Mr. Robert Adams, in his article on the ankle-joint, reproduces Dupuytren's original case, as well as the St. Thomas's Hospital specimen, as examples of the same injury, and observes: "The preservation of this specimen, which, in our mind, is a true example of the complete dislocation of the tibia inwards, and of the external malleolus, astragalus, and foot upwards and outwards, is a new proof of the truth of the observation we have above made, that this severe accident has not altogether escaped the notice of English surgeons, although the *Annuaire* contains the first accurate account of the external signs by which it may be recognised in the living subject".

Dupuytren believed that the dislocation upwards was due to the separation of the fibula from the tibia; but an examination of his illustration does not confirm that view. To me, it is obvious that the direction of the upper portion of the fibula is parallel to the displaced tibia, and I have no doubt that, in the case referred to, the foot ascended between the tibia and the lower fragment of the fibula, until it was stopped by the lower end of the upper fragment of that bone. That the foot ascended two inches depended upon the site of the fracture. It is plain from the depression figured that the fibula was broken two or three inches above the tip of the outer malleolus, and so permitted the foot to pass upwards to the distance mentioned. It is very difficult to conceive a separation to such an extent between the fibula and the tibia, for they are bound together by strong ligamentous and muscular attachments; and in the case figured by Cooper, we notice that the ligament at the lower part proved stronger than the bone, for a slip of the tibia has been torn off and remains attached to the outer malleolus.

Although museum examples of this injury are rare, I believe that it occurs more frequently than is supposed; and that, wherever there is complete dislocation of the tibia inwards, with preceding fracture of the fibula, the latter bone follows its fellow inwards, and the foot is drawn upwards by the strong muscles of the calf. I have seen one such case while house-surgeon. The patient was a carpenter aged 60, who slipped off a path, and broke his fibula about one inch and a half above the malleolus. He tried to walk, but with the result that the tibia was dislocated inwards. When he was brought to hospital, this bone was projecting through a sharply margined transverse tear in the soft parts, over the situation of the internal malleolus. The articular surface of the bone was on a level with the sole of the foot, which was everted. There was a deep depression over the seat of fracture, and increased width between the malleolar points. I succeeded in reducing the dislocation, but abscesses and necrosis followed; and after fourteen months, the patient left the hospital with a stiff joint. With such an injury, so long as the muscles act, the foot must ascend until it is stopped by the upper fragment of the fibula, the amount of shortening depending upon the length of that fragment.

ON NERVE-STRETCHING AS A REMEDY FOR SCIATICA.

By JAMES PATON BRAMWELL, M.D., L.R.C.S.Ed.,
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THIS operation was first introduced by Professor Nussbaum of Munich; but, judging from the paucity of recorded cases, it does not seem to have recommended itself to British surgeons. The probable reason for this is, that it has little of an attractive character, and, when looked at superficially, everything seems against it. For why, it may reasonably be asked, can we expect benefit from rudely dragging at a nerve inflamed or in a state of superexcitation? Everything, however, must be brought to the test of experience; and, when tried in this manner, Nussbaum's operation will be found a most valuable addition to our other appliances for combating a malady proverbially obstinate and sometimes intractable.

In dealing with cases of sciatica, it is of the utmost importance to determine as accurately as possible what is the origin of the disease in any given case; for the causes are so diversified, that the employment of any favourite remedy for all is simply absurd and empirical. Let us consider for a moment what these causes are, and we shall see at a glance that each case must be treated with discrimination, and always with an eye to its origin. As causes, we have the following: pelvic tumours; caries of lumbar vertebrae; impactions of scybala in the *caecum coli*; inflammatory infusion in the pelvis, resulting from pelvic cellulitis or pelvic peritonitis; and last, but not least, rheumatic inflammation of the sciatic nerve itself from exposure to cold and wet. Of all these, the last named is by far the most common; and it is just in such cases that nerve-stretching proves most efficacious.

What the exact nature of the effect of this operation is in all cases, I am not prepared absolutely to assert; but if, on stretching the sciatic

nerve, one feel adhesions giving way, one may be tolerably certain that the patient will be greatly benefited, if not cured. We may infer from this, that the disease is often kept up by adhesions between the nerve and its sheath, the result of a neuritis, which a free stretching generally removes. Besides, there can be little doubt that the counterirritation produced by a large wound, which not infrequently suppurates, must have a very powerful revulsive effect on the inflamed condition of any nerve in its immediate vicinity. The prompt relief, however, which follows the operation in some cases certainly cannot be accounted for by this latter supposition, but can easily be explained on the assumption of existing adhesions having been ruptured.

The operation is a very simple one, and not for a moment to be compared with the sufferings of some sciatic cases. Such, at least, is the opinion of the patients themselves, who are but too glad to submit to a second operation when necessary.

The nerve is generally sought for between the great trochanter and the tuberosity of the ischium; but it is more easily found in another quarter; and, besides, the course of the nerve here is not sufficiently central for efficient stretching. The plan I follow is that of Dr. Joseph Bell of Edinburgh. Make a straight incision four inches long in the middle of the thigh, on its posterior aspect; cut through the skin, fat, and fascia; separate the hamstring muscles with the finger; and the sciatic nerve will be easily found on the inner side of the biceps and somewhat overlapped by that muscle. Its sheath being opened by a touch of the bistoury, it is now raised on a blunt hook, then caught by the finger, and the whole leg lifted off the table. The wound is then brought together by wire sutures, a drainage-tube inserted, and a layer of lint soaked in carbolic oil (1 to 12) placed over it. As may well be supposed, there is rarely union by the first intention.

CASE I.—W. J., plasterer, a strong healthy young man, after working in a cold draught for some days, was seized with a severe attack of sciatica in his left leg. He was admitted to the Perth Infirmary, and subjected to treatment for about a month without any permanent benefit. The following remedies were employed: turpentine internally; iodide of potassium; calomel and opium; wet cupping; subcutaneous injections of morphia and chloroform; faradisation with the primary current and metallic brush; blisters; etc. The results were very discouraging and he left for the Edinburgh Infirmary, where Nussbaum's operation was performed. The relief obtained by it, however, was very transitory; and our patient returned to Perth in much pain, and quite unfit for any work. I determined to repeat the operation. He returned to the infirmary; and I cut down upon the nerve in the middle third of the thigh through the cicatrix of the first operation, and there found it adherent to its sheath, the latter being much thickened from effusion of plastic lymph. I hooked up the nerve with my index finger, and stretched it freely, breaking up adhesions not only at the seat of the first operation, but also in parts of the nerve more remote. The wound was brought together by silver-wire sutures; a drainage-tube was inserted; the whole being covered by a pledget of lint soaked in terebene. The progress of this case was uninterrupted, and in six weeks the patient left the infirmary perfectly cured of his sciatica and able for steady work. It is now six months since then, and there has been no return of his old disorder.

REMARKS.—I have no doubt that the cause of failure of the first operation in this case was extensive adhesion between the nerve and its sheath at the seat of operation, such adhesion necessarily keeping up a constant strain and drag on the nerve in all movements of the leg. An accident of this kind might be avoided, by instructing the patient to flex and extend the leg several times daily while the wound is healing.

CASE II.—George W., brassfounder, a healthy muscular man, had always enjoyed good health till December 1877, when he was admitted to the Perth Infirmary for an acute attack of sciatica in the left leg. He believed that it originated in a chill, after being overheated with his work. He was purged freely, and put on five-grain doses of iodide of potassium, the severe pain being relieved by subcutaneous injections of morphia at night. These means failing, an alkaline mixture with vinum colchici was substituted; then turpentine purges, but with little benefit.

With the patient's consent, I now determined to stretch the nerve, and accordingly cut down upon it in the same position as the former case. Its sheath seemed natural at the seat of operation, and I could not perceive any hyperæmic condition of the nerve itself; but, on stretching it, adhesions in some part of its course were felt giving way. The wound was dressed in a similar manner to case I, but, owing to the premature removal of the drainage-tube, a false healing took place. The temperature rose to 103° Fahr., and a good deal of constitutional disturbance followed. All this, however, disappeared so soon as the wound was reopened, the pus evacuated, and the tube replaced. His progress was now uninterrupted, and the recovery everything that could.

be desired. For twelve months afterwards, he kept in good health, but at that time had a return of the sciatica from exposure to cold and wet. This, however, proved very amenable to medical treatment, and he is now in perfect health.

This poor man's sufferings were very severe, and his testimony was unequivocal as to the great relief resulting from the operation.

CASE III.—Janet L., a spinster, aged 28, was operated on by my hospital colleague Dr. Stirling, eighteen months ago, for a first attack of sciatica. The nerve was exposed in the region recommended by Nussbaum. There was a perfect cessation of all the old symptoms for twelve months afterwards. About this time, she was exposed to cold and damp, and the sciatica returned in full force. She was at once readmitted to the infirmary, to have the operation repeated. There were well marked symptoms of an acute sciatica; and besides, it was found that she was suffering from ovarian irritation, metritis, and endometritis. Having at this time charge of the female wards, and knowing the benefit which had accrued from the previous operation, I proceeded at once to repeat it. The nerve was exposed in the middle third of the thigh and easily found, although the depth, owing to her corpulent condition, was considerable. It did not present at the seat of operation any abnormal appearance, neither did I feel any adhesions giving way when it was freely stretched. Relief did not come so speedily here as in the two cases just recorded, the conditions being more complex, but in a fortnight the sciatic pain was all but gone. After appropriate treatment for her uterine malady, she was dismissed cured, at least of her sciatica.

Seven months have now elapsed, but I have heard of no return of her old disorder, and one day lately I saw her walking without any difficulty.

CASE IV.—J. M., aged 27, healthy and muscular, a wood-carter, and much exposed to wet and cold by his occupation, was admitted to the Perth Infirmary in September 1878, suffering from an attack of sciatica. After he had been under medical treatment for some time without getting any benefit, the nerve was cut down upon and stretched by my colleague Dr. Stirling, under whose care he remained for about a month. At this time, he was placed under my charge, Dr. Stirling having taken his holiday; and as there was still considerable sciatica, I repeated the operation, breaking up recent adhesions between the nerve and its sheath at the seat of the first operation. The immediate results here were somewhat disappointing, the pain subsiding but slowly. For the last six months, however, he has had perfect health, and, although much exposed during the last severe winter, has been able to continue his laborious employment without any return of his former symptoms.

CASE V.—J. C., aged 46, labourer, was admitted to the infirmary March 24th, 1879. For fourteen months, he complained of pain extending from the back of the hip down the back of the left leg to the ankle, of a gnawing character, and greatly aggravated by walking or movement, also pain extending from the groin down the fore part of the thigh. On account of this, he had often been compelled to abandon his work for a time. On examination of the limb, there was considerable wasting, the difference in the circumference of the two at the middle of the thigh being two inches. There was also diminished power in the left leg, the muscles of which were atrophied.

On March 31st, the sciatic nerve was stretched, the incision being made in the middle of the thigh. After this, the old pain in the back of the limb disappeared, and, although the patient had pain for a time at the seat of operation, he never had a return of his sciatica. After the operation, the sensation in the left foot was all but gone; power was much diminished; he could not raise his leg from the bed. The faradaic current was applied daily to the muscles of the leg, and the metallic brush to the skin of the foot. In a short time, sensation had returned to the foot, and he was able to raise his leg and flex it freely.

He left the infirmary on May 31st, in the following condition. He had no sciatic pain, but complained of a burning pain in the foot, extending to a little above the ankle. Power of motion in the leg and foot was diminished, but there was no pain on walking; the pain in the anterior crural region was gone.

REMARKS.—It will be observed that the sciatica, although of long standing in this case, was cured by the nerve-stretching; and I have no doubt that the anæsthesia and diminished power would have been entirely removed by a continued application of the faradaic electricity, had our patient not left prematurely of his own accord.

AN inquest has been held at Middleton on the body of a child, two months old, which had died after a dose of laudanum administered by its mother because it was "very cross". The coroner remarked that these cases betrayed such an amount of carelessness that he thought it right to submit the facts to the public prosecutor. The inquest was adjourned.

A CLINICAL NOTE ON PHLEGMASIA DOLENS.

By FANCOURT BARNES, M.D., M.R.C.P.,

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PHLEGMASIA dolens has always been a subject of great interest to the obstetrician, opinion varying as to the share which phlebitis or lymphadenitis has in its production. As thrombosis or plugging of the iliac and femoral veins has been so frequently met with in parturient women, an easy solution of the occurrence is found in the supposition of an inflammation extending from the internal surface of the uterus along the uterine sinuses to the iliac veins. If, however, a similar thrombosis or phlebitis can be found in other parts of the body, the above explanation is insufficient, and some other cause must be conceived, having its seat in a general morbid or unnatural condition of the blood. The case would then be somewhat analogous to that not unfrequently met with in other conditions than those of the puerperal state; I allude to that plugging of the veins, or phlebitis, which may simultaneously affect several parts of the body. In gouty subjects this is not uncommon; and, under other quite unknown conditions, a plugging of the veins in the legs or arms may frequently be seen. Sometimes, indeed, an obstruction of the veins may be found in all the four limbs at the same time. In connection with this rare condition, I have thought the following case of sufficient interest to justify its being placed on record. The fact that in it one arm as well as both legs were attacked, supports clinically the theory that the plugging of the veins does not depend alone on a continuous inflammation proceeding from the uterus, but that the blood in its entirety has undergone a morbid change.

On March 31st, 1879, I was summoned by Miss Thompson, midwife to the British Lying-in Hospital, to see a young woman, primipara, aged 24, who had been safely delivered on March 25th of a living female child, after a natural labour of twelve hours. She was single, and had had some mental worry. The lying-in went on smoothly during the first three days, and on the fourth day the milk came on freely. She then became slightly feverish. On the 29th, she had not slept, and was in an excitable state. She took a dislike to, and complained of, the nurse. She had several attacks of syncope. On the 31st, I saw her, and found the abdomen swollen and tender to the touch. Pulse 120; temperature 103° Fahr. There was clearly some pelvic peritonitis. She was ordered quinine and opium pills, three grains of quinine, one-half grain of opium, twice daily. On April 1st, she seemed to be somewhat better, and remained about the same until April 5th, by which time the lochia had nearly ceased. On the 12th, symptoms of puerperal mania appeared. She passed urine into the bed. On examining the chest, loud bronchitic *râles* were heard over both lungs. The child had been suckled for the first four days, but had been sent away on account of her weakness. The quinine was increased to ten-grain doses, when she became deaf. The abdomen was not enlarged, but there was tenderness over the right iliac region. Temperature 103° Fahr.; pulse 111. There was a purulent thick discharge from the vagina, occasionally tinged with blood. The uterus was, therefore, washed out twice a-day with a 1 in 40 carbolic solution. On the 23rd, the left leg began to swell. Her maniacal symptoms had diminished. On the 28th, the right leg began to swell; and on the 30th, the left arm was swollen and white, like the legs. There was also some stiffness in the right arm, but it did not swell. On May 1st, both legs and the left arm were white, œdematous, and swollen. They were all three enveloped in cotton-wool. The general symptoms were worse; respiration 40; pulse 130; temperature 102 Fahr°. She had slight rigors during the last three days. She took her food well; beef-tea, milk, brandy, port, champagne, and grapes. The bowels acted regularly. Since the left leg began to swell, she had several attacks of lividity. On May 4th, the pulse was 140; temperature 103° Fahr.; respiration 48; tongue dry and peeled; sordes round the mouth. The arm and leg still remained swollen, and continued to until her death. She was quite sensible, and only complained of thirst, continually asking for tea. She remained in this condition until May 10th, when she died at 1.30 A.M. It was impossible to obtain a *post mortem* examination.

In the causation of the site of the coagulation, mechanical causes seem to have some influence. It is almost invariably in the upper part of the limbs and at the base of the skull that thromboses originate; for example, in the femoral veins in the legs, the axillary veins in the arms, and the sinuses of the dura mater in the skull. The reason of this, according to Lancereaux (*Traité d'Anatomie Pathologique*, tome premier) is, that these vessels are situated exactly on a level where the walls of the veins are no longer supported by neighbouring structures, and, consequently, where the force of thoracic aspiration tends to