The Absorption of Immature Cataract by Manipulation Conjoined with Instillation: Five Illustrations.

BY

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THE ABSORPTION OF IMMATURE CATARACT BY MANIPULATION CONJOINED WITH INSTILLATION.[1]

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In a paper read before the Section on Ophthalmology of the New York Academy of Medicine, on March 17, 1890, I announced my discovery of the method of curing cataract without the use of the knife. Before that announcement was made, the only method known was to wait until the cataract became ripe, which necessitated that the patients become blind, or nearly so, before anything could be done to relieve them, and even then from four to six per cent. of those operated upon proved unsuccessful, incurable blindness being the ultimate result. Nor is this all. I have this winter seen two cases which had been operated upon more than a year ago. "A perfect success," the surgeon said. For about six months the sight was fairly good, then the "second" operation, needling, was called for, and since this was done sight has been very much reduced, and an inflamed eye, painful in the extreme, has resulted in each case. As these two so-called successful cases have terminated so badly, may we not assume that others, primarily successful, were secondarily the reverse? In light of this I deem it

[1] Read before the Medical Society of the County of New York, November 24, 1890.

opportune to again call the attention of the profession to the unvarying and permanent success attending the employment of my plan of treatment in uncomplicated immature cataract.

In the paper above referred to I stated that a number of cases additional to the six therein reported had been successfully treated, but so recent had been this treatment that their histories would be withheld until a sufficient period of time had elapsed to thoroughly test the permanency of the cure.

Before reading my paper I will submit for your inspection these diagrams, showing the ophthalmoscopic pictures of some of these cases before the treatment was instituted and the appearances observed at different periods during the course of the treatment. These diagrams were made from ophthalmoscopic inspection, examination and study by Miss F. Elkins, whose skill in this direction is conceded by ophthalmologists. In employing the ophthalmoscope the view giving the greatest extent of lenticular opacity was the one diagrammed, and where it was not possible to show truthfully in one diagram the extent of the lenticular opacity, a second one, at a specified angle, was made. The degree of illumination, distance of the ophthalmoscope from the observed eye, angle of incidence of the ophthalmoscope, and focal length of the lens employed were carefully noted, and at stated times under precisely similar conditions the subsequent diagrams were made. It is but fair to state that all of the preliminary drawings were invariably returned to me at the same time as the finished diagrams, and by no possible means could, or did, the artist have any way to refresh the memory as to the previous appearances of a given cataract.

I propose in this paper to report those cases treated prior to July 16, 1890. These cases are reported by numbers, and in the same order as in my private case-book.

CASE VII.—Vision in the right eye on September 2, 1889, was $^{20}/_{100}$, and with + 2 D. Sph. was $^{20}/_{70}$; November 15th, was $^{20}/_{100}$, and with + 2 D. Sph. was $^{20}/_{50}$. Left eye, September 2d, was $^{20}/_{200}$, unimproved; November 15th, was $^{20}/_{100}$, and with + 2^{50} D. Sph. was $^{20}/_{70}$. Reading, September 2d, was Jaeger 13, but only a few lines, unimproved by spectacles; November 15th, Jaeger 7, easily read with + 4 D. Sph. for the right, and 4^{50} D. Sph. for the left eye. Duration of the treatment, about eleven weeks.

CASE VIII.—Vision was, in both eyes, September 3, 1889, $^{20}/_{70}$, unimproved; November 16, $^{20}/_{50}$, and with + 3 D. Sph. was $^{20}/_{40}$. Read, September 3d, with + 2 D. Sph., Jaeger 7, but very slowly. Read November 16th, with + 3 D. Sph., Jaeger 5, easily and clearly, and puzzled out Jaeger 3. Only a slight opacity remaining, but personal matters required her presence at home. Duration of the treatment, ten and one half weeks.

CASE IX.—Vision was, in the right eye, September 3, 1889, $^{20}/_{200}$, unimproved; December 7th, $^{20}/_{100}$, and with + 2 D. Sph. was $^{20}/_{50}$. Left eye, September 3, 1889, $^{20}/_{100}$, and with + 1 D. Sph. was $^{20}/_{70}$; December 7th, $^{20}/_{70}$, and with + 1^{50} D. Sph. was $^{20}/_{50}$. Read, September 3d, with right, Jaeger 13; December 7th, Jaeger 9, and with + 2^{50} D. Sph., Jaeger 6. Read, September 3d, with left, Jaeger 9; December 7th, Jaeger 7, and with + 3 D. Sph., Jaeger 5. Newspaper easily read. Duration of treatment, thirteen and one-half weeks.

CASE X.—Vision in both eyes was, September 9, 1889, $^{20}/_{200}$, +, and a weak convex glass made the letters clearer. December 14, 1889, $^{20}/_{200}$, and with + 2 D. Sph. for the right, and + 2^{50} D. Sph. for the left, was $^{20}/_{70}$; September 9th, with + 2 D. Sph. read Jaeger 13 at varying distances; December 14th, with + 3 D. Sph, read Jaeger 6 easily, and by straining could make out Jaeger 2. Newspaper easily read. Duration of the treatment, about fourteen weeks.

CASE XI.—Vision was, in the right eye, on September 17, 1889, $^{20}/_{70}$, and with + 1 D. Sph. $^{20}/_{50}$; November 22d, $^{20}/_{50}$, with + 1^{50} D. Sph. was $^{20}/_{30}$. Left eye, on September 17, 1889, $^{20}/_{100}$, and with 2 D. Sph. was $^{20}/_{70}$. November 22d, $^{20}/_{70}$, and with + 2 D. Sph. $^{20}/_{40}$. Read, September 17th, Jaeger 8, and could puzzle out Jaeger 5; November 22d, read Jaeger 4 easily, and with + 3 D. Sph. read Jaeger 1. At the upper edge of the lens periphery is an opacity about double the size of a pin's-head, but every other part of the lens is clear, no trace of an opacity being discernible. In the left only a general haziness remains, irregular in outline, and with + 4 D. Sph. newspaper type can be plainly read. Duration of the treatment, about ten weeks.

CASE XII.—Vision in both eyes was, on November 11, 1889, $^{20}/_{100}$, and with plus 1 D. Sph. letters were clearer. January 25, 1890, $^{20}/_{70}$, and with + 1^{50} D. Sph. was $^{20}/_{50}$ +; November 11th, read Jaeger 10 with the right eye, and Jaeger 11 with the left; not benefited by glasses; January 25, with + 4 D. Sph. for the right, and + 3 D. Sph. for the left, read Jaeger 6 clearly, and could decipher Jaeger 2. Very marked diminution in the density of the cataracts. Duration of the treatment, about eleven weeks.

CASE XIII.—Vision was. in the right eye, on November 18, 1889, $^{20}/_{70}$ plus; left, $^{20}/_{70}$ minus, unimproved by any glass; January 25, 1890, $^{20}/_{50}$ in both eyes, and could puzzle out $^{20}/_{40}$; November 18th, with + 2 D. Sph. read Jaeger 9 with each eye separately, together read Jaeger 6. January 26th, with + 2^{50} D. Sph. for the right, and + 3^{50} D. Sph. for the left eye, read Jaeger 5 easily, and could read a few lines of Jaeger 1. The cataracts have almost entirely disappeared, that which remains appearing to be more in the nature of a capsular thickening than cortical opacity. Duration of the treatment about ten weeks.

Case XIV.—Vision was, in the right eye, on November 18, 1889, $^{20}/_{100}$, unimproved; January 31, 1890, $^{20}/_{70}$ and a few letters of $^{20}/_{50}$. Left eye on November 18th, $^{20}/_{100}$, slightly clearer with + 1 D. Sph.; January 31, 1890, $^{20}/_{70}$ and a few letters of $^{20}/_{50}$; November 18th, with + 2 D. Sph., read Jaeger 9 with the right, and Jaeger 10 with the left eye; January 31st, with + 2^{50} D. Sph. for each eye, read Jaeger 5 easily, and could read a few lines of Jaeger 2. Duration of the treatment, eleven weeks.

Case XV. —Vision was, in the right eye, on November 18th, $^{20}/_{100}$, unimproved; January 30th, $^{20}/_{50}$. Left eye, on November 18th, $^{20}/_{200}$, unimproved; January 30, $^{20}/_{70}$. Read on November 18th, with the right eye, Jaeger 10 January 30th, Jaeger 5 with + 3 D. Sph.; with the left, on November 18th, read Jaeger 12; January 30th, with + 3 D. Sph., read Jaeger 6, but not as clearly as with the right. Duration of the treatment, eleven weeks.

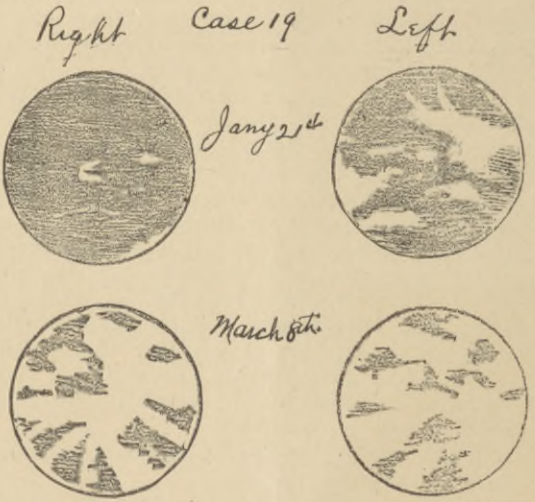
Case XVI.—Vision was, in the right eye, on November 18, 1889, $^{20}/_{200}$, unimproved; January 30th, $^{20}/_{70}$, unimproved. Left eye, on November 18th, $^{20}/_{200}$, and with + 1 D. Sph., $^{20}/_{100}$. January 30th, $^{20}/_{70}$, unimproved. Read, November 18th, with both eyes, Jaeger 10, and with + 2 D. Sph. it was clearer; January 30th, with + 3 D. Sph. read Jaeger 5, and could discern Jaeger 3. Duration of the treatment, about eleven weeks.

Case XVII. will be described later on in connection with remarks on mature cataract.

Case XVIII.—Patient had always been so extremely myopic that it has been only by straining the eyes that she has recognized friends passing her; and even then it has been more by the attire or some peculiarity of gait than by sight. Vision on January 16, 1890, in both eyes, was about $^{1}/_{200}$. She could read Jaeger 8 at about two inches from her eyes. Treatment for three months, with intervals of rest intervening between the successive months June 18th, vision was about $^{2}/_{200}$, and with — 8 D. Sph. she read Jaeger 6 at four inches.

The cataracts are barely perceptible, and the sight the patient declares to be fully as good as before cataract was observed. There is a myopia equal to about 14 dioptries.

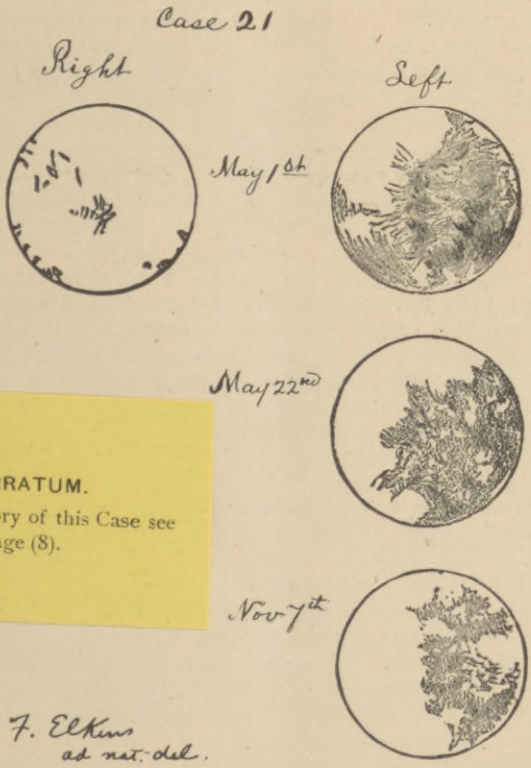
CASE XIX.—Vision was, in the right eye, on January 21st, $^{20}/_{70}$, unimproved; March 8th, $^{20}/_{50}$. Left eye, on



January 21st, $^{20}/_{200}$, unimproved; March 8th, $^{20}/_{100}$. He could not read even Jaeger 13 because of the blur over the letters. On March 8th, with + 2^{50} D. Sph., read Jaeger 6 slowly. Duration of the treatment, six weeks, when it was stopped, as illness in his family necessitated a trip to a warmer section of this country.

CASE XX.—The history of this patient dates from June 15, 1875, when her relatives were told that she had incipient cataract, her vision being, in the right eye, $^{20}/_{50}$,

and in the left, $^{20}/_{20}$. I saw her on February 3, 1890, fifteen years later, and found the vision in her right eye to be reduced to $^{20}/_{200}$. Treatment was then instituted,



ERRATUM.

For History of this Case see following page (8).

and on April 23d her vision was $^{20}/_{50}$. In the left eye, February 3d, $^{20}/_{70}$, and on April 23d, $^{20}/_{50}$. Reading had not been entirely given up because of the sight remain-

ing in the left eye, but reading for half an hour wearied both eyes so much that she was about ready to give up using her eyes for any near work. Two weeks after the commencement of the treatment she began to use her eyes moderately for reading, gradually lengthening the period of use, and at the end of a month was able to use her eyes for all purposes, unaware of any defect in her sight. Cataracts were markedly thinned, and left one quite so. Duration of the treatment, eleven weeks.

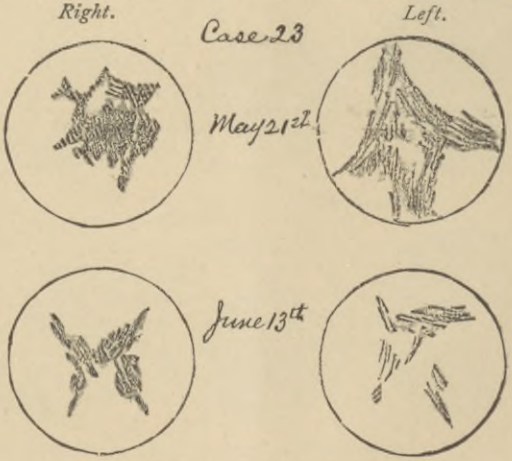
CASE XXI.—Myopia of about six dioptries. Vision was, in the right eye, on May 1st, $^{5}/_{200}$, and with — 5 D. Sph. was $^{20}/_{70}$; June 7th, $^{6}/_{200}$, and with — 5 D. Sph. was $^{20}/_{40}$. Left eye, on May 1st, $^{2}/_{200}$, and with — 5 D. Sph. was $^{20}/_{100}$; June 7th, $^{3}/_{200}$, and with — 5 D. Sph. was $^{20}/_{100}$; May 1st, read Jaeger 5 at six inches, but had no range of sight; June 7th, read Jaeger 1 at 6 inches, and with — 2 D. Sph. read Jaeger 5 at eleven to fourteen inches; May 1st, left eye could only read the letters on the thirty-feet line of the Snellen test-card at eight inches; June 7th, at the same distance, the letters of the twenty-feet line were read. The opacity of the right lens is entirely absorbed; not a vestige remains or is discoverable by prolonged and painstaking search. In the left eye considerable thinning of the opacity has taken place, and gross vision is much better. Duration of the treatment, about six and one-half weeks.

CASE XXII.—Vision was, in the right eye, on May 1st, Snellen test card, the two-hundred-feet line at six inches; July 16th, at ten feet. Left eye, May 1st, $^{20}/_{200}$, unimproved; July 16th, $^{20}/_{100}$, unimproved. In the right eye practically no reading power. In the left, May 1st, Jaeger 13 with + 5 D. Sph., and on July 16th, with the same correction, read Jaeger 11. A reference to the diagrams will disclose that the cause for the defective reading power is found in the location of the opacity, which is directly behind the pupil, and the densest opacity fills up the pupillary space. In addition thereto,

the pupil itself is unusually small, and this interferes with the entrance of light and images. Sight for distant ob-

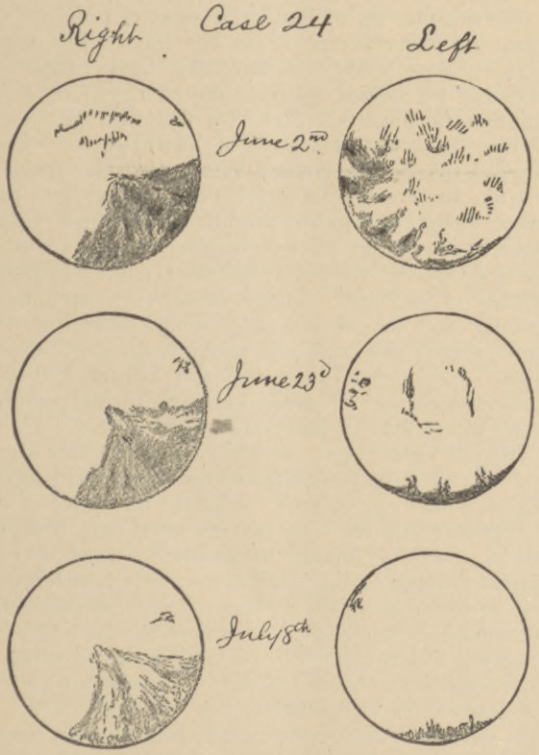
jects is greatly improved. Duration of the treatment was eleven weeks.

Case XXIII.—Hyperopia of fully 5 dioptries. Vision was, in the right eye, on May 16th, $^{7}/_{200}$, and with + 2 D. Sph. was $^{20}/_{70}$; June 14, with + 2 D. Sph. was $^{20}/_{50}$. Left eye on May 16th, $^{9}/_{200}$, and with + 2^{50} D. Sph. was $^{20}/_{70}$; June 14, with + 2^{50} D. Sph. was $^{20}/_{50}$. On May 16th, with her spectacles (+ 7 D. Sph.), read Jaeger 3



with both eyes; June 14, read Jaeger 1, using her spectacles. These cataracts were advanced beyond the incipient stage, and her sight was so blurred that she rarely went out alone, fearing that the "fog," as she called it, might prevent her from seeing approaching persons. Under treatment her sight was so much improved that the "fog" has now disappeared, and by use of her spectacles everything is clearly seen. A reference to the picture will show how great has been this improvement. At the expiration of four weeks she went out of town for the heated term. From my observation in other cases, I would say that treatment for another month will bring about complete absorption.

Case XXIV.—Vision was, in the right eye, on May 19th, $^{15}/_{200}$, but only at times; July 8th, $^{20}/_{200}$, and with + 0^{75} D. was $^{20}/_{100}$. Left eye, on May 19th, $^{20}/_{50}$, unimproved;



July 8th, $^{20}/_{40}$, unimproved; May 19th, with right eye read Jaeger 13 slowly; July 8th, read Jaeger 9; with the left eye, May 19th, read Jaeger 10 at seven to thirteen inches, and made out Jaeger 9; with + 2^{25} D. Sph. read Jaeger

5 slowly, and with an effort; July 8th, with + 3 D. Sph. for both eyes, he read Jaeger 6 at eleven inches. The cataract in the right eye is reduced in size, changed somewhat in shape, and density greatly lessened. In the left eye only a faint line of lenticular opacity remains, situated at the lower periphery of the lens. The central opacity is completely absorbed, and further treatment, which will be begun after January 1, 1891, will absorb the peripheral opacity. Sight for distant objects, using both eyes, is perfect. Duration of the treatment, 7 weeks.

An analysis of these cases shows that the treatment has been invariably successful, the improvement being in direct proportion to the amount of lenticular opacity present at the outset of the treatment; that is, the less dense the opacity, the better the result; but all the cases have been benefited. Three cases were incipient in character, and in every one of them absorption of the central opacity was complete, at the periphery of the lens a slight opacity remaining, and this entirely out of the line of vision—two of these cases requiring prolonged search, with a lens of high power and a weak light illumination to reveal their presence. In one case the absorption is absolutely complete, the most rigid and exacting examination failing to show the existence of even the slightest opacity. In still another case four faint lines, like sectors, remain to mark the location of an immature cataract which had so seriously interfered with vision as to bring about a state of nervous exhaustion, alike alarming to her physician and friends. With the restoration of her sight a corresponding improvement in her general health has occurred. The remaining cases were more or less advanced in progress, but in every case useful vision has been permanently restored. In the consideration of the subject of the cure of cataract by absorption the first question which presents itself is this:

Will a case of mature cataract respond favorably to this treatment? With the intention of obtaining a reply to this query, the following test was instituted:

CASE XVII.—Discovered suddenly that her left eye was blind, the reception on the cornea of the right eye of a fragment of stone causing her to close the eye. Vision in the right eye was $^{20}/_{30}$, and with + 0^{50} D. Sph. was $^{20}/_{20}$. In the left eye light perception only. By ophthalmoscopic examination the right eye was found to have a slight lenticular opacity at the periphery, and an hyperopia of one dioptrie, and in the left eye a mature cataract with good light projection. The patient consenting to put herself under my care, treatment by manipulation, conjoined with instillation, was begun on January 4, 1890. At this time it was impossible for her to count the spread of fingers of the hand, even when held to intercept the light, and within a few inches of the eye. On February 26th, fingers were counted at a distance of six inches from the eye; on March 28th at ten inches; on April 30th at twenty inches, and on May 25th at twenty-four inches. On June 5th patient experienced a sudden numbness of the left side of the face, over the upper maxilla, which feeling spread upward, involving one-half of the head, and then passed downward as far as the knee on the same side of the body. This was followed by a sensation of pricking and then of sleepiness, "like the foot going to sleep," she described it. A little mental confusion was noticed, and a condition of semi-consciousness for a short time was experienced. On June 7th, two days later, I found her sensation and movements normal, and her sight reduced to counting fingers at about eighteen inches—a lessening of six inches; but on July 8th she again counted fingers at twenty-four inches. Treatment was then stopped for the summer. An examination made November 17th shows that fingers can be counted at twenty-six inches—a gain of two inches—and although there has been no treatment for four months, she can discern the outlines of large objects. This case having shown such evidences of improvement, I feel that the time has not yet come to ex-

press a decided opinion, and that only after further experimentation will it be possible to answer this question.

The second question requiring a reply is this: How far advanced toward maturity can an immature cataract be and still be benefited by my plan of treatment? All my cases having been so markedly benefited, and the situation and extent of the opacity having so greatly varied in each case, I do not feel able to lay down any law or rule covering this point. In some cases with a decided opacity resorption seemed very active, and the clearing up of the opacity came about right speedily, while in others with less opacity the absorption took place much more slowly. Without formulating a decided opinion, I venture to make this statement, that it has seemed to me the more anterior the opacity—that is, the nearer the opacity was situated to the anterior capsule—the sooner did I observe evidence of the result of absorption, and the shorter was the period of treatment required. It is, however, incumbent upon me to say that in every case of immature cataract a marked diminution in the extent and density of the lenticular opacity was demonstrated by ophthalmoscopic examination, oblique illumination, and in those to whom the ability to read had been lost, reading power was always reacquired. The fact that every case was so much benefited does not allow me to set bounds at present to the application of the treatment.

A third and most important question is: Is the effect produced by my plan of treatment permanent? I do not hesitate to declare my firm conviction that the result produced is a permanent one. Not a single patient has had the slightest diminution in sight since the cessation of the treatment. I impress upon them the necessity of periodical reports as to conditions they may observe in their sight. In every case they have reported an improvement in sight, continuing after the stoppage of the treatment. This improvement, they say, becomes more apparent about two weeks subsequent to the treatment.

I have had the opportunity, within the past fortnight, of subjecting to rigid examination two of the cases reported in my first paper, who were treated prior to March 1, 1889. In each case there was an improvement in vision, and an easily recognizable opacity, which was then present, can now barely be distinguished. This improvement in sight, observed in all my cases—non-progression of the opacity, but rather continuance of absorption of the cataractous process in a series of cases, some of them whose treatment was stopped more than nineteen months ago—establishes the permanently beneficial character of the result caused by my method of manipulation conjoined with instillation, and indicates the line of treatment to be adopted and faithfully carried out in curing immature, uncomplicated cataract.

In the history of these cases a curious circumstance has been noticed, which may be a concomitance only, but this I doubt. With only two exceptions, these patients have for years been sufferers from aggravated forms of dyspepsia, and of the two exceptions one has suffered severely from time to time from attacks of indigestion with flatulency. The debilitating influence upon the system, from the absorption by the tissues of imperfectly digested food, which supplies an incomplete and abnormal nutriment to the body, brings about, as has often been proven, a serious disturbance of, and interference with, repair in the economy. Hence it is but natural to suppose that, under such conditions, the lens, in common with other parts, must not only suffer from lack of nourishment, but may also become changed in structure, and its functions interfered with, because of the reception by the organ of an altered and unnatural pabulum. We are therefore led to ask if dyspepsia may not, after all, often stand in a causative relation to the production of cataract, or, if it may not be a prominent agent in bringing this about. The existence of dyspepsia, in one form or another, in ninety-four to ninety-seven per cent.

of my cases, seems to be good ground for the supposition that these troubles—dyspepsia and cataract—may often stand in the relation of cause and effect. Now, if subsequent investigation and observation shall confirm this theory, then for the general practitioner is opened up an extensive and far-reaching field of usefulness now unnoticed and unattended. By careful attention to, and judicious treatment of, the digestive troubles of his patients who have passed their fortieth year, he can, by checking a condition favorable to its development, materially and largely reduce the chance of the occurrence of cataract. My rule has been, and still is, to send these patients to their family physician, and I have noticed, as a constant effect, that as soon as appetite is improved, and faulty digestion made good, the cataracts show a marked tendency toward improvement in direct relation with the improvement in the digestive function.

Before announcing the conclusions arrived at I wish to state that in the MEDICAL RECORD of March 29, 1890, I have given full directions for the preparation of the solution employed, and for the manner and method of manipulation, for it is a peculiar manipulation, not a massage.

My conclusions are: 1. Further investigations are necessary before a decided opinion can be expressed as to the result of this treatment in mature cataract. 2. Immature, uncomplicated cataract can be benefited to the reacquisition of reading power, that is, to good, useful vision. 3. Incipient cataracts and those which have but passed into a state of immaturity can be entirely absorbed. 4. This being so, the sooner a cataract comes under treatment the better the result obtained. 5. The effect produced by my method of manipulation, conjoined with instillation, is permanent.

50 WEST THIRTY-SIXTH STREET.