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TWO CASES OF GLAUCOMA, FOLLOWING CATARACT EXTRACTION.

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Glaucoma, following cataract extraction, fortunately is one of the more rare occurrences, attending this operation, yet the ophthalmic surgeon, who preforms extraction without iridectomy, may expect the pathway he pursues to surgical fame, will at sometime be made rough and thorny by one of those soul discouraging incidents, that occasionally follow and bring to naught an operation that was apparently crowned with success. Nor is the career of the surgeon who always performs extraction by the combined operation, one of perfect serenity, "calm and unruffled as a summer's sea," unmarked from start to finish by this calamitous sequela. I saw a case at Moorfield's Hospital in London, less than two years ago; where a successful extraction, performed with an iridectomy, and unattended with any incarceration of iris in the wound, was followed by glaucoma.

I was first prompted to write of my experience with glaucoma following cataract extraction, by receiving a visit from one of the gentlemen, whose case is spoken of farther on. My exhilaration of mind at the successful outcome of his case was of course natural and I at once resolved to publish it. The happy termination of a condition so serious and decidely *un*happy, struck me as being something worth telling to those interested in ophthalmology. Some days latter, as my thoughts along this line began to make their appearance upon paper, another case, similar in many respects to the one spoken of, but dissimilar in result came to my mind.

If some of the incidents in the course of one case were encouraging and soul cheering, I think all will agree that nearly all the incidents, that form the closing scenes in the history of the other case, were sufficiently depressing to prevent any undue elation on the part of the operator. Hence, it occurred to me that if both cases were published at the same time, it might prevent too much of the victory-snatched-from-the-jaws-of-defeat tone from prevading the whole article. So instead of performing the pleasant task of writing about a successful case only, I resolved to give the history of an unsuccessful, but none of the less instructive one, as well.

Case I. Mr. L., a gentleman 84 years of age and a widower. His occupation as an undertaker, had been sufficiently remunerative, to allow him at this age

to retire from business with a comfortable bank account, that permitted him to live at his leisure in a near by city. Although in his dotage and nearly blind from cataracts, the blindness seemed to be his only impediment to a thorough enjoyment of the many follies and pleasures that are supposed to be the prerogative of the giddy youth, rather than the octogenarian.

His vision was as follows: O. D. Fingers at ten feet; O. S. Fingers at two feet; Projection of light good in the left eye, and vision was normal.

The cataract was removed from the left eye by the simple operation, under cocaine anaesthesia. The operation was pefertly smooth and recovery uneventful. Sixteen days after the operation, the dense semi-opaque capsule was divided with a Knapp's knife needle. The eye at this time was nearly free from redness and there was no increased tension.

The reaction following the discission was insignificant. Thirteen days later vision was $\frac{20}{70}$ W. + 4 D. sp. $\bigcirc$ + 8 D. cyl. axis 165°, and J. 4. W. 11 D. sp. $\bigcirc$ + 8 D. cyl. axis 165°. Measured by the Javal ophthalmometer that was 13 D. of astigmatism, but the use of any stronger cylinder than 8 D. was not attended with any further improvement in vision. The eye was now free from redness and tension was not increased. The glasses were prescribed and a few days later he returned to his home. Just previous to his departure, his vision had improved to $\frac{20}{50}$. So this eye was numbered among the successes; only for the brief period of two months however, as succeeding events proved.

One morning two months later, my heart was saddened by the sudden appearance of this patient at my office. He informed me that he had experienced a very sudden and severe attack of pain in the eye operated upon, a few days previous, accompanied with headache and bilious vomiting. The sight of the eye, he said, declined rapidly. The pain and general wretchedness continued unabated, and indeed his whole appearance told more eloquently than his words, the story of his sufferings.

There was some enlargement of the blood vessels in the sclera, and T. + 2. The cornea was clear and the pupil dilated ad maximum. Vision was reduced to l. p.

A geneal haziness of the vitreous prevented an examination of the fundus. The anterior chamber was *deeper* than normal. This, together with the fact that the free border of the iris seemed to be curled backward, led me to believe that this part of the iris had become adhered to the edges of the button-hole in the capsule; thus impeding the flow of the intraocular fluid and high tension was the result.

No amelioration could be expected by the use of myotics, so long as the condition detailed above existed. So I decided to preform an iridectomy at once.

Under chloroform anaesthesia, assisted by Dr. W. E. Hathaway of this city, the usual opening for iridectomy in glaucoma, was made into the anterior chamber; but the iris having shrunken to such a narrow band, with the pupilliary border curved backward, it was impossible to grasp it with forceps. A firm hold on the membrane was secured, however, by the means of an iris hook, and the first effort at traction resulted in breaking, to quite an extent the adhesion that bound the iris. A copious gush of vitreous accompanied the breaking of the adhesions, and each effort to draw the iris out of the wound, only resulted in allowing more

vitreous to escape, until the globe became so flaccid that I desisted from further operative measures.

There was very little pain following the operation and the eye healed very kindly, recovery taking place rapidly and satisfactorily. The entire cessation of pain and the reduction of the high tension to normal, followed as the result of the operation.

Eserine was used for some time after the operation and there was a slight improvement in vision, but not sufficient to be of any service.

He was last seen two years ago; one year from the date of the last operation. At this time there was absolutely no change in his condition. There had been no return of pain, and tension was normal. The optic disc was very pale and slightly cupped, and the retinal vessels were small and threadlike.

Case II. Mr. S, a farmer 63 years of age, mature Cataracts in both eyes, vision amounted to l. p. only. Projection of light good. Tension normal. No enlargement of blood vessels of the sclera in either eye. He was first seen Sept. 6th, 1895, and on the 24th of the same month, the cataract was removed from the right eye. The operation was performed under cocaine anaesthesia, without iridectomy. The operation was smooth and satisfactory and recovery was uneventful. The eye was opened on the third day, and by the tenth day he was walking about the house and yard unattended, although a dense capsule, prevented anything like good vision. His condition had been vastly improved by the operation, and he was quite jubilant.

He returned to his home and remained for two weeks. At the end of this time, Oct. 25th, he presented himself for the second operation. A sickle-shaped knife-needle was employed and a transverse incision made in the capsule. The discission was followed by no reaction to speak of. Vision was greatly improved and three days later he visited my office. The ophthalmometer showed the astigmatism to be 6 D. axis 15°. Vision was $\frac{20}{50}$ W. + 6.50 D. sp. ⊃ + 6.50 D. cyl. axis 20° and J. 4″ W. + 11 D. sp. ⊃ + 6.50 D. cyl axis 20°.

These glases were procured for him, within ten days from the time of the last operation, and he returned to his home. Scarcely two weeks had elapsed, when one morning I received word from his physician, informing me that he had been called to see Mr. S. the day before, and found him suffering from very severe pain in the eye operated upon, attended with vomiting.

Of course I suspected at once that his trouble was an attack of glaucoma and immediately notified his physician to have him come to me without delay. Notwithstanding my importunity, several days elapsed before he came. There was an interval of at least five days, between the onset of the disease and the performing of the iridectomy.

He reached my office at noon accompanied by his daughter. One glance at his eye confirmed all my suspicions as to the nature of his trouble.

The eye presented all the peculiar appearances, that mark a typical case of acute glaucoma. The ocular conjunctiva inflamed and somewhat chemotic, the cornea steamy, and the anterior chamber obliterated. The pupil was dilated to about double the usual size. T. + 2 and vision barely amounted to l. p. Eserine solution was instilled into the eye several times during the time that he was in my office, which was about one hour. There was no perceptible diminution of tension following its use. An appointment was made for the operation of iridectomy at

2 o'clock the same afternoon. At this hour, assisted by Dr. Charles Phillips of this city, I did a very free iridectomy upward on the eye, while the patient was under complete anaesthesia, secured by A. C. E. mixture.

Although some vitreous escaped during the operation, I was not only able to remove a good generous piece of iris, but I passed an iris hook into the pupillary space and enlarged the opening in the capsule. The eye healed very nicely and immediately began to improve in every particular. The eserine drops were continued during the process of healing. Pain and tension were greatly relieved by the operation, and vision also began to improve, so that when he returned to his home, two weeks after the operation, his vision was $\frac{18}{100}$ W. + 9.50 D. sp. and J-5 could be read rather imperfectly W.+ 18 D. sp. I heard from him occasionally during the summer, and learned that his vision had steadily improved, and that he was able to do some work about his farm. Using the glasses that were first prescribed.

He came to see me on the 6th of last November. Just one year from time the operation for iridectomy was performed. The eye appeared perfectly well and tension was normal. There was a nice clear black pupil. And is it any wonder that my heart swelled with pride, as I looked upon the symmetrical coloboma, the making of which, a year before, seemed but a forlorn hope.

Vision was $\frac{20}{40}$ W. + 9 D. +sp. $\bigcirc$ + 4 D. cyl. axis 30° and J-4 could be read fluently, W. + 11 D. sp. $\bigcirc$ + 4 D. cyl. axis 30°.

In closing I will add that I am inclined to ascribe the failure in Case 1, to the irreparable injury done the nerve and retina, early in the disease; rather than to the fact that a piece of iris was not removed.

The relief to pain and tension, secured at once, demonstrated beyond a doubt that the cause of the plus tension had been reached and removed by the operation as performed.