

Surgical Management of Late Leaking Blebs

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Leaking bleb is a complication that may occur at different locations and times after filtering surgery. There are 2 main causes: inadequate closure of the fornix-based or limbal-based conjunctival flap causing a leak in the early postoperative period or conjunctival trauma that occurs at the time of surgery or during the postoperative period. A spontaneous leak may occur if the bleb wall is extremely thin. This may be seen in 2 groups — historical cases having full-thickness procedures or patients receiving adjunctive treatment with anti-fibrotic agents such as mitomycin-C or 5-fluorouracil (5-FU) in modern-day trabeculectomy.¹⁻⁴ Otherwise, late-onset bleb leaks after trabeculectomy are relatively uncommon.

In the article *Surgical Management of Late Leaking Blebs*, a series of 6 retrospective review cases was presented. Except for case 1 that had no information on mitomycin-C, the remaining 5 patients fall into the 2 aforementioned groups who may develop such complications. Three patients had full thickness procedures and 2 had trabeculectomy with mitomycin-C treatment.

I understand that the term 'free filtering surgery' used by the author, (page 11) refers to filtering surgery without a scleral flap. This is known as

a 'full-thickness' procedure. 'Free filtering surgery' in this series probably refers to sclerectomy, a technique for the full-thickness procedure. Patients 4 and 6 had an iridencleisis procedure, for which there are 2 techniques. The first is a subscleral iridencleisis, which includes the iris in the sclerostomy under the scleral flap.^{5,6} The second is an older technique, which is a full-thickness procedure.⁷

From the figures, patient 4 may have a full-thickness limbal incision with a wedge of iris incarcerated in the wound, so this case should be classified as a full-thickness operation. This enhances our understanding that half of the series presented in this article had bleb leak as a result of the full-thickness procedure and not simple trabeculectomy. Also these patients did not receive mitomycin-C at the time of treatment.

There are 2 management schemes for leaking blebs: non-surgical and surgical. The choice depends on the nature of the leaking bleb, considering its location, onset, amount of leakage, and conjunctival bleb status. In general, a non-surgical approach is more conservative and should be tried first. This consists of aqueous suppressants and frequent use of topical antibiotics such as gentamycin. Soft bandage contact lens is a practical adjunctive treatment for a low elevated bleb. Autologous blood injection may be tried, with variable success.

Besides what the author has described, some new treatments are worth mentioning. The technique of compression suture, as has been described by Palmberg, is a useful alternative treatment.⁸ I find the compression sutures can be used as a prophylactic treatment as well as a therapeutic treatment of early bleb leak for selected patients. Recently, we have been using human amniotic membrane to repair thin avascular leaking blebs with favourable outcomes. This approach eliminates the need to prepare autologous conjunctival graft. The membrane itself is quite thick, providing good basement membrane and stroma as a scaffold for cells to grow over. In addition, autologous conjunctival graft is not too difficult to handle surgically.

References

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