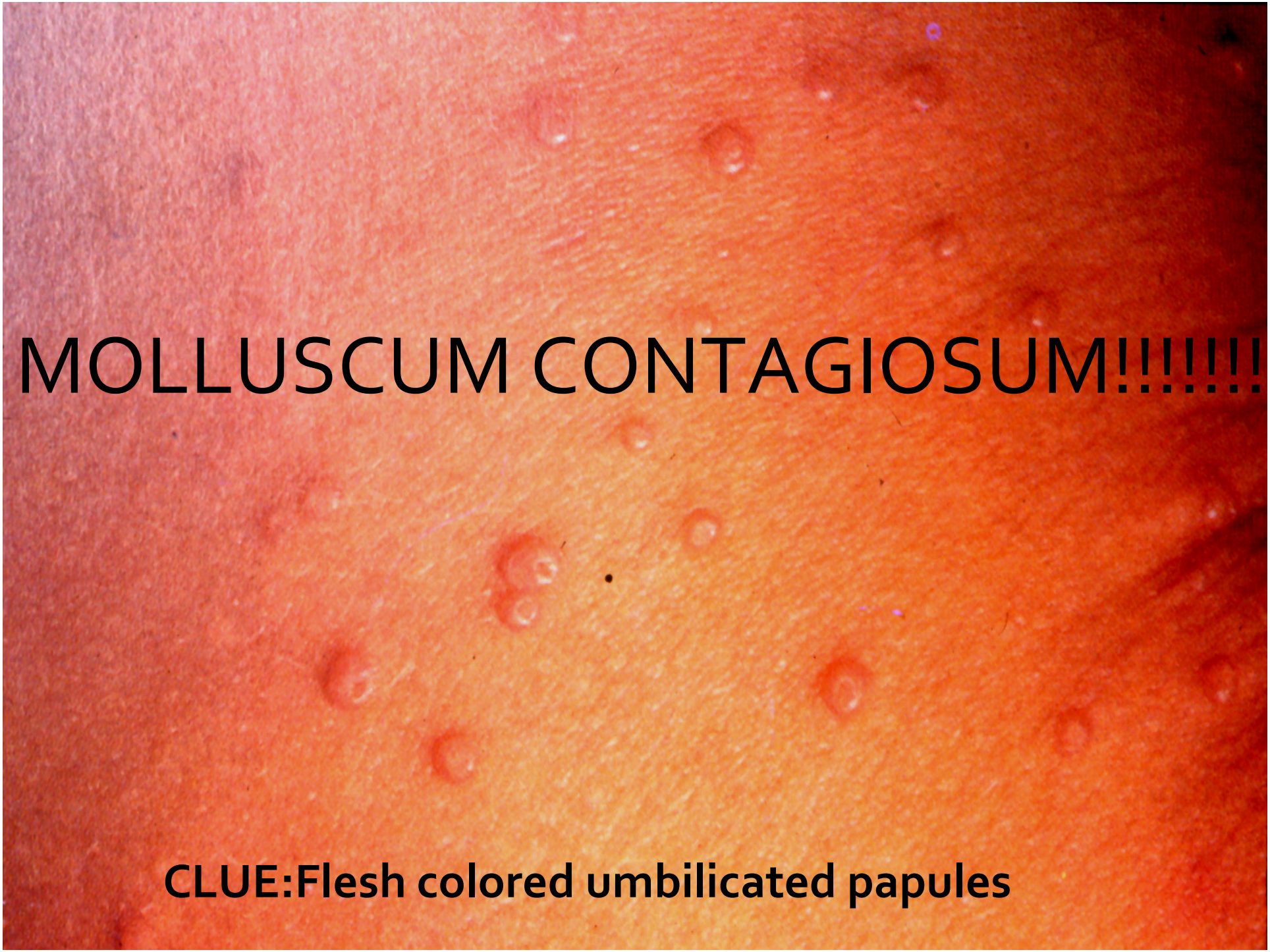
Areas involved: mouth, hands and feet, buttocks; may also be seen on face and extremities (elbows, knees)

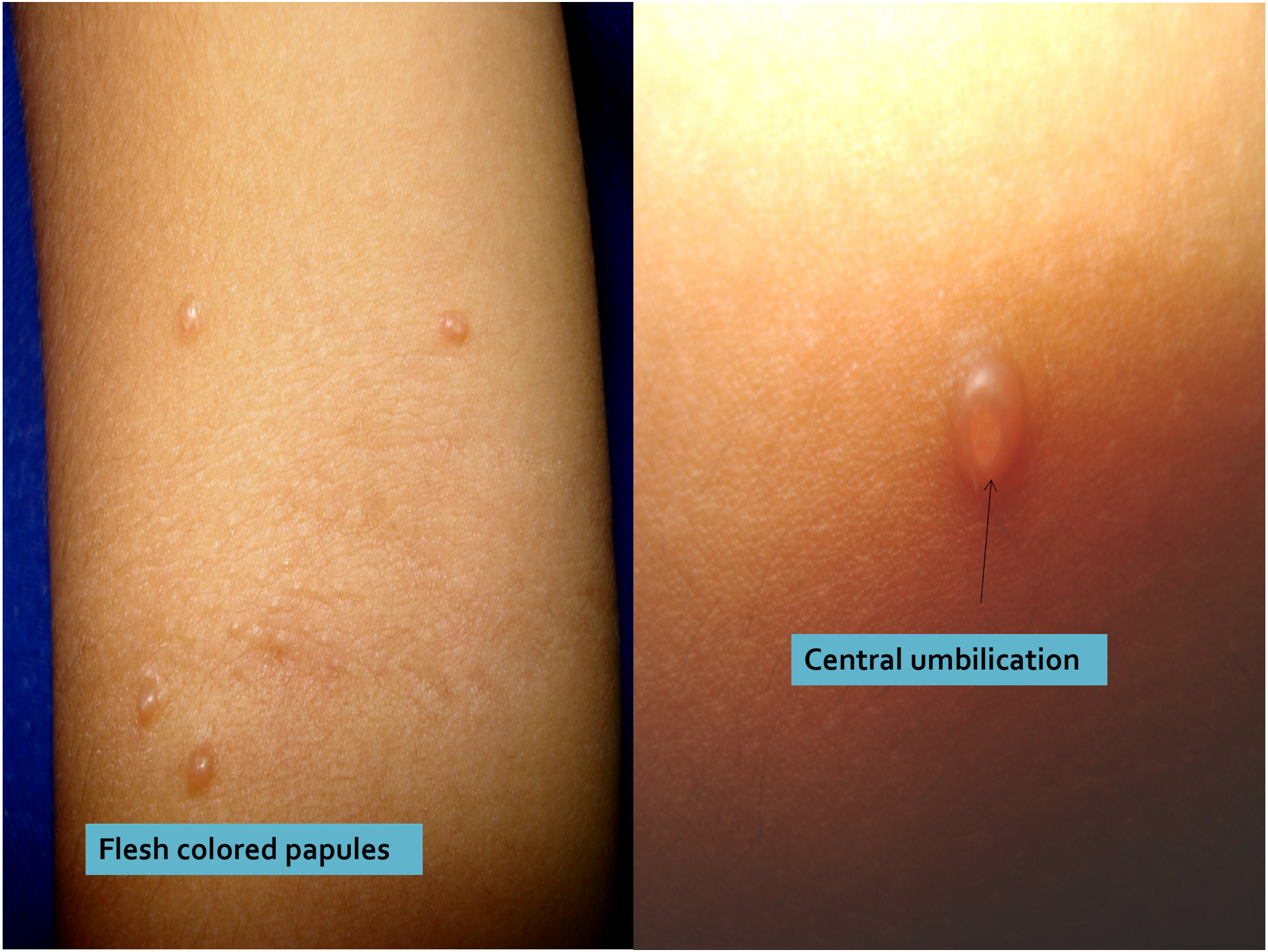
Rash usually lasts for 2-7 days

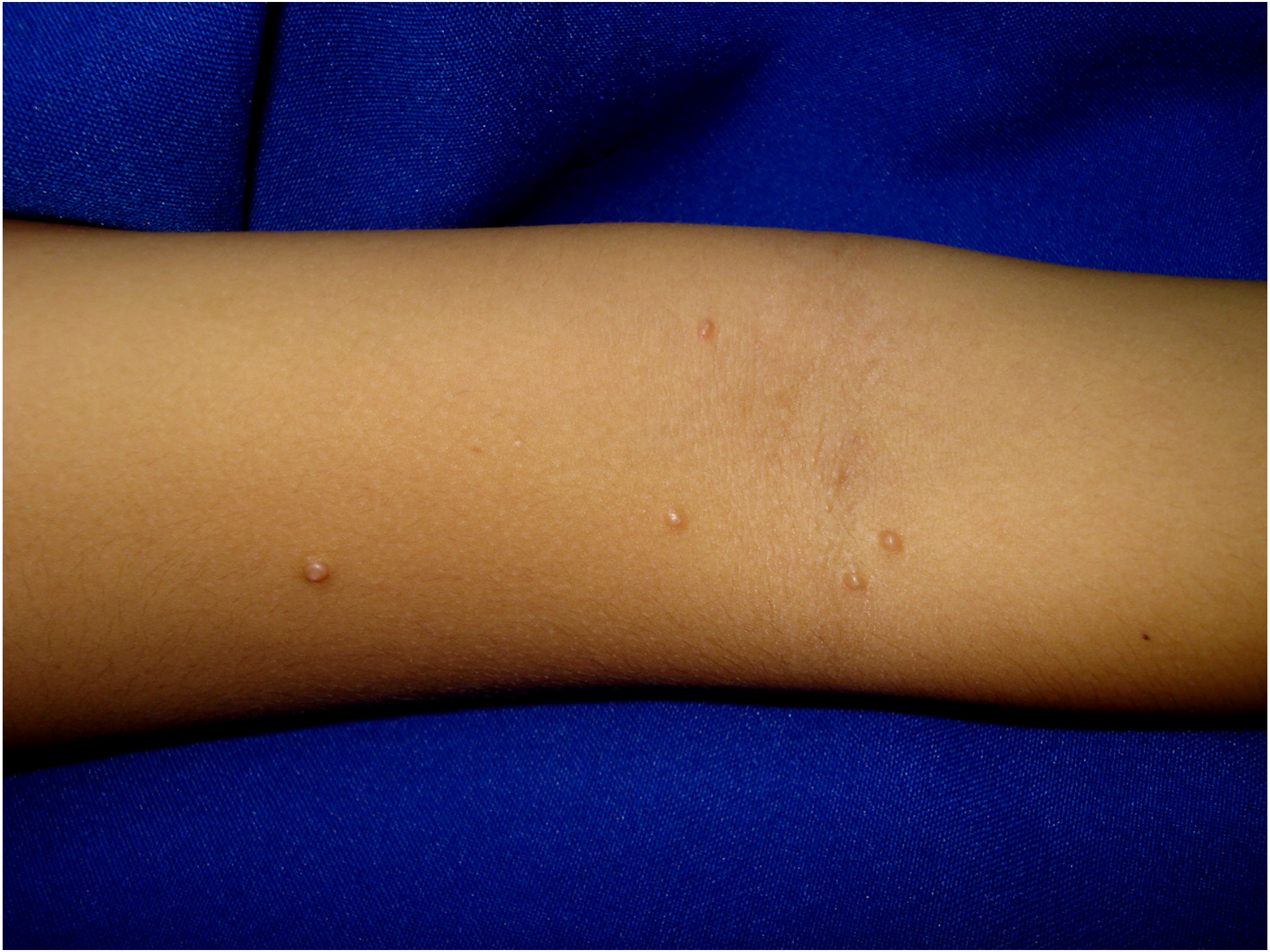
(+/-) fever, sore mouth, anorexia, malaise, abdominal pain

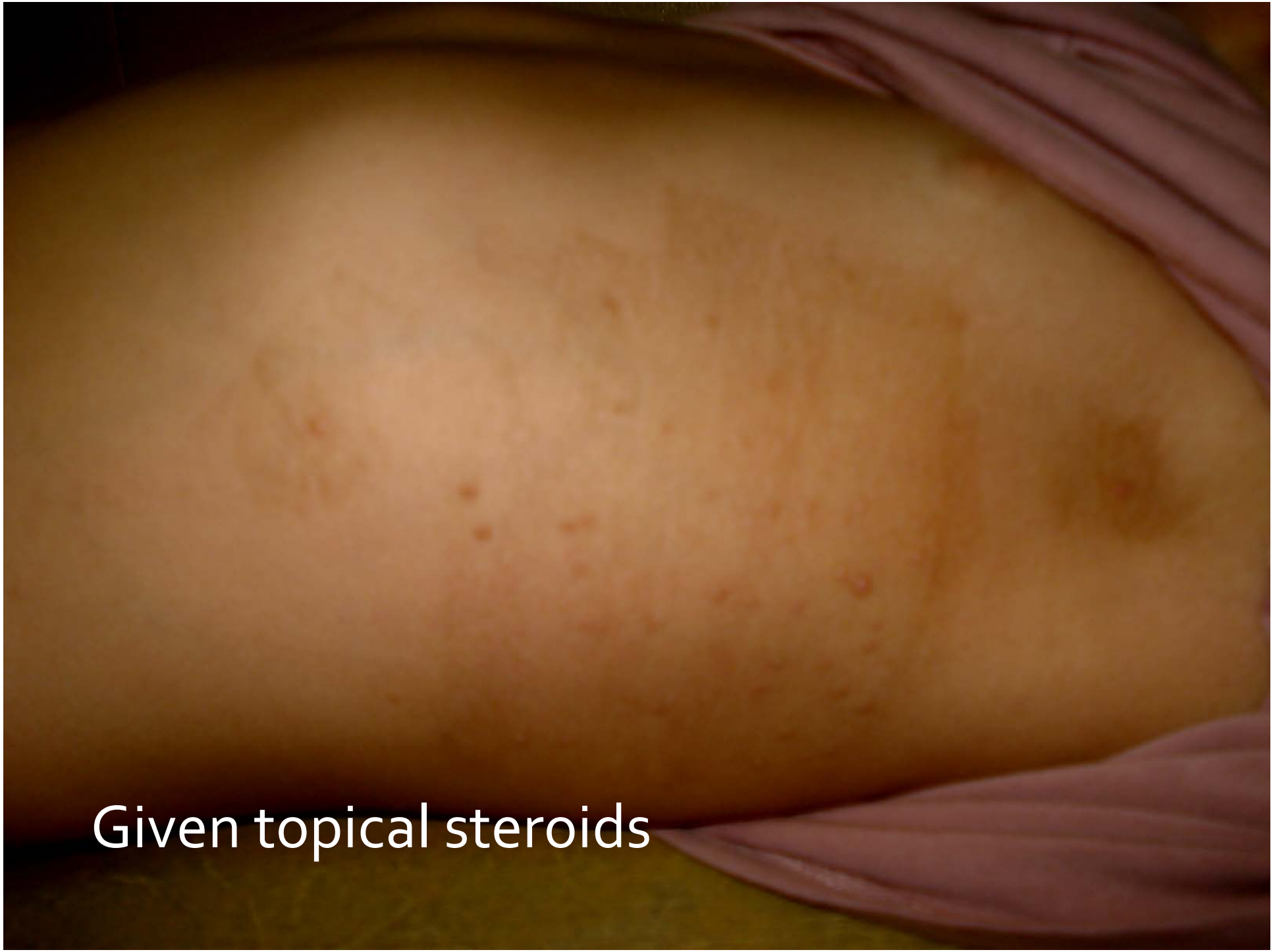
Management: Symptomatic

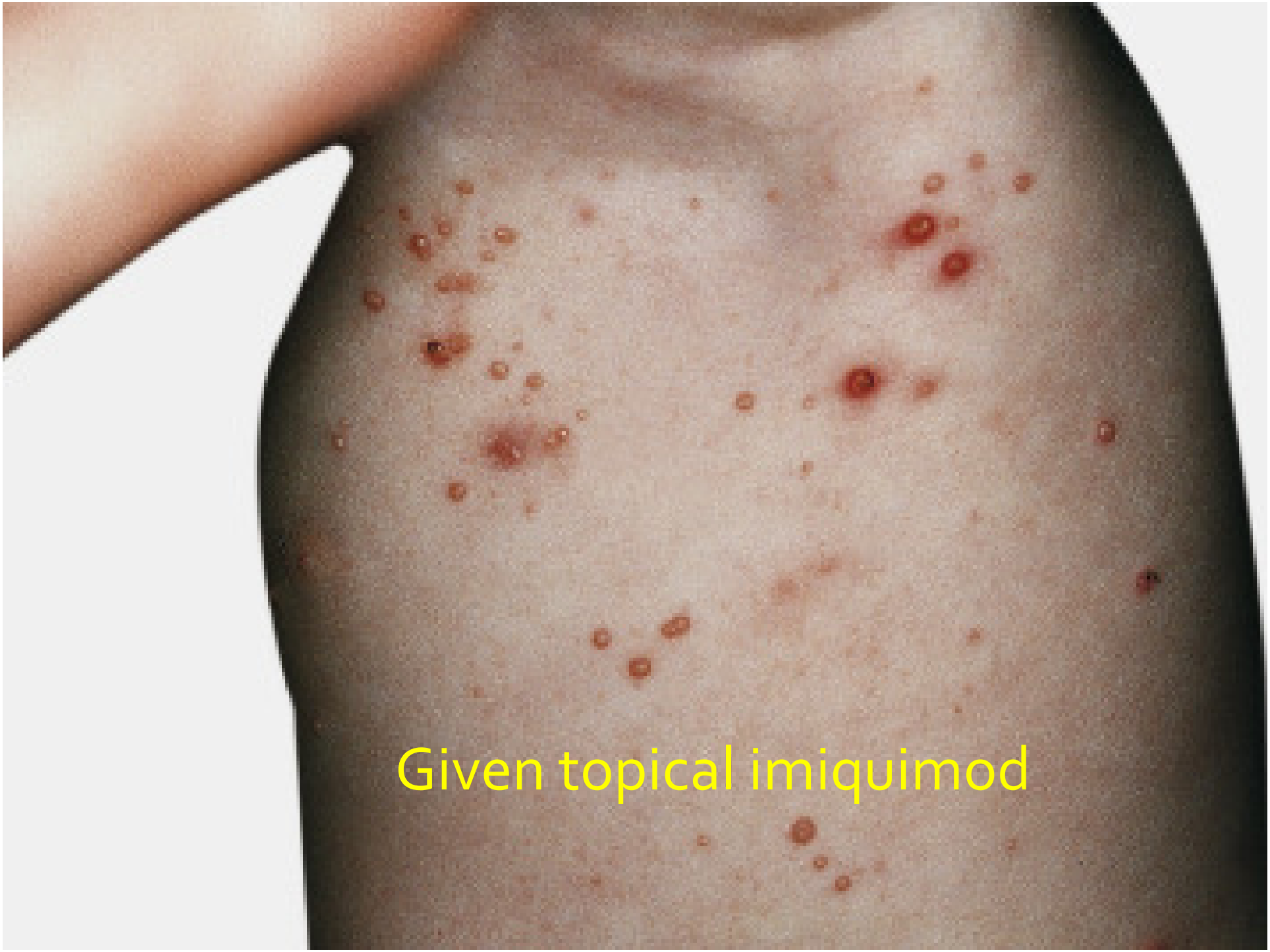

What is this??????????

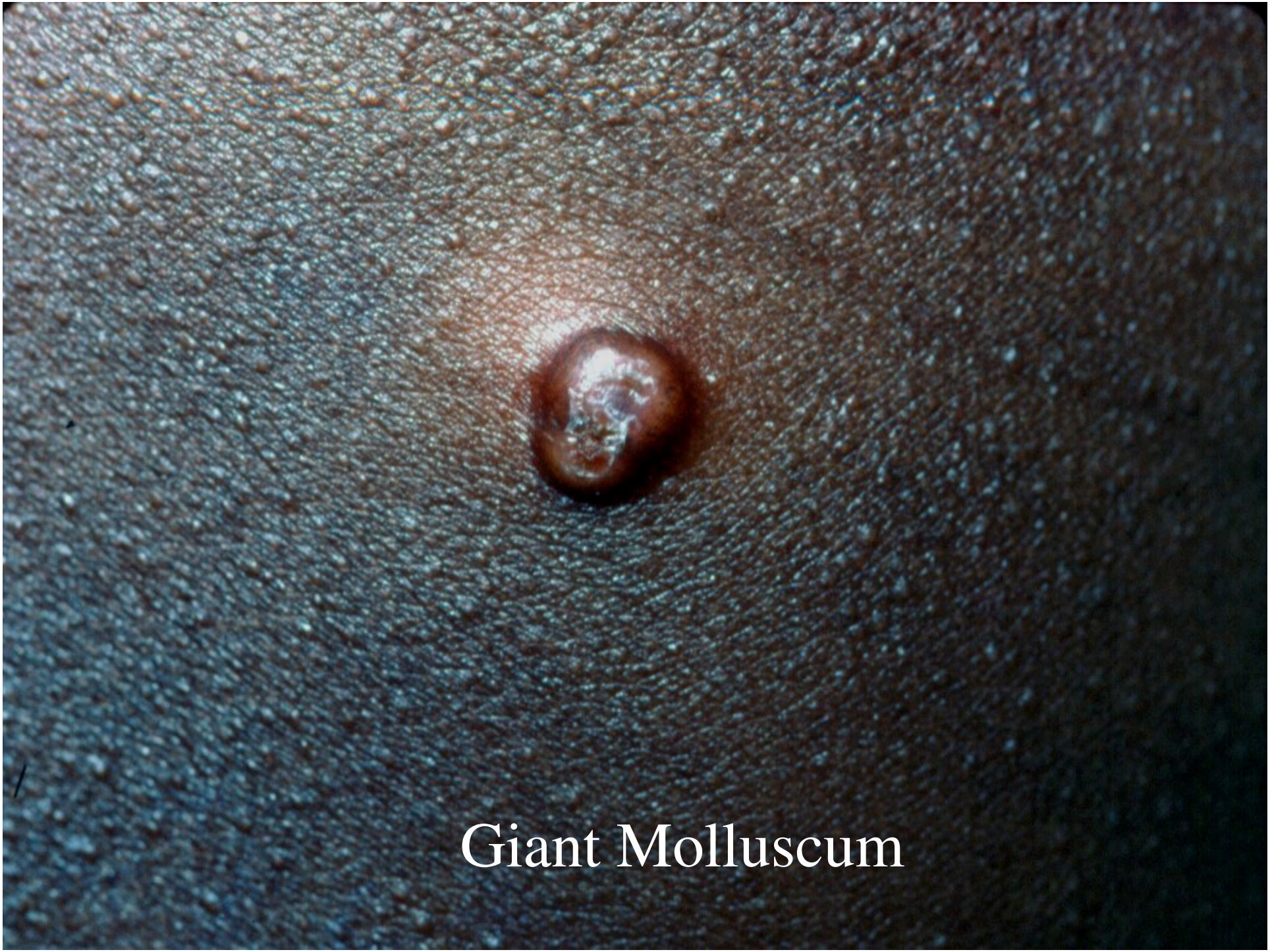

MOLLUSCUM CONTAGIOSUM!!!!!!!
CLUE:Flesh colored umbilicated papules


Flesh colored papules
Central umbilication




Given topical steroids


Given topical imiquimod


Giant Molluscum

Molluscum contagiosum

- *Flesh colored to pinkish to pearly white discrete papules with central umbilication*
- *Most common areas: axillae, lateral trunk, lower abdomen, thighs, face*
- *May have a dermatitis in 10% of cases*
- *Etiologic agent: Molluscipox virus*

Molluscum contagiosum

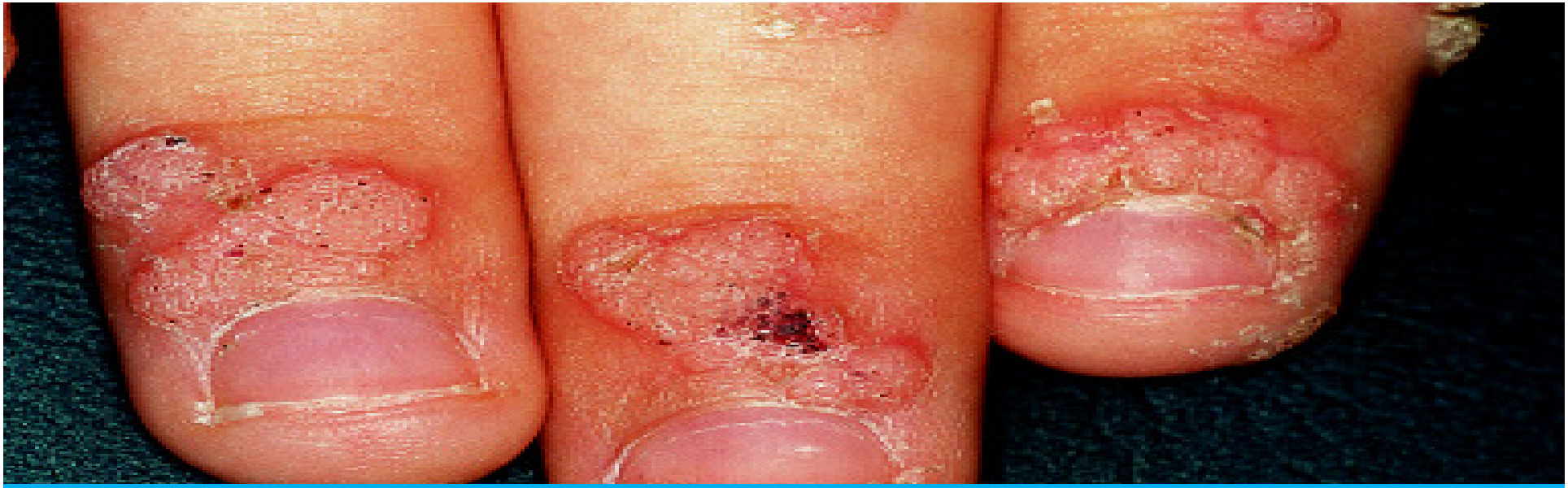
- *"Benign neglect": spontaneous resolution in 6-9 months*
- *May have a more persistent, progressive course*

Treatment options:

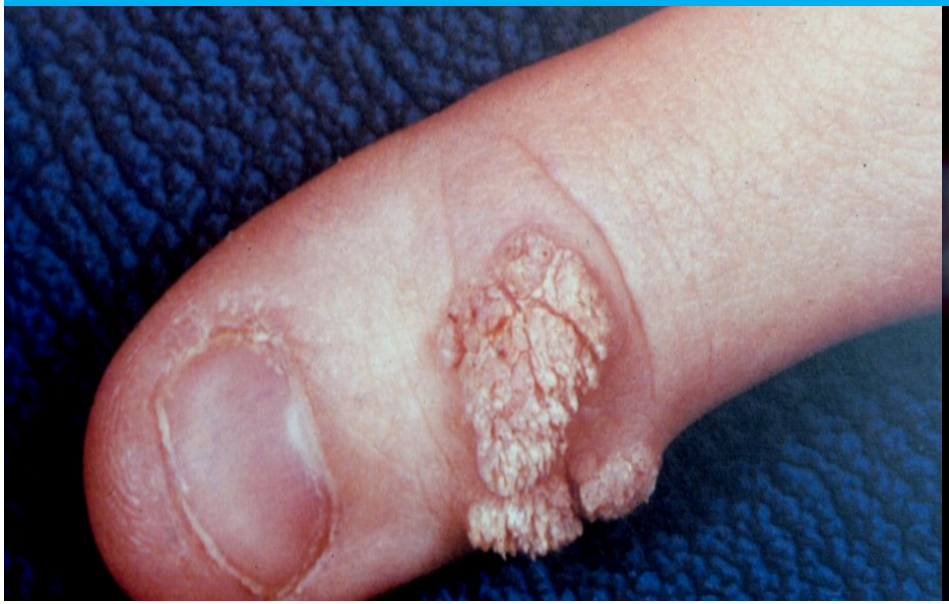
1. *Curettage*
2. *topical Cantharidin*
3. *Tretinoin cream*
4. *Imiquimod cream*

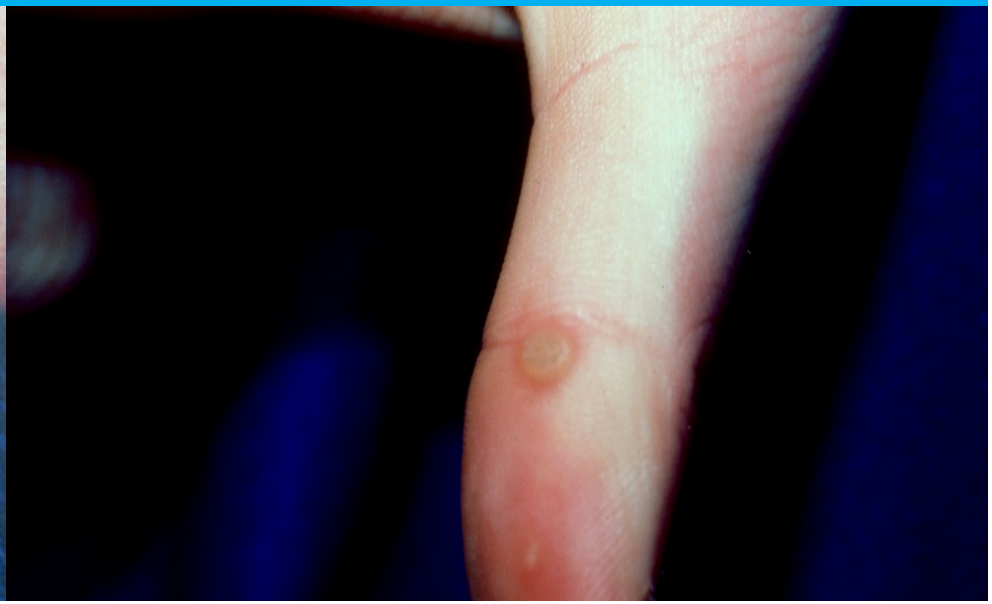
Molluscum contagiosum: What can the Pediatrician do?

- *Recognize*
- *Refer*
- *Please do not give topical steroids*
- *May try:*
    1. *Tretinoin or Imiquimod*
    2. *nail polish??!!*



VERRUCA VULGARIS





Verruca Vulgaris

Verruca: rough, hyperkeratotic

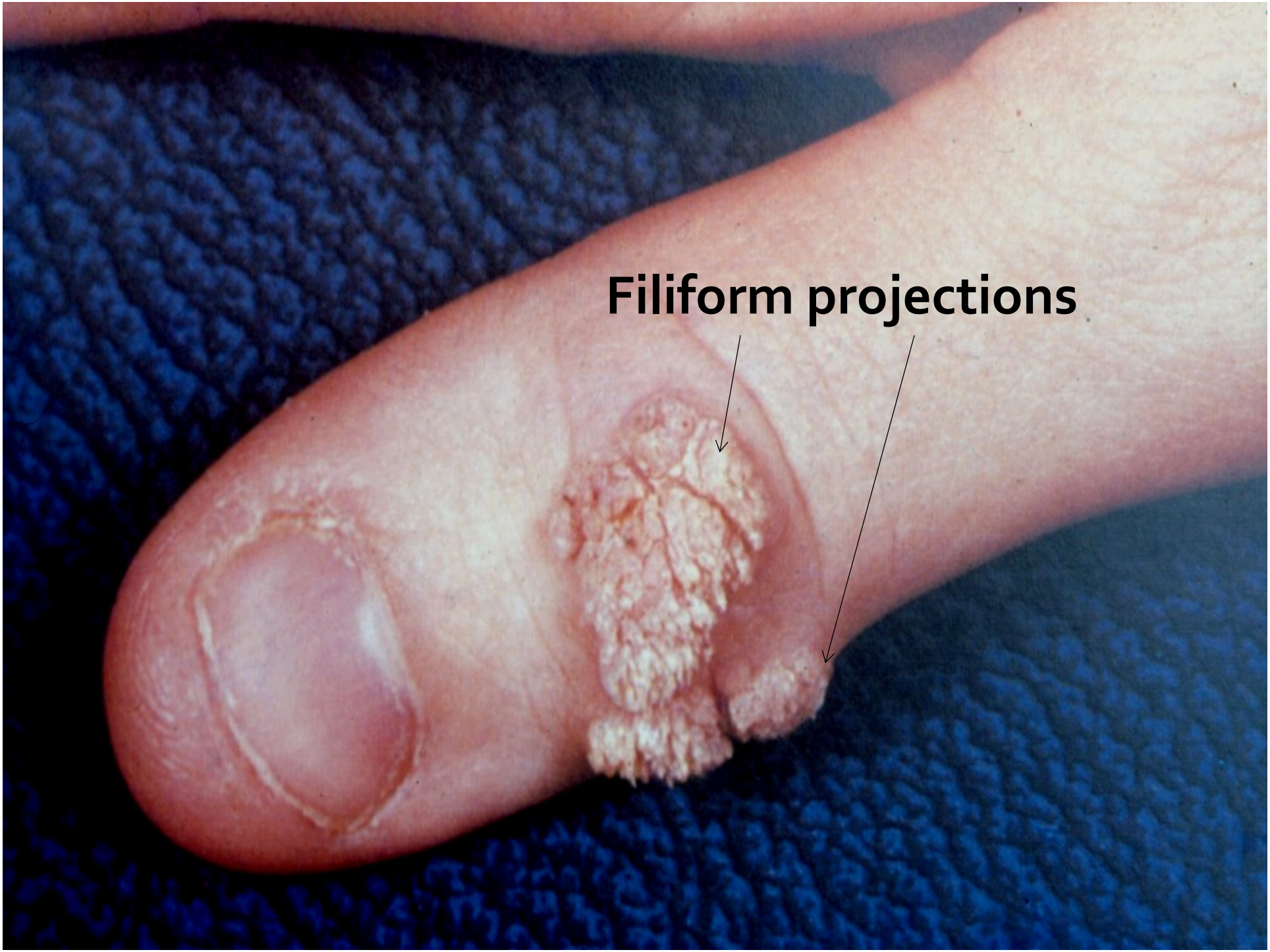
Vulgaris: common

Etiologic Agent: Human Papilloma Virus (HPV) Types 1, 2, 4, 7

Verruca Vulgaris: Clues

Look for:

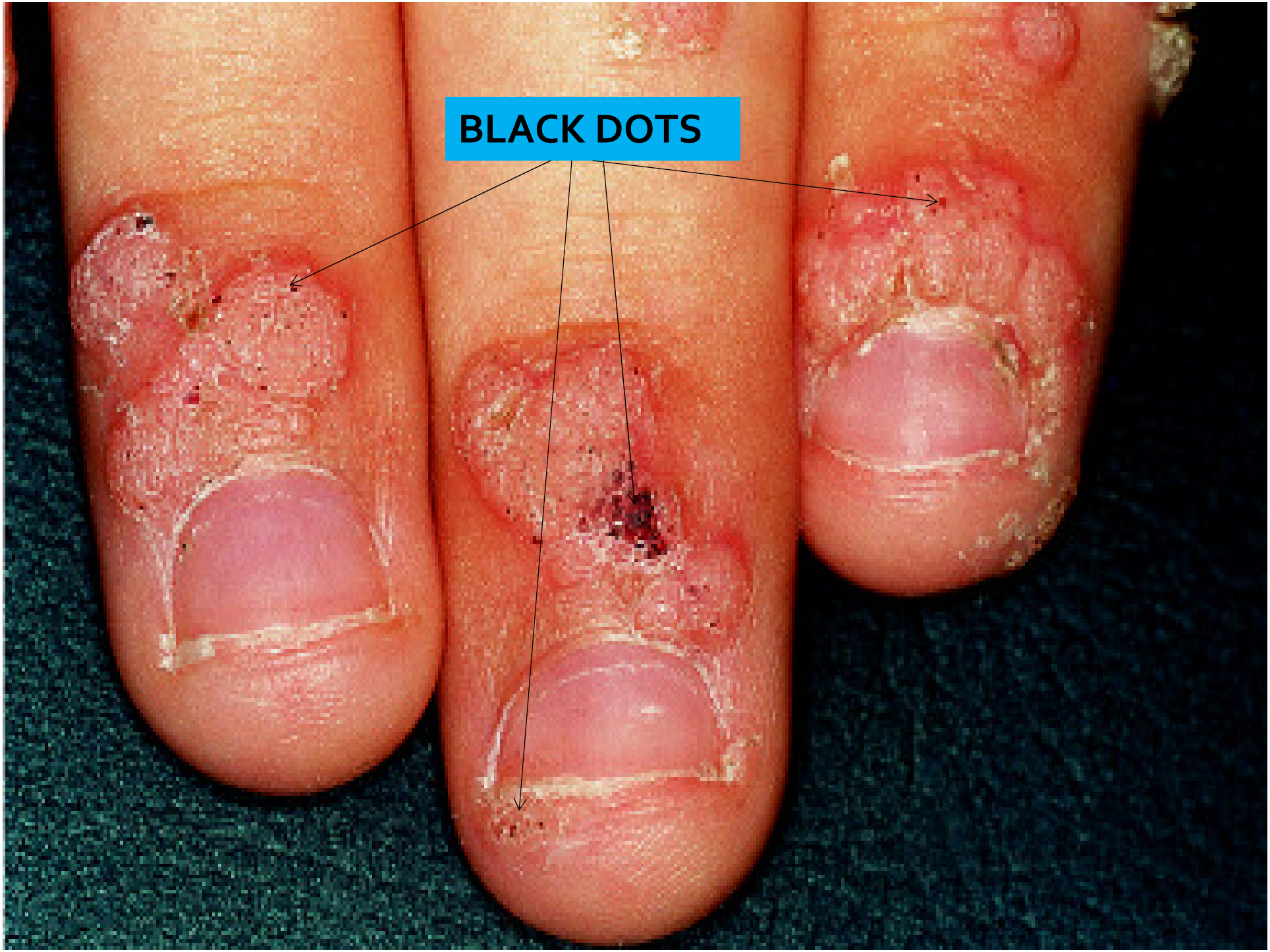
Filiform (fingerlike) or Verrucous projections

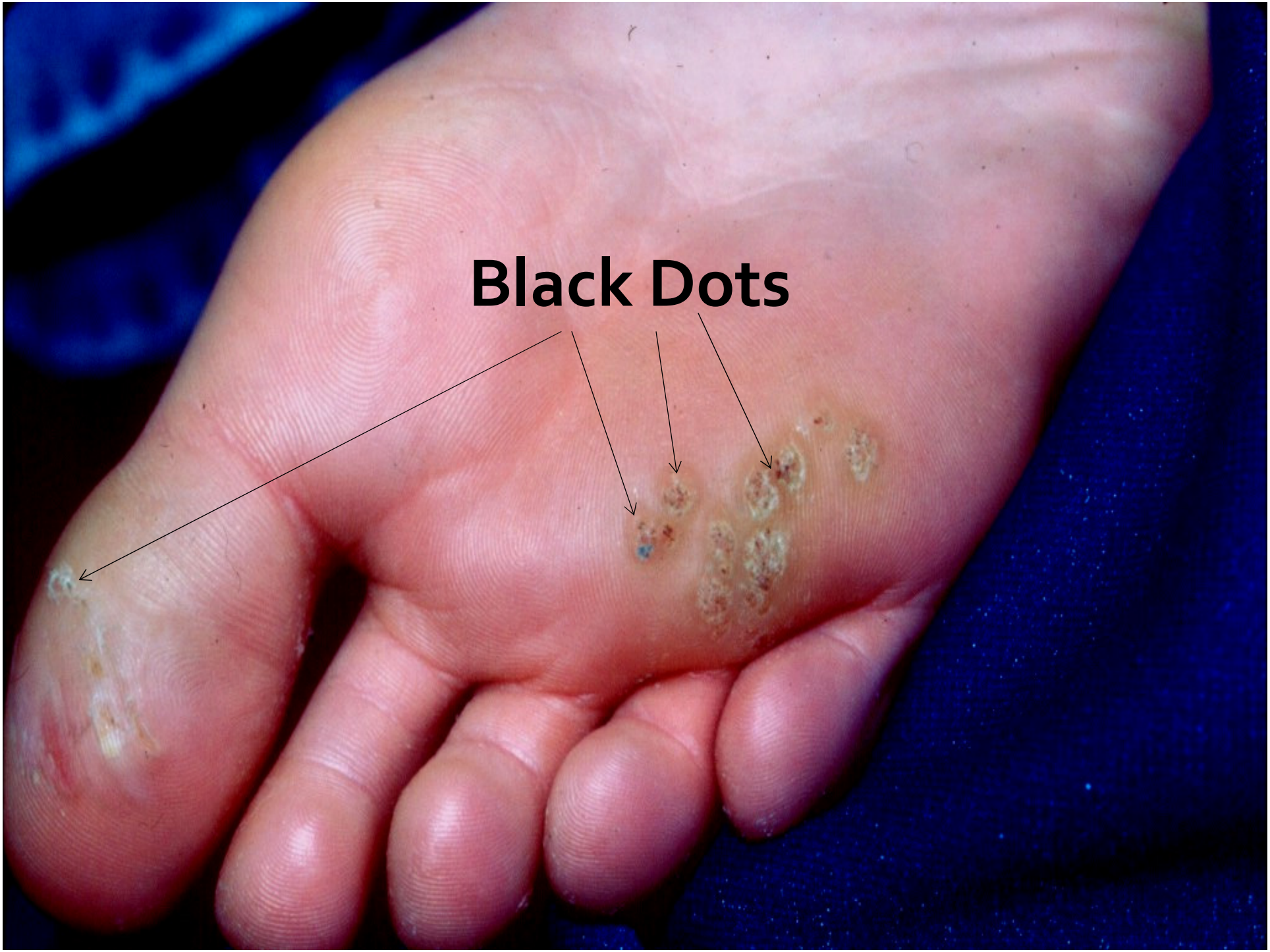

Filiform projections

Verruca Vulgaris: Clues

Look for:

THROMBOSED BLOOD VESSELS!
(Black dots)


BLACK DOTS


Black Dots

Verruca vulgaris: Management

Spontaneous resolution in 40% of cases after 2 years

If persistent or multiplying , strongly consider intervention (Individualize therapy)

1. *Cryosurgery*
2. *Dessication and curettage*
3. *Chemical destruction: cantharone plus, 40% salicylic acid (Duofilm)*

DERMATOLOGICAL INFECTIONS

FUNGAL

- **DERMATOPHYTOSIS: Ringworms**
- **YEAST: TINEA VERSICOLOR**
  CANDIDA

VIRAL

- **HAND FOOT and MOUTH DISEASE**
- **MOLLUSCUM CONTAGIOSUM**
- **VERRUCA VULGARIS**

WHAT IS WRONG WITH THE PHILIPPINES?????


SER, ME PASOK?
MERON


THANK YOU FOR LISTENING