

with albucid, in 6 the hypopyon cleared in an average of 5.3 days, and in the remaining 3 it was still present on their transference to a base hospital in 3, 21 and 42 days respectively.

Although as a criterion of efficacy the clearance of the hypopyon is not without criticism, it was the only one practicable since it was sometimes necessary to discharge the patient before the final healing of the ulcer itself owing to shortage of beds.

It is of interest that one persistent hypopyon cleared only after a course of T.A.B. injections, and in several cases the ulcer itself healed only, but then invariably, after recourse to the latter.

This assay is far from comprehensive, but there seems little doubt that proflavine will be of value in superficial eye infections, especially when the optimum vehicle and concentrations have been determined.

I should like to thank Mr. Mottram and Professor McIntosh for their help and the use of their unpublished findings.

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**A CASE OF EXUDATIVE AND HAEMORRHAGIC  
RETINITIS, WITH INCREASED INTRA-OCULAR  
TENSION, TREATED BY PILOCARPINE  
AND THYROID\***

BY

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PATIENT P., female, age 40 years, married, nulliparous, reported to us in December, 1941. She complained of a troublesome pain in her right eye-ball, and right-sided headaches, and stated that her right eye had been blind for two years.

In 1937 she was involved in a motor accident receiving a severe blow above her right eye. A week later she noticed a dark spot in front of her eye. An ophthalmologist found a patchy retinal haemorrhage. Since the accident her sight has become steadily worse and, being haunted by the fear of blindness, the patient commenced a "pilgrimage" all over Europe from one eye specialist to another.

Two months after the accident, one of the specialists found increased intra-ocular tension and performed an anti-glaucomatous

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operation. This relieved the headaches, but the sight was still failing and, in 1939, she lost it completely and the headaches returned.

On examination (October, 1941): Right eye, V.—0; Tension—90 mm. Hg (Schiotz) congestion of anterior ciliary veins, cloudy cornea. Shallow anterior chamber half-filled with blood. Iris atrophied, artificial coloboma directed upwards. Fundus oculi could not be seen. Left eye: No pathological changes. V.—6/5; tension—normal.

*Previous history.*—In childhood; scarlet fever and encephalitis. Tonsillectomy. Patient states that her only pregnancy was artificially ended on account of biliary colic. During the last two years, from our observation, no signs or symptoms of biliary attacks have been noticed.

*Family history.*—Patient's mother suffered from glaucoma. Operated on with good results.

The first time the patient was admitted to the hospital (January 14, 1942) medical and neurological examinations revealed no signs of abnormality. Gynaecologist reported uterine fibroids. Blood pressure 120/90, chemical, serological and morphological examination of blood—negative. Urine normal.

The right eye-ball was removed and, ten days later, a myomectomy was performed. Her convalescence was uneventful after both operations and, having made a good recovery, she was discharged (March 4, 1942).

Five months later she came back to the hospital with a new history. A week after the extraction of two teeth, under general anaesthesia, a dark spot appeared in front of the remaining (left) eye. Ophthalmoscopy revealed numerous haemorrhages and patches of exudate in the vicinity of the optic disc. One characteristically woolly patch of exudate was situated close to the disc. V.—6/18.

She was re-admitted (July 10, 1942) and, during the first month in hospital, her sight grew much worse and eventually she had an attack of glaucoma with considerably increased intra-ocular tension. The attack was relieved by pilocarpine, but the vision was deteriorating and finally it became limited to counting fingers from a distance of eighteen inches. In order to keep the tension down it was necessary to instill 2 per cent. pilocarpine t.i.d. or l.i.d.

In summing up we have dealt with a case of retinopathy complicated by an increased intra-ocular tension in an apparently healthy woman.

The course of such cases is identical with that of glaucoma associated with thrombosis of the retinal vein; haemorrhagic malignant glaucoma rapidly leads to total blindness, as was the case with the right eye of our patient.

The gravity of the condition indicated clearly that the morbid process in the left eye was a repetition of that of the right eye and

this compelled us to undertake a detailed revision of the case from both a pathological and a therapeutic point of view. Previous experience stressed the futility of all local treatments including operative, and the observation confirmed the imminent danger of blindness.

In our case the ophthalmoscopic picture of the fundus was similar to severe hypertensive retinopathy. Taking into consideration that the retinal changes in hypertension are caused by the diseased arterioles and our patient's blood pressure was normal (Mx. 120, Mm. 90), we were forced to conclude that it was a case of arteriolitis of unknown origin, which F. Duggan recently pointed out (*Amer. Jl. of Ophthal.*, 1943, Vol. XXVI, No. 4, p. 354).

We started protein shock therapy, injecting sterilised milk every second or third day, beginning with 5 c.c., then 10 c.c. and 15 c.c. After the third injection the patient had high fever and glaucomatous reaction; repeated instillations of pilocarpine were needed to stop this reaction. This therapeutic failure was probably due to the fact that, in the first stage, the effect of the induced hyperthermic shock caused a spasm of the eye arterioles,

In search of a new general therapeutic method in order to supplement the impotent local eye treatment we recalled old research works of the French school, especially those of Chauffard and his pupils (Laroche et Grigaut, *Annales de Medicine*, Vol. VIII, 1920, pp. 69-91, 149-172, 321-334; Gaudissart, *Presse Médicale*, 1921, pp. 893-895). They revealed that exudative patches of retinitis contain many lipoids especially cholesterol esters, and that such retinopathy is associated with hypercholesterolaemia. The blood cholesterol of our patient was 180 mgm. per cent. which is the upper normal limit; the B.M.R. (Haldane's apparatus) was estimated at minus 10 per cent.

In our opinion, the upper limit of blood cholesterol and the basal metabolic rate below zero was an indication to administer thyroid treatment, which at the same time is a factor accelerating the circulation time.\*

The patient was given thyroid tablets gr. 1 t.i.d. from July 29, 1942, to October 10, 1942. From the beginning of this treatment vision started to improve, slowly but nevertheless steadily. Patient had no more glaucoma attacks. Her weight was fixed at 54.5 kilos, her basal metabolic rate did not alter and, in order to avoid the general action of the thyroid (heart palpitation, tachycardia, perspiration, insomnia), she was taking  $\frac{1}{2}$  gr. phenobarbitone, twice daily. It is unnecessary to underline that advanced improvement of the eye was coupled with improved general condition. From October 10, 1942, until January 16, 1943, thyroid was discontinued. During

\* Because of the invisibility of the patient's veins it was impossible to get blood for repeated cholesterol and circulation time tests.

this period the patient was given six injections of 0·1 acetylcholine which were followed by abdominal cramps, and for many weeks afterwards she was given 0·05 nicotinic acid, t.i.d., because of its vasodilatory action. Since January 16, 1943, she has been taking thyroid again, one tablet, gr. 1 every second day with additional phenobarbitone, tablet gr.  $\frac{1}{2}$ , twice daily.

Under the thyroid treatment the condition of the left eye began to improve; the haemorrhages disappeared as did the exudates in the fundus. Intra-ocular tension became normal with only one instillation of pilocarpine daily. Vision increased to 6/18 and she could read J. 4 print. After many months treatment she can now write and read letters, walk alone, recognise friends and bus numbers from a distance.

We do not know whether the condition is now permanently controlled and the patient is therefore under constant supervision. The last examination was on October 1, 1943.

### Summary

A case of retinopathy in an apparently healthy woman of 40 years was complicated by increased intra-ocular tension. We assume that thyroid treatment prevented glaucoma from taking a haemorrhagic malignant course which is usually the case and evidently happened in the case of the patient's right eye.

It is our intention, therefore, in cases of retinopathy of unknown nature to take the B.M.R. and blood cholesterol test. If cholesterol is high and/or B.M.R. low, we suggest thyroid treatment. In the opinion of W. F. Duggan, every retinopathy, especially of unknown origin, should be treated by vasodilatory methods.

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## A CASE OF PRIMARY CHANCRE OF THE BULBAR CONJUNCTIVA

BY

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R.A.M.C.

PRIMARY chancre of the conjunctiva is rare. Isolated examples have appeared from time to time in the literature (*vide infra*), a perusal of which would suggest that the eyelids, especially the lower, are less rarely affected than the conjunctiva and that a primary syphilitic lesion of the eye or its appendages is more common on the Continent than in this country. Neither Lt.-Col. A. King, in charge of an Army Venereal Diseases Division, and before the