all be exaggerated upon first waking up in the morning, after sleep very much disturbed. There was also a sensation as of a weight constantly pressing upon her thorax.

March 26th, at noon, I was called by her husband to see her, he stating that she had swallowed a quantity of croton oil about a half hour previous; and on the way he gave me substantially the same history of her as above, which she, on questioning, verified.

I found her lying upon a couch; eyes quite bright, peculiar at times; no complaints of trouble whatever; skin cool, clammy; pulse 108, very feeble; respiration slow and powerless; burning sensation in mouth and pharynx; no pain or tenderness upon pressure; bowels had been moved during morning. I gave her mustard in warm water to drink, and irritated the fauces with a feather, bringing on vomiting. In the matter vomited, which was quite clear, the oil could be distinctly seen floating over the surface; and as a result of my tasting it from the tip of my finger merely touched to it, I was purged frequently and severely. In about an hour and a half, her bowels were opened freely, and at intervals for the ensuing thirty hours, in all some thirteen movements. I gave her milk and thin corn-starch, as freely as she would take it, with a teaspoonful of pure glycerine every two hours.

There were no symptoms of inflammation, and to quiet the nervous system I used bromide of potassium in twenty-grain doses. Recovery was quite rapid, as in two days she said she felt better and rested easier during the night than she had for months.

The quantity of croton oil taken was in the neighborhood of one ounce. Being a boarder in the house, merely, and having nothing of the kind in her own room, she had, in one of her bad turns, gone into another person's room, and, seeing this bottle, a two-ounce one, which was labelled plainly, *croton oil—poison*, deliberately swallowed the contents, and then went down stairs and told the family what she had done.

On recovery, I advised her removal to an asylum, and she is now in the insane asylum near this city.

I should have said, when enumerating her nervous peculiarities, that she told me her life very frequently seemed a burden to her.

J. L. BUNTING, M.D.

St. John, N.B., April 3, 1868.

UTERINE SCARIFICATOR.

MR. EDITOR,—I desire to call the attention of your readers to the improved form of uterine scarificator herewith figured. The instrument is a modification of Miller's, differing from it in the following important particulars:—

1. The slit in the tube (A, fig. 1) does not extend the whole length, but is partial. In this way increased strength is secured.

2. A little piece (b) screws into the end of the tube. When this is removed, the knife can be thrust directly out, as in figure 2.

3. The knife (C) unscrewed from its staff (D), so that the whole can be withdrawn from the tube without dulling the blade.

The mechanism of the instrument can be easily understood, without further explanation, by an inspection of the cut.

Its advantages are, that it can be used for puncturing, and for scarifying the margins of the os externum, as well as for scarifying the interior of the uterus; that it is easily cleaned, and possesses considerable stiffness, a quality lacking in all other forms which I have seen.

A little wire piston, tipped with rubber, is necessary for cleaning the tube, and for holding the knife-blade while its staff is being screwed on.

The instrument is manufactured by Leach & Greene, of your city, and may be obtained of them for a moderate price.

Yours truly, J. G. PINKHAM.

Lynn, May 14, 1868.

CASES OF NEURALGIA TREATED BY ELECTRICITY.

By ALPONSO D. ROCKWELL, M.D., of New York, and GEO. M. BEARD, Lecturer in the University of New York.

THE majority of pathologists have divided neuralgia into two great classes—1st. Those that are due to some organic lesion, of which they are a sympathetic expression. 2d. Those which are dependent on a more or less grave lesion, involving some nerve branch, or compressing or irritating them. Whether the neuralgia be due to malarial influence, to chlorosis, rheumatism, or to

necrosis of bone, or a tumor, it is in every case merely symptomatic, and the question at once arises, when we are called upon to treat one of these neuroses, from what cause does the pain proceed? Much of our success in its treatment will depend upon the correctness of our answer.

The investigations of Valleix, Trousseau, Romberg, Hanfield Jones and others, have thrown a flood of light upon the diagnosis, and consequently upon the treatment of the different varieties of neuralgia, and yet it is extremely common to mistake mere local pains for neuralgias. It is quite frequently the case that an affection of the crural nerve is called sciatica, simply because the sciatic nerve is most often the seat of pain. Strange as it may appear, we have known a severe intercostal neuralgia to be mistaken for pleurodynia, and treated accordingly. The blister that was applied, and which so generally relieves the latter disease, served only to aggravate the existing one. This mistake is not at all uncommon. A superficial observer, taking cognizance of the pain only in its entirety, will find many points of resemblance between the two diseases and may confound them, while one who avails himself of the valuable signs, at the command of every practitioner, who will give to the subject a little study, will easily make apparently subtle distinctions.

It is difficult to offer an explanation with regard to those exquisitely tender spots which are so universally made manifest in neuralgia, when pressure is made over certain portions of the body. In whatever way we attempt to explain this phenomenon, it is certain that neuralgia reveals itself when pressure is made over the spinous processes corresponding to the point of exit of the diseased nerve. The value of this method of diagnosis is particularly marked in intercostal neuralgia, cases of which we so frequently meet. Valleix* first indicated three tender spots in this variety of the disease, viz.—the first, situated on the rib near its junction with the spinal column; the second, about the middle of the rib; and the third, near its sternal end. Long and positive experience, however, shows that this statement is not absolutely correct. The spinous processes corresponding to the intercostal space affected are the tender spots most important in the diagnosis. This point has been designated the spinous point by Trousseau, and that near the sternum the point of peripheral expansion. It is not alone in intercostal

neuralgia that these spinous points are to be found. We have seldom found them entirely absent in neuralgia, let its seat be wherever it may. Trousseau states positively that since his attention was first drawn to it, he has never known it to be absent.

The following cases illustrate this method of diagnosis to which we have so briefly alluded, and may give some idea of the value of the induction of galvanic currents in alleviating the horrible pain which so often attends this affection.

CASE I.—Mrs. H., aged 40, of slight build, and somewhat delicate in health, was prostrated by an attack of intermittent fever, which, however, soon yielded to the ordinary treatment by quinine. A few days after the last paroxysm, while attending to household duties, she was suddenly seized with most distressing pains along the course of the branches of the fifth cranial nerve. The most painful points were at the exit of the superior and inferior maxillary branches. Whenever firm pressure was made on these points, the most agonizing distress was caused. The pain extended also along the frontal nerve to the forehead; and over the frontal point as well, considerable pain was excited by pressure.

When we first saw the patient, there seemed to be no special tenderness along the spinous processes, but at the second visit pressure on the first two cervical vertebræ caused pain, and would even bring on a paroxysm. Quinine (gr. viij. ter die) was ordered, and on the third day was discontinued, and Fowler's solution, gtt. v. every four hours, was taken. Tincture of aconite was applied externally. This treatment was persevered in for three days, resulting, however, in but little alleviation of the pain. A very mild and fine current of electricity from an electro-magnetic machine was then applied with magical effect. The pain was completely dissipated, and during the following night she had quiet and refreshing sleep. The cure was not complete, for the next day the nerves of the brachial plexus became the seat of pain, although not of so severe a character as it had been in the face. Pressure over the last cervical vertebra gave severe pain. We now treated her by general electrization, and succeeded in greatly relieving the distress. A quiet night was the result, but on the following morning the pain, strangely enough, located itself in the wrist and hand. Another application was given, which resulted in final and complete relief.

* *Traité des Neuralgies*, Paris, 1841.

We have frequently observed that the pain of an acute neuralgia will remove its seat, after a general application of electricity, to a point nearer the extremities, and finally disappear altogether. If the fifth pair or the brachial plexus are affected, the neuralgia "goes out" (to use an expression of patients) at the fingers, while in sciatica or crural neuralgia, the feet will be the part last affected.

CASE II.—Mr. T., aged 45, was subject every few months to neuralgic attacks of considerable severity, and for which he was accustomed to apply warm cloths to the part. By this method, the distress was much mitigated, and in the course of twenty-four hours the paroxysm passed off. The frontal nerve seemed to be the one most affected, but at times the pain extended from the chin over the right side of the face to the top of the head. On one occasion, he applied to us at the commencement of an attack of more than ordinary severity. An application of the induction current along the course of the affected nerves instantly subdued the pain, and he left the office, half an hour later, entirely free from every unpleasant symptom.

CASE III.—Mr. McR., a young gentleman of 22, who frequently suffered from tic douloureux, consequent upon a general neuralgic condition of the whole system, failed to receive much immediate relief from the use of the induction current, while the galvanic stream would almost instantly subdue the pain.

The favorable results that were obtained so readily in the cases cited above, are in other instances brought about only by persistent and continuous treatment. The majority of cases of functional neuralgia are, according to our experience, either completely relieved or approximately cured by a judicious use either of the Faradaic or galvanic current. When, however, the disease is dependent on a grave organic lesion, when a tumor involves the nerve branches, or when an acute inflammation is the cause, we do not expect that electrization will be of much service. In some instances, the distress is even aggravated. Cachectic states play an important part in the development of neuralgias, and such cases undoubtedly require prolonged treatment. In many cases it is impossible to remove the cause. The gouty and rheumatic diatheses are often as persistent as life, and against neuralgias dependent on these causes all medication seems to be powerless. The helplessness of such conditions was strikingly manifest in the following case, sent to us by Prof. Geo. T. Elliot.

CASE IV.—Mr. R., a gentleman in the prime of life, had suffered for several years from severe pain in the chest and leg. During a paroxysm, he was much oppressed for breath, and this feeling of oppression he could instantly bring on, even by moderate exercise in walking. It was a singular fact that he could exercise violently with his dumb-bells without experiencing any inconvenience. He had been previously laid up on two or three different occasions by attacks of gout, which finally left him in this condition. He was evidently affected with *angina pectoris*, and because of this gouty diathesis but little encouragement was given. He persevered in the treatment for over a month, during which time we treated him by both the Faradaic and galvanic currents. He sometimes experienced marked temporary benefit after a very powerful application of the Faradaic current, but the pain and the oppression in his breathing invariably recurred. We were able to afford no permanent relief.

Hyperæsthesia of the skin is a symptom that is frequently met with in the different varieties of neuralgia. In the intercostal variety, it may be said to be almost invariable. This cutaneous hyperæsthesia is noticeable at the exit of nerve trunks, and when the skin is scratched with the point of a pin, or with the finger nail, the patient complains of a pricking or burning pain.

CASE V.—L. C., aged 28, served in a Nevada regiment for three years during the war. After his discharge, in the fall of 1865, he was taken with acute articular rheumatism, which confined him to a hospital during the whole winter. The spring found him much better, and in a few months there seemed to be no vestige of the rheumatism remaining. His health remained delicate.

In July, 1866, he was taken with severe pains in the back and side. He was treated by "localized electrization" a few times, but with no appreciable benefit. The neuralgia increased in severity, locating itself between the ribs. In January, 1867, he applied to us for treatment. He was then extremely weak, and presented a remarkably anæmic appearance. There was very great hyperæsthesia, over the peripheral expansion of the affected nerves. Slight irritation by the finger nail, or moderate pressure by the hand, was sufficient to cause considerable pain. On account of this extreme sensibility, he was obliged to substitute for the coarse red flannel which he had been accustomed to wear, an undershirt of finer texture. Pressure made upon the first few spinous processes of the dorsal vertebra,

caused no uneasiness, but when the 6th and 7th processes were firmly pressed, the patient loudly complained.

We gave him a general application, as is our custom in such cases. The whole system was brought powerfully under the influence of the Faradaic current. The application at once relieved him, and in three days he was directed to come again. During that time he suffered much less than usual; his appetite had improved, and for the first thirty-six hours he was much invigorated.

He visited us for one month, during which time he received ten general applications. The improvement was uninterrupted from the beginning.

After the fourth application he suffered no more from the neuralgia. The color returned to his cheek; his appetite became more vigorous from week to week, and when he discontinued treatment, we regarded him as a comparatively well man.

This case called for a *powerful constitutional tonic*. Hardships in the army, and previous disease, had reduced his stock of vitality to such a degree, that our ordinary internal tonics failed to produce their accustomed results.

His nervous system had been so shaken, and all his functions so disturbed, that he could not assimilate the iron and bitters that were so much needed.

It is in such cases that general electrization achieves its most brilliant results.

The following case did not, as is usual with this variety of neuralgia, yield to electrization.

CASE VI.—C. R., aged 35, had been under the care of Dr. S. B. Ward, of this city, but as the symptoms of which the patient complained resisted all medication, he was sent to us that he might receive the influence of the electric current. Mr. R. was a member of the fire department, and while endeavoring to extinguish a fire in the sewing machine establishment of Wheeler & Wilson, he was nearly suffocated.

While holding the hose he had penetrated into the sub-cellar, and became enveloped by the hot thick smoke. He became unconscious, and was drawn out more dead than alive. From that time until he called upon us, several months subsequently, he suffered from the most severe paroxysms of intercostal neuralgia. The tender spots over the spinous processes, on either side and over the sternum, were readily recognized. We administered seven general applications of the Faradaic current. After each *seance* he was much relieved temporarily, and in the

interval he suffered much less pain than usual.

At the fourth visit, the negative pole was placed on the left side, over the seat of the most acute pain, and the positive applied to the neck down the spine, and on either side of the body.

This gave him greater relief than any previous application, and when he presented himself three days after, he stated that he had suffered but little pain since the last *seance*. The remaining applications failed to produce the same marked good effect, and after the 7th visit we saw him no more. Sometime after, however, we learned that he still suffered considerably. In all probability, he would have received permanent relief by persistent treatment.

There is another symptom of neuralgia, which, although not so universal as hyperæsthesia, is not very infrequent. We allude to anæsthesia.

We have noticed this condition to occur most frequently in connection with neuralgia of the sciatic nerve. As a rule hyperæsthesia of the skin will be present at the outset of the disease, but when the affection has lasted a considerable time, anæsthesia will sometimes supervene, showing itself especially over the area of distribution of the branches of the external popliteal nerve.

CASE VII.—Mrs. M., aged 45, had suffered for nine months almost constantly from a dull pain along the course of the sciatic nerve. At times an acute paroxysm would occur, causing fearful distress. She had been treated by cinchona, iron and ungt. veratriæ, and, as she thought, with some benefit. The disease was, however, by no means subdued, nor was there much permanent amelioration of pain. She complained of a feeling of numbness all over the calf of the leg, and at times she was quite insensible, in that part, to ordinary impressions. The first application of the Faradaic current was exceedingly gentle, and so soon as the *seance* was ended, she expressed herself as feeling a sense of general relief.

During the course of twelve days, four applications were given, resulting not only in complete amelioration of all neuralgic pain, but also in the restoration of the anæsthetic part to its normal sensibility.

After the last visit, the joint of the great toe of the affected limb enlarged, and became quite painful, but subsided to its usual size after a few more applications.

The next case was in some respects like the last, yet we failed to give the slightest relief. It is fair to suppose that such conditions depend upon an inflammation so

acute, that the least agitation, such as is caused by the passage of the induction current, aggravates the distress.

CASE VIII.—Mrs. B., aged 34, was taken with acute crural neuralgia, when she was almost convalescent from an attack of inflammation of the womb. She suffered for nine weeks without experiencing any relief, when her physician advised the use of electricity. We gave her but three applications, but from the very first the pain was aggravated, and in no slight degree.

We of course discontinued the applications, but she continued to suffer for many weeks, before the disease at all abated.

A case somewhat similar to the above was sent to us by Prof. Willard Parker, of this city, but the results from the use of electrization were almost as unfavorable. It is possible that the use of the galvanic stream might have been followed by better results, for we have in a few instances seen cases of neuralgia yield to this current, when the Faradaic was inoperative.

Hospital Reports.

BOSTON CITY HOSPITAL.

Monthly Report of the more important Operations, by
G. F. JELLY and L. D. GUNTER, House-Surgeons.

CASE I.—*Necrosis of Radius*.—(Service of Dr. THORNDIKE.)—Geo. O., aged 17, began to notice pain in right arm over lower anterior portion of radius, six weeks before entering hospital. An abscess formed, and broke in about a week. Never received any injury. Patient etherized and an incision about three inches in length made over lower part of radius, extending from a small sinus near lower extremity directly upwards parallel with the bone. A loose sequestrum about three inches long was removed with dressing forceps, and on passing in the finger not a particle of denuded bone could be felt, nor has there been any since; and now, three weeks after the operation, the wound is nearly healed.

CASE II.—*Necrosis of Tibia*.—(Service of Dr. THORNDIKE.)—W. D., aged 46, laborer, fell fourteen (14) feet, striking on a pile of iron and broke left tibia and fibula. Fibula broken ($1\frac{1}{2}$) one and a half inches above lower extremity, and internal malleolus was broken off and the fracture was compound.

Two (2) months afterwards there was necrosis of tibia, but fibula had healed.

Opening enlarged and internal malleolus, which was entirely loose and necrosed, removed.

Three weeks after operation, wound closing well; there is considerable motion in joint, though owing to an abscess in opposite ankle there is a free circulation of pus. Astragalus not denuded, nor is the tibia.

CASE III.—*Ununited fracture of Tibia and Fibula*.—(Service of Dr. THORNDIKE.)—M. M., laborer, aged 40, received a compound fracture of right leg, five months before admission; was treated at Massachusetts General Hospital four months, and discharged with non-union of fragments.—Operation, Feb. 14th. Ends of tibial fragments denuded, and a thin section made from each fragment; periosteum dissected up; sound fragments united by a silver ligature, and leg placed in fracture-box. In two days erysipelas became developed in leg and thigh, and he was also attacked with intermittent fever which he had been free from for several months. Two weeks after operation, erysipelas has all disappeared; wound healthy and fragments are adherent. General condition very good.

May.—Three months later, fair union.

CASE IV.—*Hæmorrhoids*. *Death*.—(Service of Dr. THORNDIKE.)—M. B., laborer, aged 60, had hæmorrhoids seventeen (17) years; moderate size. Etherized, and four strong ligatures applied; lost six or eight ounces of blood during the day. A typhoid condition became developed soon after the operation, and he gradually sank and died in a little over a week. Physical signs showed congestion of the lungs.

CASE V.—*Circumcision for Epithelioma of Prepuce*.—(Service of Dr. THORNDIKE.)—J. B., aged 60, laborer, has had epithelial disease of the prepuce for about nine months. It began as a pimple, and has increased to the size of a small English walnut. Neither painful nor tender. Covered with a small dark sloughing. Glands unaffected.

March 13th.—Prepuce, to which the tumor was confined, was removed in the usual way. Skin and mucous membrane stitched together. Patient did very well, and was discharged well, March 23d.

CASE VI.—*Plastic Operation*.—(Service of Dr. THORNDIKE.)—E. T., aged 35, widow, entered hospital with an indolent ulcer of the heel of a year's standing.

March 20th.—Operation. Surface of the ulcer with a narrow rim of the edge removed, leaving an open surface one and one-fourth inch in diameter.

On the outer surface of the middle third of the opposite leg, a flap, two inches in diameter, with a pedicle one and a half inch wide, was dissected up and fitted accurately into the prepared wound of the