



PIGMENTED STROMAL CORNEAL ULCER WITH COMPLICATED CATARACT

Ophthalmology

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ABSTRACT

Purpose: To study and evaluate the clinical features, laboratory findings and treatment efficacy of a case of keratitis caused by pigmented fungi. **Case Report:** A 35 year old female attended our OPD with the chief complaints of diminution of vision, foreign body sensation, redness and watering from her right eye since 20 days, and pain since 1 week, which was gradual in onset and progressive in nature. Methods: Thorough ophthalmic examination was done, including fundoscopy by indirect ophthalmoscopy and ultrasound B-scan (both eyes). Corneal scrapings for staining, smear, 20% KOH mount and culture-sensitivity was done. **Results:** Reports revealed multiple septate hyphae with 2 macroconidia. The patient was started on topical natamycin, voriconazole, moxifloxacin, cyclomid and oral fluconazole from our side. The signs have reduced, response to treatment is optimum and patient is under follow up. **Conclusion:** Brown pigmented infiltrates are an important clinical feature of dematiaceous fungi and form a rare cause of corneal phaeohyphomycosis.

KEYWORDS

INTRODUCTION:

Fungal keratitis is one of the most common causes of keratitis in tropical countries. Dematiaceous fungi form the 3rd most common cause of keratomycosis, with *Curvularia* and *Bipolaris* being the most common infecting species.^[1] Due to injudicious use of antibiotics and steroids, incidence of suppurative fungal corneal ulcers have increased manifold. Other fungi include *Aspergillus fumigatus*, *Fusarium*, *Alternaria*, *cephalosporium*, *penicillium*, *candida*, *Cryptococcus*, *histoplasma* and *blastomyces*.^[2]

Case Report:

A 35 year old female attended our OPD with the chief complaints of diminution of vision, foreign body sensation, redness and watering from her right eye since 20 days, and pain since 1 week, which was gradual in onset and progressive in nature. At the very onset, foreign body sensation and watering had begun, following trauma by household broom. She is non-diabetic and non-hypertensive. She visited several physicians and used medications. Her visual acuity was reduced to FC at 3 feet on the affected eye and 6/9 on the left eye.

On slit lamp biomicroscopic examination, the conjunctiva was mildly congested, cornea showed a healed, fluorescein stain negative stromal corneal ulcer with pigments dispersed at the centre, the pupil is pharmacologically dilated with an early cataractous lens and posterior synechiae.

The central ulcer measured 5 x 4.5 mm, and showed a pigmented, elevated brownish-black with surrounding infiltrates. The ulcer appeared dry. The left eye presented with a clear cornea, early cataract, and a normal fundus. The deposits were scraped off and used to inoculate culture media (Sabouraud's Dextrose Agar).

The indirect ophthalmoscopy and ultrasound reports of the affected eye showed normal findings, implying no posterior segment pathology.

The patient's routine blood investigations (CBC, ESR) were done and were within normal limits, lipid profile, sugar profile were also within normal limits. The viral markers (HIV I and II, HbsAg, Anti-HCV antibody) were also non-reactive.

Due to the typical appearance of the ulcer (dry, pigmented), we initiated hourly topical antifungal natamycin 5%, voriconazole, along with two-hourly topical moxifloxacin 0.5%, and cyclomid and lubricating eyedrops. Oral fluconazole was also initiated. Corneal scrapings were sent for staining (lactophenol cotton blue, calcofluor-white and Fontanna masson), 20% KOH mount and culture-sensitivity. Reports revealed multiple septate hyphae. Only 2 macroconidia noted.

The organism species could not be identified owing to the use of multiple drugs by the patient. We suspected dematiaceous fungi and the case is currently under follow-up.

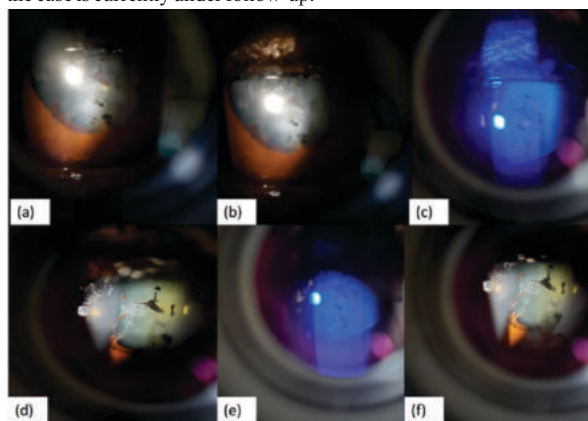


Fig. showing (a) and (b) stromal corneal ulcer with black pigment deposits (c) and (e) stain negative under cobalt blue light filter (d) and (f) posterior synechiae, iris contour distorted with cataractous lens



Fig: KOH culture revealed multiple septate hyphae with macroconidia

DISCUSSION:

Dematiaceous or darkly pigmented fungus that causes phaeohyphomycosis, rarely infect humans. The most frequently reported species are *Bipolaris spicifera*, *B. australiensis*, and *B. hawaiiensis*. *B. hawaiiensis* is widely distributed in plants or soil and is commonly found in tropical regions.^[3] The use of topical natamycin with voriconazole has been reported to be successful in treating most cases of fungal keratitis. Our case has also responded well. Therapeutic

penetrating keratoplasty with SICS + PCIOL implantation has been also kept in mind and the patient is being followed up 2 weekly for monitoring of any further deposits.

Anadi et al (1988) have reported corneal ulcers due to *Bipolaris species* infection in a leprosy patient,^[4] while Bashir G et al. (2009) have reported keratomycosis with endophthalmitis in an immunocompetent individual^[5]. Sonam Yangzes et al (2019) Chaidaroon W. et al (2016) also reported cases on pigmented corneal ulcer by *B. Hawaiiensis*^[6,7].

CONCLUSION:

Brown pigmented infiltrates are an important clinical feature of dematiaceous fungi and form a rare cause of corneal phaeohyphomycosis.

Conflicts of interest: none

Financial support and sponsorship: none

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