CATARACT EXTRACTION WITHOUT IRIDECTOMY*

BY

P. AWASTHI AND V. N. RAIZADA

Department of Ophthalmology, S.N. Medical College, Agra, India

IN cataract surgery iridectomy or iridotomy has been done as a general rule since 1864, when von Mooren first introduced it (Bellows, 1944). Different types of iridectomies have been advocated by various surgeons. Chandler in 1890 suggested a pin-hole peripheral iridectomy (Knapp, 1947), and Harrington (1949) also concluded that peripheral iridectomy was better than a complete iridectomy. Kirby (1955) stressed that round pupil extraction provided support to the vitreous and retained control over the light, so preventing glare. Vail (1957) stressed complete iridectomy avoided herniation of the vitreous through the pupil, which irritates the iris and cornea. Thus in complete iridectomy iritis and corneal irritation are much reduced. Townes (1958) advocated complete iridectomy, and McLean (1958), Castroveijo (1958), and Brown (1958) peripheral iridectomy. No detailed reports of cataract extraction without iridectomy are available in the literature.

Material

Three years ago I operated on a patient with diabetes mellitus and senile cataract without iridectomy. The recovery was uneventful. The patient was discharged on the ninth day with a white eye and is still going about without any complication.

This encouraged me to do further cataract operations without an iridectomy, and 500 senile cataracts operated upon in S.N. Hospital, Agra, were divided in two groups:

- (A) 250 cataractous eyes were operated upon without iridectomy
- (B) 250 cataractous eyes were operated upon with peripheral iridectomy.

Procedure

The night before the operation the patient was given a capsule of Nembutal (1.5 gr.) to ensure good sleep. Next morning a further capsule of Nembutal was given and this was repeated one hour before the operation, with two tablets of 50 mg. Largactil. Almost every Indian patient was fast asleep when he reached the operating table. For surface anaesthesia anethaine 1 per cent. drops was used, and for retrobulbar and facial injections Novocain 2 per cent.

One pre-placed corneo-scleral suture was inserted at 12 o'clock. The incision was made from 2.30 to 9.30 o'clock in the left eye and from 9.30 to 2.30 o'clock in the right. In most cases the operation was an intracapsular extraction; if this failed, an extracapsular extraction was done. Air was injected into the anterior chamber. A subconjunctival injection of 50,000 units crystalline penicillin was given. The extracapsular cases had the bandage

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changed after 24 hours and the intracapsular after 48 hours. The ensuing complications (Table) indicate that the percentage of iris prolapse was much higher in the group in which iridectomy was not performed but that other complications were fewer. Post-operative hyphaema was not seen in Group A, but occurred in twelve eyes in Group B. The incidence of keratitis was almost equal. Iritis was more common in Group B (this might be due to the trauma of the iris incision). The incidence of flat chamber was high in Group B and low in Group A. There was one case each of expulsive haemorrhage and endophthalmitis in Group B.

TABLE
COMPLICATIONS IN GROUPS A AND B

Complications	Group A without Iridectomy		Group B with Peripheral Iridectomy	
	No. of Eyes	Percentage	No. of Eyes	Percentage
Iris Prolapse	23	9.2	5	2
Hyphaema	0	—	12	4.8
Keratitis	8	3.2	7	2.8
Iritis	2	0.8	7	2.8
Flat Chamber	2	0.8	8	3.2
Expulsive Haemorrhage	0	—	1	0.4
Endophthalmitis	0	—	1	0.4
Raised Intra-ocular Pressure	3	1.2	—	—

In Group A, three patients developed subacute glaucoma 4 weeks after the operation; this was due to the blocking of the pupillary opening by the herniated vitreous, so that the aqueous could not pass through it easily and the iris was pushed towards the filtration angle. After peripheral iridectomy the glaucoma was controlled.

Discussion

The procedure is simple provided that the pupil is kept dilated during the operation so that the lens can be delivered easily. There is no bleeding as the iris is not injured. In Group A no post-operative hyphaema occurred which shows that in certain eyes bleeding arises from the iris. Flat chamber was also a rare complication, which indicates that the less the trauma to the uveal tissue the less are the chances of a flat chamber. One alarming complication in this series was iris prolapse. This may be avoided if the number of the sutures is increased to secure good apposition of the lips of the wound and the patient is kept quiet in bed until healing has taken place. This type of the operation is a great advantage when neovascularization of the iris is present, for example in diabetes mellitus, and in cases with a tendency to bleed profusely. The iris gives good support to the vitreous, and controls the entry of light, so that less glare results. Cosmetically the operation is more satisfactory. It was also noticed that the eyes which had no iris prolapse in Group A became white earlier than the eyes in Group B, so that the stay in hospital of the Group A patients was reduced.

Summary

500 cases of cataract extraction were studied in 250 of which no iridectomy was done. The results of these studies are discussed.

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