The amnion biological bandage contact lens (BBCL) is then placed on the patient's eye, stromal side down (Figure 1c).

Comment

The AM can be held on the eye by various methods: glue, suturing, or, as recently described, with a conformer.¹ We have found all these methods to have disadvantages. Sutures can cut out, cause haemorrhage, and irritate, and we have found conformers to be uncomfortable for the patient.

We believe the method described here has several advantages; it is cheap and can be easily performed, and is well tolerated by the patient. Examination of the eye is possible through the amnion (Figure 1d), and the BBCL can be removed and replaced whenever necessary with negligible trauma to the eye.

Conflict of interest

The authors declare no conflict of interest.

Reference

- 1 Rahman I, Said DG, Maharajan VS, Dua HS. Amniotic membrane in ophthalmology: indications and limitations. *Eye* 2009; **23**: 1954–1961.

MS Abu-Ain and SK Webber

Eye Department, Royal Gwent Hospital, Newport,
Gwent, UK
E-mail: suzanne.webber@wales.nhs.uk

Eye (2010) **24**, 1306–1307; doi:10.1038/eye.2010.1;
published online 29 January 2010

Sir,
Reply to Abu-Ain and Webber

Thank you for the opportunity to respond to the comments made by Drs MS Abu-Ain and SK Webber¹ in response to our paper related to amniotic membrane transplantation.²

Drs Abu-Ain and Webber have described a neat little trick to apply amniotic membrane to the ocular surface without actually having to suture it in place. This is a variation of the theme described by us in our paper, wherein we wrapped a conformer shell with amniotic membrane and placed it in the conjunctival sac. Clearly, there will be specific indications where this approach of wrapping the amniotic membrane around a Flieringa ring may help, for example, with a persistent corneal epithelial defect.

A Flieringa ring, however, is a scleral fixation ring and is not designed to extend deep into the conjunctival fornices, unlike a conformer shell. In contrast, the conformer benefits from being moulded to the shape of the eye and is a better fit than the ring. However, this is a minor difference and may bear no actual influence on the outcomes. In cases in which the palpebral and bulbar surfaces of the conjunctiva are denuded or inflamed, as after chemical burns or acute Stevens Johnson syndrome,

an amnion-covered conformer shell is more likely to keep the surfaces apart at the fornix compared with the Flieringa ring.

The authors claim 'several advantages' stating that their method is cheap, easily performed, well tolerated by the patient, examination of the eye is possible through the amnion, and can be removed and replaced whenever necessary with negligible trauma to the eye. All the above apply equally to the conformer shell, wherein the central hole also allows visualisation of the cornea. The patients for whom we used it tolerated it well. Conformer shells without amnion wrap have been used following buccal mucosal grafts to the conjunctiva and retained *in situ* for months with good patient comfort.

Both methods will be much cheaper than the commercially available option and either can be used depending on the clinical need. In order to determine whether one is superior to the other, a proper clinical trial will be needed, which we do not think is worth the effort.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Abu-Ain MS, Webber SK. The biological bandage contact lens: a novel technique for using the amniotic membrane in the treatment of persistent corneal epithelial defects. *Eye* 2009 (this issue).
- 2 Rahman I, Said DG, Maharajan SV, Dua HS. Amniotic membrane in ophthalmology: indications and limitations. *Eye* 2009; **23**: 1954–1961.

I Rahman, HS Dua, DG Said and SV Maharajan

Blackpool Victoria hospital and Nottingham
University Hospitals NHS Trust, UK
E-mail: Mr.Rahman@bfwhospitals.nhs.uk

Eye (2010) **24**, 1307; doi:10.1038/eye.2010.2;
published online 29 January 2010

Sir,
Trabeculectomy pearls of wisdom; mitomycin-soaked pledget 'necklace' suture

Sir,
Antimetabolite augmented trabeculectomy is now commonplace¹. The recent evolution of trabeculectomy technique and adoption of Mitomycin C and 5-Fluorouracil has caused no significant safety implications, despite early fears.²

We wish to share an additional technique to improve safety after suffering the unfortunate scenario of misplacing a mitomycin-soaked pledget during trabeculectomy. Meticulous surgical technique, a conscientious scrub nurse and methods of tracking sponges/pledgets (counts, receiver pads, radio-opaque

Figure 1 (a) Instruments required including 5/0 Mersilk suture (code W500) and PVA wick. (b) PVA wick cut into pledgets. (c) Pledgets strung onto suture. Placing suture so 1/3rd of pledget above and 2/3rd below facilitates smoother subconjunctival sponge insertion. (d) Pledgets separated to approximately 6 cm to improve insertion.

materials) should all ensure that loss of surgical material is rare. However, retained surgical sponges are common enough to deserve descriptive terminology; Gossypiboma, derived from the Latin 'gossypium' (cotton) and the Swahili 'boma' (place of concealment). There are three case reports in ophthalmic literature of retained material causing granulomatous bleb reactions/blebitis thereby increasing the risk of bleb-related endophthalmitis.^{3,4} The true incidence of retained material following glaucoma surgery is unknown and probably much underreported.

The quest for better aqueous flow drives the insertion of pledgets as posteriorly as possible under the conjunctiva. Our pledget was eventually located but the guddle fuelled refinement to our standard technique.

We use polyvinyl alcohol (PVA) after evidence suggesting cellulose can be friable and shed microscopic filaments.⁵ A PVA wick is cut by hand to create pledgets which are 'strung' onto a 5/0 black silk suture (Mersilk™ code W500). The resulting 'necklace' is then used without the need to deviate from usual antimetabolite application technique. To remove, the necklace suture is gently eased out. The remaining PVA wick is cut to a 20 mm length, which is soaked in Pilocarpine 2% and used as a corneal light shield providing additional miosis. To date (48 cases) we have zero incidence of the suture cheesewiring through the pledgets nor does the suture cause any additional snagging of sponges on removal Figure 1.

To summarise, the use of a 'necklace' suture prevents inadvertent pledget loss during trabeculectomy, a rare but significant cause of bleb-related inflammation.

References

- 1 Siriwardena D, Edmunds B, Wormald RPL, Khaw PT. National survey of antimetabolite use in glaucoma surgery in the United Kingdom. *Br J Ophthalmol* 2004; **88**(7): 873–876.
- 2 Wilkins M, Indar A, Wormald R. Intra-operative mitomycin C for glaucoma surgery. *Cochrane Database Syst Rev* 2005; (4): CD002897.
- 3 Shin DH, Tsai CS, Kupin TH, Olivier MM. Retained cellulose sponge after trabeculectomy with adjunctive subconjunctival mitomycin C. *Am J Ophthalmol* 1994; **118**(1): 111–112.
- 4 Al-Shahwan S, Edward DP. Foreign body granulomas secondary to retained sponge fragment following mitomycin C trabeculectomy. *Graefes Arch Clin Exp Ophthalmol* 2005; **243**(2): 178–181.
- 5 Poole TRG, Gillespie IH, Knee G, Whitworth J. Microscopic fragmentation of ophthalmic surgical sponge spears used for delivery of antiproliferative agents in glaucoma filtering surgery. *Br J Ophthalmol* 2002; **86**(12): 1448–1449.

D Lindfield, G Jutley and M Griffiths
Frimley Park Hospital, Surrey, UK
E-mail: danlindfield@hotmail.com

Eye (2010) **24**, 1307–1308; doi:10.1038/eye.2009.321;
published online 8 January 2010