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SHORT COMMUNICATION

Case report

Candida keratitis in a patient with candidiasis of the fingernails

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PURPOSE. *To report a case of* Candida *keratitis following penetrating keratoplasty in a patient with Candidiasis of the fingernails.*
CASE REPORT. *An 80 year-old male presented with recurrent* Candida *keratitis following penetrating keratoplasty. Patient was found to have evidence of Candidiasis of the fingernails.*
COMMENT. *Candidiasis of the fingernails have led to recurrent fungal keratitis following penetrating keratoplasty. Cultures grew* Candida albicans*. Preoperative recognition, prompt and appropriate therapy of foci of infection may prevent* Candida *keratitis following penetrating keratoplasty. (Eur J Ophthalmol 2001; 11: 380-2)*

KEY WORDS. Candida *spp., Keratitis, Paronychia, Keratomycosis*

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Fungal keratitis or keratomycosis may occur in eyes with preexisting ocular surface disease or may masquerade as bacterial or herpetic corneal disease (1) and should be suspected in patients with indolent corneal ulcerations (2). *Candida* keratitis typically occurs in patients with a preexisting corneal disease (3), therapeutic contact lens use or in the setting of altered host defenses such as atopic disorders, treatment with topical corticosteroids, or after penetrating keratoplasty. Rarely, *Candida* keratitis may be associated with mucocutaneous candidiasis syndrome. In general, delay in management of cases with keratomycosis leads to poor visual outcomes. Early diagnosis, adequate therapy and careful management of the predisposing factors are mandatory in all cases of keratomycosis.

We report a case of *Candida* keratitis following penetrating keratoplasty in a patient with candidiasis of the fingernails which may have precipitated the keratitis. Preoperative recognition, prompt and appropriate therapy of foci of fungal infection may prevent postoperative *Candida* keratitis.

Case report

An 80-year-old male first presented to the Eye Center with a history of loss of visual acuity after penetrating keratoplasty in the left eye. He had developed endophthalmitis after cataract surgery in the right eye, which had been enucleated. After the penetrating keratoplasty on the left eye he was placed on topical prednisolone acetate 1% eyedrops and ofloxacin eyedrops. The postoperative course was uneventful, topical ofloxacin was discontinued and prednisolone was tapered gradually to twice daily.

The patient presented six months after surgery with redness, photophobia, and increased tearing in his left eye. He was found to have a central corneal ulcer with creamy white corneal infiltrates in his left eye. Corneal scrapings were obtained for cultures and Giemsa and Gram staining. Giemsa stain showed pseudo-hyphae, and cultures on Sabouraud agar and blood agar revealed growth of *Candida albicans*. The patient was started on topical miconazole 10 mg/ml eyedrops, subconjunctival micona-

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Fig. 1 - *Paronychia of the fingernails in both hands.*

zole 10 mg/ml daily for 3 days, and nystatin cream (Mycostatin cream, 100,000 USP nystatin units/gram) twice daily. This therapy led to complete resolution of the corneal ulcer and infiltrates and complete epithelial healing, with development of a central subepithelial scar. The patient was given fluorometholone 0.1% eyedrops twice daily.

Three months later, he presented again with a corneal ulcer and creamy white corneal infiltrates. Corneal scrapings were obtained and cultures again netted *Candida albicans*. General medical evaluation showed paronychia of the fingernails (Fig. 1). The patient was given fluconazole 150 mg tablets orally twice daily and topical miconazole 10 mg/ml eyedrops every hour. Two days later he presented with descemetocele and hypotony. B-scan showed 360-degree peripheral annular ciliochoroidal detachment. He was admitted to the hospital and received central 3 mm penetrating corneal graft. He was continued on topical miconazole and oral fluconozole and is scheduled for a further penetrating keratoplasty.

TABLE I - FACTORS PREDISPOSING TO *CANDIDA* KERATITIS

1. Use of broad-spectrum antibiotics, corticosteroids and immunosuppressive drugs
2. Use of therapeutic contact lens
3. Existing ocular diseases: atopic disease, eyelid malposition, keratitis sicca, Herpes simplex keratitis, neurotrophic keratitis, bullous keratopathy
4. Mucocutaneous candidiasis syndrome
5. Systemic immunocompromised states: alcoholism, diabetes, AIDS, etc.
6. Use of topical corticosteroids after penetrating keratoplasty

Comment

The recent increase in the incidence of keratomycosis has been associated with the widespread use of broad-spectrum antibiotics, corticosteroids, immunosuppressive drugs and contact lens wear (4). Keratomycosis caused by yeast is common in eyes with preexisting disease (3) such as Herpes simplex keratitis, neurotrophic keratitis or bullous keratopathy (5), therapeutic contact lens use, mucocutaneous candidiasis syndrome, and other immunocompromised states leading to altered host defenses, such as comatose patients with exposure keratopathy (3), neoplasms, chronic alcoholism and diabetes (4). Patients who had undergone keratoplasty and are on topical corticosteroids may be predisposed to *Candida* keratitis (3). Local ocular resistance may be impaired by atopic disease, long-term topical corticosteroids, malposition of the eyelids, or keratitis sicca (6) and may predispose to fungal kera-titis. Entry of the pathogen in eyes with weakened ocular surface defense mechanisms and preexisting corneal disease may increase the likelihood of fungal keratitis. In our patient *Candida* keratitis followed candidiasis of the fingernails, which led to direct contamination.

General physical examination and treatment of chronic foci of infection are essential to minimize the risk of microbial keratitis. *Candida* keratitis might have been prevented in this case by systemic antifungal therapy of the fingernail candidiasis before the original penetrating keratoplasty.

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