

Overview

- The Derm Evaluation and Lexicon
- Common Conditions in Global Dermatology
- Fungus Among Us
- **That's Just Nasty**
- Infestations and Ectoparasites
- A Potpourri of Interesting Diseases



Genital Ulcer Disease (GUD)

- Causes: Syphilis, herpes, chancroid, lymphgranuloma verereum, granuloma inguinale
- USA: Genital Herpes > Syphilis
- Africa, Asia: Chancroid



Syphilis

- *Treponema pallidum*
- “The Great Pox” to distinguish from smallpox
- Clinically develops through several stages
 - Primary – chancre
 - Secondary – rash
 - Latent
 - Tertiary
 - Cardiovascular
 - Neurosyphilis
 - Gummas



Syphilis - Primary



Primary syphilitic chancre

- **Single** painless lesion + bilateral inguinal adenopathy
- Heals spontaneously without treatment
- RPR usually becomes positive several weeks after chancre arises...check the RPR, but may need to biopsy or treat preemptively

Treating primary syphilis:

- Benzathine penicillin is drug of choice
- Tetracycline or doxycycline in PCN allergic patients
- **Test for HIV and other STD's**



24yo woman with asymptomatic scaly brown circles on face



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- Malaise, sore throat, adenopathy, low grade fevers



Secondary Syphilis

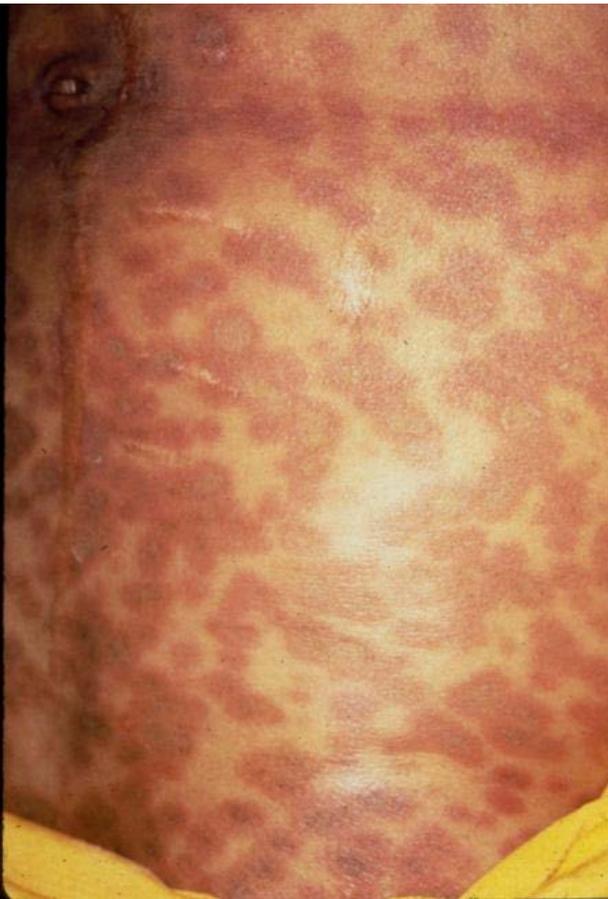


Secondary Syphilis

- Syphilids within 6-8 weeks of chancre
- Pink, erythematous, brown, coppery macules, papules...

with or without
scale...

“great imitator”



Secondary Syphilis

- Face, trunk, & extremities, palms, soles, mucosa



Secondary Syphilis

- Condyloma lata: broad, flat papules with grey, moist, weeping surface in intertriginous areas
- Mucous patches: 5 mm flat, greyish, round erosions covered by a delicate membrane on oral/genital mucosa



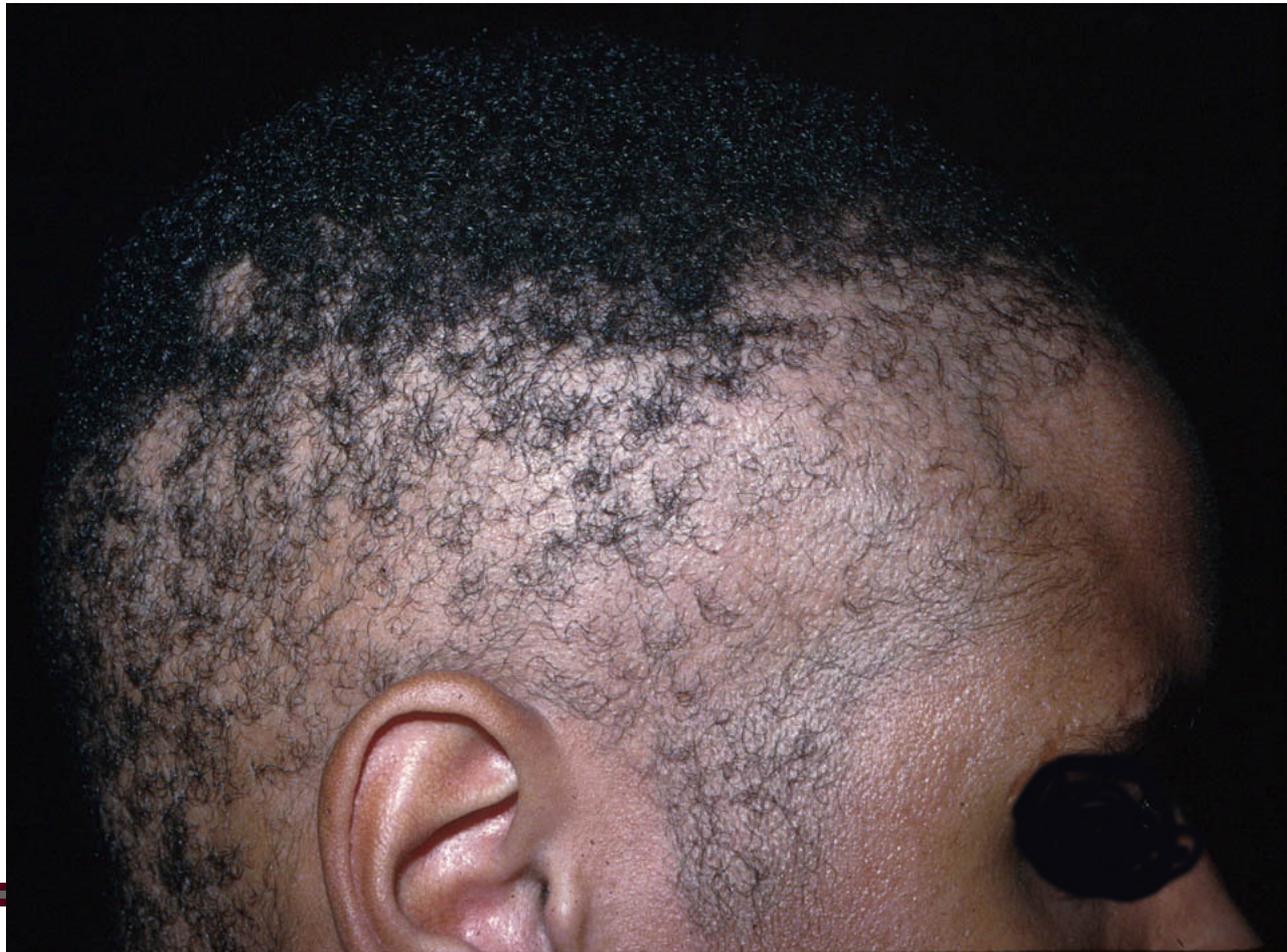
CONDYLOMA LATA



MUCOUS PATCHES

Secondary Syphilis

Patchy “moth eaten” or diffuse alopecia

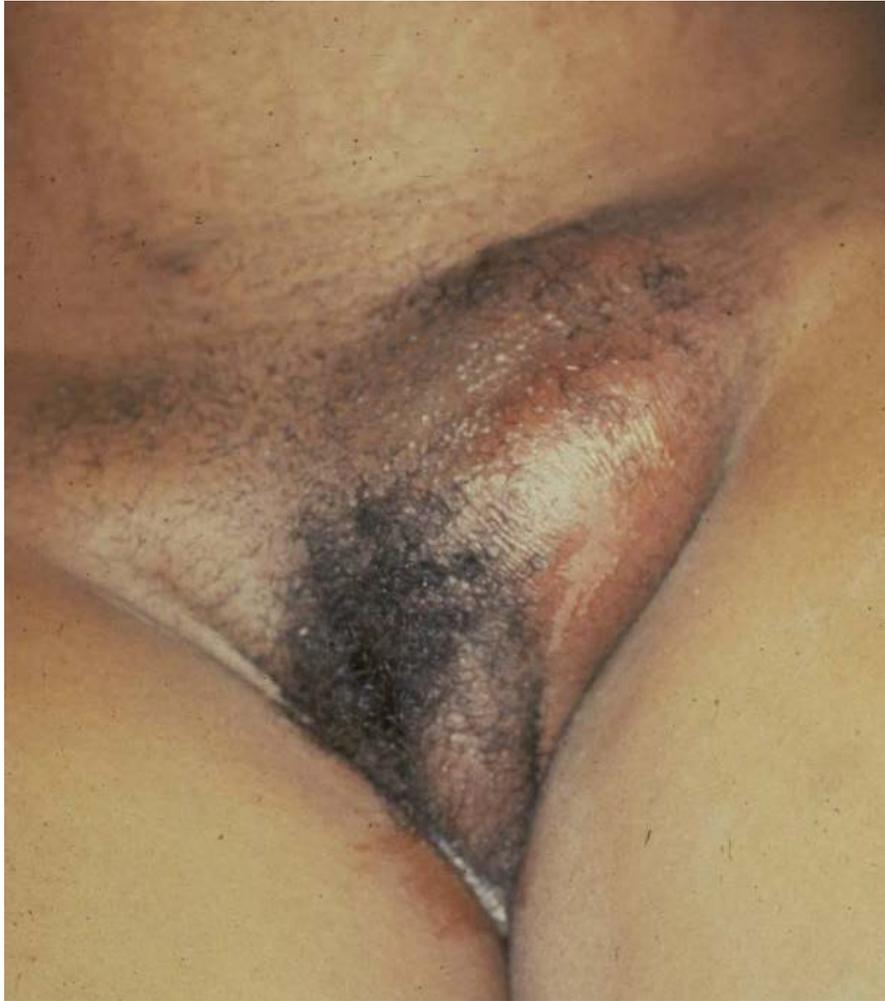


Chancroid



- *Hemophilus ducreyi*
- Multiple, inflamed, **painful**, soft ulcers within a week after sexual encounter

Chancroid



- Suppurative buboes
- Culture ulcer and treat with azithromycin

Chancroid

Azithromycin 1 g orally, single dose

Ceftriaxone 250 mg IM, single dose

Erythromycin base 500 mg po TID x 7 d

Ciprofloxacin 500 mg po BID x 3 d*

*Contraindicated in pregnancy and lactation



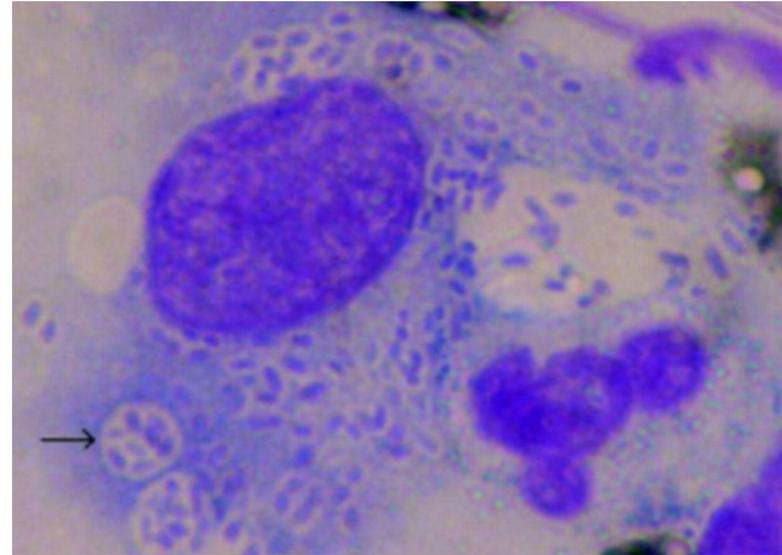
Granuloma Inguinale (Donovanosis)

- *Klebsiella granulomatis*
- Chronic, granulomatous, **painless** nodules
- Beefy-red



Granuloma Inguinale: Manifestations

- Incubation: 50 days
- Firm papule or nodule → ulcer
 - Ulcerogranulomatous: red, non-tender, bleeds readily
 - Verrucous, necrotic, cicatricial
- Genital: 90%; inguinal: 10%
- Diagnosis:
 - Donovan bodies in monocytes of Giemsa stained tissue smear



Granuloma inguinale



- Treatment

- Doxycycline 100 mg PO BID for at least 3 weeks
- TMP-SMX one double-strength tablet (800mg/160 mg) PO BID for at least 3 weeks

- Alternates:

- Azithromycin 1 g PO Qweek for at least 3 weeks
- Ciprofloxacin 750 mg PO BID for at least 3 weeks
- Erythromycin base 500 mg PO QID for at least 3 weeks



Lymphogranuloma Venereum

Chlamydia trachomatis

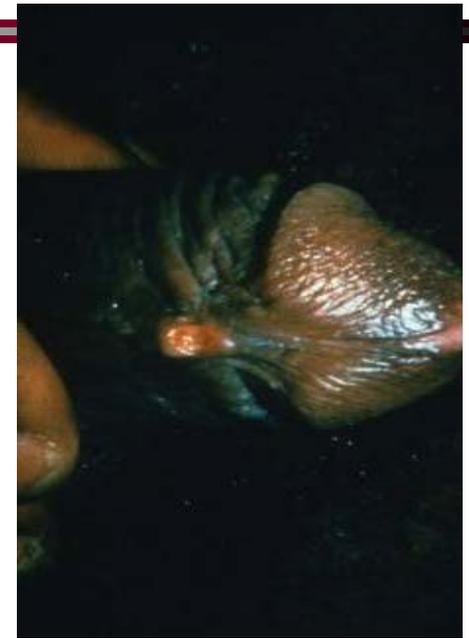
Self-limited, **painless**, genital ulcer

Tender inguinal and/or femoral lymphadenopathy (usually unilateral)

- Groove sign, suppuration, scarring
- PID

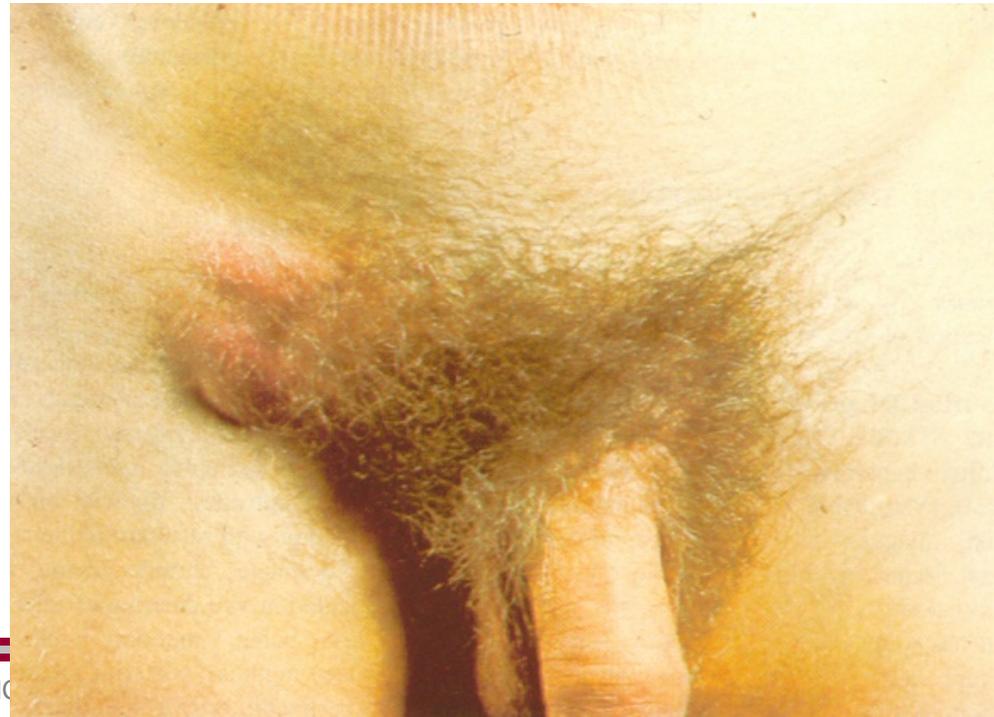
Proctocolitis (fistulas & strictures)

Non-gonococcal urethritis



Lymphogranuloma Venereum

- Diagnosis:
 - Serology
 - DNA tests
 - Urethral swab



Lymphogranuloma Venereum

- **RECOMMENDED:**
 - Doxycycline 100 mg PO BID for 21 days
- **ALTERNATIVE:**
 - Erythromycin base 500 mg PO QID for 21 days
- Aspiration of suppurative buboes may be needed

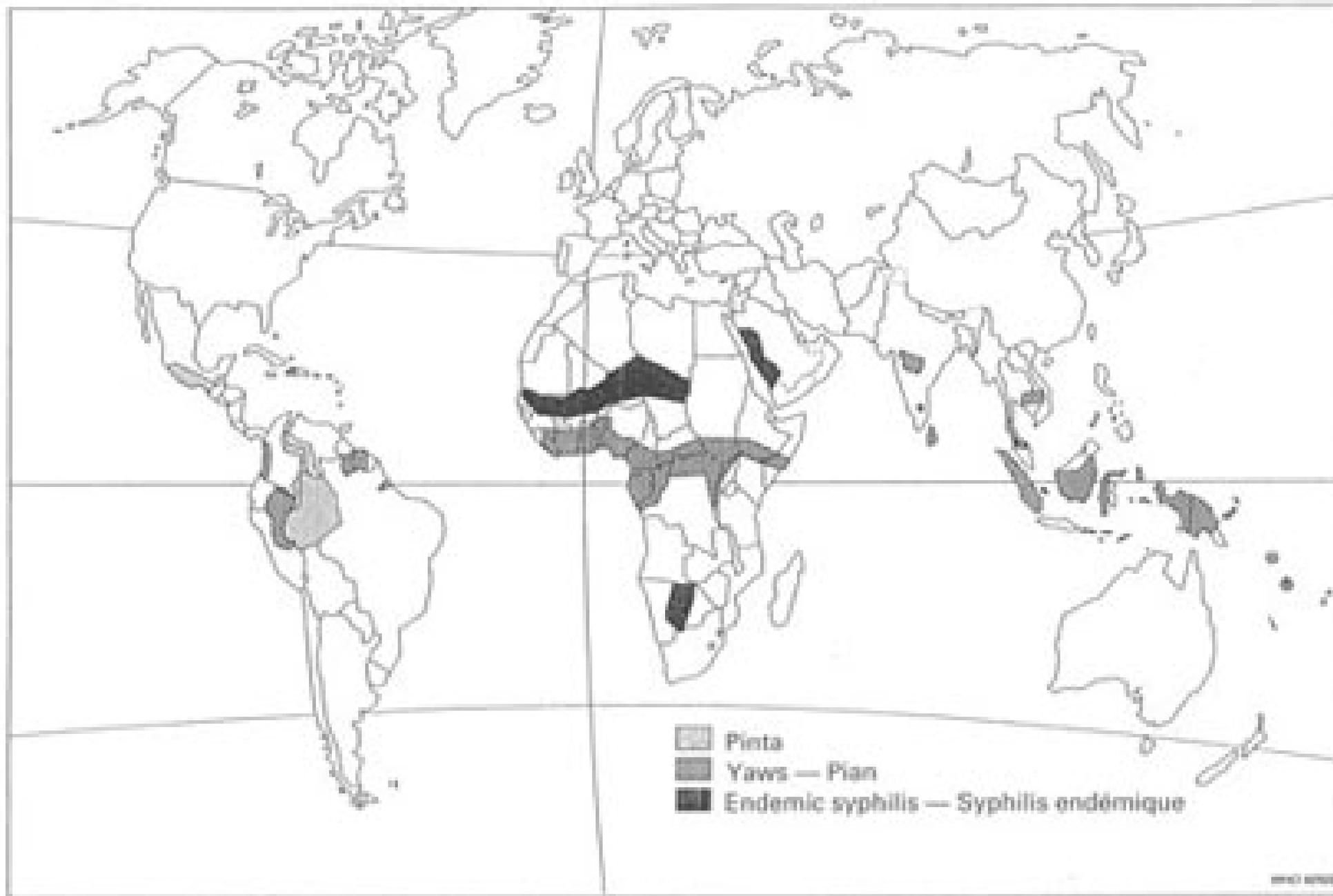


Nonvenereal Treponemes

- Children
- Related to poverty and lack of health services
- Person to person contact or sharing drinking vessel
- Diagnosis: clinical, dark-field microscopy and serologic testing
- Treatment:
 - Benzathine penicillin intramuscularly
 - If PCN allergic:
 - Tetracycline 500 mg QID x 15 days
 - Children Erythromycin 8 to 10 mg/kg QID x 15 days

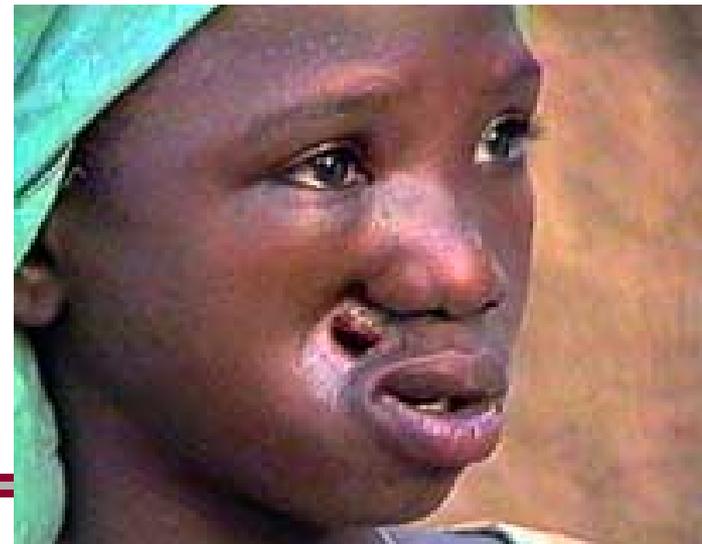


MAP 1. GEOGRAPHICAL DISTRIBUTION OF THE ENDEMIC TREPONEMATOSES IN THE EARLY 1990s
CARTE 1. RÉPARTITION GÉOGRAPHIQUE DES TRÉPONÉMATOSES ENDÉMIQUES AU DÉBUT DES ANNÉES 90



Yaws

- *T. pallidum pertenue*
- Disabling course
- Skin, bone, joints
- Hot, humid coastal plains



Early & Late Yaws

Mother yaw- primary crusted papule

- Secondary yaws- smaller lesions, clear centrally, coalesce peripherally

Painful osteoperiostitis/polydactylitis
(saber shin deformity of tibia)

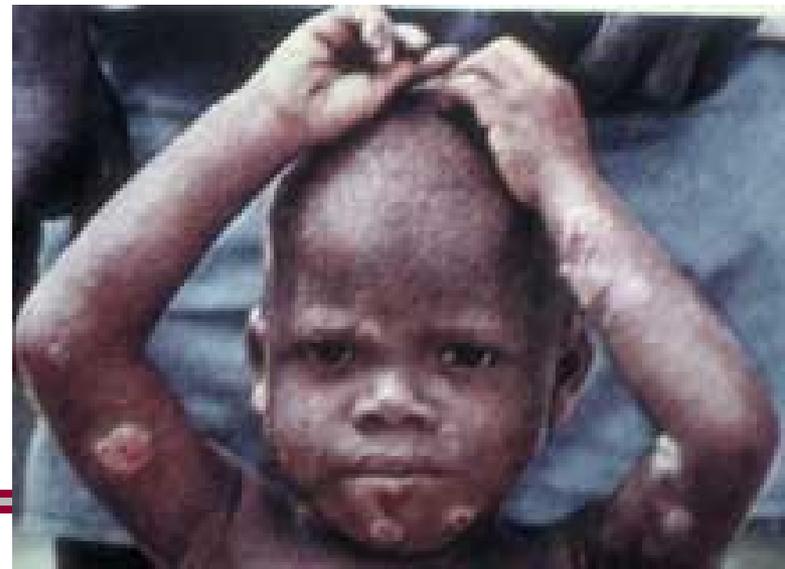
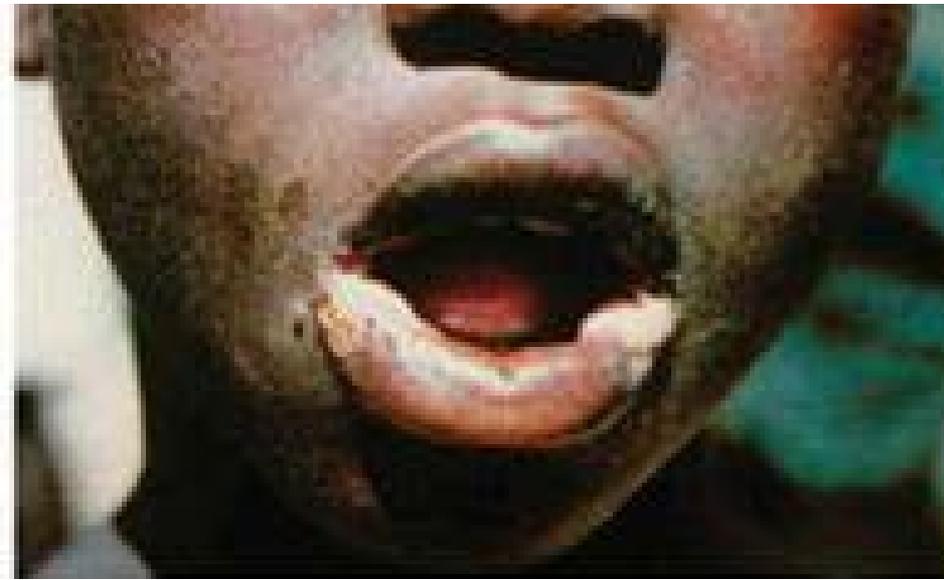
Late yaws- indolent ulcers with
clean cut borders, only 10%

Gangosa- destruction of palate and
nasal bone



Bejel (Endemic Syphilis)

- *T. pallidum endemicum*
- Dry, arid areas of Middle East and Africa
- Mouth sore initial presentation, then oral patches, laryngitis, angular cheilitis
- Cutaneous lesions uncommon
- Destructive lesions in long bones (especially legs)



Pinta (Carate)

- Central & South America
- *T. carateum*
- Only skin lesions
- Primary- red papule on legs, face, arms
 - Secondary- smaller, scaling papules initially red turning dark slate blue
- Late Dyschromic Stage- white mottled appearance



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Infestations and Cutaneous Ectoparasites

- Lice
- Scabies
- Tungiasis
- Cutaneous larva migrans
- Myiasis
- Cercarial Dermatitis



Head lice



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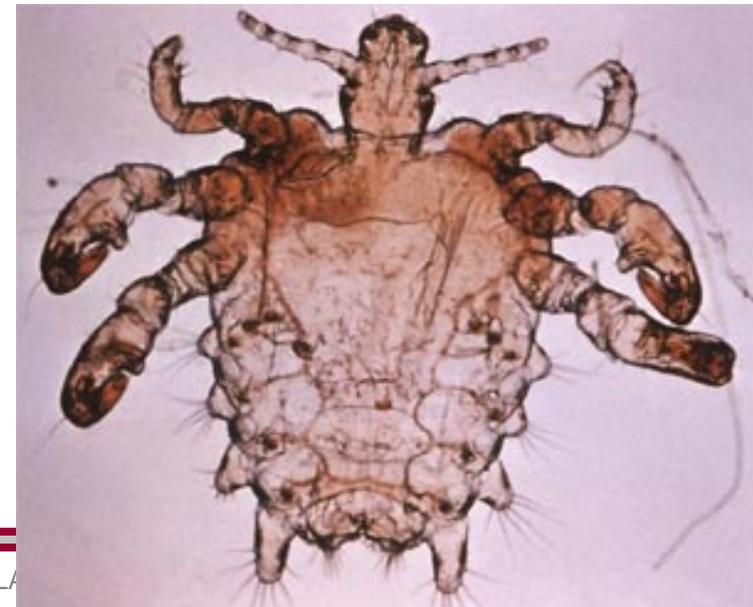


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Pediculosis pubis (crab lice)

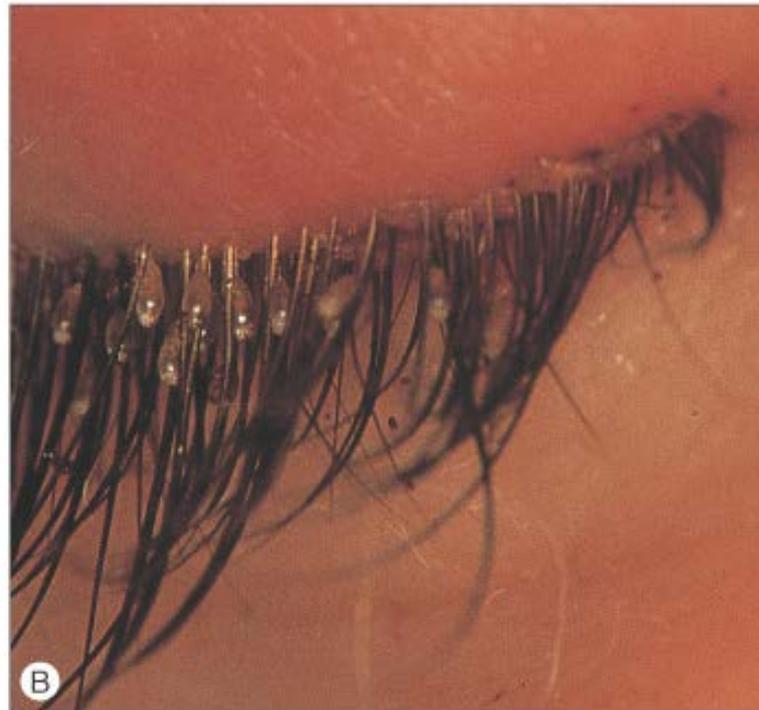
- Louse grabs hairs, bites skin, cements nits to hairs
 - Can be on any body hair, including eyelashes

- Look for other STD's



Pediculosis pubis

- Permethrin cream
- Coat eyelashes with vaseline twice dailiy



Scabies

- Itching often worse at night
- Close contacts also itchy
- Papules and burrows:
 - **W**ests, **W**rists, **W**aist and **W**illie

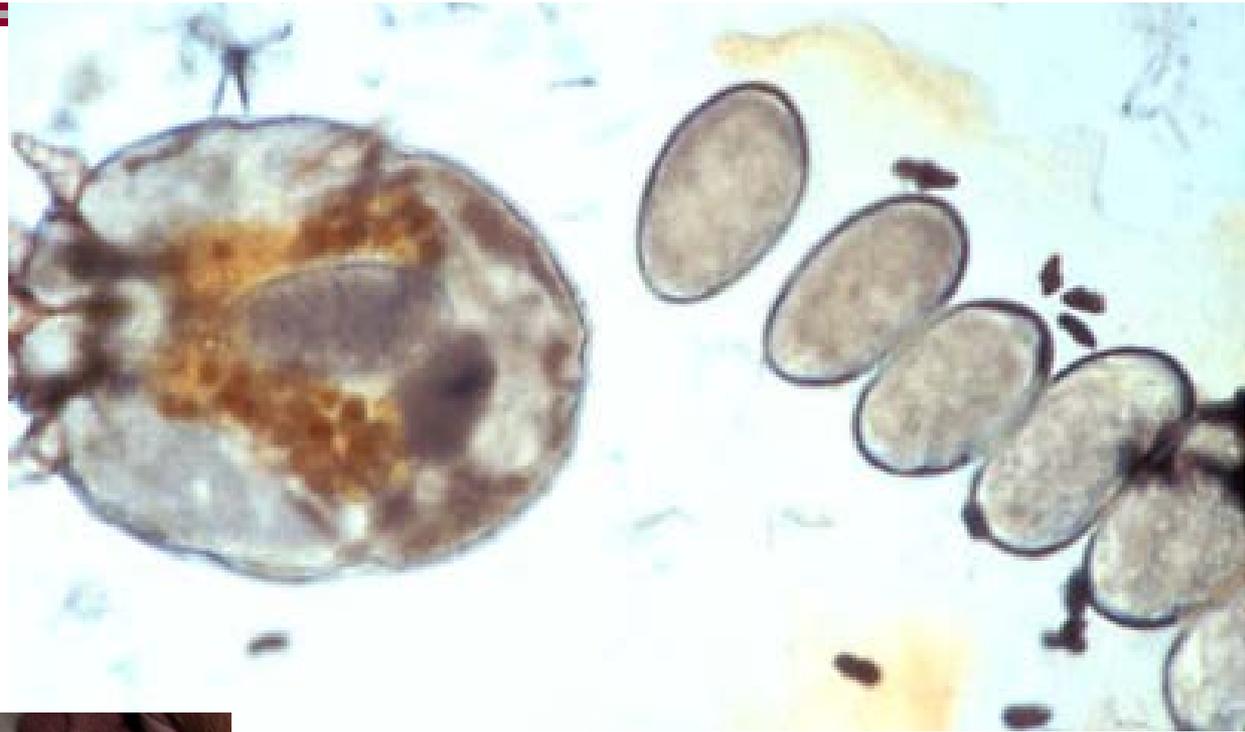


Scabies



Scabies

- Scrape to see:
 - Mite
 - Eggs
 - Poop



Sarcoptes scabiei

Treatments – permethrin, lindane, benzyl benzoate, crotamiton, malathion, topical sulfur, ivermectin



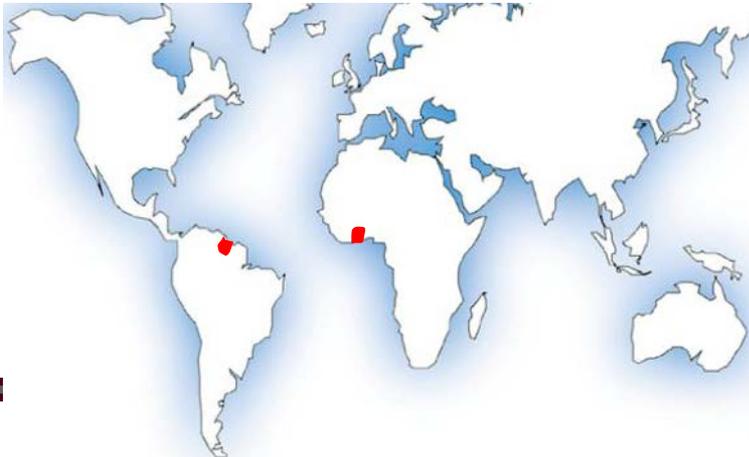
Crusted scabies

- Wear gloves!



21yo soldier returns from military exercise in Guyana

Painful lesions on foot

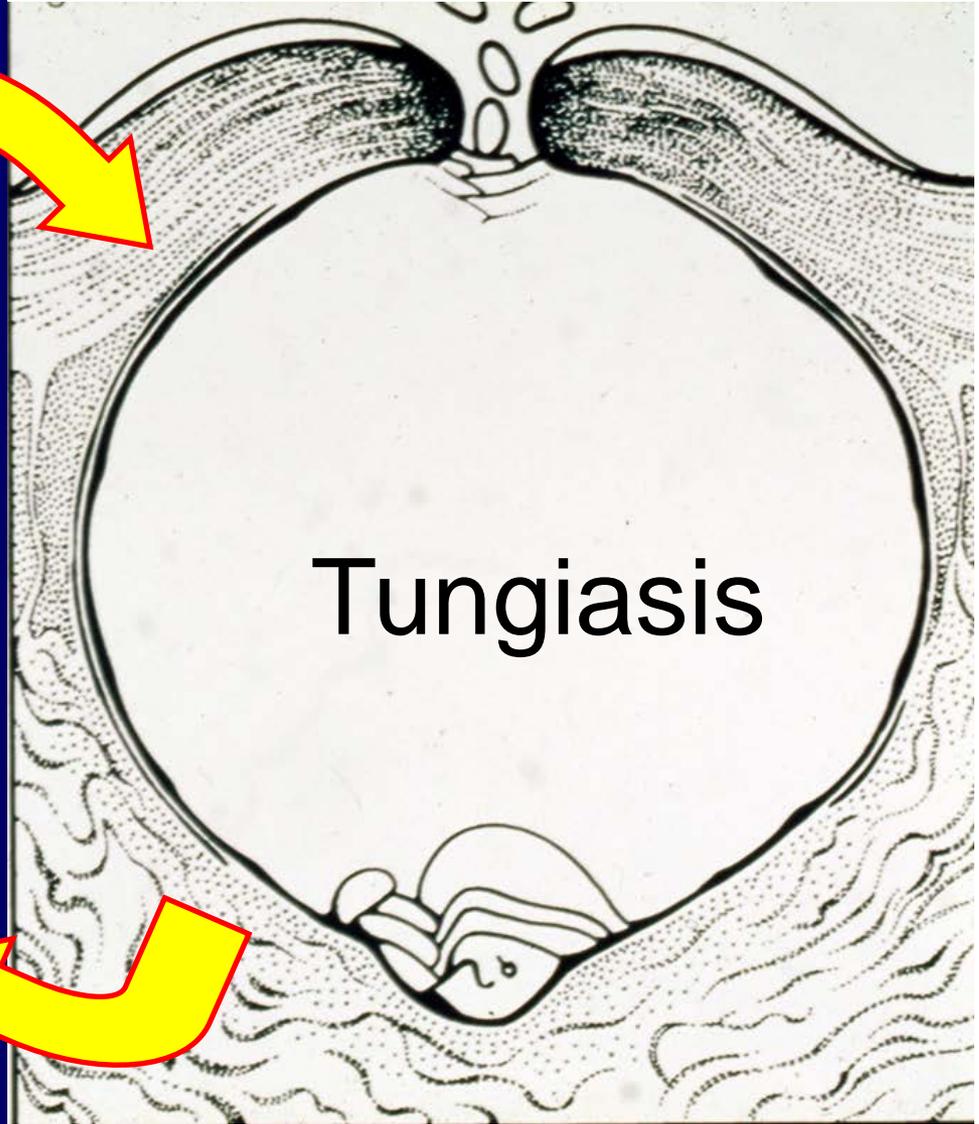
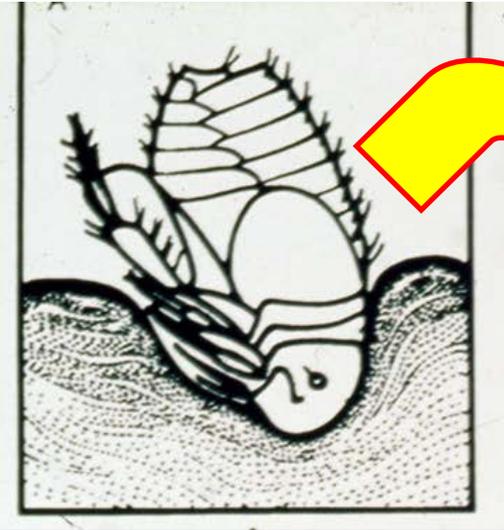


Tungiasis (Sand Flea)

- *Tunga penetrans*
- Female burrows into skin (usually foot)
- Progression of painful red spot to papule to nodule with black dot (anal/genital area of flea) to pearl-like papule (with eggs) to black keratotic crust



Gravid female burrows into flesh, leaving uterine pore open



Tungiasis (Sand Flea)

Life cycle of 2-4 mm flea is 5-6 weeks

Infestation self-limited if not reinfected

Rare osteomyelitis/ gangrene

Sub-Saharan, Caribbean, Central and South America

Surgical removal of fleas

- Topical ivermectin or thiabendazole
- Treat with antibiotics if secondarily infected



28yo Navy physician – at Flight Surgeon Course in Pensacola



Cutaneous Larva Migrans

- Pruritic, serpiginous lesion migrates 2-4 cm /day on feet or buttocks



Cutaneous Larva Migrans

- Dog or cat hookworm larvae
 - Cannot penetrate fully and usually die within 2 months
- Beach; sandboxes
- Course: self-limited 1-6 mos
- Treatment:
 - Topical thiabendazole
 - Single dose of oral ivermectin



Differential of “migrating” lesions

- Cutaneous larva migrans
- Gnathostomiasis
- Loiasis
- Strongyloidiasis (larva currens)



Myiasis



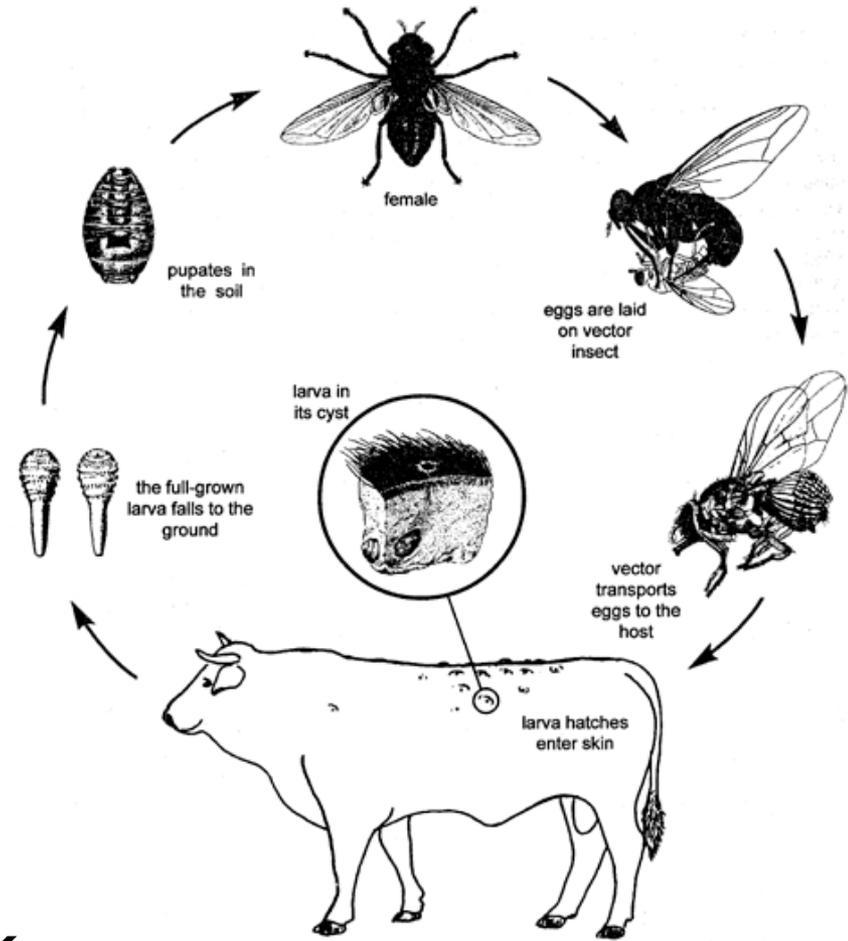
- Infestation of human tissue by fly larva

- Painful, boil-like lesion with central punctum (respiratory pore)



- Exposed skin

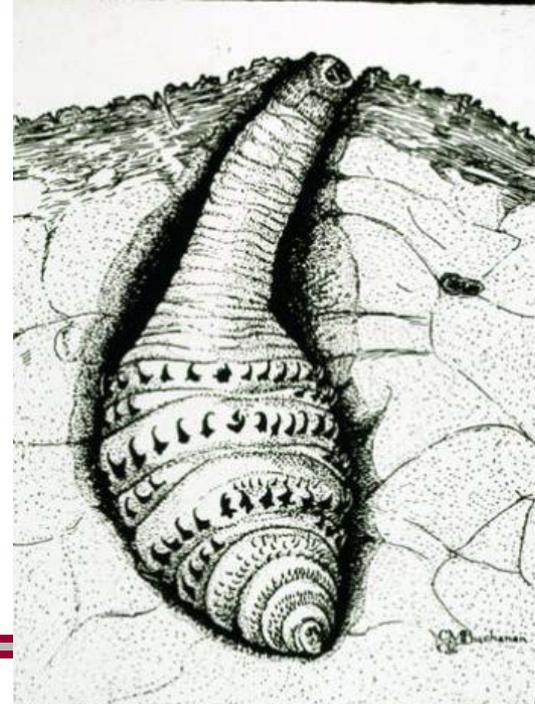
New World Myiasis



Dermatobia hominis

- Human Botfly
- Female glues eggs to mosquito, stablefly, or tick





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Old World Myiasis

- Tumbu fly (*Cordylobia anthropaga*)
- Fly deposits eggs on ground or clothing
- Young maggots penetrate skin



Cercarial Dermatitis (Swimmer's itch)



- Transient pruritic papular or urticarial eruption on exposed skin
- Resolves in 7-10 days after fresh water snail exposures (schistosomal larvae penetrate the skin)

Seabather's eruption

Pruritic, papular eruption (can last 1-2 weeks)

Occurs in tropics (begins a few hours after exposure)

- Seasonal, typically May to August

Caused by hypersensitivity to the larval forms of thimble jellyfish and certain sea anemone

- Larvae get caught in water permeable clothing
- Rash typically in bathing suit pattern

Treatment is symptomatic



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A potpourri of interesting diseases (as time allows)...



Leprosy (Hansen's Disease)

Chronic disease caused by *Mycobacterium leprae*

Peripheral nerve (sensory loss), skin, and upper airway mucosal involvement

Asia, Oceania, Caribbean, the Americas, S. Europe, Australia, Africa

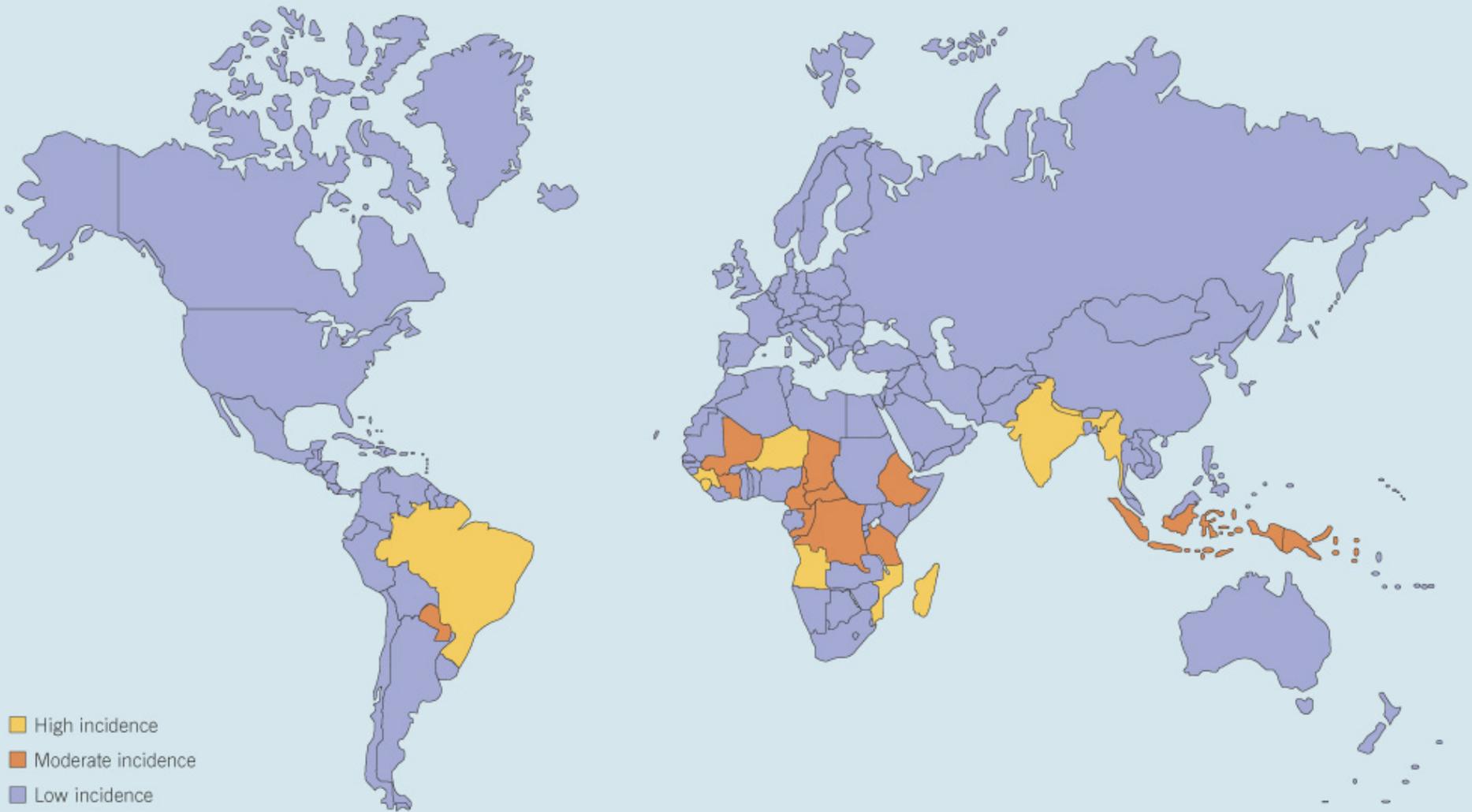
Incubation period 3 mos to 40 years

- 95% of population is NOT susceptible
- Need prolonged contact with an untreated patient

Treatment: Rifampin + Dapsone + Clofazimine



LEPROSY SITUATION IN 2000



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Sensory



Motor



Auto-amputation



Leprosy

Mycobacterium leprae



Lepromatous leprosy

Claw-hand deformity

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Slide 54



Lepromatous Leprosy

- Nodular infiltrations can destroy underlying structures saddle nose deformity, leonine facies
- Sensory loss over distal limbs



Borderline Leprosy

- Numerous lesions, annular
- Symmetrical nerve involvement appears later



Tuberculoid leprosy

- Hypopigmented saucer shaped single lesion (max 2-3)
- Numbness, pain, tingling, muscle weakness



38 yo Thai female with fever, retro-orbital eye pain, diffuse severe myalgias



DENGUE FEVER



Assay Report by the Analyze

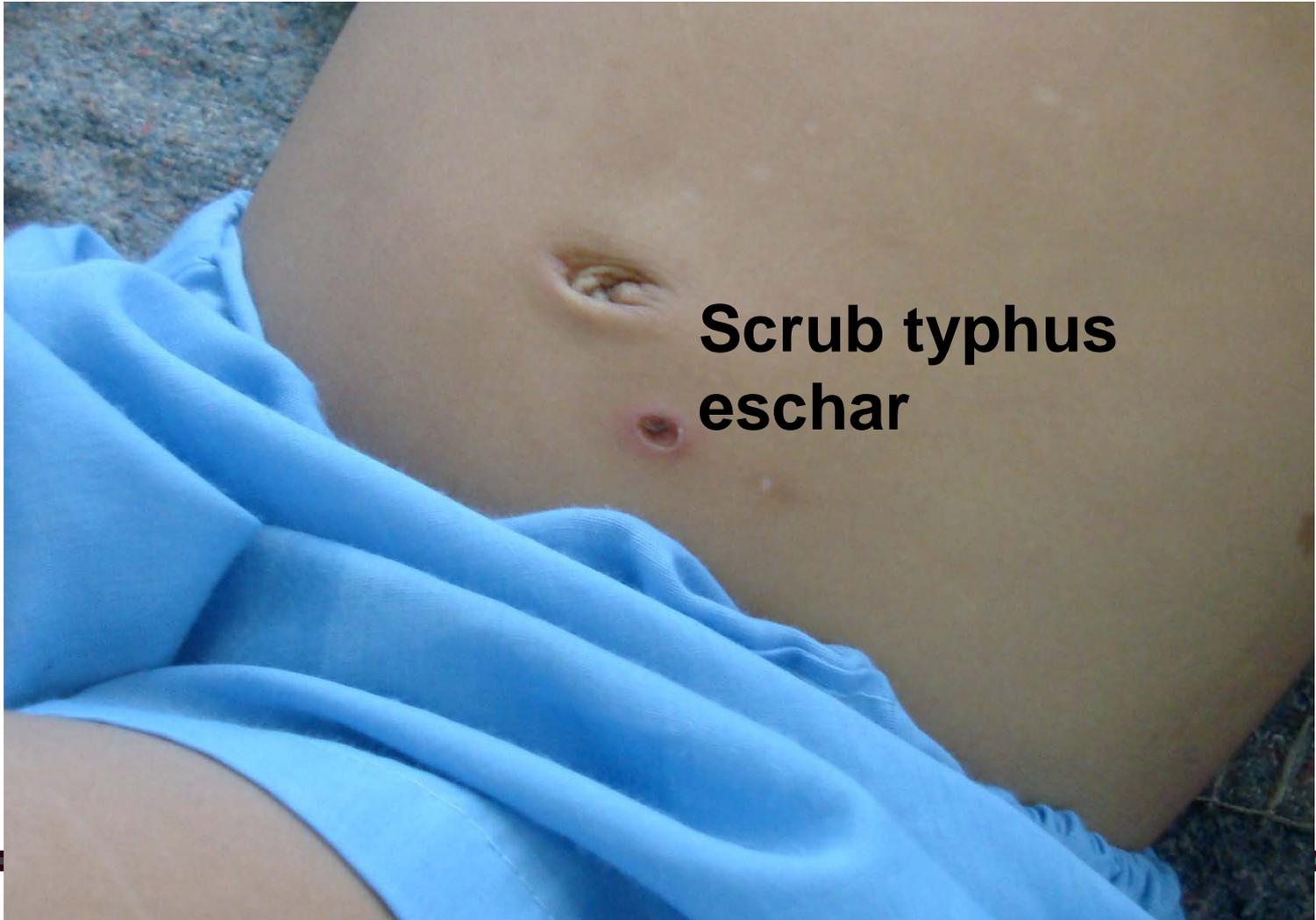
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Time: 05-23-2011 09:40

WBC	2.4	$\times 10^3/\mu\text{L}$	L
Lymph#	1.6	$\times 10^3/\mu\text{L}$	
Mid#	0.2	$\times 10^3/\mu\text{L}$	
Gran#	0.6	$\times 10^3/\mu\text{L}$	L
Lymph%	67.0	%	H
Mid%	7.5	%	
Gran%	25.2	%	L
HGB	11.8	g/dL	
RBC	5.20	$\times 10^6/\mu\text{L}$	
HCT	36.3	%	L
MCV	69.9	fL	L
MCH	22.6	pg	L
MCHC	32.5	g/dL	
RDW-CV	16.4	%	H
RDW-SD	39.3	fL	
PLT	47	$\times 10^9/\text{L}$	L
MPV	6.6	fL	L
PDW	14.8		L
PCT	0.031	%	L



3 yo Thai female with high fevers and severe falciparum malaria, improved on IV artesunate but still spiking fevers to 103°F on day 2



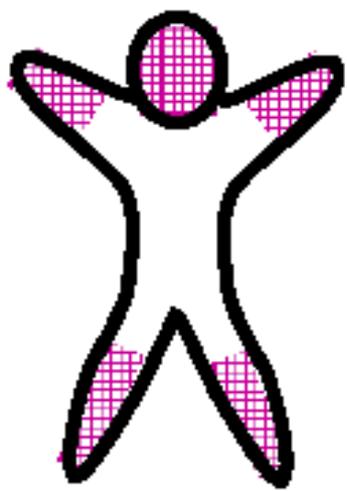
Varicella



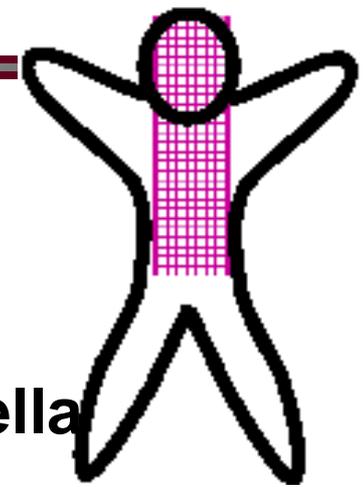


Variola (Smallpox)





Variola vs. Varicella



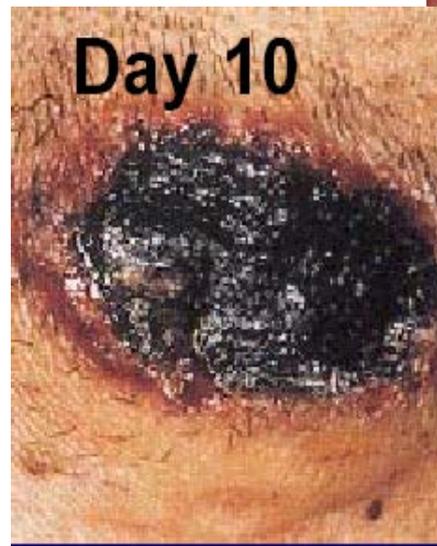
	Variola	Varicella
Incubation	10-14 days	14-21 days
Prodrome	Severe	Minimal
Distribution	Centrifugal, Convex	Centripetal, Concave
Evolution	Synchronous	Asynchronous
Crust forms	10-14 days	4-7 days
Crust detaches	14-28 days	<14 days
Infective until	Eschars detach	Lesions crust



Cutaneous Anthrax

Clinical Progression

- Painless, pruritic papule
- Juicy papule
- Bulla (48 hours)
- Bulla ruptures/early ulcer
- Eschar with raised border
- ‘Jet black’ eschar
- Minimal scarring



Orf



- Ecthyma contagiosum
- Acquired from direct contact with lambs, calves, or goats
- Spontaneous resolution

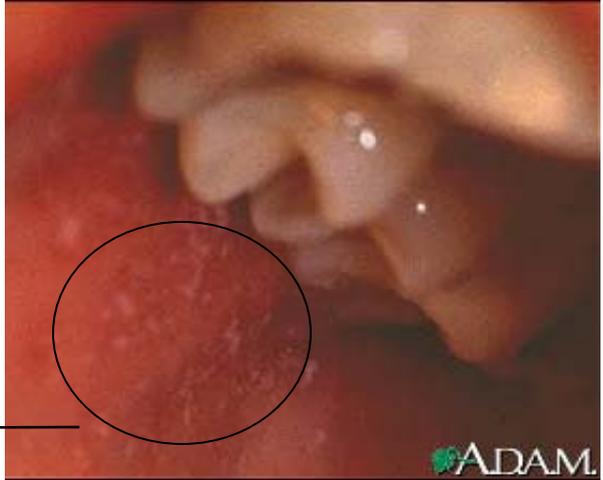


Measles (Rubeola)

- Rarely seen among vaccinated
- Major **killer** in developing world
- Spread by respiratory route
- Incubation 9-12 days
- Immunization highly effective



Measles (Rubeola)

- Prodrome: high fever, malaise, URI
 - Rash begins in hairline of neck/face, then moves down
 - Exudative conjunctivitis
 - Photophobia
 - Severe bark-like cough
 - Koplik's spots on buccal mucosa
- 
- Classic presentation: Cough, coryza, conjunctivitis, rash, & high fever
 - These children look sick

Supportive treatment



Skin lesions in returned travellers (n=4742)

- Cut. larva migrans 9.8%
- Insect bite 8.2%
- Skin abscess 7.7%
- Infected insect bite 6.8%
- Allergic rash 5.5%
- Rash, Unknown 5.5%
- Dog bite 4.3%
- Superficial fungal 4.0%
- Dengue 3.4%
- Leishmaniasis 3.3%
- Myiasis 2.7%
- Spotted fever 1.5%
- Scabies 1.5%



Questions?

