RECALCITRANT SCLERITIS AFTER VITRECTOMY AND LENS EXPLANTATION

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Scleritis is a severe painful inflammatory process that poses a significant threat to vision. An underlying systemic condition is found in up to 50% of the cases.[1] Infectious scleritis accounts for 7.5% of all cases of scleritis.[1] Risk factors for infectious scleritis include a history of pterygium surgery with adjunctive mitomycin C administration or beta irradiation. Cataract extractions, scleral buckling procedures and pars plana vitrectomies have also been implicated.[2] Pseudomonas aeruginosa is the most common pathogen involved.[3] Fungal scleritis may remain undiagnosed for several months and a scleral biopsy is recommended in patients with progressive scleritis where infection is suspected.

Case report

An 81 year old female was referred with complaints of blurry vision and photopsias OD for 18 months with boring pain of 5 months duration. Her past history was significant for undergoing a cataract extraction with a lens implant in the right eye a year and a half ago. The patient's intraocular lens dislocated on the first post-operative day, however, the patient was managed conservatively with routine follow-up. One month prior to presentation at Massachusetts Eye Research and Surgery Institute, she had developed progressive blurring of vision and had undergone a pars plana vitrectomy with explantation of the intraocular lens. On examination, the right eye visual acuity was FC at 3 ft. The eye was soft and a slit lamp examination revealed 3+ scleral injection with scleral thinning temporally at the sclerostomy site. The corneal stroma was edematous with descemet's striae. A Seidel's test was positive at sutured sclerostomy site. Fig (1) shows an external photograph of the right eye.

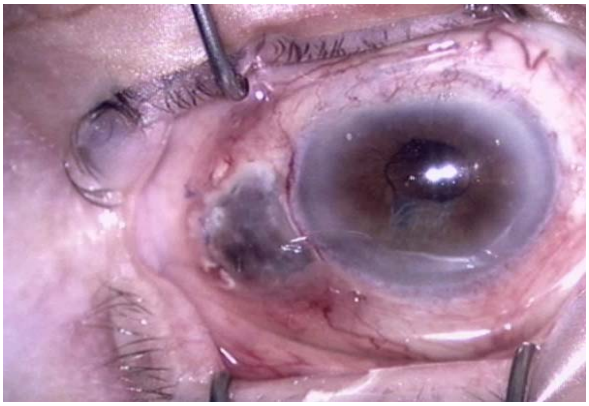

Figure 1

The left eye and dilated fundoscopy of both eyes was unremarkable. A diagnosis of necrotizing scleritis of the right eye was made. This was suspected to be secondary to either a systemic autoimmune process, or was suspected to be surgically induced. An infectious process could not be ruled out. A meticulous review of systems revealed no abnormalities and the serologic work-up was within normal limits. The patient's eye was managed conservatively and a decision was made to biopsy and patch graft the sclera. Intra-operative exposed necrotic sclera is shown in Fig (2).

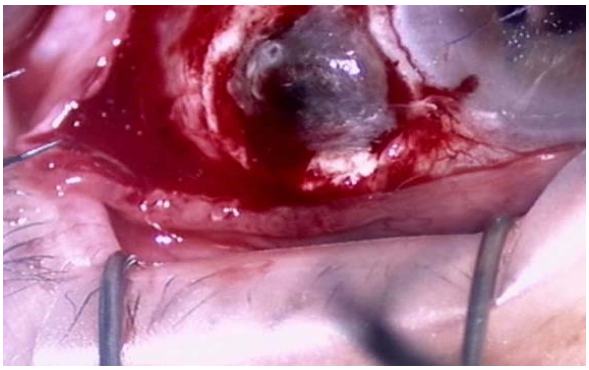

Figure 2

The scleral specimen was sent for histopathology which revealed branching fungal hyphae. This patient had developed necrotizing fungal scleritis. The H&E stain of the specimen at 100x magnification is shown in Fig (3).

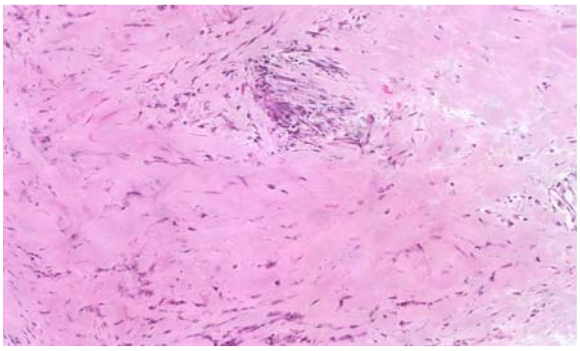

Figure 3

In conjunction with infectious disease specialists, the patient was commenced on oral voriconazole and topical amphotericin B under a topical antibiotic cover. This therapy was given for 2 months after which it was tapered. A taper of the anti-fungal agents resulted on worsening of the patient's graft with resurgence of necrosis. A debridement with removal of loose lashes at the edge of the graft was performed. The patient was commenced on topical voriconazole and oral iatraconazole. The post-operative appearance of the graft is shown in Fig (4).

At four months follow-up the patient was found to be doing well with no recurrence of signs and symptoms.

Comment:

All patients with necrotizing scleritis require a thorough systemic and serological work-up. A high index of suspicion for infectious agents is necessary if no evidence of systemic disease is found. In cases with no obvious cause of scleral inflammation, a scleral biopsy must be performed. These patients require aggressive therapy to prevent devastating consequences.

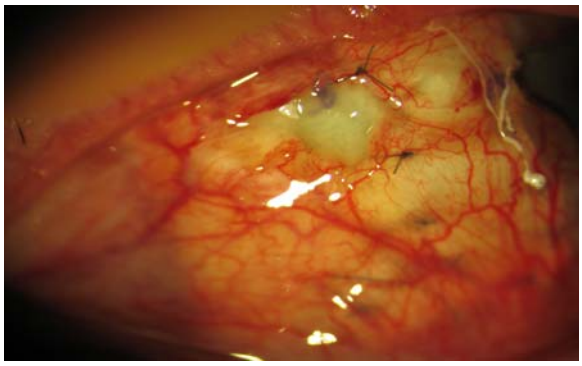

Figure 4

References:

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2. O'Donoghue E. et al. Surgically induced necrotising sclerokeratitis (SINS)--precipitating factors and response to treatment. Br J Ophthalmol. 1992 Jan;76(1):17-21
3. Riono W.P. et al.Scleritis: a clinicopathologic study of 55 cases.Ophthalmology. 1999 Jul;106(7):1328-33