



ISSN 2181-0664

Doi Journal 10.26739/2181-0664

ЎЗБЕК ТИББИЁТ ЖУРНАЛИ

3 ЖИЛД, 1 СОН

УЗБЕКСКИЙ МЕДИЦИНСКИЙ ЖУРНАЛ
ТОМ 3, НОМЕР 1

UZBEK MEDICAL JOURNAL
VOLUME 3, ISSUE 1



ТОШКЕНТ-2022

Impact Factor: 4.9

ISSN: 2181-0664
DOI: 10.26739/2181-0664
www.tadqiqot.uz

UZBEK MEDICAL JOURNAL

Volume 3, Issue 1



2022



Kumri Islamovna Narzikulova

Doctor of Medical Sciences, Associate Professor
Department of ophthalmology
Tashkent Medical Academy, Tashkent. Uzbekistan
kumri78@mail.ru


Saryarkhon Akmaljon ugli Yuldashov

Master Student Department of ophthalmology
Tashkent Medical Academy, Tashkent. Uzbekistan
dr.sarvar.2020@mail.ru

Amaliya Sardorovna Xhusainova

Master Student Department of ophthalmology
Tashkent Medical Academy, Tashkent. Uzbekistan
dr.xusainova.2022@mail.ru

EVALUATION OF CLINICAL EFFICIENCY OF CINAREX EYE DROP IN BACTERIAL CONJUNCTIVITIS

 <http://dx.doi.org/10.5281/zenodo.0000000>

ABSTRACT

Ophthalmologically potential pathologies are among the pathologies with a high prevalence of infectious inflammatory diseases of the eye, frequent recurrence, sometimes chronic and leading to severe impairment of visual function. The emergence of new antibacterial agents opens up a wide range of possibilities for the effective treatment of bacterial eye diseases and preventing their serious complications. [3,4,7,10]. Acute bacterial conjunctivitis is an infectious inflammation of the conjunctiva caused by gram-positive or gram-negative bacteria. In this case, the patients suffered from photophobia, tears, mucous-purulent discharge, swelling of the conjunctiva and hyperemia. [8].

Keywords: bacterial conjunctivitis, Cinarex eye drop (tobramycin), drug-resistant bacteria, clinical cure, drug of choice.

Кумри Исламовна Нарзикулова

Д.м.н., доцент кафедры офтальмологии
Ташкентская медицинская академия,
Ташкент. Узбекистан, kumri78@mail.ru

Сарвархон Акмалжон угли Юлдашов

Студент магистратуры,
Кафедра офтальмологии.

Ташкентская медицинская академия,
Ташкент. Узбекистан, dr.sarvar.2020@mail.ru

Амалия Сардоровна Хусайнова

Студент магистратуры.

1. Kamilov Kh.M., Khamraeva G.Kh., Ismailova D.F. MODERN VIEWS ON THE DIAGNOSIS AND TREATMENT OF PATIENTS WITH KERATOCONUS (literature review).....	6
2. Khoshimov B.L., Allaberganov D.Sh. IMMUNOHISTOCHEMICAL CHANGES IN LYMPH NODES IN PREGNANT WOMEN WHO DIED OF COVID-19.....	12
3. Khammetova F.I., Salaeva M., Turayev I.A. MODERN DIAGNOSTICS OF JOINT DAMAGE IN PATIENTS WITH REACTIVE ARTHRITIS.....	17
4. Mukhsinova M.Kh., Khodjimetov Kh.A., Ilkhomova Kh.A., Abduvokhidov J.Z. CLINICAL AND DIAGNOSTIC FEATURES OF MARFAN SYNDROME IN CHILDREN.....	22
5. Tursunova D.A., Umarova L.N. CLINICAL-LABORATORY AND FERROKINETIC FEATURES IN CHILDREN WITH CHRONIC GLOMERULONEPHRITIS.....	33
6. Kadomtseva L.V., Polikarpova N.V., Mirzakarimova F.R., Daminov R.U. SIGNIFICANCE OF ANXIETY AND DEPRESSIVE DISORDERS IN THE DEVELOPMENT OF SEVERAL GASTROENTEROLOGICAL DISEASES. LITERATURE REVIEW.....	35
7. Saydaliyeva F.A., Shiltsova N.V., Sa'dullaev S. STUDY OF ANTI-INFLAMMATORY ACTIVITY OF LIQUID EXTRACT "HEMOSTAT".....	41
8. Turakulov N.Ch., Ishpulatov S.N., Subxonova M.G. CONSEQUENCES OF CHRONIC ALLERGIC DISEASE, VERNAL CATARRH AND WING-BODY.....	47
9. Narzikulova K.I., Yuldashov S. A., Khusainova A.S. EVALUATION OF CLINICAL EFFICIENCY OF CINAREX EYE DROP IN BACTERIAL CONJUNCTIVITIS.....	50
10. Mukhsinova M.Kh., Ubaydullaeva O.Kh., Sokhibova Y.B., Orfikov U.U. CLINICAL AND DIAGNOSTIC FEATURES OF POST-COVID SYNDROME IN CHILDREN.....	58

quite effective, the number of antibiotic-resistant strains of microorganisms is increasing as a result of their uncontrolled use it and this causes difficulty to treat pathologies of bacterial etiology of the eye [1,2,5,8]. Statistical findings of many scientific clinical studies show that microorganisms' transmission of genetic resistance mechanisms and properties to antibiotics to the next generation after the emergence of naturally occurring mutations and nosocomial (or intra hospital) strains. Therefore, the need for antibiotics with a broad spectrum of antimicrobial activity is always an urgent task. In particular, over the last 10 years, the individual resistance has been increasing of staphylococci and streptococci to aminoglycosides and first-generation fluoroquinolones [9,11]. Also, some clinical and epidemiological studies show the rise of resistance to the fourth generation of fluoroquinolones (e.g., moxifloxacin) by many microbes [12,13,15]. Such cases lead to an increase in some pathological clinical symptoms, the development of complications, and an increase in the duration of the disease and make more difficulties in the treatment of infectious eye diseases. Therefore, ophthalmological practice must create a new composition and highly effective topical instillation eye drop. In clinical practice, one of these drugs is Cinarex eye drop containing 3mg/ml, containing active substance tobramycin.

Introduction. A broad-spectrum antibiotic from the aminoglycoside group. At low concentrations, it acts bacteriostatically (blocks the 30S subunit of ribosomes and disrupts protein synthesis). It works bactericidal with higher concentrations (disrupts the function of cytoplasmic membranes, causing microbial cell death).

Highly active against Staphylococcus spp. (including Staphylococcus aureus, Staphylococcus epidermidis (coagulase-negative and coagulase-positive), as well as penicillin-resistant strains); Streptococcus spp. (including alpha-beta-hemolytic species, some non-hemolytic species, Streptococcus pneumoniae); Pseudomonas aeruginosa, Escherichia coli, Klebsiella pneumoniae, Enterobacter aerogenes, Proteus mirabilis (indole-negative) and indole-positive species Proteus spp., Haemophilus influenzae, Haemophilus aegyptius, Moraxella lacunata, Acinetobacter calcoaceticus (Herellea vaginacola), some species Neisseria spp. (including Neisseria gonorrhoeae).

The microorganisms that are sensitive to tobramycin:

Aerobic gram-positive microorganisms: Corynebacterium, Staphylococcus aureus (sensitive to methicillin); coagulase-negative strains of staphylococci (methicillin-sensitive, including penicillin-resistant strains).

Gram-negative bacteria: Acinetobacter types; Escherichia coli; Haemophilus influenzae; Klebsiella species; Moraxella species; Morganella morganii; Pseudomonas aeruginosa. Tobramycin-resistant microorganisms:

Aerobic gram-negative microorganisms: some species of Staphylococcus (which is resistant to methicillin up to 50%, Streptococcus pneumoniae and strains of group D streptococci).

The first table graph shows minimal inhibitory concentration (MIC) for tobramycin. The microorganisms are given that limit values of the minimum inhibitory concentrations of 8 mg/ml. The nature of resistance may vary geographically for the respective species of microorganisms, so it is important to have information about local resistant microorganisms, especially when treating severe infections.

Table 1.
Limitations of the minimum inhibitory concentrations of resistance of microorganisms to the drug tobramycin.

Microorganism	Minimal inhibitory concentration MIC (mg/ml)
Staphylococcus aureus	0.2
Streptococcus pyogenes	12.5
Streptococcus pneumoniae	25
Pseudomonas aeruginosa	0.6
Escherichia coli	1.2

Кафедра офтальмологии.
Ташкентская медицинская академия.
Ташкент. Узбекистан, dr.xusainova.2022@mail.ru

ОЦЕНКА КЛИНИЧЕСКОЙ ЭФФЕКТИВНОСТИ ГЛАЗНЫХ КАПЕЛЬ СИНЭРЕКС ПРИ БАКТЕРИАЛЬНОМ КОНЬЮНКТИВИТЕ

АННОТАЦИЯ

Офтальмологические потенциальные патологии относятся к числу патологий с высокой распространенностью инфекционно-воспалительных заболеваний глаз, частыми рецидивами, иногда хроническими и приводящими к тяжелым нарушениям зрительных функций. В свою очередь, появление новых антибактериальных средств открывает широкие возможности для эффективного лечения бактериальных заболеваний глаз и профилактики их тяжелых осложнений [3,4,7,10]. Острый бактериальный конъюнктивит — инфекционное воспаление конъюнктивы, вызываемое грамположительными или грамотрицательными бактериями. При этом больных беспокоили светобоязнь, слезотечение, слизисто-гнойные выделения, отек конъюнктивы и гиперемия. [8].

Ключевые слова: бактериальный конъюнктивит, глазные капли Синэрекс (тобрамицин), резистентный штамм, клиническое излечение, препарат выбора.

Kumri Islamovna Narzikulova
tibbiyot fanlari doktori, dotsent
Toshkent tibbiyot akademiyasi,
Oftalmologiya kafedrası

Toshkent. O'zbekiston, kumri78@mail.ru
Sarvarxon Akmaljon o'g'li Yuldashov
Toshkent tibbiyot akademiyasi

Oftalmologiya kafedrası magistranti.
Toshkent. O'zbekiston.
dr.sarvar.2020@mail.ru

Amaliya Sardorovna Xusainova
Toshkent tibbiyot akademiyasi
Oftalmologiya kafedrası magistranti. Toshkent.
O'zbekiston. dr.xusainova.2022@mail.ru

БАКТЕРИАЛ КОНЬЮНКТИВИТДА СИНЭРЕКС КО'З ТОМЧИСИНИНГ КЛИНИК САМАРАДОРЛИГИНИ БАХОЛАШ

АННОТАТСИYA

Ko'zning infeksiyoning turdagi yallig'lanish kasalliklari keng tarqalganligi, tez-tez qaytalanib turish xosligi, ba'zan surunkali shaklda davom etishi va ko'rish funksiyasini keskin buzulishiga olib kelishi bilan oftalmologik potensial xavfi yuqori patologiyalar qatoriga kiradi. O'z navbatida yangi antibakterial vositalarning paydo bo'lishi bakterial ko'z kasalliklarini samarali davolash va ularning og'ir asoratlarning oldini olish uchun keng imkoniyatlar ochadi. [3,4,7,10]. O'tkir bakterial kon'yunktivit - gram-musbat yoki gram-manfiy bakteriyalar kelib chiqaradigan ko'z shilliq qavatining yallig'lanishidir. Bunday holatda bemorni yuqori ifodalangan fotofobiya, ko'z yoshlanishi, shilliq-yiringli ajrama ajralishi, ko'z shilliq qavatining shishishi va giperemiyasi bezovta qiladi. [8].

Kalit so'zlar: bakterial kon'yunktivit, Synerex ko'z tomchilari (tobramitsin), chidamli shtamm, klinik davolash, tanlagan dori.

Actuality: Inflammatory diseases of the anterior eye segment are the most common ophthalmopathology, accounting for an average of 35-45% of outpatients and 75-85% of cases leading to temporary disability [5,14,16]. It is known that although modern antibacterial therapy is

3 point (diffuse hyperemia)
C- hypophagma - by the type of subconjunctival hemorrhage:
 0 points (a small number of points);
 1 point (multiple points OR only a sector of the conjunctive);
 2 points (distributed OR a full 360 degree of the eyeball)

D- by type of conjunctival follicular reaction:
 0 point (if not specified)
 1 point (weak)
 2 points (obviously)

Research results and their discussion. Before starting treatment patients the prevalence of microorganisms in the primary bacteriological culture was 91.4%, mainly were detected golden staphylococci (35.5%) and staphylococci epidermidis (30%) and the smear analysis was sterile only 8.6% of cases. The bacteriological examination of conjunctival smear was positive in 21.5% of cases after a course of therapy with the Cinarex eye drop: Staphylococcus haemolyticus, Streptococcus viridans and Enterococcus Brevis were not detected at all in the conjunctival secretion. (Table 3).

Table 3.
Results of bacteriological examination of conjunctival smear (test)

Microorganism	Before treatment		After treatment	
	Number of eyes (n)	%	Number of eyes (n)	%
Staphylococcus epidermidis	28	30	16	17.2
Staphylococcus aureus	33	35.5	4	4.3
Staphylococcus haemolyticus	7	7.5	0	0
Streptococcus viridans	12	13	0	0
Enterococcus brevis	5	5.4	0	0
Sterile grease	8	8.6	73	78.5

Before the treatment period, we found defects of different sizes on the corneal epithelial layer (in the optical and paraoptic zones) in 10 eyes based on fluorescein-stained biomicroscopy of the cornea revealed (Table 4). By the third day of therapy, the number of patients with defects in the corneal epithelium decreased to 3 patients (or 66.7%).

Table 4.
Dynamic change of the keratopathy during conservative treatment with Cinarex (3rd day's results)

Examination type (fluorescein staining of the conjunctiva)	Corneal epithelial defects			
	Before treatment		After treatment	
	dotte d	widde	dotte d	widde
Fluorescein sodium (Fluorescein Na +)	6	4	2	1

Klebsiella pneumoniae	0.8
Proteus mirabilis	1.2
Proteus Vulgaris	1.2
Proteus morganii	1.2
Proteus rettgeris	2.5
Haemophilus Neisseria	0.5
	5.0

Tobramycin is poorly absorbed through the cornea, and its concentration is almost indistinguishable in the intraocular fluid after local application of 0.3% solution. Tobramycin may lead to an increase in the concentration in the intraocular fluid by raising the frequency of application

The purpose of the research. Evaluation of the clinical and antimicrobial efficiency of Cinarex (tobramycin) eye drop in treating bacterial inflammatory diseases of the eye.

Research material and method. The study was conducted on 62 patients (93 eyes) with bacterial conjunctivitis. The age of the patients varied from 18 to 65 years, the average age was 36.2 ± 1.4 years. (Table 2)

Table 2.
distribution of the patients by age and gender.

Patient s' age	Men 40 /		Women 22 /		General	
	A	%	A	%	Ab	%
<20	6	15	2	9.1	8	12
20-29	1	25	6	27.	16	25
30-39	9	22.5	5	22.	14	22
40-49	8	20	6	27.	14	22
50	7	17.5	3	13.	10	16
Total	4	100	22	100	62	10

All patients received Cinarex 1 drop 2-4 times (2 times received if patients had mild clinical signs, 4 times received if patients had relatively strong clinical signs) for 5 days.

Before and after the course of therapy, smears were taken from the flora of the conjunctival membrane to test for sensitivity to antibiotics. A 3-point scale assessed signs of inflammation afterward. We performed general ophthalmologic examinations during the study: biomicroscopy, lateral illumination, and fluorescein testing. The following local clinical symptoms were observed in the dynamics ,

of the patients: swelling of the conjunctiva and eyelids; conjunctival hyperemia or subconjunctival hemorrhage; conjunctival folliculosis. A conditional symptomatic 3-point scale was also developed for a comprehensive assessment of the conjunctiva's inflammatory process and the disease's clinical course was graphically represented based on it. We also performed a diagnostic reassessment of inflammatory symptoms and corneal condition on the 5th and 7th days from the start of conservative therapy. The structure of this scale is as follows:

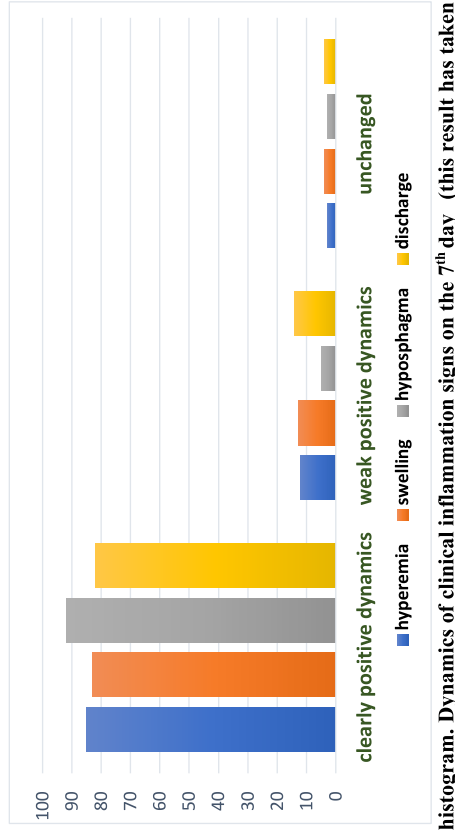
A- by the size of edema on the skin of the eyelids:

- 0 points (if not specified) ;
- 1 point (edema) ;
- 2 point (moderate swelling up to the edge of the eyelid) ;
- 3 point (strong swelling and chemosis of the conjunctiva) ;

B- by the degree of injection in the conjunctiva of the eyelid:

- 0 point (light pink or no change);
- 1 point (mild hyperemia);
- 2 point (moderate hyperemia);

against eye diseases' most common bacterial pathogens. Through a short-term course of drug treatment with the drug, Cinarex was confirmed such as clinical efficacy, the long-term effect of this drug and a positive effect on the regeneration of the corneal epithelium (**3rdhistogram**)



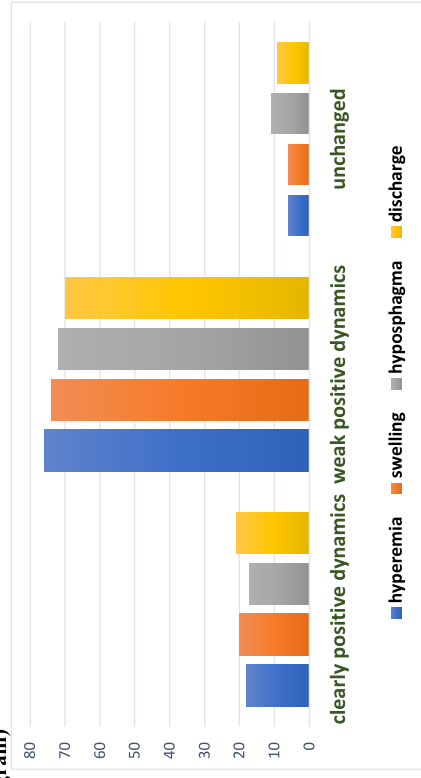
Conclusion.

1. The Cinarex eye drop containing 3mg/ml tobramycin has been found to have high clinical efficiency in treating bacterial inflammatory diseases of the anterior segment of the eye.
2. The Cinarex eye drop is recommended for use in practical ophthalmology as a drug of choice and as part of empirical therapy in pathologies of bacterial conjunctivitis.

References:

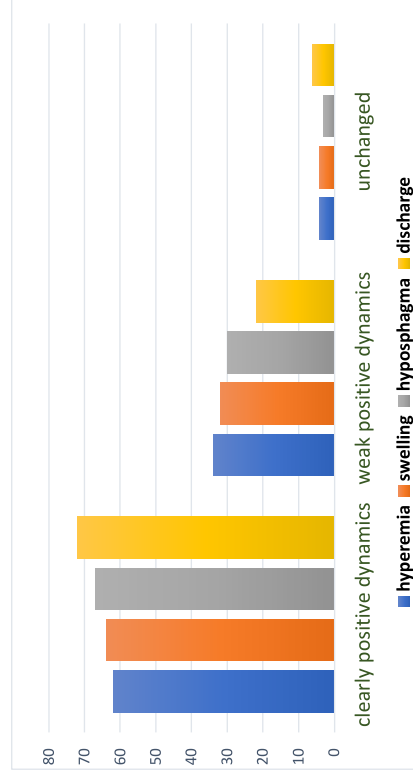
1. Abelson M., Protzko E., Shapiro A. et al. A randomized trial assessing the clinical efficacy and microbial eradication of 1% azithromycin ophthalmic solution vs tobramycin in adult and pediatric subjects with bacterial conjunctivitis. *Clin. Ophthalmol.* 2017; 1 (2): 177–82.
2. Freeman C.D., Quintiliani C.H., Nicolan S.P. Intracellular and extracellular penetration of tobramycin into inflammatory and noninflammatory fluid. *Antimicrob. Agents Chemother.* 2021; 38: 2449–51.
3. Hopkins S.J. Clinical toleration and safety of tobramycin in Adults and Children. *Rev. Contemp. Pharmacother.* 2018; 5: 383–9.
4. Notivol R., Amin D., Whitting A. et al. Prophylactic effectiveness of tobramycin-dexamethasone eye drops compared with tobramycin/vehicle eye drops in controlling post-surgical inflammation in cataract patients // *Clin Drug Invest.* 2004. Vol. 24, N.9. P. 523-533.
5. Sharma N. Fourth-generation fluoroquinolone resistant bacterial keratitis. *J. Cataract. Refract. Surg.* 2017; 33: 1488–90.
6. Sheikh A. K. Topical antibiotics for acute bacterial conjunctivitis Cochrane systematic review / A. K. Sheikh, A. F. Huwits // *Br. Gen. Pract.* – 2018. – Vol. 5, No 5. – P. 962-96
7. Wagner R.S. Kinetics of kill of bacterial conjunctivitis isolates with moxifloxacin, a fluoroquinolone, compared with the amino- glycosides tobramycin and gentamicin. *Clin. Ophthalmol.* 2019; 2(4): 41–5
8. ЕгоровЕ.А., АстаховЮ.С., Ставицкая Т.В. Офтальмофармакология. М.: ГЭОТАР-МЕД, 2004.463 с.
9. Каспаров А.А., Полунин Г.С., Маложен С.А. и др. Применение антибиотика Тобрекс в послеоперационном лечении больных, перенесших склеяную кератопластику с

The results were analyzed using statistical methods at the end of the research. The majority of patients reported an inflammatory reaction of the conjunctiva from the second day of treatment and a decrease in the amount of mucus-purulent discharge in the conjunctival cavity. On day 3 of treatment, the apparent positive dynamics averaged 18% (n= 17 eyes), the weak positive dynamics 73% (n=68 eyes), and the share of patients who were unchanged clinically 9% (n=8 eyes). (**1sthistogram**)



1st histogram. Dynamic changes in clinical signs on the 3rd day of treatment with Cinarex (tobramycin).

On the fifth day of treatment, clinical recovery was observed in 66% of patients (n=61 eyes) and weak positive dynamics in 25% (n=23 eyes), confirming the long-term effects of tobramycin. (**2nd histogram**)



2nd histogram. Dynamic change in clinical signs on the 5th day of treatment with Cinarex (tobramycin).

On day 7 (2 days after had stopped of Cinarex) conjunctival hyperemia 85% (n=79 eyes), edema 83% (n=77 eyes), hyposphagma 92% (n=86 eyes) and the disappearance of clinical symptomatic signs such as pathological conjunctival discharge was 82% (n=76 eyes). A study on the use of Cinarex (tobramycin) eye drops showed that tobramycin has high microbiological activity

- одномоментным трубчатым микродренированием // Новое в офтальмологии. 2004. № 2. С. 52-54.
10. Майчук Ю.Ф. Оптимизация фармакотерапии воспалительных болезней глазной поверхности. Российский офтальмологический журнал. 2008; 3: 18–25.
 11. Нарзикулова.К.И Разработка и клинико-экспериментальная оценка эффективности комплексного лечения воспалительных заболеваний глазной поверхности / Нарзикулова.К.И / канд. мед. наук, 2014. – Ташкент, 2014. – 18 с.
 12. Околов И.Н., Кафтырева Л.А. Резистентность коагулазаанега-тивных стафилококков, выделенных от больных с конъюнктивитами к антибактериальным препаратам //Новое в офтальмологии. 2006. № 4. С. 34-36.
 13. Самуйло Е.К., Козлов Р.С., Кречикова О.И. и др. Бактериальные инфекции глаза: структура возбудителей и их резистентность к антибиотикам: Материалы II Всероссийской научной конференции. СПб, 2009. С. 163-165.
 14. Сергиенко Н.М. и соавт. Профилактика послеоперационного эн-дофтальмита // Офтальмологический журнал. 2006. № 3 (II). С. 151-152.
 15. Современные методы диагностики и лечения конъюнктивитов / под ред. Ю.С. Астахова, И.А. Рикс. СПб.: Изд-во Санкт-Петербургского медицинского университета, 2007. 68 с.
 16. Ставицкая Т.В. Антимикробная терапия заболеваний органа зрения//Глаз. 2002. № 1. С. 12-19.