CASE NOTES

CONGENITAL IRIS LESION*

BY

W. J. LEVY

St. Thomas's Hospital, London

THE congenital iris lesion reported below is probably unique, and is for this reason recorded as an interesting case.

Case Report

A student teacher of Turkish-Cypriot origin, whilst in Great Britain on a British Council visit, inquired whether anything could be done to alleviate an eye condition which had troubled him since birth. He had previously been told that nothing could be done for it.

He complained of poor vision in both eyes since birth, the left being worse than the right. He had had glasses prescribed but they were no longer of any assistance to him. There was no family history of any eye trouble, nor were his parents consanguineous. He was born of a normal, full-term pregnancy.

Examination.—Visual acuity in the right eye was 6/18pt, unaided; and in the left 6/36, unaided. No improvement in vision could be effected with glasses. Both eyes were white and quiet. The anterior chambers were of normal depth except in the immediate pupillary area. From the anterior aspect of the iris in either eye, bulged forward an almost normally coloured and slightly abnormally patterned iris tissue, commencing approximately 2.5 mm. from the pupillary margin (Fig. 1).

FIG. 1.—Schematic diagram to illustrate the billowing forwards of the mesodermal anomaly, and approximate site of origin. Anterior limits of anomaly exaggerated for the sake of clarity.

* Received for publication, September 9, 1956.

In the centre of this tissue was a pseudo-pupil, occluded by an irregular, partly opaque membrane (Figs 2 and 3).

FIG. 2.—Right eye, showing well slightly transparent pupillary membrane, highlighted by the irregular slit beam, separated by aqueous from the lens, highlighted by the regular slit beam in the pupil.

FIG. 3.—Left eye, showing a less clear pupillary membrane. The billowing forwards of the pigmented part of the mesodermal anomaly is better demonstrated here.

Through this membrane and approximately 0.5 mm. deep to it, was seen the lens (Figs 2 and 3), on which lay a normally-reacting pupillary margin and iris. Miosis caused this

pseudocyst-like lesion to become more pronounced (a fact which was utilized later at operation). In the right eye the lens could be seen to be clear, except for a small congenital sutural cataract. There was a limited view of an apparently normal fundus. The left lens appeared to be in the correct position, but its clarity could not be established, and only a minimal red reflex of the fundus could be seen.

Operation Left Eye.—On July 25, 1956, the pupil was strongly miosed and, under general anaesthetic, a superior keratome incision was made. The membrane in the centre of the pouting lesion was grasped with intra-capsular forceps. The membrane was separated from the surrounding persistent pigmented mesoderm; however, as this reached the superior margin, the atrophic iris and pigmented mesoderm remains came with the membrane and a complete, superior iridectomy resulted. The poorly elastic iris pillars were repositioned with some difficulty and, once the iris was free of the wound, the clear, immediately adjacent, lens was respected (Fig. 4).

First Operation Right Eye.—On August 1, 1956, the pupil was strongly miosed. Under local anaesthetic a corepraxia was attempted with two needles. This separated the membrane of the central area along its inferior margin, but unfortunately it flapped back.

Second Operation Right Eye.—On August 9, 1956, the pupil was once again miosed and, once more under general anaesthetic, a superior keratome incision was made. The slightly anteriorly curled, inferior edge of the central membrane was grasped with intra-capsular forceps. Once again, when the superior margin of the pigmented mesodermal lesion was reached, it and the underlying atrophic iris came away with the central membrane and a complete superior iridectomy resulted. The same difficulty with the iris pillars was met. A clear lens was visible (Fig. 4).

FIG. 4.—Post-operative view. The picture was the same in each eye. The remaining pigmented portion of the anomaly, billowing away from the pupil, is clearly seen. The pupil is quite clear with a clear lens.

Result.—Post-operative convalescence was uneventful and was maintained on atropine and topical hydrocortisone. When the patient was discharged on August 30, 1956, when he was returning to Cyprus, his condition was as follows:

Visual acuity: In the right eye 6/9 pt, with $-1\text{ D sph.}, +0.75\text{ D cyl.}, \text{axis } 30^\circ$.
 In the left eye 6/18 +2, with $-1.5\text{ D sph.}, +1.25\text{ D cyl.}, \text{axis } 170^\circ$.
 Binocular vision 6/9-3.

Both eyes were white and quiet. In each eye there was a complete superior iridectomy with an anterior synechia of the temporal pillar. The pupil was quite clear and the inferior remains of the anterior mesodermal anomaly billowed forward. The lens was clear except for the congenital sutural cataract, identical in each eye. No abnormality of the vitreous or fundus could be seen in either eye.

Discussion

In this case, the pupillary membrane, which normally regresses entirely during gestation, persisted, and in association with this, a reduplicated anterior layer of the pigmented mesoderm developed. It is interesting that the pseudo-pupil should have the same limits as the normal, underlying pupil, and also that the pigmented portion of the anomaly had no muscular activity, whilst the underlying iris, although atrophic, showed normal activity.

Summary

An unusual case of iris and pupillary anomaly is reported.

I should like to thank Mr. Harold Ridley for his encouragement and advice, and for permission to publish this case record. I should also like to thank Messrs. Tarrant and Jeffreys of the Medical Illustration Department of the Institute of Ophthalmology for the paintings and photographs.