Endogenous Streptococcus agalactiae (Group B Streptococcus) Endophthalmitis as a Presenting Sign of Precursor T-Cell Lymphoblastic Leukemia

Endogenous endophthalmitis is a potentially devastating infection resulting from hematogenous spread of infection to the eye. Common predisposing factors for endogenous endophthalmitis include a malignant neoplasm and immunosuppressed states. Strepsectoccci are a common cause of endogenous endophthalmitis, although Streptococcus agalactiae (or group B Streptococcus [GBS]) endophthalmitis in adults is rare. We report a case of endogenous GBS endophthalmitis occurring as a presenting sign of precursor T-cell acute lymphoblastic leukemia. To our knowledge, this is the first reported case of acute lymphoblastic leukemia manifesting as GBS endophthalmitis.

Report of a Case. A 56-year-old man was in good health until developing a febrile illness 6 days prior to his first visit, followed 3 days later by the onset of redness and photophobia in the right eye. He was evaluated for presumed uveitis and treated hourly with topical steroid eye drops, but he was referred to the uveitis clinic owing to melanoma. This could play a future role in maintaining a low enucleation rate.

David Lockington, MRCOphth
Vikas Chadha, FRCOphth
Heather Russell, MRCOphth
David Young, PhD
Paul Cauchi, FRCOphth
Ewan Kemp, FRCOphth

**Endogenous Streptococcus agalactiae (Group B Streptococcus) Endophthalmitis as a Presenting Sign of Precursor T-Cell Lymphoblastic Leukemia**

Comment. The demographic characteristics of our patients are comparable to those of patients in other documented studies of uveal melanoma. The literature does not appear to describe clear risk factors for this uncommon malignant neoplasm. In keeping with this, socioeconomic status was not found to be a significant factor for choroidal melanoma or subsequent treatment modality in this study. This was remarkable as social deprivation and visual acuity at presentation in exudative age-related macular degeneration. Br J Ophthalmol. 2009;93(5):627-629.


**Figure.** A box-and-whisker plot shows medians and ranges of Scottish Index of Multiple Deprivation (SIMD) scores for choroidal melanoma treatment groups. A SIMD score of 1 indicates most deprived; a score of 6505, least deprived.
progressive worsening and posterior segment extension. On examination, his visual acuity was light perception OD and 20/40 OS. Examination of the right eye revealed eyelid edema, conjunctival congestion, and a 1-mm hypopyon with fibrinous exudates in the anterior chamber, with no view of the ocular fundus. Results from examination of the left eye were unremarkable. Intraocular pressure was 10 mm Hg OU. He underwent urgent pars plana vitrectomy with injection of intravitreous vancomycin hydrochloride and amikacin sulfate and also received intravenous vancomycin, clindamycin phosphate, and cefotaxime sodium. Vitreous, anterior chamber, and blood cultures grew GBS. A complete blood cell count showed pancytopenia with toxic granulation. Diagnostically, the workup including echocardiography revealed no focus of infection. Bone marrow biopsy revealed the diagnosis of precursor T-cell acute lymphoblastic leukemia (Figure). The patient continued to receive parenteral cefotaxime for bacteremia and had systemic chemotherapy initiated by the oncology service, with repeat intravitreous tap and injection of vancomycin 3 days later. Results from the repeat cultures were negative. His visual acuity remained light perception OD 10 days after surgery.

Comment. Endogenous endophthalmitis is a potentially devastating condition characterized by intraocular infection by organisms that access the eye through the bloodstream. Endogenous endophthalmitis accounts for 2% to 6% of all cases of endophthalmitis. In a recent review of cases of endogenous endophthalmitis, GBS was the causative agent in about 5% of cases. Group B Streptococcus most commonly causes infection in neonates and pregnant women, although in the last 2 decades there has been a 2- to 4-fold increase in the incidence of invasive GBS in nonpregnant adults. The most common identifiable sources of GBS are skin or soft-tissue infections, urinary tract infections, pneumonia, bone and joint infections, and endocarditis. In a review of cases of GBS endogenous endophthalmitis, most had ocular involvement within 5 days of onset of sepsis, and ocular infection was not the initial manifestation of sepsis in any patient. The visual prognosis in GBS endophthalmitis is poor, with 76% of cases resulting in visual acuity of light perception or worse. Our case is unusual because GBS endophthalmitis was the presenting factor leading to the diagnosis of precursor T-cell lymphoblastic leukemia. This case exemplifies the importance of having a high index of suspicion for endogenous endophthalmitis in uveitis cases with a rapidly progressive course that do not respond to standard therapy with corticosteroids. It also shows the important role an ophthalmologist can play in diagnosing serious underlying medical conditions.

Seema R. Gupta, MD
Shivali Agnani, BS
Shandiz Tehrani, MD, PhD
Steven Yeh, MD
Andreas K. Lauer, MD
Eric B. Suhler, MD, MPH

Author Affiliations: Casey Eye Institute, Department of Ophthalmology, Oregon Health and Science University (Drs Gupta, Agnani, Tehrani, Yeh, Lauer, and Suhler) and Portland VA Medical Center (Dr Suhler), Portland, Oregon.

Correspondence: Dr Suhler, Casey Eye Institute, 3375 SW Terwilliger Blvd, Portland, OR 97239 (suhler@ohsu.edu).

Financial Disclosure: None reported.

Funding/Support: This work was supported by an unrestricted grant from Research to Prevent Blindness to the Casey Eye Institute and by the Department of Veterans Affairs (Dr Suhler).


Cystic Solitary Fibrous Tumor of the Orbit

Solitary fibrous tumor (SFT) is a rare spindle cell tumor of mesenchymal origin, most commonly arising from the pleura but also known to occur in extrapleural sites. Orbital SFT was first described in 1994, and since then approximately 70 orbital cases have been published in the literature. Virtually all reported cases of orbital SFT to date were solid tumors. We report the first case to our knowledge of an entirely cystic SFT arising in the orbit.