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Tunnel infection: What next?

A 60-year-old man presented with redness and pain in the right eye (OD) for five days. He had undergone OD superior small incision cataract surgery (SICS) a month back. His vision was 6/9 in OD and 6/36 in the left eye (OS). On examination, OD linear, mid stromal limbal infiltrates of 6 × 3 mm size were noted from 11'o clock to 1'o clock hours [Fig. 1a]. Fungal filaments were seen in Gram staining, with negative culture. Hourly topical voriconazole 1% and natamycin 5%, with ciprofloxacin ointment 0.5% at night was started. The infiltrate progressed with increasing anterior chamber reaction [Fig. 1b].

What Is Your Next Step?

a. Corneal biopsy
b. Start fortified antibiotics and look for the response after 48 hours
c. Do therapeutic scraping and continue topical therapy
d. Therapeutic patch graft and do postoperative infected corneal specimen culture.

Correct Answer

d. Therapeutic patch graft and do postoperative infected corneal specimen culture [Fig. 1c].

Findings

The necrosed tissue from the tunnel was meticulously dissected and removed; the patch graft was hand-fashioned by match-and-fix technique and sutured to the defect area with 10-o nylon. The culture of the removed infected tissue was done in blood agar. Postoperatively, the same treatment was continued; topical fortified vancomycin 5% was added. After three days, the culture revealed dry chalky white creamy colonies in blood agar, suggestive of *Nocardia* sp. [Fig. 1d]. The treatment was changed to topical 2.5% fortified amikacin hourly and ciprofloxacin ointment at night. No recurrence was seen in the graft.

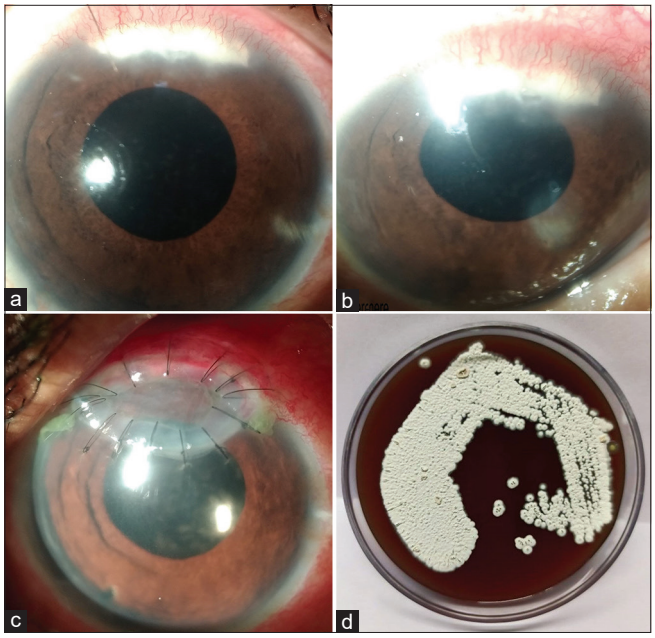

Figure 1: (a) Tunnel infection at presentation. (b) Tunnel infection increased in size after antifungals. (c) Post-therapeutic patch graft. (d) Dry, chalky white colonies of *Nocardia* grown in culture

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Clinical Diagnosis

Late postoperative tunnel infection with Nocardia

Discussion

Postoperative infections due to *Nocardia* are rare, but higher incidences are found in South India.[1] It is ubiquitous in the environment and causes slow-growing infections. In a study by Garg P *et al*.,[2] the duration between presentation and the initial infection was 24.5 ± 22.2 days.

In our patient, even though fungal filaments were noted in the smear, the culture was negative initially. The poor response to topical treatment prompted the authors for early surgical intervention. Postoperative Nocardia keratitis shows similarity to fungus both in clinical and microbiological appearance, leading to delayed initiation of appropriate therapy.[3] Furthermore, the anterior chamber, ciliary body, and vitreous involvement are of a poor prognosis, especially in postoperative situations.[1] Hence, it is imperative to attempt immediate surgical intervention if the response to medical therapy is not perceptible and in identical scenario with negative cultures.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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