Case report

Exserohilum rostratum causing keratitis in India

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A case of mycotic keratitis due to atypical Exserohilum rostratum is reported in a 42-year-old male with Hansens disease.

Introduction

Exserohilum rostratum is an uncommon cause of infection in humans. It has been isolated from few cases of mycotic keratitis [1]. We isolated a strain which showed morphological features of both of E. rostratum and E. mcginnisii.

Case report

A 42-year-old man presented to the Eye hospital on 20th November 1996, with complaints of pain, redness and decreased vision in the left eye of 1 week’s duration. He was a known case of Hansens who had been treated and cured 20 years ago.

On examination, the left eye showed a corneal ulcer 5.7 mm height, 4.8 mm width with hyphate peripheral extensions. The ulcer was seen to involve the anterior 2/3 of the cornea. A thin rim of hypopyon was seen.

The other eye had decreased vision and showed a healed nebular corneal opacity and immature cataract.

Scrapings were taken from the left eye which showed septate fungal hyphae both on Gram stain (Fig. 1) and direct lactophenol cotton blue mounts. Scrapings were plated onto blood agar and Sabouraud glucose agar (SGA) for bacterial and fungal agents, respectively.

The patient was started on 2% Ketoconazole drops every hour and 1% atropine eye drops. Since the ulcer size was progressing, 5% natamycin drops every hour were also added. However, the response to this medical management being poor, a penetrating keratoplasty was performed on 13th December 1996. He was treated postoperatively also with the same topical antifungal agents. Topical steroids were started postoperatively after 2 weeks. The graft was clear and his vision was 6/18 at the time of leaving the hospital.

Subsequently he was followed-up for 8 months and the progress was satisfactory.

Mycology

Within 48 h of incubation, hyaline mycelial growth was observed on the SGA plate which became cottony and had a dark pigmentation on the reverse of the plate. Bacteria were not isolated.

Microscopic examination using a slide culture preparation on SGA revealed numerous macroconidia which had 9–11 septa with end cells being paler, darkly pigmented basal and distal septa which was morphologically consistent with E. rostratum [2]. In addition to this, irregular warty projections were seen on the outer cell wall as is commonly seen in E. mcginnisii (Fig. 2). The isolate was tentatively identified as belonging to Exserohilum spp. and it was sent to Dr Michael McGinnis at the University of Texas Medical Branch for his expert opinion on the final identification of the species. This was retained as E. rostratum. (Ref. UTMB No. 4418).

Discussion

Exserohilum rostratum is an uncommon cause of keratitis. It is identified based on typical morphology of ellipsoidal to fusiform conidia, end cells being paler than other cells. Warty projections on the outer cell wall of the conidia is a feature that is described for E. mcginnisii.
However, in this case there are morphological features consistent with *E. rostratum* as well as warty projections which is a feature described only for *E. mcginnisii* among the *Exserohilum* spp. Morphology plays a pivotal role in the identification of fungal organisms. The existence of atypical forms of *E. rostratum* should be noted.

**Fig. 1** Septate fungal hyphae (original magnification × 350).

**Fig. 2** Ellipsoidal conidia showing pale end cells and warty projections on outer cell wall (original magnification × 350).

**References**