DERMATOLOGY

CUTANEOUS INFECTIONS AND INFESTATIONS (Bacteria)

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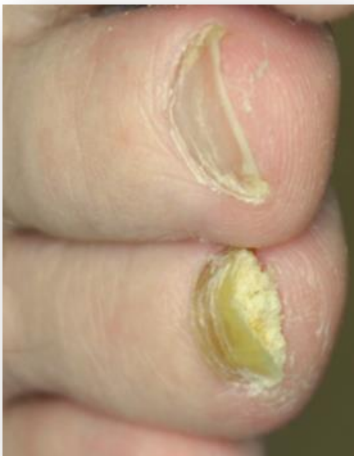
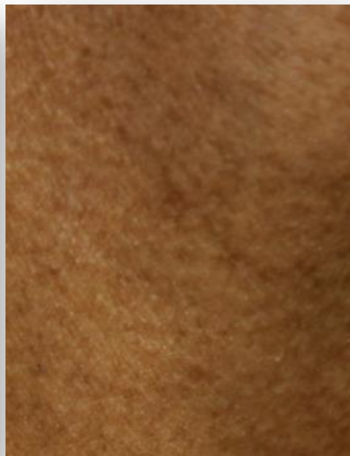
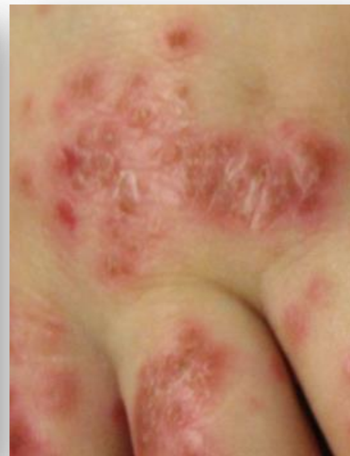
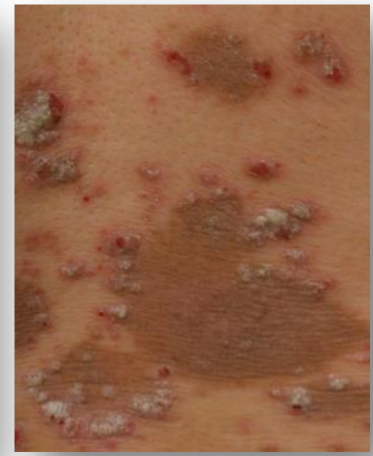








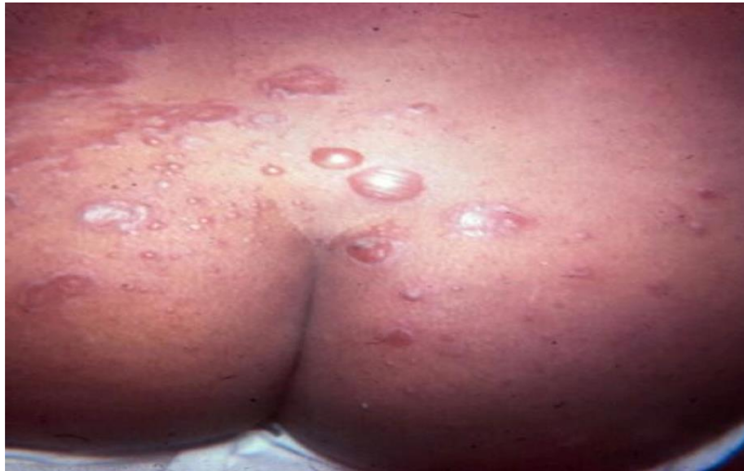
FROM SLIDES | DOCTOR'S NOTES | TEAM'S NOTES | FROM BOOK | IMPORTANT

1- Impetigo

- Superficial non-follicular infection due to staphylococcus and streptococcus (affect the epidermis by staph/strept)
- **Organisms**: Staph. aureus (associated w/nasal or perianal carriage), group A Strep, or both.
- More common in children
- **Site**: exposed areas (face, extensor surfaces, acral areas; hands and feet)
- Have 2 types

1. Bullous:

- Organism: Staph. aureus
- Common in newborns and older children
- Site: face & hands
- Lesion: thin, fragile bullae on grossly **normal** skin



2. Non-bullous: more common

- Organisms: Staph. aureus, group A Strep
- Lesion: vesicles or pustules on an erythematous base that quickly turn to honeycolored crusts

It could be:

- Primary: if there are no previous skin lesions
- Secondary: if the infection occurs on top of a previous skin lesion (impetigo on top of eczema or herpes)

Predisposing factors:

- Warm, humid climate
- Poor hygiene
- Trauma
- Insect bites
- Immunosuppression

Prognosis:

- no scarring but post-inflammatory hypo- or hyper-pigmentation can occur

Complications :

- acute post-streptococcal glomerulonephritis (APSGN)
- Follows streptococcal infection (impetigo > URTI)
- Latency period: ~10 days after pharyngitis, ~3 weeks after pyoderma (impetigo)
- *Associated strains 49, 55, 57, 59 (follow up in 2-3 weeks if +ve)*

Management:

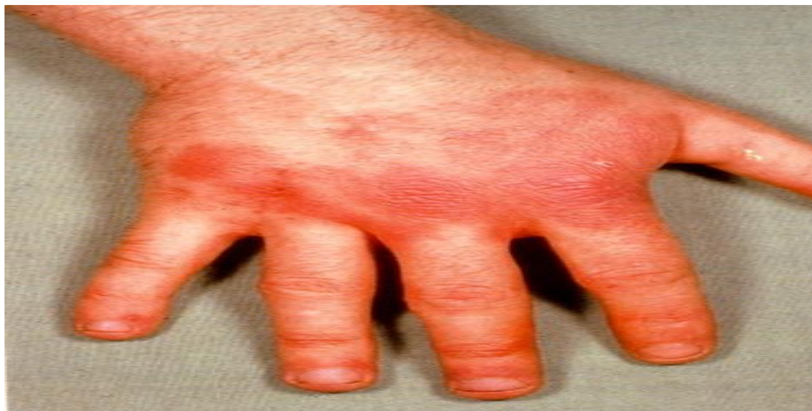
- Swab: Gram stain (will show gram +ve cocci), culture
- Remove crust (to allow penetration of medications, and accelerate healing)
- If localized: topical antibiotic (e.g. bactroban)
- If **severe**, **bullous** or **streptococcal** in origin (risk of APSGN): systemic 1st generation cephalosporin (*e.g. cefazolin*) or penicillin for 7-10 days

2- ERYSIPELAS

- deep cutaneous infection (Dermal)
- due to streptococcus after penetrating trauma (CHRONIC LYMPHEDEMA)
- site : Face and Acral areas
- Unilateral sharply demarcated edematous red plaque
- Follows minor penetrating trauma (e.g. abrasion) or associated with chronic lymphatic dysfunction
- Common in infants, young children & the elderly
- Organism: group A Strep
- Associated features: fever, malaise, and leukocytosis

Management:

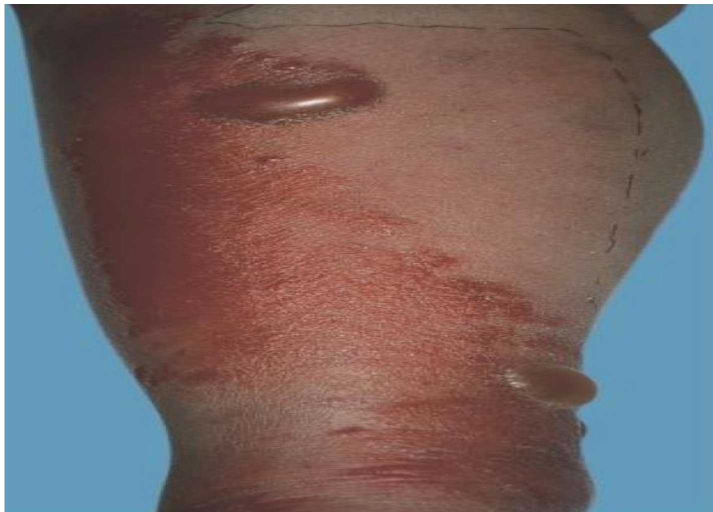
- Smear/swab if discharging
- Cold compress
- If severe: oral (10 days) or IV antibiotics (penicillin, or erythromycin if allergic to penicillin)



3- Cellulitis

- deep cutaneous infection (up to SC FAT)
- due to streptococcus after penetrating trauma (CHRONIC LYMPHEDEMA)
- site : Face and Acral areas
- Unilateral Diffuse (NOT well demarcated) edematous red plaque raised, hot, tender erythematous patch (usually not raised) ± bullae (w/Staph infection)
- Blood Culture in immuocomprazimed pts.
- Risk factors: immunocompromised, DM, HTN, obesity, venous stasis
- Organism: Strep pyogenes (group A), Staph aureus
- Associated features: fever, malaise, palpable, tender lymphnodes, and leukocytosis
- Complications: chronic lymphedema with recurrent infections

Management:
- Swab and **blood culture**
- Acetaminophen
- IV penicillinase-resistant penicillin's e.g. flucloxacillin, or 1st generation cephalosporins



4- FURUNCLE

- Inflammation of deep portions of hair follicle (*follicular*)
- Organism: Staph. aureus
- Lesion: deep seated **nodule** about hair follicle, erythematous base

- Management:
  - Swab: culture and gram stain
  - Antibacterial soap
  - Anti-Staph antibiotics

5- CARBUNCLE

- Infection of multiple hair follicles
- Organism: Staph. aureus
- Lesion: larger more deep seated, with **drainage through multiple points** in the skin

- Management:
  - Swab: culture and gram stain
  - Screen for carrier state (*swab nose, if +ve give bactroban*)
  - Anti-Staph antibiotics

6- FOLLICULITIS

- Inflammation of hair follicle
- Organism: Staph. aureus
- Site: face, scalp, thighs, axilla & inguinal area
- Lesion: multiple small **papules** / **pustule** on an erythematous base
- Prognosis: heals without scarring but post-inflammatory hypo- or hyperpigmentation can occur

Management:
- Swab: culture, gram stain
- Antibacterial soap
- Topical and systemic antibiotics

7-ERYTHRASMA

- Organism: corynebacterium minutissimum (*weak bacteria*)
- Site: flexor surfaces e.g. axilla, feet web spaces, groin, submammary
- Lesion: well demarcated, red-brown, asymptomatic (non-itchy) **patch**

Risk factors:	**Management**
Excessive sweating	Swab
obesity	**Wood's lamp: coral-red fluorescence**
Immunocompromised	Topical: imidazoles (miconazole) or erythromycin
DM	Oral erythromycin for 7 days