A NEW OPERATION FOR GLAUCOMA*

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EVERY ophthalmologist is in search of a surgical method applicable to glaucoma in its various forms, but at the same time safe and easy to perform. For this purpose a new procedure has been devised which offers the advantage of minimal trauma without cosmetic impairment of the eye. The method to be described was first suggested by the author about 3 years ago (Sanchez Peña, 1957).

Instruments.—Separator, conjunctival forceps and scissors, Lungard or von Graefe knife, iris spatula 2 mm. wide, Hess iris forceps, iris scissors (de Weckers), and scleral scissors. Instead of the ordinary iris spatula I use a special one provided with a small guard projecting for 1 mm. and situated 10 mm. from its tip (Figure). The purpose of this modification is to prevent the spatula from entering the eye too far, thus avoiding any damage to the lens or to Descemet's membrane. The spatula provides support during one of the steps of the operation.

Steps in Surgical Procedure (Figure, opposite)

A curved conjunctival flap 12 mm. in length is dissected free from the sclera down to the limbus. The flap is made in the same way as for the Elliot operation, but it is not necessary to split the cornea.

An incision is then made in the sclera, 3 mm. in length, 8 mm. from the limbus and parallel to it. It is necessary to section the sclera carefully and to avoid damaging the choroid or ciliary body (1).

The tip of the spatula is then inserted into the incision and introduced until it is seen in the anterior chamber, in the same way as for Heine's operation. The guard prevents it from entering more than 2 mm. into the anterior chamber. If an ordinary spatula is used it is necessary to be careful not to introduce the instrument too far in order to avoid any damage to the lens (2).

With the left hand the spatula is held exerting slight pressure with the guard against the anterior lip of the scleral incision. Unlike the method in Heine's operation, I do not rotate the instrument laterally to detach the ciliary body, because this is not necessary. With the right hand and a von Graefe knife, a second incision is made 2 or 3 mm. in length, concentric to the limbus and 1 mm. behind it. This second incision is easily made because the spatula protects the underlying structures.

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FIGURE.—Instrument and steps in the operation.

The spatula is held in place and with the same knife the roof of the cyclodialysis tunnel is sectioned sagittally starting from the paralimbal incision, to a length of 3 mm. thus joining the suprachoroidal space with the subconjunctival (3). The scleral opening can be enlarged if desired by cutting off the corners of the scleral flaps (4). So far this has not proved necessary.

The spatula is withdrawn and with iris forceps, the iris is grasped and pulled out gently, and a small basal iridectomy is made. This is facilitated because the iris has been freed of its adhesion by the spatula.

The operation is finished by suturing the conjunctival flap (5). It is convenient to introduce air into the anterior chamber.

Indications.—This technique accomplishes the three requisites of the surgical treatment of glaucoma: the modified cyclodialysis creates a new drainage channel towards the choroidal space; the sclerectomy creates a new extra-ocular path; the iridectomy re-establishes normal flow.

Its indications are wide, and slight modifications make it suitable in all cases of glaucoma requiring surgery. In acute glaucoma, where iridectomy is indicated this can be done through the second incision without sectioning the scleral tunnel. Iridectomy performed in this way is safe because of the protection of the spatula and the lowered tension produced by the cyclodialysis. In absolute glaucoma it is

sometimes possible to avoid enucleation provided the globe has not degenerated. The complete operation providing adequate drainage must be carried out for simple glaucoma.

Summary

The technique of a new operation is described. It aims at lowering the ocular tension by opening a new intra- and extra-ocular drainage channel and restoring the normal one. Thus its indications are wide.

It is easy to perform and all its steps are under the absolute control of the surgeon. By modifying the technique it is possible to use it in the various types of glaucoma.

There is no cosmetic impairment of the eye. The pupil is not deformed. The filtration bleb offers no problems because it is situated behind the limbus and is well protected by the upper lid. Secondary infection is improbable because the scleral opening is not coincident with the iridectomy.

REFERENCE

SANCHEZ PEÑA, F. (1957). *Arch. Ofal. (B. Aires)*, **32**, 121.