

Microbiology 3-

* Hand, Foot and mouth disease *

- 1- An outbreak
- 2- Typical disease → For children under 10 years
↳ causative Agent → Coxsackie virus A16 + Enterovirus 71
Note → Enterovirus 71 → associated with Encephalitis + Myocarditis
- 3- Atypical disease → Higher Group Age (sever presentation)
↳ causative Agent → Coxsackie virus A6
Note → Both typical + Atypical transmitted Fecoral + direct contact.
- 4- sign + symptoms → ① URT (upper Respiratory tract) symptom before skin lesions.
② Fever, malaise, Pharyngitis ③ Rash in soles, palms, buttocks
↳ shape of Rash → oral Rash → Football shaped (eye shaped) painful.
Skin Rash → Red papules progress to gray vesicles
- 5- Rx → symptomatic treatment, maintain hydration For All Fevers
↳ in sever illness → hospital Admission in case of Enterovirus A71

* Small pox *

- 1- caused by → variola virus, orthopox virus
- 2- Incubation period → 10-12 days prodromal period → (1-2) days
- 3- Eradicated virus, No treatment Just supportive
- 4- Dx → EM + PCR
- 5- presentation → maculo papular → vesicles → pustules → Scabs
- 6- death occur with
↳ within (1-2) weeks.
↳ Fulminant disease (liver Damage)

* ORF * disease

- 1- Sore mouth virus caused by DNA virus Related to small pox virus
- 2- Transmitted (Animal-human) or (Human to human)
- 3- due to work with Goat or sheep / can ~~the~~ infect multiple time + Each time less sever.
- 4- No treatment → But if papules infected by Bacteria → give them Antibacterial.
- 5- small papules → Nodules → Ulcerate or crust.

* Molluscum contagiosum *

- 1- induces Flaccid In Both health and immunocompromised patient.
- 2- severe if it associated with HIV * in trunk, pubis, face *
- 3- in adult → part of STD transmission. * Central Umbilication *
- 4- complication → if we manipulat it, Bacterial infection, Near to the Eye →
Conjunctivitis

* Not Erythematous *

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* Infection Associated with crusted lesion → caused by Bacteria + Fungi

* Impetigo *

- 1- caused by → *S. Aureus* + *GAS* (skin flora)
- 2- The most common bacterial skin infection in children
- 3- in deep infection cause cellulitis or PSGN → glomerular nephritis
- 4- Clinical Feature → macule + papules → ~~vesicles~~ vesicles → Bullae → crust
- 5- Associated with LPP / highly contagious. / in Tropical + subtropical Region
- 6- Treatment → Topical Antibiotic → mupirocin
Oral Antibiotic → flucloraxillin or cefalexin
with MRSA → doxycycline + clindamycin or co-trimoxazole.

* Ecthyma *

- 1- caused by → *S. A* + *GAS* + some times by ~~P. Aeruginosa~~ *P. Aeruginosa*
Note → *P. Aeruginosa* Reduce Neutrophils.
- 2- presentation → punched out ulcer surrounding by raised red margins.
- 3- treatment → flucloraxillin or cefalexin
For *P. Aeruginosa* → used Anti pseudomonas → piperacillin with tazobactam.
- 4- deeper form of Impetigo / or starts Ecthyma.

* dermatophytes *

- 1- Feeding off of → dead keratin (Nail, hair skin)
- 2- Human to human / Animal or soil
- 3- Clinical classification → Children → ① Tinea corporis → Trunk + Limbs
② Tinea faciale → face
③ Tinea capitis → scalp
Adolescents → ① Tinea unguium → Nail / onychomycosis
② Tinea manuum + pedis → soles / palms + ~~feet~~ feet
Adult → ① Tinea cruris → jock itch
② Tinea barbae → beard and neck area
③ Tinea corporis Gladiatorum
- 4- Diagnosis → to distinguish dermatophytoses from other skin infection (psoriasis)
↳ KOH mount ② fluoresce UV. ③ culture when KOH Negative
- 5- treatment → allylamines, Azoles, tolnaftate
↳ systemic therapy → Nail bed and Non-Extensive → ① Griseofulvin
② itraconazole
③ terbinafine
↳ No vaccine.

Microbiology 3-

* Cutaneous leishmaniasis *

1- vector → sand flies, type → Trypanosomes (single flagellae)

3- has 2 form → ① causing disease ② infectious motile.

4. 3 Form → ① visceral ② cutaneous ③ mucocutaneous

↳ ① → cutaneous :- long incubation (2-24 month)

in face + leg
↳ papules become necrotic and then pigmented scars.
↳ pass through painless ulcer.

② → mucocutaneous :- partial or total destruction of mucos mem.

Nose, Mouth

~~throat~~ throat

5- Most common types → L. tropics, L. Major.

6- Resolve after month / in poor sanitation country

7- May resemble other skin lesion → lymphagitis (due to water borne)

* sporotrichosis *

1- Dx → biopsy of skin cluster

2- show decrease (Reduce) in CBC.

3- Rx → local heat + (2-3) hours.

↳ Penta valent, pentamidine, Amphotericin, Oral miltefosine

20 → lesion well *

* SSSS *

1- In neonates, by toxin (exfoliation)

2- Biopsy with Frozen section is useful to distinguish btw TEN + SSSS

↳ So TEN Biopsy from stratum germinatum

SSSS Biopsy from stratum corneum.

3- due to hematologic spread of staph exotoxin. C_{156} C_{157} C_{158} C_{159}

4- Break Down of desmoglein-1 → (Anacantholysis) RTI + OMI C_{156} C_{157} C_{158} C_{159}

5- signs → ① Nikolsky's sign that detect Anacantholysis

② flaccid blisters ③ mucos mem. spread.

④ Paper thin skin

6- Blood culture Are positive

7- Rx - ① systemic IV Antibiotic + ④ burn unit + ICU

② systemic steroid [if Patient doesn't look toxic].

③ in sever cases → IV immunoglobulins + plasma pheresis.

⑧ TENs ① In Adult, Fatal

② IV- γ (gamma) globulin

Microbiology 4

* Necrotizing Fasciitis *

- 1- happened btw Fascia and deep subcutaneous
- 2- Fibrous band → prevent spread of infection.
- 3- Necrotizing fasciitis (GAS) + Gas gangrene → Anaerobic clostridia inf. induce bulla formation.
- 4- Symptoms →
 - ① Pain, tenderness, unexpected fever (early diagnosis)
 - ② Swelling → late stage
 - ③ Dark Red induration
 - ④ Bullae filled with blueish or purple fluid
 - ⑤ thrombosis
5. Most progressed symptoms → toxicity, shock, multi organ failure

6- Microbiology causes :-

(A) poly microbial [type 1 Necrotizing] (B) Type 2 Necrotizing

- causative Agent → Non GAS + mixed Anaerobic + Aerobic.
- Break in GIT + GUT → Extermitis
- Fournier's Gangrene (in genitalia) (perineal) ←
- causative Agent → GAS
- strains of MRSA → PVL toxin
- ↳ also cause Necrotizing pneumonia.
- sever toxicity → Renal impairment
- Myositis
- Presentation → Skin popping due to drug Abuse ←

7- other forms of Necrotizing fasciitis → complicate omphalitis that spread to Abdominal wall, flanks, chest wall ←

↳ Craniofacial Necrotizing Fasciitis → due to trauma + GAS

↳ cervical Necrotizing fasciitis → pharyngeal + dental

8- Dx → Clinical Findings

↳ ① soft tissue infection signs (Redness, ...)

② only seen in Y4 cases → fever, low PB, crepitation.

9- Rx → ① Clindamycin (anaerobic) ② Antipseudomonal OR (Ampicillin-sulbactam) G+ve

treatment ③ ciprofloxacin (G-ve)

[1+2+3] → 3 drug combo.

④ metronidazole / Clindamycin (G-ve + G+ve) ⑤ ceftazidime (Anaerobic)

[1+2] → 2 drug combo

* to cover MRSA → Vancomycin OR Linezolid

* hemorrhagic bullae → doxycycline

⑥ end with -penem → 1 drug combo.

10- surgical debridement → confirm the diagnosis + mainstay of therapy