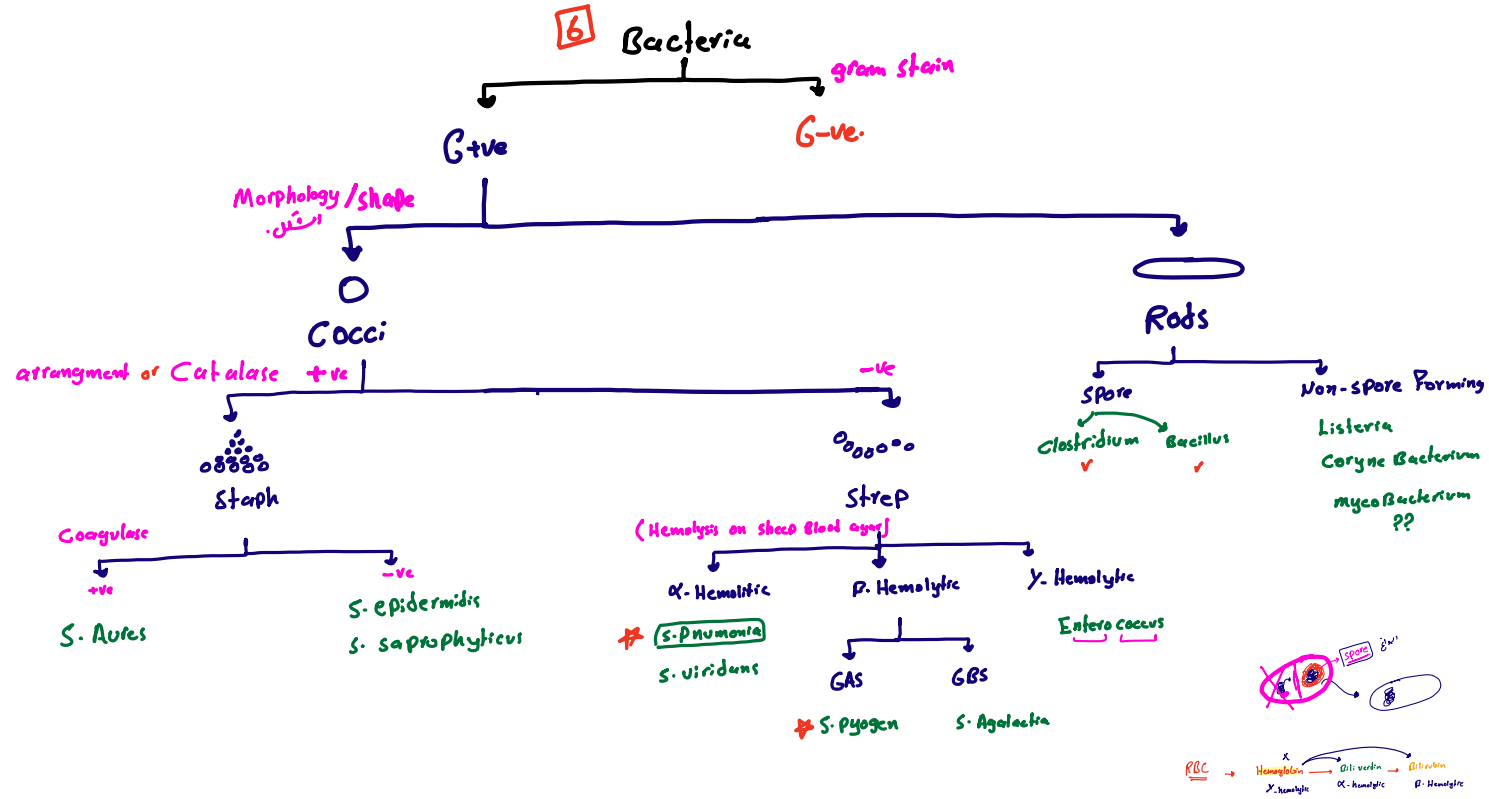
By:Mahmoud Melhem



* Staphylococcus Aureus:

Golden.

✓ → coagulase +ve →

✓ → Normal Flora in Skin & Nose

→ can Lead to:

Food poisoning ✓

Infection → Localized (Abcess) ✓ # mcc (Skin)
→ spreading
→ Necrotizing
→ systemic (osteomyelitis) ✓

* Staphylococcus Epidermis & saprophyticus:

✓ - Normal Flora on Skin

- can Lead to:
  Endocarditis , UTI

Mainly lead to UTI.

BOTH are Nosocomial (at Hospitals) and oppurtunistic.

BOTH Coagulase -ve.

* Streptococcus pyogens:

Pus

✓ - Coagulase -ve

✓ - Catalase -ve

✓ - β. Hemolytic (yellow)

✓ - Most serious of strep

- can Lead to:
  # Pharyngitis mcc

* Streptococcus pnumonica:

العطاس

α-Hemolytic (yellow) green

Lead to:
Pnumonia: Lung Inf.
Meningitis ✓
Bacteremia ✓

* Bacillus anthracis:

الجمرة الخبيثة

- Large cell , Central spores , Block shaped

* Bacillus Cereus:

- In Food (Rice)
- Mainly in Immunocompromised

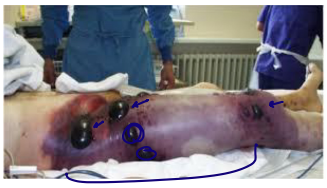
* Clostridium Difficile:

- Normal Flora in Colon
- Lead to:
  - Pseudomembranous colitis After Broad spectrum AB.
    (AB Associated colitis)
- Most common cause of Diarrhea in Hospital.

* Clostridium Perfiringes:

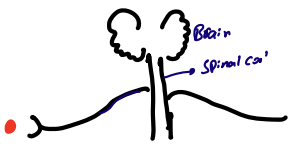
↳ Perforation

- wound ✓.
  - Gas gangerene = myonecrosis



* Clostridium Tetani:

- Found on Soil, GI Tract of animals
- ↑ with IV drug Abuser + Neonates ?
- Release Tetanospasmin → ↓↓ GABA & Glycin (Inhibitory Neuro Transmitter) → No Inhibition more activation → Spastic Paralysis ✓
  Jaw-lock



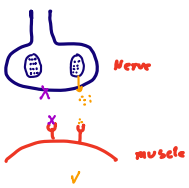
(retrograde Transport)

(CNS) (spares peripheral)

* Clostridium Bottulinum:

Botlox

- Poor food preservation, Honey.
- toxin, prevent release of ACh
  ∴ No contraction



- Flaccid paralysis.

(PNS)

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7 G-ve Bacteria

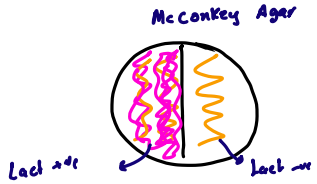
Shape

- Diplococci:
  - Neisseria
    - Maltose Fermentation
      - -ve: N. Gonorrhoae
      - +ve: N. Meningitidis
  - (men eat Maltose) ✓
  - (aerobes)
- Cocco Bacilli:
  - Hemophilus Influnza
  - Bordetella Pertussis
  - Brucella
  - Pasturella
  - (Help Beautiful Bacteria Persist)
- Bacilli:
  - Lactose Fermenter
    - -ve (yellow) (5)
      - OX -ve
        - Non-H2S producing: Shigella, Yersinia
        - H2S producing: Salmonella, Proteus
      - OX +ve: Psudomonas
    - +ve (pink) (5) EKE +CS
      - Slow: CS — Citrobacter, Sirratia
      - Fast: EKE
        - Indole -ve: Klibsella, EnteroBacter
        - Indole +ve: E.coli
- Spiral / comma shaped
  - Vibrio -cholera
  - H.pylori
  - C.Jejuni

G-ve Bacilli

- EnteroBacteria ?
  - Lact +ve ✓
  - Lact -ve ✓
  - They Perment Glucose
  - All oxidase -ve
  - Facultative anaerobes
- Psudomonas: يحتاج O2
  - Dont Perment carbohydrates ✓
  - oxidase +ve ✓
  - aerobes ✓

Laclose Permenter ?



* Diplococci:

* Neisseria:
- Diplococci
- Aerobic
- Intracellular
- 2 types:

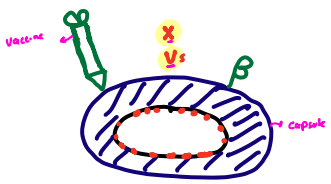
① N. Gonorrhea : STD

② N. Meningitidis: Meningitis

* CoccoBacillus

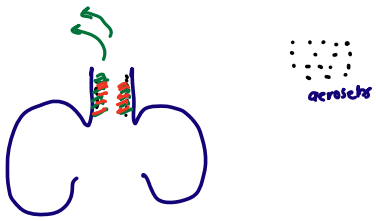
① Haemophilus Influenza: Blood loving Bacteria

- Fastidous
- require Factor V + X. (NAD)
- Lead to:
  Bacterial Meningitis in children
  (3month - 6years)
- capsulated
- Vaccine are Available.
- A → F. B is most significant



② Bortodella Pertusis: السعال الديكي

- Bacteria Inhaled in Aerosole
↓
Multiply in epithelial cells
↓
Build up of thick-Mucus
↓
whooping cough / pertusis.



[3] Brucella:

→ Ingestion of contaminated milk or cheese.
↓
Brucellosis.

→ Clinical: Ranges from subclinical → chronic

* Bacilli:

① Shigella:

- Highly Infectious ?
(Need 100-200 microorganism to cause Disease)
↓
low Infective Dose
- Lead to:
Diarrhea & Dysentry (Bloody diarrhea with mucus)
- طريقة الانتقال Feco-orally.

[2] Psudomonads:

- Oxidase +ve, aerobes
- Found in: Moist enviroment ✓
Hospitals ✓
- Oppurtunistic

Extra: TAB resistance

Comma Shaped:

① Vibrio:

- * Vibrio cholera
- طريقة الانتقال contaminated water & food.
- Lead to:
watery diarrhea (rice-water)

② Helicobacter Pybri (H.Pylosi):

Pylorus

- Highly Motile
- Colonize Stomach ?

Uric Acid —Urease→ NH_3 (Alkaline)

- Lead to: Peptic ulcer ?? by smoking, coffee
- Diagnosis:
① Blood test
② Stool test
③ Breath test
* ④ upper endoscopy (Accurate) ✓