Bilateral endogenous fungal endophthalmitis

Endoftalmite fúngica bilateral endógena

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ABSTRACT

A 77 year-old female patient suffering from pyelonephritis developed bilateral endogenous endophthalmitis presumed by Candida after have been treated with global spectrum antibiotics. Early vitrectomy and intravitreal amphotericin B injection were performed, in addition to oral voriconazole. Clinical aspects of endogenous endophthalmitis are also pointed out by a literature review.

Keywords: Endophthalmitis; Eye infections, fungal; Candida albicans; Voriconazole

Resumo

É apresentado o caso de uma paciente do sexo feminino, 77 anos, internada por pielonefrite e tratada com antibióticos de amplo espectro, tendo desenvolvido endoftalmite endógena bilateral presumida por Candida. Foi submetida à vitrectomia via pars plana e injeção intravítrea de anfotericina B, além de voriconazol oral. São abordados, ainda, os aspectos clínicos da endoftalmite endógena por meio de revisão da literatura.

Descritores: Endoftalmite; Infecções oculares fúngicas; Candida albicans; Voriconazol

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**INTRODUCTION**

Endophthalmitis is a severe intraocular infection involving aqueous humor, vitreous humor, or both, which severely threatens vision. Endogenous fungal endophthalmitis is a complication caused by outspread fungal infections, of intraocular involvement, potentially damaging to visual function. It is often related to immunosuppression states, debilitating diseases and invasive procedures.

Recent studies have suggested that the incidence of endogenous fungal endophthalmitis is increasing, mainly because most patients who develop it are immunocompromised hosts, which is an increasingly prevalent condition in our environment. The advancement of intensive therapies, the increasing use of broad-spectrum antibiotics and easier access to diagnostic means led to irrefutable increase in the number of endogenous fungal endophthalmitis cases, and it created a growing demand by professionals for its approach.

The aim of the current study was to report a bilateral endogenous fungal endophthalmitis case, whose early diagnosis and intervention were decisive to reach a satisfactory visual outcome.

**Case report**

Female patient, aged 77 years, with diabetes and 6-year high blood pressure history, went to the Ophthalmology Emergency Care reporting low visual acuity on both eyes, for 10 days. The patient had been hospitalized in ICU in the week before due to pyelonephritis, when she was treated with culture-guided antibiotic therapy, after Pseudomonas aeruginosa identification in the collected medium. The bacterium showed sensitivity to Polymyxin B, which was the chosen medication.

The patient reported visual acuity (VA) in both eyes in the opthalmologic examination by counting fingers at 4 meters. She reported anterior chamber reaction (ACR) 2+ and 18mmHg intraocular pressure (IOP) in both eyes in the biomicroscopy exam. Funduscopy showed vitrectitis, with whitish plaques on the posterior pole of the right eye (RE) and in the foveal region of the left eye (LE). The Choroid showed sensitivity to Polymyxin B, which was the chosen medication.

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Pars plana posterior vitrectomy (PPV) was conducted in the left eye to collect material for further exams; balanced saline solution was used as vitreous substitute. Amikacin (400 µg/0.1 ml) and amphotericin B (5 mcg/0.1 ml) intravitreal injection was performed in both eyes, in addition to dexamethasone (400 µg/0.1 ml), at the end of the surgical procedure. Oral prednisone (20 mg on a daily basis) was not allowed to the patient, who was treated with moxifloxacin eye drops (5 mg/ml) added with dexamethasone 1 mg/ml every 4 hours in the postoperative period. The assistant expert in infectious diseases evaluated the patient and suggested using voriconazole 6 mg/kg every 12 hours (orally) in the first 24 hours and 4 mg/kg every 12 hours for 4 weeks.

The patient reported 14mmHg IOP in both eyes, absence of ACR, and progressive reduction in vitreous opacity and in the size of funduscopy lesions 10 days after surgery (Figure 2). Direct bacterioscopic and mycological examinations results and collected vitreous cultures were negative.

The patient reported corrected VA of 20/200 RE and 20/40 LE 30 days after the surgical procedure in the left eye and was prescribed for intravitreal antibiotic therapy in both eyes. Funduscopy showed moderate vitreous opacity and papillary hemorrhage in RE, in addition to upper perifoveal atrophic scar in LE. Optical coherence tomography (Figure 3) evidenced macular edema in RE, PPV and intravitreal dexamethasone injection were administered in this eye. LE OCT showed full edema regression.

The patient did not show any change in visual acuity and in funduscopy examinations from the previous examination (Figure 1).
Endophthalmitis is one of the most severe complications among ophthalmic disorders; it accounts for the worst functional outcomes. (5) Endogenous endophthalmitis responds for 2% to 15% of all endophthalmitis cases and is the cause of hematogenous spread of distant focus. (6)

Candida albicans is the most common etiologic agent related to endogenous fungal endophthalmitis. (2,7,9) With respect to the here described case, endophthalmitis is assumed as a candidemia complication, since the patient was previously hospitalized because of pyelonephritis and treated with broad-spectrum antibiotics. She had a central venous catheter during hospitalization, a fact that corroborates the emergence of endogenous infection. (10)

Another important factor was the use of intravitreal steroids; they seem to have promoted faster inflammation elimination. (11) We chose to use intravitreal dexamethasone from the beginning of the treatment due to the severity of the evidenced uveitis.

Fungal endophthalmitis treatment remains an important challenge to Ophthalmology because it still shows unsatisfactory outcomes in a considerable number of cases. The early detection and immediate management of endophthalmitis seem to be the most important clinical factors influencing prognosis; (12) therefore, the full clinical domain of this condition by ophthalmologists is mandatory in order to get to satisfactory visual outcomes.

**DISCUSSION**

Endophthalmitis is one of the most severe complications among ophthalmic disorders; it accounts for the worst functional outcomes. (5) Endogenous endophthalmitis responds for 2% to 15% of all endophthalmitis cases and is the cause of hematogenous spread of distant focus. (6)

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**REFERÊNCIAS**


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