

development. Examples were quoted to show how in former times medical science was deficient in true scientific method; and how greatly modern physicians—though yet far from perfection—had improved in this respect. The sciences which medical students have to learn were then spoken of in more detail. It was shown that in anatomy and chemistry the student has types of the two chief divisions of science—the sciences of observation and those of experiment; while physiology, at present in a transitional state, was an example of the immense advantage of adding to pure observation experimental methods. It could not be too continually borne in mind that the subject matters of science consisted of material things, not of names or books. Yet books are quite indispensable in the present state of science to gain a knowledge of things, and their right use requires much discretion. For the beginner the best type of text-book is that which refers the student to the objects, and is useless without them. Fears are sometimes expressed lest the student of the present day should learn too much science, and become, as it is said, too scientific to be practical. But of true science it is impossible to have too much, and it is the most practical kind of knowledge that can be had. Too little science, or science of the wrong kind, is what makes men fail in practice. Equally mistaken is the notion that there is some kind of practical science less rigorous and difficult than genuine knowledge, which may be a chief substitute for it; but nothing of this can be of any use in the long run. Finally a word must be said about examinations. The present system had many evils, but in a practical profession, from which the public demand a guarantee of knowledge and capacity, some system was essential. The important thing for the student to remember was that examinations exist primarily for the benefit of those examined; and it was in a higher sense most important to the candidate himself to know whether he was fit to undertake the responsible duties of a medical practitioner.

DETAILS OF ELECTRICAL EXAMINATION AND TREATMENT IN A CASE OF PERI- PHERAL PARALYSIS OF THE FACIAL AND OCULO-MOTOR NERVES.

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How far the application of electricity is available in paralysis of the external muscles of the eyeball is a point upon which some doubt is still entertained. In the case which is here related, an unusual method of applying voltaism to these muscles was employed with success. Incidentally various points of great interest in reference to diagnosis as well as treatment arose in the course of the patient's illness, and the value of electrical tests was shown no less strikingly than the useful effects of voltaism in bringing back paralysed muscles to the influence of the will.

I was called in December, 1872, into the country by Dr. Playne, of Maidenhead, to see a gentleman sixty-two years of age under the following circumstances:—The patient looked somewhat older than his age, and had been more or less ailing for some years. A year previously he had suffered from some obscure mental symptoms, which had followed prolonged sleeplessness. He was usually dyspeptic, and had experienced pains of rheumatic character. On December 13th he found in the morning that on cleaning his teeth the water ran out of the right side of his mouth, and his face was observed to be drawn over to the left. Next day he could not close his right eye. When I saw him on December 17th, there was pronounced paralysis of the right portio dura. There was complete inability to close the right eye; the angle of the mouth dropped on the right side; in smiling the face was drawn over to the left; and when asked to show his teeth, the lips were scarcely separated on the right side, whilst on the left the teeth

were exposed in the usual manner. The aperture of the mouth, under these circumstances, formed an irregular triangle with its base disposed vertically on the left side. The right eye was painful, and watering from exposure. If there was any impairment of sensibility to touch over the right side of the face it was very slight indeed. When the conjunctiva of the right eye was touched with the finger-point, avoiding the margin of the lid, although the pressure was perfectly well felt, there was no reflex closure of the lids.

Here, then, were the ordinary symptoms of a peripheral paralysis of the portio dura, and the fact that the patient had been out in his garden on the evening before his attack rather later than usual, and that the weather was cold and damp, combined towards the probability of his suffering from a rheumatic affection of the nerve, or at least from a condition referable to the influence of cold. The evidence so far appeared to point very strongly to a lesion which was peripheral, and comparatively free, therefore, from cause for anxiety. So, again, although there was some arcus senilis, there was no marked rigidity of the radial or temporal arteries, and no cardiac bruit; but, on the other hand, the patient had complained of some numbness in the left forefinger and thumb and a stinging sensation under one of his toes. (The description of this subjective symptom was vague, and it was impossible to make much of it.) The family history, too, was bad, and it was this which caused Dr. Playne some very natural anxiety when taken in connexion with the patient's symptoms. One brother, it seemed, had died of diabetes, and another had sugar in his urine at that very time. Now, the deep origin of the facial nerve is known to be situated in the floor of the fourth ventricle, and disease or injury of this region, as has been shown by Claude Bernard, is attended with the presence of sugar in the urine. Diabetes is a disease which is apt to show itself in several members of a family. The patient's two brothers were so affected, and he himself was suffering from a paralytic affection of a nerve which takes its rise in that portion of the central nervous system in which lesions are apt to be attended by the presence of sugar in the urine. These circumstances, as may be imagined, tended to throw a doubt upon the diagnosis which would not otherwise have been experienced. On the whole, however, taking into consideration the character of the affection, especially the completeness of the paralysis, my opinion was that the lesion was peripheral in situation. At that time I had not the opportunity, unfortunately, of applying any electric current, and was, therefore, without the most important means of diagnosis. It was agreed that the eye should be covered with a shade, that Dr. Playne should apply faradism to the affected muscles and let me know the result, and that he should examine the urine for sugar.

On the 25th of January I learnt that there was no improvement in the power of the facial muscles, and that the current was felt much more strongly on the left than on the affected side. I was informed, too, that the urine, although its specific gravity was only from 1010 to 1015, contained traces of sugar when tested by Trommer's process. The general health remained as before; the patient was dyspeptic, and suffered from occasional vomiting. These details appeared to give a more serious complexion to the case, when taken in conjunction with the patient's history, and I felt disposed to doubt the correctness of the opinion I had given. The presence of sugar might point to disease of the medulla oblongata, and the impairment of sensibility of the skin on the right side of the face might signify a spread of the lesion to the sensory root of the fifth nerve.

On the 4th of March the patient came to London on a visit, and I saw him in consultation with Dr. Playne, who then left him in my hands. At that time the paralytic condition was more confirmed than ever; the right cheek was baggy and drooping; the saliva constantly ran out of the right angle of the mouth; the eyelids of the same side by a great effort could nearly be closed one-half, but that was all. In smiling, the face was greatly distorted, the mouth being rapidly carried away to the left; and the patient suffered much annoyance from inability to retain food and saliva in the right side of the mouth. Dr. Playne informed me that he had several times tested the urine for sugar, and had only once, about a month previously, failed to detect any. The test, he said, never indicated any large quantity. The

volume of urine had been usually above the normal, on one occasion amounting to 96 oz.

I had now the desired opportunity of applying electrical tests. I found that neither faradaism nor the interrupted voltaic current would excite the right facial nerve. As regards the facial muscles of the right side there was no reaction to the strongest faradaic current which could be borne, but when I applied to them the rheophores connected with a Stöhrer's constant battery, using four cells only, and slowly intermitting the current, I obtained marked contraction of those situated about the angle of the mouth. A similar power applied in like manner to the muscles of the sound side of the face produced no reaction. The sensibility of the skin of the face was decidedly lowered on the right side, especially below the eye, both to touch and to the pain of faradaism. The latter fact was peculiarly well marked. The grasp of both hands was weak, but not definitely unequal, and the patient could raise either leg against pressure equally well. There was no marked impairment of sensibility in his hands, but on inquiry he said that there was slight numbness of the finger-points on both sides. There was no diminution in the power of tasting on the right side of the tongue. There was not then, and there had never been, any weakness in the external rectus muscle of the right eye. I examined the urine, which was pale, clear, acid, and of specific gravity 1013. It contained no trace of sugar nor of albumen. There was general derangement of the digestive functions, with a furred tongue and some diarrhoea. The patient was ordered a quarter of a grain of nitrate of silver, with one-fifth of a grain of opium, twice a day, and an effervescing mixture of citrate of potash and soda, with grain doses of iodide of potassium.

As regards the diagnosis, I thought there were sufficient grounds for believing that the lesion lay in some part of the course of the portio dura. Had it been at the deep origin of the nerve, it was unlikely that the sixth nerve, which (according to Lockhart Clarke) arises from the same nucleus as the facial in the floor of the fourth ventricle, would have remained unaffected. Moreover, and this was the most important feature, the electric reaction was distinctly that indicating peripheral paralysis. When the facial nerve is paralysed from central disease, it is, according to my experience, always the case that the facial muscles retain, either entirely or in great part, their power of being excited by faradaism. On the other hand, the absence of excitability by faradaism and the exaggerated influence of interrupted voltaism were completely characteristic of facial paralysis *à frigore*. I advised, and it was agreed, that treatment by interrupted voltaism should be employed.

On the 7th March, then, nearly three months after the seizure, this treatment was commenced, and afterwards continued almost daily for three weeks. Stöhrer's constant current battery was employed, at first four cells being engaged, then six, and finally eight. One rheophore was placed on the cheek at the point where the facial nerve breaks into its two great divisions, and the other at various parts of the face; but especially often near the ala of the nostril. The current thus employed caused vigorous contractions of many muscles affecting the nostril and mouth. At other times one rheophore was applied near the outer canthus, and then the current caused contractions of the orbicularis palpebrarum muscle. Each sitting occupied about twenty minutes. One rheophore was lifted and reapplied at tolerably regular intervals of about 30 or 40 in the minute. During the first week the change effected by this treatment, although at once apparent, was not very marked; but afterwards improvement was noticed daily. On March 28th, when the patient returned into the country, the cheek no longer bagged; the lower lip kept closed, instead of falling and showing, as it had done, the lining membrane, over which saliva trickled; the eye could be very nearly closed. Nor was this improvement altogether the result of a secondary contraction equivalent to that so often seen in the paralysed muscles in a case of hemiplegia, for a very considerable power of moving the mouth by voluntary effort returned. The nerve-twigs to the occipito-frontalis muscle must, I think, have escaped injury. At all events, when I tested the frontal part of this muscle a few days after beginning the treatment described, I found that it responded readily to the faradaic current when one rheophore was placed over the emergence of the portio dura and the other on the

muscle. It was also capable of being contracted by voluntary effort.

On June 3rd I saw the patient again, and at that time a casual observer would have noticed but little deformity in his face. But I remarked a slight spasmodic jerking of the muscles of the affected side during facial movements, much as though the muscles, capable of being excited by volition, were not quite under control. At request he could close his eye, leaving only a very narrow aperture between the lids. Asked to show his teeth, the opening of the mouth was still triangular, instead of being more or less quadrilateral. During respiratory movements, little or no difference was perceptible in the action of the *alæ nasi*. Electrical testing now showed that neither interrupted voltaism nor faradaism produced contractions of the facial muscles.

In September I found that there was still some spasmodic jerking of the affected muscles. But, except when he laughed, it was difficult for an observer to believe that there was any great difference in power between the two sides of the face. Indeed the tendency, in consequence of the occasional jerking I have described, was to cause the idea that it was the left, not the right side of the face which was weakened.

Nearly two years had elapsed when I was again, on May 28th, 1875, summoned to see this patient. I found him in his bedroom, sitting up, with his back to the light, which his left eye was quite unable to tolerate. So much photophobia was there that I had to refrain from turning his face to the window whilst I examined him. The left eye was closed by ptosis of the upper lid, but the patient could, by a strong voluntary effort, open it, though the lid immediately afterwards fell. There was intense pain, referred to the ball of the eye, and also pain, together with tenderness on pressure, upon the left parietal bone, near its junction with the frontal. He had double vision, the images being crossed—that to his right belonging to his left eye. In order to avoid the confusion and giddiness caused by this diplopia, he was wearing a shade over the left eye. I found that there was partial paralysis of the branches of the left oculo-motor nerve, going to the levator palpebræ superioris, the internal, superior, and inferior rectus muscles. It seemed that the patient had been exposed to a great deal of domestic trouble and anxiety, with the result that his appetite and digestion had failed, and a few days before I saw him he had complained of double vision. It appeared also that several decayed teeth, which had been troubling him for some time, had interfered with his power of taking sufficient nourishment. I advised some chloride of ammonium, which seemed to have a good result as far as the pain in the eyeball was concerned. A fortnight later, however, I found that whilst he had ceased to feel pain in the globe of the eye, the paralysis of the muscles before referred to as partial had become complete. There was complete ptosis, and absolute inability to turn the left eye either upwards, downwards, or towards the nose. The symptoms indicating an affection of the left third nerve, which might be accompanied or caused by some effusion in its sheath, I advised a trial of iodide of potassium, although very doubtful whether it would be tolerated. In effect, the first dose so upset the patient's stomach that he could not be induced to try another, and Dr. Playne then prescribed some quinine, ammonia, and gentian. This answered very well; the appetite and general health improved, and when the patient came to town on July 7th, I found him looking much better than he had been. There was still, however, ptosis of the left eyelid. He could, when requested, lift the lid to a certain extent by a manifest effort, but it was immediately dropped. The vision of this eye not being absolutely occluded by the state of the lid, he was forced to cover it with a shade, as otherwise he was so embarrassed by diplopia that he could not walk without staggering. I found the recti muscles greatly wanting in power, but not, I think, quite so incapable as when I had last seen him. However, the eye was turned outwards constantly, and although by a strong voluntary effort it could be carried a very little way towards the nose, and a still less distance upwards and downwards, it was practically fixed in a condition of external strabismus, and was useless for optical purposes.

Guided by my experience of the result of interrupted

voltaism in the facial paralysis of the opposite side of his face more than two years previously, I thought it likely, now that acute symptoms had subsided, that a similar mode of treatment might lead to good results in restoring the action of the muscles of the eyeball which were paralysed. Instructed, too, by former experience, I felt that faradaism was not the treatment proper for the condition. The muscles of the right side of the face had quite failed to respond to faradaism, but they were excited by a very mild voltaic current when it was slowly interrupted. So it seemed likely that a mild and interrupted voltaic current was indicated in the present condition. The best mode of applying this was not so evident. When metal rheophores covered with wetted kid were applied to the closed lids, and a current of varying strength employed, either the electric influence was unfelt or it was painful to the skin. There was difficulty, too, both with these rheophores and also with sponges in applying the stimulus exactly where I wished it. I now bethought me of using the finger as a rheophore, and tried it in the following manner. An assistant having applied to the patient's left temple a sponge rheophore connected with one (it was not material which) pole of a Stöhrer's constant current battery, I grasped in my left hand another sponge rheophore coming from the other pole, and then applied the forefinger of my right hand, covered with a single thickness of muslin wetted with pure water, to the right upper eyelid of the patient. The battery was Weiss's (Foveaux's), which had considerably run down, so that it was perhaps only half-strength. Cautiously increasing the number of cells (it was long before any electric sensation was felt), I found that the current from between 30 and 40 cells could be employed in this manner, my body, through which it was bound to pass, offering a great resistance, and serving indeed as a rheostat. The application was made through the closed lids. The finger proved an exceedingly convenient rheophore. I could apply exactly the amount of pressure desirable, and could reach portions of the globe which it would have been exceedingly difficult to act upon in any other manner. Moreover the strength of the current could be gauged at every instant. That which was employed was just sufficient to cause me to feel a distinct shock in the knuckle of my right forefinger every time the current was interrupted. Occasional flashes of light were observed by the patient, but he felt no pain. We thought we could see a little improvement in power after the first day's application, but there was no doubt of this at all at the close of the second sitting. Not to weary with a daily record, I may say that this treatment was applied on fifteen occasions in all, the applications extending over a period of three weeks. The time occupied at each sitting was from twenty to thirty minutes. A daily increase in power of the muscles was noted; and when the patient returned home, after the last application, he was absolutely well. The lid was entirely under control, and the movements of the left eye were in every respect perfect. Of course, therefore, there was no longer any double vision, and the use of the shade was discarded. The patient has since remained quite well.

Remarks.—I need scarcely say that it is a matter of the gravest import, as regards the prognosis, whether a paralysis of the facial muscles is diagnosed as peripheral or as depending on a lesion of the central nervous system. The importance of this is increased when the patient, as in this case, is a man who has passed the middle period of life; and becomes intensified when, as occurred in the instance which I have described, paralysis of one side of the face is followed by loss of power in certain muscles of the eye on the opposite side. The general conditions, the patient's age, his weak state of health, his family history,—all combine to give a very serious aspect to his case, which even his complete recovery would not of itself suffice to counterbalance. For it is quite conceivable that a man of this age, and with such a history, might suffer from a central nervous lesion, possibly involving small hæmorrhages, which could be repaired, and the paralytic symptoms be *ipso facto* removed, and yet that he might be left in a state peculiarly prone to the repetition of attacks which might at any moment involve districts where the occurrence of lesion would have a serious influence upon life. The mere fact, therefore, of this patient's complete recovery does not of itself bear conclusive testimony to the peripheral character of the affections from which he suffered. The electric reaction, how-

ever, of the facial muscles paralysed in the first attack, lends complementary evidence of a kind sufficient, I believe, to enable us to say that not only was that attack certainly dependent upon a lesion of some part of the facial nerve, not of the nervous centre, but that in all probability the second attack was of similar character. Experience, which by this time has been sufficiently universal to make its results positive, teaches us that when there is paralysis of facial muscles, and these a few hours after the attack show a diminution, rapidly going on to an entire abolition of contractility on exposure to induced currents, whilst contractility is effected with abnormal facility by the interrupted voltaic current, the lesion is not a central one, but involves some portion of the portio dura nerve. I have seen no exception to this rule. The lesion may result from cold, from wound of the nerve, or from compression, but it is always a lesion of the nerve, and not of the nervous centre. It was with great confidence, therefore, that when the test applications of the induced and voltaic currents in this case were followed by the results described, I pronounced the facial paralysis to be of peripheral origin. When, in process of time, the second attack occurred, involving on this occasion the oculo-motor nerve of the opposite side, although in the nature of things the application of electrical testing was not practicable, it was not unreasonable to infer that this also depended upon a similar cause to that which had caused facial paralysis two years previously, especially as isolated paralysis of one oculo-motor nerve is almost always peripheral. I ought especially to say that there was good reason to exclude the probability of syphilis in this case, and that there has not been any sign of gout. My prognosis was accordingly favourable, as regards the question of the site of the lesion, although I could not properly give any decided opinion upon the question whether the paralysis would be recovered from or remain permanent. I inclined, however, to the more favourable view, and thought that electrical treatment would be likely to assist recovery.

The voltaic instead of the faradaic current was chosen then, because the paralysis of the eye muscles, like that of the facial muscles, was deemed to be of peripheral character. It seems likely, especially from the researches of Schiff, that induced currents do not determine directly the contraction of muscles, but only act through the medium of the intra-muscular nerves. When these are damaged, as by the influence of cold, the power of causing contraction of the muscles by faradaism ceases. Not so, however, as regards the interrupted voltaic current, the influence of which is now much more marked than it is in healthy striated muscle. Dr. Onimus, of Paris, in some interesting papers which have lately appeared*, expresses the opinion that in cases of paralysis of the facial nerve the muscles, although they do not atrophy, pass into a condition in which the contractile substance resembles rather smooth muscular fibre or protoplasm than normal striated muscle. He reminds us that continuous currents have a much more marked action upon smooth fibres than induced currents, and to provoke the contraction of the unstriated fibres a current of much less intensity is required than for striated muscles. And as with normal smooth fibres so also with those striated fibres which, from an injury to the intra-muscular nerves, have acquired much of the character of smooth muscular fibre. In this mode Dr. Onimus explains the remarkable difference between the action of the induced current and that of voltaism in cases of facial paralysis, as well as the curious fact that the voltaic current acts much more energetically in such cases than in the healthy condition. In the case above related it seems probable that the branches of the portio dura distributed to the muscles, and not the trunk of the nerve itself, were affected. For the occipito-frontalis muscle escaped, and this omission, which is easily explained if the lesion be supposed to be located in a number of nervous twigs, some of which elude the hurtful influence, presents considerable difficulty if we imagine an injury to the trunk itself. Moreover, the sense of taste was preserved on the affected side, which suggests that the lesion was at least beyond the point where the chorda tympani is given off. The impairment of the cutaneous sensibility, which was certainly more marked than I am in the habit of finding it in such cases (there is often a little numbness), is probably to be explained by

* Practitioner, September, 1874, June and August, 1875.

a localised influence upon the branches of the sensory nerve (fifth) similar to that exerted upon those of the portio dura. The exact effect upon the muscles, which was brought about rapidly by the influence of voltaism I do not find it easy to explain. It would seem—and this point is extremely interesting—that if we cut off the influence of the will from striated muscular fibre the structure tends to degrade, and, as regards its function, passes into a state closely resembling that which is characteristic of involuntary muscular fibre. The resemblance is threefold: the fibre is no longer contracted by the influence of the will, it is acted upon by voltaism when faradaism fails to affect it, and the action of voltaism upon it is much more marked than upon healthy striated muscle. Apparently the effect of applying voltaic currents to muscular fibre so degraded is to lead it back to its normal condition. It often happens, as it did in this case, that the will acquires its power to cause contraction of the recovering muscles before they will respond to the influence of the induced current, but after they have ceased to be abnormally excited by voltaism. When this occurs it is probably only a question of time as to when faradaism will be able to exert its ordinary stimulating power once more. When I last tested this gentleman's facial muscles, a few weeks ago, I found that voluntary power over them was restored perhaps to three-quarters of the normal extent, that interrupted voltaism affected the injured in no higher degree than the uninjured side, and that the influence of the induced current had again become manifest, though not quite perfectly. I suppose that voltaism replaced the action of the will, as far as concerned the preservation of the muscular fibres, till such time as the intra-muscular nerves had recovered and allowed the passage of the volitional influence. The circumstance that the face has not entirely recovered is, doubtless, owing to the injury to some of the muscular nerves having been irreparable. There is nothing, it seems to me, in such examples as this, which requires one to fall back upon an electrolytic action of voltaism upon the constituents of the nerve-trunk to account for phenomena which are to be explained more easily in the manner described. I think that the very rapid clearing up of the oculo-motor palsy (in the second attack) under the influence of voltaism goes far to prove that the lesion in this, as in the other paralytic seizure was of a superficial character. The injury at the time electrical treatment was commenced was probably to a great extent repaired, but the muscles which had been cut off for a long time from the stimulating influence of the will had degraded into a state approaching that of involuntary muscular fibre, and were incapable therefore of being acted upon by volition to any effective purpose. The few applications of voltaism restored the muscular fibres to their natural condition, and they became both physically and metaphysically "voluntary."

The use of the hand as a rheophore is not new. It has been employed by many for the application of faradaism, especially to the spinal column. But, as far as I am aware, the use of the finger in the manner described for applying interrupted voltaism to the eye muscles is novel. It is certainly very convenient. What we want in such a case is a large quantity of electricity of low tension, and this is, I think, especially well arrived at by interposing the operator's body in the course of the current, and employing a considerable number of cells.

ON THE NEGLECT OF MINOR SURGICAL OPERATIONS.

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THE inclination, natural to many men, to defer matters which are not urgent, and to pride themselves on inaction as evidence of caution, is the cause of a great deal of mental anxiety and physical trouble in all walks of life—in surgery especially. It is open to question whether more mischief is done by men who are always ready for prompt and decisive action, regardless of risk, or by those who never tire of discussing probabilities, and shrink from

coming to any decision at all if in doing so their reputation be in any degree imperilled. Certain it is, in the matter of surgical operations, that if a good deal of harm result from their unnecessary performance, much pain and distressing inconvenience might be spared, to say nothing of life prolonged, if some minor surgical operation had been timely performed.

These reflections have been recalled by a study of Sir James Paget's chapter on the Calamities of Surgery, in his recently published *Clinical Lectures and Essays*. He lays down the rule (p. 68), "Never do an operation if you can cure the patient by any reasonable method or other means." This proposition seems to command obvious assent, independently of the high claims to respect derived from its authorship. But when Sir James proceeds to illustrate his rule, I fear he is supplying the unreasoning opponents of operations with instances and arguments which, under cover of his influence, may be productive of unforeseen results. The fact is that in a very large number of cases in which so-called palliatives are resorted to, an operation is not only the most reasonable method of cure, but the least painful; at once the most creditable to the surgeon, and to the patient the most economical in the broad sense of that term.

When a varicocele is large, oppressing by its dragging weight, and causing, as it sometimes does, atrophy of the testicle, trusses, rings, and all such expedients are of little or no practical use; whereas the radical cure, now that the efficiency and simplicity of the elastic ligature are understood, can be carried out with very little pain, with scarcely any confinement, and with perfect success.

A stricture of the urethra is the only ailment of many men, who are either for years unconscious of its existence, or are the patient objects of palliative measures, in spite of which the stream becomes smaller and more twisted. How easy and effectual is timely dilatation; how little trouble is it for the patient himself to maintain the freedom of the passage by passing at intervals a good-sized elastic bougie. A neglected stricture is the source of infinite trouble to many men, and is one of the most frequent causes of premature decay and death, which timely and well-executed catheterism is practically all-powerful in preventing.

A tendency to hæmorrhoids and their actual existence, doubtless, admits of relief by strict observance of dietetic rules, proper exercise, and ablutions. But when the piles have acquired shape and the solidity of age, the radical cure is the only effectual relief. Take the simple and not unfrequent case of a solitary external pile, sometimes causing little, often much, trouble. Its excision, under the ether spray, is absolutely painless; and if the bleeding spot be touched with a little styptic colloid, the patient may go about his business at once without fear of consequences.

The elongated uvula, which troubles many orators and vocal artists, grows longer and more troublesome in spite of astringent lozenges and gargles. Its removal at just length with a pair of scissors is as nearly painless as can be possibly conceived, and is a lasting source of comfort. But of all conditions in which the superior economy of operative interference over mis-called palliatives is demonstrable, none is so striking as chronic enlargement of the tonsils. Many children with pale faces and depressed chests, who speak thickly and snore in their sleep, have big solid tonsils, which nearly touch in the middle line. It is beautiful to watch, in the course of a very few days, the cheeks becoming rosy and plump, and the chest expanding, after excision of the tonsils with the simple throat-guillotine,* which, in children and adults, is one of the most useful, yet insufficiently practised, operations. Doubtless the great question is when to interfere and when to abstain. That can only be solved by well-balanced judgment based on ample information, neither stimulated by ambition for dexterous display, nor checked by diffidence, which so frequently proclaims itself as the laboured outcome of philosophical caution, when it is in reality the natural offspring of constitutional indecision.

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* Two very striking cyrtometrical observations in point are given by Dr. Norman Moore in *St. Bartholomew's Hospital Reports* (London, 1874, p. 129).