All eight patients (eight eyes) included in this study had been operated on before coming to Beijing Tongren Hospital, and all the corneal foreign bodies were removed without obvious complications by the author between 1995 and 1997. Four of the patients had glass corneal foreign bodies, three had thorns of the Chinese chestnut, and one had stone corneal foreign bodies. All the corneal foreign bodies entered the anterior chamber partially, and the edematous cornea made the observation of the corneal foreign bodies very difficult, especially under the surgical microscope. The observation of the corneal foreign bodies became less difficult through a relatively clearer zone of cornea when the injured eye was rotated greatly to the side.

After lidocaine topical anesthesia, a pair of forceps was used to grasp the edge of the tunnel made by the corneal foreign bodies. Along the line, which passed the corneal foreign bodies perpendicular to the line from the center of the cornea to the corneal foreign bodies, a 6-mm needle (10/0, micro point spatula, Ethicon, United Kingdom) was used to penetrate the cornea in and out, passing just beneath the corneal foreign bodies. In Figure 1, A'A'B'B are shown on a circle with the same radius of curvature as the suture needle, and CC'D'D' are shown on a circle with a smaller radius of curvature. During the surgery, to evert the tunnel slightly, the author used the needle to penetrate the cornea through CC'D'D', just beneath the corneal foreign bodies. When performing surgery for removal of a thorn of the Chinese chestnut, which always penetrated into the anterior chamber deeply, we did not suture the needle behind (posterior to) the foreign body, because the tip of the thorn was very fragile against metal in vitro. The additional damage to the cornea at the central zone should be avoided to the greatest extent. Hence, the tunnel made by the suture needle was such that neither its entrance or exit were in the central zone, and they were usually so tiny that they could hardly be detected when the wound healed. The needle was kept in the cornea, when its tip and the end were both out of the cornea (Figure 2). The needle was fixed by a needle holder held in one hand. The corneal foreign body was removed under a surgical microscope (usually 15 by approximately 20) by an injection needle with a curved tip held in the other hand. To maintain the anterior chamber and to keep the wound dry, the suture needle was lifted slightly upward during removal of the penetrating corneal foreign body. After removing the corneal foreign body, the suture was ligated as a temporary suture before the permanent suture(s) were placed. A subconjunctival injection of a combination of gentamicin and dexamethasone and an eye patch were placed after watertight closure of the wound was ensured.

Aspergillus flavus Keratitis After Laser in Situ Keratomileusis
M. S. Sridhar, MD, Prashant Garg, MS, Aashish K. Bansal, MS, and Usha Gopinathan, MSc

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From the Cornea Service (M.S.S., P.G., A.K.B.) and the Jhaveri Microbiology Centre (U.G.), L. V. Prasad Eye Institute, Hyderabad, India.
Inquiries to M. S. Sridhar, MD, Cornea Services, L. V. Prasad Eye Institute, Road No. 2, Banjara Hills, Hyderabad, 500 036, India; fax: 0091-40-3548271; e-mail: mss@lvpeye.stph.net

REFERENCES
PURPOSE: To report a case of fungal keratitis caused by Aspergillus flavus after laser in situ keratomileusis surgery.

METHODS: Case report. A 24-year-old woman developed pain, redness, decreased vision, and an infiltrate posterior to the corneal flap in her right eye 3 days after laser in situ keratomileusis. On referral, approximately 3 weeks after laser in situ keratomileusis, examination of the right eye revealed light perception vision, a large full-thickness corneal infiltrate, and hypopyon. Corneal scrapings were taken for direct microscopic examination and culture.

RESULTS: Corneal scraping revealed the presence of fungal filaments in smears and in culture. The fungus was identified as A. flavus. Intensive topical natamycin and systemic ketoconazole therapy was initiated. Despite intensive medical treatment, the infiltrate progressed and the patient was subjected to a therapeutic penetrating keratoplasty. There was no recurrence of infection after surgery. At last follow-up 4 months after surgery, the eye was quiet with graft edema.

CONCLUSION: Fungal keratitis is a rare complication of laser in situ keratomileusis surgery. In a case that does not respond to medical treatment, early surgical intervention must be considered. (Am J Ophthalmol 2000; 129:802–804. © 2000 by Elsevier Science Inc. All rights reserved.)

CORNEAL INFECTION AFTER LASER IN SITU KERATOMILEUSIS, although rare, is a serious sight-threatening complication. Cases caused by bacteria are reported in the literature.\cite{1,2,3,4,5} We describe a case of infectious keratitis caused by Aspergillus flavus that followed laser in situ keratomileusis surgery.

CASE REPORT

A 24-YEAR-OLD WOMAN UNDERWENT LASER IN SITU KERATOMILEUSIS surgery in both eyes on July 21, 1999. According to the referring doctor, vision was 20/20 in right eye on the first postoperative day. On the third day after surgery, she developed symptoms of pain, redness, watering, and decreased vision in the right eye. An infiltrate was noted posterior to the corneal flap. Considering this at first to be sterile infiltrate, the patient was given topical steroids every hour and systemic steroids. Her condition deteriorated. Steroids were discontinued. Ofloxacin eye drops, fortified cefazolin eye drops, and systemic ciprofloxacin and ketoconazole therapy were given.

The patient presented to us on August 14, 1999, when she had light perception present with accurate projection of rays in the right eye and 20/20 visual-acute in the left eye. In the right eye, the lids were edematous. There was diffuse conjunctival congestion. The cornea revealed a large, full-thickness infiltrate measuring 6.1 mm horizontally and 7.3 mm vertically; there was 1.5 mm of hypopyon. No further details of the anterior chamber were visible. Anterior segment evaluation of the left eye was unremarkable. A diagnosis of infectious keratitis in the right eye was made. The ulcer bed and edges were scraped and subjected to staining (Gram and Giemsa), potassium hydroxide (10%) mount, and culture (blood agar, chocolate agar, brain-heart infusion broth, Sabouraud dextrose agar, thioglycollate broth, and nonnutrient agar with an overlay of live Escherichia coli). Smears revealed the presence of septate fungal filaments. Subsequently, eye drops of natamycin 5% every half hour, and atropine sulfate 1% three times a day, and ketoconazole 200 mg tablet twice daily were started. On follow-up, the infiltrate progressively increased in size, and the hypopyon became large (Figure 1). The fungus grown in culture was identified in the microbiology laboratory as A. flavus. A therapeutic penetrating keratoplasty was performed with a 9.5-mm graft on a 9-mm bed. The anterior chamber was cleared of exudates, and a thick membrane was seen on the anterior capsule of the lens. While peeling the membrane, the anterior capsule ruptured, resulting in extracapsular cataract extraction. Amphotericin B 5 \( \mu \)g in 0.1 ml was injected into the anterior chamber at the end of the surgery. Postoperatively there was no recurrence of infection, and the anterior chamber was without inflammation. The intraocular pressure was normal. Both natamycin eye drops and systemic ketoconazole were continued after surgery. Topical steroid medication was added 2 weeks after surgery. She was last seen on December 16, 1999, 4 months after surgery when the eye was quiet and the graft showed edema.

DISCUSSION

PEREZ SANTONJA AND ASSOCIATES\cite{1} REPORTED THE FIRST case of corneal infection after laser in situ keratomileusis surgery.
surgery, which was caused by *Nocardi a asteroides*. Subsequently, various authors reported isolated cases of bacterial keratitis after laser in situ keratomileusis surgery; the infections were caused by *Mycobacterium chelonae*, *Streptococcus pneumoniae*, *Streptococcus viridans*, and *Staphylococcus aureus*. We report this case of fungal keratitis caused by *A. flavus* to highlight the difficulties in managing such a case after laser in situ keratomileusis. Unlike bacterial keratitis, which can be controlled by potent antibiotics, fungal infection is difficult to manage, because there is a lack of effective antifungal agents. Low bioavailability, ocular toxicity, and decreased solubility of most of the currently available antifungal agents are some of the factors limiting the successful management of fungal corneal infection. Late presentation with large infiltrates is another important factor leading to failure of medical treatment.

In a case of fungal keratitis after laser in situ keratomileusis, if the infection involves the bed and an initial response to medical treatment is not seen, we think an aggressive approach can be considered to control the infection. This may even include excision of the flap, along with daily debridement of the bed and intensive antifungal therapy. If the infection progresses despite these measures, therapeutic penetrating keratoplasty must be considered to eradicate the infection and save the eye with useful vision. This case reported presented to us late, and infection was progressing despite medical treatment. As a result, therapeutic penetrating keratoplasty was performed.

To conclude, fungal keratitis is a rare complication of laser in situ keratomileusis surgery. In a case that does not respond to medical treatment, early surgical intervention must be considered.

REFERENCES


CASE REPORT

A 62-YEAR-OLD KOREAN WOMAN AFFECTED WITH NORMAL-TENSION GLAUCOMA developed bilateral increased eyelid skin pigmentation 4 months after beginning treatment with latanoprost in both eyes. Clinical examinations were performed, and external photographs were taken.

RESULT: Latanoprost was discontinued. Periodic examinations revealed that the eyelid skin pigmentation gradually diminished 1 month after the cessation of the drug, and decrease in pigmentation continued over 4 months of follow-up.

CONCLUSION: An increase in eyelid skin pigmentation is a possible complication of topical latanoprost therapy, and the cessation of the drug can result in loss of induced pigmentation in humans. (Am J Ophthalmol 2000; 129:804–806. © 2000 by Elsevier Science Inc. All rights reserved.)

LATANOPROST, A 17-PHENYL-SUBSTITUTED ANALOG OF PGF2α, has been shown to effectively lower intraocular pressure by increasing uveoscleral outflow. However, it has been associated with darkening of the irides in both subhuman primates and humans. Its mechanism of iris color change has been shown to be the result of increase in melanin production in the existing melanocytes of the iris stroma. We, herein, present a case in which treatment with latanoprost produced a reversible increase in eyelid skin pigmentation.

Increased Eyelid Pigmentation Associated With Use of Latanoprost

Michael S. Kook, MD, and Keunjang Lee, MD

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From the Department of Ophthalmology, Ulsan University School of Medicine, Asan Medical Center, Seoul, Korea.
Inquiries to Michael S. Kook, MD, Department of Ophthalmology, Ulsan University School of Medicine, Asan Medical Center, 388-1 Pungnap-dong, Songpa-gu, Seoul, 138-736, Korea; fax: 82-2-470-6440.