

# Cilia graft

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Numerous aetiological factors can be involved in loss of eyelid substance and ideally, wherever possible, such deficits are closed by primary anastomosis. However, in the presence of extensive trauma, tumour formation, or congenital anomaly, a number of reconstructive techniques may have to be employed. These are outlined elsewhere (Smith, 1959; Smith and English, 1970), but briefly to recapitulate the lower eyelid can be reconstructed by a tarso-conjunctival slide, and the upper eyelid can be fashioned with a bridge flap.

Whichever of these or other procedures (Mustardé, 1966) is used, one is left with the problem of a denuded lid margin of abnormal appearance. This enigma has challenged the plastic surgeon for many decades and the evolution of techniques to counter it makes instructive reading (Beyer and Smith, 1971). The cilia transplant offers the best answer to this situation.

## **Surgical procedure**

The cilia graft is undertaken 6 weeks after the first stage of surgery has been completed. Local anaesthesia is induced by a 1 per cent. Xylocaine infiltration into the lid margin, and a horizontally-inclined capital I incision is prepared in the recipient bed on a level with the lashes. Thin flaps are fashioned carefully, aiming at a width of approximately 1.5 mm. for each flap. Care is taken not to cause any damage or perforation during this dissection.

A survey is made of the ipsilateral brow to ascertain the region most clearly resembling the eyelash appearance. The inferolateral area is usually found to be suitable.

Under local anaesthesia a full-thickness incision extending well past the hair roots is made with a razor blade knife. A graft two cilia rows in breadth and of equal dimensions to the recipient bed is fashioned. This strip is elevated at one end with a fine suture and dissected clear with scissors, any redundant fat which may be present being removed (Fig. 1).

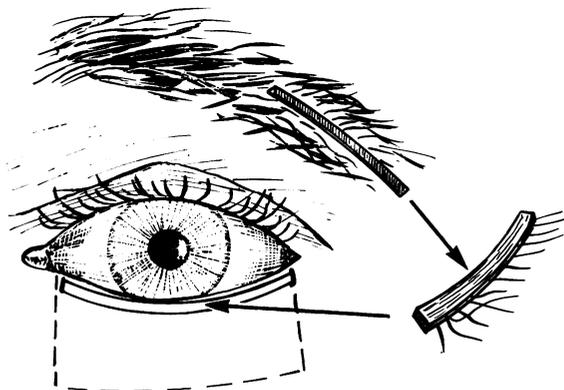


FIG. 1 *Diagram displaying the principles concerned in performing the cilia graft*

Some authors prefer a section four roots in width for the lower lid, but in our experience this is better reserved for upper lid reconstruction where the appearance of denser growth is desirable. In obtaining the transplant it is useful to compress the eyebrow firmly between thumb and fingers thus facilitating dissection in this extremely vascular zone.

The cilia graft is inserted into position (Fig. 2), care being taken to ensure that the eyelashes are orientated in the required direction.



FIG. 2 Positioning the transplant at the recipient bed site

The donor area is closed with interrupted fine silk sutures, and 7-0 silk sutures are used to anchor the graft. It is advisable to take a deeper bite with the needle at the ends of the transplant so as to pull it snugly into position. Extensive diathermy is to be avoided throughout, as unsightly scar formation may result. A light dressing is applied and the sutures are removed after a week.



FIG. 3 Biomicroscopic view of a cilia graft. The lower lid had previously been reconstructed by the tarsoconjunctival slide technique

### **Conclusion**

The cilia transplant serves two main functions: reinforcement of the lid margin, and enhancement of cosmesis (Fig. 3).

There is also an undoubted value in offering protection and minimizing the reflection of light from a smooth polished surface. For these reasons this simple technique is recommended as a later-stage procedure in reconstructive surgery of the eyelid.

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### **References**

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