**Case report**

**Candida** keratitis in a patient with candidiasis of the fingernails

E.F. JRADEH 1, S.A. AL-KHARASHI 2, K.F. TABBARA 1,2

1 The Eye Center and The Eye Foundation for Research in Ophthalmology  
2 Department of Ophthalmology, College of Medicine, King Saud University, Riyadh - Saudi Arabia

**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 lead 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 eye drops. 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-
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 fluconazole and is scheduled for a further 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 keratitis. 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.

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

Reprints requests to:
Khalid F. Tabbara, MD
The Eye Center, P.O. Box 55307
Riyadh 11534
Saudi Arabia
k.tabbara@nesma.net.sa
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