REMOVAL OF CORNEO-SCLERAL SUTURES*

A SIMPLIFIED PROCEDURE

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OPINIONS are divided regarding corneal or corneo-scleral suturing after cataract extraction, and a variety of methods has been advanced. One of the disadvantages of suturing is the difficulty and danger of removing the sutures (Hughes, Guy, and Romaine, 1944; Hughes and Owens, 1947; Guyton, 1948; Roberts, 1952; Harrison, 1952; Arruga, 1956), and consideration has been given to the advantage of absorbable suture material (Hughes, Guy, and Romaine, 1944; Roberts, 1952; Stocker, 1956). It is not my purpose to advance reasons for and against the use of sutures, but it seems that the argument against the use of silk on the grounds of difficulty of removal is one which can be overcome.

In my personal experience of 156 cataract extractions, corneal or corneo-scleral sutures have been removed with only two minor mishaps. These could have been avoided easily and will be mentioned later. No particular dexterity is claimed, only the observance of a four-point plan which makes for simplicity in what can be regarded as a safe procedure. The chief danger is that the patient may squeeze the lids together suddenly and roll the eye up, and the following plan is designed to prevent the desire to squeeze the lids and to avoid harm resulting should it occur.

(1) The desire to squeeze the lids is a nervous reaction activated by irritation of the cornea and of the conjunctiva. The power to control the desire is an ability of the higher centres, so it is reasonable to assume that circumstances causing anxiety or emotional upset will prejudice this control. A considerable anxiety is associated with a second visit to the operating theatre, particularly with the ritual of the theatre trolley, the ride along the corridor, and the wait in the anaesthetic room with instillation of drops. In the interests of peace of mind it is a more satisfactory procedure to remove the stitches with the patient in bed; it is not even necessary to change the patient's position as it is equally easy if the patient is sitting up or lying down.

(2) The manner of separating the lids is also important. For this, one can demonstrate on oneself the most comfortable method. If the lower and upper lids are separated at the same time, as by a lid-retractor, the process is uncomfortable and there is a strong desire to look up. If the upper lid only is retracted

* Received for publication June 21, 1957.

by a retractor of the Desmarres's type, the process is not so uncomfortable, but the least uncomfortable means of raising the lid is by pulling up the skin of the lid with one finger (Curtin and Boyes, 1956). The fourth finger of the left hand can effect the process of elevating the lid while the first finger and thumb hold the forceps (Figure).

FIGURE.—Drawing (by Mary D. Brown) illustrating the method of opening the lids and the manner in which the knife is applied to cut the stitch. The forceps are held in the hand that is used for holding the lid.

(3) A safety measure should the eye turn up is to use only non-toothed forceps which lightly grasp a free end of the stitch. If the lids should be squeezed the stitch slips out of the forceps and no harm is done.

(4) A knife is used instead of scissors for dividing the stitch. If the blade is applied in the same plane as the surface of the cornea with the cutting edge directed backwards, the stitch may be divided by one or two gentle strokes and there is no danger of the point or blade embedding itself in the wound. Hughes and Owens (1947) have mentioned that a Graefe knife may be used for this purpose, but in the author's experience the shorter curved edge of a Gillette blade appears to offer some advantages. Cutting the sutures with scissors without grasping the sutures with forceps has been described (Guyton, 1948; Hughes and Owens, 1947). The difficulty with this method is that it is not always easy to engage the points of the scissors so that only one end of the stitch is cut. If, inadvertently, both ends are cut, a portion of stitch is left buried in the tissues and causes irritation.

Complications.—As mentioned above, two minor mishaps have occurred in a fairly large series. The first was caused by removing the sutures on the sixth day, instead of on the 13th day according to the usual practice. The mistake was recognized immediately after the last suture was removed, and although there was leakage of aqueous there was no prolapse of the iris. The eyes were double-padded for 2 days and the rest of the convalescence was uneventful.

The second mishap was caused by using toothed forceps for grasping the stitch. The patient squeezed and rolled the eyes up while a tooth of the forceps was caught in the loop of the stitch. There was considerable pain and loss of aqueous but no iris prolapse. The eyes were double-padded for 2 days and the rest of the convalescence was uneventful.

This method of removing corneal sutures should be a simple procedure without significant danger, but is also one that may be used in the course of an ordinary ward-round.

REFERENCES

- ARRUGA, H. (1956). "Ocular Surgery", 2nd ed., p. 492. McGraw-Hill, New York.
CURTIN, B. J., and BOYES, T. L. (1956). *Amer. J. Ophthalm.*, **42**, 421.
GUYTON, J. S. (1948). *Ibid.*, **31**, 1085.
HARRISON, W. J. (1952). *Ibid.*, **35**, 1207.
HUGHES, W. F., Jr., and OWENS, W. C. (1947). *Arch. Ophthalm. (Chicago)*, **38**, 577.
HUGHES, W. L., GUY, L. P., and ROMAINE, H. H. (1944). *Ibid.*, **32**, 362.
ROBERTS, W. (1952). *Amer. J. Ophthalm.*, **35**, 1459.
STOCKER, F. W. (1956). *Ibid.*, **42**, 730.