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## CONICAL CORNEA CURABLE.

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To establish the curability of a disease which has hitherto been asserted by the best authorities to be incurable, something more may be expected than a single case, and I regret that I have no other to offer; the only cases of conical cornea which I have recently met with, being combined with congenital amaurosis in the persons of two brothers, to whom, of course, no sufficient encouragement could be offered for submitting to a tedious course of treatment. To those who may take the trouble to read the whole statement of the case, this assertion will, I trust, not appear presumptuous or hasty. To others, whose interest may not be strong enough to enter upon its lengthened details, it may suffice to say that the cornea was conical in both eyes, most so in the right; that the treatment consisted in puncturing the cornea near its margin, so frequently as to keep the aqueous humor almost constantly evacuated, and in supporting and forcing gently back the projecting centre of the cornea by placing a compress upon the closed lids of the eye last punctured, while at the same time the opposite eye was allowed or obliged to be looking forward or downward; that the treatment occupied, with intermissions, fifteen months; that during this period the cornea of the left eye was punctured eighty, and that of the right one hundred and forty-four times; that before the commencement of the treatment she could just discover the largest letters of a title-page, and at its close could read common print with ease; that a visible flattening had meanwhile taken place in the cornea of both eyes, and that during the period of two years and four months which have passed since the treatment terminated, the condition of the eyes has remained unchanged.

The puncturing of the cornea for this disease is not, as is well known, a new, although it has been, like all others, confessedly an unsuccessful mode of treatment.\* But the process of puncturing the cornea daily or oftener, evacuating the aqueous humor so frequently, as to prevent its attaining for some months its ordinary amount, is new. The mode of applying compression perpendicularly to the centre of the cornea by bandaging a compress upon the punctured eye, while the other is voluntarily kept open and looking forward or downward, is also new; and,

\* Mackenzie, Lawrence, Middlemore, Gibson, Juencken, Rosas, &c.

in view of these two circumstances, I would claim to have devised for conical cornea a new and efficient mode of treatment. The punctures were made near the margin of the cornea, and always, if possible, in the same place, because the instrument is more easily passed through the recently-formed adhesions of a previous opening, and because the aperture thus renewed is less disposed to close again. Once, in order to ascertain the condition of the texture in this place, I punctured the apex of each cornea, and found it, as nearly as could be inferred from the resistance offered, not thicker than the thinnest tissue paper. The fear of leaving an opaque cicatrix in front of the pupil, prevented a repetition. The instrument used at first was a broad straight cataract needle, for which I substituted very soon one about a sixteenth of an inch broad, spear-pointed, and provided with a little projection or guard at the distance of rather less than an eighth of an inch from the point. The case was seen in the course of the treatment by several of my medical friends, among whom were Drs. Wm. J. Dale and Coale.

May 6th, 1843.—Miss B., of Dracut, æt. 22, about six years ago, while at school, was troubled with a smarting and pain in the eyes, and intolerance of light, unaccompanied, as she believes, with any redness. These symptoms continued for about six months, and about three years ago she found that her vision had become very imperfect, that she could not read except by day-light, and then with difficulty, and could not see distant objects at all. The difficulty has clearly increased, and within the last year she has seen constantly transparent floating spectra like bubbles, and all objects, at which she looks intently, inverted, with a light halo. Still more recently she has begun to see objects double, and this whether she is looking with one or both eyes, though the double vision is most decided in the right eye, in which the disease of the cornea is most developed. Now she can just discern, at the distance of five inches, the largest letters of a title-page, though each letter is seen doubled, and encircled with a sort of halo.

The false image is always below the real one, and though usually fainter, is sometimes the brightest. The halo which she sees around an object is of the same color as the object. Besides these phenomena, there is in every object at which she looks intently, an apparent vibration, or, as she calls it, pulsation, most evident near the lower part of the image. This pulsatory movement is most distinct when she has been walking or exercising otherwise. The cornea of each eye is distinctly conical, the right more so than the left. The apex of the cone in the right eye is irregular on its surface, and very slightly nebular. Some irregularity of surface is evident on examination with lens in the apex of the cone in the left eye. The double vision is most distinct before the right eye. Occasionally, after exposure to wind, she has a smarting in the eyes. Iris dark blue. Health good.

July 5th, 1844.—It is now fourteen months that Miss B. has been under treatment, and the following is an abstract of the treatment.

With a broad cataract needle I evacuated the aqueous humor of each eye, making the opening into the cornea at the distance of about half of

a line from the margin of the cornea, and taking care to hold the edges of the incision apart until the chambers were thoroughly evacuated, indicated, of course, by the prolapse of the iris upon the cornea. This operation was done upon both eyes every second or third day, for nine weeks, after which she returned home, and, for eight weeks, made use of an infusion of tobacco, one ounce to a pint of water, and a collyrium of alum, grs.  $\text{vj}$ .; aquæ dist.,  $\text{ʒj}$ ., alternately four times daily, holding the eyes open in the fluid.

Returning to Boston, the process of puncturing was resumed, and in the course of twelve weeks performed thirty-two times upon each eye, both being usually punctured at the same time, unless, as was sometimes the case, the perforation of the cornea in one eye continued open longer than in the other. She then went home, and applied the tobacco and alum as before, for five weeks.

Returning again to Boston, she has remained twenty-nine weeks, during which time the right eye has been punctured sixty-one, and the left forty-eight times.

The punctures have been made throughout the whole period as often as the cornea has closed and the aqueous humor filled its chambers, so that it has often been done daily, and in one or two instances twice daily. During the two first periods, the punctures were made at the same time upon both eyes, except when one continued open longer than the other, and both eyes were kept covered for two or three hours afterwards with cold compresses. During these periods it was at no time considered necessary to refrain from the operation on account of inflammation or pain in either eye. During the last period of twenty-nine weeks I have pursued a different method. One eye is punctured and the compress placed upon it as usual, but she keeps the other eye open, looking forward or downward with it as long and as often as she can do it with tolerable convenience. This arrangement I adopted for the purpose of bringing the pressure of the compress to bear upon the projecting cornea. When both eyes are closed, the direction of the cornea is principally upward; but when one eye is closed and the other open, the position of the eye which is closed corresponds with that of the eye which is open, and the cornea is brought under the direct pressure of the compress. This is necessarily attended with some inconvenience, and on two occasions, Miss B., having kept the eye which had not been punctured open until the other had become quite painful, the puncturing was omitted for two or three days after the closing of the cornea. In one of these instances a slight haziness took place around the incision, which disappeared in about four days.

For the last five or six months no inconvenience has resulted, Miss B. having learned to judge from the sensations of the eye how long the pressure can be borne.

The whole number of punctures has been two hundred and twenty-four, of which one hundred and forty-four were upon the right, and eighty on the left eye. They were made as nearly as possible in the same place, near the circumference of the cornea, in order to avoid a cicatrix

within the range of vision, and frequently it was only necessary to separate the edges of the last opening not yet fully united. The occasional projection of the cornea has slowly subsided, and though still perceptible, is probably diminished about one half.

During the fourth week of the treatment Miss B. first observed a decided change in the phenomena of her vision, inasmuch as the false image of any object, at which she looks, being fainter, is more easily distinguishable from the real one, and the two images had become so much approximated that a portion of the false one was often hidden behind the real one.

During the course of the second series of punctures, she found that the halo around objects was less intense, that the vibratory, pulsatory movement of the image, most considerable at its centre and enhanced by fatigue, was less frequent and less decided than before; and that the luminous translucent spectra were less in number and size.

As these symptoms have disappeared, the shortsightedness has diminished, and by a mantel clock, of the general figure of which she had formerly but an indistinct impression at a distance of ten feet, she can now, at the same distance, tell the time of day. The surface of the dial plate is about one tenth of the whole surface of the clock. She can read common print, write and sew. I have to-day received a letter of a page and a half from her, in which she says that she has just been reading two columns of a newspaper at the distance of about twelve inches.

Nov. 10th, 1846.—It is now three years and seven months since the treatment of this case was commenced, and two years and four months since its termination. To-day she calls upon me to report the condition of her eyes. Looking at her eyes I perceived, as nearly as I can remember, after so long an interval, the same and no greater projection of the cornea than when I last saw her. In the left eye the cicatrix left by the punctures has disappeared, and in the right is just discernible. Her vision has not in the least degree deteriorated. She can tell the time by my mantel clock at the distance of sixteen feet, and for the past week has been reading about two hours daily in newspaper print. This amount of use, however, causes a slight uneasiness in the eyes, but she believes not so much as immediately after the conclusion of the treatment. There is, therefore, good ground to believe that the excessive convexity of the cornea has been *permanently* relieved.

*Boston, April 20th, 1847.*

### THE LATE JOHN REVERE, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

"Died at New York, 29th ult., John Revere, M.D., Professor in the Medical School of the University of New York, 60, graduate at Harvard University in the class of 1807."

THE above announcement brought vividly to mind an old fellow pupil, and an early friend. Dr. Revere was born in this city, and his father is