cartilage fractures consists, in the case of overlapping fractures, in the more limited development of callus in the cartilage fractures, and, in all forms of fracture, in the slowness with which the process of union would appear to be completed.

ART. XI.—*Medical Report of the National Eye and Ear Infirmary, Dublin, for the year 1875.* By H. R. SWANZY, M.B., F.R.C.S.I.; and C. E. FITZGERALD, M.D., M.Ch., Surgeons to the Infirmary.

THE custom of publishing annual medical reports of their several cliniques is very general among Continental ophthalmic surgeons. In these countries it does not prevail, unless in so far as those London general hospitals are concerned which publish "Reports," and which have special ophthalmic departments connected with them. Institutions of this kind are so little visited by the profession at large, that it seems right to render a periodical account of what is being done in them, so that some idea may be formed of the practice adopted. With this object the present Report is submitted.

As the National Eye and Ear Infirmary is probably unknown to many of our readers, some idea of its history may prove of interest to them.

The following is an extract from an entry made in November, 1827, in an old minute book in possession of the Hon. Secretary:—"The institution was established in the year 1814, under the patronage of the Earl of Whitworth, then Lord Lieutenant. Mr. (afterwards Sir Robert) Peel favoured the institution by becoming president, and many other eminent public and private characters warmly co-operated in promoting this object. Mr. Ryall, a gentleman who for many years held a medical appointment in the Royal Navy, was mainly instrumental in forming the institution. . . . On Surgeon Ryall's sudden departure for England the institution fell to the ground, it being held in a house rented by him, which, of course, was given up. Surgeon Morrison, having devoted much time and attention for many years to this branch of his profession, embraced the opportunity which these circumstances presented, and addressed a memorial to the Marquis of Wellesley, apprising his Excellency of Surgeon Ryall's departure, and requesting a continuance of his patronage of the institution." To this memorial a favourable reply was received, and, to the present,

the Lord Lieutenant for the time being is patron of the institution. "Shortly after Surgeon Ryall's departure, Surgeon Morrison notified to all persons seeking relief at the institution that it had been removed (*pro tempore*) to his house in Gloucester-street. . . . Several eminent professional characters feel much interest for its success, amongst whom are Dr. Grattan, the Surgeon-General, Mr. Carmichael, Mr. Kirby, whose countenance and co-operation cannot fail to impress society with the importance of the subject." In December, 1827, a committee of management was formed, among the members of which were Surgeons Carmichael and Kirby. In April, 1829, it was resolved, at a meeting of the governors and managing committee, to solicit the attendance of the Duke of Northumberland, Lord Lieutenant, at a charity sermon in aid of the institution. His Grace replied that he "had a particular objection to the way in which charity sermons were conducted," and appointed, in lieu of the proposed sermon, that a ball should be held, to which he would afford every countenance and support. In consequence, a ball took place in the Rotunda on the 1st of May following, which the Lord Lieutenant and the Duchess of Northumberland attended, and by which the Infirmary benefited to the amount of £600. Soon after this a house in Cuffe-street (at that time a fashionable locality) was secured for the purposes of the hospital. It seems to have flourished there, doing much good, until the year 1848, when, probably for want of necessary support, impossible to obtain in those times, it languished, although it did not altogether close its doors. On Surgeon Morrison's death, the late Dr. Hildige became surgeon to the institution, and it was on his lamented death that the present surgical staff was appointed. It was at once apparent that if the Infirmary was to be made of use to the public, better accommodation should be obtained for it than that in Cuffe-street, where the sanitary arrangements were simply intolerable. After a short time it was determined to move to the present house in Stephen's-green, which, for its size, answers the purpose much better. It threatens, however, before long to become too small, when it is hoped sufficient funds will be forthcoming to build on the present site, or to obtain larger premises in the immediate neighbourhood. The institution has the inestimable advantage of being managed by an active and enlightened lay committee, who are only anxious to second the efforts of the medical staff in introducing every improvement of which their funds will permit. The institution is, to a certain extent, self-

supporting, inasmuch as all persons admitted to the wards, who can afford to subscribe towards their maintenance, are expected to do so; and the extern patients obtain tickets at sixpence each from the attendant, which admit them to the dispensary for a week, but very poor people are not excluded. In future the dispensary will be held daily, the door remaining open from 10½ a.m. to 12 noon.

As we have said, the National Eye and Ear Infirmary was removed from Cuffe-street to 97, Stephen's-green, South, in May, 1872, and from that time is to be dated its renewed vigour. Indeed, although so long established, it must now, to all intents, be regarded as a new institution. Hence the numbers with which this Report has to deal are small, when compared with those of similar hospitals in this and other cities which, although younger, have been steadily and regularly conducted.

While a large material is something which every surgeon gladly commands, yet we cannot accept without some reserve the opinion that large numbers of patients is an unmitigated good. It is not by the hasty and superficial observation of a great number of cases that the medical man can hope to improve himself, or to advance his particular study, but rather by the careful analysis and notation of a few. It must be known to many of our readers that some of the most distinguished Continental observers in various departments of medicine—some of those men who have introduced the most brilliant reforms—number fewer patients in the course of a year in their clinics than may be seen within a quarter of the time in any of our large hospitals in this city. The very plentifulness of material makes us prodigal of it, and thus many valuable observations are lost. In the National Eye and Ear Infirmary we have endeavoured to keep an accurate register of the extern, as well as of the intern patients. Upon his first application, the name, age, calling, and residence of each patient, and the diagnosis of his disease, are registered in a book for the purpose. A sufficiently wide column is left for further notes of the case should it be a severe one, or one of special interest; and a record of the treatment employed and of its results is entered from day to day. We find that in the hurry of a busy morning this method is liable to imperfections, and, accordingly, a greatly-improved plan of registration and case-taking is being organised, which we hope to bring before our readers at a future time.

The Infirmary contains nine beds. These were occupied during the year by 106 different patients. The number of capital opera-

tions performed was also 106. The Eye and Ear Dispensary was held three times a week, the number of new cases which presented themselves being 653 (179 ear), and the number of visits paid being 4,733.

The number of *Cataract Extractions* is small, but this is mainly to be accounted for by the fact already mentioned—namely, that, prior to the present management, the material, owing to various causes, had fallen to an extremely low ebb. Since then, however, there has been a steady annual increase, which justifies the hope that, ere long, we shall be enabled to issue a Report of much greater interest and importance.

The method of operating was, in all cases, that of Von Graefe. In the performance of this operation importance was attached to the following points—(1) non-instillation of atropine prior to the operation; (2) the formation of a moderately-sized *conjunctival* flap; (3) careful reposition of the angles formed by the iridectomy in the sphincter pupillæ before proceeding to the opening of the capsule.

Wecker's forceps-scissors were employed for performing the iridectomy, and were found of great value, admitting, we think, of greater accuracy in this stage of the operation.

The total number of extractions was twenty-one.* Three of these operations were unsuccessful; but the present condition of the eyes is such as to allow good hope of useful vision being yet restored to them, by means of secondary operations. One case was a partial success, the patient being afterwards able to count fingers at 1', and in this case, too, the vision may be greatly improved by an iridotomy. The case (No. 2) was not a very favourable one for operation, as may be seen by reference to the accompanying Table. One of the three unsuccessful cases (No. 7) was that of a diabetic patient, with extensive posterior synechiæ. In one case (No. 11) the result is not noted, as the patient did not return after her discharge from hospital. Had it not been for the accident which occurred to the eye, the patient's vision would have been quite satisfactory, and even now we fully believe it is very good, judging from the condition of the eye when last seen.

* We regret that, in the lay Report just published, an error occurs in referring to the cataract extractions. It is there stated that there were seventeen successful and four unsuccessful cases. It should have been sixteen successful, one partially successful, and three losses.

Table of Cataract Extractions.

No.	Sex	Age	Nature of Cataract	Right or Left Eye	Date	Operation	Remarks	Result	Duration of Treatment
1	M.	65	Hard -	R.	1875 Jan. 7	Normal	This was an unfavourable case, for the age of patient, the entire absence of any sign of cataract in the left eye, and the appearance of the cataract itself, tended to show that there was some complication. Notwithstanding the loss of vitreous, and a subsequent attack of iritis, the wound healed quickly, and the case is now admirably adapted for iridotomy.	27th May, 1875. $V = \frac{14}{0}$ (+3½) 3 at 6" (+2). Some months after (date not entered) counts fingers at 1'.	14 days
2	M.	40	Cretaceous -	R.	Feb. 11	Copious escape of vitreous			27 "
3	M.	70	Hard -	R.	Feb. 25	Normal	—	18th May, 1875. $V = \frac{14}{L}$ (+4). Reads small print (Welsh Testament) with ease (+2½).	14 "
4	M.	65	Fluid corticalis; hard nucleus	R.	March 6	Puncture too peripheral; point of knife caught in iris	From the puncture being somewhat too peripheral, the point of the knife caught in the iris. With a little difficulty it was extricated. Short conjunctival flap. Fluid corticalis escaped when capsule was opened. In attempting to deliver the nucleus in the usual way it became partially dislocated behind upper edge of wound. It was depressed towards the lower part of the anterior chamber with the cystitome, and then extracted with the spoon. Small escape of vitreous during this manœuvre, and later a considerable quantity, owing to the restlessness of the patient.	8th April, 1875. $V = \frac{14}{00}$ (+4). Reads small type, but never could read well, so that this test is imperfect.	11 "

5	M.	60	Hard ; not quite ripe	R.	March 9	Spoon introduced to remove cor- tical mass	Patient was in an intoxicated condition when admitted the previous day. There was a considerable quantity of the cortical portion left behind, which it was found impossible to re- move by the lid manœuvre. Recourse was had to Critchett's and David's spoons, but still some of the corticalis had to be left. Suppuration of wound set in about 18 hours afterwards.	Vision = 0.	6 "
6	M.	56	Hard -	R.	April 3	Normal	Cystoid cicatrix. Same patient as No. 15.	9th Dec., 1875. $V = \frac{14}{c}$ (+4) $2\frac{1}{2}$ (+3) at 8".	14 "
7	M.	60	Hard -	R.	April 13	—	Diabetic patient. Extensive adhesion of iris to lens ; owing to latter and sticky consistency of lenticular sub- stance, large portions of the latter had to be left behind, although the spoon was employed to remove them. Iritis supervened.	Vision = 0.	18 "
8	F.	63	Hard -	R.	April 24	Normal	Same patient as No. 10.	19th May, 1875. $V = \frac{14}{xl}$ (+3 $\frac{1}{2}$). Welsh Testa- ment with ease (+2).	26 "
9	M.	44	Hard -	L.	April 24	Normal		4th May 1875. $V = \frac{14}{xxx}$ (+4) 2 (+2 $\frac{1}{2}$) at 8".	20 "
10	F.	63	Hard -	L.	May 6	Normal	Same patient as No. 8.	19th May, 1875. $V = \frac{14}{L}$ (+3 $\frac{1}{2}$). Welsh Testa- ment with ease (+2).	26 "

Table of Cataract Extractions—continued.

No.	Sex	Age	Nature of Cataract	Right or Left Eye	Date	Operation	Remarks	Result	Duration of Treatment
11	F.	50	Hard -	R.	May 13	Normal	Some days afterwards, when the wound had quite healed, the patient struck her eye against the edge of a table, and partially ruptured the wound. This set up a smart inflammatory attack, which, however, subsided under treatment.	Not noted.	14 days
12	F.	60	Fluid corticalis; hard nucleus	R.	June 8	Normal	There was no conjunctival flap at outer end of incision.	3rd July, 1875. $V = \frac{14}{LXX}$ (+4) 2 (+2) at 6".	15 "
13	F.	60	Soft corticalis; hard nucleus	L.	June 8	Spoon had to be introduced 3 times	The conjunctival portion of the incision was too small, so that the zonula was ruptured in attempting to deliver the lens, and the vitreous presented before the lens, making it necessary to deliver with the scoop. There was a large conjunctival flap. Wound adapted very fairly.	5th Aug., 1875. $V = \frac{14}{C}$ (+4) 2 (+2½) at 7".	15 "
14	M.	68	Hard; hyper-mature	R.	June 10	Normal	—	25th June, 1875. $V = \frac{14}{CC}$ (+4) 2½ (+2) at 7".	19 "
15	M.	56	Hard -	L.	July 13	Normal	Same patient as No. 6.	9th Dec., 1875. $V = \frac{14}{LXX}$ (+3½) 2½ (+3) at 8".	21 "
16	F.	60	Corticalis fluid; nucleus large	R.	Aug. 24	Considerable loss of vitreous	Patient most unmanageable. Operation quite normal until the delivery of the lens, when a considerable escape of vitreous occurred. Wound suppurated. At patient's discharge the eye promised to be a favourable one for iridotomy.	Vision = 0.	6 "

17	F.	69	Fluid corticalis; hard nucleus	L.	Sept. 9	Small portion of iris adherent in inner angle of wound	—	No date. $V = \frac{14}{c}$ (+3 $\frac{1}{2}$). Welsh Testament fluently (+2 $\frac{1}{2}$) at 7".	28 "
18	F.	68	Hard -	R.	Sept. 16	Normal	—	Date not noted. $V = \frac{14}{c}$ (+2). Welsh Testament (+2) at 6".	21 "
19	F.	?	Hard; senile -	L.	Oct. 23	Normal	Centre of section in cornea, with nar- rower knife than usual, on account of very shallow anterior chamber. Necessarily no conjunctival flap.	9th Nov., 1875. $V = \frac{14}{c}$ (+4 $\frac{1}{2}$) 2 $\frac{1}{2}$ (+3) at 7". Was formerly near- sighted. Staphyloma posticum.	11 "
20	F.	65	Hard; hyper- mature	L.	Nov. 16	Normal	Considerable opacity of capsule. Same patient as No. 21.	23rd Dec., 1875. $V = \frac{14}{c}$ (?) (+4 $\frac{1}{2}$). Cannot read, but could sew with (+3).	41 "
21	F.	65	Hard -	R.	Nov. 25	Normal	Same patient as No. 21.	23rd Dec., '75. $V = \frac{14}{LXX}$ (?) (+4 $\frac{1}{2}$). Cannot read, but could sew with (+3).	32 "

Discision of Cataract.

1	M.	1	Congenital -	R.	Feb. 11	—	Operation had to be repeated three times.	Successful. Too young to test V.	—
2	M.	1	Congenital -	L.	July 10	—	—	Successful. Too young to test V.	—

In presenting the foregoing Table we do not propose to draw any conclusions from it with regard to the value of the mode of operation adopted—the number is too small for such purpose; but we think it to be of the utmost importance that all cases of operation for cataract should be carefully registered, together with the acuteness of vision obtained, the latter being tested at as long an interval after the operation as possible. We lay considerable stress on this point, especially as the question of statistics of cataract operations has been discussed in a new light by Dr. Hirschberg, of Berlin, in a suggestive paper, published in the last number of the *Archives of Ophthalmology and Otology*.^a

Dr. Hirschberg first of all draws attention to the very unsettled state of the question as to what is the best operation for cataract, and he lays it down as indisputable, that the only true basis for judgment in this matter is the *numerical method*. He considers that it is the *computation of probabilities* which furnishes us with the necessary laws for establishing the general value which may be rightly claimed for a concrete series of numbers, and he looks upon it as a matter of regret that to this, “which might be called the mathematical formula for common sense, little attention has been paid in professional statistics at large, as well as in our specialty. Yet,” he goes on to say, “it teaches us beyond refutation that most of the different series of numbers published, because too short, do not establish with sufficient—*i. e.*, practically conclusive—probability what they are intended to prove.”

This is not the place to follow the author in his exposition of the method he advocates, which, by-the-by, pre-supposes an acquaintance with the doctrine of chances we are inclined to think is not very general. But there is one statement made by Dr. Hirschberg which seems open to objection. He says:—“The numbers of operations in general are too small, representing fortuitous rather than real values of the quantities to be determined.” And in a note to this he adds:—“It should not be attempted, as Steffan has done in his well-known paper, to make a long series by the addition of several short ones. The number of losses depends upon (1) the method, (2) the skill of the operator, (3) the individual pre-disposition of the eye to be operated upon, and (4) various external circumstances. Two series, obtained by the same method,

^a The Statistics of the Operations for Cataract. By Dr. J. Hirschberg, of Berlin. *Archives of Ophthalmology and Otology*. Vol. IV., Nos. 3 and 4, p. 452. New York. 1875.

but under different external conditions, should not be blended together, except in case that both series are very long, so that the accidental variations, in regard to points 3 and 4, find compensation, and that there is justifiable reason to assume that the skill and precision of both operators are equal."

Now we maintain it is quite justifiable to combine a large number of short series from various sources; for then, practically, the very points alluded to are eliminated or find compensation, and, to our minds, a truer judgment is arrived at by this means than the more exclusive examples adduced by Dr. Hirschberg would lead us to expect by his method, for these examples appear to give too great preponderance in favour of skill. It is in no spirit of hostile criticism we have dwelt on this subject, but rather with the object of enforcing what we have already insisted on, namely, the importance of registering *all* cases of cataract operations. We cordially endorse the author's statement, that "not one of the latest methods has as yet furnished a sufficient number of facts so as to warrant a preference to Von Graefe's method."

Iridectomy was performed *for optical purposes* nine times. In one instance the result was spoiled by the formation of cataract. Two of these operations were rendered necessary by central leucoma of the cornea, which latter, in each case, was afterwards tattooed with Indian ink to obviate the deformity. In one case the leucoma covered not only the pupil but also a portion of the brown iris, and this part was tattooed with burnt sienna.

Iridectomy for antiphlogistic purposes was performed eight times, for *glaucoma* four times, and for *secondary glaucoma* three times.

Wecker's Iridotomy was performed three times—once upon one eye, and twice upon another. In the first case the result was most brilliant. The patient had had a cataract extracted elsewhere some years previously. Subsequent suppuration of the wound had evidently set in, with the result of drawing the iris towards the latter and producing occlusion of the pupil. Fingers could be counted close to the eye only. The operation produced a beautifully-clear pupil, the vision was raised to $\frac{14}{1000}$ (with + 4), and small type (No. 5½ Snellen) could be read fluently at 7" with + 2. The second case (similar in its nature) was not so satisfactory. Notwithstanding two attempts a clear pupil could not be obtained. This was due to a very thick retro-iritic membrane, which did not lie in direct contact with the iris, but at least a line further back. The

immediate result of the operation each time was a clear pupil; yet, although the aperture in the iris remained open, that in the retro-iritic membrane closed again next day, when the aqueous humour had become secreted and the vitreous returned into its chamber. In this dilemma *Krüger's method* was had recourse to, but, owing to the excessively clumsy make of the instrument,^a the proceeding could not be carried out. With some modification the latter method would seem to promise good results in cases similar to the above.

There was one operation for *Serous Cyst of the Iris*. As the case is still under observation we shall not enter into its details, but shall merely mention that the cyst was purely idiopathic in its origin, and that it was one of the largest, if not the very largest, as yet observed.

There were twelve operations for *Convergent Strabismus*, the results of which were all satisfactory. There seems in this country to be a prejudice against the squint operation, for which it is difficult to account. We need say nothing about the unsightly appearance produced by squint, for everyone is familiar with it; but it may not be present to the minds of our brethren who have had no reason to think about the matter that a squint precludes the possibility of binocular vision with all its advantages. That the squinting eye ultimately becomes very imperfect in its vision is also a fact not sufficiently generally known. In the act of vision the squinting eye is not used, for if it were double sight would result. Hence, for want of use, the optic nerve and retina of the deviating eye gradually degenerate and actually undergo atrophy, as do other parts of the body when not used. For these reasons we think strabismus should be always corrected. The operation is unattended by the slightest danger, and its results are satisfactory, from an æsthetic point of view, in more than ninety per cent. of the cases, while, so far as its effect in restoring the impaired vision is concerned, that depends on the stage to which the impairment has advanced. We have made the foregoing remarks because the public must be educated in these matters by the profession, and because we are deeply impressed by the importance of the subject.

Entropion of the upper lid was operated for twenty times, after three different methods—viz., ten by the method of Snellen, five by the Arlt-Jaesche method, and five according to Berlin's method. As the latter is comparatively new and not yet in general use, a

^a It was obtained from the original maker of Krüger's instrument in Germany.

description of it may interest our readers. A horn spatula having been inserted under the lid by the assistant so as to protect the eyeball, or, still better, a Knapp's clamp having been applied, the surgeon makes an incision extending the entire length of the lid, about three millimetres removed from its margin. This incision is to divide at once the skin, muscle, cartilage, and conjunctiva. The skin and muscle along the upper edge of the wound is now to be pushed up with the handle of the knife or dissected up, so as to expose the cartilage. The cut edge of the latter is then seized at its centre in a suitable forceps, and with a scalpel or scissors a narrow oval piece, extending the whole length of the cartilage, and from two to three millimetres broad at its broadest part, is excised. A portion of conjunctiva, corresponding in size to the bit of cartilage removed, must necessarily be taken away with it. A portion of skin along the upper margin of the wound may then be excised if it be feared that the effect will be insufficient; and, finally, the lips of the wound may be closed with three or four points of suture, or a simple bandage may be applied without any sutures. In the five cases above mentioned no skin flap was removed, but sutures were always employed. Arlt and others have made the objection to this operation, that it is liable to produce lagophthalmos and imperfect lubrication of the margin of the eyelid, in consequence of the injury and partial destruction of the Meibomian glands. The latter objection would equally apply to the methods of Snellen and Streatfield, and yet in practice no disturbances which could be referred to an imperfect lubrication of the margin of the lid has been observed in any of these three modes of operating. With regard to the lagophthalmos, it also did not occur in any of our cases, nor in the hands of others who have had a large experience of the proceeding. The method seems to us admirably suited for extreme cases of entropion with distortion of the cartilage. It is simple, rapidly performed, and leaves no disfigurement. Our acquaintance with the operation is as yet too slight to enable us to form an opinion as to the frequency of recurrence. The author himself admits that recurrences do take place, but he thinks it will be possible, after a longer experience, to lay down rules for the proper dosing of the effect which will prevent this.*

Illuquætio was performed in three cases. It is a very ancient

* R. Berlin. Bemerkungen zu seinem Operations-Verfahren bei Entropion. Sitzungsbericht der Ophthalm. Gesellschaft. 1874.

proceeding, dating from the time of Celsus, for the correction of distichiasis, where only a few cilia are growing awry. Of late it has been revived by Snellen of Utrecht, and Argyll Robertson of Edinburgh. It is performed in the following way:—A very fine curved needle is threaded with a double silken suture or hair; the needle is seized in a holder, and its point inserted close to the place at which the offending cilia emerge from the lid; it is pushed about one or one and a half millimetres deep, and then turned abruptly round, so as to bring it out in the line of the proper cilia; the needle and two ends of the suture are pulled through, but the loop is still left below; in this loop the eyelash is ensnared by aid of a fine forceps; the loop is then drawn through, and with it the eyelash. If the hair does not fall out too soon afterwards, a permanent improvement in the position of its follicle may be produced, so that a normal position is secured for successive cilia. The worst which may occur is that the very simple proceeding will have to be repeated. Destruction of the hair follicles by cauterisation or extirpation gives rise, as a rule, to a small cicatrix, by which other previously normally growing hairs become turned in. The two points to be attended to in performing *illaquætio*, as it seems to us, are to insert the needle close to the hair, and to make the channel it traverses short. If both these particulars are not adhered to, the hair, owing to its resiliency, will next day be found in its old position.

It may here be mentioned, that in no case of entropion or distichiasis has the proceeding so well known under the name of “scalping” ever been employed in the Infirmary. When we have methods in such abundance for restoring the eyelashes to their normal position, it cannot be good practice to rob the eye of its natural protection. At the very utmost, “scalping” is applicable to cases of simple distichiasis only, but it cannot be too strongly condemned if performed for entropion. In the latter condition the operation, no doubt, produces an immediate result which pleases the patient, but this depends merely on the removal of the hairs which were rubbing against his cornea; the entropion has not been relieved. As soon as the margin of the lid is completely healed, the hard cicatrix is in contact with the cornea, and the patient's condition is little, if at all, better than before.

Intraocular and Orbital Tumours.—Two tumours, one orbital and the other intraocular and orbital, were removed during the year. The latter of these was a good example of melano-sarcoma.

The patient, a woman, aged forty, who had evidently seen better days, but was now leading a dissipated life, was admitted into the Infirmary in April. She stated that about two years before, the right eye became inflamed, which she attributed to a cold; the inflammation increased and she soon noticed something growing from the eye. A constant and offensive discharge kept continually oozing from it, and it sometimes bled very freely. She occasionally experienced some severe darts or stings of pain in and about the eye.

On examination a large tumour was found occupying the orbit and involving the globe. From the latter a black mass protruded forwards between the eyelids. Hard nodules could be felt in the region of the parotid and submaxillary glands, and this circumstance, at first sight, made it doubtful whether operative interference was justifiable. The patient was seen by Mr. Colles (Consulting Surgeon to the Infirmary), who considered the removal of the tumour imperative; and accordingly the operation was undertaken on the 22nd of April, Dr. V. Brown and Mr. John A. Irwin, who were attending the course of instruction at the Infirmary, kindly rendering assistance. It was found impossible to remove the tumour *en masse*, as all the tissues of the orbit were deeply infiltrated with the morbid growth. Besides the hæmorrhage was very profuse, and at one period assumed most alarming proportions, the blood literally pouring from the orbit; and as every fresh piece of the tumour was removed, the blood welled up with such rapidity as completely to fill the cavity at once. However, by the vigorous application of cold and pressure, the hæmorrhage was kept tolerably in check, and as much as possible of the morbid growth removed. The whole cavity of the orbit was then freely touched over with a solution of chloride of zinc, and, finally, compresses of lint and a firm bandage were applied. The patient made a good recovery and expressed herself as greatly relieved. Up to the present there has been no sign of recurrence of the growth in the orbit. Lately a very suspicious looking swelling has appeared in the region of the parotid and submaxillary glands, and there can be little doubt that the disease has established a new focus in this quarter. On the whole, however, the operation cannot but be regarded as satisfactory, for had it not been performed, the disease would undoubtedly have proved quickly fatal.

The case of orbital tumour was one of considerable interest. A young man, aged nineteen, a shop assistant, presented himself at

the Infirmary on the 10th of July. He stated that for some years past the left eye had been pushed upwards by a swelling which occupied the inner and lower portion of the orbit. The sight was not much affected, the acuteness of vision, however, being not quite equal to that of the other eye. There was no history of an injury. The tumour was elastic and gave the sense of fluctuation so strongly that it was determined to make an exploratory incision. This immediately gave exit to a thick light orange coloured fluid, which was intensely oily in character. As much as possible was squeezed out and the globe quickly returned to its normal position. The incision soon healed, and there has been no recurrence of the tumour.

A microscopic examination showed the fluid to be composed almost entirely of fat cells. When treated with ether the fluid dissolved, leaving hardly any residuum.

Besides the above operations the following were performed:—Graefe's entropion operation for the lower lid, 2; Extirpation of false cilia, 3; Peritomy, 1; Enucleation of shrunken globe for pain on pressure, 4; Enucleation of globe for marginal ring ulcer of the cornea, 1; Tumour of the lower lid, removed, 1; Tumour of the conjunctiva, removed, 1.

The following are a few of the interesting cases observed:—

Case of Sudden Amaurosis, associated with Chorea. This case has already been published, but as it was in a special journal,* and as some new points of interest in it have arisen since then, we have no hesitation in reproducing it here.

Lizzie B., aged ten, was brought to the Infirmary on 1st May last, complaining of the sight of her left eye. On 15th April the child had been out all day watching a public funeral, and came home in the evening suffering from frontal headache. Next morning, while washing her face, she discovered that the left eye was blind. The parents did not seek medical advice for a fortnight, believing that the affection would wear off. The headache continued for nine days, and has not returned since then.

Upon making a functional examination it is found that vision is absolutely wanting in the eye, bright light not being distinguished from darkness. The pupil, which is dilated, reacts sluggishly when the light falls into the eye.

The ophthalmoscope reveals those appearances which, until lately,

* Royal London Ophthalmic Hospital Reports. September, 1875.

were generally accepted as characteristic of embolism of the central artery of the retina. The artery, in all its branches, is pale and diminished in calibre, but not quite bloodless. The vein is also somewhat smaller than the normal. There is some haziness of the retina around the optic disc, especially above and to the outside, but this haziness does not advance quite up to the margin of the disc. At the macula lutea there is the well-known crimson spot, surrounded by a broad zone of retinal cloudiness.

The child is affected with chorea, which is more marked in the left leg and arm than elsewhere, and the mother says that this made its appearance almost simultaneously with the blindness. No cardiac disease can be found. The patient has never had any illness beyond mild attacks of whooping-cough and measles.

10th May, 1875.—A bright light is distinguished from a dark shadow.

14th May.—Fingers are counted centrally at a distance of three inches. The haziness around the disc is now quite gone, and that near the macula lutea very much lessened. The crimson spot has become more diffused and less intense in colour. The chorea is also better.

20th May.—Fingers counted at five inches. The lower third of the field of vision is still wanting. The optic disc is becoming white. The crimson spot continues, and also the nebula surrounding it. In general the appearance of the vessels remains similar to that observed at the first examination, but there is one arterial branch which passes downwards and inwards, which seems to be completely obliterated, and presents the appearance of a thin white thread.

1st June.—Since the last visit the obliterated branch has recovered so far as to differ in no way from its fellows. Very slight chorea still remains.

14th July.—The functions continue unaltered. The optic disc is whiter. The crimson spot is fainter, as likewise the surrounding nebula. The chorea has quite disappeared, the patient's mother having seen nothing of it for a fortnight.

The treatment consisted in bromide and iodide of potassium.

The precise nature of the foregoing case is not very certain. It was, no doubt, either embolism of the central retina or hæmorrhage of the optic nerve. Since the appearance of Dr. Hugo Magnus' work (*Die Sehnerven-Blutungen*. Leipzig, 1874) we are obliged to distinguish between these two very different conditions, which

produce such similar ophthalmoscopic appearances. One of the most important points for the diagnosis (the period at which the infiltration of the retina appears) can only be observed within the first few days after the occurrence of the blindness, and the patient in this instance did not come under notice for a fortnight. In cases of hæmorrhage of the optic nerve, the retinal veins are distended, according to Magnus, while in embolism they are contracted, as in this case. The complete, but temporary, blocking of one branch, as noted on 20th May, would also speak for embolism. The recovery of partial sight in a large portion of the field of vision, one-third of the field still remaining defective, is a circumstance which I am unable to explain. There is now no branch of the artery less filled with blood than another, nor where one branch did seem completely blocked did the defect in the field correspond to the portion of retina supplied by this vessel.

One of the points of greatest interest in this case is the coincidence of the chorea. The reader is acquainted with Dr. Hughlings Jackson's hypothesis, that the proximate cause of chorea is embolism of the capillary vessels in the region of the corpus striatum. This case may, perhaps, go to support that theory.

Since the publication of the above the following notes have been made:—

18th October.—Matters continued in the same state until the 15th of this month, on the evening of which day the little patient went out to attend a magic lantern exhibition. While sitting quietly looking on she was attacked with complete paralysis of the portio dura of the right side. Hearing normal.

23rd October.—Yesterday evening, without any assignable cause, she was attacked with violent and persistent vomiting, which continued all night and this morning. Since the last visit she has been tolerably well, with the exception of slight headache.

25th October.—Admitted to the Adelaide Hospital, under Dr. J. Little's care. No vomiting; tongue somewhat foul; pulse healthy; no headache; facial paralysis continues; bromide of potassium internally.

31st October.—Continuing well, is discharged from hospital.

6th November.—Continues well, with the exception of the vision of her left eye, the facial paralysis, and one or two slight headaches. Dr. J. Little inclines to the opinion that the paralysis of the face is due to a central lesion, as he finds that the sense of taste on the right half of the tongue is somewhat impaired.

Fig. 1.

Fig. 2.

Chart of Field of Vision

18th November.—The day before yesterday the patient had a bad headache, but no sickness of stomach. She is fond of lying down after dinner, as she then feels wearied.

29th January, 1876.—The patient's mother says the child has been growing stronger every day. The appetite is improving. She very occasionally complains of a slight frontal headache. The facial paralysis seems better, as the angle of the mouth droops less, and the eyelids can be approximated closer.

Case of Embolism of a Branch of the Central Artery of the Retina.—James C., aged twenty-three, merchant's clerk, applied on 13th May, 1875. He states that one day, about three years ago, his right eye suddenly went quite blind. This blindness lasted for half an hour, and then the eye recovered partial vision. It has remained in the same condition since, having altered neither for better nor worse.

Fingers can now be counted with the affected eye at a distance of 2' somewhat below the centre of the field of vision. Examination with Carter's perimeter displays a complete defect in the field, as shown in the accompanying chart (Fig. 2).

The ophthalmoscope shows that a large branch of the central artery of the retina, passing directly downwards from the optic disc, is bloodless, looking like a thin white thread. The lower half of the optic disc is blanched. Fig. 1 illustrates the appearances seen. It is after a drawing taken from the case.

The left eye is perfectly healthy.

The only other ailment of which the patient complains is occasional neuralgia in the right side of the face. He has never had any severe illness, especially never acute rheumatism. The heart is healthy.

There can be no doubt but that, in this case, in the first instance, the central artery itself became blocked by an embolus, which soon after was carried on into the branch in question. The case is parallel to five others hitherto published—viz., three by Knapp,^a one by Barkan,^b and one by Mauthner.^c

Atrophy of the Optic Nerve from Trauma.—Edward L., aged thirty, coachman, presented himself on 15th July, 1875. He had been thrown off his master's outside car six weeks previously, and

^a Archives of Ophthal. and Otol., III. Part 1.

^b Archives of Ophthal. and Otol., III. Part 1.

^c Allg. Wiener Med. Zeitg., 1873, p. 6.

sustained an injury extending from the outer end of the left eyebrow directly upwards for an inch and a half. The cicatrix of this wound was still apparent. There was at the time great effusion of blood into the cellular tissue of the eyelids and neighbouring parts, so that he could not open the eye. At length, when the swelling subsided, he found that the eye, which had previously been healthy, had become quite blind. He had now not even power of perception of light with it. The ophthalmoscope showed complete white atrophy of the optic nerve, the arteries being very attenuated.

There can be little doubt but that the nerve must have suffered a direct injury—probably, either by laceration against the edge of the optic foramen, from the concussion, or else by effusion of blood into the sheath of the nerve.

Case of Ciliary Neurosis, with Amblyopia.—The precise nature of this case remains unknown to us. If any of our readers should have met with a similar one, and have been able to form any idea as to its nature, we should be happy to learn of it.

Kate B., aged twenty-seven, cook, a healthy intelligent-looking girl, came to the Infirmary on 20th July, 1875, complaining of the sight of her left eye. She said she had seen well with it until the 11th instant, when, while washing her face, she perceived that it was painful on pressure. Soon afterwards motion of the eyeball began to give pain. On the 15th the sight first became dim “on and off,” gradually getting worse, until the 18th, when she could no longer distinguish print.

Status præsens.—Externally the eye seems perfectly healthy. The pupil reacts well to light. There is excessive pain upon pressure along the upper margin of the cornea, but she says this pain is less acute to-day than it has been. Motion of the eyeball in any direction gives pain in the globe. In April last she suffered from “weakness” and headaches, but has been well since. Her menstrual periods are regular, and the discharge healthy. The eye is emmetropic. $V = \frac{14}{\infty}$. Reads short words, No. 6½ (Snellen), at six inches. Examination after the ordinary method, with the black board, showed the field of vision to be considerably contracted. A perimetric examination was not made.

The ophthalmoscope displays a small staphyloma below and to the inside of the disc, with considerable pigmentary alteration in the neighbourhood. These changes are evidently of old standing.

The artificial leech was applied on the corresponding temple; she

was directed to use a warm stupe to the eye every third hour, and to protect it from cold and light. 5 grs. of iodide of potassium three times a day were prescribed.

24th July.—Eyeball less painful on pressure. Vision unaltered.

27th July.—Vision improved. $V = \frac{14}{\overline{21(7)}}$. No. $2\frac{1}{2}$ read at seven inches. Pain on pressure quite gone. Slight painful sensation on looking downwards. Motion of eyeball in other directions painless.

29th July.— $V = \frac{14}{\overline{21}}$. No. $1\frac{1}{2}$ at seven inches with some difficulty. Very slight pain on looking downwards.

4th August.— $V = \frac{14}{\overline{22}}$. No. $1\frac{1}{2}$ at seven inches.

12th August.— $V = \frac{14}{\overline{22}}$.

21st August.—Vision normal. All symptoms disappeared.

EAR DISEASES.

With regard to this department, it is not our intention to enter into any detailed account in the present Report. We shall merely refer to one or two points of practical interest.

During the year Weber-Liel's (of Berlin) method of *Intra-Tubal Electricity* has been employed in two cases with satisfactory results. So far as we have learned, this is the first institution in the kingdom in which this most ingenious mode of treatment has been adopted. It is not indicated in many of the cases which come under observation in hospitals; hence the small number in which it was tried. The disease for which Weber-Liel recommends it is that known by the name of simple chronic catarrh of the middle ear. The conviction has, however, of late been gaining ground, that the affection in question has but little in common with what we understand by the word catarrh, and yet a better name for it, or a satisfactory explanation of the true nature of the disease, has been wanting. The treatment hitherto in general use has been framed upon the catarrhal theory, and all who have had any experience will know how unsatisfactory it is. It is of the utmost importance that some means of relieving or arresting the progress of this disease should be found, as it is probably the most common cause of deafness; indeed, the title of Weber-Liel's book on the subject is—"On the Nature and Curability of the most common form of Progressive Deafness" (*Ueber das Wesen und Heilbarkeit der häufigsten Form progressiver Schwerhörigkeit*: Berlin, 1873). According to his theory, the starting-point of the disease is a

debility of the musculature of the Eustachian tube. Some catarrh of the middle ear may supervene at a later period, but is not an intrinsic part of the affection. He deduces his theory from his original anatomical, physiological, and pathological investigations. The treatment he proposes is the direct application of galvanism to the Eustachian tube. This is accomplished as follows:—The apparatus used in the Infirmary is a small galvanic machine, with a single bichromate of potash cell. A commutator is connected with it for the purpose of reversing the current. A Eustachian catheter is first introduced, *lege artem*, into the tube about to be galvanised. Through this catheter one electrode, in the shape of an elastic bougie containing a silver wire, is passed until it projects one or two lines into the tube. The other electrode is a conveniently-shaped brass rod mounted in a wooden handle. This latter is placed immediately below or behind the ear, or on the cervical vertebræ. The current should be frequently turned during the sitting, and the latter should be continued for from three to fifteen minutes, and be repeated two or three times a week. The treatment requires to be persisted in for from three to six months. In order that the treatment may be of benefit it should be employed in the early stages of the disease, before the tinnitus becomes very loud and continuous, and the hearing greatly impaired, and before secondary changes in the middle ear come on. In old chronic cases intra-tubal electricity is just as impotent as all other kinds of treatment. At some future time we hope to bring this subject more fully before our readers.

Tenotomy of the Tensor Tympani, after Weber's method, was attempted in one case. There was some slight improvement in the hearing for a short time afterwards, but this was probably due to the perforation made in the thickened membrane, rather than to the tenotomy of which the performance remains hypothetical. The operation is much more difficult than it would seem before it is undertaken. After a lengthened course of practice upon the cadaver the proceeding may be put in practice with better success.

The chief indication for the operation is found in a contraction of the tendon, giving rise to deafness, tinnitus, and vertigo, from labyrinthine pressure. Weber's results have been most satisfactory in a large percentage of the great number of cases he has operated on.