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CASE REPORT/CAS CLINIQUE

The first case of fungal endophthalmitis caused by *Emericella nidulans* after cataract surgery[☆]



Premier cas rapporté d'endophtalmie fongique causée par Emericella nidulans après chirurgie de la cataracte

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Postoperative

Summary *Emericella nidulans* is a species that has only rarely been implicated in human disease after cataract surgery. Here, we report the first postoperative case in the literature, as far as we know. The patient was a 50-year-old patient presented with mild anterior uveitis one week after cataract surgery, and hypopyon developed over the next two days. First microbiological evaluation and the results of direct microscopy and cultures of the anterior chamber and vitreous samples were found to be negative. Despite vigorous topical and intravitreal (vancomycin and amikacin) therapy, the endophthalmitis did not improve. Anterior chamber paracentesis, vitreous tap and finally complete vitrectomy with removal of the capsular bag including the intraocular lens (IOL) were performed. The anterior chamber, vitreous fluid samples and IOL were submitted to the microbiology laboratory: the culture yielded *E. nidulans* growth. Ocular inflammation resolved and vision improved on intravenous, subconjunctival and long-term oral voriconazole treatment. *E. nidulans* can be an important cause of ocular fungal infections including endophthalmitis, and voriconazole seems to be effective for the treatment of *E. nidulans* endophthalmitis.

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MOTS CLÉS

Endophtalmie ;
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 Cataracte ;
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 Postopératoire

Résumé *Emericella nidulans* est une espèce qui a rarement été impliquée dans les infections après une chirurgie de la cataracte. Ici, nous rapportons le premier cas d'endophtalmie postopératoire de la littérature. La patiente, âgée de 50 ans, a présenté une uvéite antérieure légère une semaine après la chirurgie de la cataracte et un hypopion s'est développé au cours des deux jours suivants. La première évaluation microbiologique, les résultats de l'examen direct et des cultures de la chambre antérieure et des échantillons du vitrée se sont révélés négatifs. Malgré une thérapie vigoureuse locale et intravitréenne (vancomycine plus amikacine), l'endophtalmie ne s'est pas améliorée. Une paracentèse de la chambre antérieure, une ponction du vitrée et finalement une vitrectomie totale avec l'ablation du sac capsulaire et de la lentille intraoculaire (IOL) ont été effectuées. La chambre antérieure, des échantillons de vitrée et IOL ont été soumis au laboratoire de microbiologie : les cultures ont été positives pour *E. nidulans*. L'inflammation oculaire a disparu et la vision s'est améliorée sous le traitement avec le voriconazole par voie orale au long cours, par voie intraveineuse et sous-conjonctivale. *E. nidulans* peut être une importante cause d'infection fongique oculaire et l'endophtalmie. Le voriconazole semble être efficace pour le traitement d'une endophtalmie à *E. nidulans*.

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Introduction

Endophthalmitis is a rare but frequently devastating intraocular infection, caused by an array of organisms, including bacteria, viruses, fungi, and parasites. The involvement of intraocular structures can result from exogenous or endogenous spread. Exogenous source is more common than endogenous endophthalmitis. The most common type of exogenous endophthalmitis is postoperative endophthalmitis, including cataract operation. Gram-positive bacteria, with the majority of coagulase-negative staphylococci, are the leading cause of acute-onset postoperative endophthalmitis [22]. Although ophthalmic mycoses rarely present as endophthalmitis, they are being increasingly recognized as an important cause of morbidity and blindness [21]. *Candida albicans* and *Aspergillus* species are the most frequently isolated organisms in cases with fungal endophthalmitis. Treatment of endophthalmitis with fungal etiology is also difficult. The present article discusses the outcomes of the first case of *Emericella nidulans* (*Aspergillus nidulans*) endophthalmitis after an uneventful cataract surgery and intraocular lens (IOL) implantation.

Case report

A 50-year-old woman had an uneventful cataract surgery under topical anesthesia with a 3.2 mm clear corneal incision, side-port paracentesis, continuous curvilinear capsulorhexis (CCC) which is about 5–5.5 mm in diameter and implantation of a hydrophobic IOL (MA30 Alcon Surgical Inc, TX, USA) on her left eye in our institution on October 2008. The capsulorhexis was performed by using 0.1% trypan blue dye for anterior capsule staining in mature white cataract of the present case for CCC. Intracameral cefuroxime (1.0 mg/0.1 ml) was applied at the end of operation.

Postoperatively, the patient was treated with topical dexamethasone 0.1% and ofloxacin eye drops four times daily for 4 weeks. She was seen at the 1st and 4th postoperative days and was found to have no significant inflammatory reaction in the anterior chamber. Best corrected visual acuity (BCVA) was 8/10 on the left eye (based on Snellen

chart) postoperatively. While intra- and the early postoperative controls were normal, mild increase of anterior chamber reaction was determined on the 7-day-postoperative regular check-up. Despite treatment with frequent application of topical antibiotics ofloxacin and dexamethasone 0.1% eye drops (1 drop of each, every 2 h while awake), the patient's vision decreased and anterior chamber reaction increased together with the development of hypopion on the 9-day-postoperative control (Fig. 1). There was mild ciliary injection with no pain. On examination, the cornea was clear and there were pigmentary cells behind the lens, in the anterior vitreous. Visual acuity was 6/10. The patient underwent anterior chamber paracentesis and vitreous tap for microbiological evaluation. After intraocular taps, treatment included intravitreal injection of 1 mg vancomycin, 0.4 mg amikacin and 4 mg triamcinolone acetate. Additionally, the patient was placed on intensive topical

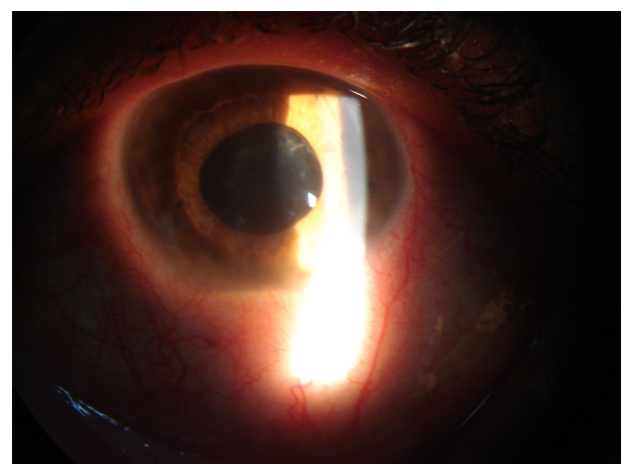


Figure 1 Biomicroscopic appearance of the eye having ciliary injection with anterior chamber reaction and hypopion resembling endophthalmitis.

Apparence biomicroscopique de l'œil avec infection du corps ciliaire avec réaction de la chambre antérieure et hypopion ressemblant à une endophtalmie.

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