TREATMENT OF NEURITIS BY ELECTROLYSIS.*

BY

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NEURITIS is such a common disease, and its treatment often so unsatisfactory, that no apology is needed for referring to treatment by electrolysis, which gives good promise of relief in cases where the lesion is of the interstitial type, due to inflammation of the nerve sheath.

This method was first published by Dr. Naunton Davies,¹ and its use in sciatica has been described by Dr. E. A. Goulden.² The apparatus consists of a pantostat, or similar instrument, with two electrodes, one being a large pad, which is applied to the arm or leg, and a smaller pad or button. An insulated needle, with a platinum point, is fixed in a holder, and is used for the actual treatment. In the absence of an electric supply, a small induction coil can be used for the faradic current, and a battery of about a dozen Leclanché cells for the constant current.

For diagnosis the pads are soaked in warm salt solution, and the larger is applied to some neutral part of the body, such as the wrist; both are connected with the terminals of the induction coil. The current used should be so weak that when the small pad is applied to the normal skin it is hardly felt; when it approaches the site of the inflamed nerve a distinct pain, or series of shocks, is felt. This area is marked with a pencil. Should no tender spot be found it may be concluded that neuritis is not present.

For treatment the skin is swabbed with iodine, and a few drops of local anaesthetic are injected under the epidermis. After a few minutes the platinum needle, having been connected with the negative pole of the constant current, is inserted into the skin and pushed down upon the nerve. The large pad is connected with the positive terminal. If the spot is very tender a current of 1 milliampère or less is applied, but sometimes from 3 to 5 milliampères may be used. The current is allowed to flow for ten minutes; it is then gradually turned off and the needle withdrawn. The wound is protected by collodion.

Only one spot should be treated on the same day, and a day's interval is advisable before the next treatment. The following cases will illustrate the method of treatment.

Supra-orbital Neuralgia.

A platelayer, aged 38, had suffered for three years from severe pain in the region supplied by the left supra-orbital nerve. Six spots in all were treated, and he was completely relieved.

In a somewhat similar case, following upon an attack of influenza, a man had suffered from supra-orbital neuralgia for five weeks. He was relieved after two treatments.

Neuritis and Osteo-arthritis.

A woman, aged 25, had suffered from pain in the left shoulder for fifteen months; latterly the pain had been so severe that she was unable to sleep. The joint showed signs of osteo-arthritis, there being creaking on movement. Four spots were treated, and complete relief was obtained. The osteo-arthritis was still present, but there was no pain on movement of the joint; this shows that neuritis often occurs around a joint so affected, and is the chief factor in causing pain. The patient went away for the winter, and lived in a damp house; the pain returned, on this occasion in both shoulders. It was found that she had four spots in the left shoulder, in different places from the original areas which had been previously treated, and three in the right shoulder; all were treated and the pain relieved.

Painful Knee.

The knee may become similarly affected. A man, aged 54, complained of pain in both knees; one spot was found below the right patella, and on the left side three spots, one on each side of the patella and one below it. He was completely relieved.

Sciatica.

The only cases of sciatica that I have had an opportunity of treating are those affecting the small sciatic nerve.

A labourer, aged 49, had suffered from sciatica for two years, and came to me after an acute attack. The gluteal branch of the

small sciatic nerve was treated, and also a cutaneous branch of the popliteal; he was completely relieved.

A woman, aged 59, had suffered from sciatica for several years. After an acute attack two spots on the small sciatic nerve were treated; the pain was relieved.

A man, aged 37, had complained of pain on the left lumbar and gluteal regions; in the part last named the pain had existed for six months. No reaction to the faradic current was obtained on testing the lumbar region, but a tender spot was found over the small sciatic nerve; immediate relief was given by a single treatment.

It is important to note that, in cases of multiple spots, complete relief is not obtained until all the spots have been treated. It is probable that the electrolysis converts the sodium chloride of the tissues into sodium hydrate, and this has a caustic effect on the exudation.

REFERENCES.

¹ *Bristol Medico-Chirurgical Journal*, June, 1915. ² *BRITISH MEDICAL JOURNAL*, April 9th, 1921.

MELANOTIC SARCOMA OF THE SEPTUM NASI.

BY

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SENIOR SURGEON TO THE THROAT, NOSE, AND EAR DEPARTMENT,
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A WOMAN, aged 47, went to Golden Square Throat Hospital in October, 1921, for a "lump in the right nostril that kept bleeding"; she could feel it inside the nose with her finger, and it had caused some broadening of the right side of the nose; there was no pain or other discharge. She was seen by Dr. Badgerow, who found a purple tumour on the anterior part of the septum on the right side; portions removed and submitted to microscopic examination proved the growth to be a melanotic sarcoma. In February, 1922, the growth was removed under general anaesthesia with cutting instruments, and the base scraped. The growth was the size of a small walnut, and was attached to the cartilaginous septum on the right side only.

Subsequently (on March 13th) at the Radium Institute she had fifteen hours' radiation (30 mg.) screened with 1 mm. silver in the nostril; again on May 15th and on August 14th. At the end of August she was reported free of growth. Nevertheless, in October, 1922, the patient became aware of another "lump" in the nostril; owing to closure of wards at Golden Square delay took place, and eventually, in March, 1923, she came to me at Westminster Hospital.

I found the right nostril completely blocked by a bluish-black fairly firm growth, bleeding easily on probing; the actual site of origin could not be determined; there was expansion of the ascending nasal process. The left nasal cavity was free; there was no growth in the nasopharynx or the right antrum of Highmore. Microscopically Dr. Braxton Hicks reported portions I removed for examination to be "spindle-celled sarcoma of a type, the cells being large and with large nuclei; in and about the cells undoubted melanin pigment; growth is a melanotic sarcoma (melanoma)."² The patient had no ascertainable secondary deposits or enlarged glands and her general condition was good.

On April 4th, 1923, I performed right lateral rhinotomy, which gave good access to the interior of the nose. The growth was clearly growing from the anterior part of the nasal septum, and involved the lateral ethmoidal mass. To remove it thoroughly I had to cut away part of the ascending nasal process of the superior maxilla; I also cut away a large part of the nasal septum and ethmoid, and the tumour was removed *en masse*. Bleeding was not profuse. The orbit was not involved, nor the antrum.

Recurrence was noticed in August, 1923. Radium treatment was given in November and in January, 1924. Considerable reaction followed, and the growth did not appear to have lessened. There was much greater external deformity, and the right maxillary antrum was obviously involved. No enlarged glands or secondary deposits were

* A paper read before the North Glamorgan and Brecknock Division of the British Medical Association on July 8th, 1924.