ABSTRACT

OBJECTIVE: To compare the treatment outcomes following Fusarium and Aspergillus keratitis.

METHODS: Data was collected during a hospital based prospective, non randomized, observational clinical study. Clinical features at presentation and demographics were collected at the enrolment visit for all patients. Treatment was started with 5% Natamycin as monotherapy or in combination with either 1% Voriconazole or 1% Itraconazole. Eligibility included identification of Fusarium or Aspergillus species on culture media.

MAIN OUTCOME MEASURES: The primary outcome was best spectacle-corrected visual acuity (BSCVA) 3 months from enrollment. Secondary outcomes included scar size at 3 months, time to re-epithelialisation, the incidence of ulcers healed with monotherapy (Natamycin) and the incidence of corneal perforation and/or the need for therapeutic penetrating keratoplasty (TPK).

RESULTS: A total of 404 patients were enrolled in the study, 234 (57.92%) patients had positive culture for Fusarium species and 170 (42.08%) patients were found to be culture positive for Aspergillus species. 154 (38.12%) ulcers healed with natamycin only, 100 (64.94%) of them were due to Fusarium species. Therapeutic penetrating keratoplasty was done in 49 (12.13%) patients, of which 37 (75.51%) cases were due to corneal perforation.

CONCLUSION: Fusarium species still remains to be the most commonly isolated fungal pathogen in southern India. Fusarium species heals well with natamycin but Aspergillus species would fare better if voriconazole or itraconazole were used additionally. Standard therapy with polyenes still remains effective.

KEYWORDS:
Aspergillus
Feathery margins
Fusarium
Hypopyon
Itraconazole
Mycotic keratitis
Natamycin
Therapeutic penetrating keratoplasty
Voriconazole