

Microbiology - 5 - Final - Summary -

* Erysipelas *

- Pathogen → *S. pyogenes* - Characteristic → swelling, Erythematous
- present as Flaccid bullae within 2nd → 3rd day + Extension to deeper
- Desquamation involved in (5-10) days of illness. structure is rare
- treatment → by penicillin → (Flucloxacillin, clindamycin)
- most commonly in infant + elderly adult.

* cutaneous abscesses *

- collection of pus in Dermis + deeper skin structure
- Etiology → polymicrobial contain skin flora (*S. aureus*)
- Clinical Feature Painful, tender, fluctuant nodules, pustule surrounding erythematous swelling
- Treatment I&D → Antibiotic necessary except in immunocompromised extensive inf. + systemic toxicity.
- ↓ Drainage

* Note → hair follicle may be port of entry

* Diabetic Foot * infection

- inf. of DM patient below the malleolus, commonest lesion → infected diabetic ulcer
- infection may lead to → paronychia, cellulitis, myositis, abscess formation, Necrotizing fasciitis, tendonitis, septic arthritis.
- Charcot joint → Neuro-osteopathic deformity. → vascular insufficiency
- Clinical Features → abscesses, gangrene
- Foot Ulcer without infection → Ulcer with inflammation or cellulitis ← 2cm
- [tachycardia, vomiting] systemic toxicity ← 2cm ← cellulitis ←
- Diagnosis → 1- Clinical Feature "perfusion" 2- Doppler ultrasound.
- 2- MRI to determine extent of infection 4- Deep tissue specimens
 (بدراسة بوليمر الجيلاتين (بإحدى العينات من الجيلاتين) ←
- Management → For inpatient → based on correcting systemic instability
- medical treatment → Don't use Ab for non-infection ulcer
- For infection ulcer (orally for mild, IV for severe cases)
- surgery → For severe infection to deeper structure
 (Gangrene, Necrotizing fasciitis) limb ischemia.

* Mycobacterium marinum → present as cellulitis or raised erythematous.

- occupational hazard → happened in Fisher man, Aquarium cleaners, Seafood handlers.
- Limited to skin
- Dx → Needle Aspiration - Acid Fast bacilli
- Rx → Rifampin + ethambutol. For 4 months

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* Cat scratch disease *

- pathogen → *Bartonella henselae*, which grows on Columbia Agar / Sheep Blood
- Transmission cycle btw → Cat + Flea
- Sigs → lesions (papule, pustule, large vesicles) developing at the P site of inoculation
↳ ipsilateral lymphadenopathy
- Dx → serology by IgM + IgG + Biopsy of LN.
- Rx → self limited of immunocompetent (Need 2 weeks) Dx: Ab, incl. IgG, IgM

* Schistosomiasis *

- pathogen → *Schistosoma*, parasitic Blood Fluke
- Dx → stool + Urine microscopy (presence of Eggs)
- Rx → Single Dose of Praziquantel (Antiparasitic)
- Skin signs → Swimmer's itch, multiple Erythematous papules "Bilharzia"
- Prognosis → Renal + intestinal pathology involve in treatment + Brain lesions
↳ Hepato-splenic schistosomiasis carries → Good prognosis.

* Leprosy *

- pathogen → *Mycobacterium leprae* "Acid Fast bacillus" / Nasal secretion. transmits
- Incubation → Long incubation (3-20) years
- Skin signs + presentation → Granulomas "Chronic infection of the skin"
- Has 2 types → tuberculoid; - intact immunity - Nerve change
↳ lepromatous; - defect in cell immunity - skin change
- Dx → Acid Fast stain + Biopsy
- Rx → Antimicrobial drugs → Dapsone + Rifampin at early stages
- Skin changes → bilateral symmetrical macules + papules

* Syphilis *

- Skin presentation → large nodules or gummas (3rd syphilis)
- Flat papulosquamous lesion (2nd syphilis), chancre (1st syphilis)

* HPV *

- pathogen → human papilloma virus condylomata
- presentation → singular warts (*verruca vulgaris*) OR multiple warts
- transmission → skin contact + sharing clothes / STD cervical cancer → HPV

Auto digital inoculation

* Diagnosis of Skin infection *

- ~~Diagnosis~~ → depend on location in the body, location in soft tissue layers and appearance of lesion
- Diagnostic test → ① Soft tissue Radiograph: to determine depth of inf.
- ② lab diagnostics → Aspiration without saline
- treatment moist heat, surgical drainage OR drainage + Antibiotics