

Report on the result of the operations for the cure of squinting, performed at the Royal Westminster Ophthalmic Hospital, between the 18th April, and 30th October, 1840 ... / by Charles W.G. Guthrie.

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R E P O R T

ON

THE RESULT OF THE OPERATIONS

FOR THE

CURE OF SQUINTING,

PERFORMED AT THE

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL

BETWEEN THE

18TH APRIL, AND 30TH OCTOBER, 1840.

Presented to the Governors at their Quarterly Meeting, Nov. 5th, 1840,

LEWIS POWELL, ESQ. IN THE CHAIR,

And directed by them to be printed and transmitted to each of the Governors and to the
Medical Journals.

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BY CHARLES W. G. GUTHRIE, JUN.

ASSISTANT-SURGEON TO THE HOSPITAL; DEMONSTRATOR OF ANATOMY AT THE  
CHARING-CROSS HOSPITAL, AND FORMERLY HOUSE-SURGEON TO  
ST. GEORGE'S AND THE WESTMINSTER HOSPITALS.

**Westminster :**

PRINTED BY F. HAYDEN, LITTLE COLLEGE STREET.

1840.



## R E P O R T.

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THE Governors of the Hospital having been pleased, at their General Meeting on the 25th July, 1840, Sir J. Swinburne, Bart. Vice-president, in the chair, to direct that my Report on the Cure of Squinting by the division of one of the straight muscles of the eye should be printed, published, and advertised at the expense of the Hospital for the benefit of the Charity, I have considered it my especial duty to endeavour to make each of the four editions it has passed through, as deserving of their approbation as the observations I have been enabled to make permitted me to do. Near seven months have elapsed since it was first introduced into the Hospital and into this country, since which time I have done 340 operations for internal, or converging squinting, and 16 for external, or diverging squinting. In no case has any inflammation of the ball of the eye followed the operation, neither has inflammation of any other part ensued, requiring further treatment than the application of a bandage and cold water for the first twenty-four hours. In by far the greater number of cases the eye has been exposed the morning following the operation, a dose of aperient medicine has often been omitted, poor patients have frequently gone to their work the next day, and in no one case has the slightest bad consequence followed this operation. The success has been, in cases of internal squinting, complete, and although some few have given much trouble, I have I believe arrived at that point which permits my venturing to say, that I have met with no case which is not curable; and that although in two or perhaps three cases the cure has not been as perfect as I could desire, it has been because the patients have hesitated in complying with my wishes.

The operation, when done according to the method I have described in my former Report, may be accomplished with the greatest safety, and without fear of any evil consequences, in less than half a minute, and every surgeon possessing a reasonable degree of information on these points, will be able, after having once seen it done, to do it as well, to say the least of it, as I can. The liberality of the Governors in causing the Hospital to be open to all practitioners, has induced many eminent men from various parts of the country to avail themselves of this permission,

and they have returned home expressing strongly their feelings for this kindness.

The modes of proceeding resorted to in order to effect a cure in cases in which the simple operation of dividing one muscle has not been found effectual in the first instance, has been the result of great and patient observation of numerous cases; and although I believe them to be complete with regard to internal squinting, and that they will soon become so with respect to external squinting, I am not prepared to say they are so at the present moment; for the occurrence of external or divergent squinting, is only as one case in 30 to the internal squinting, and the opportunities for observation are by so much less frequent.

When in internal squinting the operation does not perfectly succeed, the eye is sometimes perceived to resume a little of its original cast, or squint, from the eighth to the fourteenth day, or about the time, I conceive, at which the muscle becomes re-united to the ball of the eye, or to some part within the orbit, and considerable anxiety is felt by both surgeon and patient at its occurrence. It does not however follow, that the operation will not eventually succeed, and the eye be restored to its proper place by the efforts of nature alone. I have seen it do so several times, nevertheless I do not now trust to the unassisted efforts of nature when I perceive the slightest turn beginning, but direct the other eye to be padded, or kept closed, so that its vision may be from time to time effectually prevented, and the patient to use, or to try to use, the remaining muscles. I do this, I believe with success, even when the eye has a turn in the opposite direction after the operation, relying on the efforts Nature will make to bring the axis of the single eye actually in use, (whether the other is covered or not,) into its proper place, even although one of the muscles, usually supposed to effect this object, should have been divided; and this education of the eye is of great service, even where the padding or closing of the other is omitted.

In some obstinate cases of long standing, the eye, almost immediately after the division of the muscle, returns to nearly its pristine state of obliquity, and although the division and separation of the muscle and its attachment in every direction, in the manner I have especially indicated, until the outer or sclerotic coat is fully exposed to a considerable extent, enables us to succeed, in most instances, in effecting the object in view, it does not always do so; and in a few cases I have been obliged to desist without bringing the eye to an exact central position; or I have found it a little turned inwards on the next or some other succeeding morning. The remedy for this evil, and which generally succeeds, is to exercise the eye in a regular manner, of which Charles Marten, 18, Lisle Street, is an excellent example, and in such cases the eyes will usually be found to be

naturally convergent. It may occur when the incision in the conjunctival membrane unites in the first instance by adhesion, which it will do in some cases when it is small, and the eye by turning at all towards its former oblique state, facilitates the process. I suspect also that the ball of the eye rests in its peculiar bed of fat and membrane, like a cast in a mould; and that when the eye is liberated from its squinting state, it does not remain in its new and partially unsupported position, but gradually falls back into the mould of fat and membrane originally formed around it. I am led to apprehend that the conjunctival membrane materially assists from its general attachment to the eyelids, in maintaining the eye in its old position, from which it is, however, gradually drawn in these cases by the efforts of nature assisted by art. Mrs. Mary Anne Tilly, aged 27, of 26, Queen Street, Seven Dials, has eyes naturally close to each other. The right turns in, she thinks the left quite sound. The operation was done on the right, on the 27th July; the eye, however on trial turned in, and the sclerotic coat was cleared to a considerable extent, but the eye could not be brought into its exact position, and it was presumed this little defect would be overcome by due management of it; and it was effected by great care and attention, so that it became quite straight, and is so at this moment, the 30th of October. As the eye operated on became straight, the other gradually turned inwards, but almost imperceptibly, and I have repeatedly, during the last two months, told her she should have it operated upon also, but to which she has hitherto demurred, she now says she will have it done next week. This case proves the utility of educating the eye in order to make it straight, although it did so at the expense of the other, but if both eyes had been done at once she would have been saved one laborious operation, and a great deal of trouble.

When one eye has been operated on, and restored to its proper state, and the patient is sensible he can turn it in every direction, and has so far recovered his sight as to make use of it, the other with which he knew he had an occasional cast, sometimes begins to squint more frequently, and this may become a permanent defect. In such cases, and I have alluded to them in the last edition, p. 4, there can be no hesitation about the propriety of operating on the second eye, and which succeeds in restoring both to their proper situation.

Whenever I can perceive this state to exist to an extent which I am satisfied from experience, is not likely to be removed by any management of the eyes after one operation, I recommend the patient to have them both done at once, or with only the interval of a day, so that the education required for both in seeing in a new way may go on simultaneously; and which I have found to be of great advantage in many instances. One of the most satisfactory cases of the kind I have met with is that of Caro-

line Gray, of 10, High Street, Kensington, 17 years of age, whose operations were done last June, and no defect of any kind can be perceived. The most difficult was that of John Pavey, newsvender, 47, Holywell Street, Strand, 40 years of age, and who had squinted for 37 years. The right eye was operated on the 12th of August, but as the left became gradually worse, with the improvement of sight in the right, he had the left done on the 2nd of September. The success of the second operation was not so immediate; and an excrescence which grew from the cut part, and formed a sort of cushion which prevented the eye turning inwards, I allowed to remain until it dropped off. He now sees straight, single, and is much pleased with the result; although the external rectus muscle of the left eye is very deficient in power.

In some rarer cases it will be found that the patient squints with both eyes, although he is only aware that he does so with one; and neither he nor his friends will believe it; and I now apprehend that these are the cases in which, when the operation does not fully succeed at once, it has been often thought necessary to divide, or attempt to divide, other muscles than the one originally intended to be operated on; whilst the incisions into the orbit and through the conjunctival membrane are unnecessarily prolonged, giving rise perhaps to those great protrusions of the eyeball, or to the loss even of eyes, both of which evils, it has been stated, have followed these operations, but which ought never to occur, and which I hope these observations will in future prevent. It is a difficult thing to persuade, much more to convince a person that he squints with both eyes, when he cannot see it himself, nor any of his friends can see him do it, although the defect in one eye is apparent to every body. Under these circumstances he submits to an operation on the eye he knows to be affected, which is easily done: but when the surgeon examines it carefully after the operation is over, and the patient tries to use it, he finds that he can still turn it inwards, and the operator sometimes thinks it necessary to cut in various directions until the eye is sufficiently loosened in the orbit to lie in the desired position. A more cautious operator is contented to have removed the greater part of the evil, trusting to the management of the eye afterwards for its complete recovery. This was my practice, and although I succeeded in many instances, still I have found among the cases of 30, 40, and 50 years' standing, some that I could not entirely overcome. These persons have presented themselves, for the most part during the last two months, the more elderly people having begun to think that they might as well avail themselves of the advantages the operation afforded; and in the instances alluded to the patients all persisted that they squinted only with one eye, and which they readily submitted to operation; but when told they must have the other done, they as manfully resisted.

In my last, or fourth edition, I alluded to this, as I have before remarked,

but I did not like to express myself more fully on the practical point, until, from repeated observations, I was quite satisfied of the fact I intended to inculcate. In such a case, that is when the eye still turns in after the operation, and I am satisfied I have done all that ought to be done, I do not persist in trying to do more, but at once operate on the other eye, whether it apparently stands in need of it or not; and I ascertain the fact of the necessity in the following manner, if it had not been done before. The bleeding if any having ceased, I desire the patient to look me steadily in the face with the eye which has just been operated on, whilst I keep the other closed. When this has been done for a few seconds, I gradually raise the lid of the supposed sound eye, and in every instance of the kind, have found it turned inwards, so much so as to cause the greatest surprise to the friends of the patient, or other bystanders, and, through their observations, as well as my own, the person at last submits to have the operation done on that eye also. It is much better they should be done at the same time, when both eyes immediately become straight, but this does not always follow so instantaneously if there is a long interval between the operations, and the first eye may require some education afterwards. But I believe that, with this improvement, the cure of an internal squint may always be accomplished.

The following cases, selected from among many, may be seen at any time, and are in attendance on the Committee.

Thomas Billington, 2, Turner's Court, Bedford Bury, aged 15, began to squint at nine, after a cold in the right eye. The operation was done on the 27th June; but this eye did not become quite straight, and the left soon appeared to turn in also, so that both converged without causing a squint. I therefore performed the operation on the second eye, on the 14th August, and both directly became straight, to my great satisfaction.

Miss C—— was sent to me by Mr. Walsh of Halfmoon Street in August, and on the 1st of September I divided the internal rectus muscle of the left eye. I could not, however, bring it completely into the central position, and I assured her she squinted with the right eye, although she did not know it, and would not believe it, and which was the reason of the left eye not becoming quite straight. She submitted to my entreaties to have the other eye operated on a fortnight afterwards, as the obliquity could be perceived by her friends on the experiment being made that I have just mentioned, and both eyes immediately assumed their proper situations, and she is now free from the deformity she suffered from.

In the latter end of September I had two private cases of a similar kind, on which I operated on both eyes with complete success. In one, Miss A——, there was an interval of a day between the operations. In the other, Master W., they were done in succession. In a third case,



which has lately occurred, the young lady and her mother would not believe in the possibility of a second operation being required until after they had examined the different patients at the hospital who had been cured by submitting to it.

In the case of George Oliff, to which I alluded in the last edition as one of the most difficult I had met with, the regular exercise of the eye and all my other endeavours failed. He had received a great deal of benefit, he was himself satisfied with the improvement which had taken place, although the eye still turned inwards, although very slightly. The operation was done on the left eye on the 24th of August with the utmost care and attention, and the parts were divided to such extent, that I thought it advisable to keep him in the Ophthalmic Hospital for a few days, until all danger from inflammation should have passed away. After the wound had healed he was attacked by a corroding ulcer on the side of the nose, and by great inflammation and swelling of the bone of the leg and its covering: for this most serious constitutional disease Mr. Guthrie took him under his own care into the Westminster Hospital, on the 15th September, where, at the end of a few days, he was attacked by erysipelas of the face and head, from which he eventually recovered when almost beyond hope. The ulcer on the nose and the swelling of the bone of the leg began to improve during the struggle, and on his final recovery from the erysipelas, he found it had cured his constitutional complaints. On the 22d of October, when his health was very much re-established, it was evident that the slight squint of the eye that had been operated on still remained, and Mr. Guthrie now informed him that he squinted with the other eye although he did not know it, and that a perfect cure of the left could only be obtained by operating on the right. All this he declared he could not comprehend; but, having heard the explanation given of his case by Mr. Guthrie to the students in the ward, he stated his willingness to submit to anything he pleased, and the operation for dividing the internal straight muscle of the right eye was done on Saturday the 24th. On Sunday every one could see the improvement which had taken place in the left; and they are now both quite straight, the cure being completed.

Mrs. Baker, aged 29, No. 5, Catherine Place, Pimlico, squinted from three days old with the right eye, but did not know she squinted with the left. Right eye operated on 28th August, but turned in slightly, which could not be relieved by education altogether, and was persuaded with difficulty to have the second eye done on the 14th of October, and which she would not believe had any thing the matter with it. She now sees quite straight.

Mrs. Jane Smith, aged 40, of No. 6, Upper Crown Street, Westminster,

squinted with the right eye since her childhood, but never with the left ; and had the operation performed on the 26th of August. The right eye did not however become quite central after the operation, although she could move it outwardly, and she was informed, after a short time employed in educating it, that she must have the operation done on the other eye, which she strenuously objected to, believing that it did not squint. Finding however that the right eye would not become quite straight, and seeing others who had submitted to the operation under her own circumstances, she consented to it on the 26th of October, and sees now straight.

Mrs. Eliz. White, aged 36, of No. 15, Bowling Green Lane, Clapham Road, squinted with the right since she was ten years of age. First operation done the 14th of October, and was informed she must have the other done, to which she objected until the 26th. She now sees quite straight.

Mrs. Catherine Rankin, aged 40, of No. 1, Upper Brunswick Terrace, Islington, squinted with the right eye since 12 years of age, and thought she might do so occasionally with the left. First operation Sept. 15th, after which the eye would not become perfectly straight, and on the 14th of October she was prevailed upon to have the second done. They are now both quite straight.

A number of other persons, on whom the second operation has been done on this principle, are now attending, and can be seen any day at the Hospital. In one, Mrs. Jennings, it has not perfectly succeeded.

The imagination has exercised its usual activity even in this complaint, and persons have been found who were so perfectly satisfied they squinted badly, that they earnestly desired to have an operation performed, although the obliquity was scarcely discernible. In such cases, and indeed in those in which the second eye is operated upon, when the persons were unconscious they had any deformity, I merely divide the tendon without any of its lateral attachment ; thus weakening rather than destroying its power ; of which the following is an excellent example. Thos. Robins, aged 39, of No. 6, Church Passage, Basinghall Street, squinted inwards, he says, from his earliest recollection with the right eye, although in so trifling a degree as to be scarcely perceptible, and I declined doing the operation ; but as he persisted in saying he would have it done by me or by somebody, I thought he would perhaps receive as little injury at my hands as from those of any one else, I therefore performed his operation on the 26th of August, dividing only two-thirds of the muscle, which perfectly succeeded in removing any little obliquity there might have been at times, and in satisfying his mind on the subject.

The operation for the division of the *external* rectus or straight muscle

is as easily done as that for the internal one; but the result in external squinting is not always so satisfactory. It has been said that this operation does not succeed; that, strictly speaking, none have been successful, although all the cases operated upon have been improved in a trifling degree; in fact, that they only squinted a little less than before. This, and all the other observations I am acquainted with, are on many points erroneous, although in some few they may be correct. The case of John Maldhouse, which you were pleased to publish with my former Report, disproves all the important points alleged against the success of this operation. I performed the first on the 27th of May last, the second ten weeks afterwards, greatly to the disapprobation of his family. He now sees perfectly straight, so much so, that no one could perceive, or would scarcely believe he had been the subject of any such operations. He can turn his eyes in every direction, and with a little hesitation can turn both inwards at the same time, directing them to the point of his nose, which it is said none of these persons can do. He lives at No. 17, St. Martin's Lane.

The case of Sarah Webb, No. 49, Whittlebury Street, is not less perfect. She suffered from chronic inflammation, as well as from external squinting of the right eye only. The chronic inflammation rendered her unwilling to undergo the operation for squinting for several weeks, but at last she yielded to my wishes, and had it done on the 12th of August. The cure is perfect, and she can turn both eyes inwards at the same time just as well as I can do it, and so can several others.

I have however met with four cases in which this happy result did not follow to the same extent. In the first, I operated on the right eye, and brought it to the centre, but it never would turn in, the internal straight muscle seemed to have no power over it, and as the man thought himself very much improved, and did not wish any thing more to be done, he absented himself from the hospital, and I have not been able to find him. The second was a perfectly similar case—the third I have under treatment, and think I shall cure—the fourth had both eyes operated upon in the country for internal squinting by the division of the internal straight muscles, and the consequence was that both eyes turned outwards. The surgeon then divided the two external straight muscles, but the eyes again turned outwards, causing two very disagreeable casts at the same time. I have re-divided these external muscles further back than before, and the right eye is cured, the left is nearly so, although a trifling cast, compared with what it was before, remains, but the ultimate result of further time and treatment are however to be ascertained. The next case I shall adduce is perhaps the most extraordinary, and will give the most satisfaction of any I suspect that have yet been reported.

Thomas Williams, aged 17, of No. 15, Crown Street, Westminster, applied on the 24th August with an internal squint of the right eye, which was operated on the same day in the usual manner, without any thing remarkable being perceived. The next day it appeared rather more out than in, and this gradually increased, so that although he could frequently look very naturally with it, and particularly when he made an effort to do so, it was evident that it turned a very little outwards when perfectly quiescent. On trying the other eye, which he declared to be perfectly sound, in the manner I have directed to be done to ascertain its state, when the eye which has been operated upon is intently fixed on the face of the experimentalist, I found to my surprise that it was on every trial directed outwards. I informed him that the only way to make the right eye quite straight, and to turn in, was by dividing the *external* straight muscle of the left or sound eye. To this he demurred for some time, but at last consented, on the 28th of October, and I cannot express the pleasure I felt on finding, after the operation, that the train of reasoning which induced me to do this operation was crowned by success.

In the great majority of cases of squinting, one eye only is implicated, whatever may have been the cause which gave rise to the complaint. In a smaller number both eyes have suffered, although only one is manifestly affected, yet the second at times shews that it is not free from the infirmity which is so marked in the other; and the cure of the first will sometimes be followed by the recovery of the second. In some cases this does not follow, and the eye which was hardly known, or was really not known to be affected, gradually turns, and under such circumstances admits only of cure by operation. The more important case is however, when after the first operation is completed, the eye will not assume its proper central position, but still turns in a little, shewing, not that the operation has not been duly performed, but that it is under the sympathetic influence of the other or apparently sound eye, from which it must be relieved, by operating on that also, and which if early done, has been in my hands perfectly successful. This sympathy must have existed from the commencement of the deformity, and have been coeval with the complaint itself; and whilst the defect is only perceivable in one eye, the principle which gave rise to it existed also in the other, but was subdued and dominated by the greater mischief in the one which alone appeared to be affected; for if both had squinted at the same time, vision would have been very deficient, and only clear when the patient had the power of controlling the irregular movements of one of them. This sympathy exists, as I have said p. 3 of my former report, even when the patient cannot see with the eye which follows when blind the same rule as when capable of seeing, as shewn in the following case. Mrs. Maria Slater, of No. 4, Henry St., Dorset St., Clapham Road, aged

34, squinted with the left eye since she had the measles when a child, and does not see at all with that eye ; the operation was done on the 16th of October, but the eye nevertheless turned in a little, and I should have been much annoyed at such an event two or three months before, and have supposed that the operation had not been duly completed, and perhaps have put her to further pain and trouble in trying to render that perfect which was already so. Instead of doing this, I told her she squinted with the right eye, or at least had the desire to squint with it, and that she must submit to the operation on it in order to effect a cure of the left. This she refused to do, declaring she never had squinted with the right eye, and no one had ever seen her do it. I soon convinced the bystanders that if she never squinted before with it, that she did now, and after seeing what had been done on the other patients whose cases were analogous to her own, she agreed to submit to the operation on the right eye. The internal muscle of this eye was divided in the slightest possible manner on the 26th of October, ten days after the first operation, and the left or blind eye immediately assumed a central straight position, both to her and my very great satisfaction.

Perceiving that the influence exerted by an apparently sound eye on its neighbour was so great although that neighbour was blind and useless as far as vision was concerned, I was led to conclude, that the sympathy of the external muscle of one eye with that of the other might be as great as that of the internal muscles one with the other, and on putting it to the proof in the case above noticed of Thomas Williams, on the 28th inst. I found it to be correct, and it has caused no small surprize to some of my friends to be told, that when one eye turns out, the way to cure it is to divide the external muscle of the other eye which is apparently perfect.

Louisa Rowland, aged 19, of 21, Church Street, Soho, presented herself this day, Oct. 30, squinting outwardly with the left eye, on which the operation was immediately performed, after an examination, which convinced me that she also squinted or would squint with the right, although she did not know it, and denied she had ever done it. On the completion of the operation, it was evident that the eye would not assume a central position, and I earnestly entreated her to have the operation done on the other, to which she consented after great persuasion. Both eyes became immediately central or straight.

CHARLES W. G. GUTHRIE.\*

*October 30th, 1840.*