in the left eye. Three years ago the butt of his fowling-piece hit him on his left eye.

There was an iridodialysis at 4.30 o'clock meridian (Fig. 7), vision 20/25. After operation dialysis was corrected (Fig. 8), vision 20/20, and no dazzling.

(5) M. K., a young man, aged 20 years, complained of dazzling and poor vision in the right eye. Twelve years ago a piece of stone had struck his right eye. There were two iridodialyses, separated from one another by a narrow bridge, one at 5.30 and the other at 6.30 o'clock meridian (Fig. 9). There were traumatic lens opacities, vision 20/100. Three operations were performed. Now no dialysis (Fig. 10), and no dazzling. Visual acuity same as before.

REFERENCES

- BLASKOVICS (1938).—Eingriffe am Auge, p. 327.
 GILBERT, W. (1930).—*Kurzes Handbuch der Ophthal.*, V. Band, p. 101.
 SPAETH, EDMOND (1944).—Principles and Practice of Ophthalmic Surgery, p. 584
 THIEL, RUDOLF (1943).—*Ophthalmologische Operationslehre*, p. 346.

SIX CASES OF SCINTILLATIO ALBESCENS*

BY

SÜREYYA GÖRDÜREN

ANKARA

SCINTILLATIO albescens is one of the endogenous deposits in the vitreous. The latter, as a whole, is not frequent. Dor found 32 cases in 82,732 patients, and Westphahl 40 cases in 65,000.

They were known even in pre-ophthalmoscopic days, but until Bensön (1894), little was known about the types of the disease. He divided them into two groups:

1. Asteroid hyalitis.
2. Synchysis scintillans.

The former type occurs in normal vitreous, and consists of white, spherical bodies; while the latter occurs in a fluid vitreous and appears as sparkling gold particles.

The cases to be described are typical examples of the first group.

1. R. G., a man, aged 58 years, complaining of weakness and weariness, was admitted to Gülhane Hospital. He was suffering from a mild diabetes for 16 years, and was leading his normal life with a mild diet.

His last blood serum examination revealed, when hungry, 248 mg. per cent. of glucose, this rose to 325 mg. when given 50 g. of glucose,

* Received for publication, October 15, 1947.

and to 356 mg. after a second dose of 50 g. Arterial blood pressure 70/145 mm., red and white B.C. count, blood picture, and internal organs were normal. Mantoux test and Wassermann reaction were negative, sedimentation rate 5 mm.; blood serum nitrogen within normal limits, cholesterol 208 mg. per cent., no abnormality in liver function.

The eye examinations showed a cuneiform cataract in both eyes, vision being 20/20. The ophthalmoscopic examination made after the pupil had been dilated revealed the presence of small, disc-shaped or spherical white opacities, waving with the movements of the eye. They were too small to be seen by transmitted light. Slit-lamp examination showed the presence of highly dispersive opacities. They had a golden gleam and looked larger than the

FIG. 1.

real size; while examination of each opacity by direct focal illumination revealed the fact that they had a dead white colour (Fig. 1).

They were discrete or marshalled in strands or had peculiar figures resembling an acacia leaf or a bunch of grapes, which moved with the movements of the eye, but returned to their original place without settling to the bottom of the vitreous chamber.

The vitreous of the left eye had a normal appearance.

2. F. O., a man, aged 65 years, was first examined on July 15, 1946. He complained that his left eye had poor vision. He had an incipient cortico-nuclear cataract, and a refractive error of -4.0 D. in both eyes. The left fundus revealed superficial retinal haemorrhages and yellowish white patches just above the macular region.

The fovea had a pale yellowish colour and there were small pigment dots around it. As to the visual acuity after correction, the patient could count the extended fingers at one metre with his left eye; while that of right eye was 20/50.

On careful examination, after the pupil had been dilated, the presence of fine pigmentary disturbances were also seen in the right macular region (senile macular degeneration of Haab).

During ophthalmoscopic examination, gleaming spots were observed in the vitreous of the right eye. Slit-lamp examinations confirmed the presence of asteroid bodies. Here, unlike the first case, the anterior part of the vitreous was practically free from the asteroid bodies.

The patient had no systemic disorder. Urine analysis showed nothing pathological. Arterial blood pressure 90/150 mm.; X-ray examination of the chest revealed nothing pathological. Mantoux test and Wassermann reaction were negative, and sedimentation rate 4 mm. Blood serum sugar within normal limits, nitrogen 28 mg. per cent. and cholesterin 230 mg. per cent.; no abnormality in liver function.

3. A. D., a woman, aged 51 years, was seen on November 18, 1946.

There was incipient senile cataract in both eyes, and several posterior synechiae and a secondary glaucoma in the right. Visual acuity, R. 10/200, L. 20/60.

There were asteroid bodies in the left vitreous.

Urine analysis showed nothing pathological. Arterial blood pressure 85/160, and internal organs were normal. Mantoux test and Wassermann reaction were negative. Four infected teeth were removed. Blood serum nitrogen 22 mg. per cent., sugar 85 mg. per cent., and cholesterin 225 mg. per cent. Liver function test revealed nothing pathological.

4. Z. O., a man, aged 52 years, seen on February 5, 1947. There was immature senile cataract and a refractive error of -1.0 D. in both eyes. Vision after correction, R. 20/30, L. 20/200. There were typical asteroid bodies in the right vitreous.

Wassermann reaction and Mantoux test were negative, sedimentation rate 3 mm., internal organs normal, arterial blood pressure 110/210. No focal sepsis. Microscopic examination of urine sediment revealed several erythrocytes. Blood serum nitrogen 37 mg. per cent., sugar 128 mg. per cent., cholesterin 150 mg. per cent. Liver function test showed no abnormality.

5. Z. O., a woman, aged 63 years, seen on February 19, 1947. There was an incipient senile cataract in both eyes, multiple haemorrhagic patches in the left fundus, and a circinate retinopathy, secondary optic atrophy and typical asteroid bodies in the right eye. Vision, R. perception of light, L. after correction, 20/50.

Wassermann reaction negative, Mantoux test slightly positive, sedimentation rate 40 mm., R. and W. B.C. count and blood picture normal. Blood serum sugar 107 mg. per cent., nitrogen 27 mg. per cent., cholesterol 195 mg. per cent. There was a slight albuminuria. Liver function test showed no abnormality.

6. S. B., a woman, aged 50 years, seen on May 20, 1947. There was no ocular abnormality but a slight degree of hyperopia. Visual acuity after correction 20/20 in both eyes.

Internal organs were normal. Arterial blood pressure 120/220, Wassermann reaction negative, Mantoux test slightly positive, sedimentation rate 25 mm. There was alveolar pyorrhoea, and slight albuminuria.

Blood-serum sugar normal, nitrogen 40 mg. per cent., cholesterol 202 mg. per cent. Liver function test revealed nothing pathological.

Benson named this disease asteroid hyalitis. But the term of "hyalitis" is inappropriate, hence asteroid bodies is a better one. Argyll Robertson described this condition as "snowball opacities" and Wiegmann called it "scintillatio albescens or nivea."

According to the existing literature the disease is not common. Rutherford (1933) collected the records of 56 cases from the literature.

During a period of less than a year, we have seen six cases out of 14,350 eye patients. So it seems to be more frequent than is generally recognised. It is frequently overlooked, since it does not give any subjective symptom.

We have noticed that even the least visible cases can easily be detected by observation of several gleaming points in the ophthalmoscopic field. But usually they are confused with the light reflecting from the anterior face of the lens and cornea. Hence they do not attract attention.

Scintillatio albescens is a disease of old age. The age of incidence, as seen in the literature, varies from 30 to 84, the average being 60. Our cases varied between 50 and 65. According to the records in the literature the disease is three times as common in males as in females. In our cases both sexes are equally affected. All of our cases are unilateral, 5 out of 6 being in the right eye.

Some authors had the opportunity to examine chemically and histologically the asteroid bodies; all agree that they are composed chiefly of calcium soaps.

An association with some general disease (arteriosclerosis, nephritis, diabetes, syphilis, tuberculosis) or local disease (choroiditis, cyclitis, retinal haemorrhages or thrombosis) has been claimed. But in some cases no general or local disease can be discovered.

In the six cases under consideration, we found an association with

diabetes in one case, with hypertension in 3 cases and with focal infection in one case. No general or focal disturbances could be found in any.

As to local disturbances, in one case there was no disturbance except a slight hyperopia, in 5 cases there were cataracts of incipient or immature stages. This was associated with senile macular degeneration in one, and circinate retinopathy in the other.

In the majority of cases, the cholesterol content of the blood, although within normal limits, was somewhat increased.

Possibly some changes in the composition of the blood may cause the deposition; and local disturbances may act as a precipitating factor. Thus association with some general disturbance or focal infection, structural changes of the lens, circinate retinopathy, or senile macular degeneration may be the cause of deposits. But since the lens changes and macular degenerations are bilateral, the monocular incidence of scintillatio albens needs some further explanation.

We applied treatment according to the general or local disturbances, but could not see any improvement in the fundus picture.

REFERENCES

- DUKE-ELDER—*Text-book of Ophthalmology*, Vol. III, p. 3249, 1940.
JESS, A.—*Kurzes Handbuch der Ophthalmologie*, fünfter Band, S. 346, 1930.
KOBAY, F. Ed.—*Traité d'Ophthalmologie*, Tome IV, p. 27, 1939.
TRONCOSO, M. U.—*Internal diseases of the eye and atlas of ophthalmology*, p. 495, 1937.

CONGENITAL CYCLOPIA AND ORBITAL CYST TOGETHER WITH OTHER DEVELOPMENTAL ANOMALIES ON THE SAME SIDE OF THE FACE

BY

F. PAPOLCZY

BUDAPEST

ACCORDING to Seefelder there are four groups of developmental anomalies of the whole eyeball:

- (1) Mikrophthalmus congenitus;
- (2) Anophthalmos congenitus;
- (3) Mikrophthalmos seu anophthalmos congenitus et cysta orbitae;
- (4) Cyclopia.

Congenital anophthalmos is mostly a developmental anomaly of both sides, more rarely of one side only, according to literature.

* Communication of the Municipal St. Stephen Hospital of Budapest, Ophthalmological Department (Chief physician: F. Papolczy, M.D.). Received for publication, April 12, 1948.