

A Case Report

A case of successful antimicrobial treatment of severe canaliculitis

S.V. Pavliuk

Vinnitsia Regional Clinical Hospital for War Veterans

National Pirogov Memorial Medical University,

Vinnitsya (Ukraine)

E-mail: svpavluk@ukr.net

Background

Canaliculitis is a rare inflammation of the lacrimal canaliculi with a relapsing course and a poor response to treatment.

According to research findings, canaliculitis is revealed in 2.4% of cases among newly-admitted ophthalmic patients. Inflammation of the lacrimal canaliculi can be caused by fusobacteria, nocardia, staphylococci, actinomycetes, aspergilla, candida, herpes simplex virus, and herpes zoster, as well as lacrimal punctum occluders left accidentally [1]. Canaliculitis is most commonly of a chronic character and characterized by complication development due to late diagnosis and continuous inadequate treatment. Diagnosis difficulties make up to 72.4 % and contribute to process chronicity. The most reasonable treatment is considered to be canaliculotomy, an ophthalmological surgical procedure when the lacrimal canaliculus is incised, its discharge is removed followed by rinsing with antiseptics and antimicrobial agents [1].

According to the literature, only 10% of patients could be cured conservatively; 40% of patients had a recurrence after conservative treatment; 40% of patients were cured after surgical incision of the lacrimal canaliculus; and 10% complained of epiphora after canaliculotomy [2].

For chronic recurrent canaliculitis treatment we chose antimicrobial preparations okodek (0.2 mg/1 ml of decametoxinum; registration certificate UA/14450/01/01) and zalain [3]. Decametoxinum is an antiseptic agent of surfactants. Decametoxinum has an antimicrobial and antifungal effect due to its ability to concentrate on the cytoplasmic membrane of microorganisms, to connect with membrane lipids and to disrupt the membrane permeability. It has a high antimicrobial activity against pathogens resistant to antibiotics. Okodek with 0.2 mg decametoxinum as an active substance is used in ophthalmology as an antimicrobial agent [3].

Decametoxinum has been approved for using against bacteria, viruses, and fungi and has been found reasonable to use in producing antimycotic ointments, solutions [4, 5, 6].

Zalain, a semi-solid white cream of liquid consistency, is an imidazole-derived antifungal agent with a high fungicidal activity. An active substance of zalain is sertaconazole nitrate. The mechanism of action consists in suppressing the synthesis of fungal ergosterol and increasing the permeability of the cell membrane, which leads to the destruction of pathogens. It is effective against pathogenic yeast fungus (*Candida albicans*, *Candida* spp. i *Malassezia furfur*), dermatophytes (*Trichophyton*, *Epidermophyton* and *Microsporum* spp.), and pathogens causing infectious diseases of the skin and mucous membranes, including gram-positive strains (*Staphylococcus*, *Streptococcus*).

Purpose. To describe a case of successful medical treatment of long-term canaliculitis.

Material and Methods

We followed up a female patient, aged 32, with severe canaliculitis who complained of purulent-mucous discharge for three years, swelling and redness near the lacrimal point on the left side. The first discharge appeared three years before and the patient visited an ophthalmologists. She was prescribed antimicrobial drops locally. A week later no improvement was noted. The patient was performed lacrimal drainage system irrigation and the antimicrobial drops were changed. With a waxing and waning course of the disease, the patient had been treating for 18 months with all market-existing local antibiotics used. After a two-month treatment gap, the patient re-applied to the hospital. Before treatment, microbiological examination was performed and a pure culture of *Staphylococcus aureus* was isolated, the pathogen was identified and its antibiotic susceptibility was determined.

Results

A clinical isolate of *Staphylococcus aureus* was found to be resistant to antibiotics excluding ceftriaxone and cephazolin. Three-day lacrimal drainage system irrigation was performed using Okodek, Lydazum, and ceftriaxone.

During the treatment course, the general condition improved and purulent discharge was eliminated. However, the canaliculus was still thickened and there was noted the secretion of mucus. The young female patient refused the proposed surgical treatment, insisting on the continuation of conservative treatment. Among antimicrobial medications we chose a zalainn ointment with sertaconazole nitrate as an active substance. Using antiseptic okodek and antimicrobial zalain ointment made it possible to succeed in treating chronic canaliculitis within 7 days.

Conclusions

Okodek and zalain can be used as an alternative conservative treatment for chronic canaliculitis in the absence of conditions for surgical treatment and in the presence of fear or distrust of the patient, as the first stage of the conservative treatment without systemic antibiotics as well as after using local antibiotics without a clinical effect.

References

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