SOME OBSERVATIONS ON THE USE OF CHYMOTRYPSIN*

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I AM unfortunately not one of those who can say "I always do an intracapsular extraction", or even that I always try an intracapsular extraction, because I think some cases are safer and better with an extracapsular extraction of cataract.

After the history has been noted, each case is carefully examined with the slit lamp and a decision is taken which operation will be best for that particular case. Thus a simple uncomplicated cataract is usually extracted with Arruga's forceps, but a hypermature or intumescent lens is extracted with an erisophake.

When chymotrypsin was first introduced Dr. J. Barraquer very kindly sent me some together with a copy of his paper on the subject. Being rather sceptical, I decided to try it first on complicated cataracts in which the hope of success was not very good, and thereafter I tried it on uncomplicated cases.

Of fifteen complicated cases, six lenses were removed by the erisophake, one by vectis, and eight by Arruga's forceps. In one case there was a small loss of vitreous. Healing appeared to be more rapid than expected and there was less disturbance or reaction in the eye than usual. The visual result was as good as could possibly be expected in each case.

The following notes on 35 uncomplicated cases may be of interest. In one case, the suction pump of the erisophake failed but the lens was extracted by Arruga's forceps without difficulty. In a second case operated on with the erisophake, the capsule ruptured and the operation was completed with a vectis without vitreous loss, but some lens debris still remains in the pupil area.

One patient developed influenza, with post-operative iritis, but a good degree of visual acuity was obtained after treatment. Another developed an iris prolapse 3 days after the operation and died a few days later of coronary thrombosis.

In 33 of these uncomplicated cases the lens was delivered by Arruga's

* Received for publication March 3, 1959.

forceps without difficulty, and the visual acuity (corrected) was 6/18 in one case, 6/12 in two, 6/9 in three, and 6/6 in the remaining 28 cases.

In one case attempted by an assistant, suction was lost and the lens had to be recovered from the vitreous with a vectis. Some vitreous was lost and, as the patient was a diabetic, healing has been unsatisfactory and no visual improvement has been obtained.

The result of my trial of chymotrypsin is that I now use it in all intracapsular extractions. The solution is injected through the peripheral iridectomy under the iris on each side. When the patient was young (one—32, one—33, one—44) I was inclined to wait more than 3 minutes and when the patient was old less than 3 minutes for the solution to act. If the patient has not had curare or some other muscle relaxant, the pupil tends to contract a little when the chymotrypsin is injected, but not enough to cause any real difficulty. With Arruga's forceps the capsule may be picked up at the upper pole and the lens glides out through the pupil, traction seldom being necessary. It is desirable to keep up counterpressure with Wilson's cataract expression hook about the equator of the lower part of the globe while the capsule is grasped; otherwise the lens may fall back into the vitreous.

After operation there is less disturbance of the tissues and healing appears to be more rapid. Striate keratitis is common but it clears up rapidly, and I am not sure that this is not due to the soft eye produced by anaesthesia to facilitate operation rather than to the chymotrypsin.

In no case operated on since these figures were analysed has any complication arisen as a result of the use of chymotrypsin, but I feel that several cases would have presented serious difficulties without it and that it is especially valuable in treating younger patients.