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## Mixt-infections and inflammatory opthalmological diseases: Clinical and laboratory observations

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**Statement of the Problem:** In recent years, doctors of all specialties, including ophthalmologists face the problem of mixed infections. Recurrent inflammation of eye tissues is often the result of infection by several types of pathogens.

**Methodology & Theoretical Orientation:** Thirty four patients (14 men and 20 women) with various forms of inflammatory ophthalmological diseases and a positive result of the determination of the genetic material (DNA) of mycoplasmas (*Mycoplasma hominis, Ureaplasma urealyticum*) and/or *Chlamydia (Chlamydia trachomatis*) in tear fluid and/or urine by polymerase chain reaction (PCR) were followed-up for the period from 2013 to 2016. All patients were examined for the presence of DNA of the herpes viruses, adenoviruses and enteroviruses in biological fluids. After consultations of related professionals all patients received local and systemic (antibacterial and antiviral) therapy, after which monitoring laboratory tests were performed.

**Findings:** Among the clinical forms dominated inflammation of anterior segment (conjunctiva, cornea, anterior vascular tract) - 76%. In most patients, *mycoplasmas* and/or *chlamydia* formed associations with the herpes viruses (n=19; 56%); only bacterial DNA (Mycoplasma and/or Chlamydia) was detected in 12 cases (35%). In 4 cases *Mycoplasma* and/or *Chlamydia* DNA was detected in tear fluid; in urine - in 19 patients; in 10 cases –in both secrets. The appointment of local and systemic causal treatment resulted in relief of the complaints and symptoms, and was also accompanied by negative results of the control laboratory tests.

**Conclusion & Significance:** More than a half of the patients revealed concomitant viral-bacterial infection (22 cases). The production of bacterial/viral DNA in different biological secrets by PCR method reflects the systemic nature of the infection process, which requires obligate involvement of related specialists (dermatologists, urologists, gynecologists).

**Recent publications:**

1. Abdelfattah M M, Khattab R A, Mahran M H, Elborgy E S (2016) Evaluation of patients with dry eye disease for conjunctival *Chlamydia trachomatis and Ureaplasma urealyticum*. International Journal of Ophthalmology. 9(10):1457-1465.
2. Boiko E V, Pozniak A L, Maltsev DS, Suetov A A, Nuralova I V (2014) High frequency of latent conjunctival *C. trachomatis, M. hominis, and U. urealyticum* infections in young adults with dry eye disease. Journal of Ophthalmology. 2014:1-7 Doi: 10.1155/2014/154627.
3. Chernakova G M, Maychuk DYu, Semenova T B. Clinical manifestations, diagnostics and therapy of herpetic keratitis today: three facets of one problem. Rossijskij oftal'mologicheskij zhurnal. 2017;10(1) 90-97.
4. Vakhova E S, Krichevskaya G I, Yani E V, Svetlova E V (2014) Current aspects of Chlamydia trachomatis infection of the anterior eye segment: pathogenesis, clinical forms, laboratory diagnosis, treatment. Rossijskij oftal'mologicheskij zhurnal. 2014; 7(4):5-11

### Biography

Galina Chernakova has been studying the problems of eye infections for more than 15 years, has several publications in this field. She is engaged in the development and implementation of modern methodological approaches to accurate laboratory diagnosis (PCR), the development of treatment algorithms, ways to monitor the effectiveness of therapy schemes. She is the Associate Professor in the Department of Ophthalmology and the Opinion-Speaker.

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