
SHORT COMMUNICATION

Case report

Endogenous group G *Streptococcus* endophthalmitis following a dental procedure

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PURPOSE. *To report a case of bilateral endogenous endophthalmitis due to group G Streptococcus after a dental procedure.*

METHODS. *Case report of a 69-year-old woman who presented with pain, decreased vision, bilateral uveitis, and a unilateral hypopyon 1 week after treatment for an abscessed tooth.*

RESULTS. *Bilateral endophthalmitis was diagnosed, and group G Streptococcus was cultured from the vitreous samples.*

CONCLUSIONS. *To our knowledge, this is the second reported case of endogenous endophthalmitis following a dental procedure. Furthermore, it was due to group G Streptococcus, which is a rare cause of this condition. (Eur J Ophthalmol 2004; 14: 59-60)*

KEY WORDS. *Endogenous, Endophthalmitis, Streptococcus*

Accepted: October 12, 2003

INTRODUCTION

Endogenous or metastatic endophthalmitis is a rare but visually devastating disease that arises when microorganisms from a remote infectious focus reach the eye through hematogenous spread. It has been associated with a number of chronic systemic illnesses, such as diabetes mellitus and chronic renal failure, heart disease, malignancies, and immunocompromised states, as well as invasive diagnostic procedures (1-3). Endogenous endophthalmitis following a dental procedure has been reported only once in the literature (4). Metastatic endophthalmitis due to Group G *Streptococcus* is also rare, with only six reported cases (5-10). A case of bilateral endogenous endophthalmitis due to group G *Streptococcus* after a dental procedure is presented.

Case report

A 69-year old woman presented to the ophthalmology department with a 2-day history of floaters and a red, painful left eye (LE) with decreased vision. Her visual acuities (VA) were 6/12 in the right eye (RE) and hand movements (HM) in the LE, and there was no relative afferent pupillary defect. Slit-lamp examination revealed mild anterior uveitis in the RE and severe anterior uveitis with posterior synechiae and a 3-4 mm hypopyon in the LE. Funduscopy through dilated pupil was not possible in the LE due to extensive vitreous haziness and was normal in the RE. Ultrasonography of the LE showed a dense vitritis but no retinal pathology. Her ocular and medical history was unremarkable and she was not on any medication. Approximately one week previously, she had been

to the dentist and had treatment for an abscessed tooth.

The patient underwent a thorough general physical examination that failed to reveal anything apart from a temperature of 38°C. Urine analysis and blood tests were normal with only a marginally raised erythrocyte sedimentation rate of 55 mm in the first hour. Chest X-ray, abdominal ultrasound, skull magnetic resonance imaging, and echocardiogram all had normal results.

The presumed diagnosis of bilateral endogenous endophthalmitis was made and the patient underwent a vitreous tap of the LE with intravitreal injection of vancomycin (1 mg/0.1 ml) and amikacin (0.4 mg/0.1 ml). She was started on topical ciprofloxacin and atropine and intravenous (IV) vancomycin and amikacin, but with no significant improvement over the next 3 days. Meanwhile, group G beta-hemolytic *Streptococcus* sensitive to penicillin was cultured from the vitreous sample, while blood and urine cultures were negative. Her systemic medication was changed to IV benzylpenicillin, and although this led to complete resolution of the uveitis in the RE, there was still active uveitis with a small hypopyon and severe vitritis in the LE totally obscuring view of the fundus after 5 days. A vitrectomy of the LE and repeat intravitreal injection of antibiotics with the addition of dexamethasone (0.4 mg/0.1 ml) was carried out, during which the retina appeared pale and necrotic. The uveitis resolved completely over the next week and fundus view remained clear but VA of the LE did not improve. She

was discharged on oral benzylpenicillin and topical ciprofloxacin, dexamethasone, and atropine with VA of 6/6 in the RE and HM in the LE. On review two weeks later, both eyes were quiet but the vision in the LE had deteriorated further due to the development of a retinal detachment. She declined further surgery and her medication was discontinued.

DISCUSSION

The diagnosis of endogenous endophthalmitis usually is not a problem, as the patient is frequently already known to be septic (2, 5). However, sometimes, as in our case, in healthy individuals, the diagnosis is based on the presence of severe intraocular inflammation and positive vitreous culture (4, 5). Blood cultures may be negative, and even failure to identify a remote focus of infection is not uncommon (1-3).

To our knowledge, this is the second reported case of endogenous endophthalmitis following a dental procedure. Furthermore, it was due to group G *Streptococcus*, which is a rare cause of this condition.

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