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ORIGINAL COMMUNICATIONS.

CONGENITAL CATARACT MISTAKEN FOR MYOPIA AND AMBLYOPIA. ✓

By W. WHITE COOPER, Esq., F.R.C.S., Senior Surgeon to the North London Infirmary
for Diseases of the Eye.

FROM the circumstance of three instances having fallen under my notice, in which Congenital Cataract had been mistaken for myopia, and two in which it had been regarded as imperfect sensibility of the retina, it would appear, that such errors are more common than is suspected. The publication of the following may, perhaps, assist the diagnosis of some similar cases, and thus prevent reproach from being cast on the surgeon consulted.

CASE I. Margaret Hay, a delicate girl, 15 years of age, was brought to me on the 15th of March 1847, for supposed amblyopia. Her mother stated, that her attention was first drawn to her daughter's sight, when she was about five years of age, in consequence of the great difficulty experienced in teaching her to read. For some time, it was considered to be stupidity on her part, and she was frequently punished; but at length, it became evident, that her sight was imperfect. An oculist was consulted, who, it would seem, made but a superficial examination of the eyes, and pronounced the case to be dulness of the retina, expressing his opinion that she would "grow out of it" in time. No improvement had, however, taken place up to the period of my seeing her. On placing a book with moderate sized type in her hand, she held it rather obliquely, about four inches from her eyes, and slowly spelt the words. Beyond the distance of four feet, she could merely discern the outline of a face, and her ideas of colour were very imperfect. There was nothing unnatural in the general aspect of the eyes; but, on close examination, there was an absence of that blackness of the pupil, so characteristic of a perfectly healthy eye. The irides were very active, and the pupils contracted strongly under light. A drop of atropine was placed in each eye; in about ten minutes, full dilatation of the pupils had taken place, and displayed two greyish semitransparent lenticular Cataracts, not filling the dilated pupils, but

permitting circles of choroid to be seen around the margins of the lenses. There was immediate improvement in the sight; large objects were seen with distinctness, and colours with new brilliancy, but small objects were still confused.

On the 20th March, I operated on the right eye, passing a cutting needle through the margin of the cornea, and slicing up the lens into small fragments, which were passed into the anterior chamber; the eye was carefully protected from the light, and the ordinary treatment adopted. At the expiration of five months, all traces of the Cataract had disappeared. The left eye was operated on early in August 1847, and no unpleasant symptoms followed. In this eye, a small fragment of capsule floated in the pupil, for some weeks after the lens had disappeared, but it eventually shrank; and when I last saw the patient, in September 1848, she enjoyed most excellent vision with both eyes, by the aid of glasses, which, however, she was desired to use as little as possible.

CASE II. Joseph Unwin, aged 23, had suffered, from infancy, from imperfect vision, which was referred to partial amaurosis, the result of irritation from teething. He had learned to read large characters with difficulty, and wrote a great school-boy hand. He had tried a variety of spectacles, without deriving assistance; vision was best in the gloom of twilight, and worst on a bright day. He consulted me on the 15th June, 1847. On examination, the globes and irides were found perfectly healthy, but there was the grey hue of the pupil, which suggested at once the nature of the case; and the full dilatation of the pupils, by atropine, brought into view Cataracts very similar to those described in the preceding case. On the 26th of June, the left eye was operated on by solution; it did well, and the patient left town on the tenth day after the operation. By the 14th of September, two-thirds of the fragments of the lens had been absorbed, and the eye had recovered considerable vision. On the 16th, the right eye was operated on, and its subsequent progress was equally satisfactory with that of the former. By March 1848, the left eye had perfectly recovered, and there was no vestige of Cataract remaining; a small fragment still lay at the bottom of the anterior chamber of the right eye. He was supplied with proper glasses, with strict injunctions as to their guarded use; and, with their assistance, seemed to have acquired a new sense, so great was the improvement in his power of sight.

CASE III. H. T. B., Esq., æt. 19, consulted me in January 1848. He stated, that, since birth, vision had been very indistinct; that three years previously, he had consulted an eminent oculist, who stated that nothing could be done for him, but that he must put up with his indifferent sight, and wear 28-inch presbyopic glasses, which enabled him to read, though with difficulty. On examining the eyes attentively, a greyish hue of the pupil was perceived; and, on dilatation with atropine, greyish semitransparent Cataracts were seen, the opacity being more dense around the circumference than in the centre. Vision was not improved, but rendered more indistinct by the dilatation. An operation was recommended; and, after the sanction of two other gentlemen had been obtained, I operated on the left eye on June 20th. The lens was freely cut up with a broad needle; the case did perfectly well, and, on the 28th June,

he returned home. On the 4th August, about half the fragments had disappeared, and the upper part of the pupil was clear. On the 25th September, the Cataract had quite disappeared, and, with a proper glass, he could read the smallest print at two feet distance. On that day I operated on the right eye, which did perfectly well until the 2nd of October; when, by imprudently exposing himself to a current of air, he took cold, and was attacked during the night with severe pain in the eye and orbit, and scalding lachrymation. On the following day, a red zone was visible around the cornea, and there was great intolerance of light. Four leeches were applied, with fomentations, and he was ordered a grain of blue pill, with hyoscyamus, every hour. On the 4th, the mercurial influence became apparent, and the eye was speedily free from pain. By the 8th, all symptoms of inflammation had disappeared, but there were two small adhesions, giving the pupil, when dilated, a sort of hour-glass form. On the 12th he left town. The case continued to progress favourably; and on the 20th January 1849, he could read exceedingly well with the eye, although there was a fragment of opaque capsule rather obstructing the pupil. Since that date I have not seen him, as he is pursuing his studies at the University of Cambridge, but have been informed that the capsule is gradually shrinking.

CASE IV. Edward Thomas, aged 19, was brought to me in May 1848, supposed to be suffering from myopia. As he entered the room, he advanced cautiously, frowning, and shading his eyes with his hand. He was the son of a Suffolk farmer; and from infancy had been supposed to be very near-sighted. An optician had supplied him with several pairs of glasses; but none improved his sight. On a book being placed in his hand, he turned his back to the light, and holding the page about three inches from his eyes, slowly spelt out words in large type. Features could not be discerned. In this case, also, the grey pupils indicated Cataracts, which were brought to light by atropine. On the 15th of May, the right eye was operated on; the lens being freely divided. On the third day, slight inflammation followed, but was subdued by leeches, fomentations, and cooling medicine; and, at the expiration of three weeks, the patient returned home. The fragments of the Cataract had almost wholly disappeared by September, when a similar operation was performed on the left eye. No inflammation followed, and the patient was able to return home at the end of a fortnight. After the lapse of ten months from the date of the first operation, the patient had regained considerable power of vision with the right eye, unassisted by glasses, which he had used sparingly. The left eye was making most favourable progress, at the date of the last report.

CASE V is related in my work, *Practical Remarks on Near-Sight, etc.* It is unnecessary to quote it at length, as, in all its essential features, it resembled Case III: there being one point of difference, however,—that the sight of the patient (a gentleman thirty years of age), was greatly improved when the pupils were fully dilated.

REMARKS. The amount of turbidity of the crystalline lens in Congenital Cataract, may vary in degree, from the colour of milk and water, to the faintest haze. In the latter case, the capsule is clear; but the opacity

involves the whole substance of the lens, minute spots being sometimes scattered over the surface. Unless the pupils be dilated, it is extremely difficult to recognize the true nature of such cases; but when the iris is under the influence of belladonna, the semitransparent Cataracts will be seen suspended, as it were, in the pupil. This appearance arises from the Cataract being less than the natural lens, and a clear space thus existing between its margin and that of the pupil, which permits the jet-black choroid to be seen beyond it. When a young person has dull vision, is unable to see distant objects, reads slowly, letter by letter or word by word, and is unable to continue reading beyond a short time, holds the book very near the eyes, and turns the back to the light, haziness of the crystalline lens may be suspected. A rolling of the head from side to side, and cautiousness of gait, are peculiarities very characteristic of these cases. Such patients find a difficulty in describing the amount of imperfection of their sight; for, clearness of vision being comparative, a person, who has never seen otherwise than obscurely, is unable to judge of the perfection of sight possessed by others, and can only describe his sensation, according to the standard formed by his own perceptions. The appreciation of colours affords an illustration of this; for the more delicate shades are invisible to such patients, and are seen by them with astonishment after the pupil has been dilated, or after the lenses have been absorbed. Myopia is the affection, with which such a condition of lens is most likely to be confounded; but the distinction will be made apparent by trying the patient with concave glasses, which, in Cataract, render the vision worse instead of better. In extreme cases of myopia, the pupils are generally large; whereas, in all the cases of Congenital Cataract seen by me, the pupils have been remarkably active, and contracted to a very small size. If doubt exist, dilatation with atropine will at once display the true nature of the case.

In treating the description of Cataract under consideration, we have choice of *two operations*.

The first and simpler, is that of making a small opening in the capsule of the lens, so as to expose that body to the influence of the aqueous humour without disturbing it. The lens becomes opaque in from fifteen to thirty-six hours, and gradually undergoes absorption; but so slowly, that a second, or even a third operation may be required. I have seen the lens barely reduced one half, at the expiration of six months after the operation; and it must be borne in mind, that the complete opacity of the lens, caused by the aqueous humour, renders the eye useless for a considerable time.

The second operation is that of freely cutting up the lens with a broad needle: this proceeding is more severe than the former, but of the two I prefer it, as materially shortening the duration of the cure. If carefully and effectually done, a second operation is seldom required. It is desirable to cut the lens into the smallest pieces possible, as they will then be quickly absorbed. The consistence of such Cataracts is about that of firm jelly; and, by dexterous manipulation, the process of division can be accomplished with comparatively but little violence to the eye. It is important that the pupil should be kept under the influence of belladonna, for some weeks after the operation, as the risk of adhesions (should a slight amount of iritis supervene), will be greatly diminished

by so doing. If the patient be brought, by careful management, into a fit state before the operation, and due care be taken afterwards, but little trouble may be anticipated. There are, however, two conditions in which the first operation is to be preferred; viz., in persons who have suffered from any inflammation of the sclerotic or iris, and in those who are constitutionally prone to inflammation of a rheumatic character.

It is to be remarked, that there are some cases in which an operation is not necessary,—that is, when the central portion only of the lens is affected, the remainder being transparent. Dilatation with belladonna here affords such assistance, that an operation is not required; and, fortunately for such persons, the effect of the belladonna does not decrease by use. Mr. Tyrrell mentions a case, where it was employed with full effect for ten years, and another, in which constant use for eighteen years did not impair its efficacy.

In cases where an operation is indicated, the earlier in life it can be performed, the better: the younger the patient, the greater is the power possessed by nature, of repairing the imperfection of vision caused by the absence of the lens. Glasses should be used as little as possible; and, even in adults, the amount of accommodation to distance and perfection of vision acquired is truly surprising, if they will have the resolution to abstain from the luxury of glasses.

To prevent confusion of vision when the return of sight commences, an opaque glass may be worn before the eye, on which the operation has been performed. When the vision has so far returned, that the individual can find his way about without difficulty, and can discern objects of a moderate size, the second eye may be submitted to operation. It is proper to warn the patient, that the sight will be rendered worse by the operation, and will continue so until absorption have made some progress. The opaque fragments of the lens block up the pupil; and if they be not prepared for this, alarm is likely to be excited in the minds of the patient and his friends. In from four to six months, the Cataracts may be expected to become entirely absorbed; it may happen that portions of opaque capsule obstruct the pupil, but it is not desirable to be in haste to interfere with these by operation, as they will often shrink, by their own contractility, out of the way.

In conclusion, I may mention two interesting facts, connected with the hereditary character of Cataract. His late Royal Highness the Duke of Sussex informed me, that Cataract was brought into the present royal family, by the marriage of one of his ancestors with a princess of Saxe Coburg Gotha. She became blind from Cataract, and the following members of the royal family have since been afflicted with that disease; the Duke of Cumberland (of Culloden celebrity), George the Third, George the Fourth, the Duke of Gloucester, the Duke of Sussex, and the Princess Sophia. It is not generally known, that George the Fourth had Cataract; but the Duke of Sussex assured me that such was the case, and that it was one cause of his seclusion. Three years ago, a young woman came under my notice with Congenital Cataract, and she stated that her grandfather, father, uncle, aunt, and three sisters, had all been born with Cataracts.