

without the aid of a bootjack, that the patient had almost fainted away. Mercurial and other purgative medicines, but especially a hot bath every night on going to bed, at 103°, for fifteen minutes, were the most effectual remedies. Fomentations did good. There was a disposition to an early morning exacerbation. The jar of a carriage was intolerable. This neuritic sciatica is of an essentially different character from any muscular rheumatism, as lumbago. As the latter is inflammation of the muscular fibre, the former is most distinctly, in its twofold set of symptoms, a neuritis. The numbness is similar to that experienced in the second stage of odontalgia, doubtless from hyperæmia of the neurilemma and compression of the nervous substance."

Romberg, stating the diagnosis of sciatica, says: "Until very recently, pain confined to the *trunk* of the sciatic nerve has been looked upon as the pathognomonic sign of sciatica, and the proper diagnostic appreciation of sciatica has been impeded by attending exclusively to the *course* of the sciatic nerve. The definition of a peripheral nerve was limited to its superficial distribution, and that part which is concealed in cavities and passages was overlooked. If we except the rare cases of sciatic neuritis resulting from injuries or ulceration of the thigh, that part of the nerve which lies within the pelvis in the lumbar and sacral plexus and near the spinal cord, is the one which, on being subjected to irritation, produces the neuralgic symptoms in the leg, according to the law of eccentricity. To this circumstance we must attribute the sympathetic affections and the implications of mobility. The pain in the sacrum which is commonly present, must be interpreted in this way: the affections of the motor fibres, which are in juxtaposition with the sensory filaments in the sciatic nerve, and are generally subjected to the same influences, shows itself in the spasm of the calves, in the tremor of the muscles, and in the impaired motility."

These phenomena are very palpable in a difficult labour, where the sciatic plexus is dragged and irritated by the head of the child. The parturient female feels the cutting, penetrating pain, not only in the sacrum, but in the thighs, the calves, and the toes, according as the sciatic cutaneous nerves are irritated, one or more, in the pelvis. At the same time there are painful muscular contractions, especially of the gastrocnemius. The irritation of the sciatic nerve may be so considerable, as to leave an enduring affection which threatens danger after the birth of the child. I have had occasion to notice three such cases. Valleix has described a similar case, in which permanent lameness of one foot ensued. As we have no dissections, it cannot be positively determined, but it may be assumed, that in these cases neuritis had taken place in the compressed plexus within the pelvis. Two of the cases seen by Romberg were in women of the lower orders, and had been delivered with the forceps by an inexperienced person, and they were attacked by the pain in forty-eight hours. The other case, a delicate lady, aged 28, was delivered by one of our most experienced accoucheurs with the forceps, and was seized with the affection on the tenth day. Under suitable treatment, the violent pain in these cases yielded after a fortnight, but the convalescence was tedious. In all these cases, the sensibility and motility of the affected leg remained affected; in one woman, there was anæsthesia of the sole of the foot, so that she did not feel the insertion of a needle; in the two others, a troublesome source of weakness continued when the foot was moved and fatigued. The particular kind of treatment in these cases is not mentioned.

I have nothing further to say, than that the two cases whose histories I have read differ, as you will have perceived, somewhat from those mentioned by Romberg, as well as from each other. In the former of my cases, the

pain was felt and loudly complained of twenty-four hours before the termination of labour. This fact precludes, satisfactorily to my mind, the notions which Romberg hints at, that the indifferent manner in which the forceps in two of the cases mentioned by him, were used, was the cause of the subsequent neuralgia.

The pain at first and for several days was located in the left hip and thigh, and subsequently in the front of left leg and dorsum of the foot, parts supplied by the peripheral branches of the external popliteal nerve; in these respects, as well as in the period of the commencement of the pain, as also in delivery being by instrumental aid in the one case, naturally in the other, differing from the other case which I have read; the pain in which was chiefly felt in the calf of right leg and sole of right foot—parts supplied by the peripheral branches of the internal popliteal nerve—and the invasion of the disease being on the fourth day after delivery. They also differ somewhat in regard to the pain being in the former case always increased in the night, whilst in the latter it was less intense. In both of these cases, the illness has continued to nearly this time (March), but great allowance must be made for the circumstances in which these poor unfortunate patients were placed, having no proper nurse, no proper diet, and the other curative measures indifferently carried out.

## TEN YEARS OF OPERATIVE SURGERY IN THE PROVINCES.

By AUGUSTIN PRICHARD, Esq., Surgeon, Clifton, Bristol.

### V.—OPERATIONS ON THE EYE.

[Continued from page 627.]

*Strabismus.* CASES CCCXXVIII — DCX (inclusive) are represented by one hundred and eighty-three instances of operation for the cure of squint, of which I have kept a record; and, as to particularise each one of them in the pages of the JOURNAL would be impossible, I have brought them together, and have briefly arranged them as follows:—Seventy were male, and one hundred and thirteen female; they varied in age from 4 to 51 years; in eighty the right eye was operated on, in eighty-six the left, and both in seventeen; one hundred and seventy-four were internal, eight external, and one inferior; forty-eight were below 10 years of age; fifty-one between 10 and 15; fifty between 15 and 20; twenty-six from 20 to 30; and eight above 30.

In six, there was no improvement; but in almost all the rest the cure was very good. In ten, a granulation appeared, which required to be snipped off; and in nearly all the sight was improved in a very marked degree. Forty-one were operated on under chloroform; but for the last two or three years I have invariably refused to give it; and if patients insist upon it, for this operation, they must go to some other surgeon. It appears that there have been recorded at least two deaths from chloroform in children who were to have been cured of squint, and many more may have happened; and to avoid the pain of a slight operation undertaken to remove a deformity, when there is no danger to life, is not worth this amount of risk, small though it be; and to insure complete temporary paralysis of the muscles of the eye, the anæsthetic must be administered to its full extent. I have only in one or two instances found patients refuse to submit without chloroform; and that it is not necessary, I think it a sufficient proof to say that I have operated on children of the ages of 4, 6, 8, 9, and 10, who have remained quite steady, and in whom the operation was as readily and satisfactorily performed as in any others; and if at that age by a little persuasion they can be made to bear the pain, it is surely better than the inconvenience and risk of chloroform. In one

of the instances where I gave chloroform, the following untoward event occurred, and I attributed it myself to the effect of the anæsthetic in preventing my examining the eyes at the time of the operation. A child with a very bad squint in the right eye was operated on by me under chloroform. I divided the muscle, as I thought, and saw the bare sclerotic. The next day she squinted as much as ever, and it was clear that the division of the muscle was incomplete; I, therefore, gave her chloroform again, and introducing the blunt hook through the same conjunctival wound, raised one or two fibres of tendinous tissue, and after dividing them the eye became straight. The second operation would not have been necessary had not the child been insensible at the first.

The cases in which I have operated on both eyes at the same time have done very well. The youngest was 9 years old, and the eldest was a man of 50.

In the case of strabismus inferior, in which I divided the inferior rectus, the improvement was not as great as I expected it would have been. I experienced more difficulty in dividing this muscle than in the case of either the internal or external rectus, on account of the small space between the globe of the eye and the floor of the orbit, and the prominence of its lower edge. Slight improvement ensued.

The operation for strabismus differs from all others in respect of the motive by which patients are induced to submit to it. The more common reason which leads young children in this neighbourhood to submit to it, is that manifestation of the evil spirit in their school-fellows which prompts them to persecute every unfortunate child with a squint, painfully bashful as they are at all times, with the name of "cock-eye"; there is also the very excusable desire to get rid of an obnoxious deformity. I operated upon a woman 50 years of age, who had been obliged to be separated from her husband in consequence of his dissolute conduct; and being, by two separate operations, cured of an intense squint in both eyes, she expressed much gratitude and her satisfaction that her husband, who was in search of her, would not be able to recognise her or prove her identity, and thus he would be unable to claim some little money she had saved in service.

In my opinion, the most interesting results obtained by strabismus operations have reference to their effect upon vision, and the light thrown upon the physiological question of the adapting power of the eye to distances; and, at the risk of digressing a little from the practical subject of my papers, I will say a word or two relating to this function, and the aid obtained for physiology from pathological facts.

Squinting eyes, when the sight is defective, as it generally is, are usually myopic, and when the patient is cured of the deformity, besides improved clearness of sight, and besides the immense gain of obtaining the true stereoscopic effect,\* instead of the flat picture which he has hitherto seen, the eye ceases to be myopic; and of this we have constantly such proof as the following case affords.

CASE. M. A. R., aged 28, had suffered from an attack of inflammation in the right eye about six years before I saw her, and she consulted me about an external squint in this eye. With it she could see to distinguish the red colour of a scarlet shawl at three yards distance; but she could not discern any form. A concave glass assisted her sight. I operated, and divided the external

rectus with the forceps and scissors, without introducing the hook, and the eye became central at once, and the sight was immediately so much improved that she could not only see the shawl and the pattern upon it, but could see her bonnet strings, and make them out clearly, at the same distance. Her sight improved for some days, when she ceased to attend.

I believe that any change which occurs in the eye in order to adapt it to different distances, is so minute as not to be appreciable by ordinary measurement, even were it possible, and for the following reasons: with an optical apparatus arranged like the eye, with a diaphragm having so small an aperture as the pupil, everything is in focus, both near and distant objects. That this clearness of the image of objects at different distances is attainable without difficulty, may be seen in an ordinary photographic camera, or in any of the very common, but still wonderful, stereoscopic slides, which are taken on flat plates with an aperture much larger than the pupil; and, heterodox though it be, I must express my opinion that the real power which any eye has of adapting itself to distances is extremely small; not that we have any difficulty in seeing distant and tolerably near objects, but that the necessary change effected in the eye is next to nothing.

We direct our eyes to certain objects and see them, and we may by a little practice see a near object and a distant one in the same line of vision, at the same time, although, perhaps, not with equal distinctness.

Presbyopic and myopic persons have the focus of their eyes fixed respectively for distant and near objects and they can see no others clearly; they have the same muscles and other apparatus that we have, but their instruments are out of focus, and they require an additional (or artificial) lens to make them available for all purposes.

A person with ordinary sight cannot see objects so closely as a near-sighted person can; and it must be remembered that it is not in seeing distant, but near objects, although at various distances from the eye, that the chief alteration in adjustment is required; and the natural means at our disposal are insufficient for this purpose to any great degree.

We frequently see that a near-sighted person who puts on his glasses in the morning, wears them comfortably without intermission all the day, and with their aid can see all that he requires to see; and from these facts I infer that we all have a certain range of vision, some greater and some less; the presbyopic and myopic have the least power, whilst persons with ordinary vision have the focus of the eye fixed at the most convenient point.

Again, the resemblance between the iris and the lids has often been described. The *portio dura* supplies the *orbicularis palpebrarum* with its motor power; the lower division of the third nerve supplies the iris, and the optic and fifth nerves are the afferent nerves of both lids and iris. The eyelids and iris act together; they are both widely open when we are looking at distant objects; they are both partially closed when we look at near objects; and they both are shut as far as they can be when we sleep. In the first case, all the muscles supplied by the lower division of the third nerve are relaxed as much as possible; in the two latter, they are more or less contracted; and with these conditions of the iris and eyelids we may compare the interesting fact that when there is an extraneous substance, as a minute particle of metal, irritating the eye by being partially imbedded in the cornea, we have a very similar result, namely, the

\* It is worthy of remark that, if the axes of the eyes are straight, the true stereoscopic effect of relief is perceived, even though the sight of one eye is excessively dim; the eye which sees correctly and clearly being principally used, the other merely joining in to assist in the appreciation of distances; and exactly the same fact is to be noticed when, with two sound eyes, we look into a stereoscope at a good and a very imperfect picture of the same object, taken at a suitable angle. The one eye sees the picture, the other throws it into relief.

+ It must be borne in mind, that opticians are able, by the use of various kinds of glass, and by different forms and combinations, to make lenses identical with one another in their aperture and angle and focal distance, but varying extremely in "penetration," or their power of bringing into focus at the same time, objects of different distances.

sphincter muscle of the iris and the orbicularis palpebrarum are spasmodically contracted, through the intervention of the fifth nerve. A distant object may be seen through a very small pupil, but a very near object cannot be seen with a dilated pupil; and it is not to admit more light that the pupil dilates when distant objects are seen, as most writers have assumed, for distant objects are very light—a fact well known to artists and photographers, and Mr. Ruskin, in his lectures, lays great stress upon it; and a man on the look out, as a sailor at sea, shades his eyes with his hand to shut out the light. This dilated state is that condition of the circular muscle of the iris which is associated with complete relaxation of the internal rectus; in other words, the muscles supplied by the lower division of the third nerve contract together and are relaxed together, and when they contract we see near objects clearly, and when they are relaxed we see distant objects clearly; and I believe that the pressure of these muscles and the varied aperture of the pupil are amply sufficient to produce the very trifling change requisite to enable a healthy eye to see objects at different distances.

*Extirpation.* I have already at different times published many of my cases of extirpation of the eye and have now only to recapitulate them very briefly with one or two additions and remarks. They are in the following order: cancer in the child, which is always of the soft kind; secondly, cancer in the adult; thirdly, melanosis; and lastly cases where the eye has been extirpated to preserve its fellow.

[To be continued.]

## Transactions of Branches.

### NORTH WALES BRANCH.

#### PRESIDENT'S ADDRESS.

By THOMAS T. GRIFFITH, Esq., Wrexham.

[Delivered June 18th.]

GENTLEMEN,—On behalf of my professional brethren in this town, and for myself, I beg to offer you a hearty and sincere welcome. In addition to which I have to tender you my best thanks for the high honour you have conferred, in electing me a second time to the president's chair.

It affords me much pleasure to inaugurate my duties by offering to Dr. Turnour our unanimous and grateful thanks for his services to our Association during the year of his presidentship; and we gladly avail ourselves of this occasion for presenting to him our cordial congratulations on his marriage, and our best wishes for the long continuance of health and happiness.

We are gratified by the selection of Wrexham for our annual meeting. The short time allowed to our visitors on this occasion makes us regret the less that our town possesses but few objects to engage attention or satisfy curiosity. Its stately and exquisitely proportioned and ornamented church tower will ever attract the notice and admiration of all who delight in the beauties of Gothic architecture. The town has no ancestry of important events, political or historical, to boast; no stirring reminiscences of past deeds of murder, war, or rapine; but is more remarkable for the successful cultivation of the peaceful arts; though it has, on all occasions when war or the rumours of war have prevailed, proved by deeds its full participation in the patriotism and martial spirit of our country. Its immediate vicinity is formed in nearly an unbroken circle by the parks, woods, and grounds of a resident gentry; and is enriched and beautified by much varied and picturesque scenery.

Placed as the centre to a very large and productive mining district, much of its increasing wealth and extent is due to the circumstance that a great proportion of the wants of this district is supplied from Wrexham. A main line of the Great Western Railway passing close to the town, connects it with all the great centres of trade and commerce, and, by affording a ready transit for mineral production, has led to a large investment of capital in mining speculations, which, in general, have proved eminently successful.

The town is situated on the slope of the segment of a basin formed by hills, which run from N.W. to S.W. But to the E. and S.E., the country stretches to the bases of the Shropshire and Cheshire hills in beautiful and gentle undulations. The declivities of the town itself offer great facilities for its general drainage; and there are other local advantages readily applicable to sanitary purposes. In the hills rising about three miles from the town, there exist rich beds of excellent coal, at a depth of from 80 to 260 yards, varying in thickness from 2 to 9 feet, overlaid by strata of shale, ironstone, fireclay, and sandstone of fine, hard, and durable quality, well adapted for buildings of every kind. These hills with rounded tops are concentric to another range, which rising abruptly and to a much greater height from deep narrow valleys which separate, by a very short distance, the two ranges, form the horizon in sharp broken outlines. This range contains highly productive veins of lead, combined with blende and calamine, and a small proportion of silver. The containing and overlying rocks consist of compact limestone chert and freestone.

From this brief notice of our locality, I must pass on to matters more connected with the objects for which we meet; and here I feel that if of necessity it belongs to my office to bring before you subjects novel or striking, I should at once shrink from such an obligation. But, confiding in your kind consideration and indulgence, I shall venture on, assured that all professional interests will engage your attention and sympathies.

From the apparent calm in medical politics, one might indulge the hope that our polity was established on a settled basis, and that our future prospects point only to harmony, and the realisation of long indulged hopes and wishes. But I fear the stillness is the mere reaction after years of toil and anxious suspense. Probably, too much and too little have been expected from the working of the Medical Act; but it has given the profession a status it can never lose; and I trust it contains within itself such elements of improvement and self-adjustment, as will eventually meet the wants and best interests of our common profession. A new and important change, deeply affecting the rising generation of general practitioners, has sprung from the recently created license of the London College of Physicians. An opportunity is thus afforded to every one to become connected with that college, an object I think more congenial to the *esprit de corps* than the existing connection between medical men and the Apothecaries' Company. It is most true, and must ever be gratefully acknowledged, that this company has done much in giving to the country a class of educated practitioners; yet I cannot but think that the time is come when the compulsory dependence of the members of a learned profession on a trading corporation should cease. I earnestly hope that the future regulations of the College will enforce a short apprenticeship. The entire absence of it will, it is to be feared, tempt young men to rush at once to the study of the higher branches of professional knowledge, before acquainting themselves with those rudimental matters—those first steps—which so greatly help to form the well informed and useful practitioner. The medical student has to practise his profession as an art, as well as study it as a science. But to reach the higher attainments in medical knowledge, his youthful mind