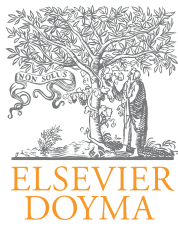


Bilateral endogenous ophthalmitis due to *Candida glabrata* after complicated bariatric surgery

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Short communication

Bilateral endogenous ophthalmitis due to *Candida glabrata* after complicated bariatric surgery[☆]



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ABSTRACT

Case report: A 43-year-old female presented with decreased visual acuity in the right eye. “Snowball-like” retinal lesions were found in both eyes on examination. Due to a lack of improvement with intravitreal antifungal empirical treatment, vitreous culture was performed and *Candida glabrata* was isolated. The patient then received intravitreal amphotericin B, as well as systemic treatment with caspofungin and amphotericin B lipid complex. **Discussion:** Endogenous fungal endophthalmitis is a sight-threatening condition. There are few reports of *C. glabrata* endogenous endophthalmitis. Treatment regimens for *Candida* endophthalmitis include combinations of systemic and/or intravitreal antifungals, as well as vitrectomy.

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Endoftalmitis endógena bilateral por *Candida glabrata* posterior a cirugía bariátrica complicada

RESUMEN

Caso clínico: Mujer de 43 años presenta disminución de agudeza visual en ojo derecho. En la evaluación, se encuentran lesiones retinianas «en bolas de nieve» en ambos ojos. En ausencia de mejoría con tratamiento empírico antifúngico intravítreo, se realiza cultivo de vítreo y se halla *Candida glabrata*. La paciente recibe anfotericina B intravítrea y tratamiento sistémico con caspofungina y anfotericina B complejo lipídico.

Discusión: La endoftalmitis endógena fúngica es una afección ocular grave. Existen escasos artículos de endoftalmitis endógena por *Candida glabrata*. Los regímenes de tratamiento para endoftalmitis por *Candida* incluyen combinaciones de antifúngicos sistémicos o intravítreos, así como vitrectomía.

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Palabras clave:

Endoftalmitis infecciosa

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Introduction

Endogenous fungal endophthalmitis is a serious eye condition caused by a septic process where the causal agent reaches the eyeball by hematogenous dissemination.¹ One or more risk factors are often involved in the development of this condition.² In the etiology of endogenous fungal endophthalmitis, *Candida albicans* (*C. albicans*) is the most common agent.¹ Treatment regimens include various combinations of systemic antifungal or intravitreal injection plus vitrectomy.³

Although endogenous fungal endophthalmitis has been reported, bilateral ocular involvement is a less common condition.⁴ Even less is endogenous endophthalmitis from *Candida glabrata*⁵⁻⁷ (*C. glabrata*). There are no papers reporting bilateral endogenous endophthalmitis from *C. glabrata*. Likewise, no publications exist on this type of eye infection as a complication of bariatric surgery.^{2,8}

We report an unusual case of a patient with bilateral endogenous fungal endophthalmitis from *C. glabrata* as a complication of gastric band bariatric surgery.

Case report

A 43-year-old female patient seen for decreased visual acuity of the right eye (OD) with one month duration, associated with photophobia and ocular pain. Her personal history highlights included diabetes mellitus 2 treated with insulin and gastric band bariatric surgery, performed 7 months before the visit, which was complicated by subphrenic abscess, gastropulmonary fistula and sepsis. *C. albicans* and *C. glabrata* were isolated by blood culture at the time, and the infection was treated with systemic fluconazole. Patient was discharged 2 months before the ophthalmology visit. Ophthalmologic examination showed visual acuity (VA) of counting fingers (CF) in OD at 1 m and VA of 20/30 in left eye (OS). Intraocular pressure (IOP) was 15 mmHg in both eyes (OU). Biomicroscopy showed cells in anterior chamber, and posterior synechiae in OD; no alterations in OS. Ocular fundus revealed whitish retinal lesions and diffuse vitritis with multiple "snowball-like" lesions in OD. OS had round and "snowball-like" whitish retinal infiltrates, located temporal to OS macula (Figs. 1 and 2).

Vitreous aspiration in OD was performed for direct examination, which showed yeast and pseudohyphae; therefore, therapy was prescribed with intravitreal voriconazole (100 µg/0.1 ml) in OD. Intravitreal empirical treatment continued with two more injections in OD and OS respectively, with suspected endophthalmitis from *Candida*. One week later, lacking visual improvement, 23 G vitrectomy in OD and vitreous culture were conducted with antifungal susceptibility study. Fluconazole-resistant, amphotericin B and caspofungin-susceptible *C. glabrata* were found; therefore, treatment with intravitreal amphotericin B (7.5 µg/0.1 ml) is started in OD. Five days later, OS 23 G vitrectomy was conducted with amphotericin B intravitreal injection (7.5 µg/0.1 ml). After an additional amphotericin B injection session in OU, slight improvement was detected by biomicroscopy, but none in VA.

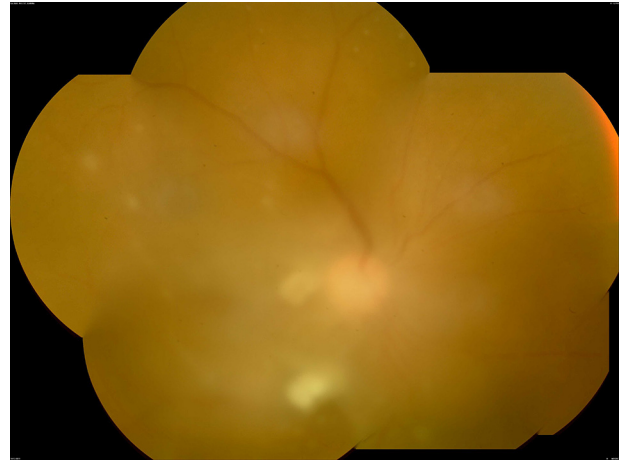


Fig. 1 – Ocular fundus reveals whitish retinal lesions and diffuse vitritis with multiple “snowball-like” lesions in OD.

Two weeks after intravitreal amphotericin B therapy was started, 23 G vitrectomy, internal limiting membrane peeling, perfluorocarbon liquid injection, endolaser and silicone oil injection were performed in OD. Likewise, daily intravenous therapy was initiated with caspofungin (50 mg/day) and amphotericin B lipid complex (5 mg/kg/day) along with amphotericin B intravitreal injections in OU, on 2 more occasions for OD and OS respectively. Co-administration of intravenous therapy and intravitreal therapy lasted 2 weeks, depending on lesion resolution. In the subsequent assessment, patient had VA in OD of CF to 1 m, VA in OS of 20/25 and inactive chorioretinal lesions in OU. One week later, patient returned with decreased VA in OD. Ocular fundus revealed inferior retinal detachment extending to macula with fibrosis and traction areas in OD (Figs. 3 and 4). Patient underwent 23 G vitrectomy and silicone oil injection in OD. She showed favorable clinical progression with VA in OD from CF to 1 m, and



Fig. 2 – Round whitish “snowball-like” retinal infiltrates located temporal to macula of OS.

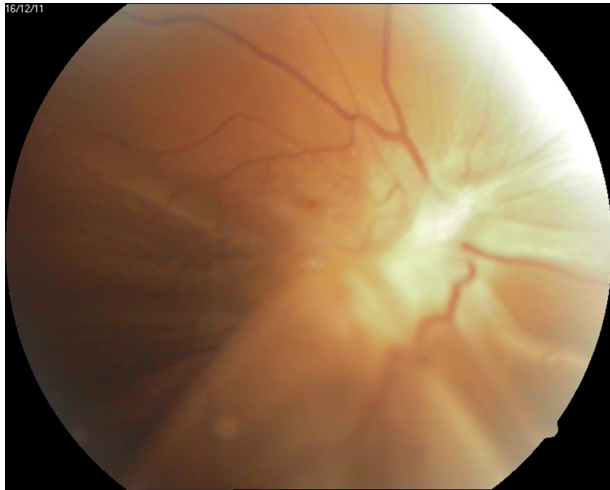


Fig. 3 – Retinal detachment with fibrosis and traction areas hiding macula and optic nerve in OD.

VA in OS of 20/25, which was maintained during the following months of monitoring.

Discussion

Endogenous fungal endophthalmitis is a serious eye condition with potentially devastating consequences on sight. It originates from a septic process where the causal agent reaches the eyeball by hematogenous dissemination.¹ Most patients with endogenous fungal endophthalmitis have one or more risk factors such as diabetes mellitus, recent hospitalization, liver disease, renal failure, cancer, recent surgery, organ transplantation, HIV infection, intravenous drug use, hyperalimentation and immunosuppressive therapies.² In our case, the patient had predisposing factors for fungal endophthalmitis, such as diabetes mellitus and a previous complicated bariatric surgery. Although gastrointestinal surgery has been identified as a

risk factor for fungal endophthalmitis,^{2,8} no fungal endophthalmitis cases associated with gastric band surgery have been published.

The most frequent cause of endogenous fungal endophthalmitis are *Candida* species, of which *C. albicans* is the most common etiologic agent.¹ Findings are characteristic and include white chorioretinal infiltrates with white vitreous opacities.⁹ For this patient, the etiologic agent was *C. glabrata*. Few papers are available on endogenous endophthalmitis from this agent. The case of a 39-year-old patient with endophthalmitis resulting from complicated abdominal surgery has been published, successfully treated with intravenous caspofungin.⁵ A case of endophthalmitis subsequent to urologic surgery has also been published, successfully treated with amphotericin B and flucytosine lipid complex.⁷

Treatment regimens for endophthalmitis with fungal etiology include various combinations of systemic or intravitreal antifungals plus vitrectomy.³ For this patient, empiric therapy with intravitreal application of voriconazole was started upon finding vitreous aspirate by direct examination. Upon vitrectomy, the vitreous sample provided important data on the culture for therapy purposes.¹⁰ Isolation of *C. glabrata* helped determine the final antifungal treatment for the patient, based on susceptibility. On the other hand, antifungal therapy time must be determined based on stabilization and resolution of eye lesions, according to clinical guidelines.^{4,10} Further evidence to manage this type of endophthalmitis is required.

Conflict of interest

The authors declare that they have no conflicts of interest.

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Fig. 4 – Inactive chorioretinal lesions located temporal to macula of OS.

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