

Corneal ulcers treatment with "cacicol" eyedrops

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Abstract

Background: The purpose of this case report is to present a patient with herpetic corneal ulcer, and its successful treatment with new, regenerative eyedrops "Cacicol".

Case presentation: A 58 year-old women complains about pain, blurry vision and severe discomfort of the left eye. Slit lamp biomicroscopic examination: left eye corneal ulcer with white spot, Descemet reaction and precipitation of endothelium. The treatment with eyedrops "Cacicol" was launched. After about two month's: Fluorescein dye is not visualized on the cornea, a minor scar formed in place of the ulcer. Positive dynamic.

Conclusion: Any corneal damage lower quality of life and patient has severe complains. One of the solution to cure corneal ulcer is eyedrops "Cacicol", with who can reach quick and effective corneal tissue regeneration.

Keywords

cacicol; corneal ulcers; ophthalmology; cornea

Abbreviations

OD: Oculus dextrus; OS: Oculus sinister; IOP: Intraocular pressure

Introduction

Cornea is part of the outer most layer of the eye and is also one of the main parts of the eye optical system, which is continuously exposed to external environment. Microscopically cornea can be divided in to five layers:

- Anterior epithelium layer. In case of this epithelium layer defect closure occurs if stem cells which are located in limb region are not damaged.
- Anterior limiting lamina (Bowman's membrane) is tightly connected with corneal stroma. In case of damage scar can form as it heals.
- Corneal stroma is the main and the thickest part of the cornea.
- Posterior limiting lamina (Descemet's membrane) is homogenous membrane that has a sharp border with stroma.
- Endothelium consists of one hexagonal cell layer and covers posterior surface of the cornea [1].

Different etiological factors, such as fungal infections or herpes zoster infections can result in corneal ulcer formation. HSV-1 (Herpes simplex virus- 1) is neurodermotrop evirus. 90% of population has HSV-1 antibodies in their blood, but disease occurs when organism protection ability becomes weaker and also when virus virulence increases. Even microtrauma provides a chance for virus to enter the cornea [1].

Any corneal damage lower quality of life and patient has severe complains. To improve patient quality of life and also provide positive therapeutic effect, one of the solution to cure corneal ulcer is eyedrops "Cacicol", with who we can reach quick and effective corneal tissue regeneration.

Case Presentation

1st visit-24.11.2016.

Patient (58 year-old women) comes to *Dr. Solomatin Eye Rehabilitation and vision correction center* with complaints about pain and blurry vision and severe discomfort of the left eye. Patient is assignment from other clinic with recommendation to make curative photorefractive therapy. Patient already received antiviral treatment. Carefully collecting an anamnesis patient notes a recent trauma in her left eye with branch.

Objective examination:

Visus OD 0,5/ cc +1,00 Dsph +0,50cyl x 20= 1,0

Visus OS 0,8/ cc + 0,50 Dsph = 0,8 (clearer)

IOP OD= 14 mmHg, OS= 13 mmHg.

Biomicroscopy: Left eye corneal ulcer with white spot, Descement reaction and precipitation of endothelium (Figure 1).

Photorefractive therapy is contraindicated!!!

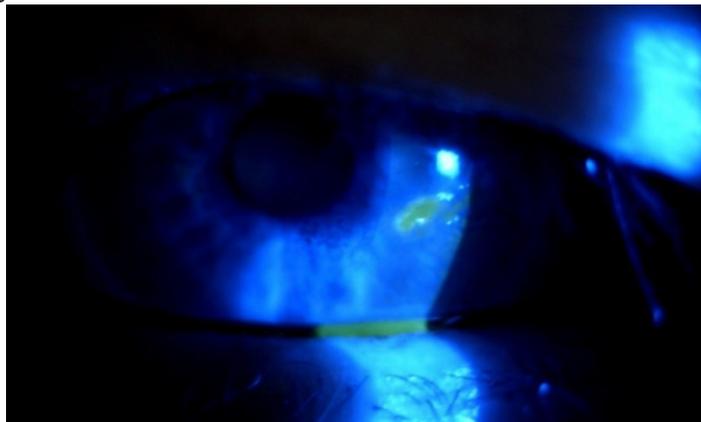


Figure 1: Left eye corneal ulcer with white spot, Descement reaction and precipitation of endothelium.

Blood test:

Herpes simplex 1 / 2 virusIgG 18,50 (<0,9)

Herpes simplex 1 / 2 virus IgM <0,50 (<0,9)

Recommendation: Start regenerative therapy with eyedrops “Cacicol”. “Cacicol” is instilled for the first time and protective contact lens is put on.

2nd Visit- 31.11.2016

IOP OD = 15 mmHg, OS = 13 mmHg

Biomicroscopy: Positive dynamic, defect of the epithelium is decreased (Figure 2).



Figure 2: Positive dynamic, defect of the epithelium is decreased.

Recommendation: “Cacicol” is instilled for the second time and protective contact lens is put on.

3rd Visit - 07.12.2016

Biomicroscopy: Defect of the epithelium approximately 2 millimeters in diameter (Figure 3).



Figure 3: Defect of the epithelium approximately 2 millimeters in diameter.

Recommendation: “Cacicol” is instilled for the third time and protective contact lens is put on. Continue therapy with “Cacicol” each 3 to 4 days, changing the protective contact lens. When healing will be complete, stop the usage of “Cacicol” and star to use “Solcoseryli” gel.

4th Visit - 06.02.2017

Visus OD 0,5+2/ +1,0 Dsph +0,5 cyl x 25= 1,0

Visus OS 0,7-2/ +0,75 Dsph +0,5 cyl x 130=1,0

Subjectively patient feels good. Feeling of the discomfort – denied.

Biomicroscopy: Positive dynamic. Fluorescein dye is not visualized on the cornea. A minor scar formed in place of the ulcer (Figure 4).



Figure 4: Fluorescein dye is not visualized on the cornea. A minor scar formed in place of the ulcer.

Recommendation: *Gel. Corneregel* three times a day. Control if needed.

Discussion

“*Cacicol*” are eye drops, which are used to improve corneal tissue regeneration. They belong to regenerative agent (*RGTA*®) family, which improves tissue healing fast and qualitatively. “*Cacicol*” is intended to use in case of such disease - neurotrophic keratopathy and corneal dystrophy [2]. Many authors outline that new molecules are found which improve corneal healing. Such molecules like collagenase inhibitor, fibronectin, heparin, EGF, IGF and NGF have an effect on corneal healing in vitro studies and in studies with animals, but still none are available in ophthalmological pharmacotherapy [3]. Also *Ishak et al* mentions, that matrix repair therapy is a new treatment method in ophthalmology, which is used to restore extracellular matrix microenvironment and it has made big interest among many doctors [4]. *Aifa et al* notes, that while making similar studies with different types of corneal ulcer, there have also been cases when treatment failed. Treatment failed in patient with *acanthamoeba* ulcer, who already had keratoplasty and also among patients with rheumatoid arthritis, which affects many joints – failure of the treatment was associated with systemic disease [5].

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