been so often recommended for the lid-margin. They all lead too easily to depressions or decubital ulcers, on the lid-margin which are particularly disfiguring. The exact but not tight simple knotting is the safest way, according to our experience.

CONTRIBUTION TO DATA ON SIGHT DISTURBANCES CAUSED BY PROLIFERATION OF PIGMENT EPITHELIUM*†

(An unusual complication after cataract extraction)

BY

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BUDAPEST

SIGHT disturbance of patients suffering from iridocyclitis and glaucoma may be caused by pigment deposits on the capsule of the lens.

In the case of iridocyclitis, especially when enlargement of the pupil is not performed in time, granulated pigment is found sometimes on the place of the synechia posterior. This is a remainder of the pigment epithelium. Correspondingly a lack of pigment may arise in the iris. After a time the pigment on the capsule of lens may gradually disappear.

It is well known that in the case of glaucoma the pigment of the iris may be scattered as this fact is mentioned as one of the causes for glaucoma. In such cases lots of pigment may be observed partly on the posterior surface of the cornea partly on the capsule of lens. In eyes treated for a long time with pilocarpine, pigment cysts are developed, pictures of them can be seen in Vogt's atlas. Pupils constantly contracted with pilocarpine, if they are allowed to enlarge, or are enlarged if possible with tonogen (adrenaline) show a surprising amount of pigment deposited on the capsule of the lens.

A remarkable and generally known change is that of the pigment epithelium of the iris and ciliary body in case of diabetes. The pupillary pigment layer is swollen and grey instead of being black as may sometimes be observed with a slit-lamp. This depigmentation is easily to be distinguished from injury or inflammation-caused depigmentation. This latter is usually discontinuous compared with the homogeneous depigmentation known in cases of diabetes. The aqueous humour of the anterior chamber flowing away at cataract

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extraction may contain — as is well known — grains of pigment from the pigment epithelium. The same can be observed exceptionally with aged patients. Accumulation of glycogen and water in the pigment epithelium is the cause of the above described changes.

Serious disturbances of sight may be caused by proliferation of the pigment epithelium in case of after cataract and very seldom the structural change called "Pigmentnachstar" (Brückner) in German literature can be encountered. This is the case when the surface of the pupil is covered by a brownish-black layer. The layer is the cataracta secundaria which has a pigment deposit on its surface, but as histological examination revealed it is a result of proliferation of the iris' pigment epithelium (Mans.).

A case essentially similar to the above description was observed without the presence of after cataract, proliferation of the pigment epithelium being found on the surface of the vitreous.

F.S. (:964-1947) woman aged 83 years had a cataract extraction on the left eye. Sight of the right eye was still perfect and therefore she used this eye. She did not get a glass for her left. She started to lose her sight 4 years ago and her sight is very bad this last year.

Status on entering the clinic: Right eye: perception: 5 m. localization: good. Left eye: counting fingers in $1/2 + 10$ D.

Right eye: conjunctiva thin, pale. Lacrimal organs: no abnormality. Cornea smooth, shining. Chamber normal, aqueous humor clean. Pupil average large, good reaction. Iris without irritation. Lens homogeneously grey. No red reflex. Intra-ocular pressure 15 mm. Hg.

Left eye: conjunctiva thin, pale. Scar at the limbus after cataract extraction with iris attached to the cornea but not the pupillary edge so that the pupil is round with good reactions. At 12 o'clock basal coloboma in the iris. Iridodonesis. No after cataract can be observed even with enlarged pupils. Pupil and coloboma dark brown, with faint red reflex. Tension 15 mm. Hg.

Blood pressure 175/85 mm. Hg. Urine: alb., sugar, pus, negative. Hearing of patient is weak, medical diagnosis: arteriosclerosis.

Intra-capsular cataract extraction with complete iridectomy was performed being accompanied by slight bleeding from the vessels of the iris, which was not absorbed during the 10 days of clinical treatment. With atropine and poultice ordered, the patient was sent home. Ten weeks after the cataract extraction, sight of the right eye was 5/5. Vessels of retina sclerotic, otherwise normal. Left eye: as above described.

Examination of the left eye reveals immediately the brown colour of the pupil, which focally lighted seems to be a growth, its surface being convex, but even focally lighted or with scleral (Lange) lamp it is translucent, though keeping its brownish colour especially in the

inferior part of the pupil, it may be seen that there is only a thin brown layer.

Magnified by slit-lamp this seemingly simple brown layer is seen to cover the surface of the vitreous, and the homogeneous surface shows its moss like composition.

How far this pigmentation reaches behind the iris cannot be stated. It can be seen all over the surface of the vitreous when the pupil is maximally enlarged.

FIG. 1.

The question is how to explain this structural change.

It is obvious that a pigment layer covers the vitreous as it does in the case of a pigmented after cataract. In the case of the pigment secundaria the fact is easily understandable. Reminders of lens get easily into connection with posterior layers of the iris. In case of cataract extraction complicated by inflammation, the iris may be attached to the vitreous. Thus we have to assume in our case that the iris epithelium got into contact with the vitreous layer the epithelium injured somehow started to proliferate and covered the anterior surface of the vitreous. The assumption is that some disturbance of healing had occurred as in our case anterior attachments are to be seen to the nasal part of the basal coloboma (See Figure). The pigment epithelium of the iris seems to have been injured while cutting or at the reposition of the iris.

Summary

An unusual complication was observed which developed after cataract extraction.

After intra-capsular cataract extraction with a round pupil in a woman of 83 years, the surface of the vitreous was covered by a pigment layer, similar to pigmented after cataract (so called Pigment-nachstar) causing her serious sight disturbances.

LITERATURE

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A CASE OF PYOCYANEUS RING ABSCESS OF THE CORNEA TREATED WITH STREPTOMYCIN *

BY

J. MASCHLER

HAIFA

RING abscess of the cornea is a rare and always a dramatic event for the oculist. Its treatment until a few years ago was a most ungrateful task. Since the appearance of the sulpha drugs and the modern antibiotics new hopes have arisen. The number of cases published since then is so small, however, that I may be justified in reporting a favourable effect of streptomycin treatment on a ring-ulcer caused by *pseudomonas aeruginosa* (B. pyocyaneus).

Case History

The 15 years old apprentice M. St. was hurt on August 15, 1947, by a tiny splinter of iron which stuck in the superficial layers of his right cornea near its centre. It did not hurt him very much, and he appeared in the eye-infirmary of the worker's Sick Fund only two days later. There was already a small infiltration around the foreign body which was easily extracted. He received atropine, hot poultices were ordered, and when he came back the next day, there was no change for the worse. I, myself, saw the patient only on the third day of treatment, when he told me that during the previous night he had felt unbearable pains in the hurt eye which had become blind during the last few hours. The eyeball was highly irritated, the whole right cornea, save a narrow peripheral rim of 1 mm., was occupied by a large abscess, the central part of which was slightly

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