improvement where visual acuity had gone down to 6/60 and fields were contracted down to around the central area. After a course of eggs and fats visual acuity improved to 6/12. About half the cases (Group A) were given yeast daily, but it was recognised as of poor therapeutic quality.

An earlier series of cases had been treated with foods of high protein and vitamin content (eggs, liver paste, peanut butter). These patients subsequently came under the care of the present writer. Some showed a further slight improvement, but the majority remained unchanged, and a number deteriorated.

From a survey of the periodic examination it would seem that the objective findings when the patients first presented themselves were more or less the maximum of involvement, with a tendency to slow deterioration.

The presence of avitaminosis and gross nutritional deficiency in all these cases leads to the suggestion that aetiologically the ocular symptoms were of nutritional origin. These symptoms did not seem to depend on the absence of any one particular vitamin, but rather to an imbalance with or without an absolute lack of either vitamin A or B1 or B2 complex. Closely associated with the abnormal balance of vitamins in the diet was the lack of proteins and fats and absence of these, too, doubtless played their part in producing the final clinical picture.

Taken as a whole the ocular symptoms, particularly the field defects, suggest that primarily the lesions observed—whatever their cause—were retinal in origin rather than nerve lesions. Such a reading forces itself from a study of the field defects.

I take this opportunity of thanking and placing on record the able work and the immense patience shown by Mr. W. C. Walker (Hong Kong Govt. Dept.) who, over a period of about three and a half years in the camp, carried out practically all the examinations of the fields.

BILATERAL PARTIAL COLOBOMA OF THE OPTIC NERVE

BY

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COLOBOMA of the optic nerve, without involvement of the choroid, is such a rare condition that I feel justified in adding this case to those odd fifty already reported in the literature which was recently reviewed by T. Steinberg of San Francisco.

David V., aged 19 years. He stated that the right eye was always bad. It started to show divergence at the age of three, following whooping cough. He has never experienced any difficulty in seeing at night, or in the "black-out" during the war.

Right eye

Left eye

Both eyes show coarse, horizontal nystagmus, especially when looking towards the extreme right or left-hand side. The right cornea is smaller than the left one.

R. V. With + 2.0 D.sph. = 6/60

L. V. with $\frac{+ 1.25 \text{ D.sph.}}{+ 1.0 \text{ D.cyl.} \rightarrow 180^\circ} = 6/9 \text{ to } 6/6 \text{ (2 letters)}$

The right disc is at least twice the normal size, deeply cupped below and at the nasal side, where its colour is a bluish-grey, but the lamina cribrosa is not visible. The central and upper parts of the disc show a normal pinkish colour, and no cupping. The edges of the disc are sharply defined, except for the temporal margin. The upper branches of the central retinal vessels emerge a little above the centre of the disc, whereas the lower branches emerge at the circumference of the disc, and bend sharply around its edges. The right fundus is otherwise perfectly normal.

The left disc, although of equal size to the right one, does not show such an abnormal arrangement of the blood vessels. The upper branches of the retinal vessels enter by the central part of the disc, whereas the other retinal vessels enter along the lower edge of the disc. Some of them are branches of the short ciliary arteries. The disc is well coloured, except for the lower and nasal part, where it is cupped, (but not as deeply as the right one), and of greyish colour. The lamina cribrosa is not visible. The edges of the disc

are well defined. The left fundus is otherwise normal. The intra-ocular pressure is normal, right 22, left 19 mm. Hg, and does not rise after dilating the pupil with homatropine, nor after keeping the patient in the dark-room for one hour.

The visual field of each eye shows a marked depression above, caused by a nerve fibre bundle scotoma, whereas the lower half of the field is perfectly normal. These field defects correspond to the deeply cupped parts of the disc.

The question arises—is this a coloboma of the disc, a glaucoma, or Schnabel's cavernous atrophy?

In favour of coloboma is the anatomically abnormal arrangement of the blood vessels in the right eye, which could not possibly be the result of the raised intra-ocular pressure only. There is obviously a mal-formation at the nasal and lower edge of the disc, which explains the field. Steinberg and Adler showed in their cases also, field defects corresponding to the area of the coloboma. The left eye

does not look so much like a coloboma, although the lower vessels look definitely aberrant. The cupping is in the nasal half and not in the temporal one, as is usual in glaucoma. Against glaucoma, and in favour of coloboma, is the normal intra-ocular pressure, which did not rise after one hour's stay in the dark room, nor after instillation of homatropine over a period of two hours. I was not able to do a dark adaptation test, but the patient stated that he had never experienced any difficulty in the black-out.

The field defect corresponds exactly to the defect in the optic nerve. There is no nasal step, which one would expect in a glaucomatous field.

The possibility of Schnabel's cavernous atrophy has to be answered in the negative, as these cases usually occur in late adult life.

Summary

A case of bilateral, partial coloboma of the optic nerve is presented, showing field defects which correspond to the defect in the optic

nerve. The intra-ocular pressure remained normal in spite of provocative tests.

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DEPOSITION OF MERCURY IN THE EYE*

BY

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RECENTLY. I had the opportunity of observing a peculiar case of hydrargism of the eye after long-continued local use of mercury ointment.

H. O., female, aged 57 years, was first seen on February 5, 1946, because of dark pigmentation of the eyelids of both eyes due to local application of mercury ointment. At the age of 16 she had suffered from "blepharitis" and from that time on, in fear of a relapse, she continued to employ this remedy nearly every night. The last prescription ran: Hydrarg. praecip. alb. 1,0; Vasel. 15,0. Now she was asking for the removal of the pigmentation which appeared about ten years ago and gives her much trouble because of resemblance to an exaggerated make-up.

The two eyes were in about the same condition. The skin of the eyelids was bluish-grey. The conjunctiva showed moderate hyperaemia. Some loose dark particles were in the conjunctival sac. The cornea and lens, observed under oblique illumination, were quite normal. Ophthalmoscopically the media were perfectly transparent. Visual acuity was normal.

Slit-lamp examination revealed dark pigment granules in the bulbar conjunctiva, especially near the cornea, with preferential distribution around the perivascular lymph vessels. In the periphery of the cornea in the region of Descemet's membrane a discoloration, varying from a greenish-grey to a bluish-grey, was seen. A yellowish-brown lustreless opacity occupied the pupillary area of the lens. Changing of colours was absent. Near the lower pupillary border there was also seen a capsular separation of the senile type of exfoliation. The brownish opacity

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