An adhesive ocular bandage for the conjunctiva-limbal wound in limbal-based trabeculectomy
D. Calladine, G. Ratnarajan, J. McAllister
Prince Charles Eye Unit, Windsor, UK

Purpose: To demonstrate the novel use of a hydrogel adherent ocular bandage applied to the conjunctival-limbal wound following limbal-based trabeculectomy.

Methods: A prospective study was conducted of 10 patients undergoing trabeculectomy by the same surgeon (JMA) at the Prince Charles Eye Unit, Windsor, UK. In all cases the conjunctal relieving incision was closed using 2 interrupted 10/0 nylon sutures, one placed at each end. The wound was dried thoroughly using a cellulose sponge and the Re-Sure Adherent Ocular Bandage (I-Therapeutix Inc., Boston, USA) was applied over the conjunctival-limbal wound. All eyes were examined in the immediate postoperative period, and again at 1-day and 7-days following surgery. At each time point, coverage of the bandage material was documented using colour slit lamp photography, intraocular pressure was measured and a Seidel test performed.

Results: At the end of surgery the hydrogel bandage was easily applied along the conjunctival-limbal wound and the blue colourant allowed the bandage material to be easily identified. When examined at the first hour after surgery the bandage material was seen to cover the entire lip of the wound and also extended to cover the surrounding conjunctiva and cornea. At the day-1 examination the bandage material had full coverage of the wound in 2 out of 10 cases and partial covering in the remaining 8 cases. The surface of the bandage had become smooth and more uniform in thickness over its surface in all cases. In the cases of partial coverage the bandage material appeared to selectively adhere to areas of epithelial or conjunctival damage, in particular to the area around the 2 sutures. At the day-7 examination 2 cases still had a partial coverage of bandage material and this was localised to the area around the sutures and absent from the middle of the wound. In the remaining 8 cases all the bandage material had gone. Uploaded image file shows the trabeculectomy during surgery when applying the bandage, at 1-hour postoperative, at day-1 and day-7.

Conclusions: In this case series the adherent ocular bandage provided a smooth and comfortable covering of the limbal-conjunctival wound. It adhered firmly to any areas of epithelial or conjunctival damage to help the wound seal and prevent any leaks. The authors believe it also helped to tamponade the anterior aspect of the scleral flap to encourage posterior drainage from the sclerostomy.