



Ophthalmia neonatorum




Dr. Njambi Ombaba

Outline

- Definition of ON
- Causative organisms
- Transmission & Risk factors
- Clinical presentation
- Diagnosis
- Management
- Prevention

Definition

- Neonatal conjunctivitis
- Conjunctivitis of the newborn
- Acute, mucopurulent infection occurring in the first 4 weeks of life from infected birth canal during delivery
- Affecting 1.6% to 12% of all newborns 
- Causes: bacteria, viruses or chemicals

Causes of ON

Bacteria

Commonest

Neisseria gonorrhoeae

Other Bacteria (30%)

Staphylococcus aureus

Streptococcus pneumoniae

Staphylococcus epidermidis

Pseudomonas aerogenosa

Chlamydia trachomatis

Viruses

Herpes simplex virus

Adenovirus

Chemicals

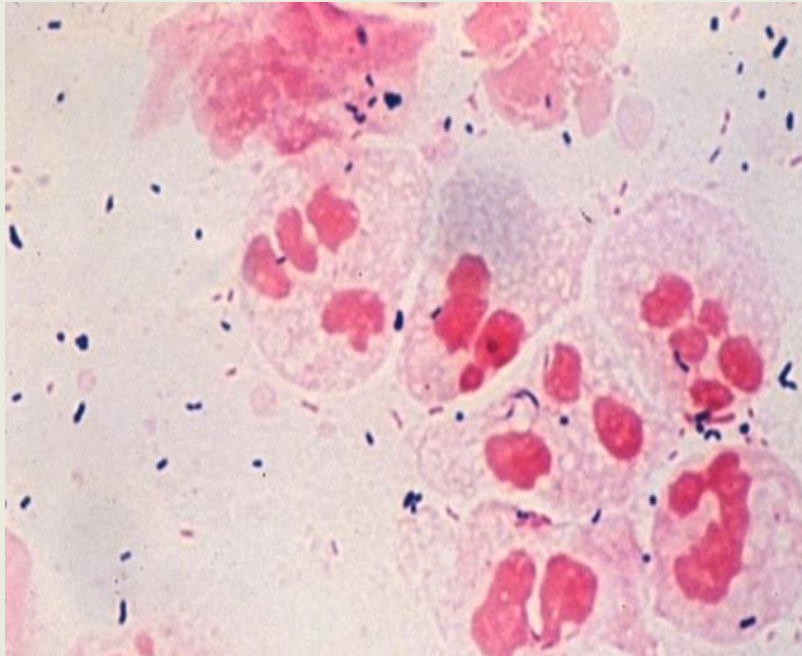
Silver nitrate

Organisms



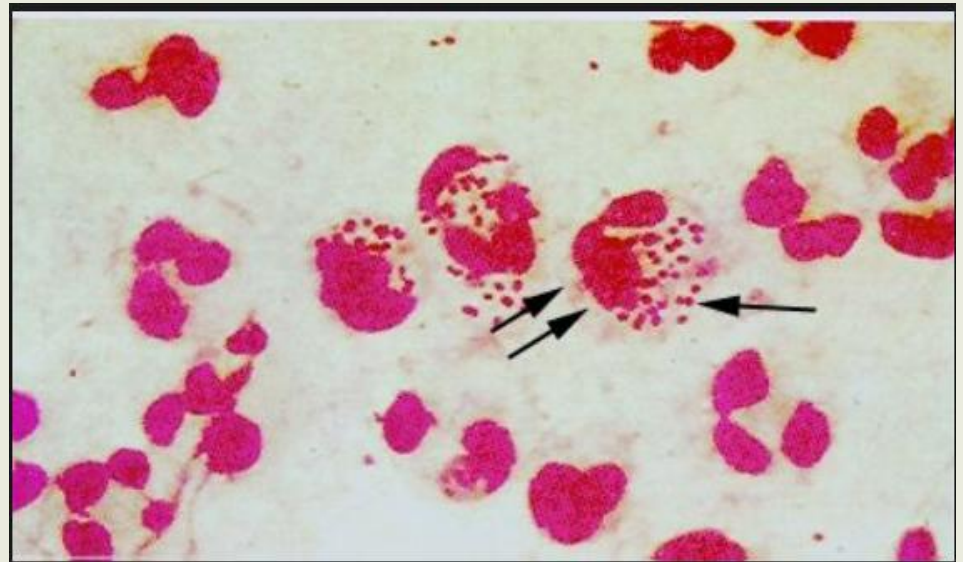
Chlamydia trachomatis

- Obligate intracellular parasite



Neisseria gonorrhoea

- Gram-negative diplococcus
- Most dangerous and virulent



Transmission

Transmission

- Genital ocular
- Genital hand ocular
- Contaminated fomites



Risk Factors

- Maternal genital infections
- Premature rupture of membranes
- Prolonged labour
- Low birth weight

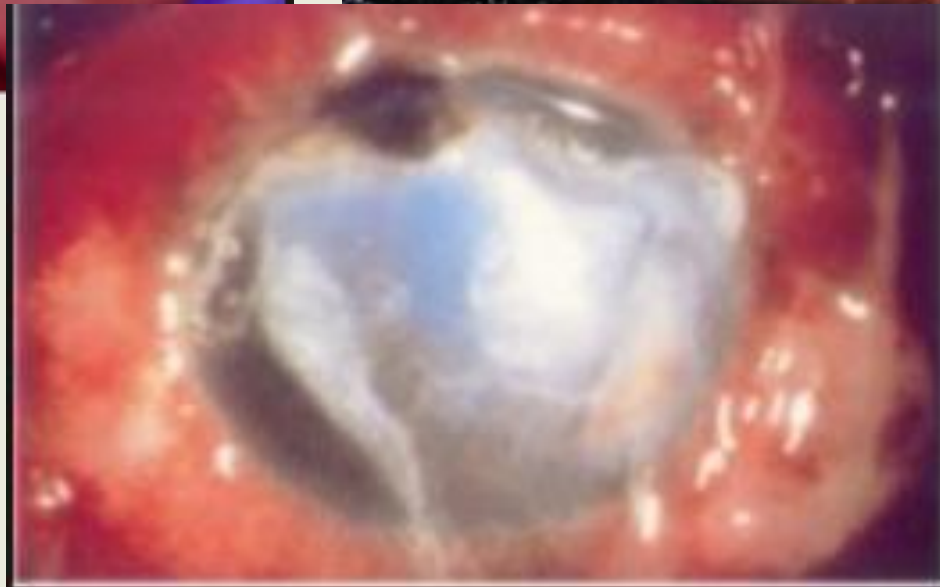
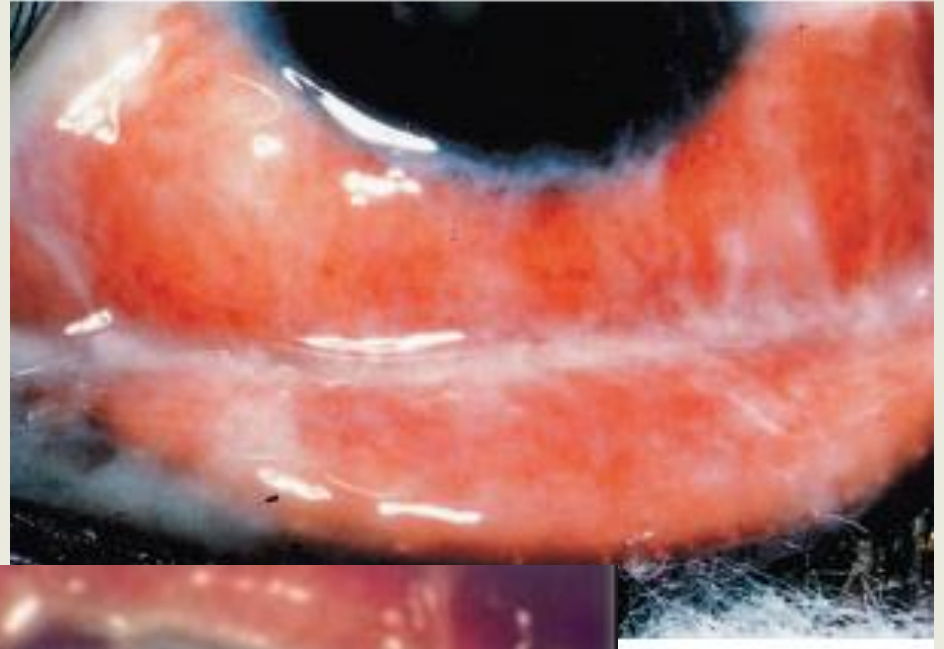
Presentation: Incubation period

	N. gonorrhoea	Chlamydia	Other bacteria	Silver nitrate	Viruses
Incubation Period	2-7 days	5-14 days	5-14 days	Occurs day one, lasts 2-4 days Resolves spontaneously	6-12 days (first 2 weeks)

Clinical presentation of gonococcal conjunctivitis

- Most severe
- The **classic presentation** is severe bilateral purulent conjunctivitis.
- Corneal involvement, severe conjunctival chemosis, and diffuse opacification,
- Cornea perforation, endophthalmitis and blindness
- **Systemic manifestations** rhinitis, stomatitis, arthritis, meningitis, anorectal infection, and septicemia and death.

Gonococcal ON



Clinical presentation of chlamydial conjunctivitis

- Ranges mild hyperemia with scant mucoid discharge to eyelid swelling, chemosis, and pseudomembrane formation.
- **Systemic manifestation:** pneumonitis, otitis, and pharyngeal and rectal colonization.



Chlamydial ON



Clinical presentation of neonatal conjunctivitis due to other agents

- Usually milder.
- **Herpes simplex keratoconjunctivitis**
- infants with generalized herpes simplex infections,
- Corneal epithelial involvement or vesicles on the periocular skin.
- **Systemic complications:** encephalitis.



HSV ON



Chemical conjunctivitis

- Mild with transient tearing and conjunctival injection
- Starts on day one
- Resolves spontaneously within 2-4 days

Laboratory tests


Gram stain or Giemsa stain ; conjunctival scraping/swab

Culture

- chocolate agar and/or Thayer-Martin for *N gonorrhoeae*
- blood agar for other bacteria
- corneal epithelial cells for HSV if cornea is involved

PCR Conjunctival scraping for polymerase chain reaction assay : chlamydia and gonorrhoea , HSV

Treatment

- **Medical Emergency / clinical diagnosis**
- Prompt treatment of gonococcal conjunctivitis
 - penetrate an intact corneal epithelium and rapidly cause corneal ulceration.
- **Treat as gonococcal conjunctivitis until culture results are available**
- Topical and systemic IV/ IM antibiotics (3rd generation cepharosporin) 50mg/kg stat
- Frequent eye irrigation 

Chlamydial conjunctivitis

- Systemic treatment necessary -
 - significant risk for life-threatening pneumonia
- Drug of choice oral Erythromycin ((50 mg/kg/d divided qid) for 14 days.)
- Topical erythromycin/ tetracyclin

Treatment of Neonatal Herpetic Conjunctivitis

- Systemic acyclovir
- Dose is 60 mg/kg/day IV divided tid 14 - 21days,
- Infants with neonatal HSV keratitis – topical acyclovir
- Prophylactic topical antibiotics

Evaluation for other sexually transmitted

transmitted

- Syphilis and HIV
- Newborn, the mother and her sexual partner(s)



Prophylaxis

- Topical 0.5% erythromycin
- 1% tetracyclin
- Povidone-iodine solution (2.5%)
- Silver nitrate
- Proper labour monitoring



Summary



- Ocular emergency
- Usually gonococcal
- Topical & systemic medication
- Ocular & systemic complications
- Potentially life threatening

