

BILATERAL ENDOGENOUS FUNGAL ENDOPHTHALMITIS TREATED WITH SYSTEMIC AND INTRAVITREAL VORICONAZOLE

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Endogenous fungal endophthalmitis (EFE) is an uncommon but potentially blinding cause of intraocular infection. It results from haematogenous spread of the microorganism from an infected site into the eye. The majority of cases of EFE have been shown to occur in patients with debilitating disease, immunosuppression and recent hospitalisation though rarely it may occur in an otherwise healthy host. *Candida albicans* is the most frequent pathogen implicated^{1,2}. We describe a case of bilateral EFE which was successfully treated with systemic voriconazole alongwith pars plana vitrectomy and an intravitreal injection of voriconazole.

CASE

A 47 year old diabetic female presented with sudden painless drop of vision in both eyes (right > left) since 1 day. She had been started on hemodialysis 2 weeks back. She had history of both eyes lasered proliferative diabetic retinopathy (PDR) 5 years back. On examination, Best Corrected Visual acuity (BCVA) was counting fingers at ½ meter OD and 5/60 OS. Slit lamp examination revealed pseudophakia with vitritis OU. Fundus showed hazy view with granuloma superior to the macula OD and inferior to the macula OS. A clinical diagnosis of bilateral endogenous fungal endophthalmitis (EFE) was made.

Routine systemic investigations such as complete blood counts, blood sugar fasting and post prandial, Hba1c, kidney function test and lipid profile were ordered. Fungal culture from a blood sample was performed three times with negative results each time. After informed consent, the patient underwent OD vitreous biopsy with 23G pars plana vitrectomy with intravitreal voriconazole (100 microgram/0.1ml) and was started on oral Voriconazole (200 mg 12 hourly X 3 weeks) in conjunction with the physician. Direct specimens from the vitreous biopsy revealed the presence of *Candida* sp. At one week follow up, BCVA improved to 6/18 OD and 6/12P OS with clearing of the media and resolution of the granulomas on fundus examination. Within 3 weeks, BCVA returned to 6/9 N6 OU, there was complete resolution of the vitritis and granulomas. This was maintained till 3 months follow up.

COMMENT

Owing to side effects attributed to systemic amphotericin B use including nephrotoxicity, newer principles governing the treatment of EFE have emerged. For cases with minimal vitritis, systemic treatment with oral fluconazole may suffice; however, if vitritis symptoms persist or progress, vitrectomy allows for better clearing of the organism¹. While intravitreal

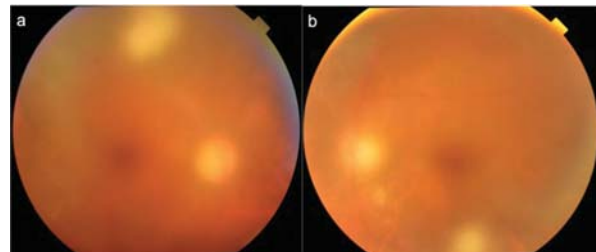


Figure 1: Fundus photograph of the right (a) and left (b) eye at presentation depicting vitreous haze 3+ and a hazy retinal view. An ill defined chorioretinal lesion was present superior to the macula in the right eye and inferior to the macula in the left eye.

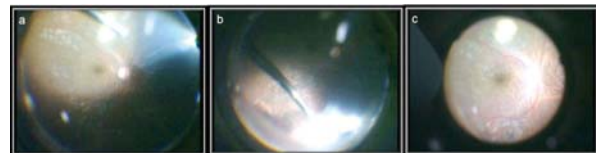


Figure 2: Intra-operative photographs taken during right eye 23 G pars plana vitrectomy showing an opacified vitreous (a) and exudates (b). At the end of the surgery, laser marks could be made out (c). The macula appeared healthy.

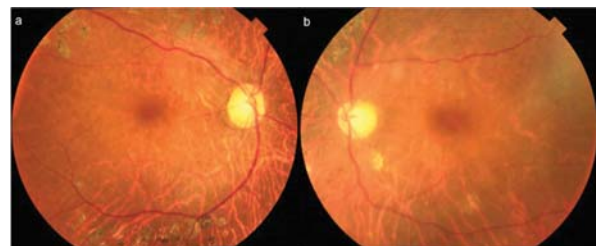


Figure 3: Fundus photograph of the right (a) and left (b) eye at one week follow up after initiation of systemic voriconazole and vitrectomy with intravitreal voriconazole in the right eye demonstrating clear media, laser marks, a healthy disc and macula and resolution of the chorioretinal lesions bilaterally.

amphotericin B in conjunction with vitrectomy has been advocated; in the above case we administered oral as well as intravitreal voriconazole with vitrectomy. Voriconazole, a new generation triazole, has been shown to achieve therapeutic intraocular levels after oral administration and appears to be a powerful weapon to add to the existing armamentarium against fungal endophthalmitis³. Final visual acuity outcomes depend most on the site of initial chorioretinitis. If the macula is spared and preretinal membranes can be effectively removed, visual acuity results can be exceedingly good, as in our case.

While endogenous endophthalmitis associated with hemodialysis catheter related sepsis is usually bacterial, this case illustrates that EFE must also be kept in mind. Early recognition and prompt management leads to a gratifying outcome in this devastating condition.

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