

The Literature

BY SUNJU PARK, MD, AND ASSUMPTA MADU, MD, PHARM D, MBA

PROSPECTIVE EVALUATION OF EARLY VISUAL LOSS FOLLOWING GLAUCOMA FILTERING SURGERY IN EYES WITH SPLIT FIXATION

Balekudaru S, George R, Panday M, et al¹

ABSTRACT SUMMARY

In this prospective, interventional cohort study, Balekudaru et al reported on the incidence and etiology of vision loss in the early postoperative period after glaucoma filtration surgery in patients with split fixation. Split fixation was defined as retinal sensitivity of “0” dB in all of the locations tested in at least one of the quadrants in the macular threshold program of the visual field.² The investigators evaluated 65 eyes of 65 patients with stage 3 and 4 advanced glaucoma according to the Richard Mills classification³ with split fixation visual field loss. Thirty-four patients underwent trabeculectomy, and 31 underwent glaucoma filtration surgery with cataract extraction. Visual acuity, IOP measurements, and visual field analyses were reviewed. Despite a significant drop in visual acuity on the first postoperative day, group A had no statistically significant change in vision, and group B showed improvement in vision 2 months postoperatively.

DISCUSSION

What Are the Incidence and Risk Factors for “Wipeout” After Glaucoma Filtration Surgery?

Patients with advanced glaucomatous visual field loss have a small visual reserve at the time of surgery. Postoperative complications can wipe out their central vision. Advanced glaucoma in older patients with coronary artery disease, the development of hypotony maculopathy, and postoperative choroidal effusion are risk factors for suffering a wipeout of central vision after glaucoma filtration surgery, although the incidence of such loss is rare.⁴⁻⁶

How Can This Catastrophic Loss of Vision Be Prevented?

In patients at risk of a catastrophic loss of vision, a careful postoperative evaluation can often identify the cause of the transient loss of vision. This study suggests that, with appropriate management, patients with advanced glaucoma can at least regain their preoperative level of vision after glaucoma surgery.

THE 5 YEAR INCIDENCE OF BLEB-RELATED INFECTION AND ITS RISK FACTORS AFTER FILTERING SURGERIES WITH ADJUNCTIVE MITOMYCIN C. COLLABORATIVE BLEB-RELATED INFECTION INCIDENCE AND TREATMENT STUDY 2

Yamamoto T, Sawada A, Mayama C, et al⁷

ABSTRACT SUMMARY

This collaborative, prospective, multicenter study reported the 5-year incidence of bleb-related infection after glaucoma filtration surgery augmented with mitomycin C^{8,9} and the associated risk factors for infection. Yamamoto and associates evaluated 1,098 eyes in 1,098 glaucoma patients who underwent mitomycin C-augmented trabeculectomy or trabeculectomy combined with phacoemulsification and the insertion of an IOL. The enrollment period was 2 years, and patients were observed every 6 months for 5 years using a standardized, predetermined protocol.

Bleb-related infection developed in 21 eyes during the 5-year follow-up period. The time period between surgery and the onset of infection was 27.3 ± 15.9 months (range, 3-60 months). Overall, the incidence of bleb-related infection was 2.2%. In the patients who completed 5 years, the incidence of bleb-related infection was 2.5% in all patients, 2.4% in those with a fornix-based flap, 2.8% in those with a limbus-based flap, 2.8% in the trabeculectomy group, 1.6% in the combined surgery group, 10.3% in those with a history of a bleb leak, and 2.0% in those without such a history.

DISCUSSION

What Are the Associated Risk Factors for Developing Bleb-Related Infection, and Are They Different in This Study?

Despite the uniform Japanese ethnicity of all the patients, this large, prospective study provides useful guidelines. Results show comparable risk factors for developing bleb-related infection, including the use of antifibrotic agents,⁹ inferiorly located blebs,¹⁰⁻¹² the presence of a bleb leak, and limbus-based flaps. In this study, a history of bleb leakage conferred a 4.71-fold increase in the risk of sight-threatening infection.

What Are the Implications for Observing Trabeculectomy Patients?

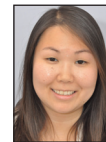
The overall incidence of bleb-related infection among the 1,098 glaucoma patients who underwent trabeculectomy and trabeculectomy with phacoemulsification was 2.2% $\pm$ 0.5% with a 5-year follow-up period. A history of bleb leakage and a younger age were associated with an increased risk of infection. Consistent with previous studies, a leaking bleb should be repaired as soon as noted. ■

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