

Agents of Eye Infections

Eye infections can manifest as mild damage of conjunctiva and eyelid, or even as endangering corneal, eyeball and orbital infections. Most infectious agents manifest in eye infections only after trauma in the area (even a small trauma, e.g. risk when using contact lenses), some pathogens penetrate the intact cornea (pneumococci, gonococci, listeria, viruses).



Chlamydial conjunctivitis

Diagnostics

- When taking smears from the conjunctiva for bacteriological examination, it is also necessary to make a microscope slide coating.
- **Suspected conjunctivitis** - wipe the conjunctival sac with a swab moistened with saline, make a slide for microscopy and transfer the swab to the culture medium.
- **Suspected chlamydial infection** - conjunctiva or cornea scraping, slide for microscopy

Infectious agents

Conjunctivitis: adenoviruses, enteroviruses, herpes simplex virus, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, *Moraxella lacunata*, *Chlamydia trachomatis*, *Neisseria gonorrhoeae*.

Eyelid inflammation: *Staphylococcus aureus*, *Moraxella lacunata*, herpes simplex virus.

Stye (hordeolum): *Staphylococcus aureus*.

Corneal inflammation:

- viral agents - herpes simplex virus, varicella zoster virus, adenoviruses;
- bacterial (ulcus corneae): *Pseudomonas aeruginosa* (common in contact lenses biofilm), *Staphylococcus aureus*;
- fungal post-traumatic keratitis: opportunistic pathogenic fungi of the genera *Fusarium*, *Aspergillus*, yeasts;
- parasitic keratitis: *Acanthamoeba*;
- chronic keratoconjunctivitis: *Chlamydia trachomatis*, *Staphylococcus aureus*, non-tuberculous mycobacteria, *Nocardia*, fungal organisms.

Eye herpetic diseases:

- associated with primary or recurrent infection - may have various forms;
- anterior segment inflammation: eyelids (blepharitis), conjunctiva (conjunctivitis), cornea (keratitis), sclera and episclera (scleritis and episcleritis), iris (iritis), if they also affect the ciliary body - iridocyclitis;
- posterior segment inflammation: inflammation of the vitreous (vitritis), choroid (choroiditis), choroid and retina (chorioretinitis), retina (retinitis), vascular (vasculitis) and nerves (neuritis);
- inflammations may combine or accompany each other.

Therapy

According to the detected infectious agent, administer antibiotics, antivirals, antifungals or antiparasitics.

Links

References

- VOTAVA, Miroslav, et al. *General medical microbiology*. 2. edition. Brno : Neptun, 2005. 0 pp. ISBN 80-86850-00-5.
- JULÁK, Jaroslav. *Introduction to medical bacteriology*. 1. edition. Prague : Karolinum, 2006. ISBN 8024612704.