



INTERNATIONAL MEDICAL SCIENTIFIC JOURNAL

ART OF MEDICINE

Founder and Publisher **North American Academic Publishing Platforms**

Internet address: <http://artofmedicineimsj.us>

E-mail: info@artofmedicineimsj.us

11931 Barlow Pl Philadelphia, PA 19116, USA +1 (929) 266-0862

Chief Editor

Dr. Pascual Izquierdo-Egea

Prof. Dr. Francesco Albano

Dr. Catherine J. Andersen

Prof. Dr. Sandro Ardizzone

Dr. Dmitriy Atochin

Prof. Dr. Antonio Aversa

Prof. Dr. Tamam Bakchoul

Prof. Dr. Pierre-Grégoire Guinot

Prof. Dr. Rainer Haak

Prof. Henner Hanssen

Roy G. Smith

Department of Molecular and Cellular Biology/Department of Medicine

Baylor College of Medicine

Houston, TX 77030, USA

Kalpesh Patel, MD

The Sydney Kimmel Comprehensive Cancer Center

Johns Hopkins Medical Institutions

Baltimore, MD, 21231, USA

Roy G. Smith

Department of Molecular and Cellular Biology/Department of Medicine

Baylor College of Medicine

Houston, TX 77030, USA

Khamdamov Bakhtiyor Bukhara State Medical Institute

Khamdamova Mukhayokhon Bukhara State Medical Institute

Available at <https://www.bookwire.com/>

ISBN: [978-0-578-26510-0](https://www.isbn-international.org/product/9780578265100)

**THE IMPROVEMENT OF DIAGNOSTICS AND TREATMENT OF
OPHTHALMIC ROSACEA**

Abdullaev Sherzod Rahmatovich, Kamilov Khalidjan Mahamadjanovich,
Babahanova Dilaram Muhutdinovna, Maksudova Laylo Mashutovna
Center for Professional Development of Medical Workers,
Republic of Uzbekistan, Tashkent

Kamilov Khalidzhan Makhamadzhanovich

Place of employment: Center for the Development of Professional Qualifications of
Medical Workers

Address: Uzbekistan, Tashkent city, Yunus Abad district, st. Badamzar, 8 passage,
house 59

Position: Doctor of Medical Sciences, Professor, Head of Department

Phone: +998935950055

email : doclaylo@gmail.com

Abdullaev Sherzod Rakhmatovich

Place of employment: Center for the Development of Professional Qualifications of
Medical Workers

Address: Uzbekistan, Tashkent city, Chilonzor district, 20 A quarter, 13-9

Position: Candidate of Medical Sciences (PhD), Senior Lecturer, Department of
Ophthalmology

Phone: +998983128600

e-mail: sherzod.glaz@mail.ru

Babakhanova Dilaram Mukhutdinovna

Place of employment: Center for the Development of Professional Qualifications of
Medical Workers

Address: Uzbekistan, Tashkent city, Yunus Abad district, st. Badamzar, 8 passage,
building 59

Position: Candidate of Medical Sciences, Associate Professor of the Department of
Ophthalmology

Phone: +9989 03152334

E-mail: diloram_mb59@mail.ru

Maksudova Laylo Maskhutovna

Place of employment: Center for the Development of Professional Qualifications of
Medical Workers

Address: Uzbekistan, Tashkent city, Yunus Abad district, st. Badamzar, 8 passage,
building 59

Position: Doctor of Medical Sciences, Associate Professor of the Department of
Ophthalmology

Phone: +998935950055

E-mail: doclaylo@gmail.com

Abstract. The aim of the work is to study the variety of clinical manifestations, the effectiveness of the treatment of ophthalmic rosacea with the use of anti-bacterial, antiparasitic, desensitizing drugs of general and local action, lubricants. An important aspect is the elimination of chronic foci of infection, the treatment of concomitant diseases, and the restoration of the immune and endocrine status.

Keywords: ophthalmic rosacea, clinical types, diagnostics and treatment.

Relevance. Rosacea is a chronic polyetiological relapsing disease with a primary lesion of the facial skin. According to statistics, it occurs in about 10% of the world's population and up to 20% among dermatological diagnoses. The peak of occurrence in women is observed at 40-60 years, in men - at 75-80 years [12]. Clinical signs of facial skin lesions are varied: from mild erythema and telangiectasias, to severe skin thickening and an inflammatory papular-pustular rash resembling Acne vulgaris. According to the classification of the Expert Committee of the American National Rosacea Society (2002), primary and secondary signs of rosacea and its 4 clinical subtypes are distinguished: erythematotelangiectatic, papulopustular, phymatous, and ocular or ophthalmic rosacea [12]. Rosacea is a dermatological disease, in 28-72 % of patients occurring with damage to the organ of vision, more often in women. Ophthalmic rosacea is accompanied by physical and psychological discomfort of patients, affecting the social life of the patient, leading to anxiety and depression [14, 15]. Despite numerous studies, no algorithm of patient management, which determines the relevance of the problem of ophthalmic rosacea and the need to develop and pathogenetically oriented methods of treatment. At lung form x ophthalmic rosacea mild, nonspecific eyelid skin lesions took about allergic reaction. _ Damage to the conjunctiva and sclera in 20% of cases precedes manifestations on the skin [1, 2, 4, 6, 9, 10]. The chronic course of ophthalmic rosacea leads to visual impairment, cosmetic defects, emotional disorders, and social exclusion. [3, eight, 11, 12].

Purpose. To study clinical manifestations, features and course and effectiveness of treatment of patients with ophthalmic rosacea.

Material and methods. Under The observation included 91 patients with ophthalmic rosacea aged 20 to 79 years (mean age 44.22 ± 4.03). Women made up the absolute majority - 82 patients (90.1 %), men - 9 patients (9.9 %). In all cases, except for corneal ulcer and rosacea-uveitis, the process was bilateral. All patients were examined and treated at the Department of Ophthalmology Center RPKMR, Dermatovenereology and Cosmetology Center RPKMR, Republican Scientific and Practical Center for Dermatovenereology and Cosmetology, Republican Clinical Ophthalmological Hospital of the Ministry of Health of the Republic of Uzbekistan and at the Dialab clinic medical service. The research methods included: history taking, external examination, visometry with correction, autorefractometry, perimetry, biomicroscopy, non-contact tonometry, ophthalmoscopy, A and B scanning, Norn test, Schirmer tests and the LacryDiag eye surface analyzer to assess the function of meibomian glands. Patients were consulted by a

dermatovenereologist if necessary, other specialists: gastroenterologist, therapist, immunologist, gynecologist, neuropathologist and otorhinolaryngologist.

Laboratory methods: general analysis of blood and urine, blood biochemistry, microscopy of eyelashes and scrapings from the skin of the face for demodicosis, scrapings from the conjunctiva, immunogram of blood and tears, stool analysis.

Results and discussion. Clinical manifestations of ophthalmic rosacea in patients were diverse: from superficial eye lesions in the form of blepharitis, conjunctivitis, chalazion, to more severe - uveitis, episcleritis, scleritis, keratitis, corneal ulcers, accompanied by a significant loss of visual functions. In 78 patients (85.7%), skin manifestations of rosacea preceded or appeared simultaneously with ocular manifestations. In 13 patients (14.3 %), eye symptoms appeared earlier than skin symptoms. Dermatological symptoms manifested as primary signs: transient local erythema, either “shamefulness” erythema or persistent erythema (persistent redness of the skin of the face), red papules, pustules, formation of phymatous nodes (Fig. 1) , telangiectasias. Secondary signs manifested as a feeling of heat, burning, swelling, peeling and dryness of the skin in the central part of the face. Among all the pathologies we often meet oh appeared - rosacea-blepharoconjunctivitis, accompanied by frequent styes and chalazion, and its phymatous (hypertrophic) subtype is characterized by the most severe course, manifested by thickening and pronounced tuberosity of the skin of the eyelids and pineal formations on them (blepharophimosis). In patients with blepharoconjunctivitis, frequent recurrences of stye and chalazion were observed. Microscopic examination of eyelash roots revealed a mite of the genus *Demodex* in 89% of cases. The next most frequent lesion is the cornea: its lesions in the form of keratitis and ulcers account for 10.5% and 4.8%, respectively (Table 1).

Tab. one

The frequency of occurrence of nosological forms of ophthalmic rosacea depending on the sex of patients

Nosology	Men		Women		Total number of eyes /(%)
	Qty	(%)	Qty	(%)	
Rosacea-blepharoconjunctivitis and chalazion	7	7.7	65*	71.4	72/79.1
Rosacea scleritis and episcleritis	one	1.1	5*	5.5	6/6.6
Rosacea-keratitis	one	1.1	6*	6.6	7/7.7
Rosacea - corneal ulcers	-	-	four*	4.4	4/4.4
Rosacea-uveitis	-	-	2*	2.2	2/2.2
Total Patients	9	9.9	82	90.1	91/100

*Note: Significance of differences ($p < 0.05$) in comparison of indicators between men and women.

These patients had the most common and one of the first sign of ophthalmic rosacea - "dry eye syndrome" of varying severity due to blockage of the meibomian glands by mites and their waste products and, as a result, their dysfunction, manifested by tear film instability, lipid deficiency in the precorneal film. Hypofunction of the meibomian glands is manifested by changes in the cornea in the form of its xerosis, which is detected when lyssamine blue and fluorescein are instilled by staining the cornea. In more severe cases, keratitis develops, followed by ulceration and corneal leukoma (Fig. 2).



Rice. 1. Patient B.M., 78 years old. Hypertrophic type of blepharoconjunctivitis (blepharophimosis, rhinophyma).



Rice. 2. Patient K.M., 39 years old. OU - corneal thorn after keratitis with ulceration. Treatment of patients with various clinical forms of ophthalmic rosacea was carried out jointly with dermatologists, according to the standards of examination and treatment in dermatovenereology (2017) and clinical guidelines (protocols) for rosacea (2008), approved by the Ministry of Health of the Republic of Uzbekistan. Therapeutic measures were carried out against the background of daily adequate and complete care for the affected skin, aimed at restoring its protective functions. Particular importance was attached to the identification and exclusion of concomitant

factors that increase the severity of the condition: exposure to weather conditions, the use of spicy foods and drinks, alcohol, excessive eating. For the safety of the skin, we recommend the use of sunscreen. In the standard treatment of ophthalmic rosacea, local and systemic drugs are used. Systemic therapy included Metronidazole (Trichopol tablets 0.25 4 times a day for 10-15 days), a tetracycline antibiotic (Doxycycline), angioprotectors, sedatives, vitamins (Aevit and group B).

For mild or moderate severity, complex treatment was prescribed, including treatment of the skin with Metronidazole gel, which was combined with a short course of oral antibacterial drugs Doxycycline. All patients according to indications in the form of anti-inflammatory, antibacterial, desensitizing agents, immunomodulators, vitamins, drugs that improve metabolism, and mydriatics.

In the treatment of demodicosis, in most cases of concomitant ophthalmic rosacea, the following groups of drugs are mainly used: anti-inflammatory, antibacterial, desensitizing, antiparasitic. An important aspect is the elimination of chronic foci of infection, the treatment of concomitant diseases, the restoration of the immune and endocrine status, and the implementation of preventive measures. Of the antiparasitic (acaricidal) drugs used, Metronidazole proved to be the most effective. The drug has not only antiparasitic against *Demodex folliculorum*, but also a pronounced bacteriostatic effect against Gram-negative anaerobic bacteria. Metronidazole has an effect on non-specific resistance of the body and influences cell-mediated immunity, being well tolerated and with few side effects, which is very important, given the need for long-term therapy. Metronidazole was applied to the skin of the face and eyelids in the form of a 0.75% -1% gel or cream. The patients underwent a deep massage of the edges of the eyelids using combined eye ointments (antibiotic + dexamethasone).

In our observations, in the treatment of ophthalmic rosacea, Volfuran tablets were used - an antimicrobial drug of the nitrofurane series, which has antiprotozoal, antibacterial and antifungal properties. Patients took 200 mg tablets twice a day for 7-10 days.

The main local therapy for "dry eye syndrome" associated with ophthalmic rosacea included the use of artificial tear substitutes (lubricants). In our cases, good results were obtained with the local application of Hilo Care gel, Korneregel and VitA-POS eye ointment containing vitamin A. The advantage of these preparations over other lubricants was the content of not only hyaluronic acid for moisturizing, but also dexpanthenol and vitamin A, which have regenerative properties.

With a corneal ulcer, the infiltrate was scraped out with a sharp spoon and the wound surface was extinguished with a 2% alcohol solution of iodine or betadine, with the obligatory prescription of local antibiotics, taking into account their sensitivity to pathogens found when sowing from the conjunctiva. In patients with rosacea-blepharitis and rosacea-conjunctivitis, clinical recovery was observed for 6-10 days. In cases of rosacea-keratitis and corneal ulcers, resorption of the infiltrate and epithelialization of the ulcer occurred on days 8-15. Two patients underwent a second course of treatment due to relapse and formation of descemetocoele. Of all 91 patients,

clinical recovery occurred in 64 patients (70.3%), improvement - in 24 patients (26.4%), in 3 patients (3.3%) no therapeutic effect was noted.

Conclusions. Thus, in our studies, ophthalmic rosacea occurs 9 times more often in women than in men. Among patients with ophthalmic rosacea, rosacea-blepharitis and rosacea-conjunctivitis were the most common clinical form, accounting for 79.1% of all patients.

An important aspect in the treatment of ophthalmic rosacea was the elimination of chronic foci of infection, concomitant diseases, the restoration of the immune and endocrine status. Systemic and local use of antiprotozoal, antibacterial, antifungal drugs, lubricants and epithelial drugs in the treatment of ophthalmic rosacea allows you to get a quick clinical effect.

References:

1. Potekaev N.N. Laser in dermatology and cosmetology. M.: MIA, 2007. 280s.
2. Khudoyberganov A. R., Abdullaev Sh. R., Babakhanova D. M. Evaluation of the effectiveness of a lubricant in the treatment of ophthalmic rosacea // Modern technologies in ophthalmology. – 2020. – no. 3. - S. 47-48.
3. Afonso AA, Sobrin L, Monroy DC, Selzer M, Lokeshwar B, Pflugfelder SC. Tear fluid gelatinase B activity correlates with IL-1 alfa concentration and fluorescein clearance in ocular rosacea. Invest Ophthalmol Vis Sci. 1999;40(11):2506-12. twenty.
4. Bakar O, Demircay Z, Toker E, Cakir S. Ocular signs, symptoms and tear function tests of papulopustular rosacea patients receiving azithromycin. J Eur Acad Dermatol Venereol. 2009;23(5):544-9.
5. Del Rosso J.Q. Advances in understanding and managing rosacea: Part 1. connecting the dots between pathophysiological mechanisms and common clinical features of rosacea with emphasis on vascular changes and facial erythema. J Clin Aesthet Dermatol. 2012;5(3):16-25. Apr
6. Ghanem V.C., Mehra N., Wong S., Mannis M.J. The prevalence of ocular signs in acne rosacea: comparing patients from ophthalmology and dermatology clinics. Cornea. 2003;22(3):230-3.
7. Kari O., Aho V., Peltonen S., Saari J.M., Kari M., Maatta M., et al. Group IIA phospholipase A(2) concentration of tears in patients with ocular rosacea. Acta Ophthalmol Scand. 2005;83(4):483-6.
8. Meyer-Hoffert U., Schroder J.M. Epidermal proteases in the pathogenesis of rosacea. J Investig Dermatol Symp Proc. 2011;15(1):16-23.
9. National Rosacea Society. 16 million Americans have rosacea and most of them don't know it Internet. Barrington, Illinois; NRS; 2012.
10. Oltz M., Check J. Rosacea and its ocular manifestations. Optometry. 2011;82(2):92-103.
11. Pisella P.J., Brignole F., Debbasch C., Lozato A., Creuzot-Garcher C., Bara J., et al. Flow cytometric analysis of conjunctival epithelium in ocular rosacea and keratoconjunctivitis sicca. Ophthalmology. 2000;107(10):1841-9.

12. Spoenclin J., Voegel J.J., Jick S.S., Meier C.R. A study on the epidemiology of rosacea in the UK Br J Dermatol. 2012;167(3):598-605.
13. Sobrin L., Liu Z., Monroy D.C., et al. Regulation of MMP-9 activity in human tear fluid and corneal epithelial culture supernatant. Invest Ophthalmol Vis Sci. 2000;41(7):1703-9.
14. Wilkin J., Dahl M., Detmar M., et al. National Rosacea Society Expert Committee. Standard grading system for rosacea: report of the National Rosacea Society Expert Committee on the Classification and Staging of Rosacea. J Am Acad Dermatol 2004;50(6):907-12.
15. Yamasaki K., Gallo R.L. The molecular pathology of rosacea. J Dermatol Sci. 2009;55(2):77-81.