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COMMUNICATIONS

A CASE OF BILATERAL GLIOMA OF THE RETINA IN  
A GIRL TWENTY YEARS OF AGE IN WHICH THE  
SECOND EYE WAS EXCISED AFTER AN INTERVAL  
OF NEARLY EIGHTEEN YEARS

BY

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*History.*—Patient, G.M., female, twenty years of age, single, in good health, had a series of fits during the summer of 1913, two or three each week, for a period of three months. On Christmas day, 1913, her left vision failed rather suddenly while at church and patient was led home. Four days later, the family doctor was consulted and attended patient at intervals until October the following year. The family history was negative.

On admission to the Royal London Ophthalmic Hospital, October, 1914, the left eye was quiet, slight corneal haze present, but no "keratitis punctata" was seen. The anterior chamber was of normal depth and the aqueous clear. The pupil was circular and active. The iris, however, showed a few fine blood-vessels on its surface. The lens was opaque. Vision equalled hand movements and projection was quick and accurate. T. +1. On October 9, Mr. J. Herbert Fisher performed a linear extraction under

cocain. The following day the eye showed some oedema of the cornea and the pupil was dilated. T. full. Eserin  $\frac{1}{4}$  per cent. contracted the pupil, but the tension remained normal for a few days only, and on October 20, a posterior sclerotomy was performed. A few days later the nasal field was found to be defective, a deposit resembling "keratitis punctata" developed, the cornea became hazy, and the tension was again plus. In December, a whitish granular deposit, which on microscopical examination showed cells resembling degenerated mononuclear leucocytes, settled to the bottom of the anterior chamber. Haemorrhage from the iris accompanied the paracentesis. Following a needling, the vision with a plus 12.00 D. sphere equalled 6/60 and with a plus 15.00 D. sphere, J.19. On March 9, 1915, the patient was discharged from the hospital, the vision now being reduced to the counting of fingers. Repeated operative measures failed to reduce the tension, but it was not until March, 1918, that the patient had severe pain. The eye was excised on May 17, 1918.

*Right Eye.*—The following is taken from the records of Moorfields Hospital, relative to the patient's right eye. "Admitted to hospital, July 7, 1900, on account of trouble with her right eye. Anterior parts of eye normal, with the exception that the anterior chamber is shallower than in the left. By oblique illumination a three-lobed mass was seen lying far back in the vitreous cavity with blood-vessels coursing over same. No reflex present. T. +1. Vision equalled P.L. Vitreous cavity nearly filled with a white flocculent growth. Anterior chamber almost obliterated. Lens yellow and misshapen. Posterior surface drawn back to a peak at point where retina passes back to optic nerve. Retina detached at seat of growth. Choroid in situ, optic nerve apparently not infiltrated. *Macroscopical report.*—Eyeball shows exophytic growth. At one spot layers of retina seem to be involved. Growth seems to spring almost entirely from inner nuclear layer. Inner granular layer invaded, also ganglion cell and nerve fibre layers. Cells grouped around blood-vessels. No rings of cells. Little degeneration."

*Left Eye.*—*Pathological report on eye excised May 17, 1918. Macroscopical.*—The left globe measured about 23 mm. by 22.5 mm. A staphyloma was present at the temporal side of the cornea, which extended backward about 6 mm. to 7 mm. The cornea showed a few fine nebulae peripherally, the central portion being quite clear. The iris appeared normal and the pupil was about 5 mm. in diameter and round, although slightly eccentric up and out. The aqueous was only faintly clouded. No lens present, but a strand of greyish tissue occupied its place. A grayish mass could be seen in the vitreous cavity. On section of the globe the vitreous was very fluid and contained a whitish deposit. The retina was not recognizable except at the anterior parts of the globe. The tumour extended forward to within

a few mm. of the lens capsule, but did not completely fill the cavity.

*Microscopical.*—Haematoxylin and eosin and Mallory's connective tissue stain. Cornea: This structure as a whole was thinned. The epithelium was absent in places, but otherwise was normal. Bowman's membrane was intact throughout. The stroma, although thinned, showed little evidence of inflammatory changes. Anterior chamber.—The conformation of the angle was changed as the root of the iris was in contact with the posterior surface of the cornea. The cells at the angle stained faintly and were probably degenerated leucocytes. A few glioma cells were also present. Iris.—This structure was more or less uniformly atrophic. On the posterior surface the pigment was heaped up into irregular patches at some places, while in others it was entirely missing, being attached to the lens capsule. Ciliary Body.—Contained glioma cells and was atrophic. Vitreous cavity.—The growth as a whole was quite vascular and was composed chiefly of cells that stained deeply with haematoxylin. No pigment was to be seen throughout the growth; areas of cellular degeneration were occasionally found. The cells immediately surrounding the blood-vessels stained deeper than those situated peripherally, and at the extreme periphery of the so-called rosettes of Flexner and Wintersteiner beginning cell necrosis was in evidence. The retina at the posterior part of the globe was entirely destroyed by the growth. In the anterior parts it was invaded with glioma cells and was very atrophic. The choroid was also atrophied and in places was only indicated by a dark line. The optic nerve was not involved outside the globe.

The portion of the tumour that was extrabulbar, in contrast to the intrabulbar portion, showed pigment changes and did not stain as uniformly. The vascular spaces were also much less clearly defined. The rosette appearance, so common in glioma of the retina, was lacking.

*Remarks.*—The case is of interest on account of the period that has elapsed between the excision of the two eyes, there being no case on record where the age of the patient exceeded 17 years. Fuchs mentions a case between 15 and 16 years of age (Fuchs's *Text-Book*, 5th Edition, p. 597).

In Lawford and Collins's series of sixty cases of glioma of the retina (*Ophth. Hosp. Reports*, Vol. XIII, p. 15), 6 to 7 years is given as the maximum age at the time of the excision. The literature covering 120 cases from this hospital does not show that a single case reached the age of 8 years.

The *American Encyclopedia of Ophthalmology*, Vol. VII, p. 5,583, states "Glioma is a disease of childhood, no true case having been found after the sixteenth year. Cases heretofore reported of greater age have been found to be either sarcomas of the choroid or pseudo neuro-epitheliomata."

Wintersteiner mentions a case in his book (*Das Neuro-epithelioma Retinae*, 1897) cited by Pepper, No. 194, p. 348, in which the patient was 17 years of age, and the duration seven months.

The patient has not had a recurrence in the orbit or metastasis elsewhere, so far as is known at this period, although thirteen months have elapsed since the second eye was excised.

I am indebted to Mr. J. Herbert Fisher for permission to publish the case.

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### THE MONTGOMERY LECTURE, 1917-18\*

A survey of cases of concomitant squint in the practice of the late Mr. P. W. Maxwell.

BY

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AN article entitled "Precision in Squint operation" was published by Mr. Maxwell in the *Lancet*, 1896. The conclusions arrived at were based on a survey of two hundred cases. The author described a "muscle tucker" of his own design, but his practical experience of the instrument was then limited to three cases.

In 1908, he published an article "Internal Squint" in the *Medical Press and Circular*. This paper dealt mainly with Donder's theory of the aetiology of concomitant convergent squint, and contained no statistics of cases. No further record of his work was published, but up to the time of his death in 1917, the subject received his closest attention, and he was indefatigable in his efforts to perfect his operative technique.

There already exists a copious literature on concomitant squint; my excuse for adding to it is that a survey such as the following, though it embraces no new conceptions, may prove of value if it but strengthens existing theories and acknowledged lines of treatment.

Since 1896, 1,201 cases of concomitant squint are recorded amongst Mr. Maxwell's private and hospital patients. Of these, 1,121 were convergent, 179 divergent, and one an upward squint unaccompanied by lateral deviations. Fortunately I have been able to follow up several of these cases, and thus to complete their records.

#### I.—*Convergent concomitant squint*

An estimation of the average age of commencement showed: Constant and unilateral, 3.6 years; alternating, 3.4 years; periodic, 2.8 years; periodic becoming permanent, 4.5 years.

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\*Delivered in the School of Physic, Trinity College, Dublin, on Friday, Nov. 8, 1918.