The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR
2021: 5. 64
OCLC - 1121105510

Practical Importance Use Of Modern Probiotics In Complex Treatment Of Adenoviral Conjunctivitis

Qumri Islamovna Narzikulova
Doctor Of Medical Sciences, Associate Professor Department Of Ophthalmology Tashkent Medical Academy Tashkent, Uzbekistan

Sarvarkhon Akmaljon Ugli Yuldashov
Master Student Department Of Ophthalmology Tashkent Medical Academy Tashkent, Uzbekistan

Saida Mamadjanovna Egamberdiyeva
Assistant Department Of Ophthalmology Tashkent Medical Academy Tashkent, Uzbekistan

Shokhidakhon Adkhamovna Makhkamova
Master Student Department Of Ophthalmology Tashkent Medical Academy Tashkent, Uzbekistan

ABSTRACT

Adenoviral conjunctivitis is an inflammatory disease of the conjunctiva that spreads at the epidemic level, the main reason for which is explained by the fact that it is rapidly spread by airborne and domestic routes and has a high degree of contagiousness. In clinical practice, viral eye pathologies develop the background of upper and lower respiratory (especially rhinitis, sinusitis, tonsillitis, bronchitis) and antibiotics are often used to treat bacterial complications in this category of patients. As a result, the balance of the immunomicrobiological environment in the intestines of some patients is disturbed [1,2,7] In this contingent of patients, eye pathologies of viral etiology persist for a long time. In modern practice, an integrated approach is used to increase the effectiveness of the prevention and treatment of adenoviral conjunctivitis. In addition, complex treatment of adenoviral conjunctivitis is required that the adequate use of antiviral and immunomodulatory drugs, as well as the inclusion new group of drugs in the treatment algorithm for increasing effectiveness and eliminate symptoms of this disease [3,5]. Probiotics stimulate the body's specific (antibody and immune system) and non-specific (skin, mucous membranes and tears) immunity by restoring the normal intestinal microflora balance, resulting in activation of cellular and humoral immune processes. The use of modern probiotics during treatment period decreased the production of cytokines in the patient's body in the same time increased of endogenous interferon's concentration in the blood [1,3,4,6]. Even during an epidemic of adinoviral conjunctivitis, the inclusion of multi-component probiotics such as Bifolak Zincum + C + D3 in the complex treatment plan is effective and safe.

KEYWORDS

Adenoviral conjunctivitis, immunomodulator, Bifolak Zincum + C + D3, endogenous interferon, multicomponent probiotics, complex therapy.

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR
2021: 5. 64
OCLC - 1121105510

INTRODUCTION

Conjunctivitis is an infectious-allergic inflammatory disease of the mucous membrane (conjunctiva) of the eyeball and eyelids. Among cases of conjunctivitis of adenoviral etiology in adults, it occurs in 80-85%. Infection of the conjunctival membrane with virus types such as influenza, rhinovirus, coronavirus and adenovirus is often exogenous (airborne and domestic routes) , and this feature is one of the main indicators determining the degree of contagious (infectious) of viral conjunctivitis. Viral conjunctivitis is also found in clinical practice in combination with acute respiratory diseases (especially rhinitis, sinusitis, tonsillitis, bronchitis) and it is an integral part of the general symptom complex, which can lead to long-term viral eye pathology. In addition, antibiotics are often used to treat bacterial complications in this category of patients. As a result, the balance of the immunomicrobiological environment in the intestines is disturbed among patients [1,2,7] . Currently, complex treatment of adenoviral conjunctivitis is required that the adequate use of antiviral and immunomodulatory drugs, as well as the inclusion new group of drugs in the treatment algorithm for increasing effectiveness and eliminate symptoms of this disease. Probiotics stimulate the body's specific (antibody and immune system) and non-specific (skin, mucous membranes and tears) immunity by restoring the normal intestinal microflora balance, resulting in activation of cellular and humoral immune processes. The use of modern probiotics during treatment period leads to a number of positive dynamic changes in clinical and laboratory parameter, firstly, it reduces the formation of cytokines in the patient's body, which are the starting material of the inflammatory process, as a result relatively optimized endogenous intoxication, secondly , synthesis of endogenous interferon and by stimulating the secretion of immunoglobulins, the immunological parameters on the hemogram are normalized. [1,3,4,6]. Thus, taking into account the mechanisms of development and biochemical features of the general pathological process of viral etiology (for example, adeno - and coronavirus) conjunctivitis to inclusion for treatment plan and composition prophylactic measures multi-component probiotics, such as Bifolak Zincum + C + D3 can be a method that is therapeutically safe and increases the effectiveness.

THE PURPOSE OF THE STUDY

To increase the effectiveness of the treatment of adenovirus conjunctivitis, the inclusion of modern probiotics (for exam. Bifolak Zincum + C + D3) into complex treatment plan.

MATERIAL AND METHOD OF RESEARCH

The study was conducted in 62 patients (124 eyes) with adenoviral conjunctivitis. The age of the patients varied from 19 to 72 years, the average age was 37.2 ± 1.1 years. (Table 1)

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR
2021: 5. 64
OCLC - 1121105510

Age of patients	Men 40/64.5 %		Women 22/35,5 %		General	
	Abs	%	Abs	%	Abs	%
< 20 years	6	15	2	9.1	8	12.9
20-29	10	25	6	27.3	16	25.8
30-39	9	22.5	5	22.7	1 4	22.6
40-49	8	20	6	27.3	14	2 2,6
50 years <	7	17.5	3	13.6	10	1 6, 1
Total	40	100	22	100	62	100%

Table 1. Distribution of patients by sex and age.

All patients were divided into 2 clinical groups: the main group - 32 patients (64 eyes), the control group - 30 patients (60 eyes).

The distribution of patients into groups by age, gender and clinical manifestations of the disease was based on randomization. Patients in the main group received Bifolak Zincum + C + D3 (2 times per 1 capsule, during 10 days) in addition to standard treatments. Patients in the control group were treated only on the basis of standard therapy. All patients diagnosed with adenovirus conjunctivitis in both groups received antiviral, antiseptic, desensitizing, and anti-inflammatory drugs simultaneously according to standard therapy. In all groups, general ophthalmological examinations were performed (visual acuity, direct and indirect ophtalmoscopy, biomicroscopy, side illumination method, and flyuorosein test). In patients, the following local clinical symptoms were observed in the dynamics: - swelling of the conjunctiva and eyelids; - conjunctival hyperemia or subconjunctival hemorrhage; - conjunctival folliculosis. A conditional symptomatic score scale was also developed for a comprehensive assessment of the inflammatory process in the conjunctiva, on the basis of which the clinical course of the disease was graphically represented. 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 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);

3 point (diffuse hyperemia)

The American Journal of Medical Sciences and Pharmaceutical Research (ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR 2021: 5. 64
OCLC - 1121105510

C- Hyposphagma - 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 point (obviously)

E- by visual acuity:

0 - point (Vis = 1 , 0)

1 - point (Vis = 0,8 -0,9)

2 - point(Vis = 0, 65-0, 75)

At the end of the research, the results were analyzed using statistical methods .

RESEARCH RESULTS AND THEIR DISCUSSION

Clinical signs such as edema of the eyelids, hyperemia, hyposphagma of varying degrees in the main group of patients with adenoviral conjunctivitis, after treatment, the degree of reliability (p <0,05) compared with the dynamics of clinical signs in the control group of patients (p <0,05) (Table 2)

Category by clinical signs	The main group (*n* = 32)		Control group (*n* = 30)		Between groups (*p*)	
	before treatment	after treatment	before treatment	after treatment	before treatment	after treatment
A	2, 44 ± 0,12	0,0 8 ± 0,04 (0) *	2. 64 ± 0,14 (3)	0,35 ± 0,13 (0) *	> 0,62	<0, 05
B	2, 88 ± 0,08	0,13 ± 0,06 (0) *	2.94 ± 0,0 9 (3)	0,49 ± 0,16 (0) *	> 0,88	<0 , 05
C	1, 64 ± 0,13	0,08 ± 0,04 (0) *	1, 45 ± 0,18 (1)	0,2 7 ± 0,08 (0) *	> 0,22	<0, 05
D	1, 39 ± 0,10	0,07 5 ± 0,04 (0) *	1.22 ± 0,1 4 (1)	0,19 ± 0,07 (0) *	> 0, 32	> 0, 1 0
E	1.56 ± 0,03	0,0 8 ± 0,0 5 (0) *	1.52 ± 0,05,	0, 2 8 ± 0,03 (0) *	> 0, 23	> 0, 092

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR
2021: 5. 64
OCLC - 1121105510

Table 2 . Dynamic change in clinical signs of adenoviral conjunctivitis before and after treatment (in points, M ± m). Note: * - comparative index before treatment in groups p <0,001 (according to Student's and Wilcoxon's criteria); p - Manifestation of different clinical manifestations between groups according to Student's and Mann-Whitney's criteria.

During the research, were observed in patients no conjunctival rections and other types of side effects of the Bifolak Zincum + C + D3. A positive dynamics of ophthalmopathological symptoms in patients with the use of the multicomponent probiotic Bifolac Zincum + C + D3 in addition to standard therapy in the main group of patients was noted. The general recovery period in the main group (total duration of treatment 14.25 ± 1.36 days) began on average 6–6.5 days earlier than in the control group (total duration of treatment 20,52 ± 1.34 days). In addition, it was found that local edema of the conjunctiva and eyelids in the main group of patients resolved on average 2-2,5 days earlier (Table 3).

Clinical signs	The main group (*n* = 32)	Control group (*n* = 30)	Between groups (*p*)
Swelling of the eyelids and conjunctiva	6,18 ± 0,34	8,71 ± 0,77	<0,01
Hyposphagma	7.22 ± 0,28	10,32 ± 0,42	<0,001
Conjunctival hyperemia	10,44 ± 0,32	16,42 ± 0,39	<0,001
Conjunctival follicular reaction	8.12 ± 0,24	12,52 ± 0,36	<0,001
Status of visual acuity	7,12 ± 0,28	10,72 ± 0,42	<0,01
Healing period	14,25 ± 1, 36	20,52 ± 1,34	<0,01

Table 3. Terms of clinical recovery of patients of the main and control groups (in days, M ± m) Note: p - Manifestation of various clinical manifestations between groups according to Student's criteria.

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
Published: January 31, 2021 | **Pages:** 210-215
Doi: https://doi.org/10.37547/TAJMSPR/Volume03Issue01-32

IMPACT FACTOR
2021: 5. 64
OCLC - 1121105510

The duration of the resolution of clinical symptoms in the main group of patients

occurred in the following terms compared to the control group:

- Category A (swelling of the eyelids and conjunctiva) 2,53 days earlier (p < 0,01) ;
- Category B (hyposphagma) 3,1 days earlier (p < 0,001) ;
- Category C (conjunctival hyperemia) 6 days earlier (p < 0,001) ;
- Category D (conjunctival follicular reaction) 4,4 days earlier (p < 0,001) ;
- Category E(status of visual acuity) 3,6 days earlier (p <0,01) ;

CONCLUSION

In inflammatory diseases of the conjunctiva (conjunctivitis of adenoviral etiology) as part of complex therapy in the main group using Bifolac Zincum + C + D3 in patients with rapid relief of symptoms (especially conjunctive hyperemia, edema and follicular reaction) of local intoxication and a significant reduction in overall treatment duration was observed. Also, no side effects (toxic, allergic) were observed during the use of this multi-component probiotic in patients. Based on the results of clinical studies, we recommend the use of Bifolak Zincum + C + D3 in patients with adenoviral conjunctivitis.

REFERENCES

1. Астахов С. Ю. Офтальмологические фтор-хинолоны в лечении и профилактике глазных инфекций / С. Ю. Астахов, А. В. Вохмяков // Клин.офтальмол. – 2008. – Т. 9, № 1.– pp. 28-30
2. Применение пробиотиков в комплексном лечении HLA-B27-ассоциированных передних увеитах / А. И. Копаенко, Г. Д. Жабоедов, Н. В. Иванова и др. // Филатовские чтения: научно-практич. конференция с международным участием ,посвященная 75-летию основанию института им. В. П. Филатова, 26-27 мая 2011. – Одесса, 2011. – С. 155-156.
3. Нарзикулова.К.И Разработка и клинико-экспериментальная оценка эффективности комплексного лечения воспалительных заболеваний глазной поерхности / Нарзикулова.К.И / канд. мед. наук, 2014. – Ташкент , 2014. – 18 с.
4. Шерстюк А. І. Імунологічні та біологіч- ні особливості перебігу аденовірусних кон'юнктивітів та їх лікування / А. І. Шерстюк / Автореф. дис. … канд. мед. наук, 14.01.18. – Київ , 2015. – 18 с.
5. Майчук Ю. Ф. Современные тенденции в эпидемиологии терапии глазных инфекций / Майчук Ю.Ф. // Окулист. – 2005. – № 6 (74). – С. 8-9.
6. Fuller R. History and development of probiotics / R. Fuller / Probiotics. The scientific basis. L.: Chapman & Hall, 2012. – P. 1-9.
7. Sheikn A. K. Topikal antibiotics for acute bacterial conjunctivitis Cochrane systematic rewiew / A. K. Sheikn, A. F. Huwits // Br. Gen. Pract. – 2010. – Vol. 5, No 5. – P. 962-96