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AN INTERESTING CASE IN DIAGNOSIS,

Read before the Medical Society of the County of Albany, N. Y.,

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On the 16th day of September last, Miss ——, aged twenty-one, came to my office with her brother, who gave me a brief statement of her case, that was more fully detailed by the patient herself at subsequent interviews.

The history I received was, that in the latter part of April last, she left her residence, where she was engaged in teaching, to pass a Saturday and Sunday with friends residing some ten miles distant on the line of a connecting railroad.

On Saturday morning she observed that everything wavered and glimmered, and she saw different colors play before her eyes. She took up a book, and found it impossible to read on account of the wavering light. There was no pain, but "a queer feeling," a sensation of unusual character. Does not think that one eye was any differently affected, at the time, from the other; only remembers that both eyes were used simultaneously, and that she was unable to read. She was not aware of any unusual circum-

stance, which she could mention, as an exciting cause of the visual disturbance, and her health was as good as ever at the time.

On Monday morning she returned to her school, as she had contemplated. The wavering still troubled her eyes, and she made no attempt to use a book, being able from her familiarity with the lessons to get on without it, but directed the children to make their figures larger on the blackboard, and thus managed her teaching. In the evening she tried again to read a novel, in which she had become interested, but gave up the unavailing effort.

From this time to the end of the school term, June 22d, the glimmering continued, though less on the whole; but it varied, sometimes better, sometimes worse. She made the least possible use of the eyes during this period, and if any attempt to employ them was persisted in, they "would inflame and look red next morning." When the school closed she went home (about twenty miles away), to spend a vacation, expecting benefit to the eyes in complete rest. The expected benefit she did find to some extent. Happening, however, on a book that she wanted to read, she made trial of her eyes, but found the bright light hurt them. The weather at this time being excessively warm she went down into the cool cellar of the house, a farm house, and by the mild light that came through the doorway was able to read nicely, to use her expression.

Notwithstanding the persistence of her ailment, she felt confident her eyes would grow better, and she continued to read and sew a little every day.

She was aroused, however, to a sense of danger, while making a visit in the family of a physician in the neighborhood, during the last of July and the first of August. At this time she became so much annoyed by photophobia, that she procured a pair of green glasses to protect her eyes against irritation from the light. In the dusk and evenings, she said, she saw very well. She received admonitions from her medical friend here, that led her friends at home to send her to New York City to consult an oculist. At this time the blur in the left eye had become somewhat worse than in the right.

The third week of August she went to the New York Eye Infirmary on Thirteenth St. A physician there called the trouble in

in the left eye "choroiditis," as she stated, and prescribed some medicine, but told her nothing could be done for the right eye. She was also advised to instil solution of atropia into the eyes, and was directed to stop the prescribed medicine if she perceived a metallic taste remaining in the mouth. Did not know what the medicine was. Two weeks later she visited New York again, and this time went, as advised, to the Manhattan Hospital. She was cursorily examined, directed to continue the drops prescribed at the Infirmary, and to return in a week. On her return, she saw several gentlemen at the hospital who examined her eyes carefully, and tested her vision, and gave her a card. This stated: "V.R = 20-70+; Hm.1-24; V.L.=20-100; c × 1-50=20-70.

She was directed to continue drops in left eye only, and was told that the final event of her ailment would be blindness, as the disease called "retinitis pigmentosa," with which she was afflicted, was incurable. She was directed, however, to come and have hypodermic injections of strychnia into the arm daily, as offering a chance of benefit. Advised to use the eyes.

On proceeding to examine this patient, I was told by her that at no time had she had pain in the eyes, except that light hurt her; but that she sometimes from habit rubbed her eyes, as "the lids seemed to itch."

Three years ago her eyes were "weak," and she wore a shade and avoided light. The eyes were then "inflamed, but got all right by using salt water."

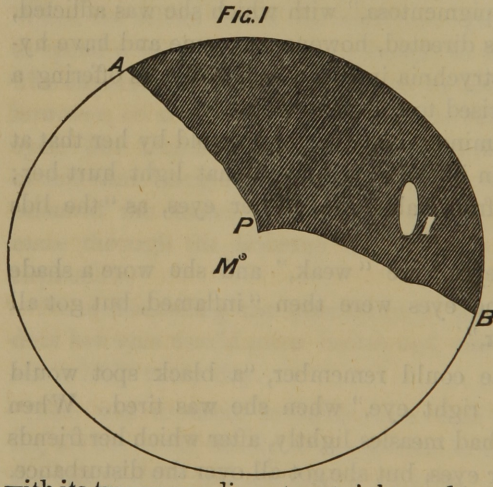
Always, as long as she could remember, "a black spot would come and go before the right eye," when she was tired. When eight or nine years old had measles lightly, after which her friends were troubled about her eyes, but she got all over the disturbance. Never called eyes feeble, and has "used them a very, very great deal."

Patient states her general health to be good, though subject to attacks of slight indigestion. Has always had "terrible headaches," but thought lightly of these, as a family ailment, since her mother and sisters were all subject to the same. There was no consanguinity in patient's parentage, and no indication of syphilitic diathesis existed. She is well nourished and of cheerful disposition. On inspection, I found the pupil of the left eye dilated, but adherent at the inferior margin to the capsule of the lens. In the region

of this synechia and below it, the cornea presented a punctate appearance with slight haziness. The pupil of the right eye, free from the action of a mydriatic, responded readily to the influence of light. A passing trial of convex lenses revealed a manifest hypermetropia, and the latent degree of this refractive anomaly was subsequently determined by paralyzing the accommodation with a strong solution of atropia.

Before ascertaining the value of her central sight, exploration of the field of vision was made. Having her fix the left eye on a white spot marked on a blackboard about twelve inches in front of the eye, the other being closed, the periphery was found to be normal for this eye, notwithstanding the synechia noted above. The other eye, tested in a similar way, showed the field to be singularly interrupted. The accompanying diagram, Fig 1, is an ellipse representing the visual field with its obscuration. M is the point of fixation. The field was obscured in all the shaded space above the irregular line A P B. At the point P this line of demarcation dips down into threatening proximity to the centre of direct vision M. In the obscured space a small clear elliptical figure I is described with its transverse diameter at right angles to that of the visual field. This figure represents an island of light in a sea of darkness, for the white crayon used to test the vision, always became perceptible within its area, but was lost beyond its confines. It will be noted that the obliteration of vision, as represented by the diagram, is about one-fourth of the extent of the entire field. It is an interesting fact that the patient had remarked as a peculiarity of her vision with the right eye, that the full moon presented a singular appearance, as if a segment were cut off from the upper right quad-

FIG. 1



rant of its disc, and a drawing with pencil, that she had made to represent it, was not unlike the diagram of her field of vision.

Upon examining the dioptric media with a magnifying lens behind the mirror of the ophthalmoscope, black, flocculent shreds and numerous granules, coarse and fine, were seen in the vitreous, falling down when the patient raised and dropped the eye as directed. This condition existed in both eyes, but the shreds were more marked in the right than in the left eye. Upon examining the fundus of the eyes, the appearances of the optic nerve discs were nearly normal. The outlines were slightly indistinct. Nothing else peculiar was noted in the left eye; but in the right, attention was immediately arrested by two groups of spots of black pigmentation, of which one was of greater extent and more crowded than the other, and both tending to coalesce near the equator. These spots of irregular shape, slightly elongated, and not unlike bony corpuscles, followed the ramifications of the retinal vessels.

The only locality in which they were to be found was in the inferior sinistral region of the fundus. They were carefully studied with the ophthalmoscope, both in the upright and inverted image. Mingled with this pigmentation were some whitish granular appearances. In the locality of these groups the vascular branches were small and shrunken. Having secured all the foregoing data, the question now was, what diagnosis should I make—what treatment, if any, should I pursue—what prognosis should I present? It was very clear to my mind that the essential ailment was identical in the two eyes.

Having weighed with proper respect the opinions pronounced in New York, as presented by the patient, I could not but think that either she had, in part at least, misunderstood what was there said, or that full consideration had not been given to all the elements in the case, and that a precipitate judgment had been rendered. It certainly could not be a case of *retinitis pigmentosa*, unless a change be made in the definition of that affection, notwithstanding the fact that there was pigmentation of the retina, most indubitably and, in some respects, seemingly characteristic, too.

Retinitis pigmentosa is a name applied to a morbid affection of the eye, which has *three* characteristic features. The first in order,

and earliest noticed, is the enfeeblement of sight when daylight is gone, the nocturnal blindness, or *hemeralopia.* The next is the concentric diminution of the field of vision. Steadily and painlessly, but with cruel deliberateness and regularity, the encroaching influence of the unsparing disease gradually, year after year, paralyzes the visual susceptibility of the delicate retina of *both* eyes, from the periphery centripetally, circle after circle, until finally the doomed victim, possessing still clear central vision, with which he may read fine print, is as unable from loss of *indirect* sight to guide himself about, as he would be, were he compelled to look through spy-glasses, fastened before his eyes. At last the macula lutea is reached and the catastrophe is announced by the utter extinction of sight in the blackness of a night, which no morning will ever dispel.

The third, but least important, and not invariably constant feature, from which the affection has been unfortunately named, is the pigmentation of the retina. When this condition of the fundus is met with, as it usually is, it, and its early site, (always in the equatorial regions of the eye-ball) are very characteristic. I say that the name is to be regretted, for the diagnosis, and hopeless prognosis, can be conclusively determined from the information afforded by the hemeralopia and the concentric narrowing of the field of vision, without any inspection of the pigment spots on the retina, while observation of pigment spots might easily lead to an erroneous diagnosis and prognosis, as well as to a mischievous or, at best, to a nugatory treatment of some unrecognized ailment that demanded positive management.

It seemed clear then, that I must dismiss the consideration of *retinitis pigmentosa* from this case. It appeared to me that the left eye offered the key, if any were needed, to the whole difficulty. Here were patent to cursory observation, an adhesion of part of the pupillary margin to the lens and a punctate condition of the cornea, such as appears in serous-iritis—a disease that is more than occasionally concomitant with deep seated inflammations of the eye.*

The inflammatory experience that the iris had endured, was recognizable at a glance; next, the flocculent shreds and particles ob-

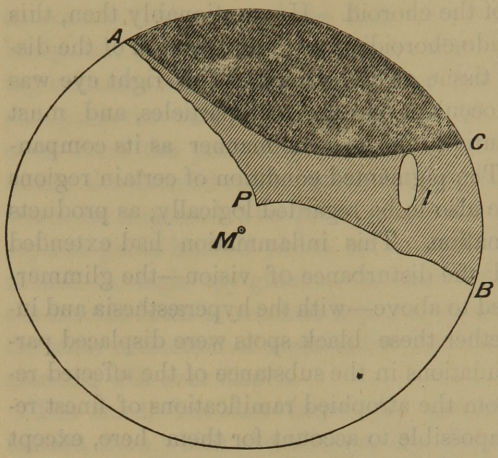
*The plastic exudation causing the posterior synechia in this case, is quite exceptional in serous-iritis.

served, that were agitated by the movements of the eye-ball, declared themselves as exudative products in the vitreous, that had followed inflammation of the choroid. Unquestionably then, this eye had suffered from irido-choroiditis, with an invasion of the disease into the posterior tissue of the cornea. The right eye was found to contain like flocculent shreds, and particles, and must have been affected essentially in the same manner as its companion to produce these. The pigmented condition of certain regions of the fundus oculi were also to be regarded logically, as products of the choroidal inflammation. This inflammation had extended to the retina and caused the disturbance of vision—the glimmering and wavering, alluded to above—with the hyperæsthesia and intolerance of light. Whether these black spots were displaced particles of pigment, or exudations in the substance of the affected retina, or altered blood from the atrophied ramifications of finest retinal vessels, it seems impossible to account for them here, except on the hypothesis of choroidal inflammation. My diagnosis was consequently: this is a case of *irido-choroido retinitis*, and the symptoms show that the action of the disease still continues. The prognosis was grave, of course, for chronic choroiditis is always serious; still, it seemed to me that it was not hopeless, and a treatment was instituted.

The first indication was to protect the eyes from irritation. Use of them was therefore interdicted, and dark protective glasses were recommended. Patient was enjoined to avoid exposure to strong light. The eyes were both kept constantly under the influence of a solution of sulphate of atropia, instilled into them at regular intervals. Warm water applications were found grateful, and were used freely. Special care was given to the diet and regimen of patient, that the processes of repair and excretion should be duly maintained. Chalybeate tonics were employed, but the chief medicinal agent relied on, as an alterative, was the Elixir Iodo Bromide of Calcium Compound. This was persistently used for eight weeks, when patient left for home, with a feeling that her eyes were better, yet with no change in the field of vision, and, perhaps, a slight diminution of pigment in the fundus. After remaining at home until the eleventh of January, and continuing the treatment there, patient revisited me. She had improved in every

way. The intolerance of light was gone, and the pigment spots decidedly lessened, and in their stead more whitish granules and striæ were discernible now than before. The area of sight was extended, and its boundary was advanced from the irregular line A P B of the diagram, Fig. 2, to the curved line A C. The half shaded space included between these lines (in which the little island of light alluded to above is situated) represents the extent of the visual field recovered from blindness.

FIG. 2



The prognosis seemed now much more favorable. I am not prepared to say, satisfactorily to myself, what caused the disease. No organic ailment of the heart or lungs, or of the great emunctories existed. If any hereditary diathesis existed as a predisposing cause, I could not determine it from any collateral evidence, and I was not able to assign a personal responsibility for the ailment, since it could not be justified by anything in the history of the case.

May 1st. 1878.

NOTE.—While this paper is in process of publication, the author has received a letter from the patient, asking permission to resume her vocation as a teacher.