

Baker. (A.R.)

A FEW OBSERVATIONS ON THE ETIOLOGY,
PROGNOSIS AND CURE OF INCIPIENT
CATARACT WITHOUT OPERA-
TIVE INTERFERENCE.

BY

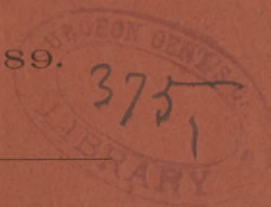
A. R. BAKER, M. D.,

CLEVELAND, O.

FROM TRANSACTIONS

OHIO STATE MEDICAL SOCIETY
presented by the author,

1889.



PRINTED BY
THE WILLIAMS PUBLISHING CO.,
CLEVELAND, O.

A FEW OBSERVATIONS ON THE ETIOLOGY,
PROGNOSIS AND CURE OF INCIPIENT
CATARACT WITHOUT OPERA-
TIVE INTERFERENCE.

BY A. R. BAKER, M.D., CLEVELAND, O.

OBSERVATION I.

I was consulted by Mrs. S., aged forty-three, in the spring of 1884, on account of loss of sight. I found that she had a cataract of the left eye almost mature, *i. e.*, she could not count fingers and no red reflex could be seen from the fundus with the ophthalmoscope; with the right eye she could only count fingers with difficulty at six inches. I could get a slight reflex from the fundus, but was unable to see any of the retinal vessels.

The history of the case led me to suspect diabetes, and upon examining the urine, I found large quantities of sugar. I prescribed tablets of iron, arsenic and strychnine and gave the patient a diet list, in which all articles of food not marked were positively forbidden. The directions were followed very faithfully. The sugar diminished in quantity very rapidly and at times disappeared entirely; but what was most remarkable was the immediate improvement in vision. In the course of a few weeks she was able to read ordinary newspaper print, and with the ophthalmoscope I could see the retinal vessels distinctly in either eye.

My note-book contains a memorandum, April 25, 1885, stating that her vision at that date in left eye was $\frac{20}{70}$ (S.) and right eye $\frac{20}{30}$ (S.). For a period of over four



years the patient was under my observation. Almost all the time there was a little sugar in the urine; at times, after some indiscretion in diet or exposure to cold, there would be an increase in the amount of sugar excreted, and almost simultaneously a decrease in the visual acuteness.

In September, 1888, Mrs. S. was called into court as a witness in a case which involved the title of her home; was kept on the stand all day; on the way home she was caught in a shower, had a chill that night and died of diabetic coma in less than a week.

Remarks.—Similar cases are not unknown to ophthalmological literature. Dr. Seegen reports two cases in his work on "Diabetes Mellitus." One case was that of a man aged thirty-nine, who in July, 1863, noticed that his sight began to fail; this was about six months after the first appearance of diabetes. The lenses were cataractous. Under treatment at Carlsbad, the lenses cleared; the quantity of urine was reduced about one-half, although the sugar remained about the same. In the spring of 1865, the lenses again became opaque.

The other case was that of a woman aged fifty-five, who was first seen in the autumn of 1867, soon after which the sight began to fail. She was treated for diabetes in February, 1868, and while under treatment the lenses became clear again.

Dr. Tannahill also reports a case of a coal miner who was seen while in prison. He had suffered from diabetes for eleven months. Both lenses were opaque—the left more than the right. He was put on the ordinary diabetic diet, and was given two grains of opium daily. While under treatment his sight began to improve; the opaque lenses gradually cleared, and upon inspection, when he was discharged from the prison, no trace of the cataract remained. In 1885 Mr. Nettleship reported a similar case to the London Ophthalmological Society.

OBSERVATION II.

Mr. O., aged sixty-two, mature cataract of right eye; immature cataract of left; vision (S.) $\frac{2}{200}$; operation of linear extraction performed on right eye in October of 1883; vision after operation, $\frac{3}{30}$. As I usually examine the urine as a routine practice in all cataract cases, I did so in this, and found quite a large amount of albumen. There was a slight hypertrophy of the heart, but no valvular disease found. Dietetic and medicinal treatment for the albuminuria was instituted, with quite satisfactory results. At the end of a year, I was informed by the patient by letter, that his sight in left eye had improved very much, and that his spectacles were unsatisfactory. I saw the case soon afterward, and found that his vision had improved to $\frac{2}{30}$ (S.) in this, the unoperated eye; and that he had discarded the cataract spectacles and was using his old ones, with which he claimed to see better. He continued to use a pair of +2.50 D. lenses which I gave him until about one year ago (five years), when his sight began to fail rapidly in the left eye, and he returned to the use of the cataract lenses. About the same time, there was a decided increase in the amount of albumen in the urine, and at present, the old gentleman is suffering from œdema of the feet and legs and other serious results of kidney disease.

Remarks.—I have found albumen in the urine of a large percentage of my cataract cases, usually not in large quantities, and in most cases unsuspected by the patient or family physician. But casts and hypertrophy of the heart have usually demonstrated the existence of nephritis. Deutschman has made the same observation, and believes that the coincidence of chronic Bright's disease and cataract is not accidental, and that "we must recognize a nephritic cataract just as we recognize a diabetic cataract, the cause in both cases being constitutional."

I am not aware that any cases are on record in which nephritic cataracts entirely disappeared; but it has been the observation of everyone that the progress of a cataract is very uncertain, at times progressing rapidly, at other times slowly, and frequently remaining stationary for months or years. Is it not quite possible that if the general health was carefully interrogated, some other than *senile changes* might be found to explain the origin of cataract and enable us to give a prognosis more favorable to the patient than inevitable blindness?

OBSERVATION III.

Mr. C., in 1884, consulted an oculist for failing vision, whose ability to diagnose incipient cataract I could not doubt. A preliminary iridectomy was made prior to the cataract extraction, which, it was said, would be made in the course of a few months at most.

Mr. C. has now waited five years for this cataract to mature, and now, much to his gratification, there is no cataract to be seen or evidence that there ever has been one.

OBSERVATION IV.

Mr. O. D., in 1871, consulted Dr. C. R. Agnew for failing vision. Dr. Agnew diagnosed incipient cataract of both eyes; also found quite a high degree of astigmatism and vision very much improved by cylindrical glasses after dilating the pupils with atropia. Spectacles were ordered, and a prescription for atropia given, to be used as long as the vision was improved, and when sight had so far failed as to be unable to count fingers, he was requested to return to New York for an operation. Mr. O. D. thinks he can see just as well now as he could eighteen years ago. He has used the solution of atropia in his eyes every week, and worn the glasses continuously during the entire period.

I have had the case under my observation for the past six years, and have been unable to detect any change in the condition of the lenses during this period.

Remarks.—Cataract, which is usually a disease of old age, characterized by gray hairs and wrinkles, atheromatous blood-vessels and shrunken muscles, owing to its white color has, in the absence of any other plausible explanation for its existence, been called *senile*.

The patient suffering from incipient cataract has been assured, from time immemorial, that nothing could be done for him, that the disease was a senile one, and as inevitable as gray hairs; and the only consolation offered was, that after becoming totally blind, he might undergo a delicate and difficult operation, which would probably give him partial relief.

Dr. Risley contributed a valuable paper to a recent number of the *University Medical Magazine*, in which he said, "That while opacity of the lense is a disease of advanced life, it does not in all probability depend upon senile changes, but is originated in local pathological states involving the nutrition of the eye itself."

These local pathological changes he believes to be in the choroid, and thinks the changes in the lense and vitreous in later life to be due to the same cause as the impaired nutrition of the sclera, and the resulting posterior staphyloma and consequent myopia in children. He attributes the comparative freedom from cataract in early life to the yielding of the sclera, which prevents the lense from suffering from injurious disturbances of nutrition. In support of this theory of the cause of cataract, Dr. Risley presents statistics of sixty cases taken consecutively from his case-book, in forty of which there was a choroiditis noted, and in many of the other twenty the opacity of the lense was so far advanced as to prevent a study of the *fundus oculi*. He also reports a number of cases in which

the opacity of the lense remained stationary for many years, or even disappeared entirely upon proper treatment, directed to the choroidal disease.

CONCLUSION.

If these observations are accurate, should not our views as to the etiology, prognosis and treatment of incipient cataract be modified? If it is true that a large number of cataracts are due to general diseases, like diabetes and nephritis, and the resulting opacity of the lense may be retarded or cured by treatment directed to the general disease; if it is true that a still larger number of cataracts are due to local pathological conditions affecting the nutrition of the lense, and the resulting opacity may be retarded or cured by treatment directed to the local disease, should not our prognosis, as to the cure of cataract without operative interference, be more hopeful than heretofore?

If progressive myopia is a conservative factor which protects the lense from undue pressure and resulting disturbance of nutrition and opacity, the reason why cataract is a disease of the aged would be satisfactorily explained. In fact, I think the wearing of spectacles, in high degrees of myopia, as a prophylaxis of cataract, has long been a recognized procedure.

If our reasoning is correct, not only high degrees of myopia, predisposed to cataract, but cases of choroidal disease which result in myopia in young persons, terminate in opacity of the lense in older people, and we may, therefore, conclude that (1) All cases of eye-strain should be removed in early and late life. (2) Cataract is not due to senile causes. (3) That it may be classed among preventable diseases. (4) That incipient cataract may be, by judicious treatment, retarded or even cured entirely. (5) That even if treatment does not accomplish this

favorable result, it will put the eye in a healthier condition, and future operations will be undertaken with greater prospects of success. (6) All cases of incipient cataract should be referred to some one skilled in the use of the ophthalmoscope for examination.

