

THOMAS ELLIOT, 1817–1859
A FORGOTTEN OPHTHALMOLOGIST*

BY

ADRIAN LAMB

Perth, Western Australia

But Doctor, it's only Jimmie's right eye that has the cast. Why must you operate on the other one as well?

How often has a puzzled parent confronted us with that question and, before answering, who among us has ever wondered what brave man first grasped his courage and advanced his scalpel at the "good eye"? That man died almost one hundred years ago; he lived in the then remote town of Carlisle, and he was a Scotsman called Tom Elliot.

The *Carlisle Patriot* of October 22, 1859, published a long and graceful obituary:

For nearly 20 years he has enjoyed a high reputation as a surgeon . . . He passed his examinations at the Royal College of Surgeons, London. He commenced practice in partnership with his brother [William Elliot], and soon acquired considerable repute in consequence of some observations which he published on the subject of squinting.

These observations had been published in the *Lancet* (1840) and in the *Edinburgh Medical and Surgical Journal* (1841). How refreshing it is to read the opening sentence of his first communication to the editor of the *Lancet*:

Sir, You will oblige me by inserting the following remarks in the next number of the *Lancet*.

Thomas Elliot, born in 1817, was the son of a doctor. His father came from Whitehaugh in Roxburghshire, where Elliots live to this day and are famous for their stock-breeding and rugby prowess. After graduating at Edinburgh, Dr. Elliot studied in Paris and then settled in partnership in Carlisle. His first paper, published at the age of 23, is an object lesson in clinical observation and reasoned deduction. Perhaps a little pedantic in style, with unfamiliar terminology, much of the original paper is worth quoting:

On the subject of division of the internal rectus in strabismus convergens:

In three of the cases upon which I have performed the operation, the division of the tendon of the adductor muscle was not followed by any apparent immediate change in the position of the eye, notwithstanding the complete division of the tendon. In the first of these the eye which was operated upon became straight on the following day at the expense of its fellow which became inverted.

I drew the following inferences:

(1) That the strabismus could not be regarded as confined to one eye, since, when the sound eye was closed, the affected one became straight and could move in any direction, but on raising the lid of the former it was found inverted, though the position of the eyes was soon reversed again.

*Received for publication November 11, 1953.

(2) That the straight position of the sound eye appeared to me to depend on the state of its optic nerve, as vision was much more distinct with it when the squinting eye was closed, than vice versa.

(3) That the convergence was mutual, as was seen by the inversion of the sound eye, when (after closing it) the eyelid was quickly raised.

(4) That the return of the sound eye to the centre of the axis of the orbit must be the result of a muscular effort, an effort sufficient to overcome the contraction of its undivided adductor, and made to accommodate its more distinct vision.

The first inference is probably the most fundamental ever drawn in the basic understanding of concomitant strabismus. The second, third, and fourth anticipate astonishingly accurately our present-day views on amblyopia and the accommodation convergence reflex.

Elliot then throws scorn on much of the contemporary theory and practice concerning the treatment of strabismus and in particular scoffs at a certain Dr. Liston who advocates division of the superior and inferior recti in all cases of convergence. The paper ends with these adventurous words:

The plan I determined upon was the division of the tendon of the adductor of the sound eye, after section of the other adductor had failed.

And how dramatic the result:

I then divided the same tendon of the right eye and it instantly became everted and parallel with the inverted left eye. On being directed to look forward the eyes were straight, in short, perfectly natural.

Dr. Elliot had made a profound discovery, and 3 months later, in 1841, he elaborated it in a long paper to the *Edinburgh Medical Journal*. Fortunately he continued to observe and deduce, and many of his conclusions reached over one hundred years ago agree with those we hold to-day. He defined accurately both paralytic and concomitant strabismus and an example of the former may be quoted:

. . . . on looking to the right side both eyes were much inverted. On looking to the left side, the eyes were parallel.

And how acute is the following:

If the eyeball be large it will be less acted on by the inner fibres of the superior and inferior recti, unless their tendons be large in a corresponding degree, so as to wrap over the inner side of the eyeball, which I have not observed to be the case.

There is also a description of eccentric fixation, or the "false" macula:

. . . . where the centre of the retina of the inverted eye is not the most sensible part.

Who can fail to recognize this congenital nystagmus in a child aged 6?

. . . . a peculiar rotatory motion is constantly seen in both eyes, probably caused by an irregular action of the two oblique muscles.

Elliot was fully alive to the rationale of occlusion in the treatment of amblyopia, and was something of an orthoptist:

The eye must be bandaged and the other eye must be regularly practised till the sight of both be made to correspond.

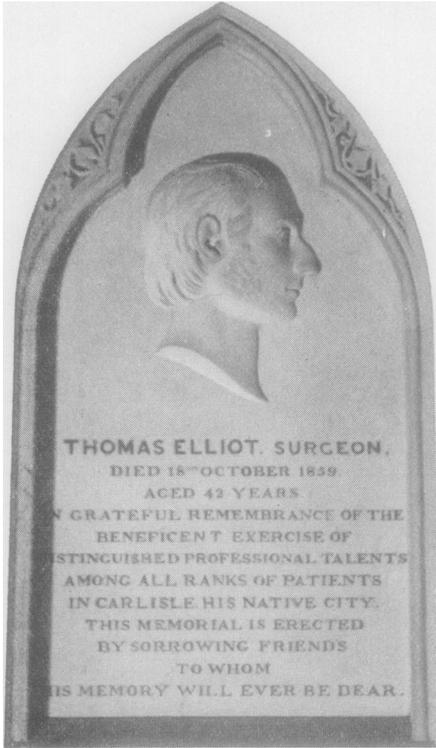


FIGURE.—Memorial plaque in Carlisle Cathedral.

the present-day ophthalmologist owes so much.

He must have had remarkable manual dexterity, and his patients remarkable fortitude. Local anaesthesia was still unknown.

The patient being seated on a chair, a tablecloth was passed round her arms and body and secured . . . one blade of a pair of a small curved eye-scissors was then passed through the conjunctiva . . . a blunt hook was next passed . . . Considerable difficulty is occasionally experienced in consequence of the violent spasmodic contraction of the orbicularis . . . In operating upon children it is advisable to secure the legs and feet to the chair . . . The operation I have frequently performed in fifteen seconds.

The Carlisle obituary says little but reveals much. Elliot was a greatly loved surgeon. He worked too hard. He died of typhus at the age of 42. He is probably the only ophthalmic surgeon commemorated by a plaque in a cathedral. Few have heard of him, but perhaps this short note, inspired by Dr. J. A. Ross of Carlisle, may do something to revive the honoured memory of one to whom

REFERENCES

- ELLIOT, T. (1840). *Lancet*, 1839–40, 2, 927.
 — (1841). *Edinb. med. surg. J.*, 55, 370.
The Carlisle Journal. Oct. 21, 1859.
The Carlisle Patriot. Oct. 22, 1859.