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COMMUNICATIONS

HEREDITARY GLIOMA OF THE RETINA*

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THE personal experience on which this paper is based is comprised in the account of two families under my charge some years ago at the Royal Eye Hospital, Manchester, in which the disease was transmitted from the mother to several of her children.

At the time, eleven and fourteen years ago, when these patients were seen, neither I nor any of my colleagues had met with any cases of hereditary glioma, and I was myself unaware of such cases having been put on record.

I do not think that I could have passed over any such cases for the following reason:—I have never seen a child with glioma that was not brought by its mother, and if she had lost an eye, even if wearing an artificial eye, I could not have failed to note the fact and make enquiries as to how the eye was lost.

To my mind, this is quite conclusive as far as transmission from the mother is concerned, but in transmission from the father—and we shall see that this may take place—it is quite possible that we have passed over some such cases, as the father being at work, might not in every instance come with the mother and child.

* Read at the 1917 meeting of the Ophthalmological Society of the United Kingdom. The full communication will be published in the Society's *Transactions*.

Another possible source of error is exemplified in a case mentioned by Berrisford, where a man had one eye removed for glioma and his daughter had four children all with glioma, three of them bilateral, although she herself was free from this affection, the disease skipping one generation. Making all allowance for these fallacies, I think we must admit that transmitted glioma is a rare occurrence, and that any cases should be put on record.

The particulars of my two gliomatous families are as follows:—

The Smith Family.—

1. John. First seen by me Jan. 3, 1903, when aged 5 months. The left eye was removed for glioma a few days later. On Sept. 23 the mother thought the right eye was affected and a flocculent mass could be seen at the nasal side of the fundus after dilating the pupil. This eye was also removed in October of same year.

The mother, aged 22 years, had her right eye removed by the late Dr. P. H. Mules, at the age of nine months, for a growth, and ***her*** mother, who is still alive, tells me that her daughter's eye was exactly like those of her grandchild's and, like them, "flashed fire;" so I imagine that there can be no doubt as to the nature of the affection, although I failed to find a record in the hospital books.

The child kept well till the age of seven years, when a tumour developed in the right upper jaw and palate, for which an operation was done at another hospital. The child died some three weeks later, and examination showed secondary growths in both kidneys, but no growth within the skull, only an œdematous state of the brain. I cannot say from the information available whether the growth had arisen from the glioma of the eye or not.

2. Ethel. Now aged 12 years. Both eyes are normal in every way.

3. Lucy. First seen Nov. 10, 1906, when aged 9 months. The mother noted the growth in the left eye three months ago, and for the last week also in the other eye. Both eyes were removed and the child died on July 5, 1907, from an attack of measles

4. William. First seen April 8, 1908, when aged 9 months. Both eyes were removed for glioma, and he died of this disease at the age of 2 years and 11 months.

5. Still-born.

6. Mary Elizabeth. First seen April 26, 1913, when aged 1 week. Examination of eyes at this time revealed no glioma, but 5 months later it showed in the left eye, which was removed. Shortly after the other eye was seen to be affected, but it was not removed and the child died of broncho-pneumonia eight months later.

7. I saw the mother the other day and she has a baby, aged 10 weeks, which so far shows no signs of the disease, but in view of the fact that I could not make a very satisfactory examination of

the eyes, it is quite possible that the disease is already present; or, as in the case of Mary Elizabeth, may come on later.

The mother tells me that Ethel and the baby were the only ones that were bottle-fed, and she ascribes their immunity to this fact. I do not know whether she is correct, but her opinion is as good as my own, which I therefore need not express.

Here, then, we have a family of six children, not counting the still-birth, with double glioma in four.

The Jones Family.—

1. Still-born. At present date would have been 14 years of age.

2. Doris. First seen October 3, 1906, when aged 3 years. The right eye was removed for glioma. The child, now aged 13 years, is well and the other eye is normal.

The mother had her right eye removed for glioma by Dr. C. E. Glascott in July, 1879, at the age of two and a half years.

3. George. Seen December 7, 1907, aged 3 years. The right eye was removed for glioma. At the present date the child is well and the other eye is normal 10 years after operation.

4. Florence. Seen November 19, 1913, when aged 7 months. The right eye was removed for glioma, and the left also for the same affection at the age of 1 year and 10 months. She is now well and in good health.

All the children were breast-fed.

Here we have three children, not counting the still-birth, with glioma of both eyes in one, and unilateral glioma in the other two.

Remarks

As I am concerned with the factor of heredity only, I refrain from giving any description of the eyes either before or after removal, and need only say that in no case could there be the faintest doubt as to the nature of the affection. Indeed, they were all typical examples of the disease.

In compiling the appended list of references I have been greatly assisted by Col. R. H. Elliot and Mr. Sydney Stephenson, and beg to tender my best thanks to these gentlemen.

As far as I have been able to make out, there are six cases of hereditary glioma of the retina on record, which, with my own two, brings the total to eight examples.

In two instances only, Owen's, quoted by Berrisford and others, and de Gouvea's, was the transmission from the father; but for the reason already mentioned, this may not be so important as it appears.

These hereditary cases seem to show an abnormal tendency to affect several members of the family, and also to implicate both eyes.

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SCLERO-CORNEAL TREPHINING FOR HYPERTONY: AN EXPERIENCE OF TWO HUNDRED AND FIFTY OPERATIONS*

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OF the various types of operation suggested to secure a filtering cicatrix that of sclero-corneal trephining is one of the simplest and most satisfactory. In the early days, after the introduction of any new method or remedy, exaggerated claims are made for it, and too favourable a view is often taken of its effects, and, therefore, of its future possibilities.

I consider that, from the cases dealt with by me by this method of trephining, it will be seen that it is not a panacea; but if I am able to prove that the results are superior to those obtained by the older iridectomy alone, something will be gained.

Operative Technique.

The method employed differs but little from that described by Lieut.-Col. R. H. Elliot. Local anæsthesia is used in every case. It is produced with a 4 per cent. solution of cocain hydrochloride. After the instillation of two drops at a short interval, one or two ophthalmic tabloids of hemisin are introduced into the conjunctival sac and the lid is kept closed for two minutes. After blanching of the eye the patient is directed to look towards his feet, and then with a spatula cocain crystals are spread on the sclera just above the limbus, at the site selected for the trephine hole. The upper lid is held up by the finger for an interval of one minute, so that the crystals only slowly dissolving are not displaced. By this means I have found it possible to operate in almost all cases without any severe pain being experienced by the patient. After the release

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