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Cladosporium Keratitis Case Report

Dr. Vepa Meenakshi
Assistant Professor, Ophthalmology, R.S.P.R., Govt. Regeional Eye Hospital,
Andhra Medical College Visakhapatnama, India
Dr. T. Jyothirmayi
Assistant Professor, Ophthalmology, R.S.P.R., Govt. Regeional Eye Hospital/ K.G.H.,
Andhra Medical College Visakhapatnama, India
Dr. Sunil Kumar Naik
Post Graduate, Ophthalmology, Andhra Medical College Visakhapatnama, India
Dr. V. Mahathi
Post Graduate, Ophthalmology, Andhra Medical College Visakhapatnama, India

Abstract:
The dematiaceous fungi appear to be an increasing cause of human disease. This was a case of a patient coming with complaints of pain, redness, photophobia and defective vision in right eye following injury with a twig. Scrapings from corneal ulcer were sent for gram stain, bacterial and fungal culture. Cladosporium species of fungus was isolated from a patient. The patient was treated with natamycin eye drops, atropine eye drops and oral ketoconazole. The corneal ulcer began to respond and healed completely. Though Cladosporium sp., rarely cause disease it also should be kept which treating patients of fungal keratitis.

Keywords: *Cladosporium, conidiophores*

1. Introduction

Fungal keratitis was first described by Leber in 1879. This entity is not a common cause of corneal infection, but it represents one of the major causes of infectious keratitis in tropical areas of the world.[1] There has been an increase in the number of reported cases of fungal keratitis which might be due to increasing use of broad spectrum topical antibiotics providing a non competitive environment for the fungi to grow. In addition, the use of topical corticosteroid enhances the growth of fungi while suppressing host immune response.[2]

Diagnosis and treatment of keratomycosis has become a challenge to ophthalmologists because of its resistance to treatment and difficulty in obtaining drug sensitivity.[3,4] This present case report is to report a case of fungal keratitis caused by a rare species of fungus: Cladosporium.

2. Case Report

A 55 year old male patient presented to our tertiary care institute with pain, redness, photophobia since 10 days and defective vision since 8 days in right eye following injury with a branch of Causurina tree [called as Sarugudu tree in Telugu]. 3 days before coming to the present institute the patient went to a primary health centre where he was prescribed topical Natamycin (5%) eye drops hourly, Moxifloxacin eye drops (0.5%) hourly and Atropine eye drops two times a day and patient is using them since then.

Examination of right eye showed edematous eyelids, conjunctival congestion, circumciliary congestion. Cornea was edematous (Grade 2) with an oval central grayish white ulcer of size 6X7mm with sloping margins, clear floor and it was extending up to deep stroma (Figure 1). There were no satellite lesions. Corneal sensations were reduced. Anterior chamber depth was normal with normal iris, pupil was dilated probably drug induced and other details were hazy. Left eye showed immature senile cortical cataract otherwise being normal. Visual acuity was hand movements in OD, 1/60 in OS.

Fluorescein stain was positive (Figure 2) and corneal scrappings showed negative gram stain but a positive 10% KOH mount in which thin septate branched hyphae with septate conidiophores were seen (Figure 3). Culture done on Sabourads dextrose agar showed a medium rate of growth with grey coloured velvety colonies and rapidly spreading black colonies on the reverse side all suggestive of Cladosporium species (Figure 4).

The patient was treated with natamycin 5% eye drops hourly, atropine eye drops 2 times per day and oral ketoconazole 150mg two times a day. The patient responded well to the treatment and the ulcer healed well.

3. Discussion

Fungal keratitis is common in India due to the tropical climate and a large agrarian population that is at risk with an incidence of approximately 33.4%.[5] The most common organism isolated from fungal corneal ulcers is Aspergillus species followed by Fusarium sp., Candida sp., Curvularia sp.,. Cladosporium sp., were isolated in less than 5 % of the ulcers.[6,7,8] Cladosporium is a

dematiaceous (pigmented) mould widely distributed in air and rotten organic material and frequently isolated as a contaminant on foods. Some species are predominant in tropical and subtropical regions. The growth rate of Cladosporium colonies is moderate on potato dextrose agar at 25°C and the texture is velvety to powdery. Similar to the other dematiaceous fungi, the color is olivaceous green to black from the front and black from the reverse.[9,10] Most of the Cladosporium spp. does not grow at temperatures above 35°C. Cladosporium spp. produce septate brow hyphae, erect and pigmented conidiophores, and conidia. Cladosporium spp. produce septate brown hyphae, erect and pigmented conidiophores, and conidia. They have a geniculate appearance. In addition, conidiophores of Cladosporium herbarum bear terminal and intercalary swellings. Conidia of Cladosporium sps. in general are elliptical to cylindrical in shape, pale to dark brown in color and have dark hila. They most commonly cause cutaneous and subcutaneous diseases and rarely deeper infections.

They are frequently found in normal eyes but rarely cause keratitis.[11] Fungal keratitis is usually diagnosed late as the symptoms are less and if it is due to rare species such as cladosporium meticulous care needs to be taken in attaining corneal scrapings and specimens for culture as these fungi are present in normal eyes also.

4. Conclusion

To conclude though cladosporium sps are routinely found in normal eyes they may be a potential cause for keratitis and hence utmost care should be taking in evaluating, investigating and treating patients with suspected fungal keratitis.

5. References

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Annexure

Figure 1: Corneal ulcer

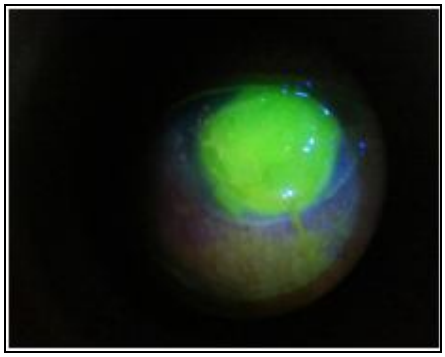

Figure 2: with Fl Stain positive

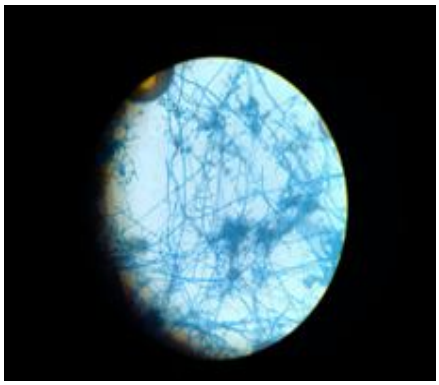

Figure 3: H/P showing Cladosporium

Figure 4: IN Sabourad's agar