

SOME IMPRESSIONS OF OPHTHALMIC SURGERY IN EUROPE*

S. ADLER, M.B., B.Ch. (RAND), D.O.M.S., R.C.P. & S. (ENG.), *Johannesburg*

During a short visit to Europe and the United Kingdom, I had the privilege of watching some of the world's most famous eye surgeons operate.

At the Barraquer Clinic in Barcelona, a magnificently appointed private hospital run by Professor Barraquer and his son Joaquin, cataract extractions are performed under local anaesthesia and curare with heavy sedation. The curare is given in doses sufficient to relax the extraocular muscles without affecting the respiration. Most of the extractions I saw were done by phacoeresis. A suction cup is applied to the anterior surface of the lens, which is then completely removed in its capsule. The method was pioneered by



Fig. 1. Acrylic lens in position in anterior chamber.

Professor Barraquer, who devised and perfected the instrument. As soon as the lens is removed, the previously-inserted corneo-scleral suture is tied, and pilocarpine solution is injected into the anterior chamber to constrict the pupil.

At this clinic I saw a number of acrylic lenses inserted into the anterior chamber. These lenses were devised by Professor Strampelli of Rome, and fit into the anterior chamber of the eye (Figs. 1 and 2). Each lens is individually made to fit the particular eye and is of appropriate dioptric strength to render the eye emmetropic. It is inserted horizontally after a peripheral iridectomy has been made at 12 o'clock, care being taken to see that the lens does not block the iridectomy. These lenses are used (1) to replace a cataractous lens, (2) to render the eye emmetropic in high degrees of myopia or hypermetropia. The technique of insertion is relatively simple and the immediate results are good. Time alone will reveal if there are remote complications. (The Ridley type of intra-ocular lens placed behind the iris is no longer used at this clinic, and is in fact not in favour at most of the other clinics I attended.)

At the Barraquer Clinic I saw a particularly useful and simple surgical instrument. It consists of a holder which grips a piece of the cutting edge of a sterilized razor blade. A portion of this is broken off and used as a small, very sharp cutting instrument. As soon as it ceases to be razor-sharp, another piece of the razor blade is broken off for use. This instrument can be used for a

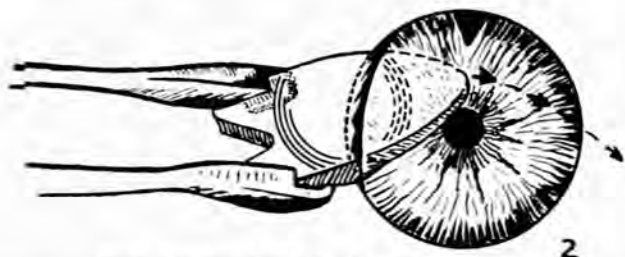


Fig. 2. Insertion of acrylic lens into anterior chamber.

variety of conditions ranging from lamellar corneal grafts to the removal of sutures. It can be improvised by using an artery forceps instead of a special holder which, however, has non-grooved blades and takes a steadier grip. This instrument should prove useful to general as well as eye surgeons, particularly for the removal of sutures.

I saw a number of corneal grafts being performed with consummate skill under the Zeiss binocular operating microscope, which assured accurate apposition of the corneal graft. Dr. Barraquer used as fixation for the graft a very fine 'virgin silk' composed of 7 cocoon threads. This was inserted as a continuous suture (Fig. 3) with a specially constructed 4 mm. needle (Grieshaber). The suture can be left in place for 15-20 days without producing irritation. At this stage sufficiently firm union has occurred to obviate any danger on their removal.

Also in Barcelona I saw Professor Arruga perform a number of intracapsular cataract extractions carried out in the patient's bed under local anaesthesia with an Arruga forceps. He inserts corneo-scleral sutures after the extraction is completed. He uses a minimum of instruments and his surgery is very accurate.

At Geneva, Professor Franceschetti demonstrated the use of the Berman locator for intra-ocular foreign bodies. In one case I

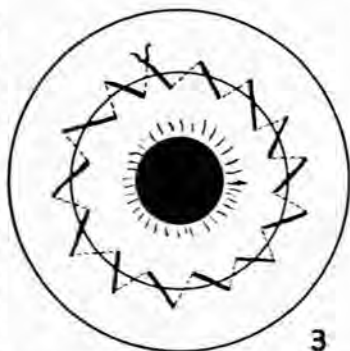


Fig. 3. Suture used in fixation of corneal graft.

saw it showed that a minute foreign body was on the inner aspect of the lid and not intraocular. This was done without the aid of X-ray localization. The instrument is a useful adjunct to X-rays for the extraction of metallic foreign bodies.

At Utrecht Professor Weve stressed the danger of excessive diathermy at one application in detachments of the retina, arising from overheating of the tissues. He showed me an interesting film of a suction irrigation syringe for dealing with soft lens matter after a discission operation. The apparatus sucks out soft lens matter at the same time as it injects saline.

At Bonn Dr. Meyer-Schwickerath demonstrated his light-coagulation therapy. This is basically a method of causing therapeutic burns of the retina to seal holes in detachments. The method was evolved as a result of observing burns caused by watching an eclipse of the sun without the necessary protective glasses. The apparatus allows the operator to view the fundus as through an ordinary ophthalmoscope. Once the hole in the retina has been located, the very intense light is switched on and a burn is caused at the site on which the light is being concentrated. The treatment is ideal for shallow detachments and is also used prophylactically to diathermize potential areas of detachments. It can only be used in shallow detachments, for the light penetrates transparent material and only generates heat when the retinal tissue is in close proximity to pigmented tissue. He has also used the method of light coagulation to treat intra-ocular neoplasms, of which he showed me an impressive number of slides made before and after treatment. I was also shown the slides of several patients in whom he had made an artificial pupil by causing a burn of the iris with light coagulation.

In Manchester I watched Mr. Duthie do an imposing list of intracapsular cataract extractions. These were most beautifully executed after a 'complete' iridectomy. The only disconcerting feature in my view about his otherwise brilliant cataract surgery is the omission of corneoscleral sutures, with its attendant post-operative dangers.

At the Westminster Branch of the Moorfields Eye Hospital, Mr. Frederick Ridley has devised and equipped a complete unit for the fitting and manufacture of plastic lenses.

At the East Grinstead plastic surgery unit Mr. Rycroft demonstrated several new instruments he has devised, including two very fine needles, specially made for the introduction of air into the anterior chamber after cataract extraction and keratoplasty. He also showed me a very delicate forceps for tying extremely fine silk sutures in corneal grafts. These he has described in the *British Journal of Ophthalmology* (41, 504).

I wish to express my thanks to Mr. Aaron Cohen for the excellent diagrams.

Received for publication in January 1958.