

9. Foot and Knee.—One of the most impressive cases of neuralgia ever treated by the author has the following history. A Mr. B., serving in the war of the rebellion, received, as near as memory serves to recall the case, three gunshot wounds,—one in which a small minié-ball passed through the tarsal bones, a second into the arm, a third lodged in the chest; the exact locations of the two latter are not distinctly recalled, as they did not associate with the case. After dismissal from the service, and after being engaged for a long period in the occupation of a carter, the patient commenced to suffer pain in the knee-joint and down the back of the leg, this pain increasing during a period of months to such extent as to require a constant watch being kept to prevent suicide. The author feels justified in asserting that seldom is witnessed greater expression of agony in a human being than was the almost constant condition of this man. Spending two months in observation and clinical study of the case, a conclusion eventually forced itself upon the mind that associated with the track of the ball through the foot existed some lesion of the dorsalis pedis nerve. Not that at this point there was pain, tenderness, or indeed expression of any kind, but a diagnosis by exclusion seemed to locate the trouble here: the author mentions particularly the absence of all signs, because he could find no one to second his conclusions or to indorse a proposition to make section of the nerve above the ankle. The nerve, however, was exposed and the length of an inch removed. From the moment of the operation the patient was entirely free from his neuralgia, although tenderness about the knee upon pressure continued for some little time, while the superficial portions overlying both malleoli sloughed and remained in an ulcerating condition over three months.

Dental surgery affords countless instances of immediate pain radiation. This radiation commonly relates to teeth having a common period of eruption, a diseased bicuspid of one side expressing itself in a healthy bicuspid of the other, a molar in a molar, etc.

It is to be accepted that a diseased tooth may express itself in almost any part of the body, on the other hand that disease in any part of the body may express its discomfort through a tooth. (See *Odontalgia*.)

Treatment.—The idea is advanced that there is seldom or never what is termed idiopathic neuralgia but that pain is always a symptom. It is unfortunately the case that too often as practitioners we discover weakness in search after cause, and thus find ourselves unable to treat a case scientifically, being driven to empiricism. Even yet, however, medicine is able to render more than an accidental service; and the principle on which treatment is founded is that of soothing and quieting, either as applications refer to the

pain is reflected from a lesion related with this nerve. Neuralgia of this situation and of the tip of tongue demands consideration of possibilities associated with the lingual nerve and with the hypo-glossal,—not overlooking, at the same time, probabilities connected with more distant anastomosis. Section of the lingual nerve at base of skull is made by means of same operation practised for dental. See Diagrams, Figs. 541 and 543.

system at large, or to a particular part involved. Sedatives, where there is general nervous disturbance, independent, so far as we discover, of other derangements, are found sometimes to act very happily. The tinctures of valerian and gentian in equal proportion, given in tablespoonful doses, make a fine combination. Bromide of potassium, where it seems necessary to keep up a continuous impression, is given with advantage in doses of ten grains, dissolved in a wineglass of water, from two to ten times a day. If administered, however, in a paroxysm, forty to sixty grains are found not too much, and it is sometimes well to combine with this small doses of opium or morphia.

R.—Potassii bromidi, gr. xx;
Morphiæ acetatis, gr. $\frac{1}{4}$ to $\frac{1}{2}$, according to severity of pain;
Aquæ, ℥j. M.

The dose to be repeated in five or six hours, if required.

Valerianate of zinc is a favorite preparation; it may be made into pills with conserve of rose, or any preferred vehicle, each pill to contain from one-half to a full grain, to be given twice or thrice a day.

Tincture of Indian hemp is prescribed in doses of five drops, repeated three times a day.

Where there is disturbance of the visceral health, it has been found occasionally successful to produce rapid but moderate salivation. Compound tincture of benzoin administered in fifteen-drop doses three times a day acts happily in those wandering abdominal pains which sometimes put at fault in way of explanation.

Aconite, made into quarter-grain pills, and administered cautiously, three or four times a day, is recommended.

Digitalis in tincture, or the tincture of veratrum viride, in conditions of undue circulatory excitement, exhibited in five-drop doses until such excitement is subdued, will sometimes quickly relieve the pain.

Colchicum, where there is a supposed gouty association, is always wisely employed. The wine of the root is the best preparation.

In rheumatic neuralgia, or pain associated with a rheumatic condition, the following formula will be found very reliable; certainly so, if some other existing lesion be not too antagonistic:

R.—Potassii iodidi, ℥ss;
Extracti belladonnæ, gr. vj;
Vini colchici radiceis, ℥ss;
Tincturæ guaiaci ammoniatæ, ℥vj;
Aquæ cinnamomi, ℥vj. M.

Sig.—A tablespoonful to be taken in a wineglass of water three times a day; if it purge, five drops of laudanum is to be added to each dose.

Arsenic is frequently used with benefit. It may be exhibited in granules of the twentieth of a grain three times a day. It acts well in cutaneous neuralgia.

Donovan's solution—the liq. hydrarg. arsen. et iod.—is a favorite with many practitioners. Dose, five drops three times a day; avoiding salivation. This is an alterative, having a variety of significations.

In all cases associated with lassitude and anæmia, the following may be prescribed with benefit:

R.—Elixirii gentianæ ferratæ, ℥vj.
Sig.—Teaspoonful four times a day.

Or,

R.—Tincturæ ferri chloridi, ℥j;
Quiniæ sulphatis, ℥j. M.
Sig.—Fifteen to twenty drops three to four times a day, in water.

Or,

R.—Syrupi ferri pyrophosphatis, ℥vj;
Quiniæ sulphatis, ℥j. M.
Sig.—Teaspoonful four times daily.

Opium and ether, given in full doses before a paroxysm, with ten or fifteen grains of quinine administered after the pain has ceased, will commonly make an impression, and frequently abridge the next attack. Success is claimed for the exhibition of opium to the production of narcotism. Such treatment is only, however, commendable as an occasional expedient.

Muriate of ammonia, in doses of half a drachm three or four times a day, has been given with advantage; a soothing effect is produced by placing a lump of the salt on a burning coal, thus impregnating the atmosphere of a room.

Oil of turpentine is frequently applauded by English practitioners. It is to be given in doses of from one-half to a full drachm.

Chloroform, or chloroform combined with camphor, is recommended. A formula used by Dr. George B. Wood is as follows:

R.—Chloroformi, f℥ij;
Camphoræ, ℥j.

Mix with the yolk of an egg and ℥vj of water, and direct a tablespoonful to be taken every half-hour, every hour, or every two hours, according to the urgency of the case, until relief is obtained, or some decided effects are experienced from the medicines, either on the stomach or brain. Chloral hydrate, in ten-grain doses, may replace this, commonly happily in the case of the plethoric.

Vermifuge medicines are frequently prescribed with benefit, particularly in the case of children, parasites frequently keeping up an irritation, although presenting no definite signs. Of these medicines, one of the very best is the combination of spigelia and senna:

R.—Syrupi spigeliæ et sennæ, ℥iv.

Sig.—Teaspoonful doses three times a day. Four ounces will commonly be found enough to destroy any worms which may be present in the intestines, or to show error in diagnosis.

Cathartics are generally indicated in spasmodic attacks of neuralgia; especially is this the case when there is costiveness, furred tongue, sick headache

or stomach, giddiness, etc. It is generally satisfactory practice to precede the purgation with a few quarter-grain doses of calomel. The character of the purgative is to be influenced by the condition of the patient. Sulphate of magnesia is generally found applicable. The compound cathartic pill is mostly found objectionable. The ordinary Seidlitz powder, repeated three or four times within the day, is a very happy and really refreshing medicine. If it should do no good, it certainly does no harm.

Strychnine is an empirical anti-neuralgic medicine of much reputation. It may be prescribed in quantities of two grains, divided into eighty pills, one to be taken three times a day.

Of local remedies there is a great variety. A formula long celebrated under the name of Rauque's liniment, is as follows:

R.—Extracti belladonnæ, ℥ij;
Ætheris, ℥j;
Aque lauro-cerasi, ℥ij. M.

Sig.—Let it be rubbed on the part and saturated flannel be applied.

The endermic application of morphia is a common practice. The medicine may be used on a blistered surface, or be injected subcutaneously. To make the injection, it is only necessary to thrust the needle-point of the syringe into the rete mucosum, or it may be passed completely beneath the skin into the underlying cellular structure.

Hot and moist applications are generally found of much service in quieting pain,—the part to be enveloped in old and loose flannel, and evaporation prevented by an investment with oiled silk or other material.

In affections of the fifth pair, Dr. Richab, of Strasburg, attributes great good to one grain of quinine and two of common snuff, introduced into the nostril of the painful side. It is said in many cases "to act like a charm."

Prof. Charles Meigs introduced, several years back, a plan of treatment with sulphuric ether, which yields at times great temporary relief. He confused the nerve-currents by taking a piece of sponge saturated with ether, and, by a continuous but irregular round, touching, here and there, different neighboring surfaces, until the pain would disappear. If, for example, it was in the forehead, he would touch over the supra-orbital nerve, over the infra-orbital, over the anterior dental, over the facial, over the cervical,—alternating the touches to these parts for a period varying from five minutes to half an hour. In most cases the pain is, for the time, relieved.

Creasote, much diluted in simple cerate, is sometimes found very useful as a local obtunder,—five drops of creasote to an ounce of cerate or lard; to be rubbed over the affected part, little by little, until relief is obtained.

Dr. Kirby directs a liniment made of one drachm of tincture of aconite to seven of fresh palm-oil, or with two ounces of camphor liniment,—a half-drachm of the former, or double the quantity of the latter, to be rubbed in twice or thrice a day, according to its effects. It must be watched, however,

as the medicine is cumulative; if its poisonous effects appear, stimulants are to be given.

Dr. Grave's neuralgic plaster is compounded as follows:

R.—Pulveris opii, ℥ij;
Camphoræ, ℥ss;
Picis Burgundicæ, q. s. M.

Stupe the parts with warm water before applying it.

Cazenave's pomade is thus made:

R.—Chloroformi, ℥j;
Potassii cyanidi, ℥ijss;
Adipis, ℥ij;
Ceræ albæ, q. s.

Rub into the part a piece of the ointment the size of a pigeon's egg, and cover with oil-skin.

Hydrate of choral in the proportion of ℥ss to ℥viii of water furnishes an admirable local obtunder.

A writer in *The American Practitioner* recommends dropping into the meatus auditorius from four to ten drops of the following mixture, remarking it to be "very rare, with the use of this liquid, that relief is not obtained in a few minutes, and the patient asleep in half an hour, whatever may have been the severity of the pains."

R.—Extracti opii,
Extracti belladonnæ,
Extracti stramonii, āā pars j;
Aquæ pruni Virginiani, partes xij.

If it should happen, says this writer, that at the end of eight or ten minutes the pain does not yield to the remedy (which sometimes happens when the quantity used has been too small, or when we have to treat a neuralgia which has already required the use of narcotics in any way), it is necessary to use a second dose, at least equal to the first.

Alluding to the extemporaneous character of the preparation, it is suggested that it may be preserved, if care be taken to keep it cool, by pouring on its surface from two to four drops of sweet almond oil.

Among the recipes found in Dr. Napheys's "Modern Therapeutics," which have been selected from the prescriptions of eminent practitioners, are the following, which may not be without service to many readers:

Wm. Aitken, M.D., Edinburgh:

When the neuralgia is superficial, compresses steeped in the following solution:

R.—Atropiæ sulphatis, gr. v;
Aquæ destillatæ, f℥ij.

Renew the compresses several times in twenty-four hours, continue them for at least an hour each time, covering them with oil-skin to prevent evaporation.

Brown-Séquard:

R.—Extracti belladonnæ, gr. ℥;
Extracti stramonii, gr. ℥;
Extracti cannabis Indicæ, gr. ℥;
Extracti aconiti, gr. ℥;
Extracti hyoscyami, gr. ℥;
Extracti conii, gr. j;
Pulveris glycyrrhizæ, q. s.

For one pill. To be used with care, and not over four a day.

Dr. Da Costa:

R.—Aconitiæ, gr. ij;
Veratriæ, gr. xv;
Glycerinæ, f℥ij;
Cerati adipis, ℥vj. M.

To be rubbed over the painful part, care being taken to see that there is no abrasion of the skin.

Dr. Wm. Hammond:

R.—Extracti belladonnæ, gr. v.
Divide into twenty pills. One three times a day.

Liniment of Guy's Hospital:

R.—Liquoris plumbi subacetatis,
Tincturæ opii,
Mellis, āā ℥ij;
Confectionis rosæ, ℥j.
Fiat linimentum.

London Hospital:

R.—Tincturæ aconiti,
Linimenti saponis, āā f℥j.
To be used as an anodyne liniment.

A liniment recommended by Dr. Napheys as an elegant sedative is as follows:

R.—Atropiæ sulphatis, gr. viij;
Morphiæ sulphatis, gr. xvj;
Aconitiæ, gr. ij;
Acidi sulphurici diluti, ℥v;
Alcoholis, f℥ss;
Olei olivæ, q. s. ad f℥iv. M.

Or, if a stimulant effect be also desired:

R.—Chloroformi, f℥ss;
Spiritus terebinthinæ, f℥j;
Camphoræ, ℥j;
Olei lavandulæ, ℥xx;
Olei olivæ, q. s. ad f℥vj. M.

The first four ingredients are to be mixed before adding the oil, and the liniment to be well shaken before being applied.

Dr. Felix von Niemeyer, University of Tübingen :

R.—Extracti hyoseyami,
Zinci oxidi, āā ℥ij. M.

Divide into eleven pills. Begin with one pill morning and evening, and increase to twenty or thirty of them daily. These, known as the Meglin pills, have a good reputation in Germany.

One of the most intractable of the neuralgiæ of the scalp ever met with in the practice of the author, yielded to compression of the facial arteries.

Methodical rubbing, massage, of a neuralgic seat is recommended by Dr. S. Weir Mitchell.

In a case, noted by that author, of contusion of the ulnar nerve subject to intense neuralgia, the nerve being hardened and enlarged, tender, and enduring no application of electricity, the pain was relieved by hypodermic injections; but after using many remedies, and at last the actual cautery over the nerve-trunk without altering its size or tenderness, slow and careful manipulation was tried to test if it could be enabled to bear pressure. After a course of gentle friction, lasting half an hour, the object was attained, three sittings enabling the parts to be rubbed and even kneaded quite roughly.

A case of neuralgia of seventeen weeks' standing, the seat of pain being the lumbar muscles, was instantly cured by the author on relieving the pregnant uterus found caught by the promontory of the sacrum. The patient, when met, was found propped on all sides by pillows, not having been able for the period named to touch a foot to the floor. Correction of the misplaced womb allowed her at once to go about as usual.

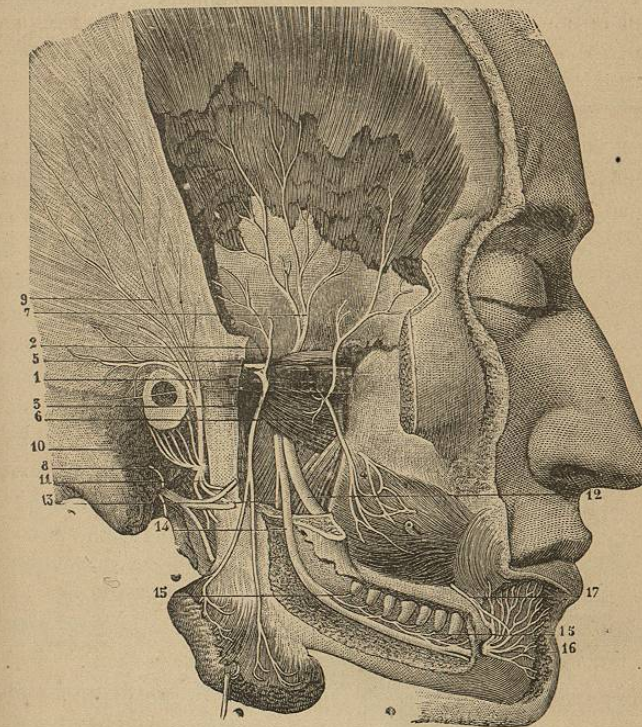
CHAPTER LVIII.

NERVE LESIONS PROPER AND THEIR TREATMENT BY SECTION.

NEURALGIA arising out of disease of a nerve incurable by medical means finds remedy in removal of the affected part; otherwise, by section made between the seat of lesion and sensorium. (See *Neuralgia*.)

Inferior Maxillary Nerve.—Fig. 541 shows the location of this nerve

FIG. 541.



Refer for description to page 75.

as situated in the maxillary bone (14). The part removed, to secure exposure, is the external plate. The old ways of uncovering this nerve have been so surely succeeded, as the writer cannot help but feel, by an operation devised by himself and practised now on many occasions, that the single manner is presented.