

Remarks on the routine use of the ophthalmoscope in cerebral disease / by J. Hughlings Jackson.

Contributors

Jackson, J. Hughlings 1835-1911.
University College, London. Library Services

Publication/Creation

London : J. & A. Churchill, 1879.

Persistent URL

<https://wellcomecollection.org/works/f45c254h>

Provider

University College London

License and attribution

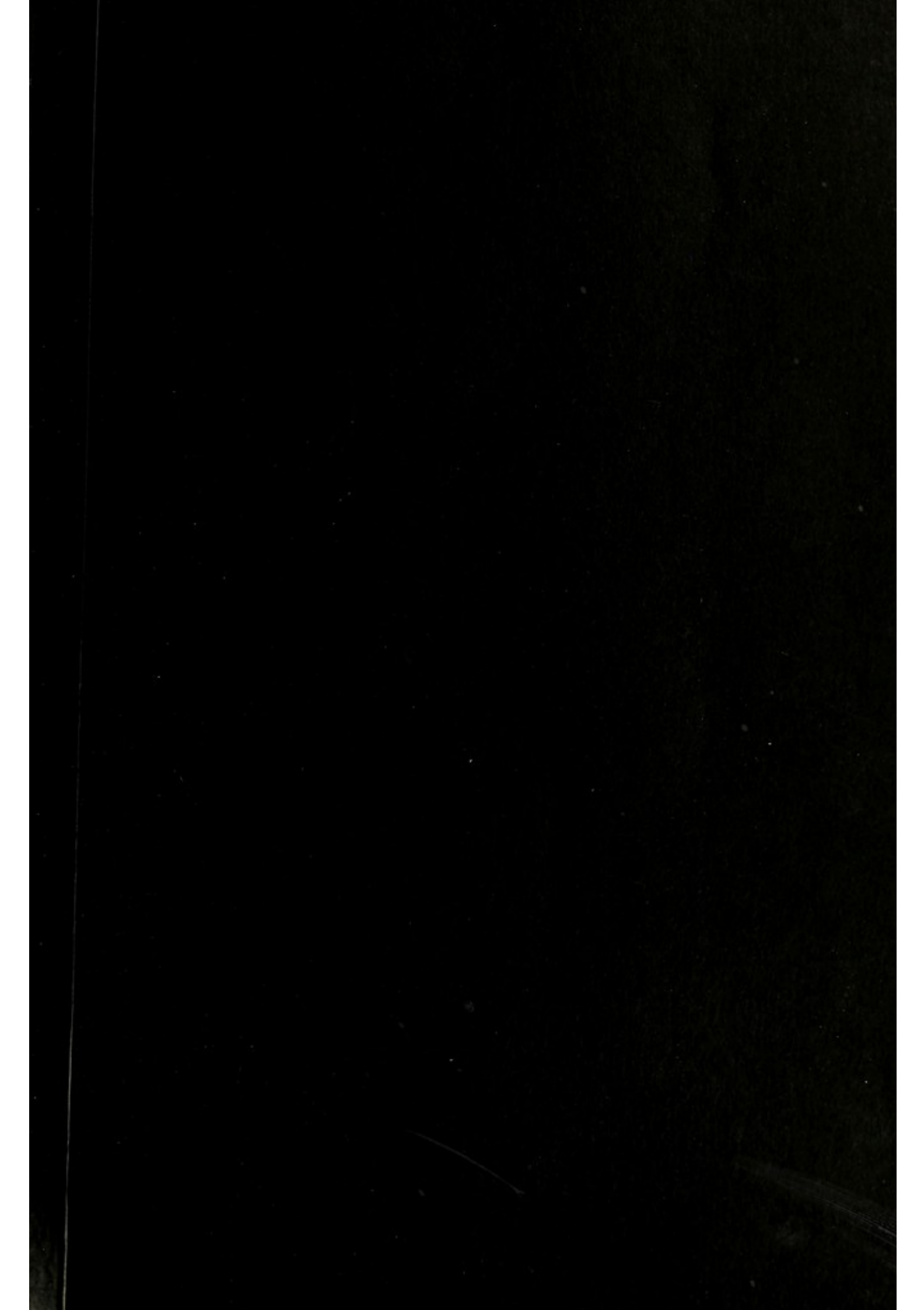
This material has been provided by This material has been provided by UCL Library Services. The original may be consulted at UCL (University College London) where the originals may be consulted.

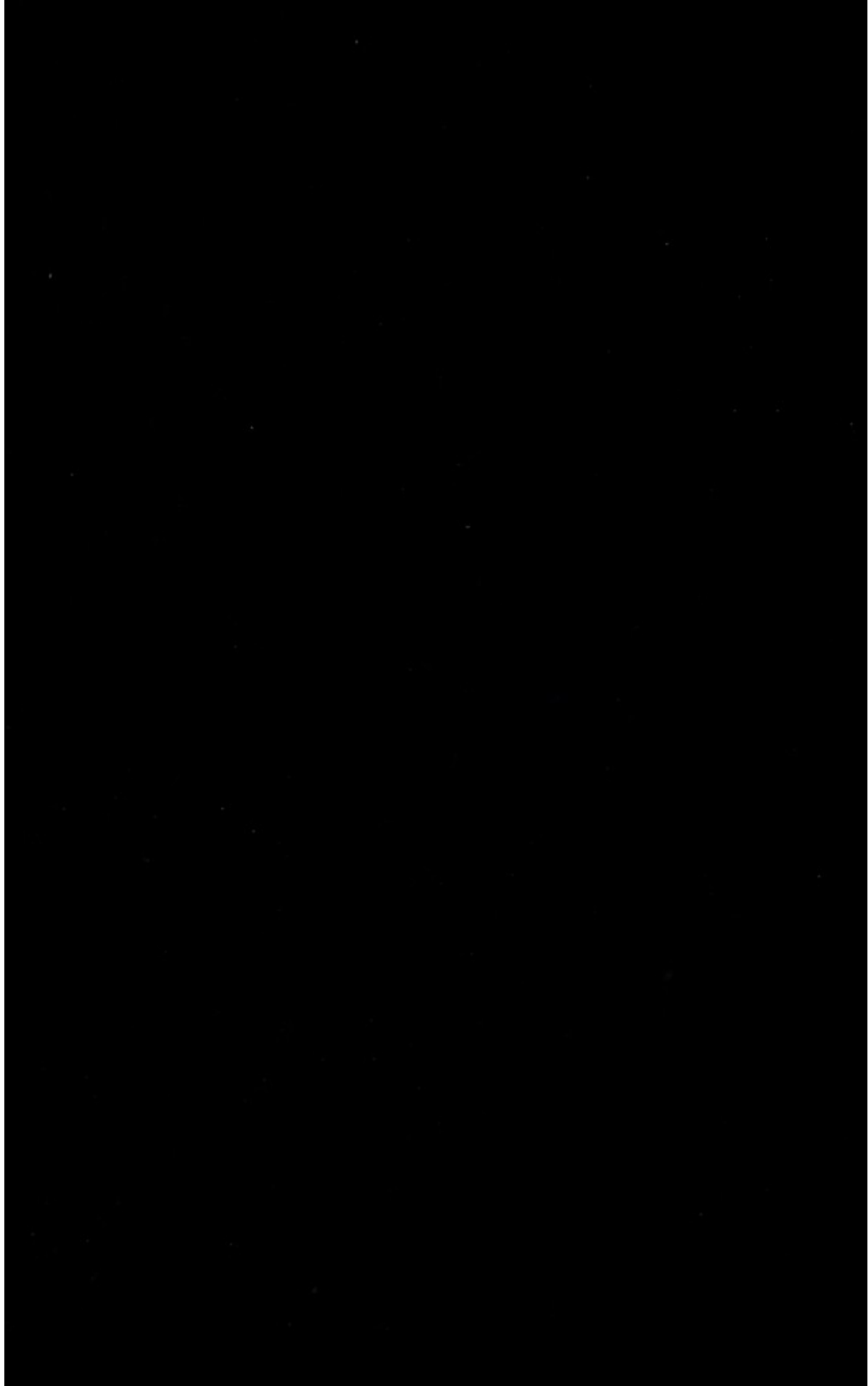
This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

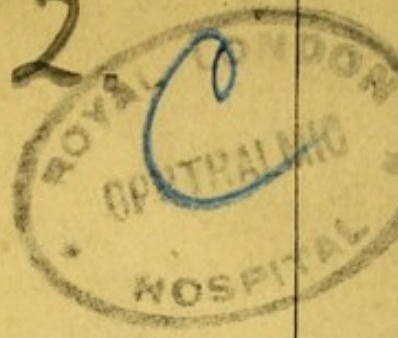


Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>





22



REMARKS

ON

THE ROUTINE USE

OF THE

Ophthalmoscope in Cerebral Disease.

BY

J. HUGHLINGS JACKSON, M.D., F.R.S.,

PHYSICIAN TO THE HOSPITAL FOR THE EPILEPTIC AND PARALYSED, AND TO
THE LONDON HOSPITAL.



LONDON:

J. & A. CHURCHILL, NEW BURLINGTON STREET, W.

—
1879.

Price One Shilling.

THE UNIVERSITY OF CHICAGO

Department of Oriental Studies

THE UNIVERSITY OF CHICAGO
Department of Oriental Studies

Department of Oriental Studies

THE UNIVERSITY OF CHICAGO
Department of Oriental Studies

REMARKS

ON

THE ROUTINE USE

OF THE

Ophthalmoscope in Cerebral Disease.

BY

J. HUGHLINGS JACKSON, M.D., F.R.S.,

PHYSICIAN TO THE HOSPITAL FOR THE EPILEPTIC AND PARALYSED, AND TO
THE LONDON HOSPITAL.

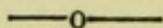
Reprinted from THE MEDICAL PRESS AND CIRCULAR.

LONDON:

STEAM PRINTING WORKS, 16 GREAT WINDMILL STREET, W.

1879.

GOWERS ON OPTIC NEURITIS.



I find I have not given the most recent of Gowers's conclusions in stating what he has observed as to optic neuritis. I am indebted to him for the following letter :—

50 Queen Anne Street, Cavendish Square, W.
June 6th, 1879.

DEAR Dr. JACKSON,—Later microscopic investigation has led me to modify considerably the opinion of the rarity of descending neuritis expressed in the statement you have quoted in the *Medical Press and Circular* for the 4th inst. The opinion was founded on the slightness of the indications of inflammation commonly presented by the trunks of the optic nerves in cases of intra-ocular neuritis from cerebral disease. But I have since found in several cases that equally slight changes may connect an intense neuritis behind the optic foramen, with an intense neuritis within the eye ; and I am led to the belief that these slight changes have far more weight than has commonly been attributed to them ; and that descending inflammation, instead of being rare, is a very common mode in which neuritis is produced in intra-cranial tumour. I have described the facts on which this opinion is founded in my Manual of "Medical Ophthalmoscopy."

Believe me,

Very truly yours,

W. R. GOWERS.

Dr. Hughlings Jackson.

653915

THE ROUTINE USE
OF
THE OPHTHALMOSCOPE,
&c. &c.

THERE is nothing in medical ophthalmology more important than the fact that a patient who has acute neuritis can read the smallest type and may not know that his sight is in any way defective. Let me say a word as to term neuritis.

For my own part I know of but one inflammatory condition of the optic discs from intra-cranial disease, with the possible exception of swelling of the optic disc in tubercular meningitis. But when I, in the following paper, use the expression optic neuritis, the reader may substitute choked disc, peri-neuritis, or any other term which seems to him better. For at present I concern myself with nothing more than showing *that extremely abnormal ophthalmoscopical appearances may exist when sight is good*. I have been urging this for about fourteen years. I should think I have written on its importance a score of times. Although it is a fact fully recognised by most ophthalmic surgeons, as quotations I shall give

will show it is not accepted by very many physicians. To some the statement seems to be mere nonsense. Of course my experience of abnormal conditions of the fundus oculi is one-sided. I see what I may briefly designate "physician's cases." I would say of them that I oftener see extreme ophthalmoscopical appearances without any defect of sight than with any considerable defect of sight—say defect which the patient or his friends recognise. Lest this appear the extravagant statement of one who has become wedded to an early-formed opinion, I will give Gowers' conclusions from his field of observation.

"In reply (a) to your question as to my experience of optic neuritis without defect of sight, I should say that in at least half the cases of neuritis in cerebral tumours which I have seen there has been no defect of sight, either of acuteness of vision or in the extent of the field. In at least half the cases during the acute stage of the inflammation, and in a considerable proportion of cases throughout there has been no defect of sight. It is certainly more frequent for vision to suffer during the subsidence of inflammation (from the cicatricial contraction of the tissue formed) than during the active process. No doubt it is more common for sight to be affected in descending neuritis; but according to my microscopical observations, descending neuritis is rare, except in meningitis, in which observations on vision cannot often be made."

In the *Medical Times and Gazette* so far back as June 19, 1865, I recorded the case of a man who died of

(a) A good example of neuritis without defect of sight at any time is figured from a drawing by Gowers in Mr. Haynes Walton's book on "Diseases of the Eye," last edition.

tumour under the tentorium, and who, during acute neuritis, read the newspaper every day, and read small print to me ; I did not test his sight by test-types ; he became blind later. Since that time I have seen scores of patients who, with acute neuritis, could read the smallest type of Snellen or Jaeger quite easily. The fact of conservation of sight in double optic neuritis was, I believe, first stated by Blessig.

Let me here quote from a paper "On Latency of Optic Neuritis in Cerebral Diseases" (*Medical Times and Gazette*, Feb. 8, 1868). The quotation begins by a quotation from a still earlier paper ("Observations on Defects of Sight in Diseases of the Nervous System") which I published in the "Royal London Ophthalmic Hospital Reports," vol. iv., pt. iv., p. 403 : "*It is, I submit, imperative in all cases of severe cerebral disease, at all events in cases of an acute kind, to examine the eyes with the ophthalmoscope, whether the patient complains of defect of sight or not.*"

"I should now make the statement much stronger by adding '*even if he affirm that he can see well and if he read small type readily.*' A patient, after an ophthalmoscopic examination revealing optic neuritis, will sometimes, on being asked how long his sight has been bad, make a remark like this : 'I did not know there was anything the matter with it,' and may be able to read the type called '*brilliant.*'"

"If the above statement at first glance seems strange to any ophthalmic surgeon, I would beg him to bear in mind that patients are not likely to come under his notice until their sight fails. I have occasionally had the somewhat painful feeling that the accuracy of my ophthalmoscopical examination has been doubted by

physicians whose opinions I highly value, when I have declared that patients with severe cerebral disease, who seemed to see quite well, had inflamed optic discs. But there can be no possibility of mistake in cases of severe optic neuritis, as the appearances are striking and are very easily recognised—no mistake, I mean, in recognising that the retinal veins are very irregular, that the course of the arteries is much obscured, or quite lost, that there are little clots of blood scattered near the swollen discs; for these things are face to face with us when we are using the ophthalmoscope. They may exist when the patient can read small print easily, not ordinary small type, but No. 1 of the test-types used by ophthalmic surgeons.” The criticism upon this statement cannot legitimately be that it is an erroneous theory; it is not a theory at all; the reader, if unconvinced by the evidence, or rather, perhaps, I should say by the authorities quoted, may criticise it, but can only do so by denying its truth or its importance.

I believe there is an erroneous notion in the minds of some that one is speaking only of slight and doubtful appearances. It is for this reason that I made the remarks with which the above quotation concludes. I would refer the incredulous to a drawing of optic neuritis in the “West Riding Asylum Reports,” vol. iv., taken from a patient under my care who had perfect vision. The drawing is reproduced in the “Lond. Ophth. Hosp. Reports,” vol. viii., part ii., p. 316, Sept., 1875. The fact is, I have, until the last few years, been rather guilty of underrating slight ophthalmoscopical changes. I have several times spoken against the error of exaggerating the importance of slight ophthalmoscopical anomalies. For example, in a paper “On the Routine Use of the Ophthalmoscope in

Cerebral Disease" (*Med. Times and Gazette*, June 3, 1871), I say, "Another error as bad as, or even worse than, overlooking *striking* ophthalmoscopic appearances, is to attach undue importance to slightly abnormal intra-ocular appearances, which may be only abnormal in the sense of being physiological peculiarities. Curiously, this is the fault, not of those who have used the ophthalmoscope much, but of those who have used it little. It requires much practice to give true clinical value to "congestion of the optic nerves" or to "congested retinae," to slight changes about the edge of the disc or to alterations in the course and calibre of the veins. In the paper referred to, I spoke on this matter, and from it I quote the following:—"I have never laid stress on slight alterations in the colour of the discs, or on slight abnormalities in the size or course of the large retinal vessels. . . . We may get as far wrong by attaching too much importance to slight appearances as by altogether overlooking decided pathological changes." I certainly did not speak too strongly.

Professor Liebreich, at visits to the Hospital for the Epileptic and Paralysed, has frequently pointed out striking peculiarities in the fundus, which he declares to be really physiological variations. Speaking of the importance of ophthalmoscopical examinations of many normal eyes, Professor Liebreich remarked at the Clinical Society (see *Lancet*, November 5, 1870): "En effet, l'aspect du fond présente à l'état normal, on pourrait dire autant de variations que la figure humaine, et il faut l'étudier indéfiniment si on ne veut pas être exposé à prendre quelquefois pour une altération pathologique ce qu' n'est qu'une modification individuelle d'un œil sain." Obviously, then, whilst the student may observe any case he likes as minutely as he can do with precision, he should not dare

to draw conclusions from very slight intra-ocular appearances.

Let me now quote authorities on this matter. Soelberg Wells refers to the case of one of his patients who had acute neuritis and good vision, in his "Treatise on the Diseases of the Eye," p. 339, second edition. He mentions, also, a case from his own practice of unioocular neuritis in which the acuity of vision remained perfectly normal throughout. I quote the following from his work: "Mauthner ('Lehrbuch der Ophthalmoscopie,' p. 293) narrates an interesting case in which a patient affected with optic neuritis retained a normal acuteness of vision *up to the time of his death* (which was sudden). The post-mortem examination revealed the existence of interstitial optic neuritis, but the retina was healthy up to the optic nerve." (The italics in this quotation are mine.) In remarks added to reports of several interesting cases of optic neuritis at the Clinical Society, October 28, 1870 (see *Lancet*, November 5, 1870), Brudenell Carter referred to the fact "that a considerable degree of optic neuritis may be present in certain cerebral affections without impairment of vision." In his book on "Diseases of the Eye," p. 425, Brudenell Carter writes: "The announcement of the frequent co-existence of great nerve-swelling with normal vision was received when first made with something like incredulity, but the fact has long been familiar to those who, following the example set by Dr. Hughlings Jackson, Dr. Clifford Allbutt, and Dr. Buzzard, have systematically practised ophthalmoscopical examination in all cases of suspected intra-cranial disease." In my former paper, 1868, I referred to the opinions of Hutchinson. The following quotation is from a note by him in the last volume of the "London Hospital Reports," 1867:—"In

optic neuritis, it is often impossible, from the observation of the state of the disc, to form any opinion as to how much the patient can see." Bader, in his work on "Eye Diseases," p. 485, speaking of the state of vision in cases of inflammation of the optic disc and of the retina adjoining it, says: "Vision, according to the accounts given by patients, is often hardly disturbed, even if there is considerable loss of transparency of the optic disc and of the adjoining retina, with much hyperæmia. . . . Some patients (even at the height of the inflammation) only complain of a swimming of objects looked at for some time."

Noyes, of New York, commenting on a case of acute neuritis optica from tumour of the brain reported by Dr. Schiess Gemuseus, says: "This case adds to the observations already become numerous, where intra-cranial disease produces visible changes in the fundus oculi without causing injury to the sight." (*New York Med. Journ.*, February, 1871.)

Leber, in Graefe and Scœmisch's Handbuch, speaking of the papillitis (intra-ocular neuritis) in cerebral tumours, says: "*Vision may remain for a long time normal, in every respect, even with very great swelling of the papilla.*" (Italics in original.)

De Wecker writes ("Traité des Maladies du Fond de l'Œil," p. 81), "How many times have we not had the occasion to see a most characteristic neuro-retinitis with almost complete, and even complete, preservation of visual perception?"

Now I quote from the writings of the greatest of ophthalmic surgeons. Graefe, writing in 1866 (*Archiv. für Ophth.*, xii., 2, 130), says: "It has been on all sides admitted, and has been especially stated by Blessig, that there is no exact

proportion between the amount of functional disturbance and the amount of change discoverable by the ophthalmoscope. The want of such proportion depends upon two factors. The first is the uncertain degree in which the conducting elements of the nerve may participate in the morbid process, a fact well ascertained in nephritic retinitis. Hence, we may find the existence of good vision—almost always only for a short period—in a high degree of congestion papilla (Stauungspapille). The second factor is the degree of interference with the arterial blood supply.”

So far I have quoted ophthalmic surgeons. I now quote a physician. Clifford Allbutt (*Med. Times and Gaz.*, May 30, 1868), speaking of ischæmia of the discs, says: “It is astonishing how changed and disfigured the optic disc and neighbourhood may become in this affection without disturbing central vision. I have lately had several such patients under my care who could read a badly-printed news-sheet with ease. The same fact is strongly insisted on by Graefe. For this reason, the condition is constantly (I may, perhaps, say generally) overlooked.”

Buzzard writes: “There may be no impairment of vision accompanying extensive effusion of lymph upon the disc, and a considerable amount of sight may co-exist even when the disc is atrophied to some extent.” (“Clinical Aspects of Syphilitic Nervous Affection,” 1874, p. 35.) At page 98 of the same work, he describes a case of double optic neuritis in which, at the time the appearances were most strongly marked, the patient could read No. 1 Jäger with either eye. In a case of double optic neuritis, associated with cerebellar tumour (*Clinical Society’s “Transactions,”* vol. vii.), in which the appearances were well marked in each eye, but most advanced in the left, the patient could read No. 1 Jäger with the

right eye, and the field of vision was on that side of normal extent. In the left, however, sight was lost over the right half of the field, but the patient could see fingers pretty well over the left half. So also of a patient affected with double optic neuritis with right hemiplegia (Clinical Society's "Transactions," vol. xi.), Buzzard remarks, "On examining her eyes with the ophthalmoscope I found in each the optic disc greatly swollen and of a reddish tint, from the development of numerous minute vessels. Its border was not defined. The large veins, distended and very tortuous, disappeared suddenly here and there in the opaque swelling, to emerge again into view beyond the disc. . . . Her sight did not appear to be much affected, as she could read small print, but the mental condition made accurate examination on this point impracticable."

The condition of the discs, Dr. Buzzard tells me, was discovered at an examination of the eyes, which was made as a matter of routine, and not because of any complaint regarding the sight. Indeed, but for the employment of the ophthalmoscope, no affection of the eyes could have been surmised from her manner and story.

Broadbent (Clinical Society's "Transactions," vol. ix.) has recorded a case in which, with "marked optic ischæmia or neuritis," vision was good.

Dr. Stephen Mackenzie has recorded in "Brain," part iii., p. 404, a case of embolic hemiplegia with double optic neuritis, in which the patient complained of no defect of vision, and was able to read without difficulty No. 1½ of Snellen's test-types.

Dr. Stephen Mackenzie tells me that a patient lately died under his care in the London Hospital from atrophy of the brain who had had double optic neuritis, in which pa-

tient's case there was no defect of vision. The optic neuritis was only discovered by the examination of the eyes with the ophthalmoscope on his being asked by a colleague to see the patient, who complained of pain in the head and vomiting. Dr. Mackenzie tells me that he has frequently demonstrated to his class cases of optic neuritis from cerebral disease without there being any appreciable loss of sight, and that he has watched such cases from the onset to the complete subsidence of the inflammatory process in the papilla of the optic nerve, without being able to detect by test-types any defect of vision. He agrees fully with me that optic neuritis is to be detected by the routine examination by the ophthalmoscope, irrespective of the statements of patients as regards their sight. Many of the cases he, as physician, has seen where the sight *is* affected, have passed through the ophthalmic surgeons' hands before they have reached the physician.

I thus urge the routine use of the ophthalmoscope on very good authority. Without it, optic neuritis may be overlooked in its early stage. Thus we miss an important help in diagnosis, and we begin treatment of pathological changes late. There is disease of the optic nerve to treat before the symptom amaurosis appear.

Without this help we should, in the early stages, under-rate the gravity of very many cases which end fatally.

From a scientific point of view the necessity of not overlooking a decided pathological condition is obvious. Then it is of some importance in a case of severe cerebral disease to be able to tell the patient's friends that sight may become impaired or be lost, for this prediction, when verified, will satisfy them that we have not misunderstood the nature of the case in its early stage. There are few cases on which such different opinions are

given as those of cerebral tumour and other kinds of "coarse disease." They often begin by symptoms which are not specially nervous, although really dependent on brain disease. The early symptoms are often put down to stomach derangement, to over-work, or to some other minor cause. The patient is naturally very anxious to put forward the view that his severe headache, vomiting, &c., are owing only to some temporary derangement, and mostly accuses the liver. He may urge that his illness began by "attacks of bile." I have known the friends of a patient lament bitterly the different opinions that have been given at the early and late stages of a case of cerebral tumour. Every practitioner will know of cases of young men who have first severe headache, and, perhaps, urgent vomiting, and scarcely other symptoms, and who occasionally for weeks, or even for months, remain able to do their work somehow, especially if, as occasionally happens, the severe pain in the head only comes on in the night. The absence of renal disease being ascertained, the symptoms are strong evidence of the existence of "coarse" disease inside the head. We often see patients blind from optic neuritis, especially children who are reported to have had "bilious fever." It is frequently the "fever" that attends coarse disease of the brain. I feel sure that the use of the ophthalmoscope would sometimes save us from the mistake of declaring the symptoms of a case to be of non-cerebral origin, because superficially considered, they seem to refer to other organs than the brain. In all such cases the ophthalmoscope should be used, *whether the patient complains of defect of sight or not, and when he can read the smallest type.* Although the absence of optic neuritis would not negative the existence of coarse disease within the cranium, the

presence of the neuritis (double) would, I think, render the existence of this kind of change *almost* certain in many cases of very severe headache without renal disease ; we cannot be quite certain. I had, about a year ago, a patient under my care, the whole course of whose symptoms—and double optic neuritis was discovered—seemed to point to coarse disease of the brain ; but there was no such change found post-mortem ; the brain was very much wasted. Nevertheless, I repeat, double optic neuritis occurring along with intense headache, and especially with vomiting (perhaps bilious), is *almost certain* evidence of the existence of coarse disease of some kind—not of any particular kind—within the cranium.

Let me relate a case showing, in a very striking way, the value of the recognition of the fact (case recorded *Med. Times and Gaz.*, Nov. 16, 1872). The patient was a blooming healthy-looking girl, *æt.* 20. Although she had attacks of headache and vomiting, yet she was apparently so perfectly well in the intervals of these attacks that the diagnosis of intra-cranial tumour must have seemed *preposterous* to those who did not use the ophthalmoscope or who could not interpret its meaning.

Now this patient had a nervous symptom, or rather a pathological nervous condition ; that is, as above implied, she had acute double neuritis ; but, as she could read the smallest type, and did not know that there was anything the matter with her sight, this valuable evidence did not exist for those who do not use the ophthalmoscope by routine. Her sight failed before death. (Tumour and cyst of the right lobe of the cerebellum were found.)

For some time this patient had only three symptoms, the three so often found together—viz., headache, vomiting, and double optic neuritis. Now, at the most import-

ant stage of the case, the third symptom (optic neuritis), as I have said, would not exist for those who do not use the ophthalmoscope *by routine*. Without it the diagnosis would have been erroneous. It is true that from *very* severe headache and vomiting we may *guess* intra-cranial tumour, but who *would* ever guess it in a perfectly healthy-looking blooming girl, who was in good flesh, and occasionally apparently absolutely well. This indeed, is the *beau-ideal* of a case to be mistaken early in its course for "disease of the liver." How often do we hear of amaurosis caused by "bilious" fever? To encourage such a mistake was the fact that the girl had always been subject to "bilious attacks." Another mistake would be hysteria. Neither of these mistakes could be made in such a case if the patient's optic discs were looked at. We did look at them, and from what we saw we were absolutely certain that there was intra-cranial disease, and we predicted tumour.

But we may overlook the neuritis altogether. The patient may die of intra-cranial disease before his sight begins to fail, or the neuritis may pass off, leaving sight quite good. It is obviously a serious matter to overlook so striking a pathological condition. In cases of loss of speech (aphasia), there may occasionally be discovered severe optic neuritis when there is nothing in the patient's bearing to suggest that his sight is defective.

In young children it is absolutely necessary to use the ophthalmoscope when they suffer from severe cerebral disease. We occasionally discover optic neuritis in a child whose parents have never noticed anything the matter with his sight. In cases of acute cerebral disease, the patient may be too ill to take any notice of our attempts to test his sight. Here, again, we must use the ophthalmoscope.

“ In the following cases, without ophthalmoscopical examination, we could never have inferred that the cerebellar abscess which was found post-mortem had produced any changes in the patient's discs. I saw this woman by Mr. Maunder's permission. I take the report from the “ Mirror ” of the *Lancet*, March 29, 1873 :—

“ For the notes of the first of the subjoined cases we are indebted to Mr. Wallace Drew.

“ S. B—, æt. 16, admitted May 25, 1872. The patient, a fair, delicate-looking girl, stated that about a fortnight before admission she had earache, which was soon followed by giddiness and discharge from the ear. The discharge and giddiness continued up to the time of admission. Previous to this she had always been healthy. She had scarlet fever and measles when a child, and small-pox six months ago, from which she completely recovered. No history of injury ; no history or signs of syphilis.

“ On admission there was a thick yellow discharge from the left ear, and she complained of deafness, frequent attacks of violent retching and vomiting, and said her ‘ head felt going round and round.’ She had great pain ‘ all over her head,’ which was increased by pressure over the mastoid process. Temperature normal.

“ May 28th. — Condition and symptoms unaltered. Ophthalmoscopic examination disclosed double optic neuritis. She passed urine in the bed during the night.

“ June 5.—The nurse states that at 7 a.m. ‘ she gave a scream, and a stupor came over her, from which she could not be roused. The eyeballs and eyelids kept moving during the attack.’

“ 6th.—At 4 a.m. patient had a fit, described by the nurse as ‘ clenching of the hands and feet and foaming at the mouth,’ which lasted about four minutes. She did

not bite her tongue. She remained in a stupid condition all day.

“7th.—Patient can be roused with difficulty. Continues vomiting. Dr. Hughlings Jackson saw her and dictated as follows :—‘There is double optic neuritis ; minute examination impracticable. She is very much thinner than she was a week ago. There is no paralysis apparently, but she is too ill to get out of bed for careful examination.’

“8th.—Two fits this morning, one at 9 a.m, the other at 10 a.m. Nurse states that before the first she had a rigor, which lasted a quarter of an hour. During the fit she had twitching of the muscles of the face and eyelids, but both upper and lower extremities were apparently powerless. The second fit was similar to the first, except that the twitching of the face was absent. Passes urine in the bed. Tongue is moist, tremulous, and red.

“14th.—She has improved very much since the 8th. Vomiting, pain, and giddiness much less. Discharge from the ear is very profuse. Passes better nights. Bowels constipated.

“29th.—Her general symptoms have been much the same since the last report ; some days she has been sufficiently well to get up and do needlework, at others as bad as ever. Has had no more fits. Dr. Hughlings Jackson made the following remarks :—‘The optic discs are still swollen, and very prominent over a small area. Veins are very dark. Effusions of blood at the edge of the swelling. General manner much improved since I last examined her.’

“July 31st.—Dr. Hughlings Jackson saw her again, and made the following remarks :—‘She has been much worse for the last two days ; but since I saw her on

June 29 she had been very much better, had been up, and had done needlework. She made two aprons. The last observation shows that her sight has not been considerably affected, although it has not been tested by types. She would read, and the nurse thought she saw well. She had taken her diet (half 'fancy'), and had also eaten part of other patient's diet. Indeed, she seemed to be getting well. Now she is very ill, and has great pain in the head. There is no paralysis. It is of course impossible, as the patient is in bed, to say that her legs are not weak; but before she took to her bed there had been no difficulty in her gait. Certainly there is no paralysis of any cranial nerve; and it is particularly to be noted that speech, articulation, and voice are good. There is, however, still double optic neuritis. The existence of this pathological condition of the optic nerves would never be guessed from her manner. The disc patch is about three times the diameter of a healthy disc. There is no distinct edge, but a general boundary of swelling over which the large veins turn to be lost to sight, re-appearing beyond. No arteries are traceable in the patch.'

"The patient died a quarter of an hour after the ophthalmoscopic examination was made, and the above remarks dictated by Dr. Hughlings Jackson. From the nurse's description of her death, she appears to have become rapidly comatose. Her temperature (night and morning) 8th of June—the day she had two fits—when it reached 99°. Trephining was suggested by Mr. Maunder, but was counter-indicated by the absence of any localising symptom.

"The friends refused to allow any examination of the body, and removed it, but on the following day (Aug. 2),

after great difficulty, permission was obtained to examine the head. The left half of the cerebellum was found to be completely hollowed out, forming a large abscess cavity. The cyst-wall was soft, with little or no fibroid thickening, and the pus it contained was of a yellow colour, tinted in some parts with a green hue. At the receding angle in posterior fossa of skull, formed by the junction of the mastoid with the petrous portions of the temporal bone, where the lateral sinus makes a bend, a spot was found which communicated directly with the abscess in the cerebellum, and from which pus oozed when the periosteum was removed. At this point the bone was found softened, and readily broke under the point of a probe. There was rather more fluid in the lateral ventricles than normal, otherwise the brain was quite healthy. There was not the slightest trace of lymph or even dulness of any portion of the arachnoid."

Illustrations of the second statement, that neuritis may exist with good sight and may pass off, leaving sight good are often given. I refer again to the two drawings in the "West Riding Asylum Reports." The uppermost drawing shows acute neuritis; the second, the disc on recovery almost normal. No one would dare to say that the patient had had neuritis from the appearance depicted in the second drawing; the patient never had any defect of sight from first to last.

It is not at all uncommon for patients to recover from optic neuritis. I do not say recover from amaurosis (although they may recover when sight is gravely affected, if treated soon after the failure), for I now speak only of cases of optic neuritis in which there is *no defect of sight*. I give one illustration: In a case I recorded (*Med. Times and Gaz.*, Dec. 7, 1872), the patient was attending on me

for convulsive seizures, when one day, May, 1871, he complained of his sight. I had examined his eyes at his first visit, Feb. 9, 1871 (the discs were then normal), but I had neglected to examine them at intervening visits (April 14 and 29), thus breaking a rule I have tried to enforce.

On May 9 I made this note: "There was nothing wrong observable about his sight, judging from his manner, but he said he could not read for many minutes together, and that he saw badly across the road. I therefore looked at his discs, and, finding neuritis, tested his vision. When near the window he could read with each eye No. 1 of Jäger. He read slowly and made one or two mistakes, but corrected them when they were pointed out to him. The discs were much swollen; the edges were lost. The veins were large and tortuous; there were irregular white patches and several recent hæmorrhages. How long these appearances had existed I could not tell. The discs were normal at his first visit on February 9.

May 16th.—He could still read No. 1 of Jäger and No. 1½ of Snellen. He read slowly and made four mistakes in about four lines, *e.g.*, he said "space" for "spade," which, however, he corrected himself. Still he complained of his sight. He said, "it comes over like a cloud now and then," and that when he looked at the newspapers "it comes over like a mist." His sight never failed altogether. He had occasionally specks in the left eye. There were no "colours." He recognised the colours in the coloured types of Snellen very well. His field of vision was normal. The left optic disc was much swollen, the veins large and knuckling over the edge of the disc. The arteries were obscured. There were very

small shapeless white patches and scattered blotches of blood. The right optic disc was in about the same condition. There were no changes at the yellow spot. There was no albuminuria. He had had a slightly giddy seizure. I gave him large doses of iodide of potassium.

The discs gradually cleared up; indeed, by June 26, the appearances would have seemed normal to a careless observer, but the edge of the disc was slightly indistinct; the arteries were traceable, and the veins were not tortuous. By direct examination, streaks were seen along some of the vessels. There was "silvery-looking" matter near the entrance of the vessels in small quantity; there was also a little streaking of the adjacent retina.

1874.—He keeps well. The ophthalmoscopical changes to ordinary indirect examination are *nil*, and to direct examination they are very slight.

At every visit the patient could read the smallest test-types. I tried him with Jäger's, Snellen's, Dixon's, and Williams's types, so that he did not read assisted by memory.

In all the cases I have seen of recovery from optic neuritis the patients had taken large doses of iodide of potassium. Whether they would have recovered if left alone, that is, whether sight would have failed, I cannot tell. My belief is, however, that the iodide of potassium administered in the earliest stage of optic neuritis would save many from blindness. It can, of course, do no good for the tumour (unless it be syphilitic), but it does, I think, for the inflammation of the optic nerves. When I say I have known optic neuritis appear and disappear, I can speak of cases in which, in a subsequent illness, the patients have died. The ophthalmologist never sees the pathological condition until sight is damaged. But the physician will, if he looks, often see it when there are no

other permanent symptoms than headache, with or without vomiting.

Patients sometimes die suddenly, as the case of cerebellar abscess illustrates, from intra-cranial adventitious products. In the following case, reported *Lancet*, June 21, 1873, there was no autopsy, and thus we can only say that the patient died suddenly after showing symptoms of chronic cerebral disease of some kind. But the case shows strikingly the importance of the *routine* use of the ophthalmoscope. It might easily have been mistaken for one of hysteria, or, by careless persons, for some affection of the liver. The woman always looked well. But such mistakes could not possibly have been made in this case after the use of the ophthalmoscope; optic neuritis is always a serious matter. At the very first the patient's husband was told that she was very dangerously ill. The only reason for giving this opinion was, there was optic neuritis.

A woman, æt. 28, attended first on October 26, 1872, for severe pain in the head, coming on in paroxysms, and for vomiting. The history she gave was obscure. It seemed probable that about a year before she had had double vision. She would occasionally fall down, and she had fits of some kind beginning in the left leg; no clear account of them was obtainable. Because she had *pain in the head* an ophthalmoscopic examination was made. Being a very nervous woman she seemed slightly alarmed at this procedure, and said excitedly, "There's nothing the matter with my eyes." She did read $1\frac{1}{2}$ of Snellen with each eye very easily, and, indeed, appeared to see quite well. Nevertheless, she had double optic neuritis well marked. Under iodide of potassium in large doses she got well, or, rather, to feel well, for the

neuritis had not passed off when she ceased to attend. Her sight was tested at each visit, and found to be normal.

She came again for the same kind of symptoms, February 3, 1873, and for attacks of giddiness, in which she would fall. At this time some swelling of the discs remained, *but she could still see well*; she easily read out No. 1½ of Snellen as before. The patient was again improving when, on March 23, she died suddenly. The evening before she had been out marketing with her husband. In the night she said she was not so well, got up, walked about, said she felt better, returned to bed, again said she felt not so well, and died immediately.

At her last visit she seemed to be a fine healthy woman, except for nervousness and an air of simple weariness. There was an inquest, but no autopsy.

...the left hand ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...
 ...the ... the ...

