'By HAROLD GRIMSDALE, F.R.C.S.,

Assistant Ophthalmic Surgeon, St. George's Hospital. (Continued from p. 251.)

## STATIONARY CATARACT.

A well-placed iridectomy, however, enlarges the normal pupil so as to uncover a certain area of clear lens, and thus improve the vision. It is important that the iridectomy should involve only the pupillary horder of the iris; if the external margin be removed also, the edge of the lens, badly curved and irregularly refracting, and even the perilental space is exposed, so that rays of light passing through the artificial aperture are not brought to a focus on the retina. For an operation of this kind, cocain is sufficient, unless the patient is quite young.

The instruments needed are the speculum, fixation forceps, iris forceps, scissors and spatula, and a knife.

The last will vary according to the choice of the operator; either a keratome or an irid desis knife will be used. The latter is really little but a narrow keratome.

Its use is slightly different; the keratome completes its incision with one thrust, the irid-desis knife is used so as to enlarge the original wound towards one or other side as it is withdrawn. In testing this knife with the drum, each edge should be tried separately, and the operator informed if there be any difference between the two.

After the incision made in the sclero-corneal junction, the iris is seized in the forceps near the pupillary margin and a very small fold drawn out of the eye, to be cut off with a single cut of the scissors. The spatula is then used to replace the iris into a normal position; or the operation may be performed after the manner of Mr. Brudenell Carter, which has been already described.

The aperture in the iris may be made in any direction so long as it will not be covered by the lid. It is least noticeable when situated downwards and inwards, and this, therefore, is the place generally chosen.

This operation is, unfortunately, not possible in many cases; usually the opacity is too large to allow of it. In this event we must remove the lens. The age of the patient must now be taken into consideration. If he be less than thirty, the lens will be soft throughout, and it will be useless to attempt to extract it. We must, therefore, employ a more gradual method. If the lens matter be exposed to the action of the aqueous, the fibres swell and are broken down, to be gradually absorbed from the anterior chamber. The method of operation by needling takes advantage of this.

The operation consists in tearing a hole in the anterior lens capsule; for this we use a stopped needle. The pupil should be dilated with atropine; and the cornea cocainised. For nervous children the speculum can often be dispensed with and the lids opened with the index and ring fingers; pressure from the middle finger on the outer part of the sclerotic serves to steady the globe.

The needle is introduced just external to the corneo-scleral junction, and passed in so that the point reaches about the middle of the pupil, and the anterior capsule of the lens is torn. Operators vary in the freedom with which they larerate the capsule at the first sitting, but, inasmuch as it is impossible to judge what the consequent reaction will be, it is better to proceed cautiously and to be satisfied with a small incision.

Through this a small quantity of aqueous finds its way to the lens fibres. These swell and protrude through the rent in the capsule; at the first dressing they may be seen as a greyish button in the situation of the rent. This gradually is absorbed, to be replaced by a fresh mass, and this process continues until a large part or even the whole of the lens is broken up and disappears, leaving only the capsule.

More often after a time the absorption becomes very slow, or ceases entirely, and must be renewed by a second needling. Sometimes five and six operations have to be performed before the whole lens is removed. This involves a considerable lapse of time—six weeks or two months—and often, therefore, the lens is purposely broken up with greater freedom at the start. As a result the anterior chamber is filled by swollen, partially degenerated lens fibres, and a condition of glaucoma results unless its contents are evacuated, either by means of a curette or by a suction tube.

The operation by suction is not often employed now. The original tube used was of glass with a silver nozzle cemented to the end. Owing to this joint the tube cannot be sterilised satisfactorily.

The after-treatment of these cases is not difficult; the eye operated on should be kept closed with a pad and bandage for a few days after the operation. The pupil should be kept dilated with atropine from the first, except when a peripheral corneal incision has been made to evacuate the lens. Here a marginal prolapse of iris is not very uncommon, and may have to be removed.

Atropine should not be used in this case until the edges of the corneal wound have adhered, but in all others it may be instilled as a routine practice from the first, night and morning. It is often difficult to keep a child quiet in bed. If the operation has been a simple needling, it does no harm to allow him to sit up and play with his toys on the day following the operation. If all goes well, there is no pain and little inflammatory refaction. Sometimes a slight iritis is set up, resulting in adhesions between the iris and the lens. Hot



