Common skin infection

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- PART 1: LECTURE
- Bacterial:

  Impetigo, Erysipelas, Cellulitis, Furuncle, Carbuncle, Folliculitis ,Erythrasma
- Viral:

  Warts, Molluscum contagiosum, H.simplex, H.zoster
- Fungal:

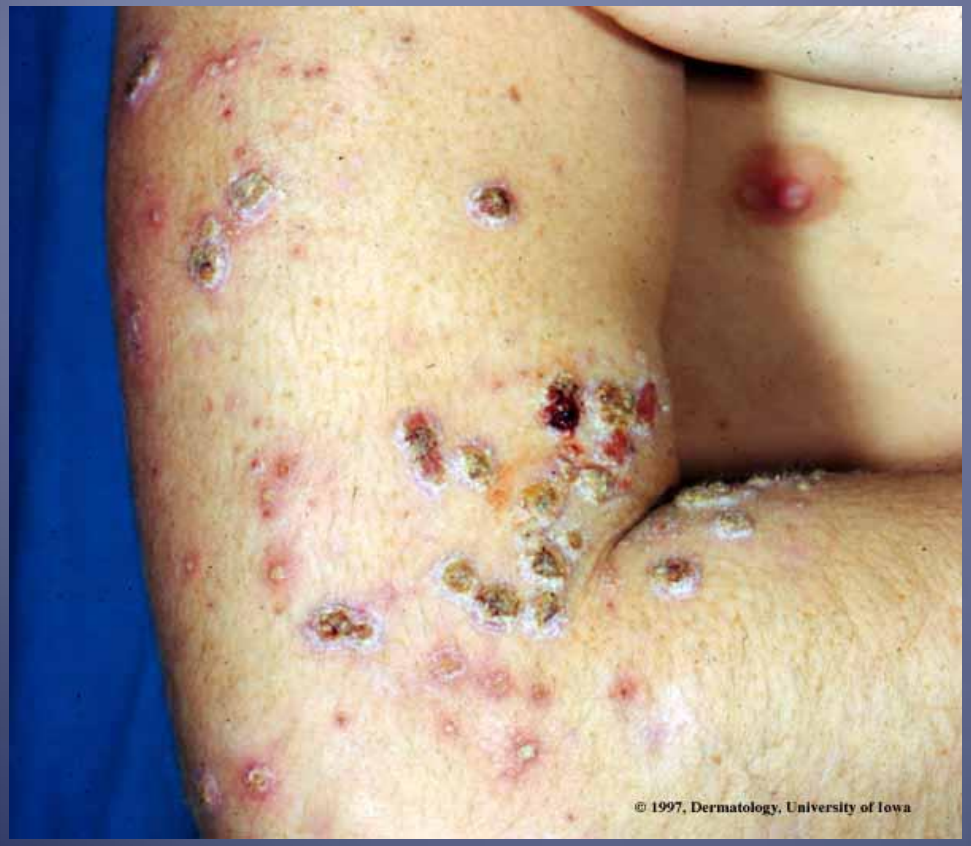
  Candida, Dermatophyte inf., Pityriasis versicolor
- Protozoal: Leishmaniasis
- Infestations:

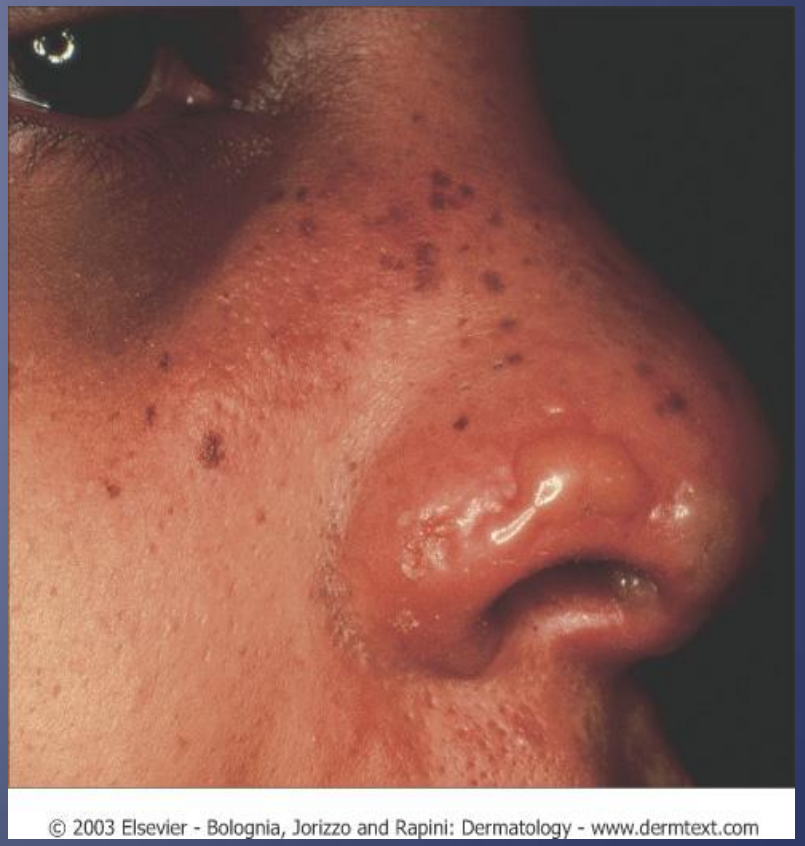
  Scabies, Pediculosis capitis
- PART 2: CLINICAL CASES & DISCUSION

Bacterial

Impetigo

- Acute superficial cut. Inf.
- Staph, gp A strept or both
- Children, Adult





Bullous Impetigo

Due to staph aureus. Phage group II

New born and old children

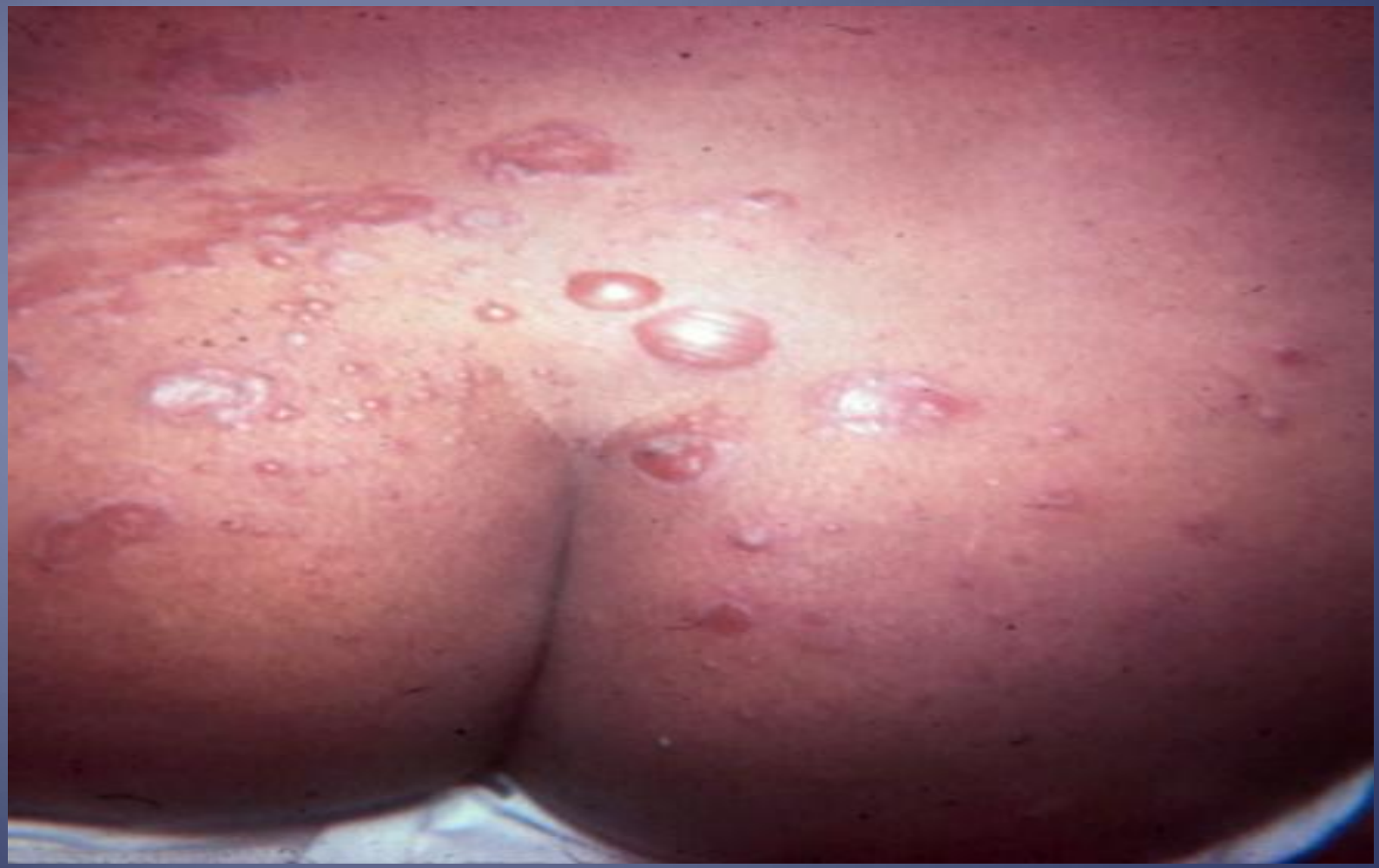
Face, hands

Bullae(thin,fragile) on grossly normal skin

Staphylococcus aureus:

Found on normal skin

Associated with nasal or perianal carriage



Non Bullous

more common form

Due to S.A ,Strept pyogenes(GABHS),both

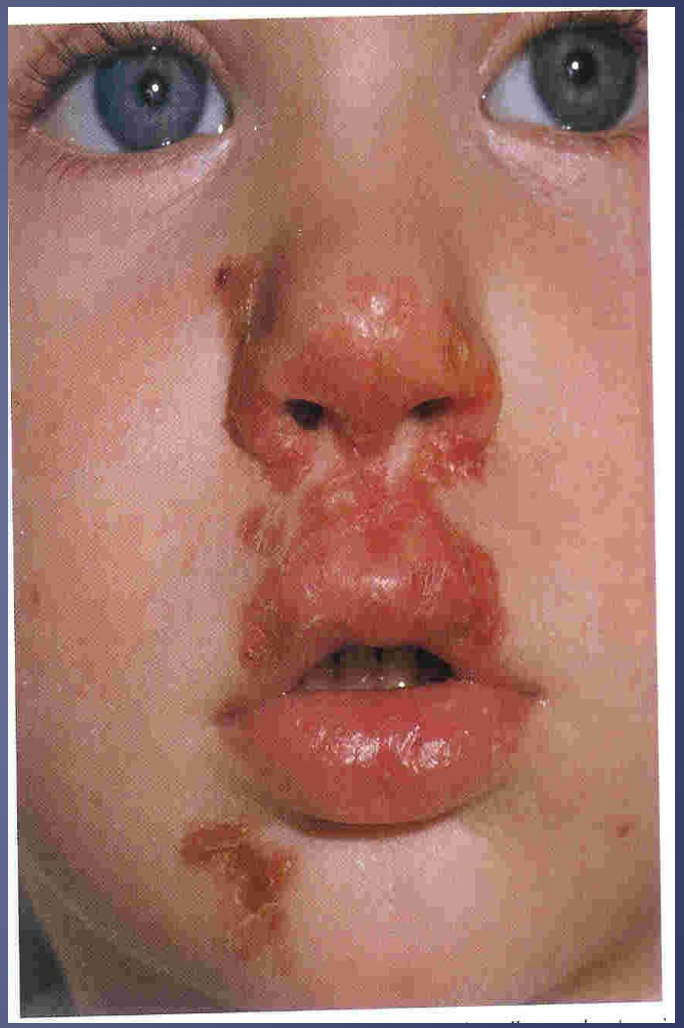
ransient vesicles or pustules later

golden yellow crust

Predisposing factors:-

Warm, humid climate,

poor hygiene, trauma, insect bites and immunosuppression.



Prognosis:

Scarring is unusual, but postinflammatory hyperpigmentation or hypopigmentation

Complications:

APSGN:

- Follows strept. infection (impetigo)> URTI
- Latent period : 10 days if associated with pharyngitis, 3 weeks if associated with pyoderma
- Nephritogenic pyoderma associated strains 49,55,57, 59
- Rare

Mx:

Swab :Gram, stain show gram positive cocci

Culture

Remove crust

Localized:Topical Abx (bactroban)

Severe , bullous or Strept (prevent post strept. Glomerulonephritis):

1st generation cephalosporin

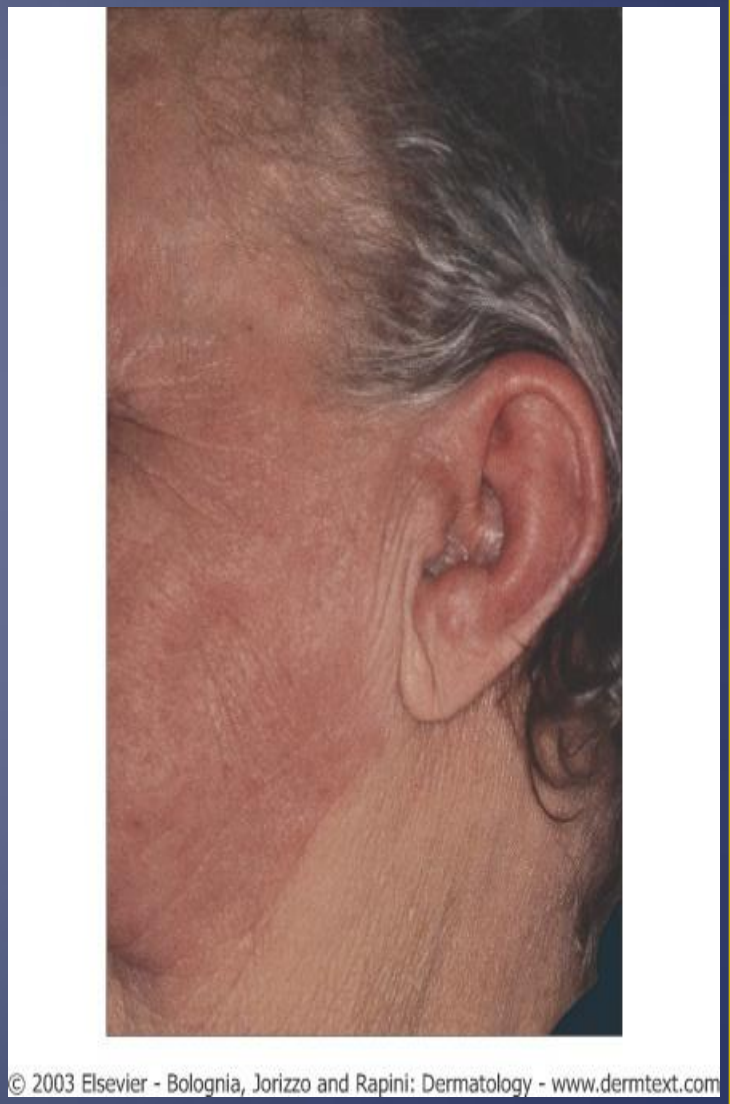
semisynthetic Penicillin

7-10 d

Erysipelas

- Superficial infection with marked lymphatics involvement.

- Sharply demarcated unilateral, red oedematous.
- infants, young children, & elderly patients (most commonly)
- Face, leg
- Beta hemolytic gp A Strept.
- Minor abrasion / lymphatic dysfuncion - sup. Lymph vessels
- Leucocytosis & fever



Mx

Smear for gram stain and culture (fluid, blood)

Cold compressor

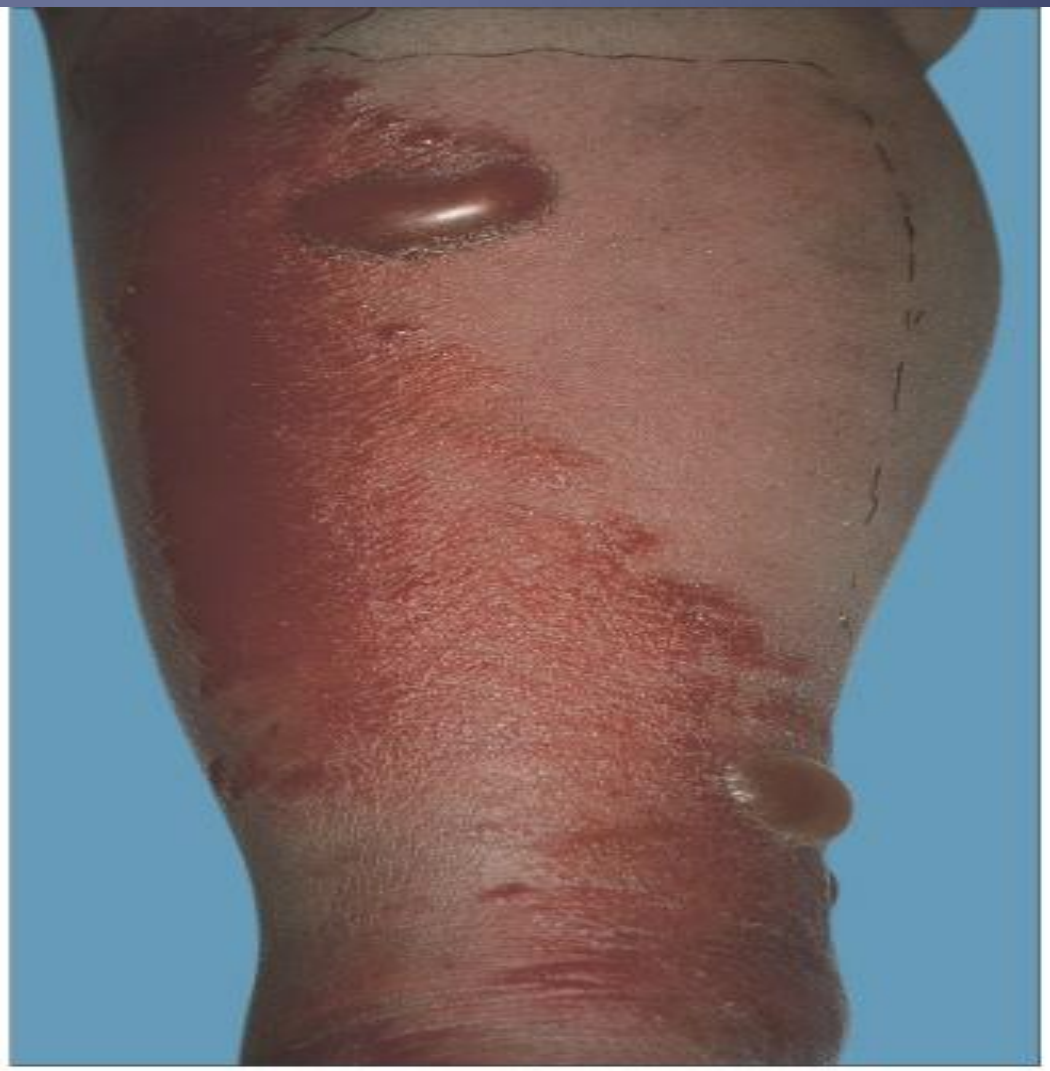
Oral anti biotics or I.V. for severe infection

Oral penicillin for 10 days

Erythromycin

Cellulitis

- Deeper involvement of the SC
- Raised, hot, tender, erythematous(leg)
- Strept. Pyogenes, staph.aureus
- Cut , abrasion or ulcer
- Palpable, tender LN
- Fever, leucocytosis
- Risk factors:
- DM, HTN, obesity, immunodef,venous stasis.
- Complicated by lymphedema if recurrent



Mx

Swab + blood culture

acetaminophen

IV penicillinase-resistant penicillins

1st generation cephalosporin

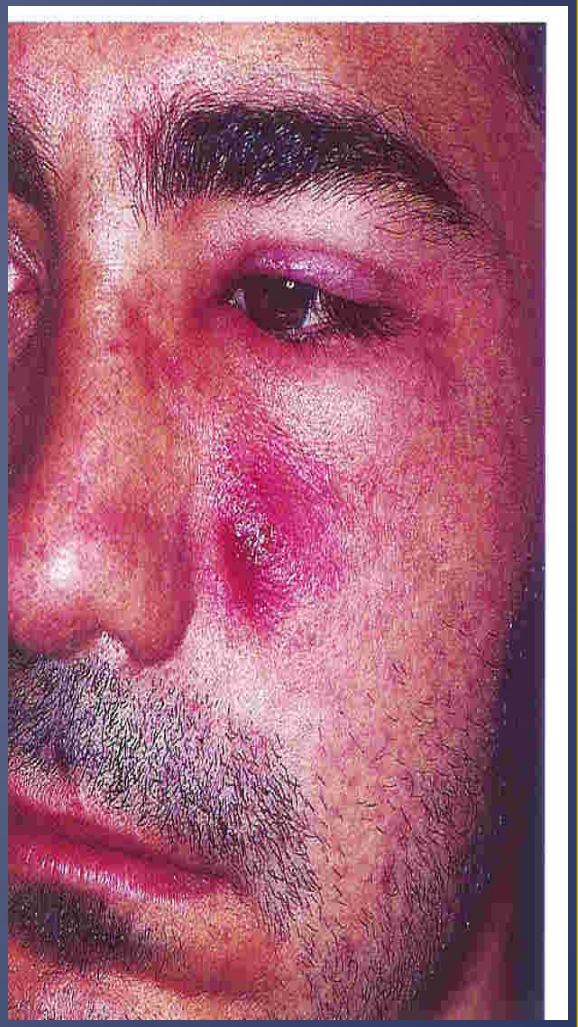
Furuncle (boil)

- Inflammation of deep portions of hair follicle
- Deep seated nodule about hair follicle

S. aurius

MX

- Swab : Culture and GS
- Antibacterial soap
- Antistaph antibiotics



Carbuncle

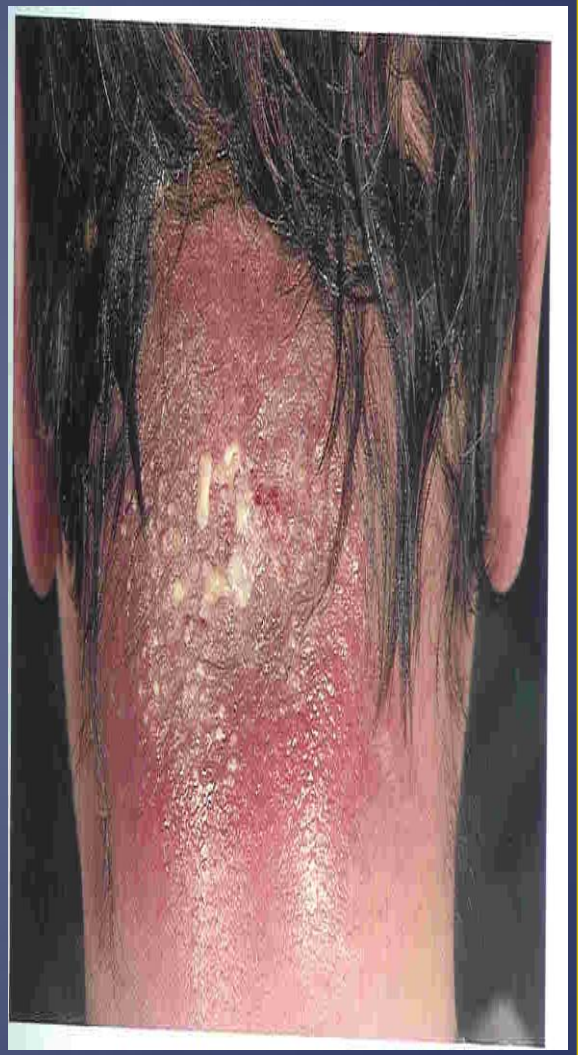
Infection of multiple hair follicles

- Larger more deep seated
- Drainage through multiple points in the skin
- S. Aureus

Mx

-Swab : Culture and GS

- Screen for carrier state
- Antistaph antibiotics

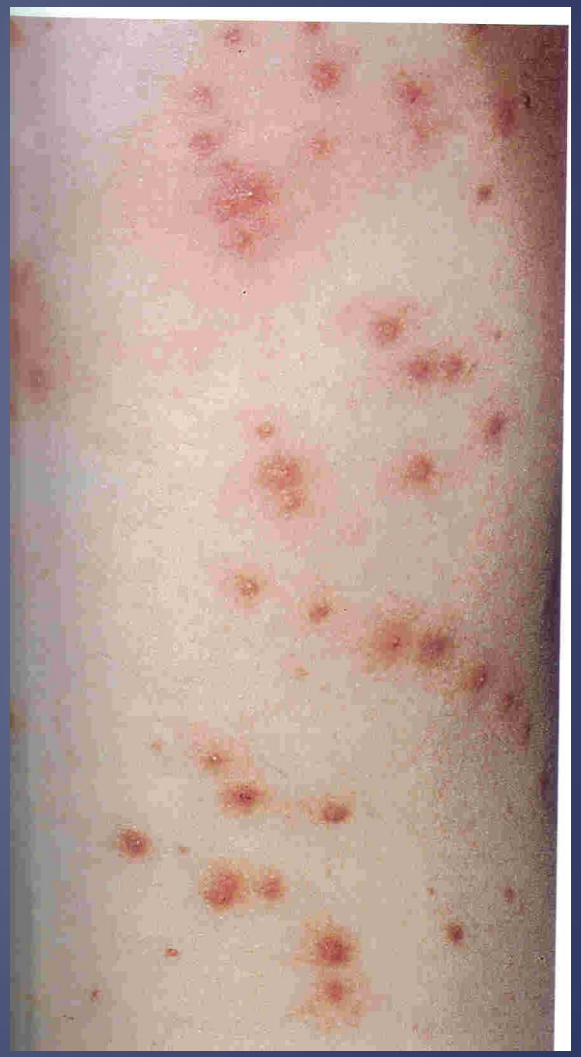


Folliculitis

- Inflammation of hair follicle
- S. aureus

face, scalp, thighs, axilla, & inguinal area.

- multiple small papules / pustule on an erythematous base
- Heals without scarring



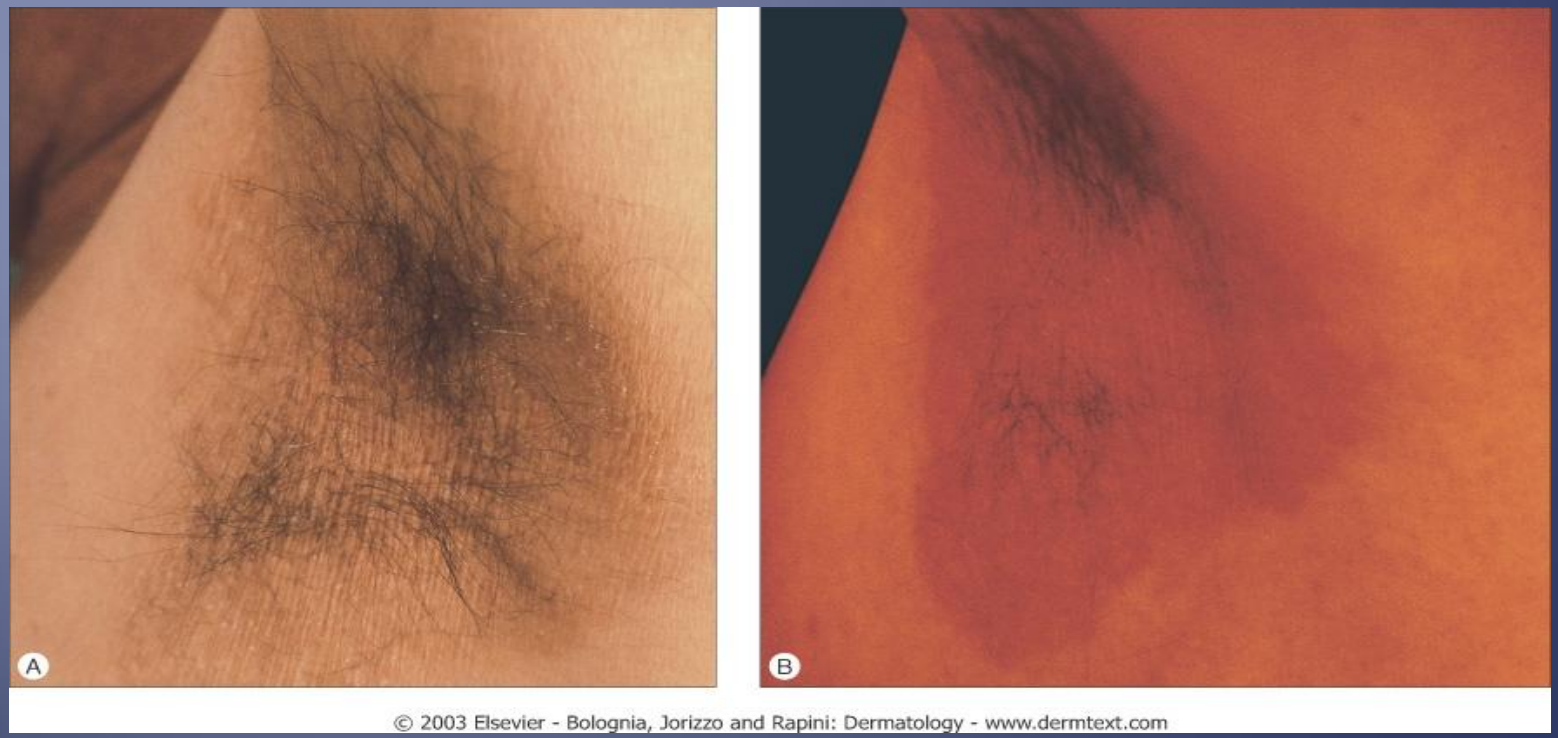
Mx

Swab: culture, gram stain

- Antibacterial soap
- Topical and systemic Abx

Erythrasma

- Corynebacterium minutissimum
- Red, brown, asymptomatic, flexoral



RISK FACTORS:

Excessive sweating,Obesity,DM, immunocompromised states

Mx

Swab

wood's lamp: coral-red fluorescence

Topical: imidazoles (miconazole) or erythromycin

Oral erythromycin X 7 d

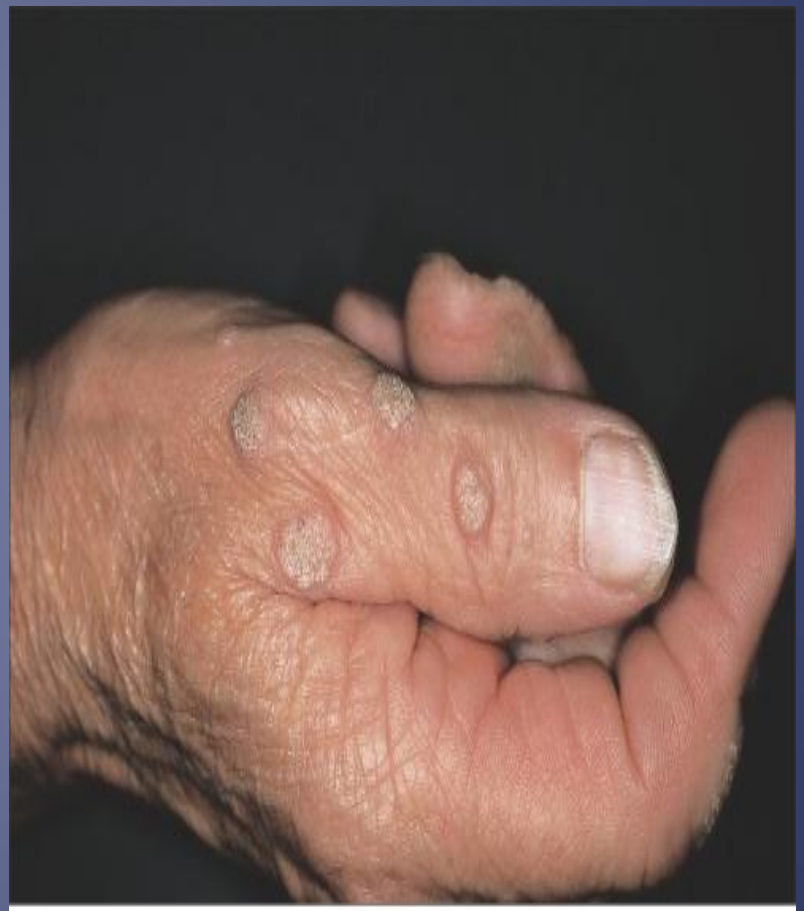
Viral

Warts

HPV (DNA)

Common wart:

- Hand
- Children
- Koebner phenomenon

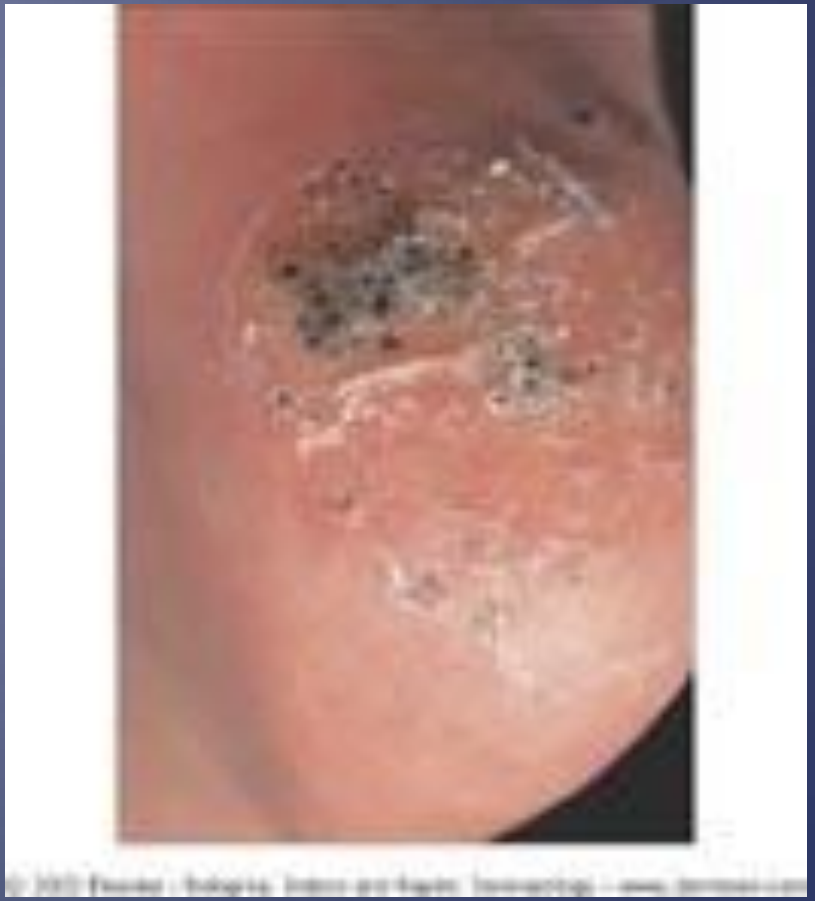


Plane warts :

Face, back of hands

Plantar wart:

sole ,painful



Mx :

Involute spontaneously

Cryotherapy

Topical: SA, TCA

Electrocautary, curettage

Laser

Genital wart:

- Most common STD
- Condylomata accuminata
- Cauliflower like
- Penile, vulvar skin, mm, perianal area
- Sexual partner
- Child--- ?sexual abuse
- oncogenic:16, 18

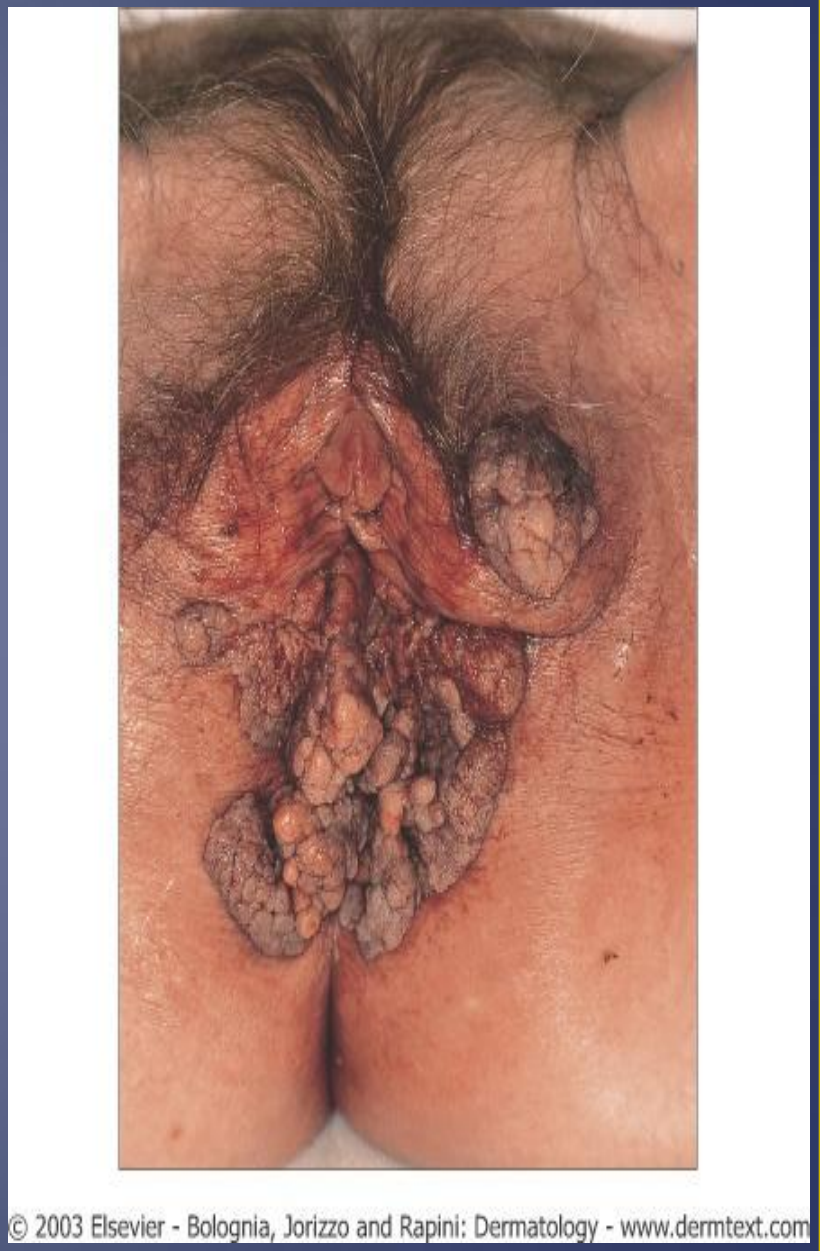


Table 79.2 Management of anogenital warts with grading of recommendations. Grading of recommendation: (1), based on randomized, controlled trials of good quality and consistency; (2), well-conducted clinical studies but no randomized clinical trials[67].

MANAGEMENT OF ANOGENITAL WARTS WITH GRADING OF RECOMMENDATIONS
Cytotoxic agent
• Podophyllotoxin 0.5% solution, 0.15% cream (1)
Physical destruction
• Cryotherapy (liquid nitrogen, cryoprobe) (1) • Trichloroacetic acid (TCA) 80–90% solution (1) • Electrosurgery (1) • Scissors excision (1) • Laser vaporization (2)
Immunomodulatory
• Imiquimod 5% cream (1)

Table 79.1 Clinical manifestations and associated HPV types.

CLINICAL MANIFESTATIONS AND ASSOCIATED HPV TYPES		
	Frequently detected	**Less frequently detected**
Skin lesions		
• Common, palmar, plantar, myrmecial and mosaic warts	1, 2, 4	26, 27, 29, 41, 57, 60, 63, 65
• Flat warts	3, 10	28, 29
• Butcher's warts	7, 2	1, 3, 4, 10, 28
• Digital squamous cell carcinoma and Bowen's disease	16	34, 35
• Epidermodysplasia verruciformis (EV)	3, 5, 8	9, 12, 14, 15, 17, 19–25, 36–38, 46, 47, 49, 50, etc.
• EV – squamous cell carcinoma	5	8, 14, 17, 20, 47
Mucosal lesions		
• Condylomata acuminata	6, 11	42–44, 54, 55, 70
• High-grade intraepithelial neoplasias (including cervical condylomata plana, bowenoid papulosis, erythroplasia of Queyrat)	16	18, 31, 33–35, 39, 40, 51–59, 61, 62
• Buschke–Löwenstein tumor	6, 11	
• Recurrent respiratory papillomatosis, conjunctival papillomas	6, 11	
• Heck's disease (focal epithelial hyperplasia)	13, 32	

Molluscum contagiosum

- Pox virus
- Children
- Face, neck
- Central punctum (umbilication)
- H/P: Hunderson-patterson bodies

Mx:

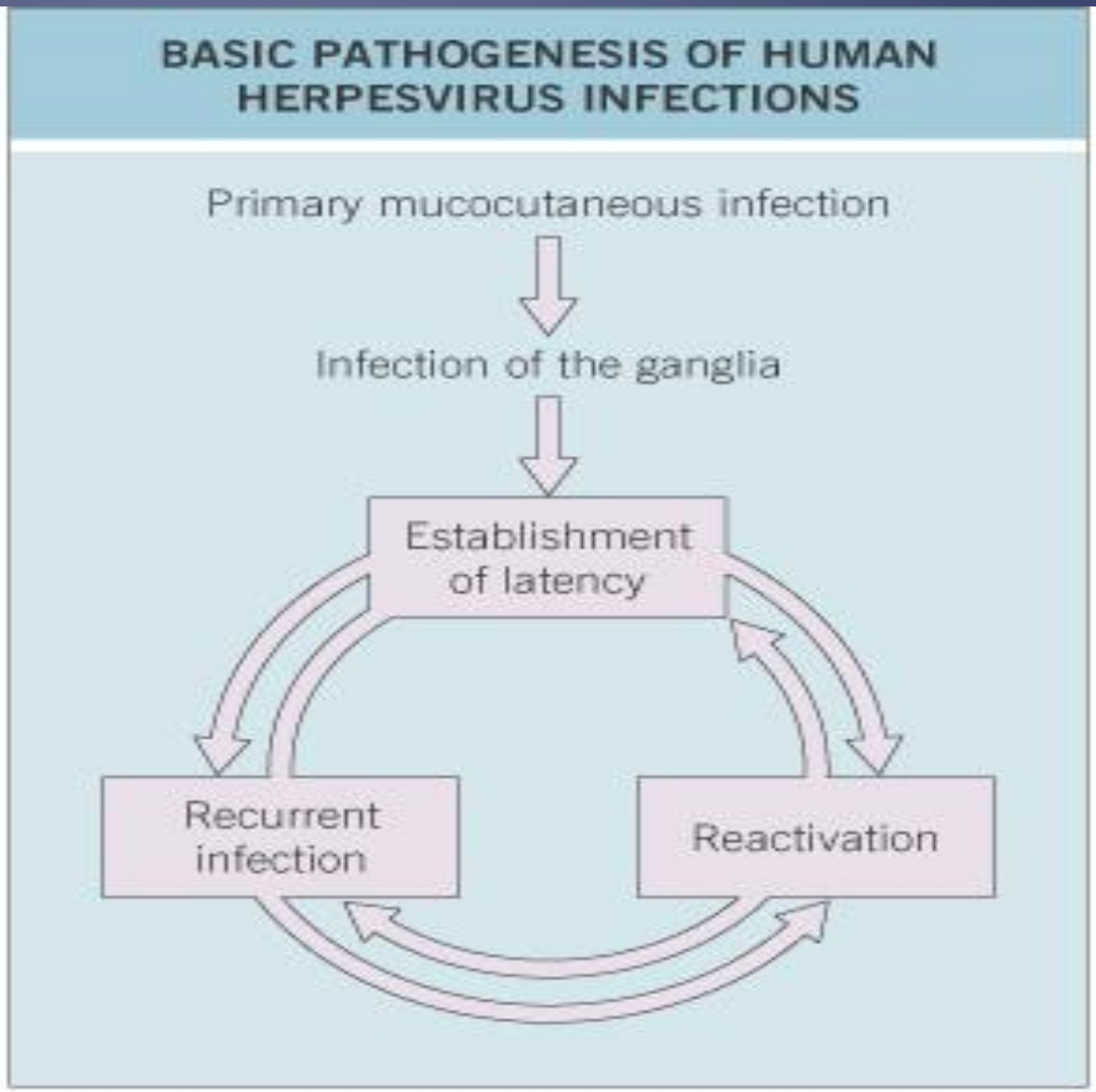
Involute spontaneously

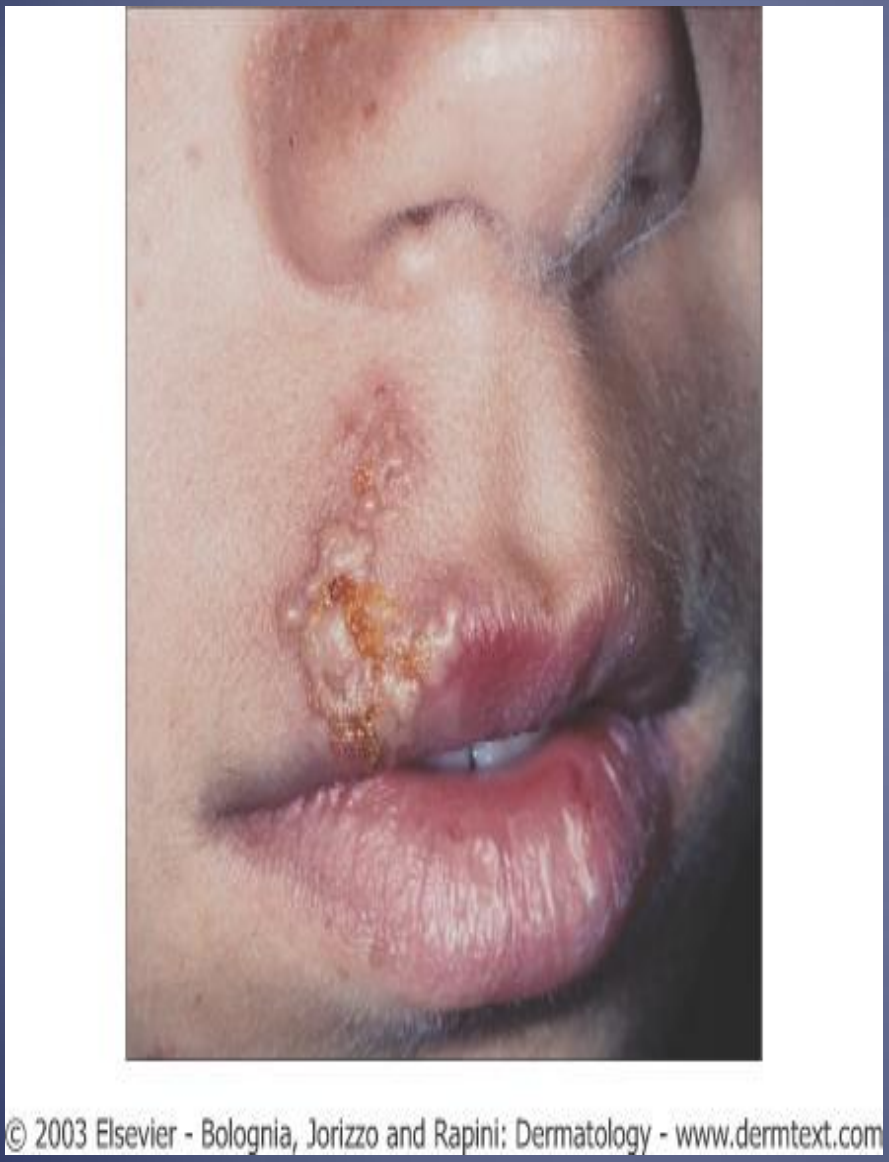
curettage, cryotherapy

Herpes simplex

- Group of small blister
- HSV-1(H. labialis)
- HSV-2(genital herpes)
- Herpetic whitlow
- Eczema herpeticum:

Infection with HSV in patients with previous skin disease (eg: atopic dermatitis, pemphigus, burns)

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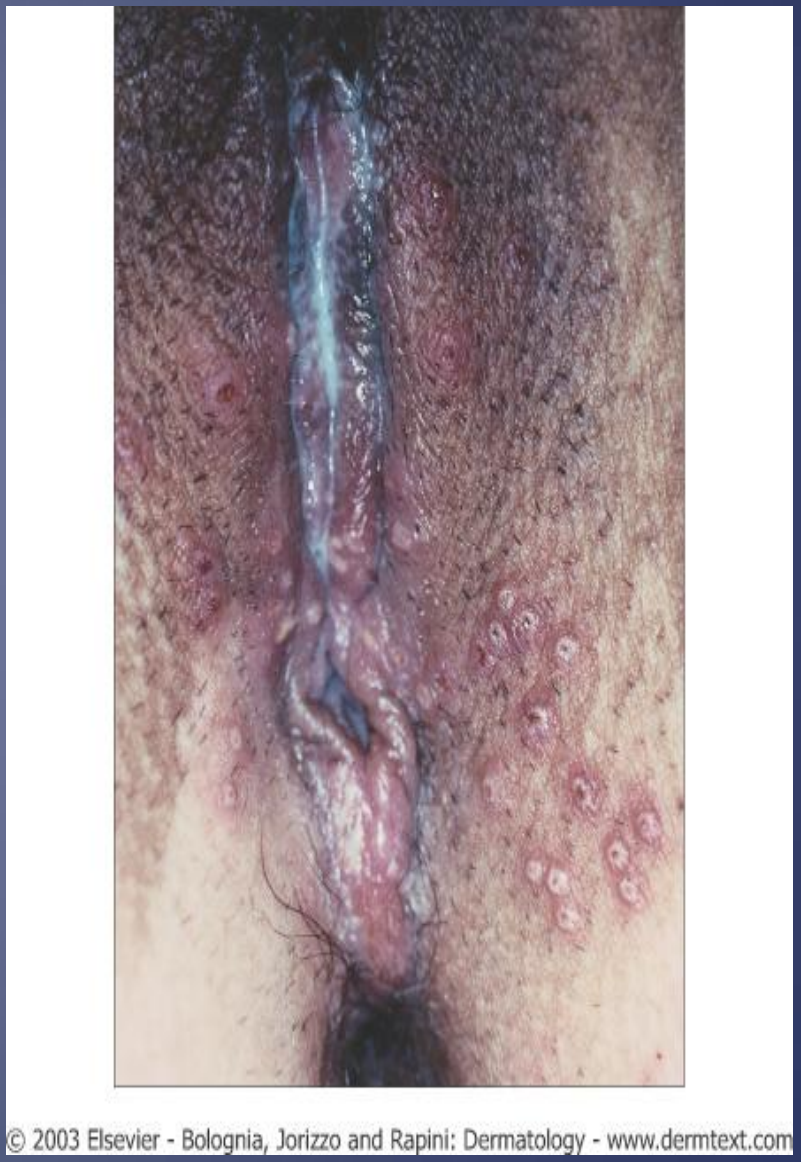
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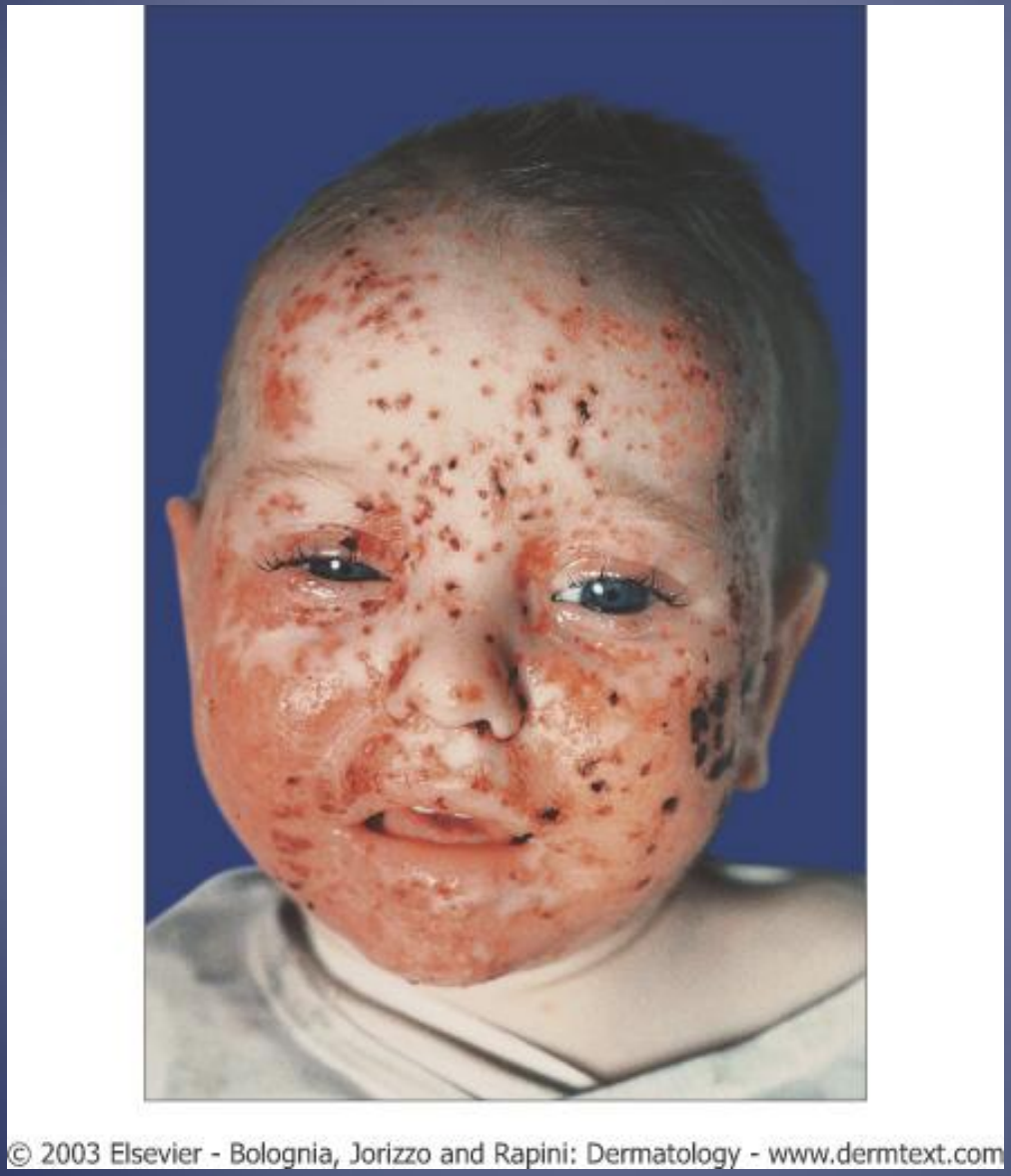
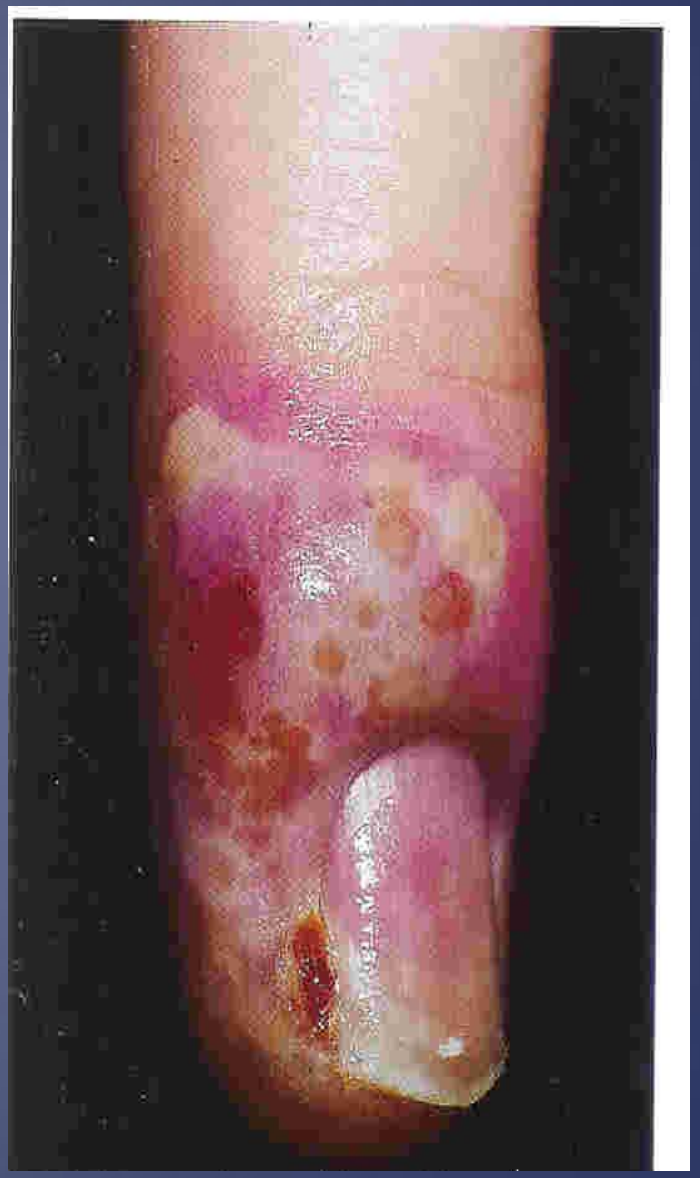




Mx:

Tzanck Smear---viral particles

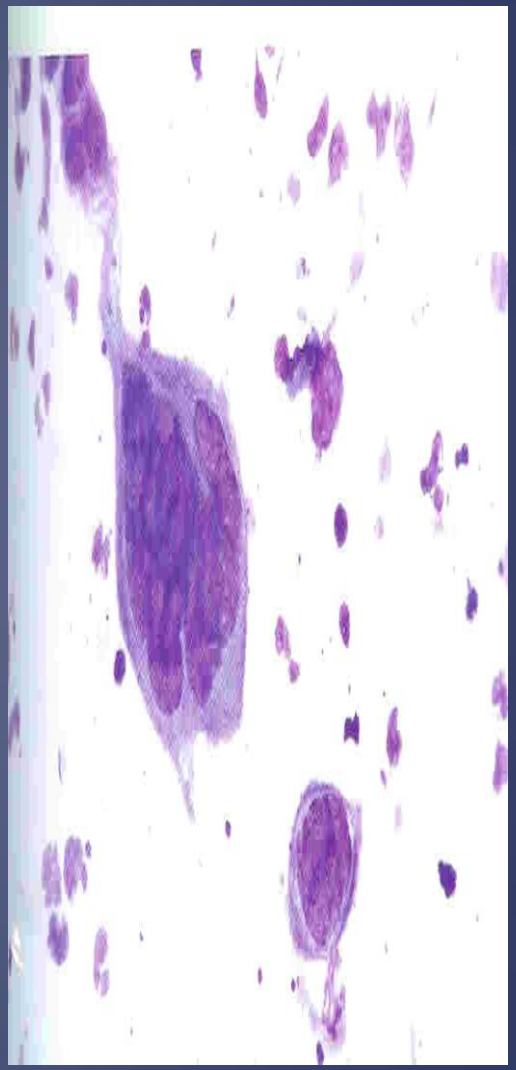
Serology (1gG, 1gM) antibodies

Direct fluorescent antibody(DFA)

Viral culture- most definitive

Oral / I V acyclovir

Genital, Recurrent, immune suppressed, neonatal, Ecz.H.



Herpes zoster

- *Chickenpox virus*
- Adult
- Prodromal pain—dermatomal (blisters)—post-herpetic neuralgia

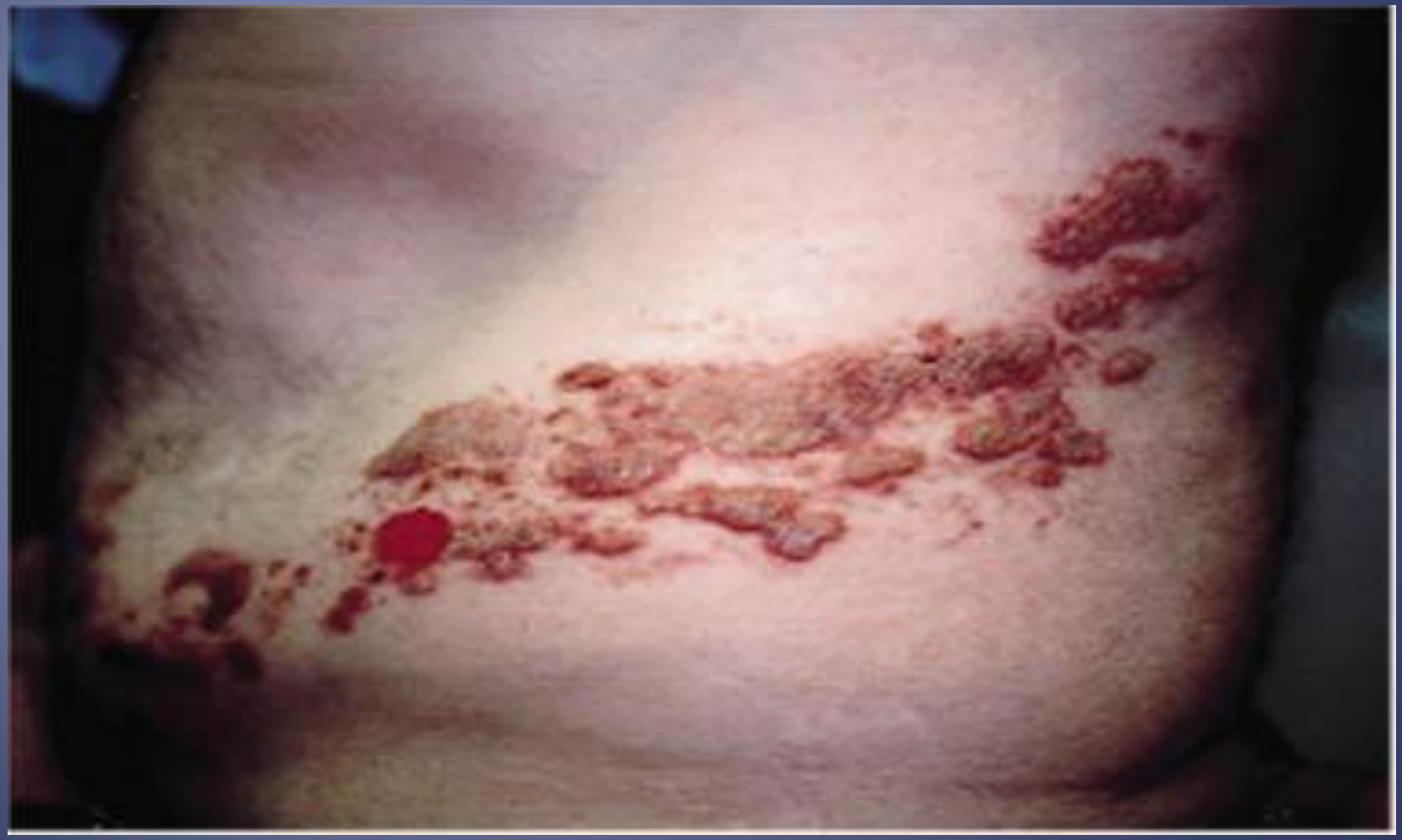
Mx:

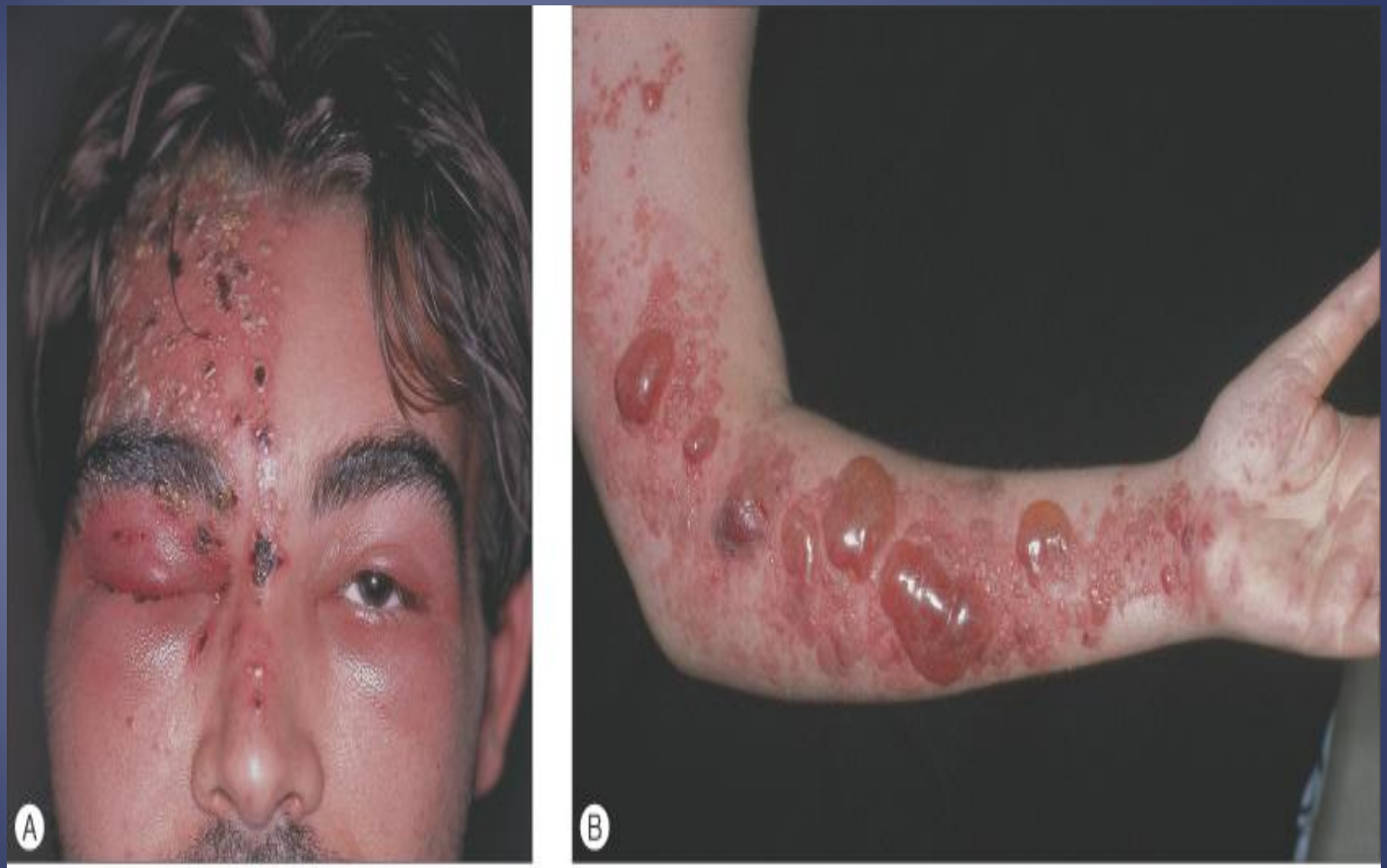
Tzanck Smear---viral particles

Direct fluorescent antibody(DFA)

Analgesia, drying agent

Acyclovir: immune suppressed, wide spread





Fungal

Superficial mycosis

Deep mycosis

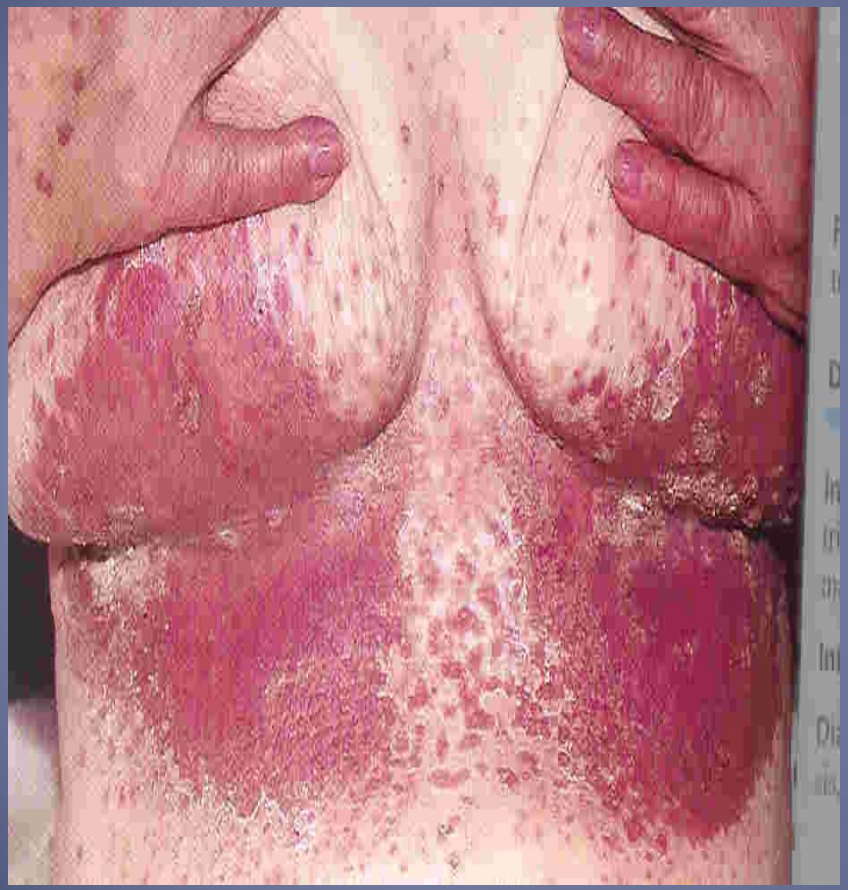
Table 77.2 Superficial mycoses of the skin.

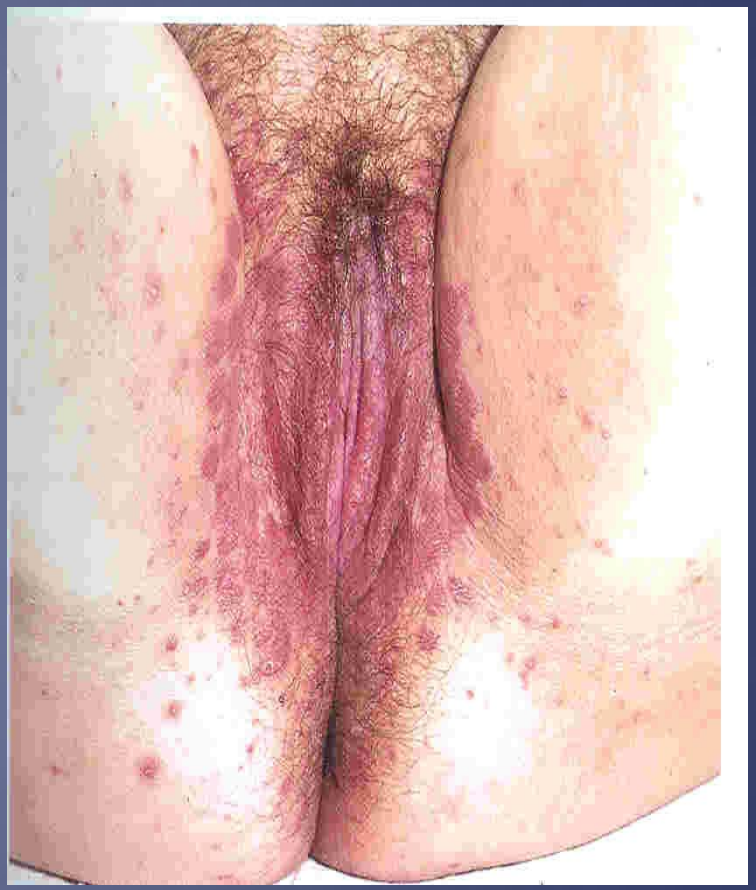
SUPERfiCIAL MYCOSES OF THE SKIN		
	Cutaneous disorder	**Pathogen(s)**
Minimal, if any, inflammation	Pityriasis (tinea) versicolor	*Malassezia furfur* (*Pityrosporum ovale*)
	Tinea nigra	*Exophiala werneckii*
	Black piedra	*Piedraia hortae*
	White piedra	*Trichosporon beigelii*
Inflammatory response common	Tinea capitis, barbae, faciei, corporis, cruris, manuum, pedis	*Trichophyton, Microsporum, Epidermophyton* spp.
	Cutaneous candidiasis	*Candida albicans*

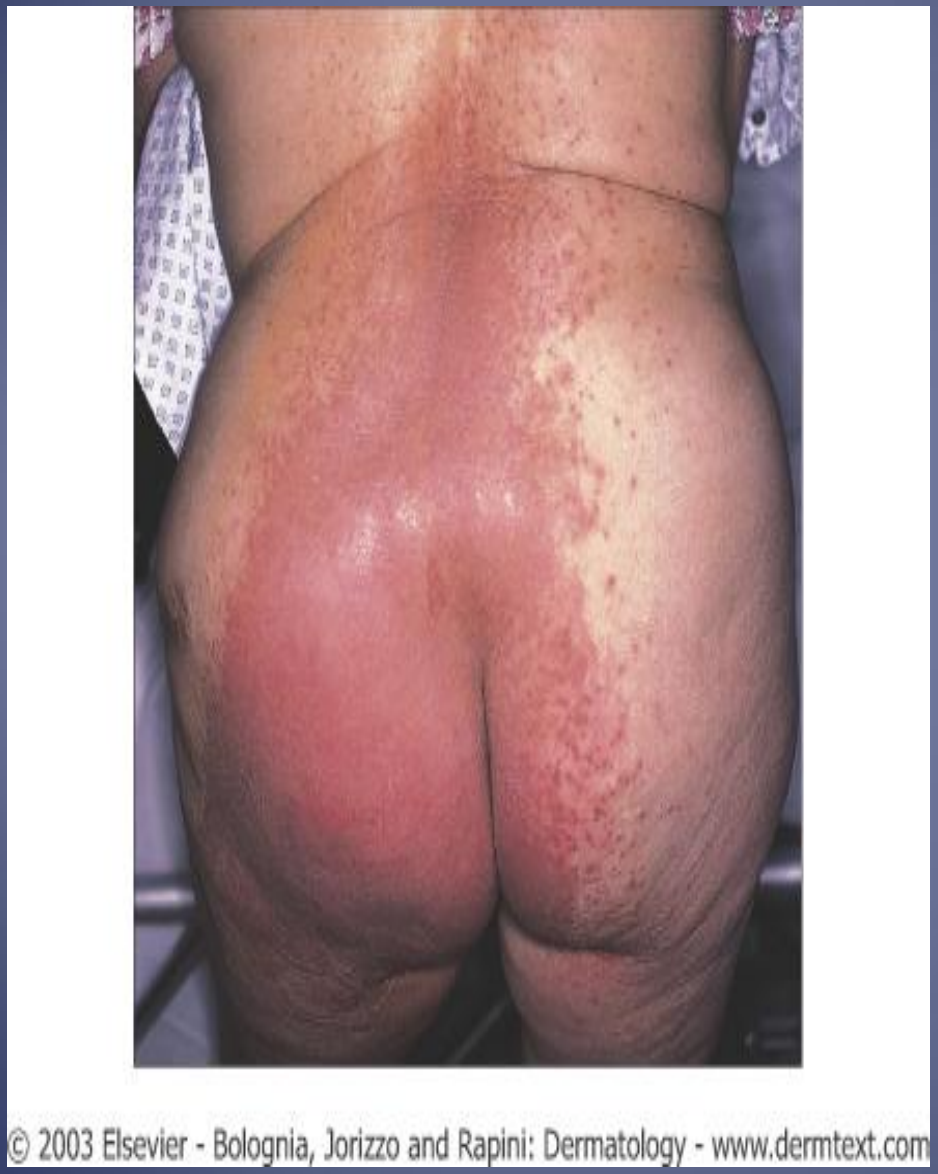
Candidiasis

Candida albican (normal commensal of GIT)

- Napkin candidosis & Intertrigo (satellite lesions)
- Paronychia
- mm---oral,urogenital and oesophagus.
- Vulvovaginitis---irritation, discharge
- *Candida* folliculitis
- Generalized Systemic inf
- Chronic mucocutaneous candidiasis



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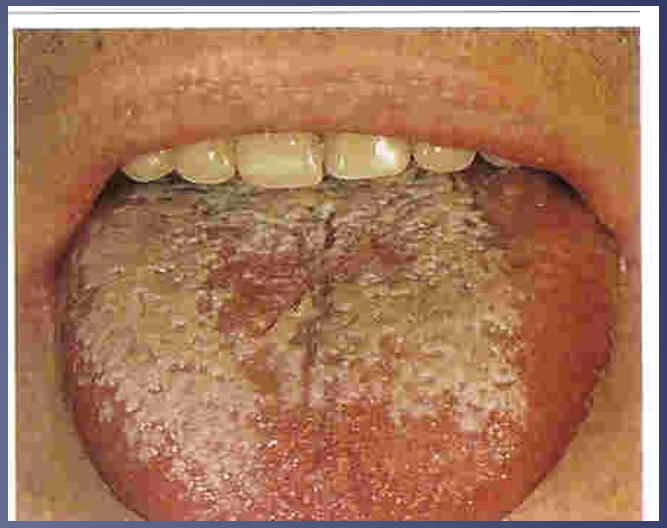
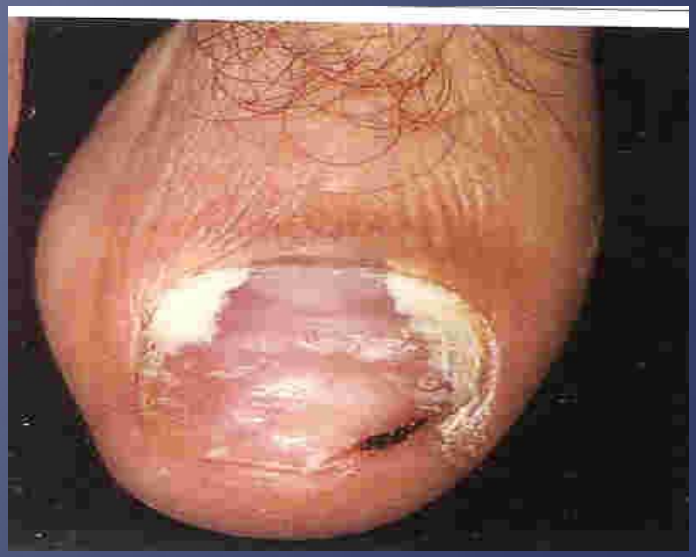




Mx:

Swab and KOH

Alter moist warm environment

Nystatin-containing cream

Imidazole (Daktarin, canastein)

Oral antifungal (itraconazole): immune suppressed, persistent infection

Dermatophyte infection

- Skin
- Hair
- Nails

Tinea pedis

Adult (athlete's)

Toe webs , instep

T. rubrum, T. mentagrophytes

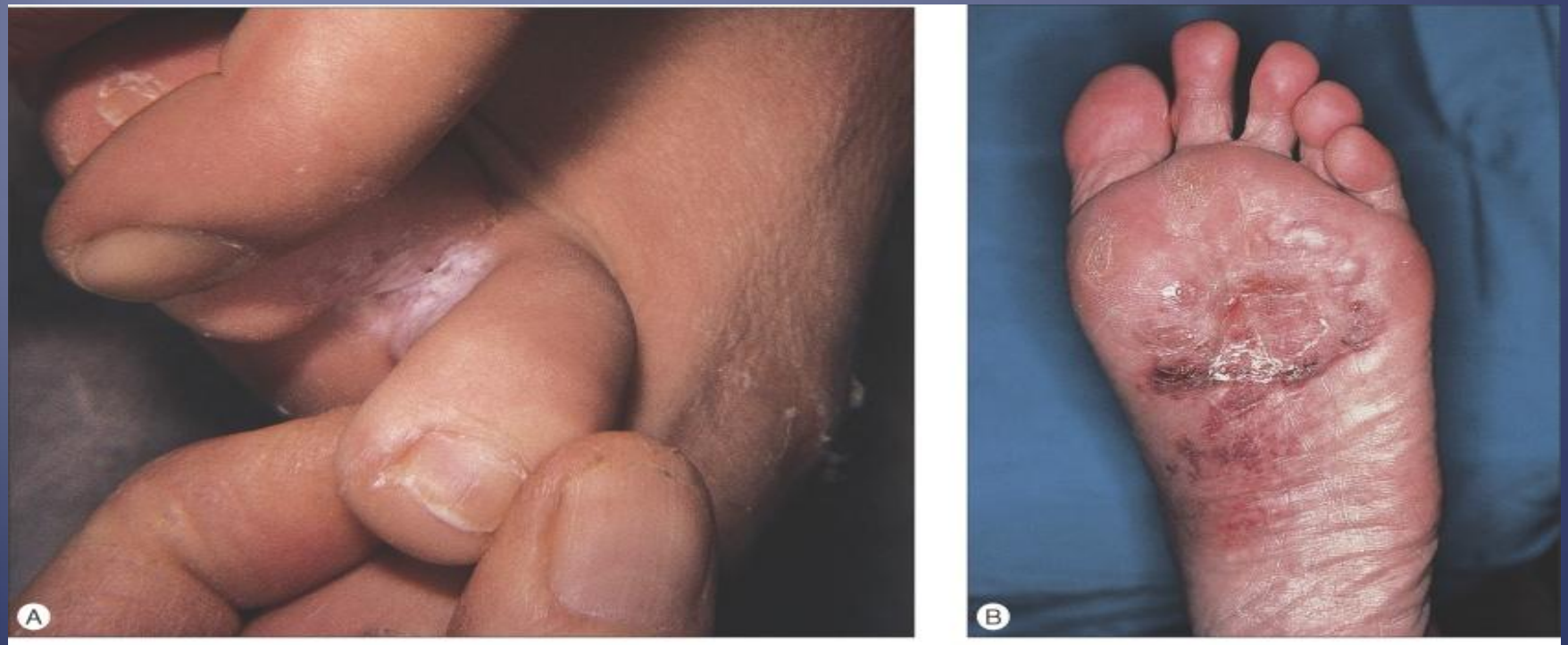


Table 77.9 The four major types of 'tinea pedis' (including dematiaceous and dermatomycoses).
*Because of the thickness of stratum corneum on plantar surfaces and the inability of *T. rubrum* to elicit an immune response sufficient to eliminate the fungus[16]. ‡Often *Pseudomonas*, *Proteus* or *Staphylococcus aureus*. †Allergic reaction to fungal elements presenting as a dyshidrotic-like eruption on the fingers and palms (culture-negative for fungus). CMI, cell-mediated immunity.

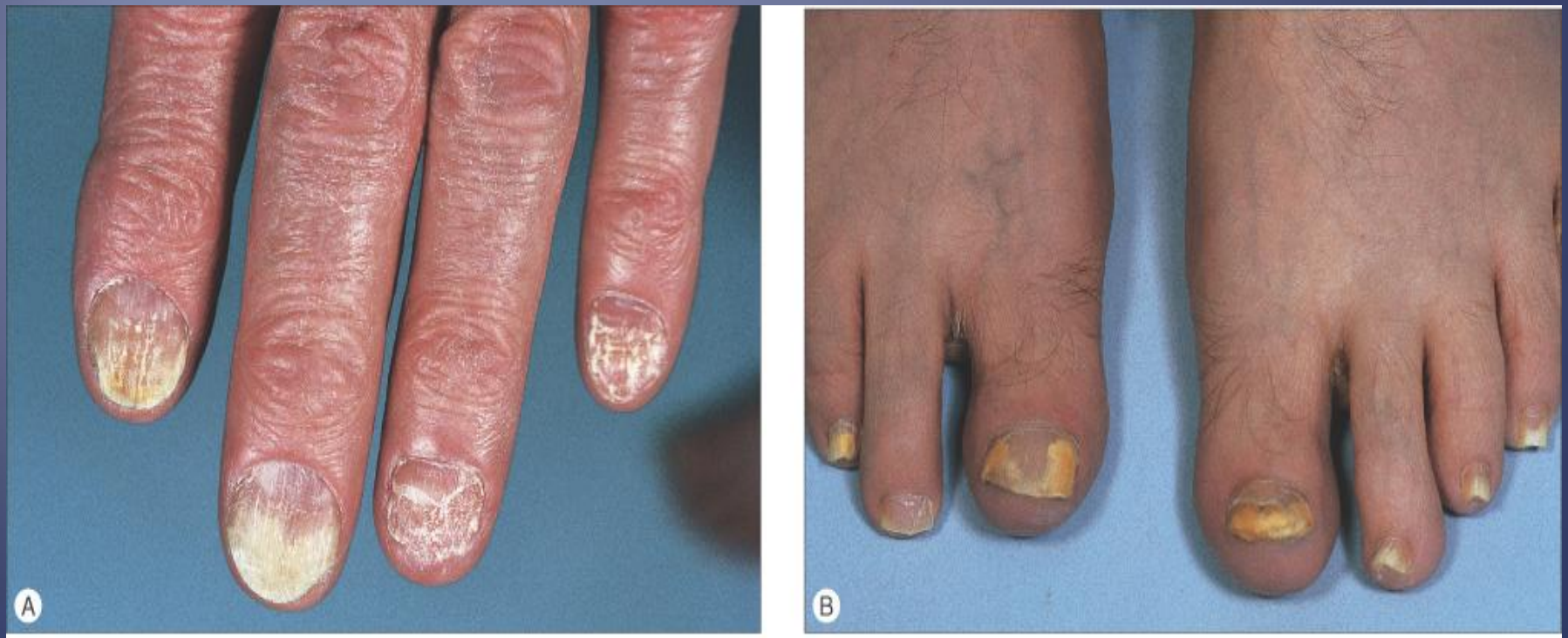
THE FOUR MAJOR TYPES OF 'TINEA PEDIS '(INCLUDING DEMATIACEOUS AND DERMATOMYCOSES)

Type	Causative organism	Clinical features	Treatment considerations
Moccasin	*T. rubrum* **E. floccosum** *S. hyalinum* *S. dimidiatum*	Diffuse hyperkeratosis, erythema, scaling, and fissures on one or both plantar surfaces; frequently chronic and difficult to cure*; may be associated with fungal CMI deficiency	Topical antifungal plus product with urea or lactic acid; may also require oral antifungal therapy
Interdigital	*T. mentagrophytes* (var. interdigitale) *T. rubrum* *E. floccosum* **S. hyalinum** *S. dimidiatum* *Candida* spp.	Most common type; erythema, scaling, fissures, and maceration occur in the web spaces; the two lateral web spaces are most commonly affected; associated with the 'dermatophytosis complex' (fungal infection followed by bacterial invasion‡); pruritus common; may extend to dorsum and sole of foot	Topical antifungal; may require topical or oral antibiotic if superimposed bacterial infection
Inflammatory (vesicular)	*T. mentagrophytes* (var. *mentagrophytes*)	Vesicles and bullae on the medial foot; associated with the dermatophytid reaction†	Topical antifungal usually sufficient
Ulcerative	*T. rubrum* *T. mentagrophytes* *E. floccosum*	Typically an exacerbation of interdigital tinea pedis; ulcers and erosions in the web spaces; commonly secondarily infected with bacteria; seen in immunocompromised and diabetic patients	Topical antifungal; may require topical or oral antibiotics if secondary bacterial infection

Dermatophytes *Non-dermatophytes*

T. ungum

T. rubrum, T. mentagrophytes

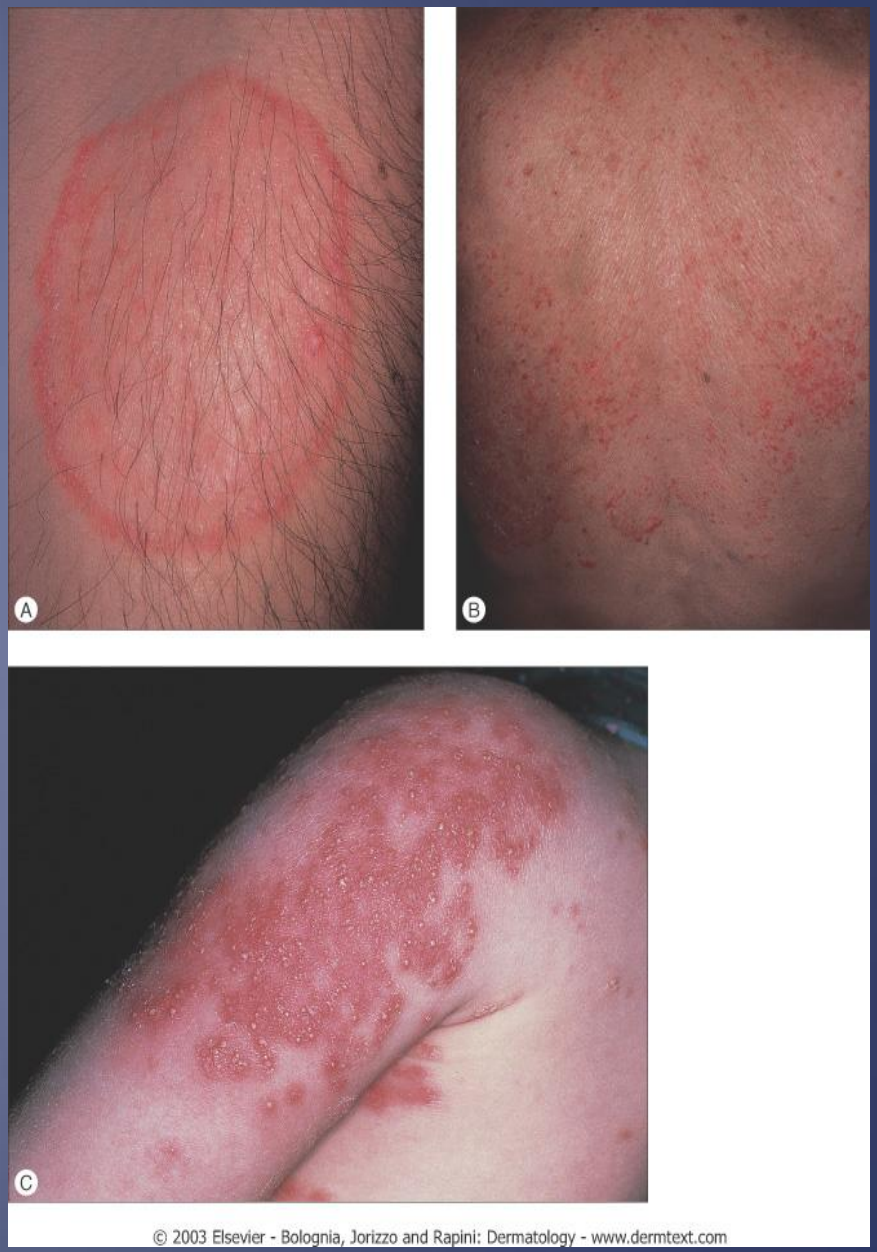


Tinea corporis:

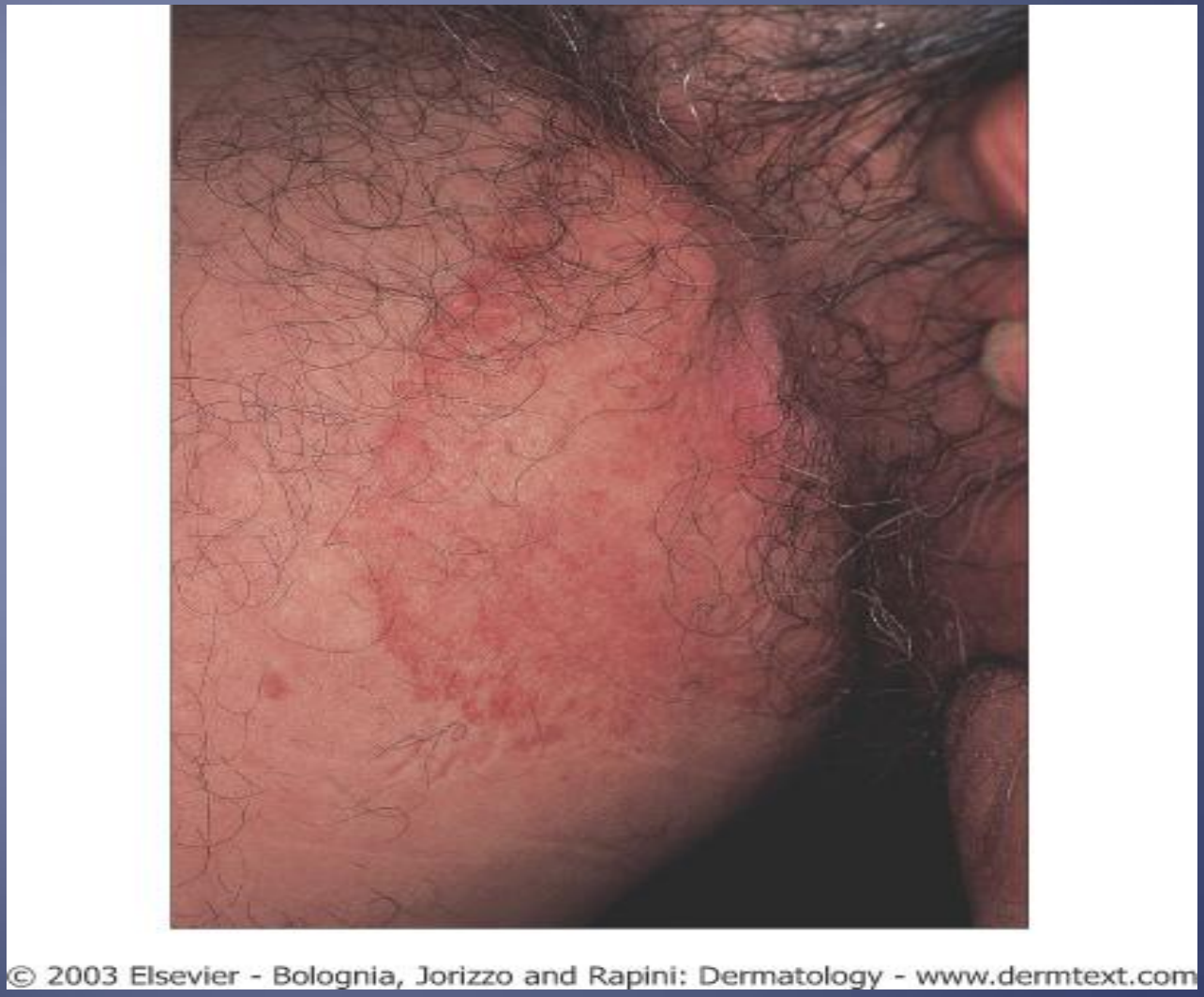
Trunk

Active edge

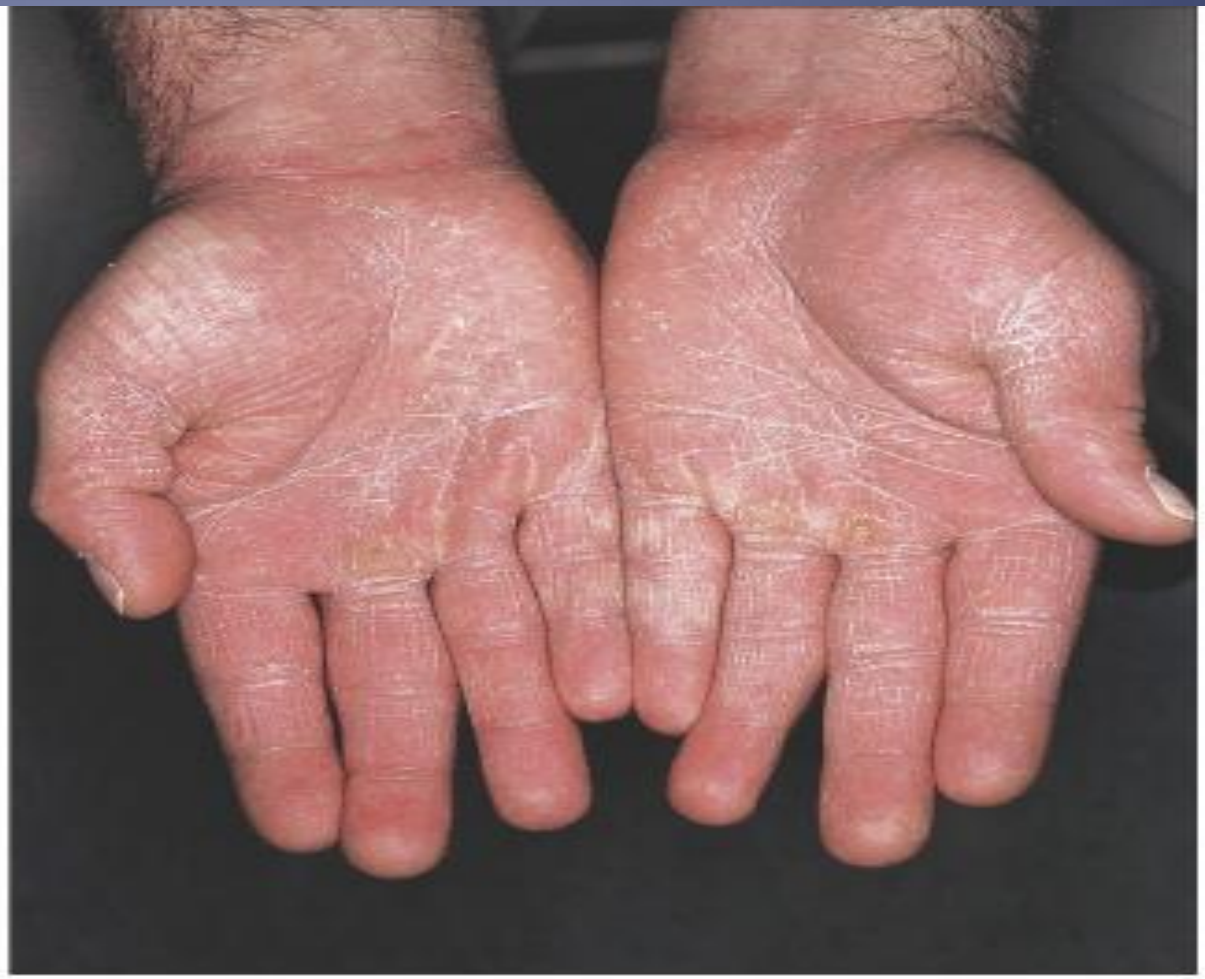
T. rubrum



T.cruris



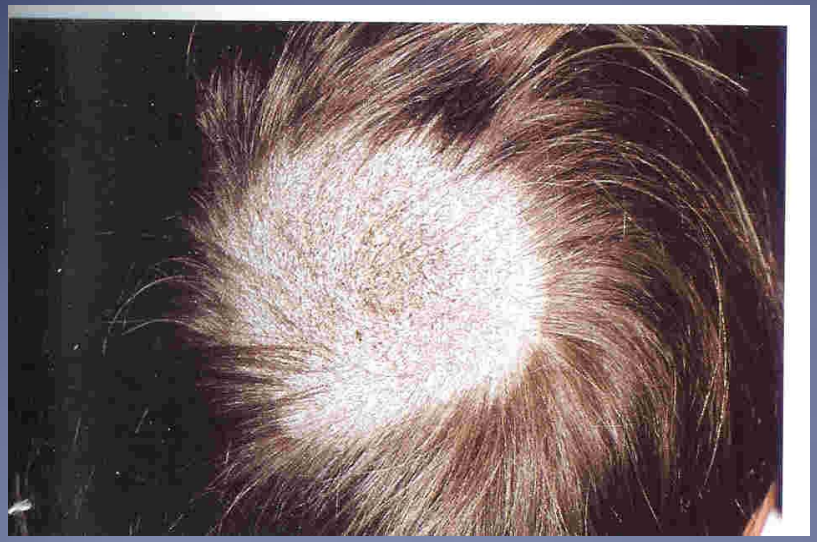
T.manun

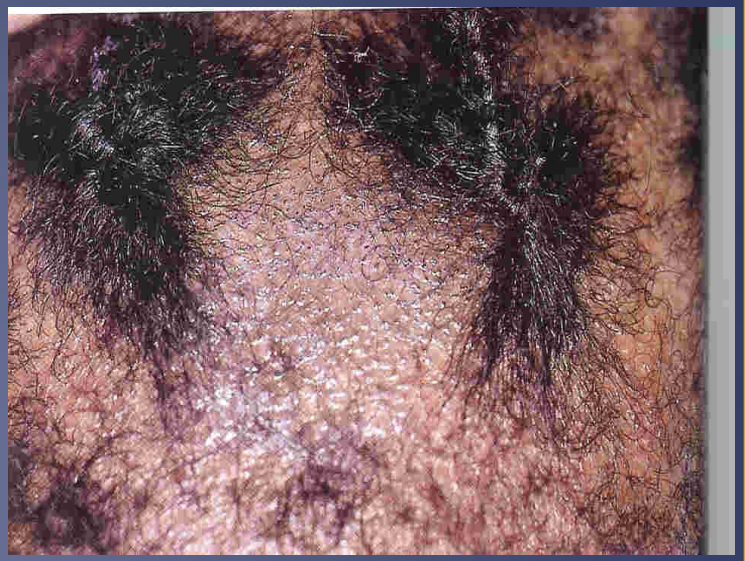


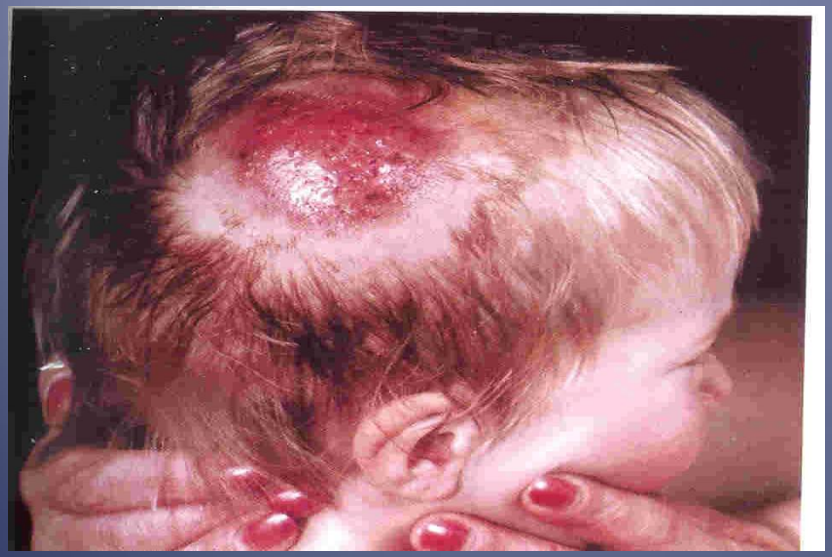
Tinea capitis

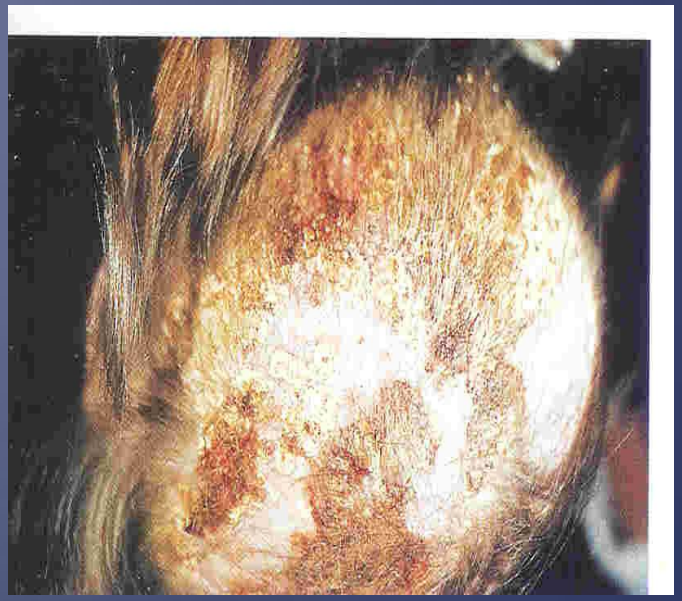
Well circumscribed pruritic scaling area of hair loss

- Black dot (T. tonsurans)
- Gray patch (M. audouinii),
- Kerion (T. verrucosum)
- Favus (T. schoenleinii)









Mx:

Education

Scraping, hair plug, nail clippings---KOH and culture

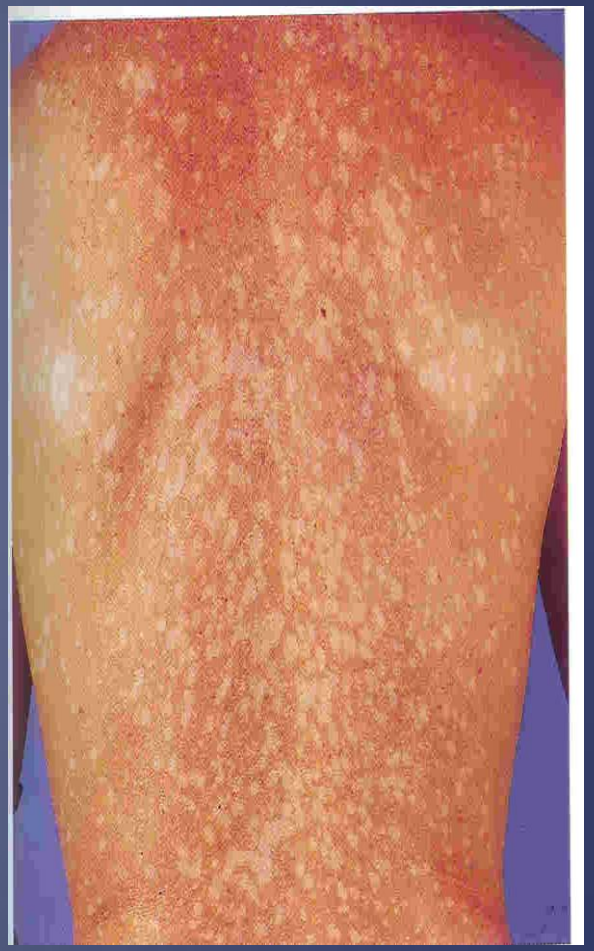
Wood's light ----

Topical (terbinafine, daktarin)

Oral (Griseofulvin, terbinafine, itraconazole): extensive, Hair, nail

Pityriasis versicolor

- *Malassezia furfur* (hyphea)
  Pityrosporum orbiculare (yeast)
- Trunk
- Asymptomatic
- Yellowish- brown(in white skin)
- Hypopigmented. (in dark skin)



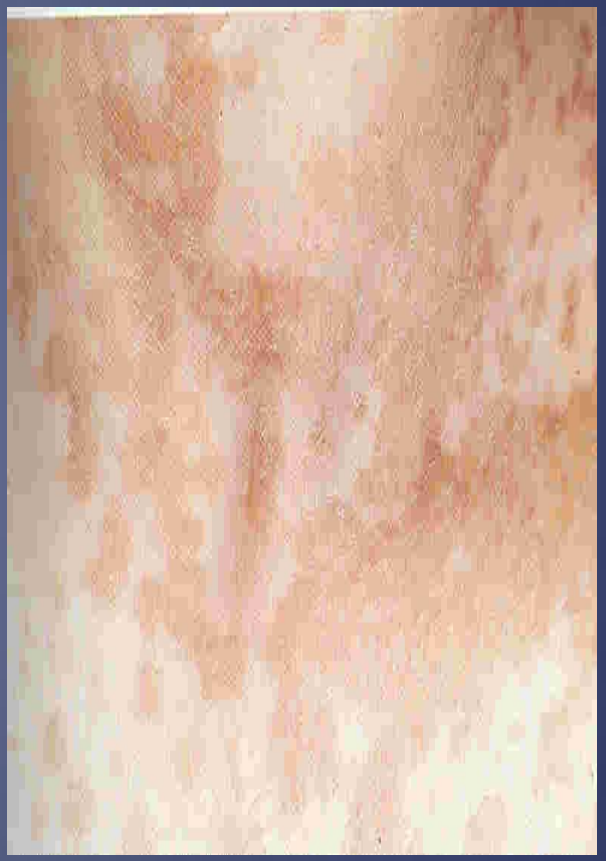
Mx:

Wood's lamp(coppery-orange fluorescence)

Scraping

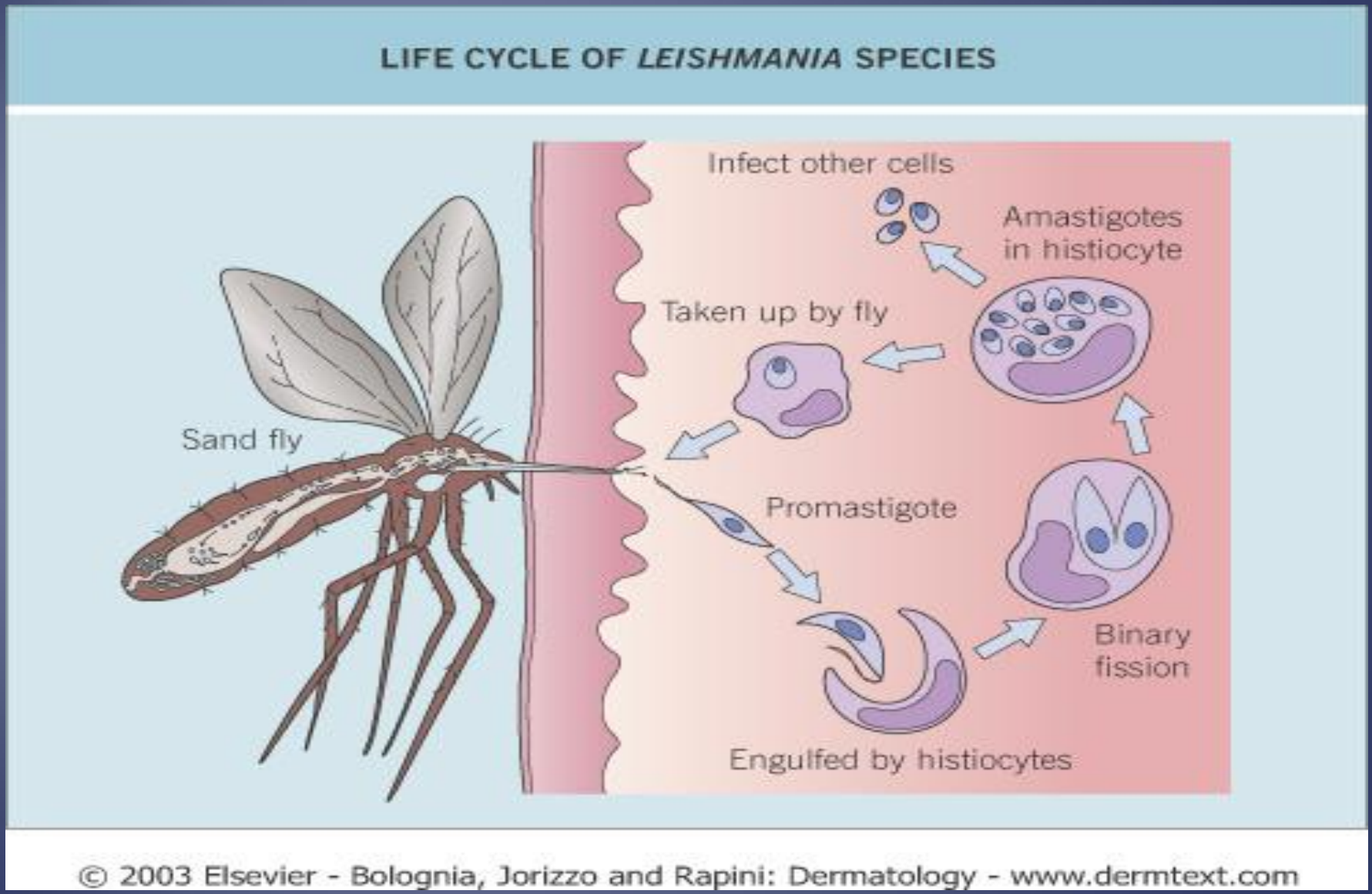
Topical imidazole (nizoral)

Recurrence

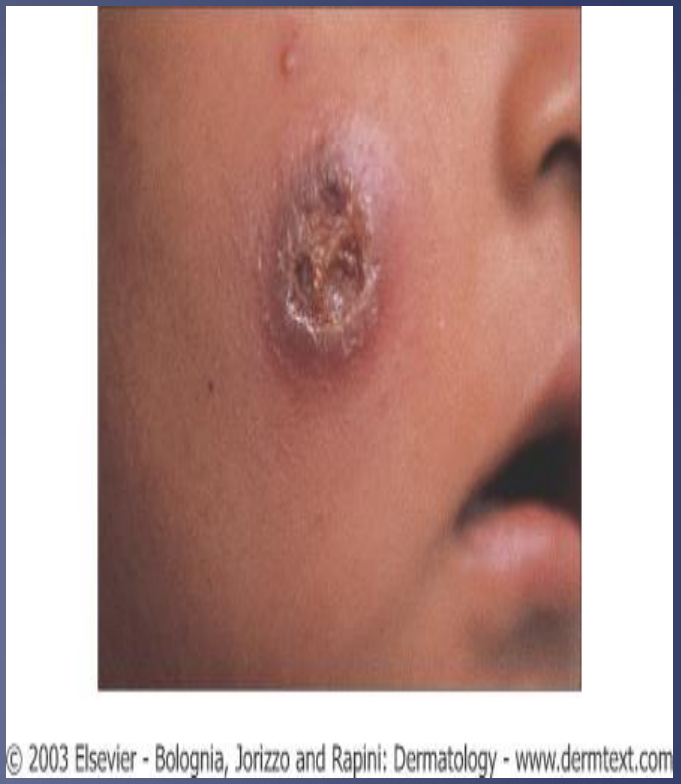


Protozoal

Leishmaniasis


LIFE CYCLE OF *LEISHMANIA* SPECIES
Infect other cells
Amastigotes in histiocyte
Taken up by fly
Sand fly
Promastigote
Binary fission
Engulfed by histiocytes
© 2003 Elsevier - Bolognia, Jorizzo and Rapini: Dermatology - www.dermtext.com

- Transmit: sand fly
- Painful papule/ nodule—ulcer-scar
- Exposed site



Mx:

Leishmanin test, Bx

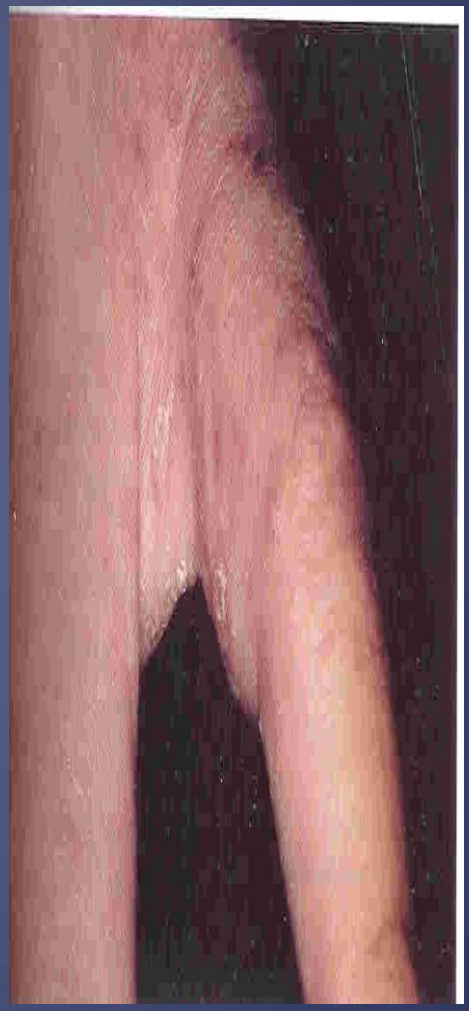
Pentavalnt antimony local injection

Systemic pentavalent antimony

Cryotherapy

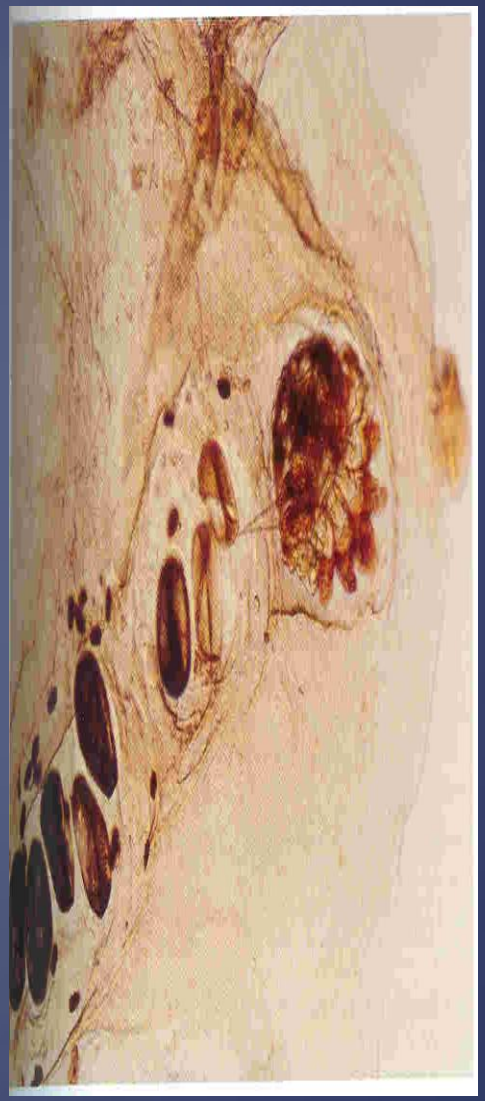
Scabies

- Mite: ***Sarcoptes scabei***
- Sever and persistent itch
- Worse after bathing and at night
- Sites: finger webs, flexor of the wrist, axillae, areolae, umbilicus, lower abdomen and scrotum
- Linear burrow
- 2nry infection(pustule crust)



Mx:

- 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
- Lindane(gamma benzene hexachloride)
- Crotamiton cream for 5 days
- Sulpher preparation

Pediculosis capitis

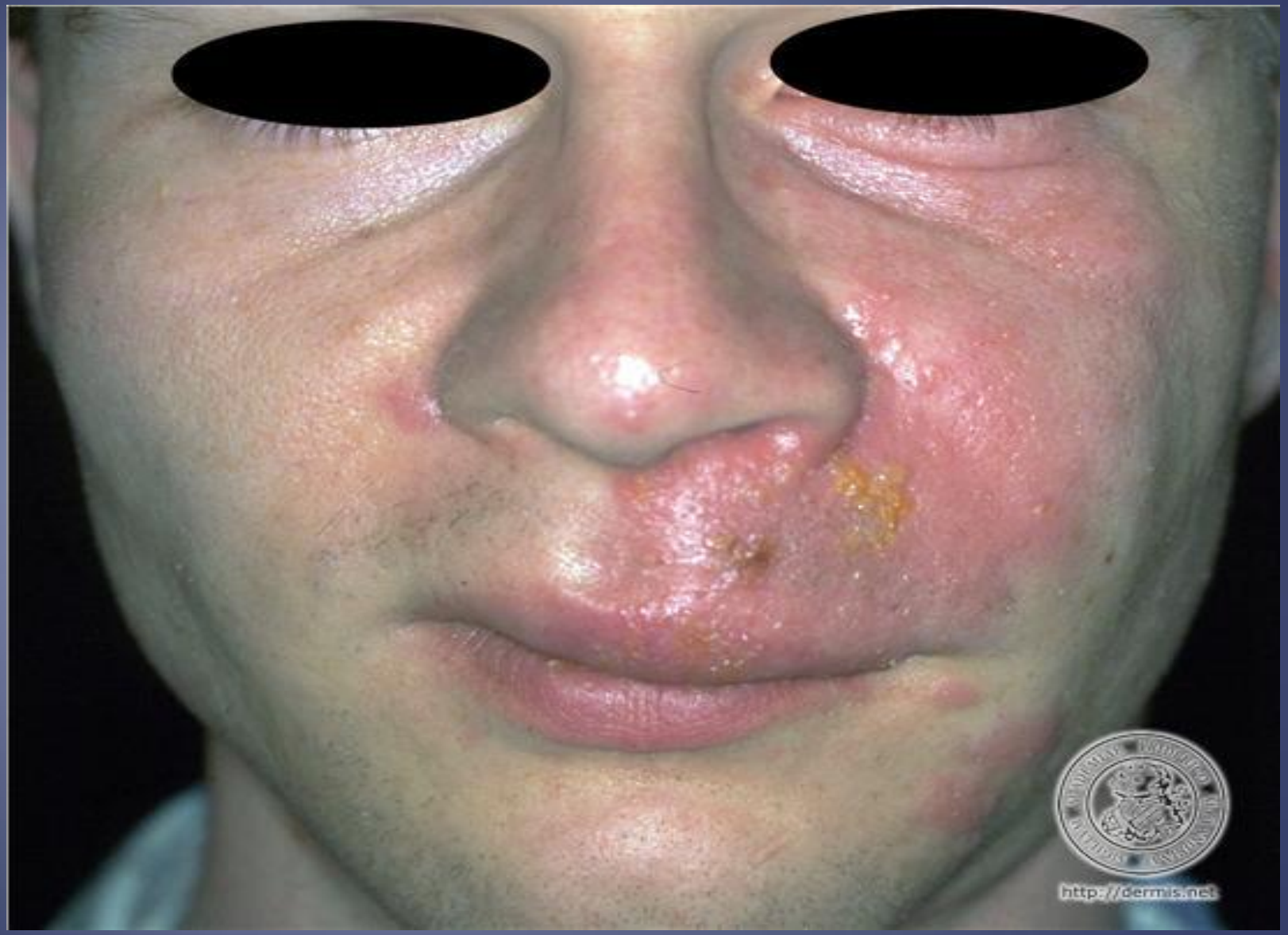
- Common in school children
- Head louse(*pediculus humanus var capitis*)
- Sever itching of the scalp
- Post cervical LN
- 2nry impetigo, nits

Mx:

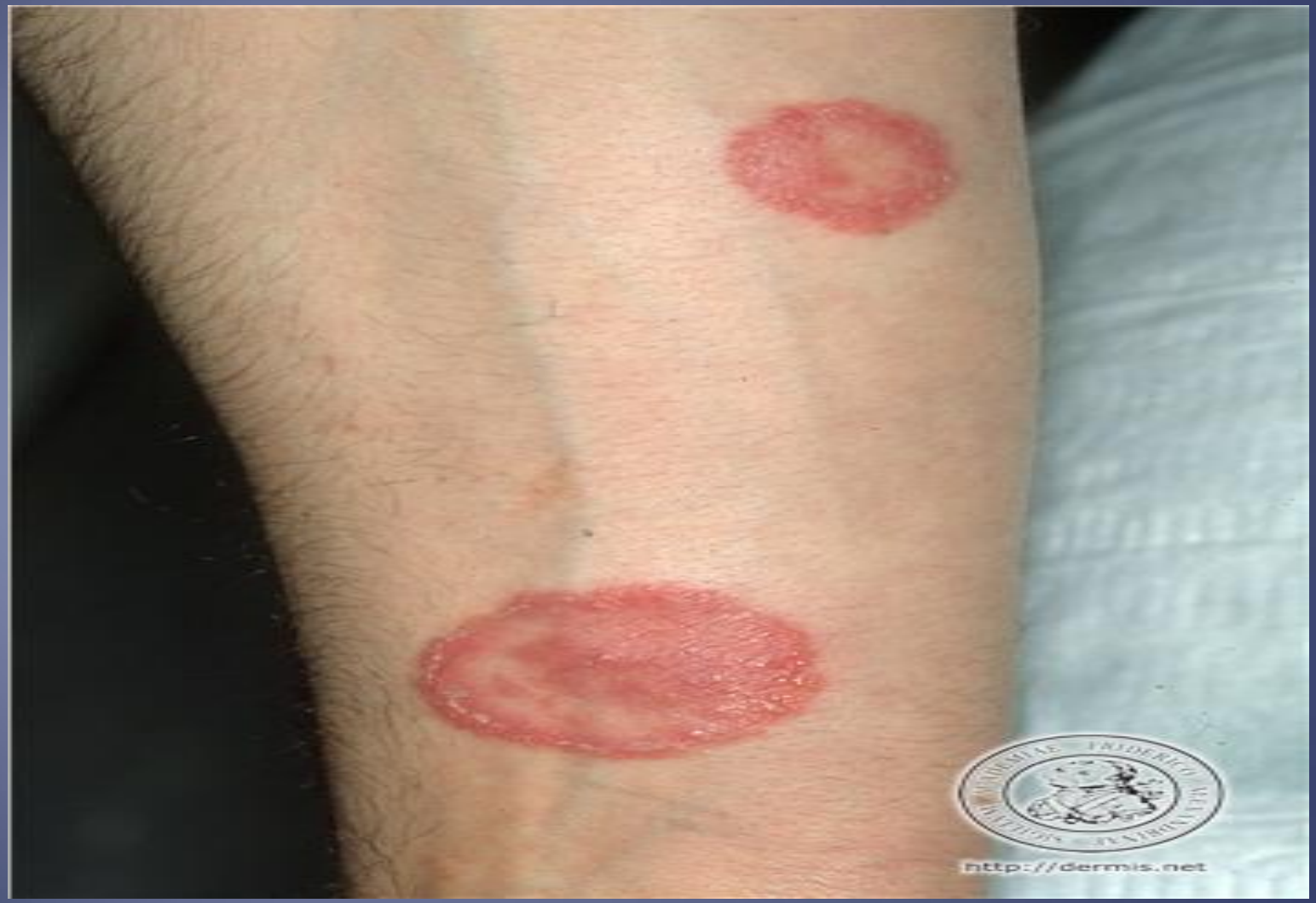
- Identification of the nit or adult head louse
- Examination of other family members and treated simultaneously
- Combing with a metal nit comb
- Permethrin cream 1% and 5% for 10 min then rinsed off
- Malathion 0,5% lotion
- Lindan(neurotoxicity)

Questions ??

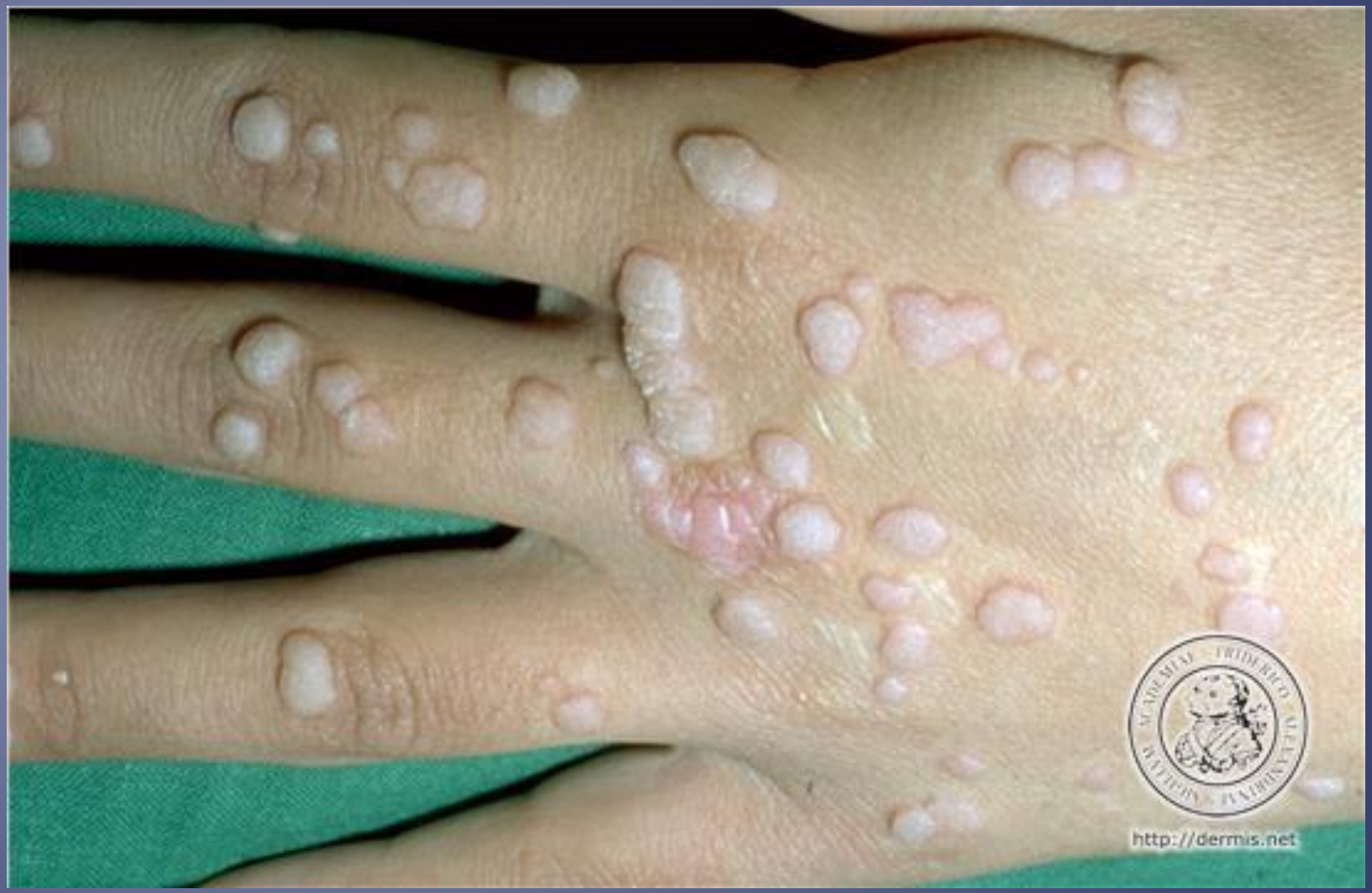
CLINICAL CASES


http://dermis.net

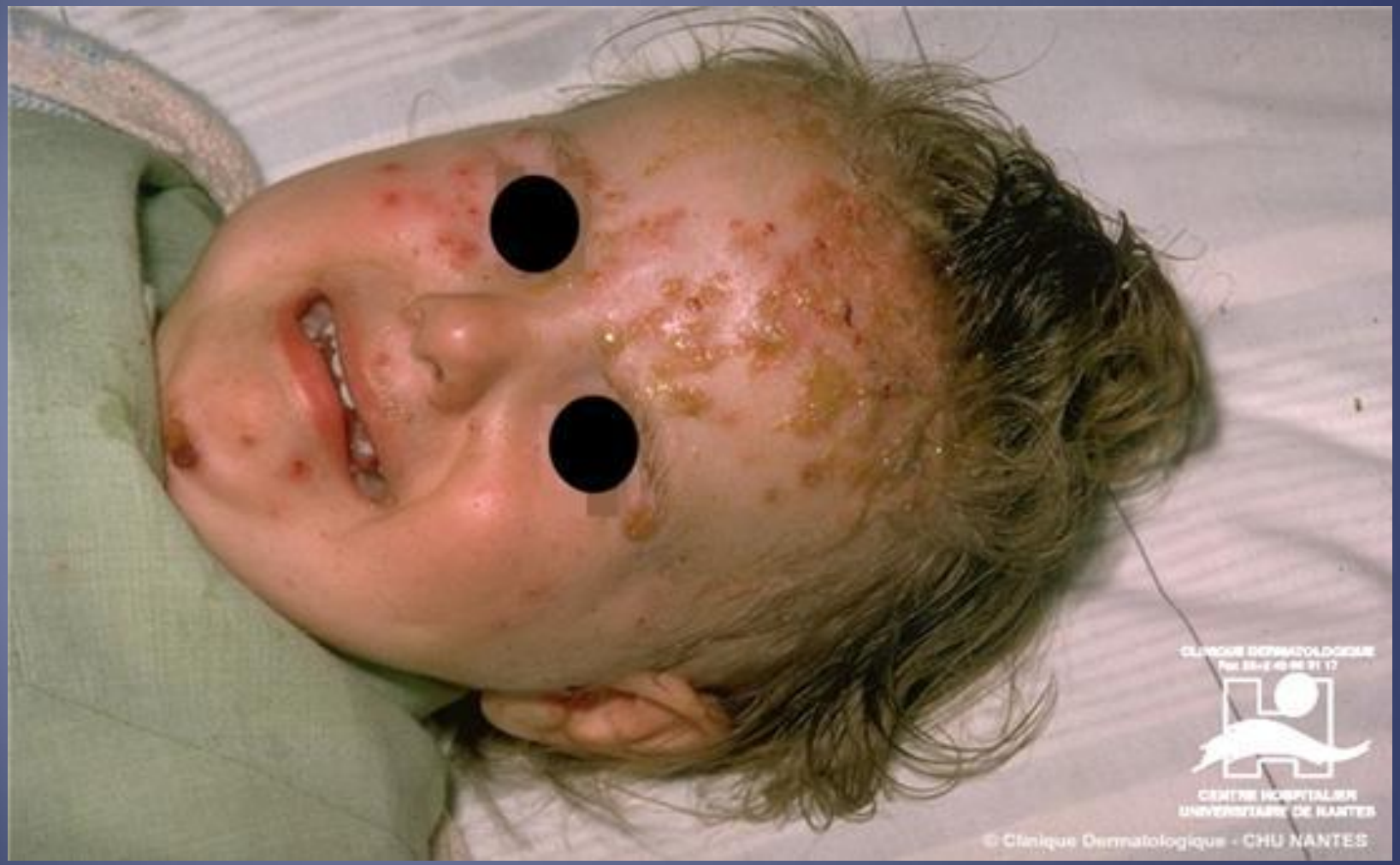
THINK ?


http://dermis.net

THINK ?


http://dermis.net

THINK ?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THINK ?