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## Case Report

# Double jeopardy - Graft infection by *Scedosporium apiospermum*

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### ABSTRACT

Presenting a case report of corneal graft infection by an opportunistic fungus, *Scedosporium apiospermum*, which is reported to be resistant to many antifungals. Antibiotic sensitivity of the organism and management of such infections has been discussed.

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## 1. Introduction

*Scedosporium apiospermum* is a saprophytic filamentous fungus, found in soil, manure, polluted water and sewage sludge, with a worldwide distribution. It is the third most commonly encountered fungi following *Aspergillus* and *Fusarium*.<sup>1</sup> Here we present a case report of corneal graft infection caused by *S. apiospermum*.

## 2. Case

55 year old male presented with complaints of pain, redness and white spot over cornea of left eye after falling into a gutter during a visit to village. He gave history of keratoplasty in left eye, 1 month ago, for bacterial corneal ulcer. Best corrected visual acuity (BCVA) right eye 6/6, left eye counting finger 1 meter. Slit lamp examination of right eye was unremarkable, left eye showed ectatic graft, with abscess in inferior part of the graft with surrounding corneal haze. (Figure 1a) There was no evidence of suture infiltrates. Anterior chamber details were hazy. B scan OS showed few dense echoes suggestive of exudates. (Figure 1b) Sac syringing both sides was patent. Patient

was started on oral ciprofloxacin, topical moxifloxacin and tobramycin eye drop and atropine ointment. Routine blood investigations were normal. HIV, HBsAg and RPR were non-reactive. Repeat therapeutic penetrating keratoplasty was done during which there was inadvertent expulsion of lens.

Corneal button was examined under 10% KOH preparation which showed fungal elements with hyphae. Culture on Sabouraud's dextrose agar with chloramphenicol showed greyish white hyaline mould with suede like consistency. (Figure 1c) Lactophenol Cotton Blue mount showed conidia borne singly, simple and branched conidiophores and laterally on hyphae which was suggestive of *Scedosporium apiospermum*.

Post-operative day 1 OS BCVA - there was perception of light. Slit lamp examination showed oedema of donor cornea. Patient was discharged on oral ketoconazole, with topical natamycin, fluconazole, moxifloxacin eye drops and atropine ointment. Further follow up showed ectatic corneal graft with infected graft host junction and loose sutures. Oral and topical Itraconazole was started but had to be stopped as patient was intolerant to it. 1 month post-surgery, slit lamp showed corneal thinning infero-nasally with vascularization, posterior synechiae and loose sutures temporally. Follow-up at 3 months showed graft failure with

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corneal vascularization and thinning. (Figure 1d) B Scan showed resolution of exudates.

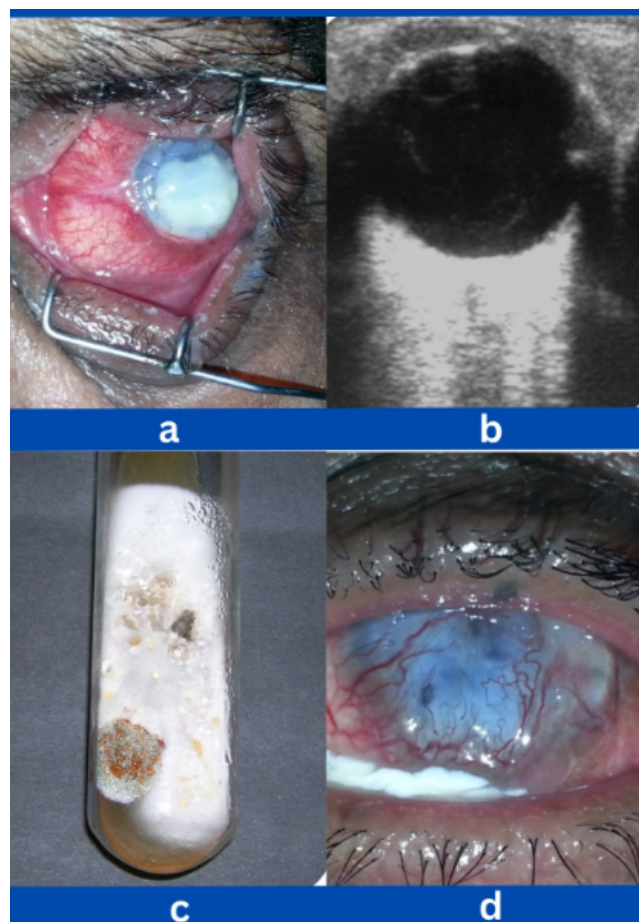


Fig. 1:

### 3. Discussion

*Scedosporium apiospermum* is an opportunistic fungus and it has been reported to be resistant to many antifungals.<sup>2</sup> It is causative agent of severe infections in immunocompromised and occasionally immunocompetent patients. Predisposing factors include corticosteroids, immunosuppressive therapy, contact lens wear, ocular trauma or surgery. Keratitis is the most common manifestation of *S. apiospermum* ocular infection in immunocompetent individuals, and in most cases, they are usually preceded by corneal injury due to some trauma, like in this case, the patient acquired it after falling into gutter.<sup>3</sup>

Treatment of keratitis caused by *Scedosporium apiospermum* with either natamycin alone or in combination with topical voriconazole, miconazole or clotrimazole

was seen to be effective in 88% of the cases. Topical ketoconazole has also been reported to be efficacious. However, in patients with keratitis associated with a deeper tissue invasion, oral ketoconazole has been recommended to be added to the treatment. In severe cases, systemic therapy with ketoconazole, voriconazole or itraconazole, has been advised.<sup>2</sup>

Our patient was intolerant to itraconazole and non-affording for voriconazole. So, we continued treatment with ketoconazole and found good results with it.

### 4. Conclusion

*S. apiospermum* is an emerging cause of infection in India. Identification of the fungus by culture sensitivity is important because of its variable susceptibility to antifungal agents. We found satisfactory result with ketoconazole treatment in *S. apiospermum* infection. Therefore, it can be used as an effective alternative to voriconazole and/or itraconazole in demanding circumstances.

### 5. Conflict of Interest

The authors declare no relevant conflict of interest with respect to research, authorship and or publication of this article

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