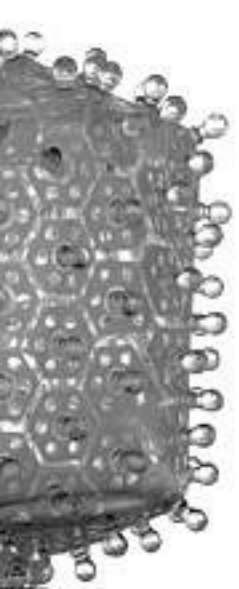

Microbiology

Slide #: 7

Dr Name: Asem Shehabi

Sheet ☐ Slide ■

Mrym Ghuloom

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Gram-negative coccobacilli and cocci

Prof. Dr. Asem Shehabi and
Dr. Suzan Matar

1-Haemophilus Group

- Gram-negative cocco/large- thin bacilli.. Micro-aerophilic.. Requires growth factors (**V- X-factors**)..Red blood cells, Grow around hemolytic *Staphylococcus*, Rapid autolysis outside body
- **Normal Flora**.. Human Upper Respt. Tract.. Many species Haemophilus.. opportunistic pathogens Virulence factors.. Endotoxin & Capsule.. localized-invasive infections
- **H. influnzae type b**: Most common pathogenic species.. capsulated .. Causing Localized and Invasive Infect.. Sore Throat, Otitis Media, Sinusitis, Conjunctivitis, Brochopneumonia, Septicemia & Meningitis.. Children 6 Months-5 Years.. Antibiotics.

Lab Diagnosis: Blood, CSF & Others Culture.. Chocolate & blood agar included X & V Factors.. Hib-Vaccine.. Infants > 2 months old.

Haemophilus colonies growth surrounding Stapholococcus colonies

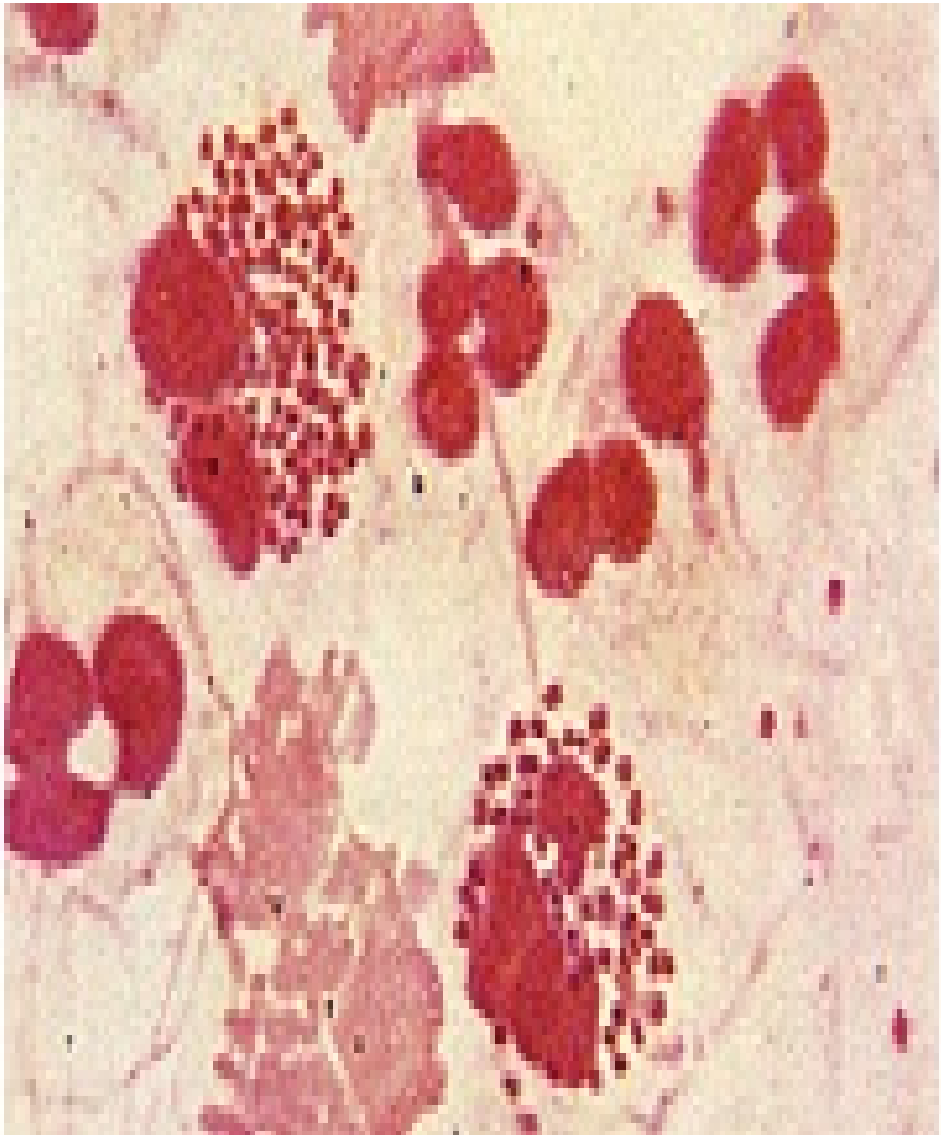
Bordetella pertussis

- Gram-negative coccbacilli.. Aerobic.. Highly human Communicable agent.. Droplets Infection..close contact.. Bacteria attach to lower respiratory tract mucosa., Incub. period 7-10 days..Destruction tracheal ciliated cells by releasing Pertussis toxin (cytotoxin) . **Pertussis** start by mild coughing, sneezing..intense cough (Whooping / paroxysmal cough), vomiting, red eyes ..Infants & Children more susceptible to infection than adults, high fatal in Adults than in children. Antibiotics are useful in first stage. **Prevention:** DTP vaccine within first 2 -4-6 Ms
- **Diagnosis**: Clinical signs and Symptoms.. Less Culture & Lab tests.

Neisseria & Moraxella Groups

- **Neisseria** spp., **Moraxella spp.:** Gram-negative diplococci, Facultative anaerobes, Oxidase & Catalase+ve, Highly susceptible to Low/High Tempt… Dryness, Rapid Autolysis .. Room Tempt. Normal Flora Respiratory Tract.. Rare Non-pathogens (N. sicca, N. flava, M. Mucosa).. Common Pathogens.. ***N. gonorrhea, N. meningitidites***.
- 1-**N.gonorrhea:** Pili, IgA-Protease, LPS, Colonization Mucosa.. Invasion..Inflammation.. Genitourinary Tract, Rectum, Throat, Sexually Transmitted Diseases.. Acute/Subacute/Asymptomatic Infections.. Uretral/Vaginal Discharge, Urethritis, Cervicitis, Salpengitis.. Common Reinfection..

Neisseria Gramstain-Intracellular Presence in Urethral Discharge



Follow/2

- **Lab diagnosis**: Direct Gram-stain.. Intracellular G-ve diplococci in WBCs (pus cells).. Rapid Culture in Blood/chocolate Agar.. Antibiotics, No Vaccine.

2- N. meningitidites: Capsular Polysaccharides, LPS, IgA-Protease, Serotypes A,B,C, Invasive, Exogenous Infect. Respt.Tract.. Sore Throat.. Septicemia.. Meningitis.. Acute disease with high Mortality without treatment. Children (6-Months-5 years) more susceptible than adults. Epidemic outbreaks.

- Protective Vaccine is available.
- **3- M. catarrhalis:** Part of normal Respiratory tract.. Opportunistic pathogen.. Pneumonia.. Rarely Septicemia.. Compromised Lung/heavy smokers.
- **Lab Diagnosis**: Direct-Gram-stain, Culture Blood/ chocolate Agar, Biochemical tests, Antibiotics,