INDIAN ✦ COUNTRY

ECHO

LEADING THE WAY

Growing the Ability to Deliver Quality Healthcare to American Indian and Alaska Native People.

Bacterial Infections

February 20, 2024

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Objectives

I. Review common pediatric and adult cutaneous bacterial infection
II. Discuss common mimickers of bacterial infections
III. Treatment

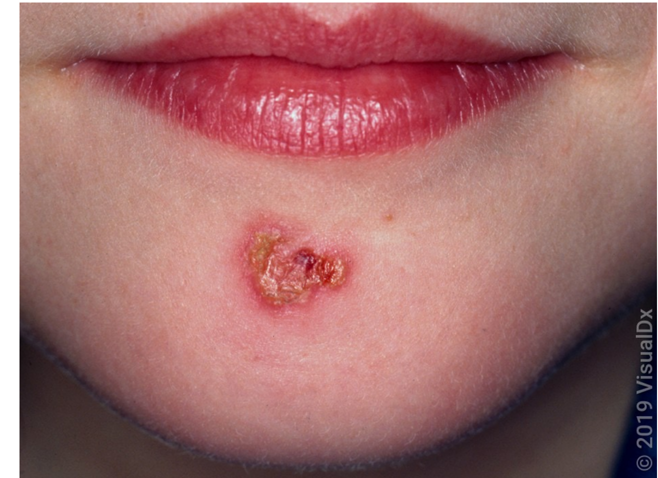
Impetigo and ecthyma

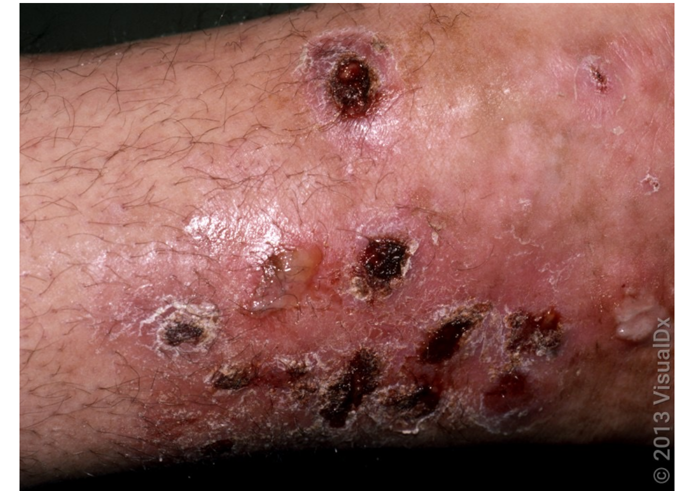
Impetigo:

- Superficial cutaneous bacterial infection
- Caused by Staph aureus or Group A Strep
- Treat with topical mupirocin or oral antibiotic if extensive

Ecthyma

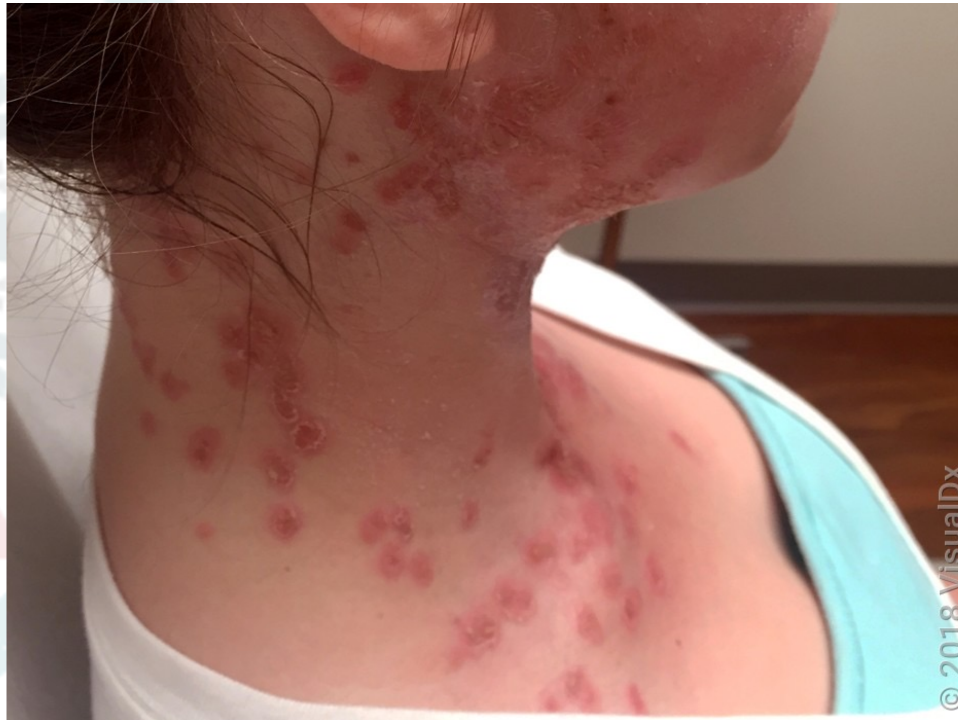
- Ulcerative skin infection, usually Group A Strep
- Vesicles or pustules that crust over and ulcerate →heal over several weeks with scarring
- Treat with oral antibiotic targeting Staph and Strep

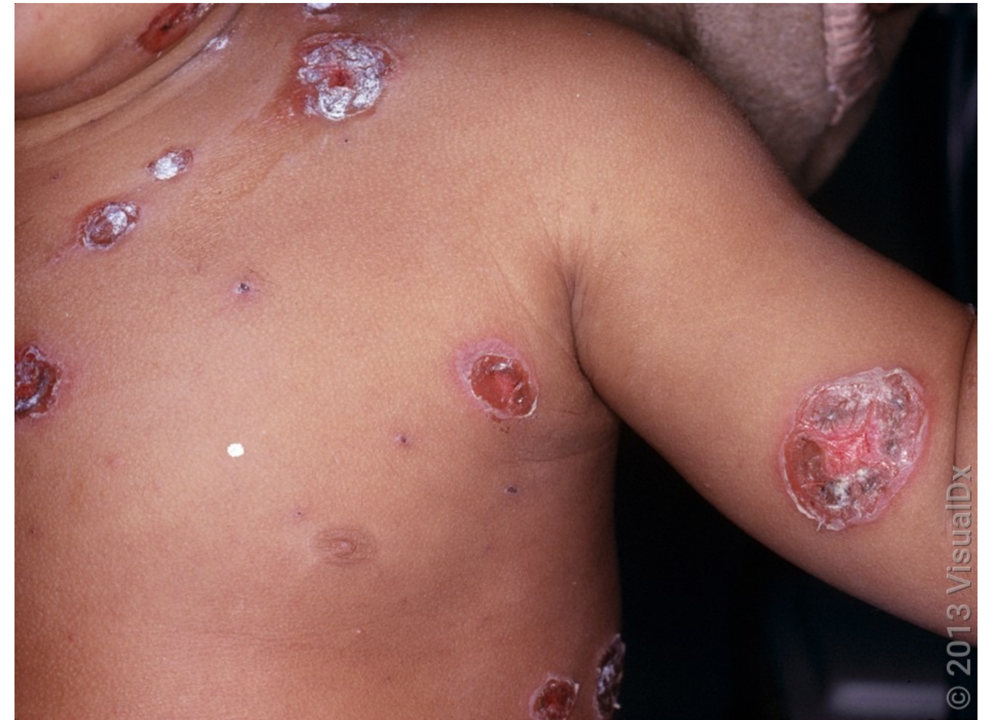


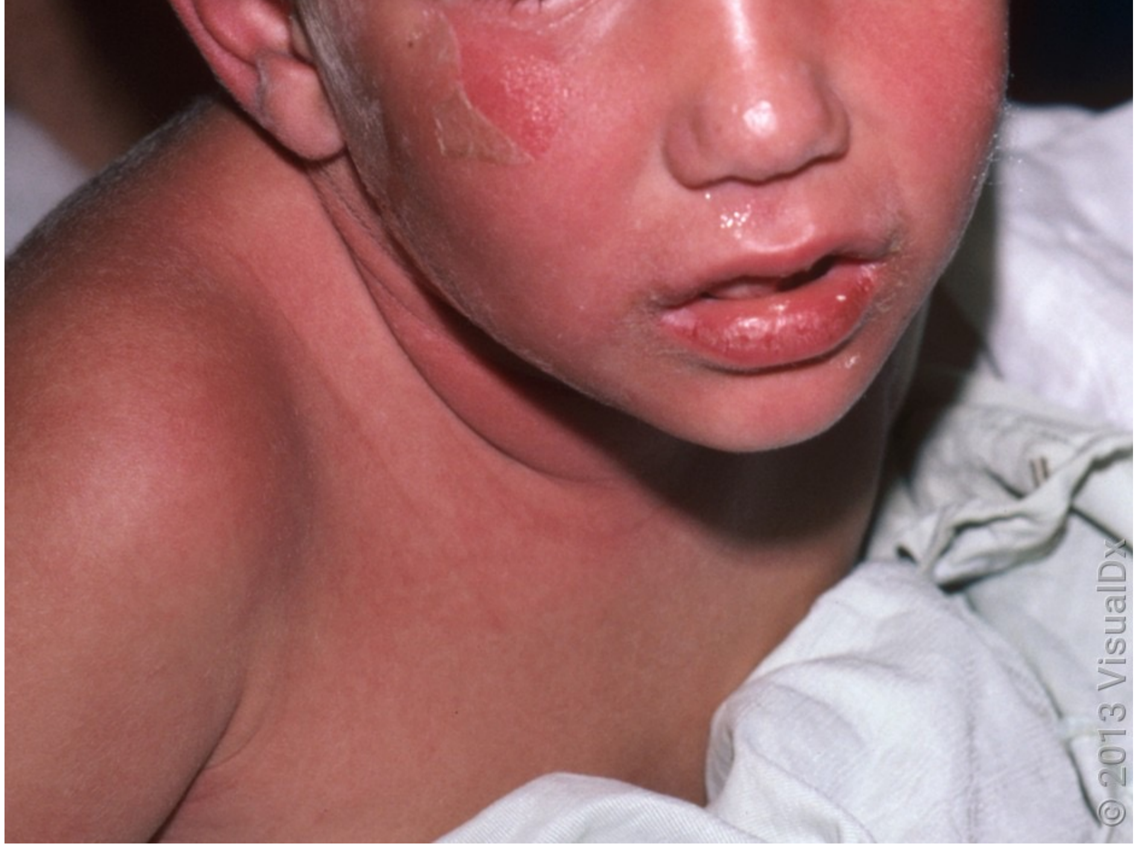


Bullous impetigo

- Infection with specific strains of Staph aureus (exotoxin that cleaves desmoglein 1 →blisters and erosions)
- Usually treat with systemic antibiotics unless limited (mupirocin)



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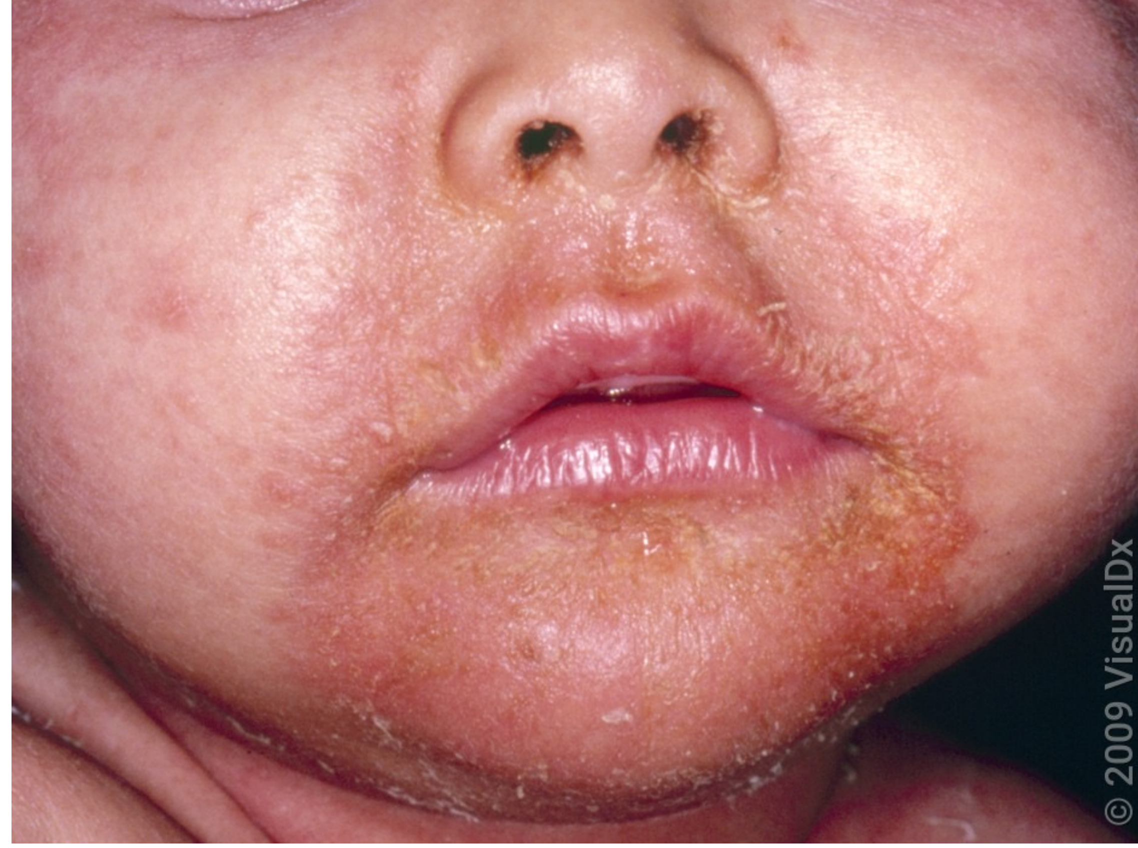
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Staph scalded skin syndrome

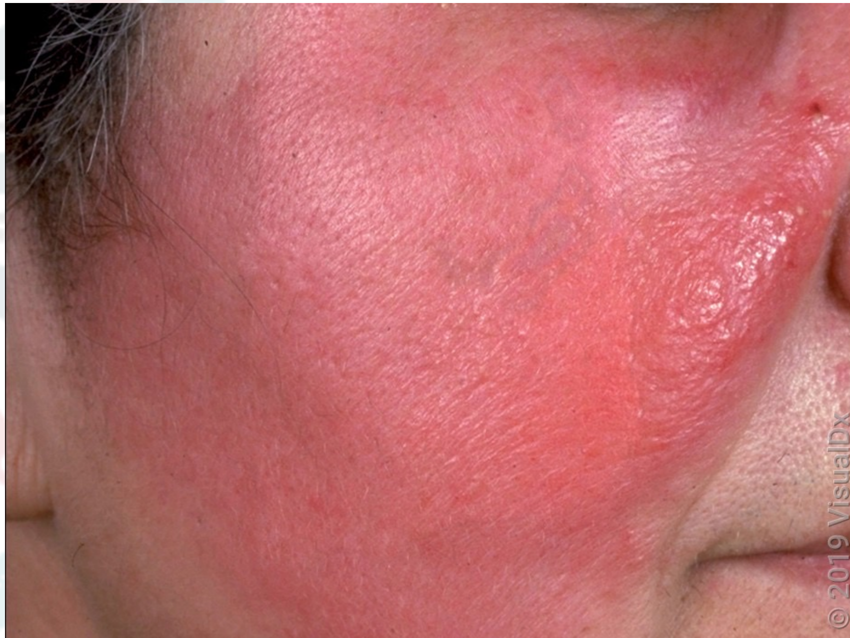
Usually seen in young children (under 6 years old)

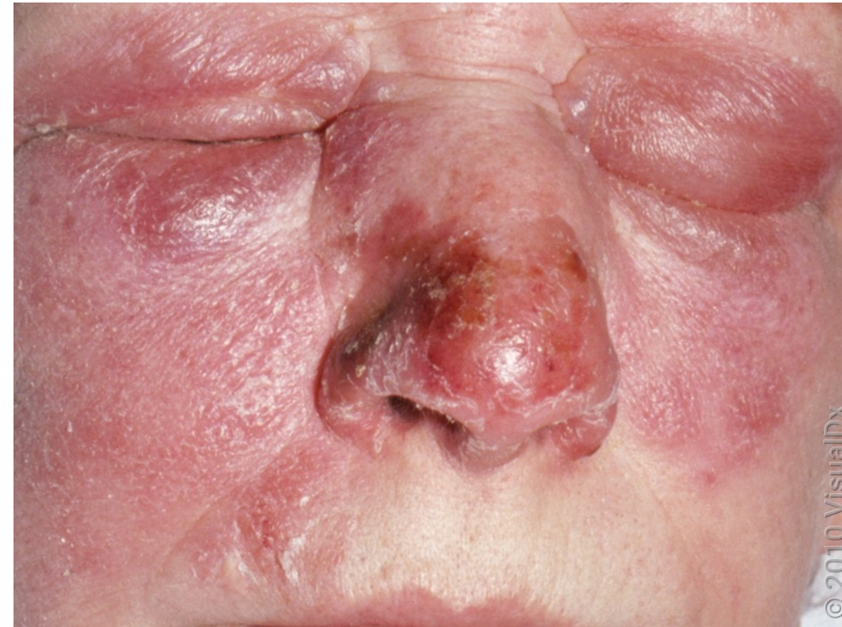
- Usually seen in young children (under 6 years old)
- Can be seen in adults with renal failure (impaired clearance of toxin)
- **Painful**
- Treatment: base on local resistance patterns; we use IV oxacillin; minimize trauma to the skin
- Bacterial culture location

Erysipelas

Bacterial infection of superficial dermis

- Usually Group A Strep
- **Painful**. May have associated fever, leukocytosis
- Treatment: Penicillin or first-generation cephalosporin





Erysipelas?

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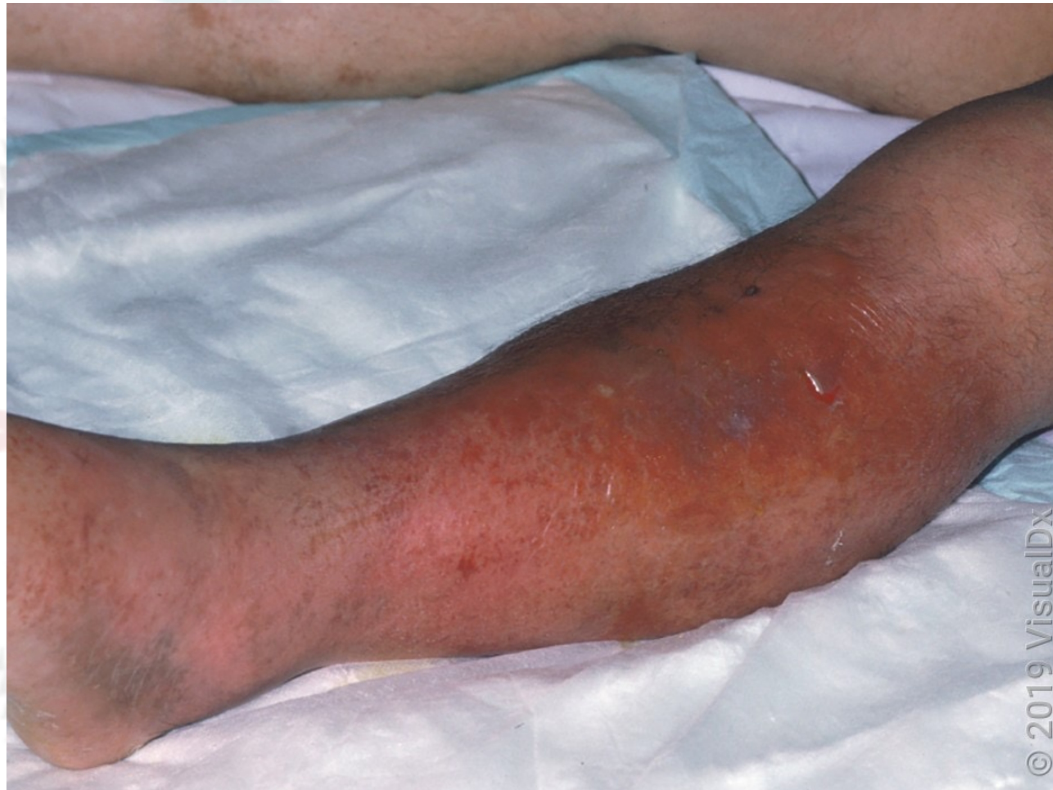
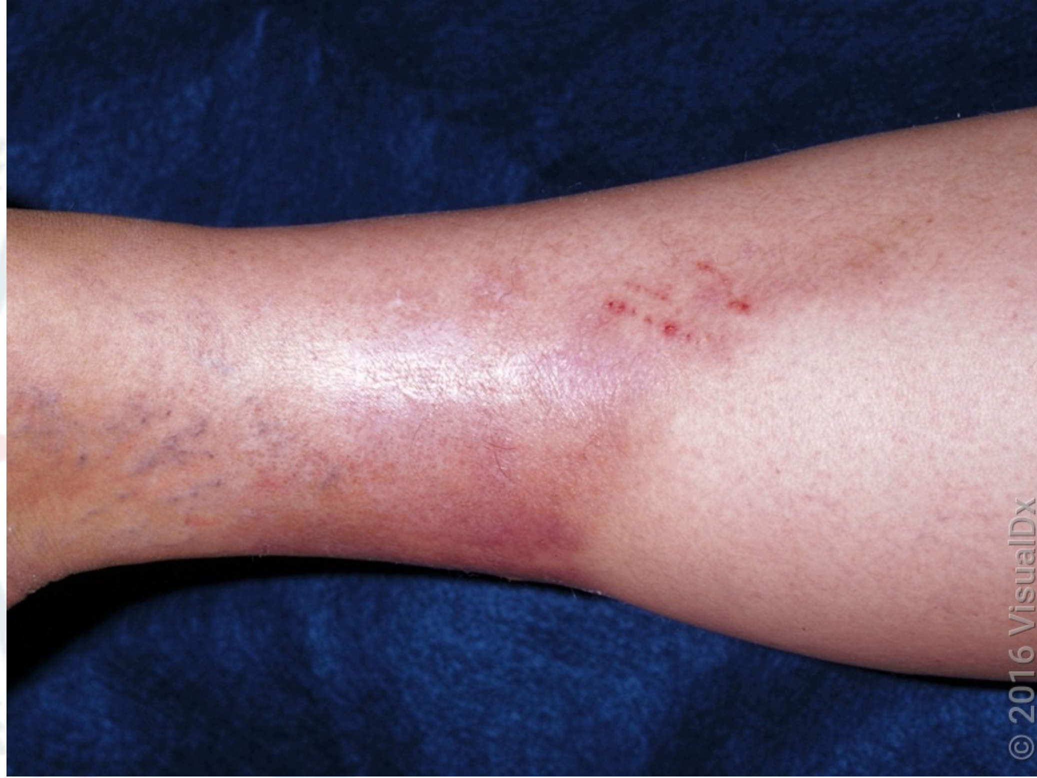
Cellulitis

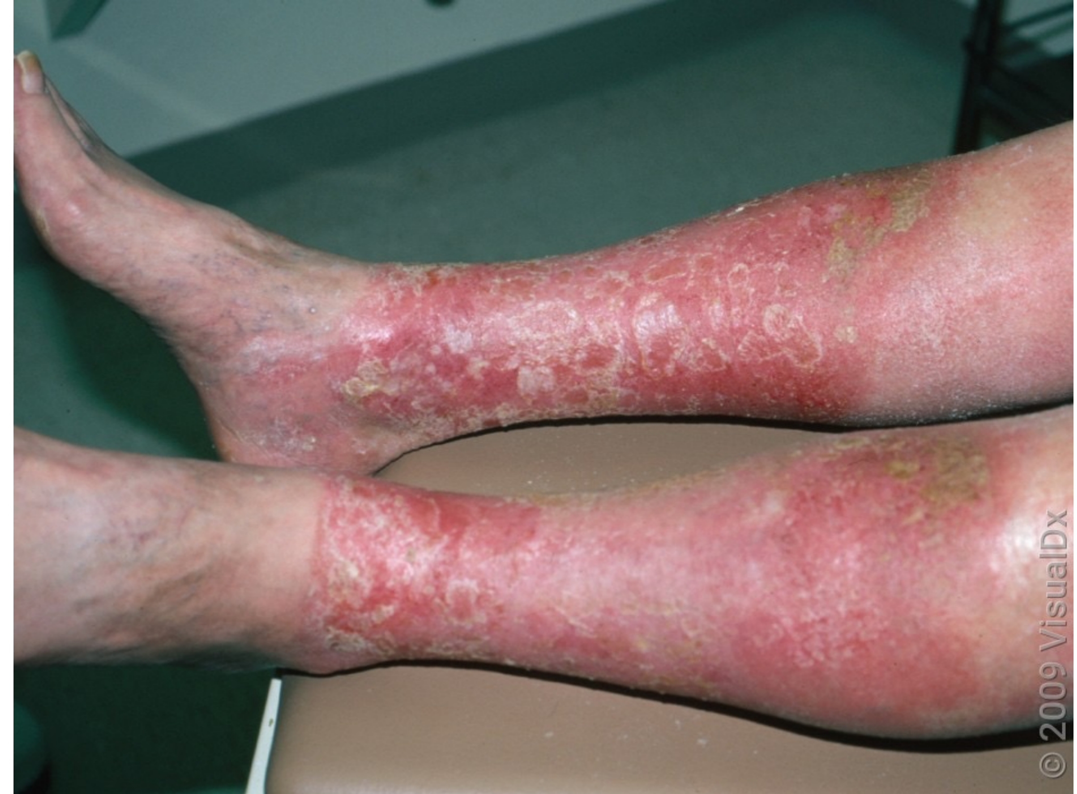


Infection of the deep dermis and subcutaneous tissue

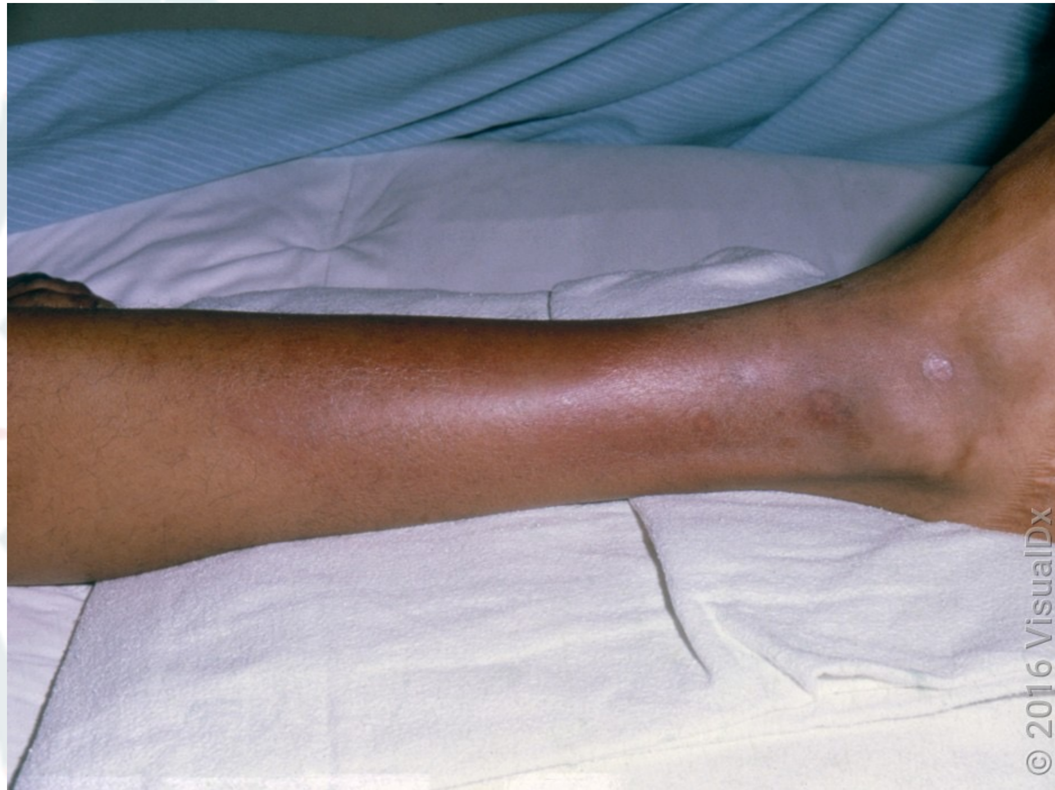
- Ill-defined plaques. Favor lower legs but can occur anywhere
- Pain, warmth, erythema, swelling
- Usually staph and strep, but long list of other potential pathogens
- Risk factors: immunosuppression (consider gram negative pathogens), background eczema, stasis, obesity, older age, lymphedema, IV drug use, other trauma to the skin
- Blood cultures usually negative

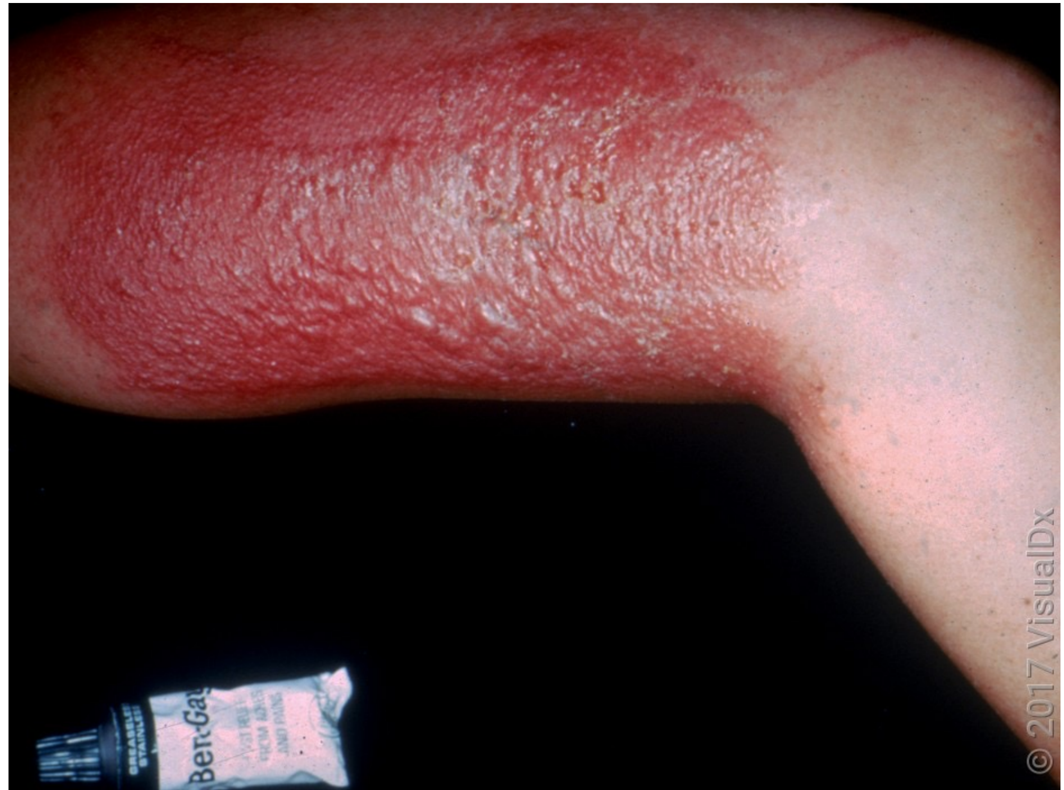
Cellulitis or not?



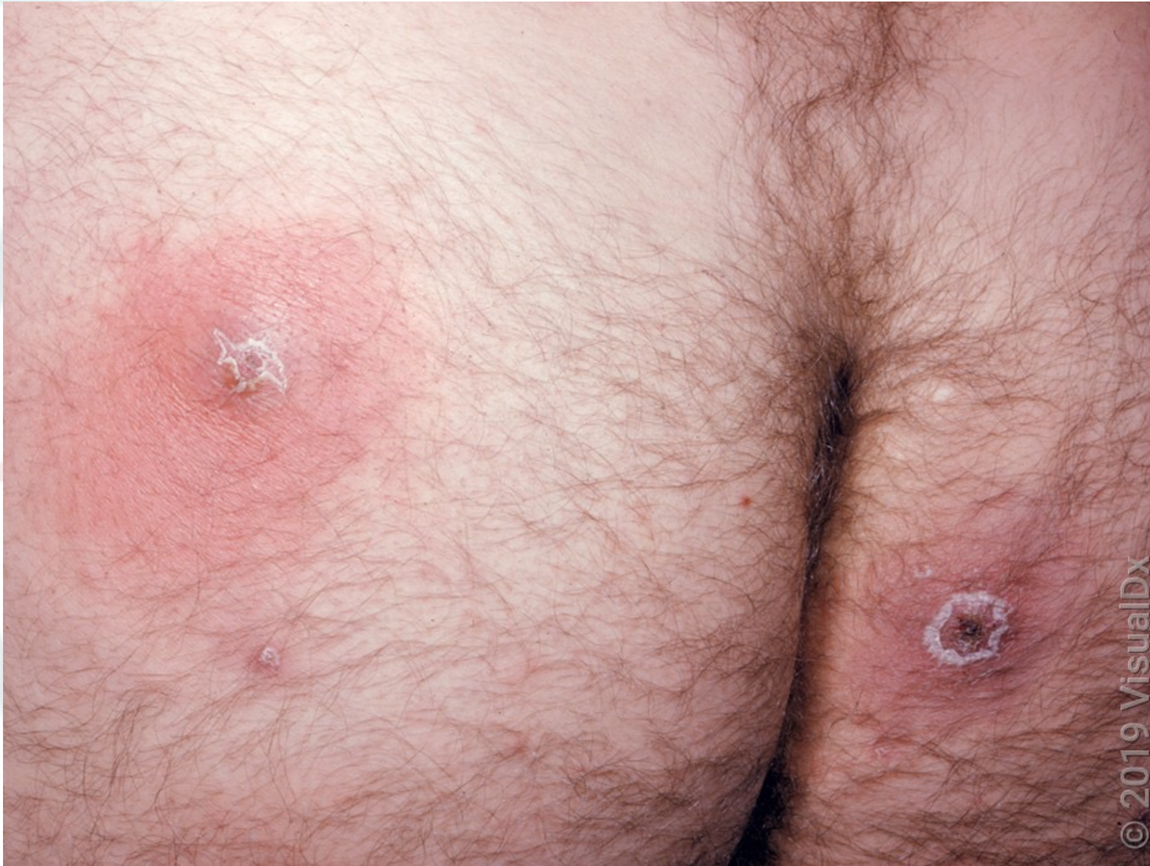


Cellulitis or not?



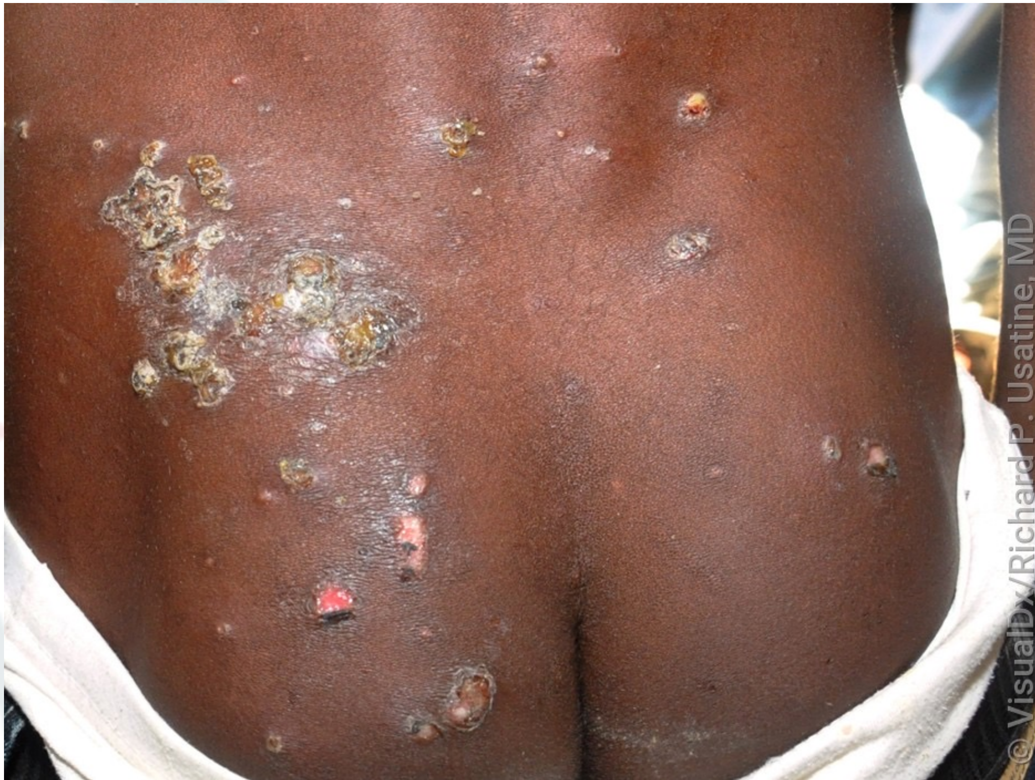


Furunculosis



- Essentially an exuberant folliculitis
- Culture drainage whenever possible
- Most commonly caused by Staph aureus (especially MRSA), Strep can also be implicated
- Treatment:
  - Single fluctuant abscess →Incision and drainage
  - Multiple and/or recurrent lesion →systemic antibiotic
  - We usually start with doxycycline 100mg BID; can also do clindamycin
  - To prevent outbreaks: benzoyl peroxide or chlorhexidine wash

Case 1



Recurrent impetigo

- 7-year-old patient has presented multiple times in the past year with impetigo
- Cultures repeatedly grow MSSA and he quickly improves with cephalexin
- Has mild atopic dermatitis, maintained on intermittent triamcinolone ointment
- Next step?

Case 1

Staph decolonization

- Mupirocin ointment twice daily to nares, fingernails, umbilicus, anus for 1 week
- Chlorhexidine wash daily from the neck down
- Wipe down hard surfaces with antibacterial wipes (door knobs, remote controls, phones/iPads); wash all towels, throw away tubs of moisturizer
- Ideally all family members would decolonize as well

Case 1

NATIONAL Eczema ASSOCIATION

BLEACH BATH

how to

1. Add bleach to water :
- Full tub: 1/2 cup bleach
- Half tub: 1/4 cup bleach
- Gallon of water: 1 teaspoon bleach

2. Soak for 10 minutes
...or longer, if you prefer. Rinse only if your skin doesn't tolerate the bleach bath well.

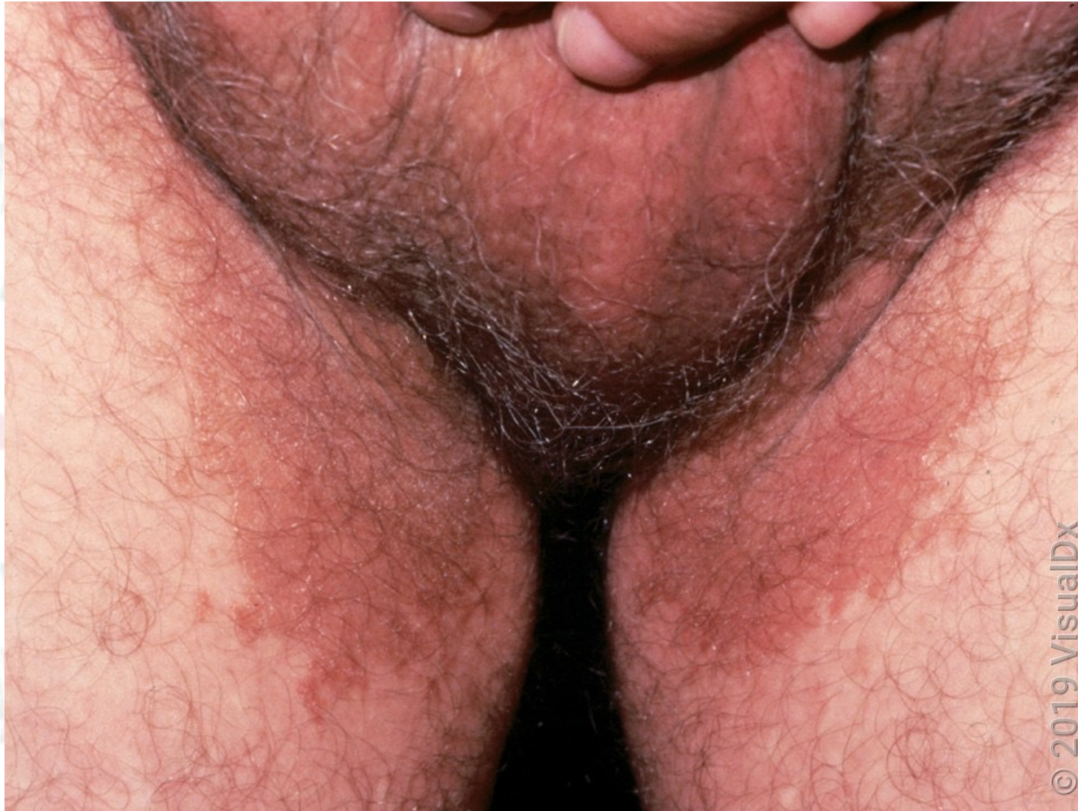
3. Pat dry gently

4. Apply topical medications to affected areas

5. Apply emollients to the entire body

Bleach baths can be done daily or as little as twice weekly.

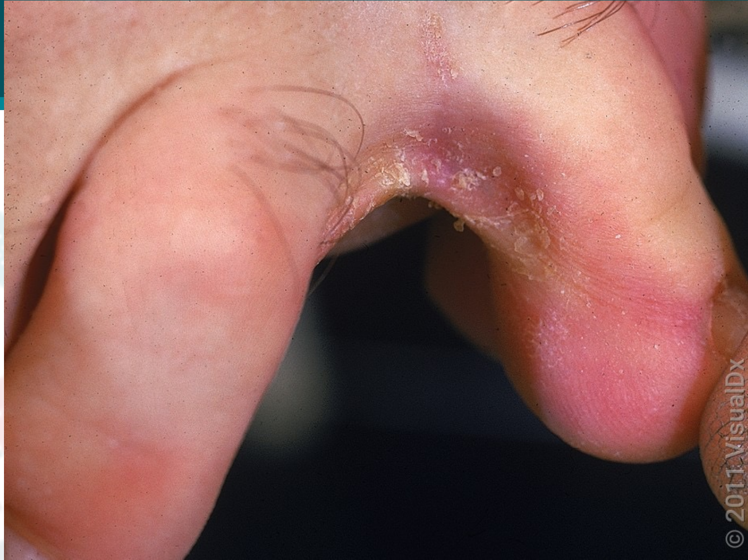
Case 2

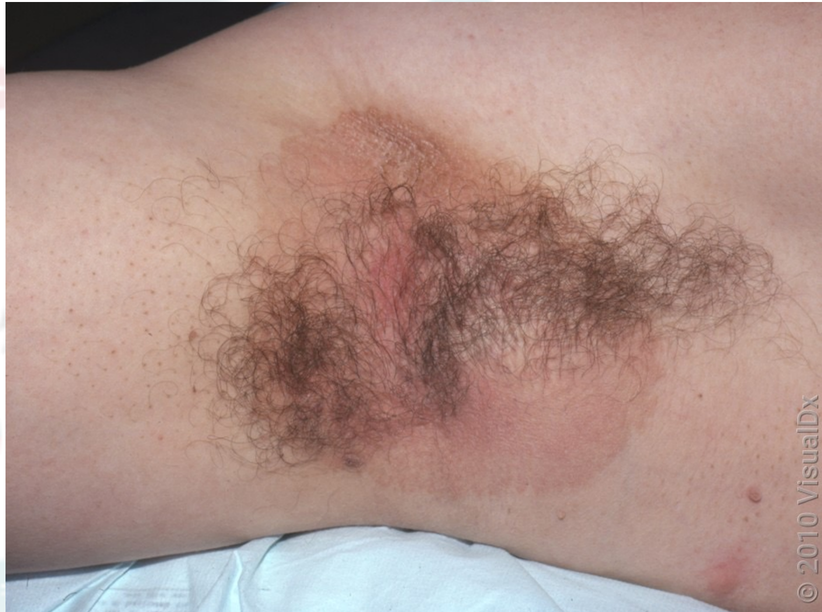


Resistant tinea?

- 45-year-old male patient presents with persistent rash in the inguinal folds for the past year
- He is very bothered by the appearance of the rash, but it is asymptomatic
- Has previously tried topical ketoconazole, nystatin, zinc oxide paste, and hydrocortisone without improvement
- Next step? Diagnosis?

Case 2

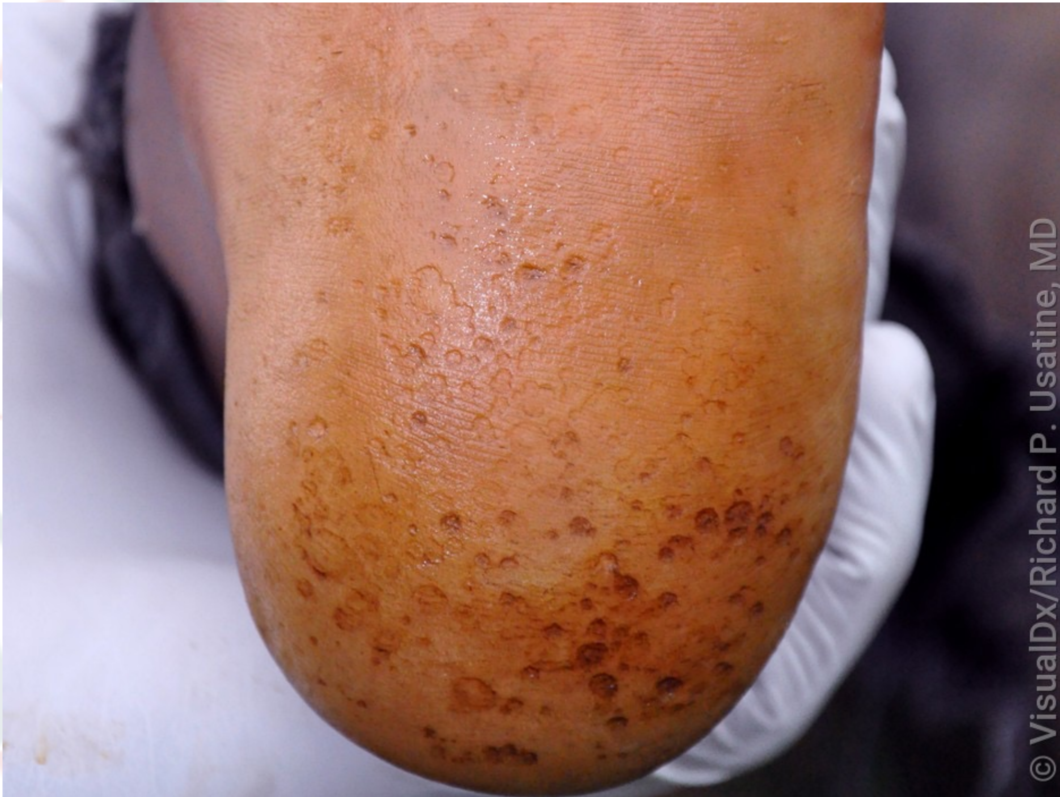




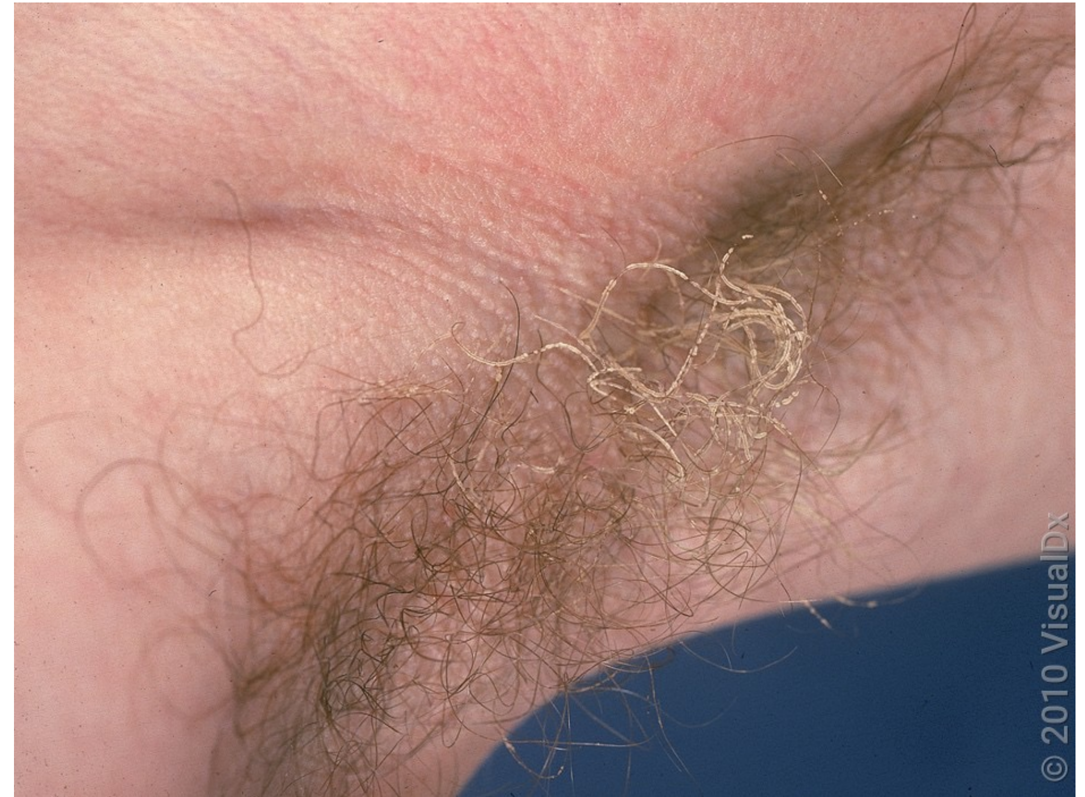
Erythrasma

- Superficial corynebacterial infection
- Favors body folds, especially the fourth toe webspace
- If wood lamp available, will highlight coral-red organisms
- Treatment: topical clindamycin or erythromycin. For extensive cases: oral erythromycin

Pitted keratolysis



Trichomycosis axillaris



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