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REPORT OF THE CASES
from the author.

ATTENDED DURING THE YEAR 1837,

BY R. MIDDLEMORE,

SURGEON TO THE BIRMINGHAM EYE INFIRMARY.

[From the Transactions of the Provincial Medical and Surgical Association.]

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REPORT

PRESENTED DURING THE YEAR 1881

BY THE DIRECTOR

The following report contains a summary of the work done during the year 1881, and is divided into two parts, the first of which contains a general account of the work done, and the second a detailed account of the work done in each of the departments.

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REPORT.

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OSSIFICATION OF THE CRYSTALLINE CAPSULE.

Mary Larkin, æt. 60, the wife of a publican residing near Sutton, received a blow upon the right eye about eight years ago, which deprived the organ of sight, but did not leave behind any manifest defect of any other description. About six months since she complained of great pain in the eye, and, on examination of the part by her surgeon, Mr. Oates, of Sutton, the lens, surrounded by an ossified capsule, was found to be dislocated.

Nov. 1, 1837.—She complains of intense pain above the eye-brow, upon the cheek bone, and towards the nose. The forehead is acutely painful, and also the back of the head on the affected side. This intense hemicrania, or darting pain from the fore to the back part of the head, is usually complained of in those instances where ossification of any of the textures of the eye has begun to produce active irritation.

Appearance of the Eye.—There is a slight zonular arrangement of vessels around the cornea, which is occasionally much increased, and it is manifest that she has suffered for some weeks past from chronic iritis. Immediately behind the cornea there is a globular body obviously covered by a white membrane, interspersed with dense yellowish-white spots; the iris is pressed backwards by the presence of this body in the anterior chamber: it was evidently the lens within the anterior chamber and surrounded by its capsule, the anterior hemisphere of which was converted into bone, but being more perfectly ossified at one part than another, the mottled and irregularly and densely dotted appearance I have mentioned was perceived. I scarcely know how to describe these appearances, but a person who has once seen them, has no difficulty in recognizing them when presented to his notice a second time. The removal of the ossified part was proposed and acceded to.

Operation.—November 18, 1838.—Assisted by my friend Mr. Willcox, I made a section as for extraction at the lower part of the cornea, and, with little difficulty, removed an ossified capsule, which is now among my preparations. The lens was of an amber colour, and was not very opaque; the posterior capsule was scarcely thicker than usual, and nearly transparent, but the anterior hemisphere of the capsule was almost entirely converted into a smooth plate of bone, except near the margin of the union between the anterior and posterior hemispheres of the capsule, where it constitutes a rugged ring of bone.

Treatment.—The lids were carefully closed after the operation, and a narrow bandage was lightly passed over them. The patient was directed to lie in bed, and to have her apartment darkened; a little aperient medicine was administered, and the diet was lowered. By these means, perseveringly adopted for about a week, the patient was enabled to return home, and in about a fortnight afterwards she called upon me, when the following was the condition of the eye:—Nearly free from inflammation; pupil clear, but slightly drawn towards the incision of the cornea. The cornea is in no degree staphylomatous, and the wound inflicted at the time of the operation has healed very perfectly. The sight of the eye is entirely destroyed.

TREATMENT OF STAPHYLOMA OF THE CORNEA.

James Shephard, *æt.* 24, sustained a severe injury to the face some months ago, which produced collapse of the right, and occasioned the following condition of the left eye:—Two-thirds of the cornea at its lower part has become prominently staphylomatous; the pupil is closed, and the iris is adherent to the upper part of the staphyloma. The eye-ball is a good deal inflamed. The objects it was desirable to accomplish in this case were, first, to lessen the size of the staphyloma; second, to remove the ophthalmia; and third, to form an artificial pupil.

As one-fourth of the cornea, and a corresponding portion of the iris were healthy, it was, I repeat, desirable to make an effort to form an artificial pupil; but, of course, before this was attempted, it

was necessary to cure the staphylomatous projection by some method which would not endanger the occurrence of atrophy of the eye-ball. The use of the seton was improper on account of its great liability to produce a degree of inflammation adequate to affect injuriously the corneal or irital texture; and the removal of the projecting part by ligature or the knife was improper, by reason of their direct tendency to cause collapse of the eye-ball. The repeated tapping of the part, by means of a fine iris-knife, was not open to this objection, and, although a mode of treatment not generally to be recommended for the treatment of staphyloma, was in this instance adopted, and with perfect success; so that this person's eye is now in a fit state to be operated upon for artificial pupil.

In all cases of partial staphyloma of the cornea where it is desired to leave the eye in a condition to permit the formation of an artificial pupil, in all instances where it is specially important to avoid the displacement of the lens, and the risk of producing atrophy of the globe, the operation of tapping is to be preferred, but, on account of its tediousness, and its frequent inadequacy, it is not adapted to the cure of the large and extensive variety of staphyloma, or, indeed, of any form of staphyloma the walls of which are much thickened. These last varieties of staphyloma are best treated by the removal of a small portion of the most prominent and attenuated part, as formerly explained;* but, instead of using Beer's extraction knife, I now

* See my remarks upon this subject in the second and third volumes of the *Transactions*.

prefer to employ one the blade of which resembles the ace of spades, only narrow in proportion to its length, and having a cutting edge on either side—a sort of double Beer's knife, one edge of which when the point is introduced within the cornea, is opposed to its upper, and the other to its lower margin.

FISTULOUS OPENING COMMUNICATING WITH THE ANTERIOR
CHAMBER.

Mary Elwell received a blow from a cork, which was forcibly projected against the eye. In a few days after the accident she called upon me: there was a small, nearly transparent, tumour just without the margin of the cornea, which contained a small quantity of aqueous fluid. On its removal, by a minute opening made with the point of a fine needle, it soon reappeared, and the iris appeared somewhat narrower on the side of this little vesicular enlargement. No astringents I could use had the effect of causing its contraction, and, on opening it with a small needle, it soon filled again; had I used a large one, I might have produced prolapse of the iris, or have established a fistulous opening, through which the aqueous fluid would have constantly flowed. Subsequently I applied the nitrate of silver to the part. The small swelling gradually diminished, and has not since reappeared.

This description of tumour sometimes occurs after a small but penetrating wound at the corneo-sclerotic junction, and may either be produced by the protrusion of the membrane of the aqueous humour,

or, as in this instance, by the passage of a minute portion of the aqueous humour beneath the conjunctiva. The application of the nitrate of silver to the part, after the evacuation of its contents, is usually adequate to its cure.

DISLOCATION OF THE LENS THROUGH A RENT IN THE
SCLEROTICA, BENEATH THE CONJUNCTIVA.

Wm. Manton, æt. 21, a labourer, received an injury of the right eye from a cow's horn. The left eye was lost in infancy, from small-pox. Soon after the occurrence of the accident, he was attended by Mr. Cook, and subsequently by Dr. Arrowsmith of Coventry.* When he first came under my care, four months had elapsed since the date of the injury. The eye was in the following condition:—The cornea was slightly nebulous, and somewhat conical; the anterior chamber enormously large (almost amounting to dropsy of that part); the iris was wanting at its superior part, so that the pupil resembled that of an eye in which the upper section has been made for the extraction of cataract, the surgeon having shaved off a portion of the iris in making the incision; and there was a blue mark just behind the corneo-sclerotic junction, shewing that the sclerotica, perhaps, also, the conjunctiva, but I am not sure of this, had been ruptured at that part.

* Dr. Arrowsmith has been so good as to furnish me with an account of the appearance of Manton's eye when he first examined it, and my impression is, that our opinions differ in some degree respecting the nature of the case; but I am sorry to state that I have lost the letter he sent me when I applied to him for an account of the symptoms existing three weeks after the injury.

This man can see moderately well without spectacles, but his sight is not much improved by the use of double convex glasses, which, I presume, is chiefly owing to the increased convexity of the cornea and amplitude of the anterior chamber, by which the tendency to far-sightedness, occasioned by the loss of the lens, is in a great measure corrected.

The form of dislocation of the lens from which Manton suffered, is by no means one of frequent occurrence. It has fallen to my lot to see two instances in which the lens has passed through a rent in the sclerotica, and lodged near the corneal margin and beneath the conjunctiva. These cases came under my observation when only a very small tumour was visible, which I supposed, in both instances, to be the remains of the displaced crystalline. Although the patients suffered extreme pain for some time after the accident took place, they eventually recovered a very useful degree of vision, notwithstanding the omission, on the part of their surgeon, to remove the lens by a division of the conjunctiva. Sometimes the lens will not only pass through the sclerotica, but through the conjunctiva also, by the laceration of both membranes at the same time, and yet the patient's vision will be moderately good when assisted by the ordinary cataract glasses; but this, of course, is neither a common accident, nor the customary termination of it when it does take place.

To conclude my remarks on this interesting case:—whenever a convex tumour of considerable size and covered by the unbroken conjunctiva, forms

near the corneo-sclerotic junction soon after an injury to the eye-ball, it is almost sure to consist of either effused serum or blood, or to be the displaced lens. The means of determining to which of these causes the enlargement is owing are, for the most part, abundant and manifest, and if the swelling be ascertained to arise from the presence of the lens, the rule for the guidance of our practice is absolute; the displaced crystalline must be at once removed by a division of the conjunctiva.

WOUND OF THE CORNEA AND DISLOCATION OF THE LENS.

James Simcox, æt. 12, on the fifth of November, was engaged in firing off a cannon, when some portion of its contents struck his left eye. He came to me on the following day. The eye was then a good deal inflamed, the lens was partly pushed through and partly fixed within the pupil; fragments of it were also noticed at the bottom of the anterior chamber. The cornea was very slightly wounded. He suffered a good deal of pain, although the eye was not acutely inflamed.

Treatment.—Mercury to be administered so as to affect the mouth slightly. Belladonna to be applied daily over the eye-brow. Flannels soaked in strong narcotic lotions to be applied to the eye-lids, and six leeches to be placed behind the ear.

Result.—In about a month, the lens being absorbed, the appearance of the eye was so perfect that it would be difficult to determine that it had ever been the seat of an accident. The sight recovered as after an operation for extraction of cataract.

I relate this case (one of a series I am engaged in arranging) to illustrate the propriety of omitting the performance of a surgical operation, in many instances where the lens, not covered by its capsule, is dislocated by accident. I have tried both plans pretty extensively, and am assured that the removal of the lens may be generally dispensed with, with great advantage as regards the result, and with that important advantage as relates to the patient, which no humane surgeon should ever lose sight of—that of avoiding the infliction of unnecessary pain. The removal, through an incision of the cornea, of a lens displaced by a severe accident, when the eye has become, as it soon will do, inflamed and intolerant of light, *always* occasions severe pain, and, *in some instances*, a degree of agony, which the fortitude of a martyr can barely sustain.

CHRONIC INFLAMMATION OF THE ORBITAL CELLULAR
MEMBRANE.

Joseph Hope, æt. 22, complained of pain in the head, throbbing in the orbit, and a feeling as though the eye-ball was being ^{well} extended from its socket. The eye, on careful examination, was found to be slightly protruded, but there was no sense of pulsation conveyed to the finger, nor any appearance of infiltration of the orbital cellular membrane. The young man says he has received no blow or other injury to the eye. He considers it to be occasioned by being out late on a cold damp evening.

The complaint continued to increase, the eye became more and more protruded, the whole orbital

contents became vastly increased, he suffered from dreadful hemicrania, from feverishness, and from general derangement of the health. At this time he applied at the Town Infirmary, at which institution he was attended by Mr. Gem; and when he called upon me after he had left the Infirmary, his eye was nearly as usual, except that the lids were slightly puffy and œdematous.

The treatment employed by me during the time the patient was under my care, was founded on the supposition that he was suffering from chronic inflammation of the orbital cellular membrane, producing serous infiltration of that tissue. The illness for which he was attended by Mr. Gem did not appear to be connected with the state of the orbit. At one period of his illness, the severity of the pain, the increasing protrusion of the globe, the sense of tension of the eye-ball, and of stretching of the parts behind it, made it a matter of serious reflexion how far the patient was suffering from the development of a tumour within the orbit. Of course the symptoms were manifestly different from those proceeding from inflammation of the periosteal lining of the orbit.

EMPLOYMENT OF VARIOUS REMEDIES FOR THE RELIEF OF
AMAUROSIS.

Veratrine and Aconitine Ointment.—These unguents have been so much talked of, that I have thought it proper to give them a trial. I will briefly explain the results of their employment. In only one example of amaurosis, out of eight subjected to the treatment, have I derived the slightest benefit,

namely, in the case of a soldier suffering from dimness of vision, which, however, was not so great as to prevent him from walking with tolerable ease about the streets of this town, and managing the sale of vegetables at home. The pupil of his eye was rather large and sluggish, and there was just that sort of muddy (occasionally approaching to resplendent when viewed in a particular light) green appearance within the eye, which is noticed where chronic inflammation of the septa of the hyaloid membrane has induced a slightly turbid condition of the vitreous fluid. The pupil (and this is a very common effect of these applications) became smaller and more active, and he thinks his sight considerably improved. After discontinuing the remedy, his sight was very little better than it was before he used it. In some cases of neuralgia of the eyeball, I have prescribed these ointments with unequivocal advantage.

The ointment is prepared by mixing four grains of aconitine or veratrine with half an ounce of lard.

Mode of using the Ointment.—A quantity, the size of a *small* nut, to be rubbed above the eye-brow by means of a bit of sponge attached to a convenient handle, until the skin begins to smart and feel very hot. The *rubbing* to be practised daily.

Use of the Nitrate of Silver.—The application of a finely-pointed piece of nitrate of silver to the margin of the cornea in certain forms of amaurosis has been advised by various surgeons. Some years ago I tried this plan of treatment, but not finding it serviceable to the extent I expected, discontinued

to employ it ; but, finding it lately recommended by Lisfranc, and that recommendation supported by the relation of a number of cases* in which it had proved serviceable, I felt that it was due to so distinguished an authority to carry his suggestion into effect. The following is one of the cases in which this method of management has been tried.

Case.—William Earp, æt. 12, residing at Atherstone, was brought to me by my friend Mr. Ward. The little patient had suffered from an attack of fever, nearly two years ago, since which time he has been blind, although in every other respect he is perfectly recovered.

State of the Eyes.—Pupil large, clear, and immoveable; there is no inflammation present, and his eyes are not painful. With the right eye he can just discern the degrees of light, with the other he has not the slightest perception of light. This eye was selected for our treatment, and Mr. Ward was good enough to use the remedy at the boy's residence. After the nitrate of silver had been applied four times, at suitable intervals, Mr. Ward brought the child to me again, when the vision of the eye (formerly entirely dark) was sufficiently restored to enable him to distinguish colours, and to make out large and conspicuous objects. The pupil is smaller than it was, and the iris is more active. The use of the remedy and the improvement of vision are now progressing, though slowly. In one or two instances in which I have employed the nitrate of silver, a troublesome form of ophthalmia

* *The Continental and British Medical Review.* No. iii. (for May, 1837.) Edited by A. M. Bureaud Riofrey, M.D.

has occurred afterwards, but, inasmuch as most of the cases in which the nitrate of silver are admissible and advisable, are those in which there is an anæmic and atonic condition of the ocular tunics, and of the vascular system of the eye generally, this occurrence is very rare, and has always been, under my own observation, quite manageable.

Mode of using the Nitrate of Silver.—Having a portion of nitrate of silver worked to a delicate point, I touch the cornea near its junction with the sclerotica so slightly as merely to produce a small eschar, on the detachment of which a minute, superficial, and perfectly healthy ulcer remains, which very readily heals and becomes imperceptible, and this I do at about four points, which are comprised within the half of the cornea.

Use of Strychnia.—I must not omit to mention that in two instances of amaurosis occurring in my private practice, I have, after the failure of other methods, placed a blister in front of the ear, and applied to the raw surface left after its removal a small quantity of strychnia, and that its use has been followed by the most satisfactory results; satisfactory, indeed, when it is considered that this method of management was tried after all the measures previously employed had failed to relieve.

SCROFULOUS DEPOSITION WITHIN THE EYE-BALL RESEMBLING
MALIGNANT DISEASE.

George Lord, æt. 6, first came to the Eye Infirmary July 6, 1838. He is of a fair complexion, has light hair, a thin transparent skin, a delicately tinted cheek, and is, what is termed, a precocious child.

The parents of the boy have both a light complexion, and possess the same constitutional characters as their child, but they appear to be healthy, and have other children who are strong and hearty. They can give no account of the cause and origin of the complaint in their child's eye, and are sure that he has received no severe blow upon the part.

Left Eye.—Slight intolerance of light, but otherwise healthy.

Right Eye.—Cornea nebulous, and slightly uneven, as in some cases of corneitis. Iris almost in contact with the cornea, and interspersed with large red vessels, which appear to connect it with the cornea through the medium of lymph which is deposited throughout its texture, and in patches upon its surface. Its structure is as though it had been macerated, and is otherwise changed. The pupil is not distinguishable. The conjunctiva is tumid, many very large vessels exist in its texture, and in that of the sclerotica. At the upper and also at the nasal side of the eye-ball, a whitish prominence may be noticed, as though matter had been deposited within the globe, had ruptured the sclerotica, and had pushed before it the extensible conjunctiva. The patient is the subject of severe pain from, apparently, tension of the globe. Conceiving the child to be suffering from scrofulous deposition within the eye-ball, I adopted every measure calculated to sooth his present uneasiness, and intended to open the ^{or} ~~the~~ *l* *o* *n* *g* *e* *r* of the tumours on the following day.

July 8.—The tumour has given way, and there is now exposed a dirty, whitish, and fibrous-looking substance, a good deal resembling the solid curdy

portion of the contents of a common scrofulous abscess. This matter may be peeled and pulled away by the forceps. One or two similar tumours have just appeared at other parts of the surface of the eye, but they are extremely minute. The general aspect of the eye is dreadful, and would formerly have been considered to furnish a decided example of malignant disease, and would doubtless have been removed by a surgical operation.

In the progress of this case, the details of which it is not necessary to furnish, the resemblance to malignant disease was so great, that several medical friends to whom I shewed the case had very little doubt upon the point. My own opinion, however, was, that the disease constituted a very rare form of ophthalmic disease, namely, chronic deposition of curdy, scrofulous matter within the eye-ball and beneath the conjunctiva; this deposition being rather more solid and tenacious than that usually resulting from strumous action. In this opinion my excellent friend Dr. Julius Staberoh* agreed.

Treatment.—A grain of disulphate of quina to be taken three times a day, and every evening one grain of blue pill and three of the extract of conium.

Local Treatment.—Flannels wetted with the following lotion to be frequently applied in a warm state to the eye:—℞ *Extracti belladonnæ* ʒj., *extracti hyoscyami* ʒij., *decocti papaveris* ʒvss., *vini opii* ʒss. m.; and whenever the pain was more than

* This enthusiastic student of our interesting profession has now returned to Germany, and promises to confer honour on the country and the profession to which he belongs.

usually severe, a grain of opium mixed with half a drachm of mercurial ointment, to be well rubbed immediately over the eye-brow.

Result of the Case.—An organised deposition coated the ulcerated parts left on the discharge (which gradually took place) of the curdy pus, and the eye-ball became somewhat diminished; the mottled organised matter deposited within the globe, and so mixed up with the iris as to render its texture scarcely distinguishable, still remains.

My former reports contain an account of cases in which the eye-ball was the seat of disease so closely resembling malignant affection, that it required the greatest possible attention to arrive at an accurate diagnosis. But having already directed attention to the means of distinguishing the anomalous depositions within, upon, and beneath the eye-ball, and which are not malignant,* from the class of intractable maladies usually termed cancerous, fungoid, hæmatoid, melanotic, &c., I shall not lengthen my present remarks by referring to the subject in detail.

In my last Report† I related the case of George Southall, in whose right eye many of the appearances of malignant disease were present. I have seen this lad during the last fortnight, and, in confirmation of the opinion formerly given, I may mention that his eye continues as nearly as possible in the same state as when I first published an account of it.

* See my *Treatise on the Diseases of the Eye*. Vol. ii., pp. 412, 465.

† Vol. v., p. 399.

MELANOTIC GROWTH FROM THE SEMILUNAR MEMBRANE.

In the last volume of the *Transactions*,* I related a case under the above title, and explained the characters of the growth as they were noticed on attentive examination after its removal. I have carefully examined the patient's eye this day (February 28, 1838); it is very slightly inflamed; two exceedingly minute black spots exist near the lachrymal caruncle, but she says they are not ^{or} longer than they were six months ago. There is a small black spot about the centre of the cheek, and a considerable enlargement and induration beneath the jaw on the same side, the skin covering which is perfectly healthy. The woman is in pretty good health, and seldom feels pain in the swelling except when "she takes cold."

* Page 395.

EXTIRPATION OF THE EYE,

ON ACCOUNT OF

A TUMOUR DEVELOPED WITHIN THE OPTIC SHEATH.

BY R. MIDDLEMORE, ESQ.,

Surgeon to the Birmingham Eye Infirmary.

— HANDS, æt. 3, a very healthy-looking child, was brought to me at the Eye Infirmary, in consequence of a slight strabismus, presumed loss of sight and fulness of the left eye, which had been first noticed by his parents two months ago.

State of the Eye.—The cornea is slightly nebulous, the eye a little more protruded than its fellow, and it is evident that the power of sight is entirely lost. The parents and brothers and sisters of the child are very healthy. The defect of the eye cannot be traced to a fall or blow, or to any accident or circumstance of any kind.

Progress of the case.—In the course of three months, the eye-ball became considerably protruded and much inflamed, and the whole cornea assumed a decidedly nebulous appearance. The iris was pushed towards the cornea, but was not distinctly inflamed. The pupil was slightly muddy, but there was no deep-seated shining opacity at its fundus,

nor did the eye itself appear to be much enlarged. A degree of fulness at the upper and outer side of the eye-ball may be perceived on close examination when the palpebræ are widely separated. The child is very restless, and is manifestly suffering some degree of pain. It was evident that the performance of an operation constituted the only feasible means of relief.

Operation.—Mar. 18, 1837: present, Mr. Hodgson, Mr. Ledsam, and Mr. Crompton. Having lengthened the intertarsal slit by an incision towards the temple, discharged the humours of the eye, passed a strong ligature through the sclerotica a little behind the margin of the cornea on each side, and, by its agency, drawn the eye forwards and upwards, I made a pretty deep semicircular incision through the conjunctiva, and somewhat beneath the globe, from the inner to the outer canthus, and united the extremities of this incision by a similar one made at the upper part of the eye-ball. The tumour was of considerable size and extended, as I imagine, through the optic foramen, so that it was not perhaps wholly removed. However, with the curved scissors, I succeeded in clearing the orbit. The soft and slippery character of the tumour, and the depth and situation of that small portion which, I think, remained, rendered it somewhat difficult and dangerous to continue my attempts to extirpate every portion in the situation of the optic foramen. On the completion of the operation, the little patient was extremely exhausted from loss of blood, and required the use of pretty active stimulants for at least an hour afterwards. The orbit was now

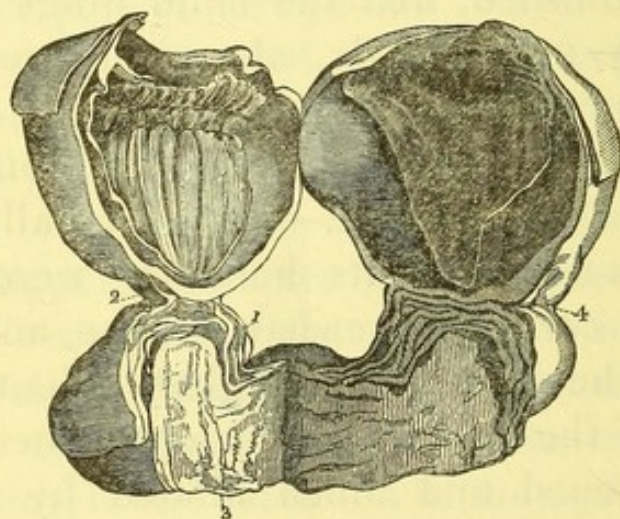
carefully sponged, a thin fold of linen dipped in cold water was lightly bound upon the eye-lids, and the patient put to bed.

On the following morning the lids were a little swollen, and, on the next day, they were excessively tumid; this, however, subsided in the course of a few days. The orbit discharged a good deal of pus for three weeks, and, when this ceased, as the child had apparently perfectly recovered, I ceased to attend it. Since this period, I have occasionally seen the little patient, and with a view of completing my notes of the case, called and examined him to-day (Feb. 28, 1838). The orbit appears free from disease; the eye-lids are quite healthy, and are slightly drawn inwards by the absence of the eye-ball. The *right* eye has a rotary motion, but vision is perfect. The intellect is unimpaired; but the power of the right (the left eye, it will be remembered, was removed) hand and arm is diminished, and the child drags the right foot slightly, very slightly, along the ground when walking or running.

Dissection of the contents of the orbit immediately after their removal.—The eye-ball appeared healthy, except that its humours were slightly turbid, the cornea somewhat opaque, and its back part near the optic nerve slightly indented by the pressure of the tumour. The optic sheath was a little thickened and much dilated by the large tumour, and especially so near the optic foramen. A portion of cellular matter, apparently the cellular membrane formerly connecting together the fibrillæ of the optic nerve, was observed between the

tumour and the optic sheath ; this was of a yellowish colour, most abundant near the cribriform portion of the sclerotic coat, and condensed into one or more layers in those situations where, from the greater size of the tumour, &c., it would be exposed to the greatest degree of pressure. The tumour, covered by this cellular tissue, and by the sheath of the optic nerve, was of considerable size ; its greatest bulk being situated near, but not close to, the optic foramen. It was of a yellowish colour, and of a texture resembling the mucilaginous nasal polypus, only rather fibrous. By immersion in spirit, it assumed a firm, fibrous, and whitish appearance. The preparation is added to my pathological collection, which I shall have real pleasure in shewing to any member of the profession who may wish to examine it.

Section of the Eye-ball, Optic Sheath, and Tumour.



- 1.—The optic sheath.
- 2.—The connexion of the optic sheath with the sclerotic.
- 3.—The tumour.
- 4.—The unabsorbed cellular membrane of the optic nerve.