# DERMATOLOGY

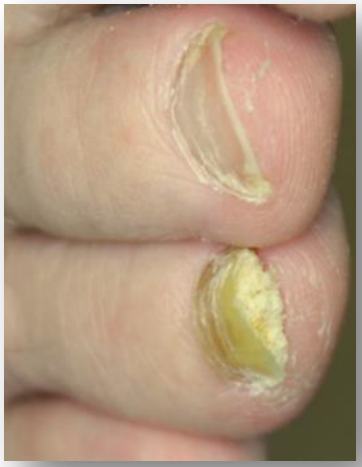
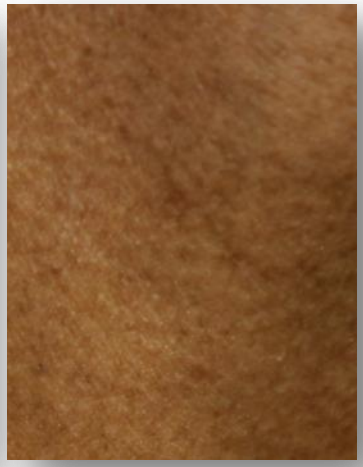
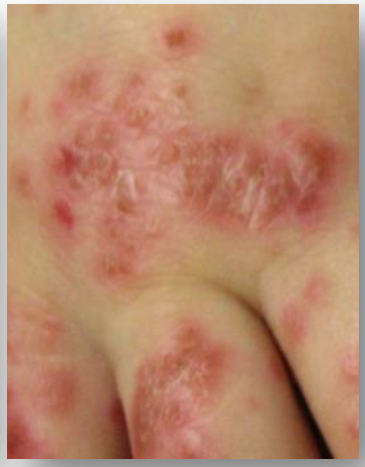
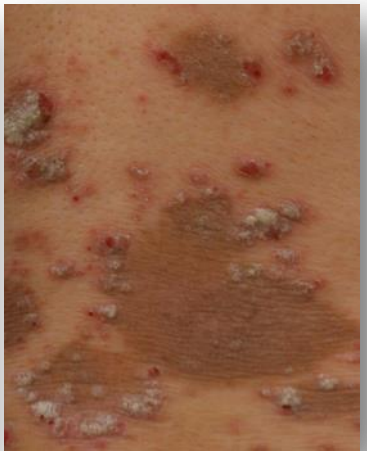
## CUTANEOUS INFECTIONS AND INFESTATIONS (viral and FUNGAL)


DONE BY

Abdulaziz Alsubaie

TEAM LEADER

Meshaal AlOtaibi

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

# VIRAL INFECTION

## Warts

- Common benign self-limited cutaneous tumors
- Virus : Human papilloma virus (HPV)
- Direct contact
- Asymptomatic transmition
- Delay in presentation
- Oncogenic potential (HPV 16 and 18)
- High recurrence rate. it's latent at the basal layer of the skin
- Koebner phenomenon sometimes manifests ( warts at the site of trauma )

### CUTANOUS (HPV 1 and 3)

1. common wart: usually hyperkeratotic papule or plaque on erythematous base
2. flat wart: face and back of hands
3. planter wart: painful, bad prognosis, located mainly at sole of the foot ( point of pressure )

### GENITAL Warts (HPV 6 and 11)

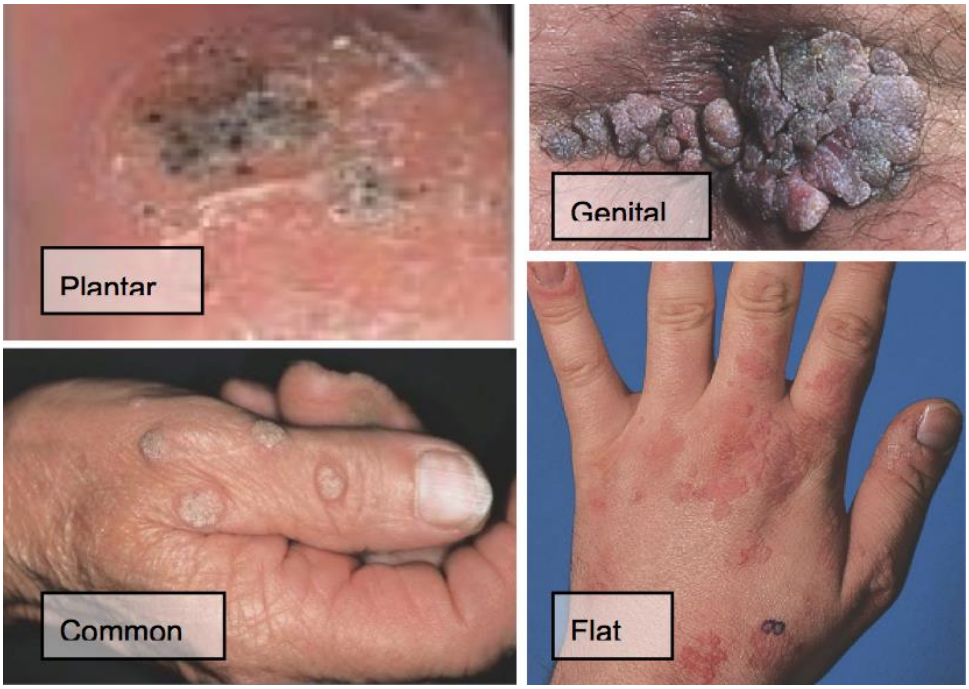
- Most common STD
- Site: penile, vulvar skin, perianal area, mucous membranes

Lesion:

- Condylomata accuminata: pedunculated tumor "cauliflower like", or o Classic papules
- Always check sexual partner
- oncogenic types: 16 and 18!

### Treatment of warts

- Tissue destructive modalities
  - Keratolytic (salicylic acid and podophyllin)
  - Cryotherapy ( Liquid nitrogen)
  - Electrotherapy
  - CO2 laser
- Immunotherapy

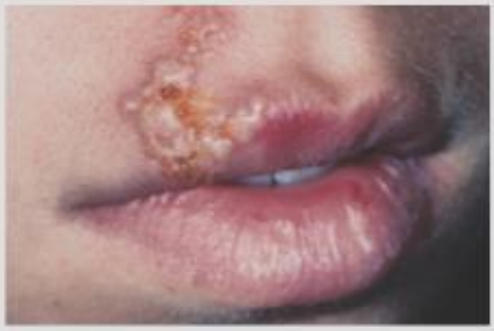


# Herpes simplex

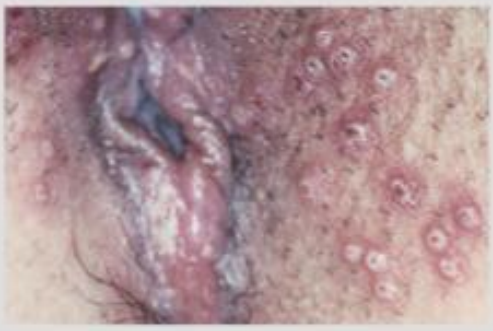
- Virus: herpes simplex virus 1 & 2. Incubation period: 7-10 days. Transmission: direct contact/asymptomatic shedding.
- Lesion: Grouped small vesicles "blisters", on erythematous base that erode within ~ 24 hrs
- Prodrome (before lesion appears): tingling, pruritus, pain

## Management :

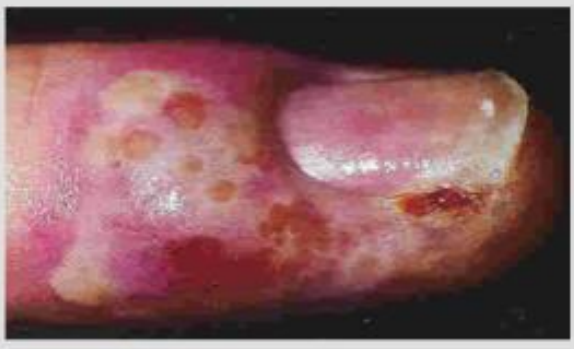
- Tzank Smear (not specific): shows multinucleated giant
- epithelial cells/viral particles
- Serology (not specific): IgG, IgM antibodies - for screening the partner
- Direct fluorescent antibody (DFA) – more specific
- Viral culture: most definitive but not widely available
- Always check for superimposed infections (e.g. impetigo) or concurrent STIs
- DO NOT use topical steroids (worsen symptoms)
- Topical antiviral / Oral (more effective than topical) or IV acyclovir for: genital, recurrent, immunosuppressed, neonatal, eczema herpeticum



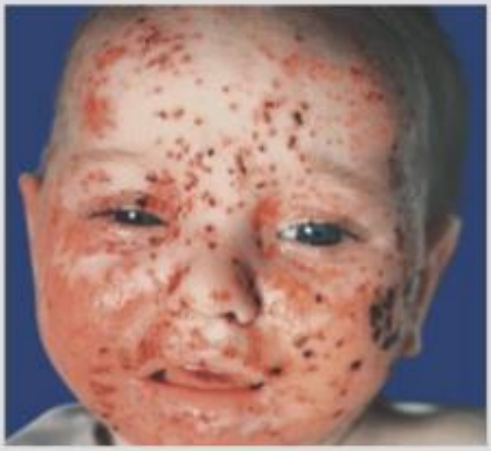
**HSV-1 (Herpes Labialis) "cold sore":** Recurrent. Resolves spontaneously.



**HSV-2 (Genital Herpes):** Extremely painful. High association with cervical cancer



**Herpetic Whitlow:** Inflammation of the proximal nail folds "paronychia"



**Eczema Herpeticum**: Infection with HSV in patients with previous skin disease (e.g. atopic dermatitis, pemphigus, burns)

# Herpes zoster virus

- Virus: chicken pox virus [varicella zoster: primary infection causes chicken pox (usually in children), reactivation causes shingles (usually in adults/elderly)]
- Adult, Hx of chickenpox

- Reactivation risk factors: immunosuppression e.g. steroids; stress

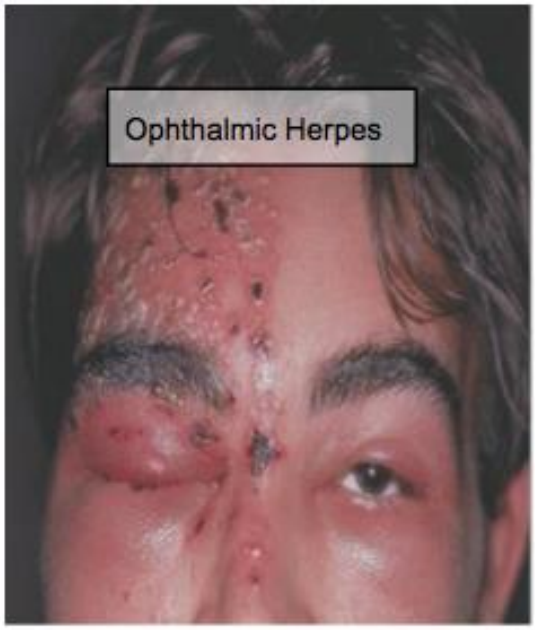
- Lesion: dermatomal blisters. Commonest dermatomes: thoracic (spinal), trigeminal (cranial).
- Serious: ophthalmic herpes, Ramsay-Hunt syndrome (geniculate ganglion; could lead to facial nerve paralysis), sacral ganglia herpes.
- Prodromal pain & tingling (3-5 days before eruption) and post-herpetic neuralgia (persists for ~4 weeks)
- Heals with scarring

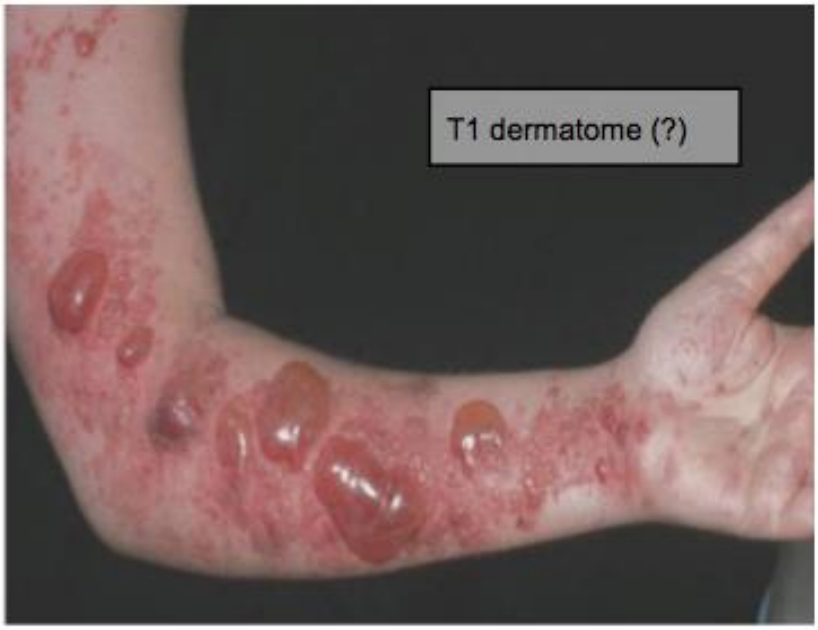
## Management:

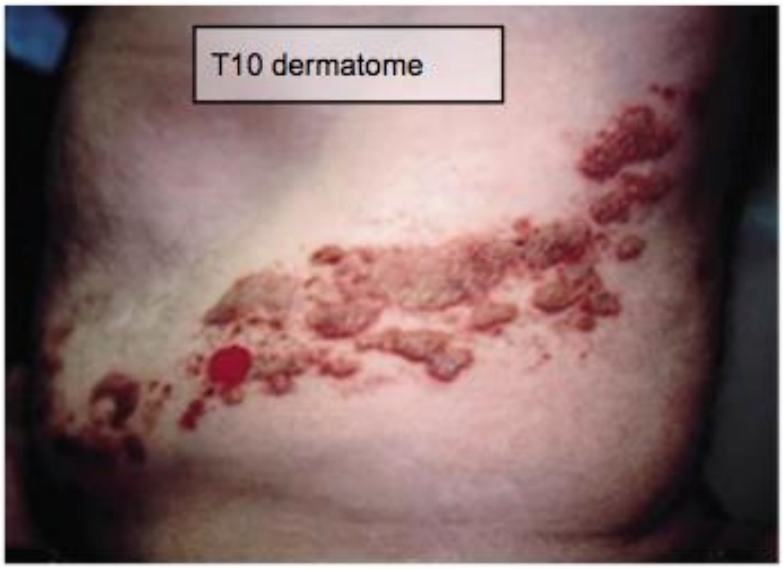
- Tzank Smear: viral particles
- Direct fluorescent antibody (DFA)

Treatment:

- Analgesia, drying agent
- Acyclovir: if immunosuppressed, wide spread



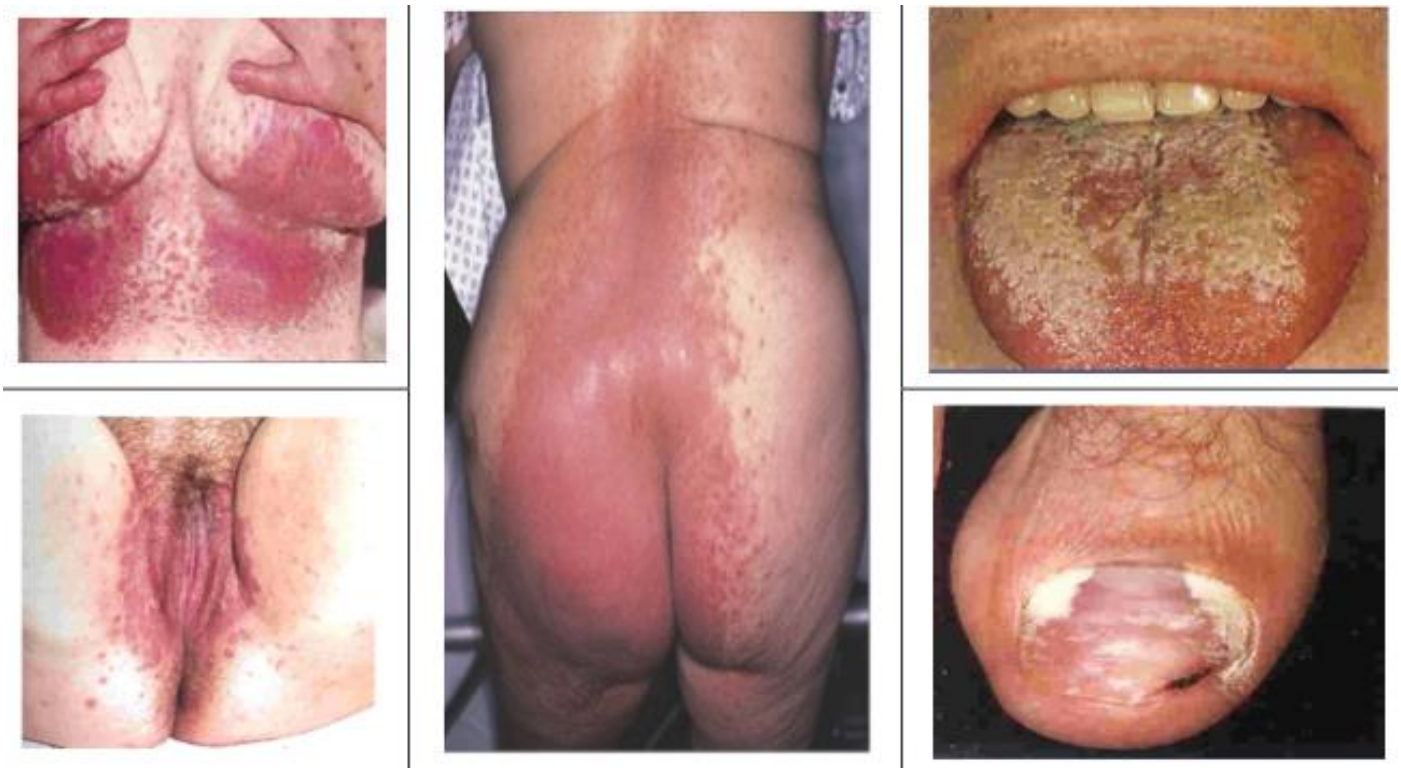
# FUNGAL INFECTION

## Candidiasis

- Organism: Candida albicans (normal commensal of GIT), pathogenic in immunocompromised
- Sites:
  - Intertrigo: flexor surfaces & skin folds = under breast, groin, or interdigitally. “Napkin candidosis” = diaper area (toddlers & the elderly).
  - Paronychia: painful red swellings of periungual skin. Topical Rx not effective.
  - Mucous membranes: oral (thrush), urogenital and esophageal
  - Vulvovaginitis: irritation, discharge
  - Candida folliculitis
  - Generalized systemic infection
  - Chronic mucocutaneous candidiasis

### Management:

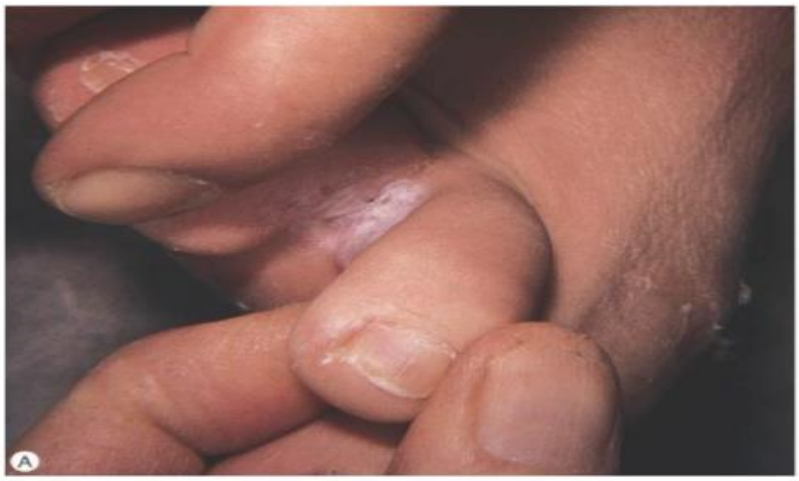
- Swab: KOH
- Alter moist warm environment (keep area dry w/powders etc)
- Nystatin-containing cream
- Imidazole (Daktarin, canastein)
- Oral antifungal (itraconazole): if immunosuppressed, or persistent infectio

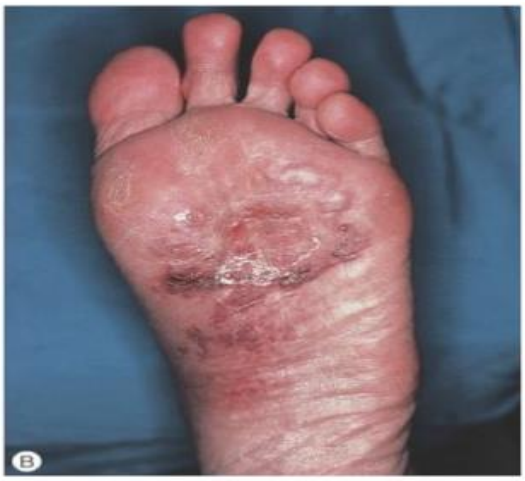


# Dermatophytosis

## 1- TINEA PEDIS

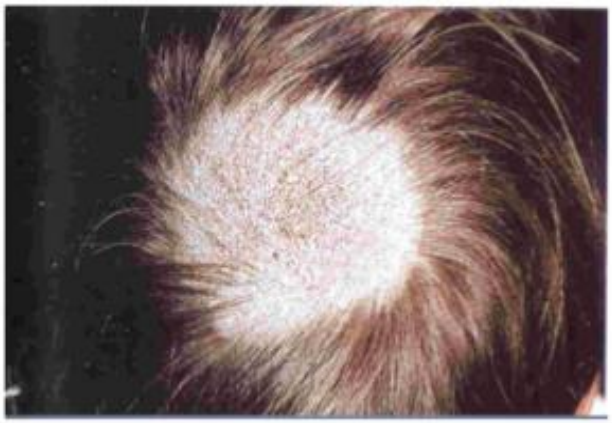
- Organisms: T. rubrum (source: human), T. mentagrophytes (source: animal)
- Adult (athletes)
- Site: toe webs (interdigital) most common, instep
- Lesion:
    - Interdigital ( fissuring of toe webs ), on soles ( itchy scaly patches )



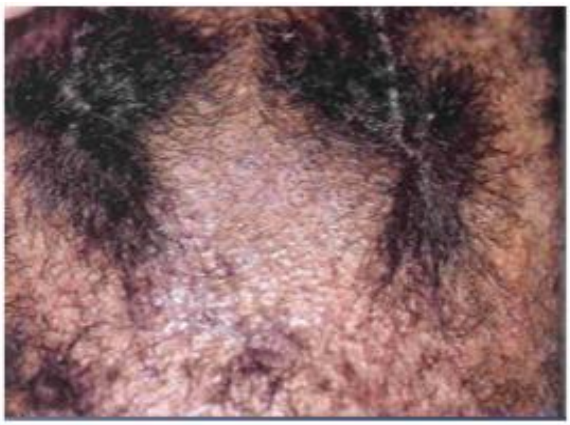




## 2- TINEA CAPITIS

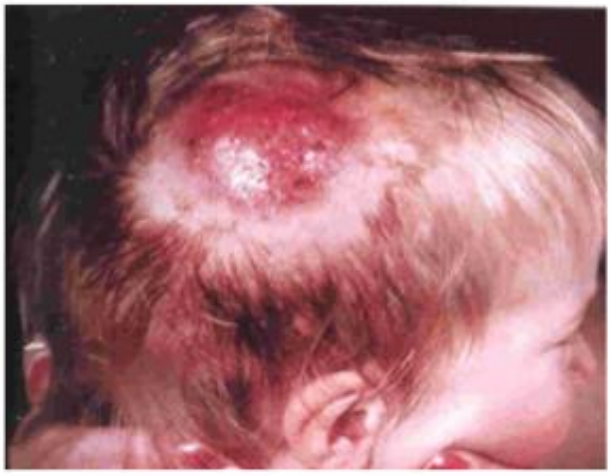
- On the scalp
- Well circumscribed, pruritic, scaling area of hair loss



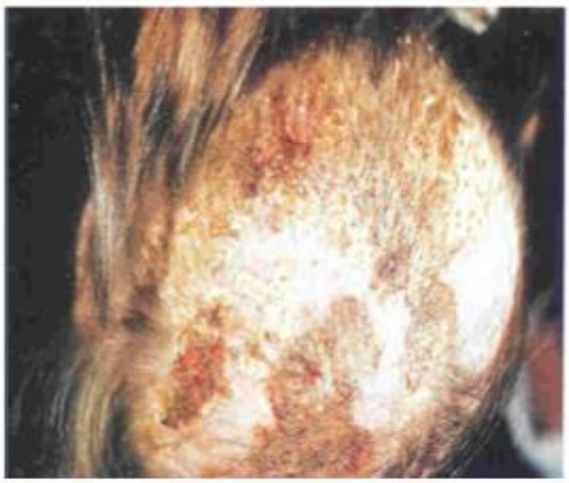
Gray patch (commonest) - T. audouinii, shows green fluorescence under Wood's lamp



"Black dot" tinea capitis – T. tonsurans



Kerion – T. verrucosum
Heals with scarring alopecia



Favus – T. schoenleinii: thick yellow adherent crusts
Heals with scarring alopecia

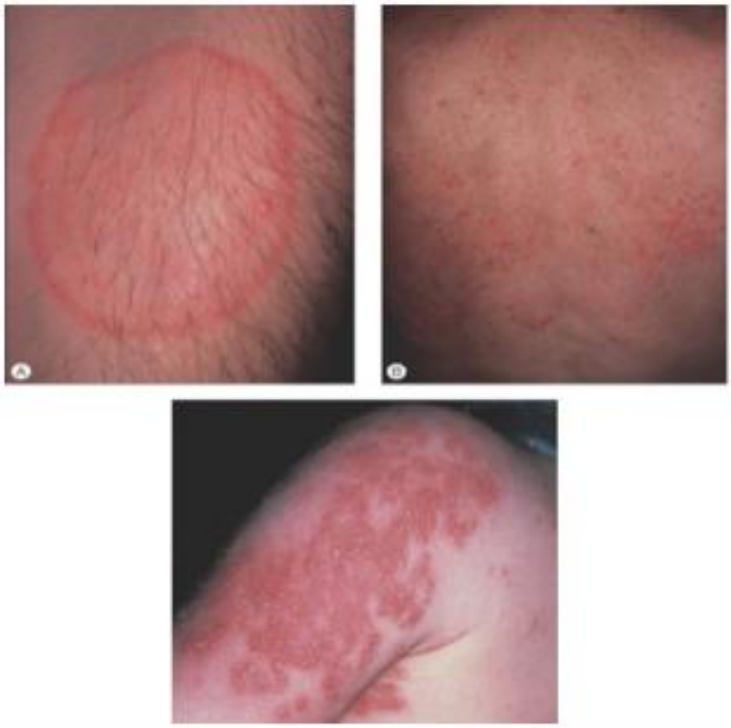
3- OTHERS

**Tinea Corporis**

Trunk

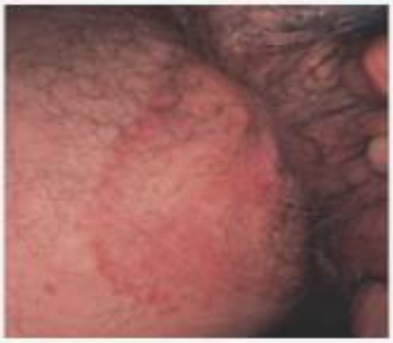
T. rubrum

**Annular, itchy, active border**



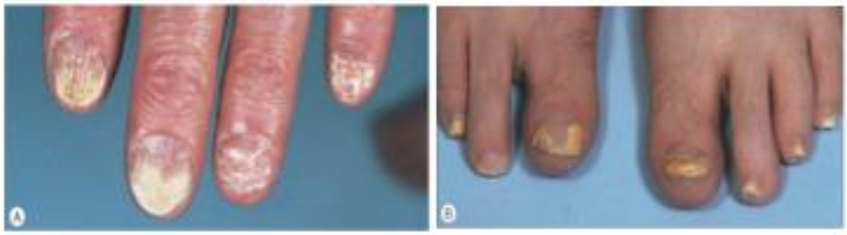
**Tinea Cruris**

Groin, pubic regions, and thighs

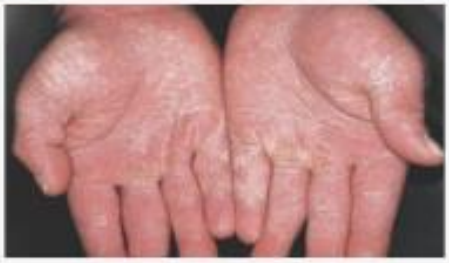


**Tinea Ungum**

T. rubrum, T. mentagrophytes



**Tinea Manuum**



## Management of dermatophytosis:

- Education
- Scraping, hair plug, or nail clippings: KOH (hyphae) and culture Wood's light (T. audouinii > green fluorescence)
- Topical (terbinafine, daktarin)
- Oral (Griseofulvin, terbinafine, itraconazole): extensive, hair, nail

# Pitryasis versicolor

- Organism has 2 forms: Malassezia furfur (hyphae) & pityrosporum orbiculare (yeast)
- Site: trunk
- Lesions: asymptomatic (no itch), well-demarcated patches
    - Yellowish-brown (in white skin)
    - Hypo-pigmented (in dark skin)

Management:

- Wood's lamp (coppery-orange fluorescence)
- Scraping: KOH, culture
- Topical imidazole (nizoral)

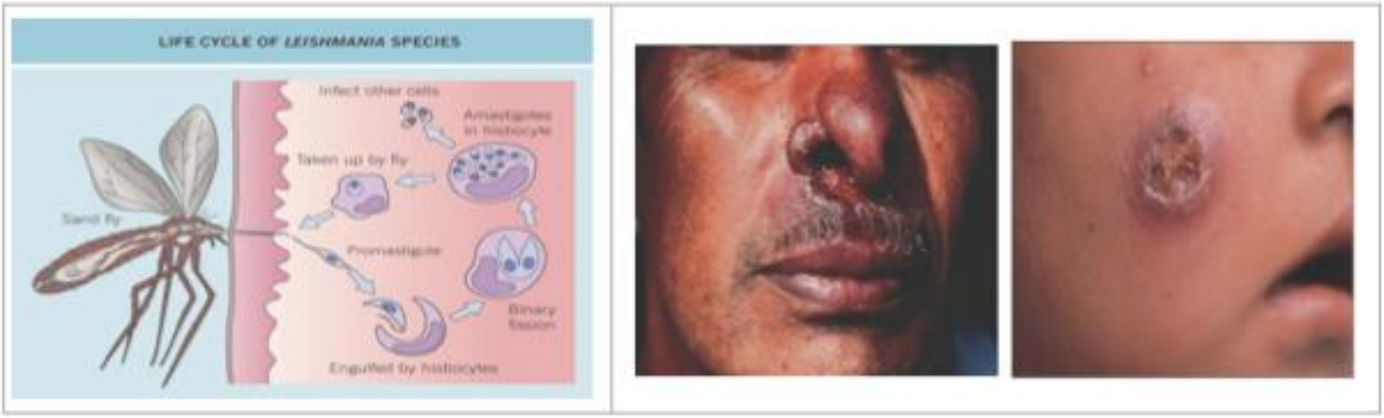
## Protozoal infections and infestation

# Leshmaniasis (protozoal infection)

- Transmission: sand fly
- Site: exposed areas e.g. face, legs
- Lesion: painful papule/nodule > ulcer (deep with elevated borders) > scar

Management:

- Leishmanin test, biopsy (Lieshman-Donovan bodies)
- Pentavalent antimony local injection
- Systemic pentavalent antimony
- Cryotherapy



# Scabies (infestation)

- Causative agent: mite “sarcoptes scabei”
- Sites: finger webs, flexor of the wrist, axillae, areolae,umbilicus, lower abdomen.
- Lesion:
    - Linear burrow (primary lesion)
    - Secondary lesion: small urticarial crusted papules, eczematous plaques, excoriations (immune reaction)
    - Severe and persistent itch
    - Worse after bathing and at night
    - Secondary infection (pustule, crust)

Management:

- India ink or gentian violet then removed by alcohol to identify the burrows
- A drop of mineral oil on the lesion then scraped away with a surgical blade
- Demonstration of the mite under the microscope
- Treatment of family members and contact even if asymptomatic
- Washing clothing and bed linen
- Permethrin 5% cream (1st line)
- Lindane (gamma benzene hexachloride)
- Crotamiton cream for 5 days
- Sulfur preparation

# Pediculosis (infestation)

- Head louse (pediculus humanus var capitis) Common in school children
- Severe itching of the scalp
- differentiate from dandruff by vibration test > nits are firmly attached to hair, unlike dandruff)

Management:

- Examination of other family members and treated simultaneously (IF symptomatic)
- Identification of the nit or adult head louse
- Combing with a metal nit comb (nits are not affected by topical Rx)
- Permethrin cream/shampoo 1% and 5% for 10 min then rinsed off
- Malathion 0.5% lotion

# MCQs

1- The initial symptom suggestion of herpes zoster is:
a) Dermatomal ulceration
b) Fever
c) Headache
d) Lymphadenopathy
e) Pain in dermatological distribution

2- Leishmaniasis is transmitted by:-
a) Food.
b) Mosquito.
c) Dust.
d) Flea.
e) Sand fly.

3- 18 years old male presented to the dermatology clinic complaining of asymptomatic rash for few weeks over his trunk. On examination, there were multiple brownish hyperpigmented scaly patches over his upper chest and back.
What is the quickest test to prove diagnosis?

a) Skin scrapping for KOH and microscopy
b) Direct immunofluorescence test
c) Patch Test.
d) Tzanck Smear

ANS > e , e , a