

efficiency. Two instances only will I quote, because they impressed themselves on me by being done in one night and because they bear on the theoretical suggestion that the non-suture of a perforation must lead to the formation of a gastric fistula. This I may say hardly ever occurs, and when it does is only temporary.

One Sunday afternoon I was called to see a lady whose medical adviser, Dr. Ross, had diagnosed the perforation of a gastric ulcer. When I saw her there was nothing except a history of "neuralgic dyspepsia" and tenderness in the epigastric region to suggest that the abdominal calamity originated in the upper abdomen. All the physical signs—distension, rigidity, dulness, immobility, &c.—were in the lower abdomen. On opening the peritoneal cavity nothing of note was found in the lower abdomen. Nothing being found, the upper abdomen was opened, and a perforation found near the lesser curvature on the anterior wall of the stomach. The perforation was large, surrounded by a sodden area of inflamed tissue, and much fluid was issuing from it. The perforation was tamponed in the way described above. Forty-eight hours after the operation the "gastric" gauze was changed, when gas and fluid escaped from the stomach. The issuing fluid smelt like gastric juice, and was more copious when fluid was taken by mouth. It was only mildly septic and interfered little with the healing of the wound. This fistula was present for about ten days, when it healed spontaneously. On my return home, as I opened the front door of my house the telephone rang from Colney Hatch Asylum, where Dr. S. J. Gilfillan told me a nurse was suffering from the perforation of a gastric ulcer. In her case, also, the diagnosis was simple. The operation was also, and was carried out substantially as narrated above. The perforation was much smaller than in the lady just mentioned. Her recovery was very prompt. Her indigestion vanished and her general health has improved very greatly. In neither case was a gastro-enterostomy necessary at the time or has proved to be so later. Indeed, I suspect that in the absence of (narrowing the stomach by) suture, a gastro-enterostomy is less often required than if the perforation is sutured.

These two reported instances are specially selected only because they happened to take place on the same night, and by preventing my getting to bed stamped themselves on my memory as possible examples of results of tamponading the ulcer. Its advantages I will briefly summarise. 1. The operation is simpler for the operator to do. 2. The operation is quicker, particularly in less experienced hands. 3. In consequence of being simpler and quicker, the patient more easily gets over it—that is to say, the mortality is lower. It certainly is so amongst my own figures. 4. A gastro-enterostomy, primary (at the time of the operation for the perforation) or secondary (at a later period), appears to be less frequently required. 5. Complications—e.g., pelvic abscess, subdiaphragmatic abscess, &c.—are in my experience less frequent. Fears of more than a temporary and brief gastric fistula may be dismissed.

If such a summary is in its turn summarised it may be said that such an operation offers the patient more chance of recovery, particularly in the hands of an operator of no great experience. Of course, in the hands of experienced and facile operators the excision of the ulcer, followed by suture of the wound, and perhaps gastro-enterostomy, may be better and result in the

recovery of the patient. But for more ordinary patients, surgeons, and circumstances the method of tamponade is better.

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## NOTE ON THE TREATMENT OF SCIATICA.

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IN view of the great and, I believe, increasing prevalence of sciatica, and the often comparatively poor results obtained from treatment by rest, injections of various kinds, and internal medicine, I think it may be of interest to report the results attained by me during the past year by physical measures—namely, by the use of the 500 candle-power lamp and static electricity. Nine cases have been treated by these methods, eight of which made a complete recovery, but only six of them deserve special mention, as the other three were early acute cases, and the probability is that they would have recovered promptly with rest, drugs, ionisation, or other treatment.

The short history of the six cases is as follows:—

CASE 1.—The patient, aged 53, had lumbago some four weeks previously, but this had got better. He now had cramp in calf and thigh muscles, and severe pain on certain unguarded movements ran down the back of the thigh and was worst at the knee. Knee-jerks present. A patch of anaesthesia, described by him as a "dead patch," on the outer and lower part of the leg, down to the ankle. This patient showed improvement after two or three treatments, but was slow in making a complete recovery. The interesting point was that the "dead patch," which he had had for years, apparently completely recovered.

CASE 2.—The patient, aged 53, who was referred to me for electrical treatment by Dr. T. J. Horder, had had sciatica for two years; had been treated by ionisation, been to the Riviera and Harrogate, &c. Was never very bad, but only exceptionally free from pain for a whole day. He improved very much at first, and then seemed to stick, and just as I was about to despair he recovered completely. This patient was taking medicine as well as having the treatment given by me.

CASE 3.—The patient, aged 64, had sciatica 18 months ago. He went to Vernet-les-Bains and was cured; returned to England and was exposed to cold, with the result that his sciatica returned 13 months ago. The pain was not severe, but always bothered him when he got up in the morning. Slight tenderness over the sciatic nerve between the great trochanter and tuberosity. This patient showed no improvement whatever. His pains became less marked in the region of his sciatic nerve, and increased in the lumbar region and in the anterior part of the thigh. I took a skiagram of the hip-joint, and as there was some evidence of osteo-arthritis in the joint I thought it of little use to continue the treatment. I understand that now, six months later, he still has the pain.

CASE 4.—The patient, aged 57, who was referred to me for electrical treatment by Dr. H. W. McClure, had had sciatica for three months; at first very severe pain night and day; now very severe at times, but not continuous. Always worse at night so that sleep was prevented. There were marked wasting and fibrillary contractions of the muscles of the thigh, less wasting of the calf. Knee-jerks equal. Tender point situated over the sacro-sciatic notch, the internal popliteal, and in the outer side of the calf. Could walk only with the aid of two sticks. After three treatments this patient was having good nights, and after 18 treatments was completely cured.

CASE 5.—The patient, who had had two bad attacks of sciatica lasting for months, came to me complaining of lumbago, but next day said he had cramps in the calves of his legs, and that his previous attack of sciatica had begun in the same way. There was a definite tender point

over the left sciatic notch. Treatment was applied here, and also on the right side. After 12 treatments he was able to attend two shoots without apparent damage or relapse.

CASE 6.—The patient, aged 32, three weeks ago with a friend was lifting a heavy weight; the latter let go and the whole weight coming on the patient he strained his back. He had pain in the back for a few days, and this was followed by such severe pain in the sacro-iliac joint that he could not turn in bed, and could get no sleep for five nights. Now he has pain down the outer side of the thigh and calf, and pain in the dorsum of the foot. He could not bend the hip-joint with the knee-joint extended. There was a definite tender point just at the gluteus margin over the sciatic nerve. The patient had a good night after the first treatment, and now after 10 treatments is practically well except for the stiffness.

I should add that all these patients went about their ordinary avocations, as far as they were able to do so, while the treatment was going on. I do not discourage a moderate amount of walking, nor do I object to attention to business. What I do find detrimental to most people is travelling by train or motor car.

The method adopted is as follows. First it is necessary to find the definite tender point or points in the line of the sciatic nerve. These can be found (1) by direction of the patient, (2) by pressure, (3) by the use of the vibrator, and last and best by the use of the static spark; but this latter, if attempted at the first consultation, may unfavourably impress a timid patient.

Having found the tender point, the parts around it are exposed for 20 minutes to the rays of the 500 candle-power light; this is applied as close to the bare skin as the patient can stand the heat, and by turning away the light for a moment, or by passing the hand lightly over the skin a considerable degree of tolerance can be established. The obvious effect is hyperæmia. After 20 minutes' exposure to the light the patient is seated on a chair on the insulated platform. An electrode of some easily moulded metal—I use pewter—is applied over the tender spot, usually about half way between the great trochanter and the tuberosity of the ischium, or over the sacro-sciatic notch. The size of the electrode I generally use is  $3\frac{1}{2}$  by  $4\frac{1}{2}$  inches, but if the part is very tender a larger electrode will be better borne.

An adequate static machine should be capable of giving a 12-inch spark in all weathers between the terminal balls of the prime conductors when the patient is connected to the machine, and this spark should be capable of regulation down to  $\frac{1}{2}$  inch, or less for particularly tender points. With the electrode applied to the patient's skin and connected by a wire to the positive side of the static machine, the negative side being grounded and the spark gap closed, the motor is now started and the spark gap gradually opened, keeping the number of sparks passing at the gap at not more than 300 a minute at the outside, while 200 a minute is even better.

The operator will not have opened the spark gap very far, in all probability, before the patient will complain of pain. When this point is reached the spark gap is closed again until the patient says he feels just a little tenderness, and at this point it is kept for five minutes or so, when the spark gap can again be widened, this time with probably less discomfort to the patient. The treatment by the static wave current is kept up for 20 minutes, or less if the patient shows signs of fatigue. I then go on, if I deem it advisable, to give a few static sparks to the muscles of the buttocks and thigh, to any

tender points in the course of the nerve, and to a tender patch probably due to fibrositis, which I often find in the gluteal or lumbar region in these cases.

These sparks are given with the patient standing on the insulated platform, which is connected to the negative side of the machine, the positive side being grounded. A ball electrode held in the hand of the operator and also grounded is approached to within 4 or 5 inches of the spot to which the spark is to be applied. The patient feels a smart blow or cut as with a light whip, and is not apt to appreciate the treatment at first, but after experiencing the relief these sparks bring will often ask to have them repeated and point out the spot where they should be applied.

This ends the treatment, which should be applied daily at first until marked improvement is obtained, when a treatment can be given twice weekly, bi-weekly, and finally stopped. This treatment is equally successful in neuritis of the arm, or in uncomplicated neuritis anywhere when a definite tender point can be found.

As to the rationale of the treatment it is probable that the light causes hyperæmia of tissues deeper than the skin. This hyperæmia followed by the deep massage effect of the static wave current would remove and carry off in the blood current the plastic exudate which is probably thrown out around the nerve in sciatica. The same forces would act in the same way in removing patches of fibrositis.

In addition to this, however, it has been shown that the static wave current increases the hæmoglobin contents of the red corpuscles and increases the elimination of solids in the urine. While I cannot say that I have myself made the necessary observations to confirm these statements, the condition of improved health and vitality in patients who are taking this treatment is so obvious, and so frequently pointed out by them with every evidence of satisfaction, that I cannot feel any doubt but that, in addition to the local effects, general metabolic effects of a beneficial character are taking place in the organism.

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## TWO CASES OF POST-OPERATIVE HEMIPLEGIA.

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HEMIPLEGIA as a post-operative complication must be so rare that the following two cases which occurred in my practice almost within the same week seem to merit reporting. Both were patients at the Government Hospital, Alexandria.

CASE 1.—The patient was an Egyptian woman, aged 40, suffering from a large fibroid of the uterus. Operation was performed on Sept. 15th, 1913, in the raised pelvis position. The tumour involved the supravaginal cervix, which was greatly expanded, and was associated with a tubo-ovarian abscess on the right side. The operation was extremely difficult and lasted almost two hours. A gauze drain was left in for 48 hours. The wound healed without suppuration, but for the first week following operation the temperature was slightly raised, ranging from  $37.6^{\circ}$  C. (evening) to  $37.2^{\circ}$  (morning). The operation was done at 9 A.M. At 5 P.M. the patient complained of pain in the right arm and leg, which by the next morning had given place to complete loss of power and sensation. Four days later there was some return of power in the arm, whilst sensation commenced to come back on the twenty-fourth day. Recovery