

Recurrent *Enterococcus faecalis* Endophthalmitis

Dear Editor,

The most common cause of postoperative infectious endophthalmitis is *Staphylococcus epidermidis*, or coagulase negative staphylococci [1]. However, recent reports have shown that the *Enterococcus* species are the most common organisms in isolates of postoperative endophthalmitis [2,3]. In other words, the culture rate of *S. epidermidis*, or coagulase negative staphylococci, has decreased, and the culture rate of the *Enterococcus* species has increased tenfold compared to previous reports [1-3]. Several *Enterococcus* species are mentioned in journal reports of endophthalmitis recurrence after cataract surgery [4]. Although recurrence of infectious endophthalmitis caused by *Enterococcus faecalis* has been rare, the effect of such recurrence on final visual outcome is substantial. Our data contain electrophoresis of *E. faecalis* DNA cultured from two cases, which showed that the two strains isolated from the cases were exactly

identical. However, our previously published paper did not present the data that showed that the recurrence case could be caused by the same strain as the first one. Here, we show a DNA electrophoresis figure, showing the isolates of the first and the recurrent cases were the same strain. In this paper, early vision improved from counting fingers at 30 cm to 20 / 80 after surgery. However, after relapse, the final visual acuity was poor with counting fingers at 10 cm.

We present a case of recurrent postoperative endophthalmitis caused by the same strain of *E. faecalis*, which was identified by electrophoresis of genomic DNA. The patient in the present case suffered a poor visual outcome despite proper treatment after surgery.

A 75-year-old woman presented with ocular pain and visual loss in her left eye seven days after cataract surgery, and her best-corrected visual acuity (BCVA) was counting fingers at 30 cm. Upon physical examination, the patient had conjunctival injection, an edematous cornea, and an anterior chamber reaction with hypopyon upon slit-lamp examination (Fig. 1A, 1B). The fundus was invisible because of vitreous opacity. We presumed infectious endophthalmitis and performed an emergency pars plana vitrectomy (PPV) with aqueous humor and vitreous biopsy. The patient also underwent intravitreal injection of vanco-

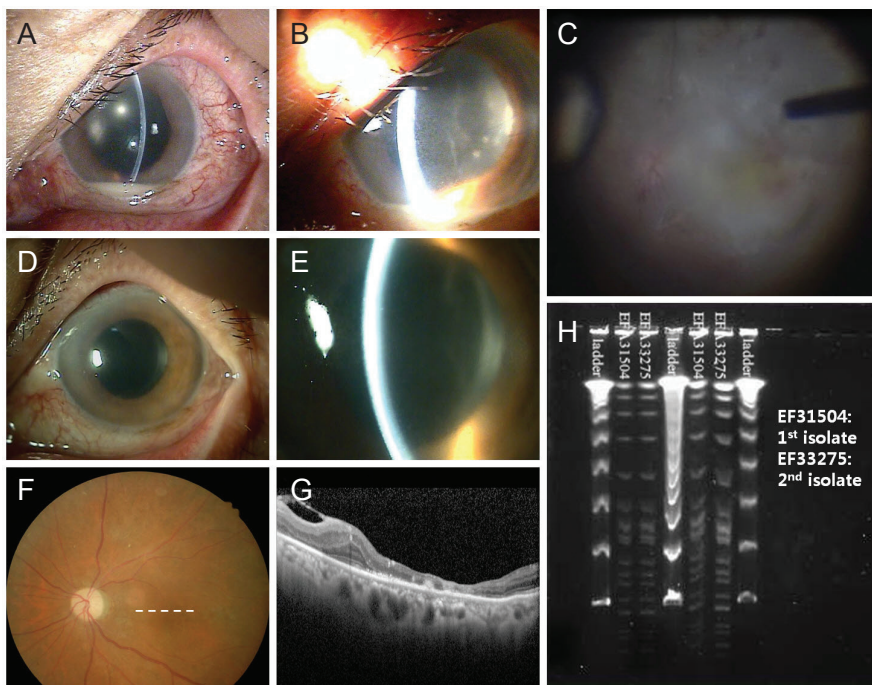


Fig. 1. (A) Edematous cornea and an anterior chamber reaction with hypopyon. (B) Active anterior chamber reaction and fibrotic membrane on slit-lamp examination. (C) Vitrectomy findings showed that the retina was necrotic at the posterior pole and covered with a whitish exudative membrane. (D,E) There was no sign of hypopyon, conjunctival injection, and anterior chamber reaction upon slit-lamp examination at eleven days after pars plana vitrectomy. (F,G) Findings at 11 weeks after the second vitrectomy. Fundus photography and optical coherence tomography showed retinal atrophy at the posterior pole with mild optic disc pallor. The images show the disrupted inner and outer segment junction and retinal pigment epithelium at the subfoveal region. (H) Pulsed-field gel electrophoresis showed that the organisms isolated from two different specimens were the same strain.

mycin (1 mg/0.1 mL), ceftazidime (2.25 mg/0.1 mL) and dexamethasone (1 mg/0.1 mL).

E. faecalis was isolated from the vitreous and aqueous humor specimen after the PPV. The organism demonstrated resistance to moxifloxacin but was sensitive to vancomycin and ampicillin. Eleven days after PPV, the patient's BCVA was 20 / 80, and the vitreous was clearer (Fig. 1C, 1D). Three weeks after PPV, she complained of ocular pain, and the BCVA in her left eye had decreased to hand motion. The fundus was vague and showed opaque vitreous media. We performed a second PPV with intravitreal antibiotic injection. During surgery, the retina was found to be necrotic at the posterior pole and covered with a whitish exudative membrane (Fig. 1E). We performed the second operation in a similar way to the first. Similar to the first infection, *E. faecalis* was isolated from the vitreous specimen. Pulsed-field gel electrophoresis applied to isolates from the first and second infections revealed that the *E. faecalis* were of the same strain (Fig. 1F). Eleven weeks after the second PPV, the patient's final BCVA was counting fingers at 10 cm due to macular atrophy (Fig. 1G, 1H).

E. faecalis endophthalmitis has been rare in previous reports [1]. It exhibits rapid progress and severe virulence and eventually results in poor vision [2]. In the present case, the *E. faecalis* isolated from the two different specimens were of the same strain. Therefore, we conclude that the organism that infected the patient during the first attack recurred. Removal of the capsular bag to prevent late recurrence of postoperative *E. faecalis* endophthalmitis was considered [5].

In conclusion, *E. faecalis* endophthalmitis is an emergent condition that requires rapid intervention and close follow-up for at least one month after intraocular surgery to detect recurrences. This condition requires aggressive treatment, including early complete vitrectomy and posterior capsulorrhexis (to prevent late recurrences).

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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