symptoms disappear under its employment, and warm water alone was afterwards sufficient for the cure. In the case of more confirmed iritis, I persisted in the belladonna douche during the whole period of the treatment, because it was necessary to do so from the intensity of the disease, and the adhesions which had apparently occurred. In the case of simple conjunctival inflammation, with lachrymal abscess, I used warm water alone, because the iris being unaffected, it was not necessary to employ the belladonna. I have used other remedies in solution, more particularly the wine of opium with sulphate of copper, which I have found especially useful in the scrofulous affections of the eyes in children where a slightly stimulating douche is required.

The manner in which I use the douche or irrigating method in this hospital, and in private practice, is as follows:—If the iris be the seat of the disease, and the conjunctiva likewise affected, I prescribe the following lotion:—

Extract of belladonna, twenty grains;
Sulphate of copper, five grains;
Water, a pint. For a lotion.

This is to be injected frequently during the day with a clean brass syringe, with an ivory pipe capable of holding from three to four ounces of the fluid; at first it is necessary to throw the stream upon the closed lids, at least for the few first times. By degrees, however, the patient becomes inured to the shock, and after a time is able to receive the continued stream upon the exposed surface of the eye without experiencing any disagreeable sensation. The most marked improvement will be found to follow the three or four first applications of the douche.

Besides the intrinsic value of the douche as a remedy in ophthalmic disease, it possesses, I think, advantages over the common method of applying lotions to the eye. It is impossible, or at least difficult, by any other means, to remove entirely from the surface of the eye the pus which is secreted from the inflamed membranes, especially as some slight force is sometimes necessary to detach it, and I have often found that the simple contact of fluid in an eye-glass, which is the most common method, will not produce its removal. The other means which are commonly employed to convey lotions to the eye, not unfrequently increase the irritation of the surface, and very often aggravate the disease.

With regard to its application generally in diseases of the eye, I was led to adopt it from witnessing the excellent effects of the warm douche bath when used in diseased states of the fibrous tissue of the joints, and I thought that, as the structures were somewhat analogous, something like the same results might be produced. In this I have not been disappointed, and, as I have found the value of the remedy myself I am anxious that it should have a fair trial, not wishing to take any credit for my suggestion until its merits have been more fully ascertained, and I shall feel obliged to any one who will give it a fair and impartial trial.

Its good results, in most of the cases which I have seen, seem to be due to the gently stimulating effects which warm and medicated water, applied in this way, have upon the minute vessels of the tissues of the eye, reducing inflammation by increasing the circulation

through them where the external tunics only are concerned; but where the iris is either primarily or secondarily implicated, of course much must be referred to the specific effect of the belladonna in allaying the increased nervous irritability of its tissue, upon which the inflammation may often be said to depend.

There is a particular form of ulceration of the cornea in which I have found this plan of treatment particularly useful.

In ill fed and anæmic persons, ulcers will frequently appear on the cornea, without any obvious sign of inflammation in the surrounding vessels; they seem to arise, in fact, from a deficient nutrition of its texture. It has been proved by microscopic experiments, and is now generally supposed, that the cornea is not vascular, but that it derives its nourishment through absorption or imbibition from the surrounding vessels, and as these vessels participate in the general anæmic condition and powerless state of the circulation, of course the cornea, which is dependent on these for its supply, in some measure loses its vitality, and destruction of its texture ensues. In these cases I have found the irrigating treatment of the utmost possible service.*

P.S. I wish to correct an error which crept into my report of a case of purpura in the last week's Journal. I was misinformed respecting the existence of hæmorrhage from the mucous membranes, which I stated as not having occurred. I have since, however, been told that epistaxis, and some degree of hæmoptysis, and some slight signs of the hæmorrhagic tendency in other parts of the system, had taken place during the latter part of the patient's illness.

* For a more particular description of this condition—vide Dr. Williams's clinical remarks.—“Medical Gazette.”

A C A S E

OF

MUSCULAR AMAUROSIS,

CURED BY THE

DIVISION OF FOUR RECTI MUSCLES.

TO THE EDITORS OF THE PROVINCIAL JOURNAL.

GENTLEMEN,—The accompanying case of Henry Skinner is one which I published, amongst others, in a letter addressed to Dr. Farre, for the purpose of illustrating the symptoms of impaired vision, depending on morbid muscular contraction, and of which my reviewer, in the “British and Foreign Medical Review” for October, 1841, says, “There is not a shadow of evidence that the symptoms depend on the alleged cause”—namely, that of muscular contraction. I, therefore, in the present report of the case, have given a repetition of what I then published concerning it, with its subsequent history and treatment, from which I think it will be evident that the opinion of the said reviewer was, to say the least of it, wanting in judgment.

I remain, Gentlemen,
Your obliged servant,
JAMES J. ADAMS.

27, New Broad-street, City.

Henry Skinner, aged 22, cabinet-maker; of healthy appearance, but of delicate complexion, fair hair, and grey irides. The positions of both eyes are perfectly natural, but small. If an object be held at the distance of four inches from the eyes, both will equally and fully converge; but, if the object be approached close to the root of the nose, the equal convergence will become destroyed, by the left eye turning towards its natural central position, while the right eye more completely enters its inner canthus.

The appearance and action of the irides are natural **sight, with both eyelids open; very defective after moderate exertion**; when he first attempts to view a small object, or to read, the object or print is perfectly distinct for about four or five minutes, when a dimness of the sight, attended by some confusion of the objects looked at, prevents his continuing to use his eyes till they have been rested for about one minute, after which rest he is again able to pursue his employment with all the advantages of distinct vision, till the approach of the next attack of dimness, which will commence at a period somewhat less than five minutes, and last during nearly double the time of the first. If he be anxious to pursue his occupation, he can only do so by the means of repeated rests, of a gradually increasing length, and at shorter and shorter intervals, till two or three hours have expired; he will then be compelled to rest his eyes during many succeeding hours, otherwise the dimness or mist, of which he complains, would become so complete as to leave him in perfect darkness for a time. A few days since he endeavoured to write a short letter, which, after much difficulty, he accomplished in the space of two hours. He says that, had his eyes been well, he could have performed it easily in twenty minutes.

If the eyes be examined separately, their degrees of impaired vision will be found to be nearly alike; perhaps the sight of the right may be rather more imperfect than that of the left, but in both eyes it is most imperfect towards the nose. The sight is generally worse in the first part of the morning, and after dinner. In the morning, during the first half hour after he has left his bed, the sight remains very good; it then commences to become dim, even if he looks at large objects, and this state of the sight will continue for about three hours; it then becomes much less so, and even sufficiently good to allow him to follow his business. After dinner the same kind of attack commences, but generally does not last longer than one or two hours.

H. S. states that he suffers much pain in the brows, forehead, and temples, which is always increased when the dimness of sight is most troublesome, and is readily excited by the light and heat of the sun, or by extra bodily exertion. The history of the case is simply this: that about twelve months since he first came to London from the country, and that his sight soon began gradually to fail him while at work; also, that its defect has steadily increased, in spite of continued treatment by alteratives, purgatives, and counter-irritants.

Such is the history of the case when published in May, 1841. The following is its continuation from September 28, 1841:—The general appearances of the patient are much altered since May last; he is thin, and exceedingly out of health, and his counte-

nance is expressive of much anxiety; the position of his eyes is natural, their power of convergence full and equal, and the repulsion of the right eye just perceptible; the power of inversion of each cornea is more than complete, by one quarter of its surface; that of eversion is equally complete in either eye.

His sight is exceedingly defective, and worse than he has ever known it to be; a gaze at any object, but for a few seconds, is followed by a dimness of the sight, and an involuntary closure of the eyelids; he cannot see to read, to write, or to follow his occupation for longer than five minutes at a time, without being compelled to rest his eyes; and he says that, if he endeavours to work at his trade from seven o'clock in the morning till seven at night, he cannot accomplish more than about two hours of work, the rests of his eyes requiring to be frequent, and of long duration; sight in both eyes equally affected. A convex lens, No. 2, improves the sight.

He suffers from severe pains in the back part of the head, and in the eyes, also from giddiness, and that to such an extent as to cause him to be in fear of falling, all of which symptoms are much increased in their severity if he exerts his eyes or his body, or if he be surrounded by much noise, and they are worse when the dimness of his sight is greatest; he likewise complains of feeling very drowsy.

His history from May, 1841, the date of the preceding report of this case, is, that he has continued unremittingly to attend to the directions of an ophthalmic surgeon at an eye hospital, under whom his general treatment has been, at one time, mercurial, even to salivation, at another, tonic; and his local treatment, counter-irritation, to which may be added a perfect rest of the eyes during nearly three months. From May till now the sight has been gradually becoming worse, though not without a few temporary improvements.

Oct. 4. I divided the left internal rectus muscle, which was observed to be remarkably thick and powerful; the result of the operation on the position of the eye was, its divergence when the right was central.

5. Position as immediately after operation. He thinks that the sight of the left eye is slightly improved, but of this he cannot speak positively, so much pain and smarting of the eye resulting from the least attempt to use it. The pains about his head and eyes are less severe than previously to operation, though after it their severity, during several hours, was much increased.

9. Position unaltered; inversion of the left eye very imperfect; sight in the left eye decidedly improved; it can be used for a longer time than before operation, without mistiness or pain being excited; he suffers severely from giddiness, which is instantly relieved by pressing the right eye firmly and backwards; mere closure of the lids will not remove the giddiness.

16. General appearance improved; less anxiety of countenance; and he says that his appetite and spirits are better; position and association of both eyes natural; convergence slight, and equal at three inches; repulsion very slight in the left, and not central; inversion just complete in the left; eversion slightly more complete in the left than in the right; sight, with both eyes open, very good if he looks

directly forwards, or to the left side, but more defective than usual if he looks to his right, every object appearing as if in a dense fog. If either eye be closed, objects are instantly seen as distinctly to the right as in any other direction, but not quite so distinctly as when both are open; the sight of the left eye is better than that of the right. He says that his eyes feel stronger, and that his sight is clearer; the pains of the eyes and head are less constant in the attendance. The treatment has consisted in the close bandaging of the right eye. He states that, three days since, he wrote a long letter without being compelled to rest his eyes; it was accomplished in half an hour, and, according to his belief, he could not, previously to operation, have written it in a less time than that of two hours.

23. Objective symptoms as on the 16th; sight much improved; he can see to read the smallest print with perfect distinctness; he read yesterday for two hours at a time, without observing any dimness of sight or mixing of the letters, an aching of the eye-balls being the only cause which compelled him to desist; objects are still seen indistinctly when situated to his right side; sight equally perfect in either eye, and equal to that experienced when both eyes are open.

25. *Second Operation.* Divided the left external rectus; did not remove a portion; the central position of the eye was not disturbed by the operation.

30. Left eye slightly converged; right central; association unnatural; the closure of either eyelid causes a divergence of the open eye, and a corresponding convergence of the one covered; eversion of the right cornea not beyond two lines of its natural central position; sight nearly as before the last operation, and is equally well in all directions; he still suffers severely from attacks of pain, which occur suddenly, and mostly after food, and he says that they are generally accompanied by a flow of tears; he has not bandaged either eye.

Nov. 6. Position of both eyes nearly natural, the left being but very slightly inverted. Eversion not complete in the left eye, by one and a half lines. Sight not quite so clear as it has been of late, though "pearl" can be read at the distance of twenty inches, and gazing on it, during several minutes, will not produce dimness. The sight of either eye is clearer than that experienced when both eyes are open. Objects are now seen less distinctly on the left side, and the closure of either eye, instantly, renders their appearance clearer—a condition exactly the reverse of that which succeeded the first operation. His painful sensations are lessened, though readily excited by exertion of the body, or eyes.

27. Position and association of the eyes perfectly natural, they having been, for the space of a few days, equally and slightly converged. Prominence slightly more in the left eye than in the right, than which it is the more natural and handsome looking. Sight, free from dimness, if exertion of the eyes be not continued beyond two or three hours; and he can see most clearly if only one eye be used at a time. He is still very subject to pain across the forehead, in the brows, temples, and eyeballs; the pains, which used to be felt at the back of the head, have nearly ceased. The pains are more severely felt on the right

side than the left; if he wakes in the night he feels a smarting and aching pain in the left eyeball.

Dec. 4. Objective symptoms as already reported, with the exception of the eversion of the left eye, which is all but half a line of being complete. Sight not so perfect nor strong as of late; any exertion of the eye, beyond two hours, produces dimness. His painful symptoms continue to be severe; he says that pain is always felt before the dimness of sight is observed, and, on resting his eyes, that the sight is first relieved, then the pains. He attributes the present defect of sight to an extra exertion of his eyes five days ago, which consisted in his reading, by candle-light, for the space of three and a half hours.

6. *Third Operation.* Divided the right external rectus, did not remove a portion; the immediate effects of the operation were, a convergence of both eyes, and a lessening of the power of eversion in the right eye by two and a half lines.

9. Both eyes converged, the left more than the right; sight very confused, not double, and, if either eye be used separately, the vision is clear and strong; his pains are lessened, though they were aggravated on the day of operation; the left eye has been closely bandaged since the day of operation; the right is now ordered to be closed, instead of the left, for about two days.

20. Position, both eyes slightly and equally converged; association nearly natural, the closed eye remaining inverted, the open one becoming central; convergence extreme and equal; repulsion, none; eversion not complete in the left by half a line, and in the right by one and a half lines; sight still very confused, but not double; the more distant the object, the more confused, and objects appear to be diminished in size, also to be displaced; those situated to the right appear to be at a point more to the left than they really are; for instance, two plates, with a fork between them, being placed directly before him, the right hand plate appeared to be shifted close to the right side of the left hand plate, and the fork seemed to occupy the centre of the right hand plate; dimness does not increase according to the degree of exertion of the eyes; at times objects are seen, with both eyes open, perfectly distinct for a few seconds; if either eye be used by itself, the sight is at all times clear; the pains in the head are less frequent and less severe; the aching of his eyeballs has entirely subsided.

27. Position and association of both eyes perfectly natural; convergence extreme and equal; no repulsion; inversion complete in the left, and more than complete in the right by one quarter of its corneal surface; eversion not complete by half a line in the left, and by one line in the right; sight improved; he can see to read very finely engraved letters, but continued exertion of the eyes renders the appearance of the letters dim and mixed; sight in the left eye very slightly more perfect than that of the right; pain is still felt in the front part of the head, but on some days he is perfectly free from pain; continued exertion of the eyes, beyond three or four hours, is followed by pain across the forehead; if either eye be used separately, pain is more quickly produced by the use of the right eye than by that of the left.

Fourth Operation. Divided the right internal rectus; it was remarkable for its size; the immediate effect

was a divergence of both eyes, but of the right more than of the left; treatment, to closely bandage the right eye.

Jan. 8, 1842. Position of both eyes very central; association not quite natural, the covered cornea being slightly diverged; convergence full at one inch; repulsion alternate, slight, and unsteady, and in the left more frequent and full; inversion complete and equal; sight, with both eyes open, more perfect than it has been at any time since he first applied to me; distant objects are remarkably distinct, but very near objects are not quite so; the sight of each eye is equally perfect, and if one eye be used at a time, both near and distant objects are seen with natural clearness; closure of the left eyelid is attended by pain over the right eye, which subsides on the left being reopened.

22. Position and association natural; convergence full; repulsion slight, alternate, and unsteady; sight improved; near objects are seen more clearly; no pain in the head or eyes after exertion, and the pains of late have not been felt in the early part of the morning.

29. Sight still improved in its clearness and brightness; he can see to read during as many hours as he pleases without dimness of vision or pain being produced; he only would feel drowsy; the sight in each eye is now equal to that of both eyes; a few wandering pains through the head are occasionally felt, but their degree is so slight as not to cause him any uneasiness, or interruption to his occupation.

REMARKS.

If the facts of the above described case be briefly stated, it will appear that a healthy young man, of about twenty-one years of age, by trade a cabinet-maker, came from the country to London for employment, his sight being at that time perfectly well, and that he did not work long at his business in his new situation, which was in London, before he felt that his sight was not capable of so much exertion as formerly. The sight from that time gradually became more and more defective, with respect to its clearness, during exertion of the eyes, and, at about the expiration of one twelvemonth, its defect was such that he applied for its relief to a surgeon of an eye hospital, which application was made in the spring of 1841. He remained under the treatment of that surgeon till September of the same year, and, in the interval, paid the utmost attention to his eyes, by attending the surgeon regularly, following his directions strictly, and by most carefully resting his eyes during three months of the time. The treatment consisted of the usual remedies which are tried for the cure of his complaint—namely, a course of mercury, and one of tonics, accompanied by severe counter-irritation. The results of his more than six months' treatment was a very considerable increase of impairment of health, sight, and pain; and when he applied to me in September, 1841, a gaze of a few minutes at any object caused his sight to become dim, and his head and eyes extremely painful, and an attempt to work at his trade, from seven o'clock in the morning till seven at night, would only allow him to execute about two hours of work; his frequent rests of his eyes, to relieve their sight and pain, required so much time.

On October the 4th I divided the left internal rectus muscle; on the 25th of the same month, the left external rectus; on the 6th of December, the right external rectus, and, on the 27th of the same month, the right internal rectus. Previously to the first operation, the usual position of the eyes was central and natural; after the first operation the left eye diverged, and after the second converged; after the third both eyes converged, and after the fourth both diverged; and before each operation, and in a few days after the last, the positions of the eyes were central and natural, and their motions perfect to a natural extent. By the first operation the sight of both eyes was much improved as to clearness and power of continued exertion; small print could be read during two hours at a time, and the pains were lessened. By the second the sight of each eye was used separately, and was improved, but not quite so perfect as it had been if both eyes were open, and his pains lessened. By the third the sight, with both eyes open, was improved, that of the left made more perfect than that of the right, and his pains greatly lessened. By the fourth and last operation, his sight was made as perfect as he has ever known it to be, equal in strength in each eye, and capable of enduring the longest exertions without dimness being produced; also, his pains were so far removed that they were but very occasionally felt, and then in a degree so slight as not to cause him uneasiness, or any interruption to his occupation. So that instead of losing his sight after a short gaze at an object, and being capable of only executing two hours of work at his trade in the space of twelve hours, he can now view, for a natural time, the finely engraved letters of the Lord's Prayer, as engraved in a circle of less size than a fourpenny piece, with distinctness and comfort, and he can see to do as long a day's work at his business as he ever could.

CASE

OF

TUMOUR DEVELOPED IN THE MIDST OF THE CAUDA EQUINA.

By W. W. FISHER, M.D.,

Downing Professor of Physic, Cambridge.

The case I am about to communicate came under my observation in January, 1840. The name of the individual affected was Taylor; he was thirty-eight years of age, was a tailor by trade, and had been intemperate in his habits for some time previous to the commencement of his illness. He had about three years before (i.e. in 1837), injured, whilst riding, the lower part of the loins by the back part of the saddle, and from that period he began to suffer from pain in the lumbar and sacral regions, which was attributed to rheumatism; the pain gradually became more violent, and extended down the legs, which began to swell. He was obliged to give up work in June, 1839, and became bed-ridden in the September of the same year; he could not, however, lie down, but rested on