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Tandava Krishnan & Pukhraj Rishi

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LETTER TO THE EDITOR

Management of a Case of *Candida* Endogenous Endophthalmitis in a Neonate

Tandava Krishnan, MS and Pukhraj Rishi, MS, DO

Shri Bhagwan Mahavir Vitreoretinal Services, Tamil Nadu, India

Neonatal candidemia is a challenging clinical situation noted in 1% of cases admitted in the Neonatal Intensive Care Unit (NICU).[1] The incidence of endogenous candidal endophthalmitis in cases with candidemia varies from 6 to 50% but in neonates it is always the primary cause of endogenous endophthalmitis.[2,3] There is a paucity of clear-cut guidelines available for the management of neonatal candidal endophthalmitis. We hereby report a case of neonatal candidal endophthalmitis successfully managed with intravitreal and systemic antimicrobials. To the best of our knowledge, this is the first case of treated neonatal candidal endophthalmitis being reported from South Asia.

An in-patient consultation request from a children's hospital was made for a 15-day-old child (birth weight 2.75 kg) with culture-proven candidemia (*Candida tropicalis*) and septicemia (*Burkholderia cepacia*) in the presence of festooned pupil, irregular anterior chamber, and altered pupillary reflex in the left eye. The child had a full-term, hospital delivery. There was a history of seizures on postnatal day 1, for which a loading dose of intravenous phenobarbitone was given. The child was being treated with injection meropenem 50 mg iv bd (over 30 min) and injection fluconazole 15 mg iv od following a loading dose of 30 mg iv. There was associated thrombocytopenia (30,000 cells/mL). Fundus examination of the right eye was normal. There was no view of the fundus in the left eye due to festooned pupil and vitreous haze. B-scan ultrasound revealed the presence of anterior vitreous echoes; the retina was attached. A provisional diagnosis of endogenous endophthalmitis in the left eye, secondary to candidal sepsis was arrived at. After explaining the "off-label" nature of the treatment, intravitreal injection of voriconazole 50 μg/mL (0.05 mL), vancomycin 1 mg/0.1 mL (0.025 mL), and ceftazidime 2.25 mg/0.1 mL (0.025 mL) was given 30 min after platelet transfusion. Treatment included topical moxifloxacin (0.5%) 4 times a day, tobramycin (0.3%) 8 times a day, voriconazole (10 mg/mL) 8 times a day, and homatropine (1%) 2 times a day. The child was followed up on a daily basis, and at 1-week follow-up a marginal improvement in the pupillary reaction was noted with breaking up of posterior synechiae. However, the vitreous echoes on B-scan persisted and second dose of 0.05 mL intravitreal voriconazole injection (50 μg/mL) was given. The topical medications were continued. Vitreous echoes gradually reduced in number, and 40 days after the first injection there was a clear view of the fundus up to the fourth order of retinal vessels.

DISCUSSION

Neonatal candidemia is a challenging clinical situation often associated with progression of retinopathy of prematurity (ROP) with or without candidal endophthalmitis.[4] In a setting of candidemia, all cases of neonatal endophthalmitis are due to candidal etiology.[5] Conversely, the co-morbidities associated with neonatal endophthalmitis include ROP, respiratory disorders, perinatal infection, fetal hemorrhage, and blood transfusion.[5] It has also been shown that the risk of developing endophthalmitis is higher in neonates having candidemia, ROP, birth weight <1500 g, bacteremia, history of blood transfusion, and associated respiratory disorders. The neonate in

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Correspondence: Pukhraj Rishi, MS, DO, Senior Consultant, Shri Bhagwan Mahavir Vitreoretinal Services, Sankara Nethralaya, 18 College Road, Chennai-600 006, Tamil Nadu, India. E-mail: docrishi@yahoo.co.in

this report had candidemia and septicemia with associated history of platelet transfusion secondary to thrombocytopenia. Previous reports have looked into the role of vitrectomy and intravitreal amphotericin B for the management of candidal endophthalmitis.[6,7] The role of systemic and intravitreal voriconazole in the management of fungal endogenous endophthalmitis has been studied previously,[8] but the role of intravitreal voriconazole in the management of neonatal candidal endogenous endophthalmitis has not been described. The control of infection with intravitreal voriconazole augmented by systemic antifungal agents suggests an encouraging role of such treatment in neonatal candidial endophthalmitis.

DECLARATION OF INTEREST

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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