# *Scedosporium Prolificans* Sclerokeratitis Following Pterygium Excision with Mitomycin C: A Case Requiring Enucleation

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B-scan ultrasonography was performed showing scleral thickening and a positive T-sign without evidence of vitritis. Examination was also notable for mild periorbital edema and approximately 5 mm of lef proptosis with mild extraocular motility restriction.

T e patient was subsequently admitted to the hospital for diagnostic evaluation and inpatient treatment. Corneal scrapings were cultured on blood agar, chocolate agar, Saboraud's agar and thioglycolate broth. Computed tomography (CT) imaging revealed marked scleral thickening and proptosis. Topical natamycin and oral voriconazole were initiated, due to concern for fungal infection with history of recent ocular exposure to organic debris. Oral prednisone was continued due to concern for an autoimmune process with prior positive ANA and dsDNA results. Rheumatology and infectious disease services were consulted. Repeat rheumatologic workup was notable for ANA 1:160 homogenous titer and negative anti-dsDNA. HIV antibody, syphilis serology and tuberculosis interferon gamma release assay testing were negative.

On the third hospital day, fungal culture from the corneal biopsy grew fungus without species identifcation. At this juncture, the systemic corticosteroid dose was reduced with plans for an expedited taper. On the fourth day of hospitalization, the fungal organism was identifed as *Scedosporium prolifcans*. Since *S. prolifcans* has an unpredictable antifungal susceptibility pattern and is typically highly resistant to most therapeutic classes, oral terbinafne and IV micafungin were added, and oral voriconazole was continued. Magnetic Resonance Imaging (MRI) was obtained to evaluate for posterior spread and revealed enhancement of retrobulbar fat and optic nerve of the lef eye (Figure 1b).

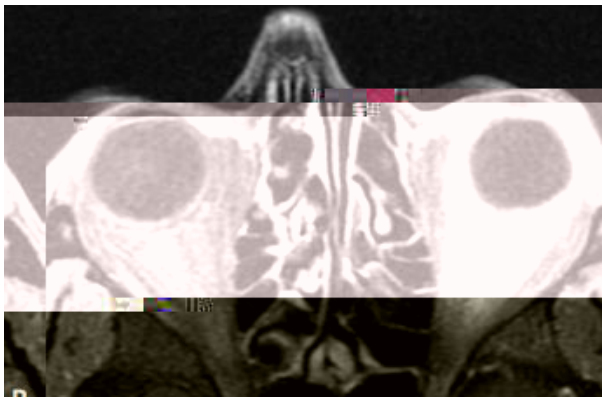

**Figure 1(b):** Coronal T1 magnetic resonance imaging with fat suppression and contrast demonstrating thickened sclera, retrobulbar fat and optic nerve enhancement.

T e decision was made to enucleate the eye to prevent further extension of infection, considering evidence of posterior orbital extension of infection on MRI and the highly resistant nature of *S. prolifcans* to antifungal agents. On hospital day 6, the afected eye was enucleated, involving disinsertion and excision of extraocular and oblique muscles and the globe. Implant placement was deferred due to the risk of seeding. Histologic examination of the globe showed numerous fungal hyphae and abundant necroinfammatory debris throughout the cornea and sclera (Figures 1c-1d). Notably, the optic nerve margin and orbital apex, which enhanced on MRI, were free of involvement, confrmed by tissue stains for fungus. Prior to discharge from the hospital, IV micafungin was discontinued afer 8 days of treatment. T e patient was continued on oral voriconazole 4 mg/kg every 12 hours and terbinafne 250 mg every 12 hours for a total of 10 weeks afer enucleation. He has no evidence of disease recurrence and will have an autologous fat graf to the lef orbit.

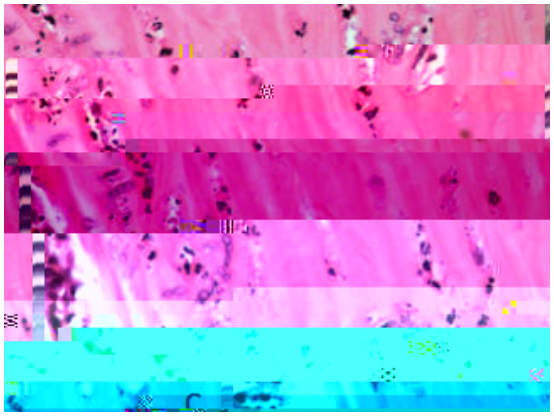

**Figure 1(c):** Hematoxylin & eosin stained sections (100x) of the enucleation specimen demonstrate abundant necroinfammatory debris with numerous fungal hyphae.

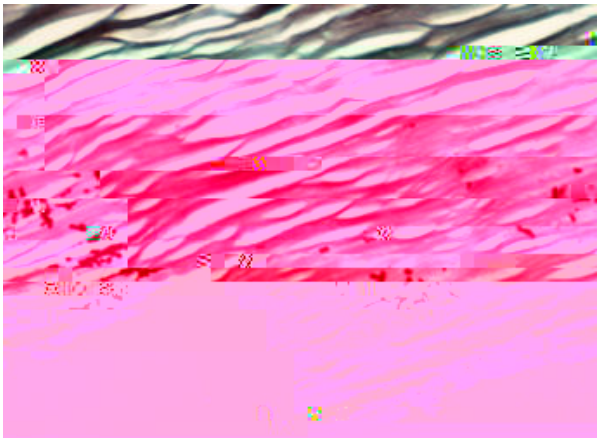

**Figure 1(d):** Grocott's methenamine silver stain (200 x) highlights numerous fungi within the cornea.

## Discussion

Ocular manifestations of *S. prolifcans*