Supplementary Online Content


eAppendix. Report of cases

This supplementary material has been provided by the authors to give readers additional information about their work.
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Case 1

A 79-year-old male presented at Bascom Palmer Eye Institute (BPEI) at postoperative month (POM) 12 after cataract extraction (CE) and intraocular lens (IOL) implantation in the right eye with the best-corrected visual acuity (BCVA) of hand motion and intraocular pressure (IOP) of 7 mm Hg.

He first developed symptoms of recurrent inflammation at POM 5. His workup (VDRL, lysozyme, ESR, ANA, RF) was negative and he was treated with topical prednisolone acetate. At POM 6 he underwent a sub-Tenon injection of triamcinolone. Subsequently he suffered several episodes of recurrent inflammation with a yellow lesion forming along the superotemporal iris border. At POM 9 and POM 10, the patient underwent diagnostic vitrectomies and intravitreal injection of vancomycin and amikacin. The vitreous and anterior chamber cultures remained negative.

At POM 12 the patient underwent vitreous tap and injection of vancomycin and ceftazidime with negative culture results. Subsequently, pars plana vitrectomy with removal of the IOL and of the iris lesion with intravitreal injections of vancomycin, amikacin, and voriconazole was performed. The cultures yielded growth of Curvularia species on blood agar and Sabouraud agar in 3 days. The patient was treated with intravitreal voriconazole 5 times: 3 monthly injections and then 2 additional injections every other month. At POM 23, the patient underwent secondary IOL implantation. At POM 34 the patient’s BCVA was 20/100.

Case 2
A 21-year-old male was examined 2 weeks after trauma with a metal nail and primary corneal laceration repair at another hospital. VA in the left eye was 2/200 and IOP was 20 mm Hg. The original concern was for lens fragment–related inflammation, but given filamentous infiltrates at the corneal wound site, at 1 month after trauma, anterior chamber tap and intracameral injection of voriconazole were performed. The cultures were negative.

Six weeks after the initial trauma, the patient underwent vitrectomy, lensectomy, and injection of vancomycin, ceftazidime, and voriconazole. The vitreous cultures grew *Curvularia* species on chocolate agar, blood agar, Sabouraud agar, and in Thioglycolate broth in 48 hours. Topical amphotericin B and oral voriconazole were initiated. Due to elevated liver function tests, the oral voriconazole was halted after 6 weeks. Patient was stable until he had rebound inflammation at 10 weeks after trauma and repeat tap and injection of voriconazole were performed. The patient underwent 6 additional intravitreal voriconazole injections and was then switched to topical voriconazole. Because of the recurrent and persistent inflammation, repeat vitrectomy was performed with intravitreal voriconazole 6 months after initial examination. No nidus of infection was identified and the cultures were negative. The patient was maintained on topical voriconazole and received additional intravitreal voriconazole at postpresentation month 9 and 10. Throughout the patient's clinical course, there was a concern that an endothelial plaque that formed around the initial corneal wound might be sequestering the organism. A corneal perforation occurred 10 months after initial examination and therapeutic penetrating keratoplasty with intravitreal amphotericin and
voriconazole was performed. Fungal elements were identified on pathologic examination of the corneal specimen, but the margins did not contain organisms. Topical voriconazole was continued until postpresentation month 16. At month 35, the BCVA was 20/200, and the exam showed no evidence of infection.

Case 3

A 76-year-old male presented with inflammation 6 months after undergoing CE/IOL in his right eye. Previously followed at another hospital, the patient developed inflammation after he underwent Nd:Yag laser capsulotomy at POM 3. He was treated with topical steroids. Upon presentation to BPEI at POM 6, his BCVA was 20/70 and hypopyon was noted. Intravitreal tap and injections of vancomycin and ceftazidime were performed. The culture remained negative. A posterior capsular plaque was noted and on POM 7 the pars plana vitrectomy, partial capsulectomy, and injection of vancomycin and ceftazidime were performed. The culture was positive for Curvularia species on chocolate agar, blood agar, Sabouraud agar, and in Thioglycolate broth in 3 days. The patient underwent intravitreal voriconazole injection and was started on oral voriconazole. However, the inflammation persisted and the patient underwent complete capsulectomy, IOL removal, and intravitreal amphotericin at POM 9 with negative cultures. The inflammation still persisted and the high-resolution ultrasound showed fungal balls in the area of the ciliary body. On POM 11, vitrectomy, dissection and removal of the peripheral fibrinous membranes, gas tamponade, and injection of intravitreal amphotericin were performed. It was noted during the surgery that membranes and flocculent material were attached to the ciliary body from 2 to 7 o’clock.
Inferior retina was studded with small infiltrates consistent with colonies or inflammatory deposits. *Curvularia* species grew from the vitreous wash and the ciliary membrane. The patient was placed on weekly intravitreal amphotericin injections for a total of nine injections and oral ketoconazole. The injections were stopped at POM 14. At POM 23, secondary iris-sutured IOL implantation was performed. At POM 31, the BCVA was 20/60 with an epiretinal membrane.

**Case 4**

A 67-year-old female presented to BPEI at POM 23 after CE/IOL in the left eye. The VA was 20/400 and IOP was 4mmHg.

Previously followed at another hospital, the patient developed inflammation POM 2 after CE/IOL and was treated with topical prednisolone acetate. Due to an indolent iritis and the development of a wispy posterior capsule plaque, *Propionibacterium acnes* endophthalmitis was suspected. Cultures of aqueous obtained by anterior chamber paracentesis were performed and were negative; the patient refused vitrectomy. The patient underwent sub-Tenon triamcinolone injection for recurrent inflammation. The rheumatologic workup (including CBC, CMP, urinalysis, ESR, RPR, FTA, RF, C-ANCA, p-ABCA, HLA-B27, anti-CCP) was negative except for the ANA which was 1:80 in a homogenous pattern. At POM 13, the patient, in conjunction with rheumatology, was treated with methotrexate and later azathioprine. Her inflammation continued to recur and worsened after starting azathioprine. At POM 19 she underwent diagnostic pars plana vitrectomy, partial capsulectomy, and intravitreal vancomycin injection with cultures growing *Curvularia*. The patient was treated with oral itraconazole and topical natamycin.
neither of which she tolerated. She also received repeated intravitreal voriconazole. Subsequently intravenous voriconazole was started. At POM 20, a complete capsulectomy and IOL removal was performed with Curvularia growing from the haptic. The patient was maintained on intravenous voriconazole but that had to be stopped due to elevated liver function tests. The patient was treated with oral itraconazole, and biweekly intravitreal voriconazole.

Due to recurrent inflammation, the patient was sent for evaluation to our institution. At POM 25, pars plana vitrectomy was performed and an endoscope was used to evaluate the retinal periphery and sub-irideal space. An area of pars plana and subretinal flocculent material was noted. The material was evacuated and silicone oil tamponade was used. The cultures remained negative. The patient was treated with oral itraconazole and 4 doses of intravitreal voriconazole over 4 weeks. At POM 28 the patient was stable with BCVA of 20/300 and no evidence of recurrence.

Case 5

An 84-year-old female with history of age-related macular degeneration underwent CE/IOL in the left eye at another hospital and presented at POM 3 with anterior uveitis and vitritis. The VA was count fingers. Given the posterior capsule plaque, anterior chamber tap and intravitreal injections of vancomycin, ceftazidime, and dexamethasone were administered. The patient was treated with topical fortified vancomycin, gatifloxacin, and prednisolone. Four additional vancomycin injections were performed given concern for Propionibacterium acnes. However, the culture results were negative. On POM 7, given persistent inflammation, pars plana
vitrectomy with capsulotomy was performed. *Curvularia* species grew in 3 days on blood culture medium. The patient was treated with oral fluconazole for 2 weeks. Additionally, 10 days after the vitrectomy, the patient underwent a second pars plana vitrectomy with removal of intraocular lens and capsular bag remnants with intravitreal injection of amphotericin. The culture results and the pathologic analysis of the capsular bag remnants were negative. Clinically, her inflammation resolved thereafter. On POM 11, her best-corrected visual acuity was 20/400 as limited by geographic atrophy.

**Case 6**

A 70-year-old female with an ocular history of iridocyclitis controlled with topical anti-inflammatory drops underwent CE with Crystalens IOL placement in the right eye. She was tapered off standard postoperative drops in a timely fashion, but developed inflammation on POM 2 and was started on difluprednate. The inflammation waxed and waned and the patient was treated on variable schedules of difluprednate and prednisolone acetate over the following twenty two months. YAG laser capsulotomy was performed on POM 11. Work-up included HLA-B27 and cytomegalovirus and was negative. A trial of Valacyclovir was administered, but patient did not tolerate the medication. After the cataract surgery, the visual acuity ranged from 20/30 to 20/60. The patient received subconjunctival injections of triamcinolone acetate on POM 15, 21, and 23. A month after the last injection (POM 24), the patient’s vision decreased to 1/200 and hypopyon, anterior capsule thickening, and vitreous opacities were noted. Pars plana vitrectomy, capsulectomy, and injection of intravitreal vancomycin and ceftazidime were
performed. Anterior chamber and vitreous cultures were sent. *Curvularia* species grew from the vitreous specimen on chocolate and blood agar as well as on Sabouraud agar and Lowenstein Jensen medium. The growth was noted in 3 days. The patient was treated with 4 intravitreal injections of amphotericin. Oral voriconazole was started and later switched to fluconazole. Repeat pars plana vitrectomy, membrane peeling, and removal of IOL were performed. Subsequently patient developed neovascularization of the iris, pupillary membrane, tractional and rhegmatogenous retinal detachment and underwent pars plana vitrectomy, intracameral bevacizumab, intravitreal amphotericin, and silicone oil was used as tamponade. Repeat vitreous cultures were negative. On the last POM 27 visit, the visual acuity was light perception and retinal detachment was seen under silicone oil. Given the funnel configuration of the retinal detachment, it was deemed inoperable.