The drug of choice for treatment of keratitis and corneal ulcers suspicious to the fungal etiology

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Background: Fungal infection of the eye is one of the unsolved problems in the modern ophthalmology, and often leads not only to blindness, but the loss of the eye as an organ as well. In recent years the frequency of fungal keratitis cases has increased.

Purpose: The purpose of the study is to analyze the experience of local and systemic antifungal therapy in patients with severe keratitis and corneal ulcers.

Materials & Methods: For 4.5 years, 27 patients (27 eyes) were followed. The causes of the disease: wearing contact lenses – 12 patients, secondary attachment of fungal infection – 6 patients, eye trauma – 7 patients, postoperative infection – 2 eyes. 21 patients treated by 0.2% fluconazole in eye drops form and/or in subconjunctival injections (in 2 cases in combination with oral administration), 17 patients received 0.02% or 0.05% chlorhexidine gluconate solution (in 13 cases in combination with fluconazole), 5 patients – 0.3% amphotericin B in eye drops form (in 4 cases in combination with fluconazole and chlorhexidine gluconate), 2 patients – 0.1% voriconazole in eye drops form. Itraconazole was given orally in 7 cases in combination with local medications.

Results: According to the inoculation, the fungal etiology of keratitis has been confirmed in 5 cases, in others cases the etiology of the disease has not been established under laboratory condition, but in respect that the anamnesis, clinical picture and course of disease, a fungal or mixed etiology of the disease has been suggested. Surgical treatment was required for 4 patients. In 1 patient enucleation was performed (morphologically fungal etiology was confirmed). Two patients received through keratoplasty, 1 patient was additionally treated by corneal cross-linking. In other 23 patients, persistent opacity of the cornea of varying severity was formed at the endpoint. It was not the recurrence of infection in all cases.

Conclusions: In patients with long-term keratitis and corneal ulcers with a worn-out disease pattern, the drug of choice is fluconazole. In patients with keratitis associated with the wearing of contact lenses, combined therapy of antifungal drugs in combination with chlorhexidine gluconate is appropriate. In melting of the cornea with the spread of the process inside the eye, the drugs of choice are amphotericin B and voriconazole. It is necessary to combine the methods of administration and prescribing several drugs treating a severe fungal infection of the eye.

Biography
Obrubov Anatoly S MD, PhD is an Ophthalmologist of City Clinical Hospital named after S P Botkin, Moscow, Russia, and Associate Professor of the Department of Ophthalmology of Russian Medical Academy of Continuing Professional Education, Russia.

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