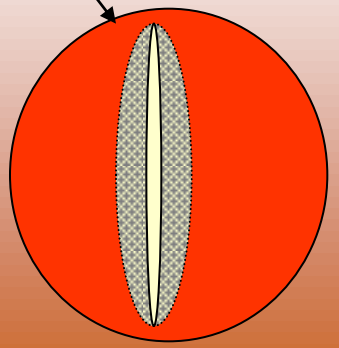
Haemophilus

Morphology: G- pleomorfous rods, facultative anaerobe

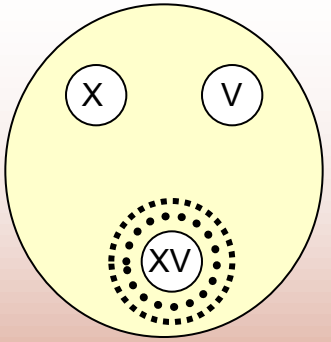
Cultivation:

- Is dependent on growth factors haemin (X) and NAD (V)
- They are not able to grow on BA, growth factors must be released by *S. aureus* and haemophilus grows around *S. aureus* (satellite phenomenon)
- Grows also on Levinthal agar in little transparent colonies or on choccolate agar (CHA)



H. influenzae

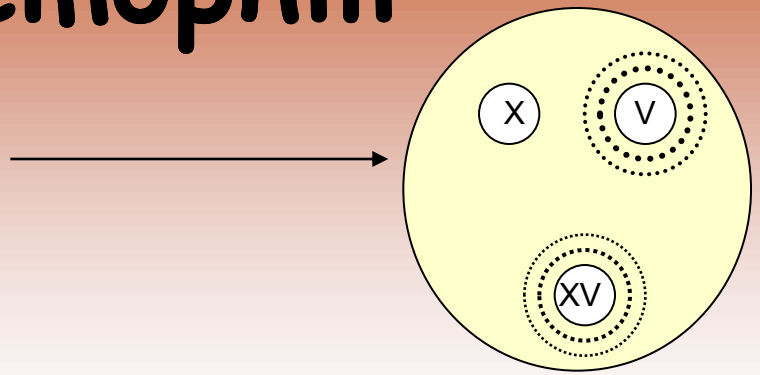
Biochemistry: indol formation, urease, ornitindekarboxylase
Factors of virulence: capsule - 6 serotypes (a-f), the highest pathogenicity b
Pathogenicity:
Capsuled strains:
serotype b: faryngitis, sinusitis, otitis, epiglotitis (children 2-5 years), meningitis
other serotypes: faryngitis, pneumonia, sinusitis
notcapsuled strains: light respiratory infections
Therapy: amoxicillin, co-amoxicillin, cotrimoxazol, macrolides, cefalosporins
In epiglotitis: sitting + wet cold air
Meningitis: cefalosporins 3rd generation
Prevention: vaccination of children



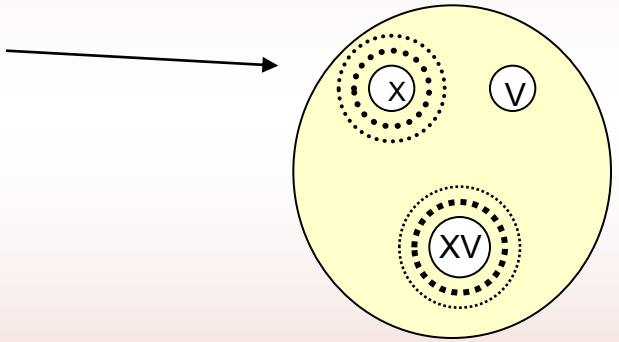
Cultivation and detection: CHA,
satellite phenomenon on BA in presence of *S. aureus*,
depression of normal flora via bacitracin,
Detection of a type due to growth factors (XV factor)/porfyrine test
latex. agglutination (cerobrospinal fluid, serotype detection)

Other haemophili

H. parainfluenzae
Light resp. infections, needs factor V



H. aphrophilus
Causes light resp. infections, needs factor X



H. ducreyi
Causes ulcus molle

H*aemophilus parainfluenzae, h.aphrophilus, h. paraaphrophilus* (+**A**ctinobacilus+ **C**ardiobacterium+**E**ikenella+**K**ingela) can cause endocarditis - **HACEK**

Pasteurella multocida

Morphology: G- pleomorfous rods, facultative anaerobe

Cultivation: on BA forms little transparent watery colonies, Levinthal agar,CHA

Pathogenicity: light respiratory infections, wound infections

Therapy: ampicillin,fluoroquinolons, tetracyclin

! Dg. sign: resistance to vancomycin, susceptibility to pnc

Cultivation and diagnosis: CHA, BA, biochemistry

Epidemiology: present in mouth of animals, often in wounds bitted by cat or dog.

Pseudomonas

P. aeruginosa

Microscopy: G-rods with capsule

Cultivation: on BA pearled shine colonies with haemolysis, various pigments, smells like yasmine

Biochemistry: oxidase +, catalase +

Factors of virulence: capsule, slime, enzymes, haemolysins

Pathogenicity: wound infections (in burns), urinary tract infections, nosocomial infections and sepsis in immunocompromised patients

Therapy: often multiresistant strains, antipseudomonade penicillins, cefalosporins of 3rd and 4th generation, carbapenems, aminoglycosides, fluoroquinolons

Lab. detection: direct - cultivation and microscopy, biochemistry

Other pseudomonades: biochemical detection, typical resistance to ATB

Burkholderia cepacia – colonisation of lungs *in* cystic fibrosis patients, urinary tract infections

Stenotrophomonas maltophilia – catheter sepsis,ventilatory pneumonias (VAP)

Other G-nonfermenting bacteria (biochemical identification)

Acinetobacter calcoaceticus/baumanii - oxidase negative, immobile, resistant, similar spectrum of diseases like *P. aeruginosa*