

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

---

VOL. LXII.

THURSDAY, APRIL 5, 1860.

No. 10.

---

RESEARCHES UPON THE TREATMENT OF NEURALGIA BY THE  
INJECTION OF NARCOTICS AND SEDATIVES, WITH CASES.

BY A. RUPPNER, M.D., BOSTON.

[Communicated for the Boston Medical and Surgical Journal.]

I PURPOSE to lay before the profession the detailed account of several cases of severe neuralgia, under my care during the last fifteen months, and treated principally by the injection of narcotics, after the method advocated by Dr. Alex. Wood, of Edinburgh. I shall offer no apology for doing so. The neuralgic affections form a class of diseases in which our present mode of treatment offers little that is satisfactory. Every practical physician must confess, that after exhausting the most judicious, persevering, rational and radical methods of treatment (and what article in the materia medica and what surgical expedient has not been pressed into service?), he has often been compelled to fall back on the empirical administration of remedies.

To point out a method of treatment which, although not always curative, might at least be generally palliative, when employed in cases adapted to the treatment, has ever been the great desideratum to be reached. Hence it is easy to account for the enthusiasm with which the proposed treatment by "*subcutaneous injection*" has been received by the profession everywhere, both in Europe and America. Indeed, about the time Dr. Wood published his little treatise "*On a New Method of treating Neuralgia by the Direct Application of Opiates to the Painful Points*," I found myself in the same predicament in which, no doubt, many a physician has often, before and since, found himself. I had, for instance, the doleful opportunity of witnessing very often the most excruciating paroxysms of a highly respected friend of mine. For more than seven years had the disease, with ever-increasing violence, asserted its supremacy over every mode of treatment the most eminent and skilful medicalmen could devise; and the patient was finally consoled with the delusive hope that another seven years' revolution of the

VOL. LXII.—No. 10

time of suffering would bring the desired rest to her head, to which the neuralgia was confined, and with it to her whole constitution, much impaired by this time. This patient's case will be given in this report. I resolved to try *subcutaneous injection* at the earliest convenient moment, and had soon an excellent opportunity of doing so. Other cases presented themselves. Although some of these were not at all adapted to this treatment—the cause being *central* and not *centripetal*—yet even in those cases where a cure is out of the question, I was greatly encouraged by the relief afforded; the more so, because it enables the sufferer patiently to persevere in a course of treatment adapted to the morbid state in which his disease has originated.

For the sake of brevity in detailing my cases, and to avoid otherwise necessary repetition, I shall call attention—

First, to that most important symptom in this disease—*pain, and its localization*.

Secondly, to the conditions on which the success of the operation in a great measure depends.

Thirdly, to cases, given in the order in which they occurred in my practice, and with the results up to the time of writing this report. The history of each case will be given more or less minutely, as its importance may demand, as well as any constitutional measures and treatment which were pursued at the same time.

Fourthly, I shall perhaps venture to offer a few suggestions as to the probable *modus operandi* of the remedy.

*Pain and its localization.*—By whatever name we may designate that variety of affections comprehended under the term *neuralgia*, they possess in common the one important symptom of *pain*, more or less violent, situated in the course of a nerve. The greatest disparity of the attacks exists. They may be sudden and violent, gradual or increasing in intensity as the disorder makes progress. It may pay its unwelcome visits with the certainty of the clockwork which announces the departed hour on the dial, or rush into any breach which it may espy in the citadel of the constitution, with the ferocity of an exasperated enemy. Neither the robust and plethoric, nor those of feeble habit of body, are exempt from its inroads. Care, mental anxiety, profuse and weakening discharges, predispose greatly to the malady. No clime nor country, no race nor sex, nay, hardly any age, except perhaps the first years of infancy, is free from it. The inhabitant of the forest writhes under a paroxysm of *tic douloureux*, as well as the most delicate *habituée* of the fashionable saloons in the capital of Southern Europe or those of the United States. *Sciatica* pays its unwelcome visits to the celestial Chinese as often, and in as good earnest, as to the serf of the soil of Russia, or the planter of Brazil.

Nevertheless, genuine cases of neuralgia are not so common as is generally supposed. Hence, to test the value of the present proposed method of relieving the pain, it is essential that its ap-

plication be limited to real neuralgic affections—where the pain is actually seated in the course of the nerve; and it must, moreover, be remembered, that agreeably to the laws by which nervous action is propagated, the irritation, that is, *the pain*, may be seated directly *on*, or reflected indirectly *on the nerve*, at any point between its extreme peripheral distribution and the point at which it joins the brain. To determine the precise seat of irritation, that is, *to localize the pain*, is, then, the first step to be taken towards the proper application of this local treatment, namely, the injection of sedatives.

M. Valleix, in his book entitled "*Traité des Névralgies*, Paris, 1841," first laid *particular* stress upon that most characteristic symptom, *pain*, and states that while, on the one hand, the superficial nerves of the body are of all others the ones most commonly affected with this disease, there are some points in their course in which this pain is more liable to be seated than in others; that no structural alterations have been discovered in the nerves to account for this greater predisposition to pain. He gives to these painful points, or seats of departure of pain, the name of "*foyers*." These are of the utmost importance to us in regard to the treatment. Ample observations and experiments have repeatedly convinced me of the correctness of M. Valleix's statement—that these points are usually more or less morbidly sensible to pressure, even in the intervals between the attacks of the sharp, sudden and intermittent pain. Nay, so great is the morbid irritability in many cases, that whilst firm pressure is borne without any complaint whatever in the rest of the course of the nerve, the slightest touch in these *foyers*, or principal points, is often sufficient to excite acute suffering, sometimes the most acute imaginable. I shall give the history of a case hereafter, in which slight pressure upon the supra-orbital nerve, where it emerges from the supra-orbital foramen, excited such a paroxysm of pain that the patient trembled all over; the spectacle was too sad to be witnessed more than once. But this was not the only painful point in the case; in fact, the whole system was so invaded by erratic suffering that the unfortunate patient seemed to have inherited the threatened doom of Caliban:

"Thou shalt have cramps,  
Side-stitches that shall pen thy breath up; urchins  
Shall, for that vast of night that they may work,  
All exercise upon thee; thou shalt be pinched  
As thick as honeycombs, each pinch more stinging  
Than bees that made them."

Valleix has classified the painful points in the course of any nerve thus:—

1. The place of emergence of the nervous trunk; for example, the trifacial at the supra- and infra-orbital and mental foramen.

2. The point where a nervous twig traverses the muscles to ramify on the integuments; similar to the parts which are traversed by the posterior spinal nerves.

VOL. LXII.—10\*

3. The point where the terminal branches of a nerve expand in the integuments, as the terminal principal branches of all the cutaneous nerves, among which we may mention the anterior part of the intercostal nerves, &c.

4. The point where nervous trunks become superficial during their course, as the peroneal nerve.

Fortunately, the above points are exactly those where the nerve tends towards the surface, and where, consequently, it is most amenable to the treatment by injection.

But Valleix did not confine himself to the above four important landmarks, to be kept constantly in view. With admirable industry and precision, he has described the points of emergence of every branch of the great divisions of nerves which come into consideration in the treatment advocated by himself, namely, the application of successive small blisters in the course of the affected nerve. It is equally important to be perfectly familiar with all these points, in order to apply the method proposed by Prof. Wood where it will prove most effectual and can be most promptly applied.

These points of emergence are particularly numerous in the fifth pair of nerves, which, in at least two thirds of all the cases of neuralgia, is the seat of the suffering, the whole or a branch being affected. For convenience of reference in the cases to be detailed, as well as for practical purposes, and for the benefit of those readers who are not familiar with Valleix's work, I give here the points of emergence of the trifacial, arranged in tabular form. By means of it, is indicated nearly the exact position, at least in very many cases, where the instrument by which the narcotic is injected is to be inserted, when the pain is prominent in a principal trunk, or in some particular branch.

Points of emergence of the ophthalmic branch of the trifacial.	1st. The point of emergence of the <i>lacrimal nerve</i> at the external angle of the eyelid, or	a. <i>The palpebral point.</i>
	2d. Of the <i>frontal nerve</i> (external) at its emergence from the supra-orbital foramen, or	b. <i>The supra-orbital point.</i>
	3d. Of the <i>nasal nerve</i> , less determined, and situated a little within and below the internal angle of the eye, or	c. <i>The nasal point.</i>
Points of emergence of the superior maxillary branch of the trifacial.	1. The point of emergence of the <i>orbital nerve</i> towards the skin of the cheek, or	a. <i>The temporo-malar point.</i>
	2. The point of union of the <i>petrosal branch</i> of the <i>vidian</i> with the <i>facial</i> , giving origin to the <i>chorda tympani</i> , or	b. <i>The internal auricular point.</i>
	3. The emergence of the <i>superior alveolo-dental nerve</i> , or	c. <i>The superior dental point.</i>
	4. The emergence of the <i>superior maxillary</i> from the <i>infra-orbital foramen</i> , or	d. <i>The infra-orbital point.</i>

Points of emergence of the inferior maxillary branch of the trifacial.

1. The emergence of the *mas-*  
*seter nerve* where it passes  
through the sigmoid notch, or
2. The emergence of the *buc-*  
*cal nerve* into the skin and mu-  
cous membrane of the lips.
3. The emergence of the *tem-*  
*poral branch* of the *auriculo-*  
*temporal* or *anterior auricular*  
*nerve*, between the temporo-  
maxillary articulation and the  
auditory canal, or
4. The emergence of the *lin-*  
*gual* between the sub-lingual  
gland and the tongue, or
5. The emergence of the *in-*  
*ferior dental* from the mental  
foramen; one of the most re-  
markable points, or

- a. *The temporo-maxillary point.*
- b. *Point not well determined.*
- c. *The auriculo-temporal point.*
- d. *The lingual point.*
- e. *The mental point.*

Point of interlacement not  
belonging exclusively  
to the fifth pair.

There must also be mention-  
ed the interlacement of the  
*frontal nerve* with the *superficial*  
*temporal* and the *occipital ma-*  
*ior and minor*, situated at the  
posterior part of the *sagittal*  
*suture* and almost immediately  
above the *parietal protube-*  
*rance*, or

*The parietal point.*

It would, however, be erroneous to believe that these painful points are met with equal frequency in practice. On the contrary, some present themselves very rarely. If we may be allowed to judge from a large number of cases which we have examined, reported by such authors as Valleix, Sandras, Piorry, Romberg, Downing and others, and from our own observation of fourteen cases, these painful points will be found to occur in frequency very nearly in the following order :

- |   |       |                          |
|---|-------|--------------------------|
| Points of emergence in the or-<br>der of their frequency. | 1st.  | The supra-orbital point. |
|   | 2d.   | " mental "               |
|   | 3d.   | " infra-orbital "        |
|   | 4th.  | " temporal "             |
|   | 5th.  | " nasal "                |
|   | 6th.  | " malar "                |
|   | 7th.  | " dental "               |
|   | 8th.  | " labial "               |
|   | 9th.  | " lingual "              |
|   | 10th. | " palpebral "            |
|   | 11th. | " parietal "             |

N. B.—With the mental point, the auriculo-temporal point is almost always present.

Frequently, the patient will complain of severe pain just in front and a little below the ear, the place of anastomosis of the portio dura with the divisions of the fifth pair. Whatever may be our opinion as to the real function of the *facial nerve*, whether it is ever affected by this disease, it is quite certain that this form of

neuralgia is difficult to diagnosticate, on account of the intimate connection of the "*pes anserinus*" with the trifacial nerve. I have more than once met with cases where the pain was principally confined to this position. Hence arises a most important question for us in regard to subcutaneous injection, namely, where to introduce most properly the sedative in such cases? This difficulty may be overcome if the practitioner will bear in mind the place and mode of union of the portio dura with the three divisions of the fifth. The branches of the facial being three, the ascending, transverse, and descending, they are found to form three principal unions.

*Ascending, transverse and descending branches of the portio dura.*

Place and mode of union of the portio dura with the three divisions of the fifth.

- 1st union.—a. Beneath the eye.
  - b. Between the cheeks (buccal).
  - c. The side of the nose (nasal).
  - d. Terminating offsets of the superior maxillary.
- 2d union.—a. Between the mandibulo-labialis branch of the inferior maxillary.
  - b. The cervico-facial branches of the portio dura (on the chin and lower lip).
- 3d union.—a. On the temple.
  - b. On the eyebrow; union of the temporal branches of the facial nerve with branches of the frontal nerve just emerged from the supra-orbital foramen.
- Unions less important.—a. On the side and crown of the head.
  - b. " eyelids.
  - c. " cheek.
  - d. " lower jaw.
  - e. The front of the ear.

I shall now, in the second place, speak of *The conditions on which the success of the operation in a great measure depends.*

This may be done briefly, as much that has been said above of *pain and its localization* is directly applicable here. But we must go a step further, and endeavor to ascertain whether the disease is *central or centripetal*; in other words, whether the morbid process on which the neuralgia depends be seated in the brain, from whence, as the great centre, all nervous influence emanates, or in one of the conducting trunks by which irritations affecting the ultimate distribution of the nervous fibrils are conveyed to that central organ. We are of opinion that, in cases where the disease arises from within the cranium, the result of this treatment will not answer the expectations, for obvious reasons; and although the local manifestation in the conducting nerve is to a great extent under the influence of treatment, specially directed to it, yet it will do little good, being unable to reach the cause of the disease—I ought to say, its proximate cause—if, indeed, it ever proves beneficial at all. In one case, where the disease is seated unmistakably in the cranium, and in another where there exists caries of the superior maxillary bone, I have failed to perceive any improvement in the violence of the paroxysms, or any cessa-

tion of the pain, after repeated and powerful injections. In such and similar cases, as well as in all others where the pain is deep-seated, the result is at variance with the expectations.

On the other hand, in all cases where the cutaneous, and particularly the superficial cutaneous, nerves have been the seat of the malady, this treatment has answered my most sanguine hopes. Even in cases of long standing, when combined with appropriate constitutional treatment, I have succeeded in giving relief, for a considerable period of time, to the painfully harassed patient, after all other possible expedients had been tried in vain.

And let me here append a few words in regard to constitutional treatment in neuralgia, as one of the conditions of success. In almost every case that has come under my observation, a tonic treatment has been indicated. I have tried both mineral and vegetable tonics, and must give the preference to vegetable tonics. I have used the sulphate of quinine in many cases, and in all but one it was followed by good results. I am of opinion that a tonic treatment ought at once to be adopted, with few exceptions; and that the same ought to go hand in hand with the local treatment. Even the local treatment ought only to be resorted to when other remedies have failed. In mild cases of neuralgia, or in cases of recent standing, I have succeeded well with the solution of the valerianate of ammonia, used either in conjunction with injection or alone. I look upon the valerianate of ammonia as a preparation which deserves more the attention of physicians than it has hitherto received. But I proceed to give the cases, as being best adapted to illustrate the above statements.

[To be continued.]

---

## TWO CASES OF TRACHEOTOMY FOR THE REMOVAL OF A FOREIGN BODY FROM THE TRACHEA.

[Communicated for the Boston Medical and Surgical Journal.]

### CASE I.—REPORTED BY DR. A. NEWMAN, OF LAWRENCE, KANSAS.

AUGUST 11, 1858, I was called to visit a child of Mr. Inman, about two years old, who had, it was supposed, on the day before got a watermelon-seed into the air-passages. On the following day I visited the patient, who lived at a distance of about twenty-five miles. I found, on arriving, that she was about her play as usual. When quiet, there was very little disturbance. A little exercise at play, however, produced shortness of breath and wheezing respiration, which could be distinctly heard at some distance. There was no difference in the respiratory murmur on the two sides of the chest. There had been but little cough. The mother informed me that, while playing with some watermelon-seeds, she was suddenly seized with great dyspnoea and coughing, which lasted for half an hour, and that during the paroxysm the face was livid. As