DEMETIACEOUS FUNGAL KERATITIS

(A Case Report)

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Introduction

Fungal keratitis is an important cause of corneal blindness and usually carries an unfavourable prognosis due to its protracted course and requirement of specific therapy. Common fungal species responsible for keratitis include *Aspergillus*, *Fusarium*, *Acremonium* and many others [1,2]. We report a case of keratitis caused by a less common fungal species (*Curvularia*) belonging to the group of filamentous fungi known as Dematiaceous moulds, with its typical clinical presentation and management.

Case Report

A 60-year-old woman hailing from a rural area in Eastern UP presented to this hospital with 12 days history of pain, redness, and diminution of vision in the right eye. There was no preceding history of trauma or foreign body impaction in the eye. She was treated by an ophthalmologist with topical ciprofloxacin and mydriatics. The symptoms which had initially improved, worsened after the fourth day of treatment.

On general examination, she was averagely built and nourished. DVAR was PL+ with PR accurate in all quadrants. DVAL was 6/18 with correction. Examination of the RE revealed blepharospasm, intense congestion and a central corneal ulcer 3 mm x 3 mm in size with ill defined margins, covered with a whitish shaggy exudate with the central portion showing brownish black pigmentation. Surrounding cornea was edematous. Anterior chamber was filled with 1/3 level hypopyon. Pupil, which could be vaguely made out, showed an adherent posterior synechiae from 4'O clock to 7'O clock position. No view of the lens or fundus was possible. The left eye examination did not reveal any abnormality except for an immature cataract.

A fungal etiology for the keratitis was suspected. Corneal scraping was taken with a #15 blade under 4 per cent xylocaine anaesthesia. A large brownish clump of exudate could be dislodged from the surface of the ulcer. Ten per cent KOH mount was done and a part of the exudate was cultured on Sabourauds Medium.

The KOH mount revealed dark brown septate hyphae with multicelled conidia suggestive of a dematiaceous fungus. The culture tubes were incubated at 25 and 37 degrees celsius. A rapidly growing blackish brown fungal growth was observed within 48

hours indicative of phaeohyphomycotic fungi. Further subcultures and microslide culture was done. Lactophenol cotton blue staining showed dark yellow brown multicelled conidia with distinct 'boomerang' like bends, diagnostic of *Curvularia* spp (Figs. 1 & 2).

She was treated with natamycin 5 per cent eye drops given 4 hourly, ciprofloxacin 0.3 per cent eye drops given 2 hourly, atro-

Fig. 1 : Slide culture showing conidia of *Curvularia* species subdivided by transverse septae.

Fig. 2 : The rapidly growing periphery of the conidium gives the typical 'boomerang' appearance of *Curvularia* species.

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pine eye ointment twice a day and oral acetazolamide 250 mg three times a day. Tab fluconazole was given in the dose of 200 mg per day for five days.

Scraping of the ulcer was done as a therapeutic measure, on alternate days in the first week, to reduce the fungal load. The patient responded very well to the above regimen. The hypopyon resolved within four days and the symptoms subsided. However, the pigmented exudate appeared at the end of the second week for which scraping had to be done on two more occasions.

Finally the ulcer resolved completely after a period of four weeks and did not show any fluorescein staining. A residual paracentral nebular grade opacity was however left at the time of discharge. DVAR was 6/60 and an immature cataract along with posterior synechiae was revealed. Patient was advised to undergo synechiolysis with cataract surgery after 8 weeks. Patient has remained symptom free at first follow up visit after 1 month.

Discussion

Fungal keratitis is a frequent cause of preventable blindness. It is said to be usually preceded by some kind of trauma or foreign body impaction in the eye. The present case was apparently spontaneous in origin. Prognosis of fungal corneal ulcers is unfavourable due to their protracted course and need for specific antifungal therapy.

Forster et al [3] have described pigmented corneal ulcers (similar to those seen in our patient), though infrequently seen, are known to be caused by a group of fungi known as Dematiaceous moulds which include species such as *Curvularia*, *Dreschlaria* and *Cladosporium*. A large study of fungal keratitis in Madras [4], observed only 5 per cent cases out of 698 cases studied to be caused by *Curvularia*. Other studies from Lucknow [5] and Pune [6] did not show any case of *curvularia* keratitis. Single case report of *curvularia* keratitis have also appeared in the literature [7].

Another feature of this case was the persistence of the infection after initial response which necessitated

repeated scraping even after two weeks of aggressive therapy. This was in spite of the fact that, the KOH mounts and the cultures of the third and subsequent scrapings, failed to reveal any fungal elements. Forster et al [3] have described the clinical course of this etiologic agent as 'unpredictable and variable'. They have warned against the use of steroids since three of their cases in which steroids were used resulted in corneal perforations. No steroids were used in the management of the present case.

Early diagnosis of mycotic keratitis is important for adequate and timely treatment and is possible with the judicious use of direct microscopy and culture facilities available at peripheral hospitals. *Curvularia* is an infrequent cause of mycotic keratitis. It has a typical clinical appearance, pattern of growth on Sabourauds medium and specific diagnostic features on slide preparations.

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