

中文題目:黴菌性角膜炎及眼內炎使用 voriconazole 治療

英文題目: Fungal keratitis and endophthalmitis with voriconazole treatment

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Abstract

We report a 63-year-old woman with eye pain and blurred vision after a bamboo leave injury. After unsuccessful therapy with ketoconazole for *Acremonium* species keratitis and endophthalmitis, the patient's condition improved with surgery and voriconazole treatment. Voriconazole may be adequate treatment of fungal endophthalmitis resulting from contiguous spread by keratitis.

Case Report

A 63-year-old woman with diabetes mellitus injured her right eye with bamboo leaves, and suffered from severe ocular pain and decreased vision in the right eye. A slit-lamp examination revealed a corneal epithelial defect with ulcer and scar formation in the right eye. After 6 weeks of treatment with topical levofloxacin, betamethasone, and neomycin, the visual acuity in the right eye was limited to hand movement at 1 meter. The conjunctiva showed severe injection, and a corneal epithelial defect with a deep ulcer was noted. According to the bacterial culture results of a corneal swab, the pathogen was yeast. Instillation of topical natamycin, moxifloxacin, and tobramycin was begun, with 100 mg of ketoconazole systemically twice daily. The right eye worsened with the appearance of conjunctival injection and a mucopurulent discharge, and hypopyon in the anterior chamber. Therapeutic penetrating keratoplasty, lensectomy, and intravitreal and intracameral injection of amphotericin B were performed on day 8 of hospitalization. The fungus culture of the corneal swab and aqueous grew *Acremonium* species. Thus, topical moxifloxacin and tobramycin, and intravenous fluconazole (600 mg daily) was administered. After 5 days, the intravenous fluconazole was changed to voriconazole (200 mg twice daily). The patient's condition improved significantly and discharged on oral voriconazole (200 mg twice daily for 6 months). No recurrence of the fungal infection occurred, and the patient's best corrected visual acuity improved to 6/10.

Discussion

There are many known pathogens of endophthalmitis, and one study reported that the most prevalent pathogens are gram-positive bacteria (85.1%), followed by gram-negative bacteria (10.3%) and fungi (4.6%).¹ One study reported the incidence of infectious keratitis progressing to culture-proven endophthalmitis to be 0.5%; fungi were the most common organism, followed by gram-positive and -negative bacteria.² The most common pathogens recovered from patients with fungal endophthalmitis are *Fusarium* species, followed by *Aspergillus* and *Acremonium* species.³ The genus *Acremonium* is comprised of approximately 150 species, and many species are recognized as opportunistic pathogens, causing mycetoma, onychomycosis, keratitis, endophthalmitis, and peritonitis.⁴ Treatment of fungal endophthalmitis includes surgery and topical and systemic antifungal therapy. Voriconazole is a second-generation triazole antifungal agent derived from fluconazole. The mechanism of action of voriconazole is inhibition of cytochrome P450 demethylase. Voriconazole is formulated for intravenous and oral use, and has excellent oral bioavailability.⁵

References

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