

Bleb Dysesthesia

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CASE PRESENTATION

A 72-year-old female presented with pain and foreign body sensation 2 months after trabeculectomy with adjunctive mitomycin C (MMC) in her left eye. She had a history of advanced primary open-angle glaucoma bilaterally treated with argon laser trabeculoplasty and pathological myopic choroidal degeneration (Figure 1A). During the preceding decade, her left eye had undergone peripheral retinal photocoagulation for retinal detachment, photodynamic therapy for choroidal neovascularization, cataract extraction with the implantation of a posterior chamber IOL, and intravitreal injections of bevacizumab for chronic macular edema. The visual field showed severe diffuse loss of sensitivity (Figure 1B).

An examination of the patient's left eye revealed a large, diffuse superior bleb that extended nasally (Figure 2) and a corneal dell nasally adjacent to the bleb (Figure 3). The IOP measured 8 mm Hg. Dosing of the prednisolone acetate 1% was decreased from q.i.d. to b.i.d., and the patient began using artificial tears hourly while awake. The corneal dell had improved 4 weeks later, but she still complained of pain and foreign body sensation. The prednisolone acetate was tapered off, and the bleb gradually decreased in size nasally. Three months later, the patient no longer complained of foreign body sensation.

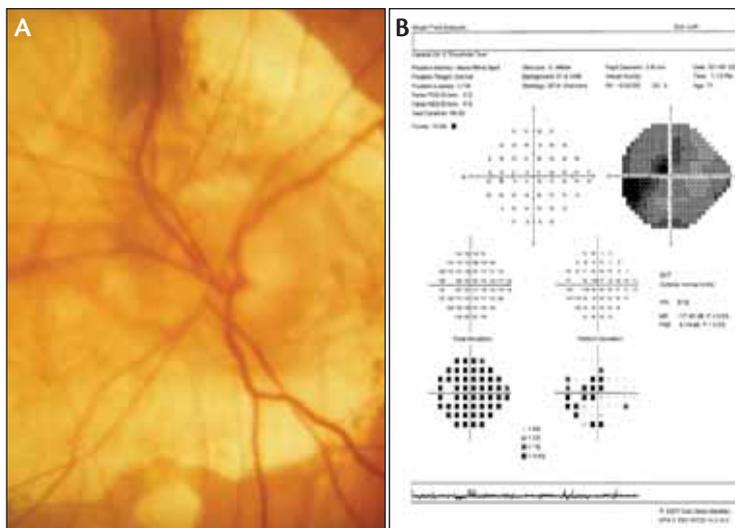


Figure 1. Optic disc photograph (A) and visual field test for the patient's left eye (B).

Comments on Causation and Treatment

RNW: What could have caused the patient's symptoms?

FAM: Bleb dysesthesia can occur due to the presence of a large nasal bleb in the palpebral fissure, which causes an uneven distribution of the tear film. The resultant areas of dryness lead to the formation of microabrasions on the cornea and possible dellen.



Figure 2. External photograph of the patient's left eye showing the large nasal bleb.

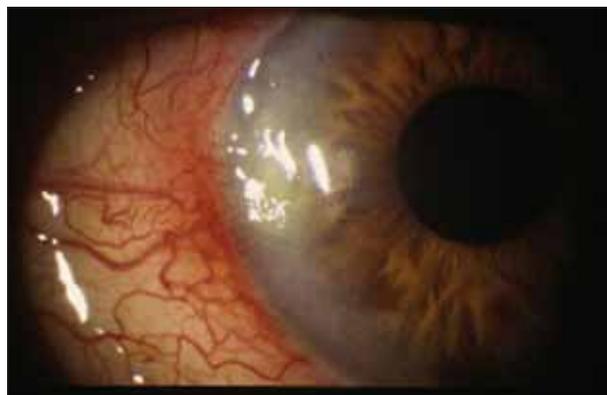


Figure 3. External photograph of the patient's left eye showing the corneal dell.

EHL: A prospective study found that the superonasal location of a bleb, a patient's young age, poor coverage by the eyelids, and the formation of bubbles were associated with bleb dysesthesia.¹ Could large circumferential blebs be due to a diffuse area of MMC application, extending to the nasal area?

FAM: The occurrence of a large nasal bleb is uncommon after fornix-based trabeculectomies, even when the surgeon applies MMC over an extensive area. As a matter of fact, a large, diffuse application of MMC has been shown to be beneficial in trabeculectomies, because it reduces the incidence of local avascular blebs, which are more prone to postoperative complications.²

RNW: Bleb dysesthesia is initially treated with the frequent administration of artificial tears and ointment at night. How long do you wait for symptomatic relief before deciding to pursue a surgical option?

FAM: This patient used artificial tears, and the corneal dell gradually improved. A complete resolution of symptoms, however, only occurred 6 months after surgery. In this case, decreasing her use of prednisolone acetate was also helpful, probably related to a gradual remodeling and shrinking of the bleb. Nonsteroidal anti-inflammatory agents have also been used to treat pain associated with dry eyes or in the postoperative period after cataract and refractive surgeries,³ and these drugs have been used successfully to ameliorate bleb dysesthesia in some patients.

FAM: What would be some of the surgical options if symptoms persisted despite medical management?

RNW: When medical therapy is ineffective, the use of a compression suture to delimit the size of the bleb may be useful.⁴ This approach is reversible, and if the IOP rises too much, the suture can be cut and removed.

EHL: Another possible technique is bleb-limiting conjunctivoplasty.⁵ The surgeon incises the conjunctiva and Tenon's capsule of the bleb superonasally. The excised edges are sutured to the sclera with an 8-0 or 9-0 polyglactin suture. As with the compression suture, the nasal bleb will be absorbed after bleb-limiting conjunctivoplasty, and the superior bleb will continue to function. "Bleb window"-pexy is a modified method, which uses autologous fibrin tissue glue in place of a suture.⁶

RNW: Many methods for revising a bleb have been proposed, including the use of trichloroacetic acid,⁷ cryotherapy,⁸ and yttrium aluminum garnet neodymium laser treatment.^{9,10} In some cases, such as the one discussed herein, conservative medical management is sufficient to ameliorate the symptomatology of bleb dysesthesia.

CONCLUSION

A patient with a history of uncontrolled IOP and intolerance of medical therapy underwent a trabeculectomy with MMC. Her postoperative bleb dysesthesia was related to a large nasal bleb in the interpalpebral fissure and the development of a corneal dell. Her symptoms resolved with the frequent use of artificial tears, and the bleb eventually decreased in size nasally after the patient discontinued using prednisolone acetate. □

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