ELSCHNIG'S CAPSULO-IRIDECTOMY*†

BY

S. J. H. MILLER

London

As occlusion of the pupil is a relatively rare complication of cataract extraction, usually occurring when vitreous has been lost, the problem of fashioning a new pupil arises infrequently. The literature on this subject presents such a host of procedures, each no doubt successful in the hands of its author, that in the absence of previous experience a choice has to be made almost at random.

Elschnig (1912) described an operation called "Iritoektomie" (sic) which he had employed with effect in two cases. The details of the technique have been described in text-books of ophthalmic surgery by many authors, including Kümmell (1922), Blaskovics and Krieker (1945), Arruga (1946), and Stallard (1950). The essentials of the operation can be grasped from the six drawings in Fig. 1 (opposite).

Case Report

F. J., male, aged 80, was admitted to St. George's Hospital, London, in December, 1951. Despite his years and his blindness, he was a vigorous and healthy man accustomed to go about London alone. In 1934 he had had a cataract extracted from his right eye somewhere abroad. The operation was a failure; the iris was drawn up towards 12 o'clock with complete occlusion of the pupil and the final visual acuity was perception of light only. In 1942 a cataract was extracted from the left eye in Vancouver, B.C. The result was excellent, but in 1949 he sustained an injury from a splinter of wood which he was chopping and the left eye had to be enucleated. From this date the patient was blind.

Two unsuccessful attempts were made to produce a new pupil during 1951, and on December 28, Elschnig's capsulo-iridectomy was performed. At first dressing 48 hrs later a round and central pupil was found (Fig. 2, overleaf) with a bright red reflex from the fundus. At a later examination the vitreous proved to be remarkably clear with only a few anterior strands. The fundus was seen without difficulty showing moderately arteriosclerotic retinal vessels and some senile degenerative changes at the macula.

Two months after the operation the eye was white and the visual acuity was 5/12 with $\bar{c} + 9.0$ D sph. $\frac{\quad}{+2.0$ D cyl. axis 150° , and J2, with $\bar{c} + 3.0$ D sph. added. With the help of a magnifying lens he was able to read the smallest newspaper print.

Technique

I am indebted to Mr. H. B. Stallard whose technical description I followed in this case. A few details may be worth emphasizing:

- (1) It is not necessary to dip the knife and incise the iris at such an early stage

* Received for publication March 6, 1952.

† Dedicated to Professor Lindner on the occasion of his 70th birthday.

FIG. 1.

in the operation. There is always the danger of emptying the anterior chamber on retracting the knife from iris tissue, thus making the counter-puncture difficult. It is quite easy to re-introduce the knife and incise the iris-capsule diaphragm when the primary incision is complete.

(2) The de Wecker's scissors must be of such a size as to pass readily into a wound 2.5 mm. long, and to be manoeuvrable within the confines of the anterior chamber. Large de Wecker's scissors cannot open in such a space.

(3) The iris-capsule diaphragm is tough and unyielding and cuts rather like rubber.

FIG. 2.—Structure of new pupil.

(4) The operation is safe because the corneal section is not completed. The danger of vitreous loss is minimized and wound healing is assured.

(5) Elschnig's capsulo-iridectomy is easy to perform and the procedure is strongly recommended as the operation of choice in post-operative occlusio pupillae.

My acknowledgements for the drawings and photographs are due to Dr. Peter Hansell and the Department of Medical Illustration at the Institute of Ophthalmology.

REFERENCES

- ARRUGA, H. (1946). "Cirugía Ocular", p. 401. Salvat, Barcelona.
 BLASKOVICS, L. VON, and KREIKER, A. (1945). "Eingriffe am Auge", 2nd ed., p. 310. Enke, Stuttgart.
 ELSCHNIG, A. (1912). *Klin. Mbl. Augenheilk.*, 50, pt. 1, p. 538.
 KÜMMELL, R. (1922). In "Augenärztliche Operationslehre", vol. 1, p. 738, ed. A. Elschnig. (Handbuch der gesamte Augenheilkunde, 2 und 3 auflage.) Springer, Berlin.
 STALLARD, H. B. (1950). "Eye Surgery", 2nd ed., p. 378. Wright, Bristol.