

On the nature and treatment of tic douloureux sciatica, and other neuralgic disorders / by Henry Hunt.

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ON THE
NATURE AND TREATMENT
OF
TIC DOULOUREUX
SCIATICA,
AND
OTHER NEURALGIC DISORDERS.

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OF THE

WATERS AND TREATMENT

THE DOUBLOUREUX

SCIENTIFIC

OTHER NEURALGIC DISORDERS

BY HENRY HUNT, M.D.

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WITH
FEELINGS OF ADMIRATION FOR HIS TALENTS,
MINGLED WITH
GRATITUDE FOR HIS UNWEARIED KINDNESS,

THIS ESSAY

IS INSCRIBED TO
HENRY HOLLAND, ESQ., M.D., F.R.S.

BY HIS
FAITHFUL AND GRATEFUL FRIEND,

THE AUTHOR.

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PREFACE.

ALTHOUGH the subject of the following Essay has frequently engaged the attention of the medical profession, yet, the object of those who have written on the subject appears to have been, rather to point out the efficacy of some favorite remedy or to advocate a particular plan of treatment, than to inquire into the nature and causes of it.

This has led to an empirical and ineffectual treatment, and to the consequent abuse of several powerful and valuable remedies, which have for a time been considered almost as specifics, and have soon fallen into comparative disuse; not, indeed, before much mischief has been occasioned

by the indiscriminate application of them, which in many cases, I am persuaded, has tended to increase the disease from which the tic douloureux has arisen, and to render it more obstinate and incurable.

Such I apprehend to have been the result of administering large doses of carbonate of iron, quinine, bark, arsenic, and the more powerful sedatives.—All valuable remedies, when judiciously administered, but equally baneful when given without judgment or discrimination.

Having practised for many years in the south of Devon, the climate of which is proverbial for being warm, humid, and relaxing, and peculiarly calculated to produce the kind of habit most favorable for the development of those nervous diseases, which depend on weakness and relaxation, I had frequent opportunities of seeing and studying those diseases.

My attention was early directed to tic douloureux, and after witnessing many cases, carefully tracing their origin, and comparing the various symptoms by which they were accompanied, I was led to conclude that this peculiarly painful malady had its rise in different individuals from different causes, and in very opposite conditions of the system; a conclusion that satisfactorily explained why a remedy, which had been successful in some cases, had completely failed in others.

This has induced me to select several cases, in which I have been able to trace the pain to its source. These I have arranged under several heads, according to their respective causes; to each I have appended a few observations, and the means I have found most efficacious in their treatment.

I feel, however, satisfied of my inability to carry out this plan in a manner at all worthy of the

subject, one full of difficulty and doubt; but if others should be induced to prosecute the inquiry further, some hope may be entertained that ultimately this dreadful and obstinate malady may be better understood, which would necessarily lead to a more efficient and successful treatment of it.

68, *Brook Street, Hanover Square.*

Dec. 4th, 1843.

CONTENTS.

	PAGE
Description of Tic Douloureux	1
Tic Douloureux, arising from some peculiarity of Constitu- tion or Neuralgic Habit	10
Tic Douloureux arising from Dyspepsia	23
Tic Douloureux arising from Dyspepsia complicated with Congestion of the Liver and other Viscera	47
Tic Douloureux arising from Anæmia	59
Tic Douloureux arising from Morbid Action in the Spine	65
Tic Douloureux arising from Disorder of the Uterus	84
Tic Douloureux arising from Disease of the Brain	105
Tic Douloureux arising from local Mechanical Causes	108
Tic Douloureux arising from Malaria, Recession of Eruptions and other causes	120

	PAGE
Periodical Headach	122
Sciatica	130
On Intermittent Action	154
On the Use of Sedatives	159
On the Sesqui-oxyde of iron	171
On the Use of Arsenic	173
Local Remedies	182
Concluding Remarks	187

TIC DOULOUREUX.

CHAPTER I.

Description of Tic Douloureux.

THE agonising pain, commonly called Tic Douloureux, has its seat in the branches of those nerves that are distributed over the cheek, the fifth and the seventh, but most frequently in the branches of the fifth nerve. No nerve, however, in any part of the body is exempt from its attack.

The manner in which it affects different individuals is very various. In some, the paroxysm commences with a dull, obtuse pain, not unlike an incipient toothache, exciting, perhaps, at first, little attention or alarm; gradually, however, it becomes more severe, and of more frequent recurrence. The pain, at first dull, is, at uncertain intervals, accompanied by acute darting, plunging pains, not unlike electric shocks, shooting through the nerve affected

and the different branches of that nerve with inconceivable rapidity, occasionally ceasing for a few minutes, to be renewed with equal, if not greater violence, by which the unfortunate sufferer is thrown, as it were, into a kind of frenzy. After having continued for an indefinite length of time, the pain gradually subsides, the violent flashes having previously ceased.

The pain attacks other persons suddenly and without warning, with an intensity of suffering which it is difficult to describe.

Some patients describe the pain, as being characterized by a sensation of clawing and gnawing in the part affected, or as if red-hot iron was forcibly driven through the nerve, and accompanied by a repetition of agonizing shocks, or flashes darting through it. The termination of the paroxysm is often as abrupt as the attack, whilst it leaves the patient either in a state of violent nervous excitement, or completely exhausted by the agony.

The paroxysms, in some cases, return irregularly several times in a day. Sometimes they intermit for the space of three or four days or a week, or even a longer period, and then return with equal severity, *appearing* not to obey any regular law. Those that come on suddenly and violently from the first are frequently the most severe, irregular and obstinate.

When the disease in its irregular form is fully established, or rather in proportion to the length of time it has existed, the paroxysms become more acute, and occur more frequently. They are then more easily excited by trifling local or accidental causes of irritation; by the slightest touch or movement of the affected part, so that the effort of speaking, masticating, or swallowing is as much as possible avoided. Sudden exposure of the part to heat or cold will also be sufficient to provoke a paroxysm.

When the neuralgic pain originates in, or depends on disorder of any viscus, the pain will generally vary in proportion as that disorder increases or diminishes.

The paroxysms, in numerous cases, recur with the regularity of an ague, returning daily at the same hour; in cases of this nature the pain, at first trifling, gradually increases in severity for a given time, until it has attained its acme; when, perhaps, after continuing very violently, it gradually subsides and leaves the patient perfectly easy, until the same hour on the following day. During the violence of the paroxysms, the same shocks and darting pains are not unfrequently felt, as in the more irregular form of the disease.

Cases are occasionally met with, in which the paroxysms return three or four times every day in

quite as regular order, as to the time, as they do in cases partaking of a more common or quotidian type. In others again, one, two, three, or even four weeks may intervene between the paroxysms, yet the recurrence of them is so regular, that the exact day in which they will return can be generally foretold.

In many cases, although a certain degree of pain is constantly felt, yet the exacerbations of greater intensity are quite as regular as in those which have intervals of perfect ease.

There is also a marked tendency in this disease to return annually about the same period, the time of its return varying in different individuals. This is equally true of both forms, the regular and irregular. Some individuals are *quite free* from pain, except during one, two, or three months in the year; others have their sufferings *much increased* in particular months; some asserting that they suffer most in October and November, and others in April and May.

Tic douloureux, in many of its phenomena, is very analogous to epilepsy, hysteria, and other nervous diseases. In neuralgia, as in epilepsy, the parts are sometimes quiet, as indeed the whole system may be; yet there is so great a tendency to tic, that the slightest cause is sufficient to provoke an attack. Again in neuralgia, as in epilepsy, the

patient is occasionally forewarned of the approaching paroxysm by a feeling somewhat similar to the epileptic aura. A case will be detailed in which the disease apparently depended on disordered stomach and liver. In this case the paroxysm was invariably preceded by a sensation, as if a fine thread passed from about the region of the pylorus through the chest and neck to the seat of the pain in the cheek, and as soon as it reached that spot, the pain in the cheek began. Others have been able to foretell the approach of a paroxysm by experiencing a sensation, as if a stream of cool air was gently passing over the part affected for a short time before the pain came on. One gentleman likened it to the electric aura; but this sensation only occurred in cases in which the paroxysm was periodic.

Others have remarked, that a few hours previous to an attack of pain they almost invariably perceived an excessive degree of nervous restlessness and irritability of temper, or, to use their own expression, they have been in such a state of "fidgets" that they could neither settle themselves to any occupation, either of business or of pleasure; neither could they endure the society even of their friends.

This feeling entirely wears off in some when the pain begins; in others, when it ceases. I have re-

marked this state of feeling to prevail in cases depending on a disordered stomach.

Some patients also have told me, that if the pain for some days has been less severe than usual, the severity of the succeeding paroxysms has generally been in a considerable degree increased. A great increase of the temperature of the part affected is perceived during a paroxysm; but this is not invariable. In one instance I witnessed a complete wasting of the cellular tissue and fat of the cheek in which the pain was felt; but in the course of twelve months after the pain had been relieved, the wasted cheek had recovered its natural size and fulness.

It should be remarked that the symptoms of the disease have been detailed without reference to any particular cause of it, for the phenomena differed in some individuals whose disease arose from the same cause, and agreed in others in whom the cause of the disease was different.

Sir Charles Bell, a gentleman of great authority in everything relating to the nervous system, considered that "in true tic douloureux, there is no disease of the nerve, nor of the surrounding parts; that those cases arising either from disease in the nerve, or from local irritation of it, or from dead or preternatural growth of bone, the pains differ from those characteristic of true tic, and for a very

obvious reason, the cause is continual, and the remission of pain imperfect." If this was invariably correct, this peculiarity would in some degree be our guide in tracing the pain to its true cause, and would afford some assistance in our diagnosis and in our treatment of it. But neither does the opinion of gentlemen of equal authority coincide with this view, nor is it confirmed by the experience of others.

The opinion of Sir H. Halford, as expressed in his 'Essay on Tic Douloureux,' is, "that in its severer forms it is often connected with some preternatural growth of bone, or with a deposition of bone in a part of the animal economy, where it is not usually found, in a sound and healthy condition of it, or with diseased bone."

Alluding to this opinion of Sir H. Halford, Sir B. Brodie says, "I have no doubt that it is so in some instances; I have seen one, if not two cases, which confirm Sir H. Halford's opinion."

With regard to the *remission* of the pain being imperfect whilst the cause is continual, Mr. Swan states, "The periodical form of neuralgia is by no means indicative of its not depending on organic disease, as there are numerous cases on record where it has been clearly ascertained to originate in organic disease within the cranium; also a nerve in the extremities has been irritated by tumours and

aneurisms, yet the pain has returned with all the regularity of an ague, and has altogether ceased on the removal of the irritating cause." A case has been related by Mr. Swan of a man who had paroxysms of pain in the nerve of his leg every night at the same hour with perfect freedom in the interval, which was caused by an aneurismal tumour irritating the nerve in its course, and it was permanently relieved by the cure of the aneurism. The converse of this will be shown in the case of the very Reverend Dean of ———, in which, without doubt, the pain was caused by debility and disorder of the stomach; he never was quite easy, yet at particular hours his pain was much aggravated; he could not bear at any time the least touch on the part affected, and was relieved from the pain when his stomach was set right.

With regard to the severity of the pain these two authorities again differ. Sir C. Bell writes, that in true tic douloureux "the nerve is not morbidly affected; when it is influenced by remote irritation the pain is infinitely more severe, while it lasts, than that produced by the morbid condition of the nerve itself, or of the surrounding parts involving it." On this subject Sir H. Hallford says, "Mild forms of it depend upon some derangement of the digestive organs, and is cured by treatment that will bring on a better action of the several abdominal vis-

cera, and will restore the system to its healthy tone."

In those cases which have fallen under my own observation, it has appeared that the intensity of the suffering has not depended, in the least degree, on the particular cause; for I have observed pain of equal severity in those in whom the cause originated in disordered functions as in those in whom it depended on some local organic source of irritation.

CHAPTER II.

Tic Douloureux, arising from some peculiarity of Constitution,
or Neuralgic Habit.

BEFORE entering on the consideration of the local causes of tic douloureux, it is necessary to allude to a class of persons, particularly to females, in whom the natural sensibility of the nervous system is so increased as to render them peculiarly liable to neuralgic pains.

In some these pains apparently arise not from any local source of irritation of particular nerves, but spontaneously, as it were, whenever the system is reduced to a state of general debility ; in others, in whom this morbid state is not so highly developed, yet it is to an extent sufficient to predispose them to these pains, so that it requires only a very trifling source of irritation, or a temporary or slight derangement of the general health to produce them.

That this morbid state may be owing to some defect or peculiarity in the original organization, which has hitherto eluded inquiry, is not improbable ;

however, such is the obscurity in which the minute structure and functions of the brain and nervous system are enveloped, that it is impossible, in the present state of our knowledge, to demonstrate or explain the different peculiarities in the pathological condition of that system which either gives origin or predisposes it to the various disorders to which it is liable. It is clear such do exist in hysteria, epilepsy, chorea, and other nervous diseases, and it is not unreasonable to conclude that there may be a somewhat analogous condition giving rise to neuralgia.

Individuals, who are of this nervous and irritable habit, are morbidly sensible to every impression both moral and physical, and on them impressions produce more than ordinary corresponding effects. If at any time their general health become disordered, or the feeble powers of their constitution be further weakened, an attack of pain, having all the characters of *tic douloureux*, is the consequence, which does not readily subside until the morbid irritation is allayed and their strength restored.

An example of this peculiar habit will be found in the case of Mrs. H——, a lady of very delicate constitution, with feelings most sensitively alive to every impression, either of pain or pleasure, whose health has never been robust, yet has not been subject to any particular derangement of it which

can be described by name. She has for many years suffered from neuralgic pains in various parts of the body, but more particularly in the second division of the fifth nerve of the left cheek, when, from any cause, she is more than commonly weak, or suffering from any mental anxiety. The sudden and unexpected receipt of news of a painful nature, for instance, will, almost always, bring on neuralgic pain in some part; sometimes in the under part of the last phalanx of the fourth toe of the left foot so severely as to prevent her walking or standing. This after a time will quite as suddenly leave the toe and attack the nerve in the cheek, having all the characters and severity of tic douloureux. If the first paroxysm continue long, it will commonly return daily for some weeks, unless arrested by medicine, or until the constitution has overcome the effects of the shock, and has recovered its tone. She is also very sensitive to the influence of climate; she resided at Clifton for several years, during which time she was comparatively exempt from pain; but on removing to the damp and relaxing climate of the south of Devon, she soon became languid, weak, and incapable of much exertion; and after some months' residence there, without any other apparent cause than debility, these neuralgic pains returned, and after a time fixed on the nerve in the cheek, and assumed the quotidian type.

It yielded at length to arsenic ; a medicine which not only relieved the pain, but greatly improved and strengthened the general health.

The benefit of a temporary removal to a high, dry, and warm situation was invariably and almost immediately perceptible. In the course of a few days, the feelings of languor and debility gave place to that of comparative briskness ; the heavy weight which she had usually over her brow passed away, the complexion became clear, the appetite and digestion improved, the neuralgic pains entirely subsided, and she was soon enabled to take an amount of exercise to which she had been quite incapable whilst residing in the low, relaxing air surrounding her own abode. An improvement of this nature invariably occurred whenever she has removed to this kind of bracing air, and the reverse on her return to a humid one.

Among many causes by which an attack of pain was provoked, none were more certain than over-exertion ; the consequent exhaustion appeared to interrupt all the vital processes ; the stomach was rendered incapable of digestion, the bowels became irregular, and if this exhaustion happened immediately preceding the menstrual period, the monthly relief was interrupted, or the discharge only scantily secreted.

Either of these derangements of function produced a return of pain, which did not subside until

the disordered action had been corrected and the general strength cautiously restored; for when weak she had always a return of the pain in the cheek for three or four days previous to the appearance of the catamenia.

This lady, in common with many others of this habit, is unable to take tonics, for they, with the exception of arsenic, invariably disagree; producing a dry, brown tongue, loss of appetite, and feelings of general discomfort. Arsenic has not this effect, and appears also to possess other valuable qualities besides that of a tonic, which adapts it peculiarly well to these cases.

Mr. Swan and others have made an observation which my experience quite confirms, that "Debility is the state most fitted for keeping up excitement in the nervous system, and when once produced a habit is formed which continues the irritation, and generally becomes stronger the longer it is unopposed by such remedies as have the power of breaking through it."

Although this weak and irritable state may be overcome, it is surprising what trifling circumstances and slight deviations from health are sufficient to reproduce it, none more so than causes of a moral nature, and to these we may look as the greatest obstacles which we have to encounter in the treatment.

Though we may have little or no power in preventing the numerous causes of anxiety to which all are subjected, yet, by avoiding as much as possible the *physical* causes which act so injuriously on these delicate frames; by attending to the improvement of the general health; and by adopting every method of giving tone to the system, much may be done to avert the evil consequences which those of a moral nature might otherwise produce.

It is to be expected that the general health of females of this delicate organization would be easily deranged; but as the deviations from the healthy state are so diversified, any attempt to describe them in an essay of this kind would be quite superfluous. Each case must be studied and treated according to its own nature and peculiarity: remembering that females of such habits cannot bear harsh or violent remedies with impunity; but that they require a steady and patient perseverance with mild ones, until a more healthy action is induced; afterwards, by a cautious use of tonics, combined with sedatives, and attention to a proper plan of living, the general strength may be so increased that the neuralgic habit will at length, to a certain extent, be overcome. When the neuralgic pain is very violent and is produced by derangement of the general health, caution is required on the part of the medical attendant, lest his attention

be diverted by it from the real cause of the pain, and he be thereby induced to have recourse to empirical remedies, such as the more powerful tonics and narcotics, which often lead to incalculable mischief if resorted to before the cause has been removed. There is much reason for believing that this mistake has frequently confirmed the neuralgic habit, and has rendered it difficult if not almost impossible to cure.

In detailing the case of Mrs. H.—, it was remarked how very susceptible she was to the injurious influence of a humid, relaxing climate. This remark applies with equal strength to the whole of this class of delicate females; and few things, I believe, operate more detrimentally on their general health, or have greater power of inducing that peculiar kind of constitutional disorder of which neuralgia is the frequent consequence.

To produce this does not require what is strictly called a malarious district, although that would be more detrimental. A climate of this nature is so pernicious that, although the effects of it may be from time to time overcome by regimen and medicine, the patient soon relapses into her former condition, unless she is removed entirely from its influence. Each relapse renders the individual more and more susceptible of its effects, and increases the difficulty of affording even temporary relief; so that

not only are the powers of the constitution impaired, but at length the health is permanently destroyed.

When the health of persons of this delicate habit has been, by a lengthened residence in such a climate, much injured, although not irretrievably so, it requires a very protracted abode in one more suited to them, with the addition of very judicious medical treatment, to repair their shattered constitutions. When that has been happily effected, they cannot, even then, return to the former without incurring much risk of speedily losing all the advantage they had previously gained by their absence from it.

I have occasionally met with persons who had so far recovered, and who appeared so well and strong, and whose nerves were so firm, that it was considered safe for them to make the experiment; but a very short trial convinced them that their constitution had not been sufficiently hardened to resist the debilitating action of such a climate.

This effect of climate is so clearly marked in the following case, that it may be briefly related :

Miss C——, about the age of twenty, became weak, lost her health, and was suddenly seized with a pain in the nerves of the fore-arm, accompanied with a loss of power in using it. She was residing in a low, damp situation, at the foot of a hill, in the south of Devon. Every means that I could sug-

gest were ineffectually tried. She therefore went to a celebrated physician for advice, who lived in a town comparatively high and dry. She soon improved in every respect, and naturally attributed her recovery to his greater skill. She had not, however, long returned to her former abode before she was attacked by the same feelings of languor, and the pain and weakness of the arm soon followed. This induced her to consult him again, which she did, with the same result; but all her improvement, as was the case before, was gradually lost soon after her return home. She then took lodgings in a house situated on the top of a hill, very high, open, and bracing. In this place of residence she so quickly regained her strength and was relieved from the pain, as to afford me every reason to conclude that the benefit she had attributed to the physician was mainly owing to the change of situation.

My experience has convinced me that the climate best adapted for such individuals is one that is high, dry, and open. But care should be taken that, for the most sensitive amongst them, it is not too bleak. The patient's residence need not be strictly in mountain air; provided it is in an elevated situation, on a dry soil, and with a dry, clear air around it, it will be generally found sufficient.

A residence, however, of a few months in a

mountainous region—such, for instance, as in North Wales—gives tone and strength in so much greater a degree, that, where it is feasible, it is certainly to be preferred and recommended. The bracing and exhilarating effects of such an air is so great, that the invalid should be cautioned against an error, which is not unfrequently fallen into, by which much of the benefit that would otherwise have been gained is often lost. The invalid, finding herself capable of taking an amount of exercise to which she had hitherto been unequal, is tempted by the enjoyment of it to outstep the bounds of prudence, and thus a degree of exhaustion is produced, which is always injurious.

The effect of over-fatigue appears to vary in different persons, the difference perhaps depending on the degree of strength possessed by each individual, or on the amount of fatigue incurred. This difference is perhaps best shown by the effect of restoratives. Some patients will find themselves assisted in their recovery by wine, porter, or other stimulants, and others are made worse by them. The fatigue of the latter may not be inaptly termed feverish fatigue, and they are refreshed and renovated by a saline draught with ammonia or a few grains of the nitrate of potass and sal volatile. Persons of this description are by far the most difficult to manage with success. Therefore, they

should be particularly enjoined to attend to a few rules in regard to exercise, which may be gradually relaxed as their strength improves.

First, then, they should not at any time allow themselves to be so tired, that moderate rest will not recover and refresh them.

Secondly, that they must never permit exercise to interfere with digestion, by carefully avoiding exercise for some time previous to their meals; for if, owing to the weakness of their vital powers, they take so much exercise as to induce fatigue immediately before their meals, they will, to their cost, find their stomach quite unequal to its duty. In these feeble persons, more particularly, all their nervous energy is required by the stomach for the due performance of its functions; and if the nervous energy be expended just previous to digestion, that function will be proportionally ill performed.

The indigestion, by giving rise to a variety of acid products, produces fresh causes of irritation, which alone, independent of other injuries resulting from it, will be sufficient to bring on attack of tic. This remark applies to all persons, both strong and weak, but it is applicable more particularly to the latter.

The following is a remarkable instance of the necessity of attending to it by persons who are subject to tic douloureux. Mr. C——, who had suffered

for many years most acutely from this disorder, and who was capable of taking extraordinary exercise in shooting, hunting, deer-stalking, &c., could never venture to dine before he had rested quietly nearly two hours, for if he did, a violent paroxysm of tic was the certain consequence. And what is singular, the tic in him was clearly attributable to an organic cause, apparently quite independent of digestion.

Rest until digestion is quite finished must also always be allowed. This, however, is so much more commonly attended to than rest before meals, that it need not be further dwelt on.

There is another point deserving the attention of these feeble persons, for, trivial as it may appear, it is in reality of some moment to them. The necessity of taking some little nourishment, perhaps a cup of coffee with a little bread, before they leave their bed in the morning, otherwise the fatigue of dressing will so exhaust them, that their appetite for breakfast and the power of digesting it will be impaired; and if they begin their day in this unpromising manner, they will remain through the whole of it tired and weary. Attention to this easy and simple rule will prevent this, and will also enable them to bear the additional fatigue of sponging their persons with cold water, or, what is far pre-

ferable, the use of the shower-bath: for this sea water is to be preferred; but if it cannot be procured, some bay salt dissolved in fresh water will form a good substitute. After either of these remedies they should be briskly rubbed.

CHAPTER III.

Tic Douloureux arising from Dyspepsia.

A QUESTION of great interest in the investigation of the pathology of neuralgia also arises, which may be inquired into with advantage.

It is, whether a morbid condition of the system, somewhat similar to the one just alluded to, may not be produced by the effect of previous disease.

That other disorders of the nervous system are the consequence of previous diseases, is sufficiently proved by experience. This Dr. Pritchard has well expressed in his work on 'Nervous Diseases' in the following sentence : " I allude to the fact long ago noticed and now fully ascertained, that diseases of the nervous system are often found, on inquiring into their previous history, to have been preceded by chronic disorders of various kinds affecting other structures, and more especially by disordered conditions of some of the natural functions and occasionally of the organs allotted to them." These remarks are equally applicable to the painful diseases of the nerves as to those of a spasmodic

nature, to which Dr. Pritchard more particularly referred.

From carefully attending to the history of numerous cases of tic douloureux, and endeavouring to ascertain the cause of their occurrence, it has appeared to me that diseases which have preceded the complaint, and to which it may be pretty correctly traced, have been those of a class which either suddenly debilitate the body, as it were by a peculiar poison, or those which undermine the powers of the constitution by a slower but equally effective process. Of the former the influenza is an example. One of the most characteristic features of that complaint being the early and sudden prostration of the vital powers, of which neuralgic pains are not the unfrequent consequence. Dr. Holland, I believe, was the first if not the only physician who remarked this connexion between them. In his 'Essay on the Influenza' his allusion to it is so very clear, that I shall take advantage of it and insert it: "Of the diseases consequent upon influenza, if not indeed to be regarded as an integral part of the malady, one of the most frequent and remarkable is the tendency to neuralgic intermittent pains and morbid actions in different parts of the body, with periods as regular as those of a common ague, sometimes taking the tertian as well as the quotidian type; little connexion save

priority and sequence can be traced between the early and more familiar symptoms of influenza and such partial and intermittent affections. Whether they depend on idiosyncrasy of the patient, or on some peculiar application of the virus, or simply a liability given to be affected in this way, are points equally obscure." The cases are given of two persons who were soon cured by the aid of quinine. But in one which fell under my own notice, the case of a lady between eighty and ninety years of age, this intermittent neuralgic attack continued unmitigated by all the various plans suggested for her relief, and she continued to suffer under it until her death. I know no other disease which possesses the power of producing so suddenly neuralgic pains, as influenza; I will, therefore, pass on to the consideration of those of a more chronic kind, to which they are more commonly referrible.

Among the most prominent of these, disorders of the digestive organs may be correctly numbered; nor is this surprising, when we remember the very extended surface the mucous membrane of the stomach and bowels present, the abundant supply of nerves, ramifying over every part of it, exposed as they are, from their situation, to such a variety of causes of irritation, which are so well known to produce nervous affections in distant parts, under different forms.

But it is yet to be explained, of what nature is the disorder of these organs, to which neuralgia may be attributed; for "pathologists do not seem to agree to what the disorder of the system the association belongs."—(Sir H. Halford.)

As a great variety of diseases of the nervous system are correctly attributed to disorders of the digestive organs—such, for example, as a diminution of the functions of the brain; local or partial palsy; diminished sensibility, and the opposite but equally perverted state of the functions of the nerves; morbidly increased sensibility and pain; spasms and convulsions, and others,—may it not be asked, do all these different effects arise from one and the same kind of disorder of those viscera? Or does each kind of secondary disease depend on a different and peculiar condition of them? Or are they modified by some idiosyncrasy of the patient? Could these questions be answered satisfactorily, some at least of the difficulty and obscurity which at present surround these diseases would be removed. It has been stated that neuralgia chiefly occurs (when there is no immediate local cause of irritation) either in persons naturally of a weak or irritable habit, or in those who have been reduced to this state by long-continued illness, by mental anxiety, or by other debilitating causes.

It occasionally happens that one of the viscera

alone has been reduced to a state of weakness and irritability, accompanied with extreme sensibility of its nerves, by causes acting particularly on it, whilst the whole system, at least to any great extent, does not participate in the weakness.

These observations will be generally found to apply to cases of neuralgia arising from dyspepsia, equally as to those which arise from a deranged function of the other viscera,—the dyspepsia being almost always of an atonic or nervous character, rather than of a gastritic or inflammatory one.

When an inquiry is made into the remote causes of the disorders of the stomach, and into the previous habits of persons subject to them, they will generally be found to be of a nature most likely to produce this kind of dyspepsia.

As many of the causes said to excite neuralgia in the nerves of the cheek are identical with those that are well known as the most common causes of disorders of the digestive organs, it is not unfair to conclude that it is produced by them through the medium of such derangement. This conclusion receives strong confirmation both from the history of cases, as well as by the effect of remedies directed to the restoration of those organs to a healthy tone. Indeed, it would be difficult otherwise to give anything like a satisfactory explana-

tion of the manner in which they act on the system, so as to produce this painful disease.

From the account which I have often received from persons who have applied to me for the relief of tic douloureux, however various the causes of the disease may have been in many instances, the stomach has generally been the first part that has suffered.

The time also has varied in different individuals before the tic douloureux has followed. In some, who were of an irritable and nervous temperament, the pain in the cheek has very soon succeeded; in others, of a more robust frame, longer time has elapsed before the nerves have been secondarily affected.

It does not indeed necessarily follow that pain or uneasiness should be felt in the stomach or bowels, although the disorder, on which the neuralgia of the cheek depends, is situated in them; for it is a well-known fact, that pain is often referred to a part distant from the seat of the disease.

This is exemplified by the case of Dr. Wollaston, who was suddenly seized with pain in his ankle, immediately on eating an ice, and was relieved as soon as it was rejected from his stomach by vomiting; also by the more common occurrence of pain

being referred to the knee, when the hip-joint is the seat of disease.

Patients often confidently assert that, with the exception of pain in the cheek, they are in perfect health, their appetite and digestion good, whilst it has been evident that the sole cause of their misery has been seated in the digestive organs, and the immediate provocative of the pain in the cheek has been some irritating matter in the stomach, arising from indigestion.

Of the various causes that may produce disorders of the stomach, none are more common than errors in diet, and the two following cases very strongly show the risk that even the most robust persons incur of seriously injuring and weakening the powers of their stomach by injudicious regimen.

The very Rev. Dean of —, a gentleman who had enjoyed unusually good health, finding himself inclined to grow rather too stout, although he was arrived at a period of life when such a tendency not unusually shows itself, imprudently altered his plan of living: after having lived generously, and having taken little exercise, he adopted suddenly a very spare and abstemious diet, accompanied at the same time by excessive walking exercise, by which he was reduced to a state of great general weakness. The tone of his stomach

was very seriously injured, and unequivocal symptoms of indigestion, and among them the presence of acid, were the result.

After a few weeks he perceived an uneasiness in the cheek ; this increased in severity, and he was seldom free from pain, but it was much aggravated every night about eleven or twelve o'clock, then almost amounting to a distinct paroxysm. He applied to me in August, 1837 ; his general strength at this time had been much improved, for he walked eight miles to see me, and had the same distance to return home. The stomach also was somewhat improved, but still weak. He had constant pain in the cheek, which was much increased on pressure, making the operation of shaving a very painful one. The imperfect paroxysm of pain continued every night four or five hours, accompanied by severe shocks and plunges. There was no indication of the disorder of the stomach having extended to any other viscera, his tongue was slightly furred, and was a little swelled, the bowels very regular, and the evacuations healthy, the appetite was good, but the digestion was still imperfect. After an emetic and aperient draught of rhubarb and sulphate of potash, warmed with sal volatile, I gave him the following draught three times a day, an hour before his meals :

R Liq. Arsenicalis ℥iv.

Tr. Camph. comp. ℥xii.

Aquæ cinnam. 3x.

M. ft. haustus :

increasing the quantity of the liquor arsenicalis daily, until he felt its action on the stomach, which he did, when each dose amounted to twelve minims : it was then discontinued. As soon as he perceived the effect of the medicine, the violent plunges of pain diminished, slowly but regularly, until at the expiration of a fortnight they had altogether ceased. By this time, the action of the arsenic had also subsided ; he again took it in doses of five minims, and continued it until all tenderness and pain of the cheek was entirely overcome. This was effected at the expiration of a month from the time of my first seeing him. He then left my neighbourhood, with directions to take the medicine for some months, occasionally omitting it for a fortnight or three weeks, increasing gradually the interval, and decreasing the period, in which he took it.

In January following I received the following account from him :

“ Since I left your neighbourhood, I have had only two returns of tic, and those very slight ; I think I continued to take your prescription in small doses for about a month, after my return to —, and having discontinued it about a fort-

night, I had a slight return of the spasmodic pain, which yielded immediately to the arsenic. On this occasion, I took it in still smaller doses, only twice a day, and not exceeding three drops at each dose. After about three weeks, I again discontinued it, and at the end of another fortnight, had a slight attack of tic, which yielded instantly to your prescription, which I took in the same small doses for a fortnight, and for the last month I have been quite free from pain, though I suspect that the nerve is not quite sound, from a feeling of numbness and tingling, which I used to regard as a precursor of an attack."

After this time, the pain seldom troubled him, and only when his stomach became disordered.

In 1841 he wrote me that by strict attention to diet, and above all, by abstaining from acids, and from the use of wine, and other fermented liquors, he kept the tic from annoying him.

In this case many remedies had been taken without any mitigation of the pain, but with rather an aggravation of it.

Mr. —, ætat forty, a strong athletic person, applied to me in September, 1839; he had been suffering intensely from neuralgia in the left cheek; the paroxysms returning at all hours, both of the day and night. It was very difficult to get from him anything but a very rambling unsa-

tisfactory account of himself, his whole thoughts being absorbed by the acuteness of his suffering, which he described over and over again. I, however, ascertained that his stomach was out of order, that his tongue was coated with a yellowish creamy fur; his pulse was strong and full; his appetite good, but the process of digestion was accompanied by very uneasy feelings. His diet for many years had been almost wholly of animal food and wine, that is, a beefsteak for breakfast, with a cup of coffee; a full allowance of animal food, with two thirds of a bottle of port for dinner; and the remaining third with meat for supper. He used very violent exercise, he perspired very freely, and that secretion was exceedingly strong and offensive.

Soon after my first interview, he had a most violent paroxysm of tic, in the midst of which, I gave him an emetic of twenty grains of ipecacuanha, with one of tartar emetic, which operated most effectually, and gave him immediate and most complete relief; so different were all his feelings afterwards, that he believed himself cured; nothing was ejected from the stomach but a large quantity of thick tenacious mucus, not at all acid. After some warm aperients, he commenced taking the arsenic in the same combination as was prescribed in the last case, and continued it in the same manner, with an occasional alterative and aperient.

I also put him on a more rational diet. For a few weeks, he had some slight returns of pain, but has since remained entirely well.

I have selected these two cases from among several others, as being remarkably good examples of tic douloureux arising from a disordered stomach; of the stomach becoming disordered by causes quite opposite in their nature; and of simple stomach disorder, without any other complication.

It is to this simplicity in the cause of the pain, that I attribute the quickness with which these gentlemen were relieved.

Cases of this simple nature are far more rarely met with than those which are complicated with derangements of some of the neighbouring viscera.

It may not generally be advisable to administer emetics, when the stomach is unnaturally weak, and its nerves unusually sensible; yet in cases of this nature, having repeatedly failed in obtaining relief from other medicine, until an emetic had been administered, I have for many years made it a regular practice to do so, unless there existed some good reason to forbid it.

The matter ejected has generally been a quantity of very glairy, tenacious mucus, which is for the most part acid; and the removal of it facilitated the operation of other medicines, especially of arsenic. I have not the slightest doubt of this fact,

and in the last mentioned case, arsenic, among many other medicines, was the last the patient had taken, before he consulted me, without any apparent effect, but upon resuming it after the emetic, the beneficial effect of it was soon felt. Should the paroxysm of tic be regularly intermittent, the exhibition of an emetic, an hour previous to the time of its return, interrupts and often prevents the paroxysm, and not unfrequently causes the subsequent one to be milder. After an emetic, it is also a good practice to give a warm aperient, for which purpose, a draught of twenty grains of rhubarb and sulphate of potash, with thirty drops of sal volatile, in some aromatic water, answers very satisfactorily.

After this preparation I have found arsenic to be the best and most efficacious remedy, combining it with a sedative, (and where there is evidence of the presence of acid in the stomach, with a few grains of the bicarbonate of potash,) commencing with small doses, on the average of four minims, and gradually increasing the dose daily, until some decided symptom of its action is perceptible, which is commonly evinced, when the dose has amounted to ten. As soon as this is felt, the pain in the cheek sensibly abates, but after it has considerably decreased, it is desirable to discontinue the medicine for a few days; for in these

simple cases, it is seldom requisite to induce a very powerful effect from the medicine on the stomach.

After waiting until all symptoms of its action have ceased, the arsenic must be recommenced in the original small doses.

There is seldom any necessity of augmenting these doses a second time, for the action of this powerful medicine is soon renewed. In this manner, it is to be continued for several weeks, if not for months, after the patient has been quite relieved from the pain.

It is of consequence, too, to remember that the arsenic is to be taken on an empty stomach, for the effect being then more powerful, less quantity becomes necessary. There are some cases, however, in which this plan cannot be followed, and in them, it should be given with the food, or soon afterwards. The susceptibility of the stomach, with respect to this remedy, varies a good deal in different persons; the dose and the time for its being taken must therefore be varied accordingly. Should the pain at any time appear to increase, it will be right to repeat the aperient, and afterwards to increase the quantity of arsenic, until its action is again sensibly felt, indeed, during the treatment, an occasional aperient will often be of service.

When the pain has been relieved and the stomach improved, as it will frequently be under this plan of

treatment, the substitution of a grain of the sulphate of quinine, given two or three times a day, has often appeared to give additional tone, although it would have disagreed at first.

One great error, against which patients must be strictly guarded, is the belief of their being cured as soon as the pain is relieved; for unless they patiently persist in taking these remedies, and in following a proper plan of diet until their stomach is quite restored, they will have the mortification and misery of finding, sooner or later, that the pain will return.

I have tried a variety of other medicines and plans of treatment in these simple cases, but I have found none so efficacious as the one described. At one period of my practice, in addition to the foregoing plan, when the pain was exceedingly severe, I was in the habit of giving the extract of belladonna, in rather large and repeated doses, until the pain was overcome; but for many years past, I have not had recourse to it, since I found that by administering arsenic to a sufficient extent, the belladonna might be dispensed with. I have sufficient reason to believe that iron, especially the sesquioxide, quinine bark, &c. are commonly injurious, where the cause of the tic is in the stomach, at least in the large doses that are generally given. In the majority of cases, that have been under the

care of other medical men before I have seen them, one or more, if not all, of these remedies have been tried, and in many cases, they have evidently been injurious. Nor is it to be wondered at, when it is remembered that this condition of the stomach is one of weakness and irritability, and it has not the power of digesting these medicines, at least, not until some degree of strength has been given to it, and some of its irritability allayed.

Although arsenic given in small doses will generally be found to subdue that kind of morbid sensibility, which is accompanied by neuralgic pain in the cheek, yet it will occasionally fail. When this happens, arsenic appears to disagree *immediately*, producing an indescribable sensation of distress in the stomach, dryness in the fauces; white tongue, and other symptoms of gastritis; when these symptoms are quickly produced, this medicine should be discontinued without delay. This observation may appear to be unnecessary, but I have been induced to make it, from knowing that, in spite of such warnings, the use of arsenic has been persevered in until very unpleasant, if not serious, effects have been produced; this has led to the condemnation of a remedy, very valuable, when used with judgment and discretion.

In cases of this nature, the most appropriate plan of treatment is that which tends to allay, rather

than to subdue, the morbid sensibility of the nerves of the stomach, which in extreme cases, I believe to be accompanied by a slight degree of inflammation of the mucous membrane. Much may be effected by a very rigid diet, which should consist entirely of farinaceous food, taken in small quantities, and only lukewarm.

Of medicine, I have found small doses of the nitrate of potash with two or three minims of Scheele's prussic acid, given three or four times a day, and three or four grains of James's powder at bed-time, to be the most efficacious plan of treatment; and should the bowels require assistance, a common lavement, a little castor oil, or two or three ounces of Pulna water is to be preferred; much relief is often afforded by mustard synapisms applied to the stomach, or some other rubefacient, such as the stronger preparation of ammonia, some stimulating plaster, or an occasional blister.

It is not unusual, after this plan has been followed for a few weeks, that arsenic may be taken with advantage, and without producing any of the unpleasant effects just described. In this case, it should be taken either with or immediately after the meals, in doses not exceeding two or three minims, and its effects should be cautiously watched; if it again disagrees, it must be abandoned altogether, and other measures adopted to overcome

this morbid state, without reference or regard to the neuralgic pains, which are the result of it; this, however, is seldom necessary. I believe more benefit to be obtained by doing little than much, in cases of this description; by being content with a proper diet; and by avoiding everything that can possibly irritate these sensitive nerves.

It is in these cases, which have been so injudiciously treated, that the homœopathic plan of treatment succeeds, for, by giving nothing but an ideal medicine, and by avoiding all stimulants in food and drink, the stomach gradually recovers its healthy condition, and the pain very frequently subsides.

Strict attention should be paid to diet by all persons suffering from neuralgia, and this is more particularly necessary to be attended to by those, in whom the neuralgic pain can be traced to dyspepsia.

In an essay of this kind, it would be out of place for me to attempt to enter into the question as to the unwholesomeness of the various articles of food; I must be satisfied with giving a general short outline of the diet best suited to individuals labouring under dyspeptic neuralgia.

The habits and peculiarities of each individual must be studied, for, as Dr. Prout has justly remarked, "Whatever agrees with the stomach of an individual, when taken in moderation, may, perhaps, be

presumed to be easily digested, and therefore wholesome as regards that individual."

It sometimes happens that the nerves of the stomach are so exceedingly sensitive, that the least portion of solid food cannot be taken with impunity; Dr. Wilson Phillip has mentioned the case of a person, "who was invariably attacked with severe pain in the cheek, whenever even the smallest portion of bread was taken into the stomach, a single mouthful never failing to bring on an attack." These extreme cases are happily rare, but there are many who require the mildest and most easily digested food; such persons should live entirely on farinaceous food, until the nerves (of the stomach) become less sensitive, which may be known by a return of appetite; by the tongue becoming clearer; and by their general feelings assuming those of health; feelings that are not easily depicted, but well known to these persons.

When the state of the stomach has thus been improved, some preparation of animal food should be added, a little beef-tea, or chicken prepared in the following manner. A chicken is to be wrapt in muslin, and stewed for twelve or fourteen hours, with half an ounce of vermicelli, and a few whole peppercorns, until the whole has become a jelly; some of this, diluted if necessary, with a little toast, forms a very nutritious and easily-digested meal.

Care however, is required, when persons are living on this abstemious diet, lest debility of the system be increased; when this is apprehended, some addition must be made to the diet.

When the stomach is in this weak state, every kind of food has a tendency to become acid; this may, however, in some measure be prevented by taking some slight stimulus with or after meals; a little weak brandy and water, or a teaspoonful of sal volatile in a glass of water, or a cup of coffee.

As soon as the stomach will bear it, a little solid animal food, simply cooked, should be added, a slice of chicken, or game, with stale bread or toast. In proportion as the powers of digestion improve, so must the diet be altered.

For those persons, whose digestive organs are not so highly sensitive, and for those in whom the morbid sensibility has been greatly allayed, a plain nutritious diet, consisting of animal food, with stale bread or toast, and a few well-boiled vegetables, if they can be taken with impunity, is the most proper; but as vegetables are apt to disagree, the effect of them must be closely watched. Chicken, game, mutton, and venison are of the best kinds of animal food; in addition, there is seldom any objection to plain pudding of rice, bread, tapioca, and others of a similar quality.

Salmon, indeed all fish, is objectionable; pastry,

rich puddings, fruit, both fresh and dried, raw, crude vegetables, pickles, cheese, and the various sauces, must be strictly forbidden, as well as all hard and indigestible matter; for they excite an increased secretion of acid in the stomach, which, of all the products of indigestion, is the most irritating to the nerves of the stomach, when in a state of exalted sensibility; and not only does such indigestible matter irritate the nerves of that organ, but it is a source of irritation to those of the intestinal canal, in its passage through it; to which may be added the consequences which result from the absorption of such acid into the system.

There are two great errors made respecting diet, one is partaking of unwholesome food, the other taking too large a quantity; the last is the most common and perhaps the greatest.

Attention to two simple rules will in a great measure prevent the latter: first to live simply, and avoid a variety of dishes: secondly, to eat slowly, by allowing a sufficient time for thorough mastication of the food, by which means the earliest indications, that of the food a sufficient quantity has been taken, will be perceived, indications which should immediately be attended to and obeyed.

In respect to drink, water is generally to be preferred, and it will be observed, that those who are

water drinkers, and are moderate and abstemious in eating, have the best digestion, and are consequently less liable to neuralgia, and other nervous diseases.

On the subject of stimulants, it is necessary to make a few observations, as their effect is very equivocal. In some instances, the stimulus of a moderate quantity of wine is not only of service, but is quite essential to a healthy digestion, but it must be only taken in the smallest quantity necessary to enable the stomach to effect this purpose; more than is requisite would be injurious. As the strength is gained, so should the quantity of stimulant be lessened, until it is altogether discontinued.

This remark, as to the necessity of some stimulant, is peculiarly applicable to those, who have been in the habit of indulging in wine, or other stimulating beverages; for if these persons are suddenly and wholly deprived of it, "uneasy sensations will be experienced, a discontented state of this organ," (the stomach,) as Mr. Abernethy described it, "and a want of the expected stimulus," but it should never be taken at any other time, "for it is wrong to stimulate the stomach, when it has no task to perform." This last injunction of Mr. Abernethy's is perhaps of the greatest consequence

to be remembered in cases of neuralgia arising from dyspepsia, from the fact, that stimulants are frequently had recourse to with the hope of temporary relief, which, indeed, they often afford, with the certainty of increasing the debility and prolonging the disease.

Perhaps the best stimulant is a little brandy and water, but there can be no objection to a glass or two of good sherry or sound port. For breakfast, bread or toast, (with some other farinaceous food,) when there is appetite for it, or weak *café au lait*, or scalded milk, which is milk from which all the cream has been removed: this is easily effected, by standing a pan of milk on a stove, moderately heated, until all the cream has risen to the surface, which cream, when cold, can be easily removed. This milk is sufficiently nourishing, and is easily digested.

Many persons, whose stomachs will not tolerate butter, can digest the fat of bacon, which may be allowed them. This bacon after being boiled, should be toasted before it is eaten, otherwise it will not be sufficiently dressed.

Early hours and a due proportion of exercise are necessary in every case of indigestion; care being taken that the latter does not interfere with digestion, neither must it be carried so far as to produce

fatigue. Walking or riding is to be preferred to carriage exercise.

Warm clothing, with flannel worn next the skin, and sponging the whole person every morning, or the use of the shower-bath, with brisk friction afterwards, will be found very advantageous, as I have before recommended.

CHAPTER IV.

Tic Douloureux arising from Dyspepsia complicated with
Congestion of the Liver and other Viscera.

CASES of tic douloureux, which arise simply from debility, and morbid sensibility of the stomach, occur less frequently than those in which that condition of the stomach is complicated with other visceral derangements.

This is attributable to a combination of circumstances. The causes which produce disordered stomach, if long continued, will also disorder and impede the functions of the liver and the other abdominal viscera. Disorder also of the stomach frequently extends to, and implicates the other viscera, after the cause of the primary ailment has ceased to operate.

In this disease, the pain in the nerve, although only the *effect* of a disordered stomach, is so excessive, that it becomes afterwards a *cause* of keeping up and increasing the disturbance in the natural functions of the digestive organs.

Many of the remedies which are given to obtain temporary relief from the pain have also an injurious influence in weakening the stomach and obstructing the biliary, and other secretions, more particularly the very large doses of opium, which are so frequently taken.

As an example of this, a Mrs. ———, a lady almost the last sufferer by whom I was consulted, was in the habit of taking sixteen grains of solid opium daily to mitigate the pain, the consequence was, the tone of her stomach was nearly destroyed, her liver gorged, and her complexion muddy, and half jaundiced. Yet she was surprised that she had not found relief from arsenic, quinine, and other remedies of a similar nature.

Amongst the causes, which, I am led to believe, are as fertile as any in producing this more complicated state of disorder of the digestive organs, is long continued anxiety. Few causes give rise to more obstinate forms of neuralgia. To this may be added, sedentary habits, too great exertion of mind or body, and residence in malarious districts, &c.

Of necessity, cases in which this complicated disorder of the system exists, require very different treatment, preparatory to having recourse to those remedies, which have been found to be proper and successful in cases where there exists merely simple debility and morbid sensibility.

Although these two conditions may coexist, as they often do, yet any attempt to cure, without having first thoroughly and effectually cleared out and relieved the oppressed and gorged viscera, would not only be useless, but positively injurious.

For this reason, in the case of a person suffering from *tic douloureux*, who has a sallow, muddy complexion, with eyes half jaundiced, foul tongue, hard and tense abdomen, with sluggish irregular bowels, and whose urine is scanty, high coloured, or turbid, the only safe and successful practice, is at once to unload the turgid liver, and other abdominal viscera. Much time will be gained in effecting this object, if the treatment is commenced by the administration of an emetic, where there is no obvious reason to forbid it.

Whilst partially accomplishing the object in view, emetics are of great use in rousing the oppressed and dormant nervous energy. The violent action of the various muscles on the contents of the abdomen, in the act of vomiting, overcome the congestive state of the viscera, and portal system generally; the subsequent action of calomel and purgatives, is thus rendered more certain, easy, and effectual. In addition to these advantages, the patient may be encouraged to hope for great and immediate relief from pain, which, although temporary, is no trifling boon to a person, who has

been long suffering under it. An emetic seems also, in some cases, to break down the habit of the pain, which does not afterwards return with the same degree of violence as before; at all events, a degree of relief to the system follows the operation of this remedy, which is seldom afforded by a single dose of any other. I, therefore, always strongly recommend it, with the before-mentioned exception; although, from the prevailing prejudice against emetics, and from their being disagreeable remedies, my advice is not always followed. The emetic should be followed by a free use of mercurial purgatives, until the system is unloaded, and the viscera are stimulated to a more healthy action. In cases of long standing, and in those that have been mismanaged, it requires a firm perseverance in this plan to effect this object completely, and it is necessary afterwards, from time to time, to repeat these remedies, to prevent a relapse. When the congestion does not readily yield, or when this treatment is only partially successful, it is a good plan to follow it up by a visit to Carlsbad, or some other deobstruent spa, which ensures, in addition to a regular course of the saline aperient water, the advantages of a voyage and a journey, varied scenery, change of air and habits, early hours, plenty of exercise and amusement, a wholesome diet, and a freedom from business. It is not very

unusual to find that, by this treatment, the tic douloureux will be cured.

Success, however, is very far from being invariable. It has been more general in strong and robust persons, than in the weak and irritable, in whom of course, this plan must be modified, and carried out with caution, lest, by unnecessarily increasing the debility and irritability, the neuralgia should be also increased.

It will be proper here, to advert to a remedy of great power, suggested by the late Sir C. Bell, viz., the croton oil. It must not indeed be considered as a specific, nor is it applicable to every case, but where the neuralgia is referrible to a congested state of the abdominal viscera, it certainly may be given with much hope of advantage. In full doses, it acts both as an emetic and a cathartic, and is so powerful that it unloads the bowels and relieves them quicker and more effectually than most other remedies. It is owing, perhaps, to its operation as an emetic, that much of its value depends, for I have repeatedly seen the free use of purgatives fail to produce the necessary relief, until after the exhibition of a common emetic of ipecacuanha, and tartar emetic. Lately, croton oil in small doses, combined with stomachic aperients, has been strongly recommended, and several successful cases attest its value. There can be no doubt, that

it is a very effective purgative, and well adapted to many cases, though not applicable to all.

Mercury, given so as to affect the system, is to be avoided as a general rule in disorders of the nerves ; yet, in cases of tic douloureux which have been of very long standing, it may be necessary to have recourse to it, to remove congestions and unnatural accumulations, which interrupt and prevent the due performance of the natural and vital functions.

It sometimes happens, as before stated, that after the digestive organs have been relieved and stimulated to a more healthy action, the neuralgia ceases. When this is not the case, we may seek assistance from among the tonics, and sedatives, selecting the one or the other, as may best suit each case. For those who have been long sufferers, and whose general appearance betrays an impoverished, cachectic state of the blood, steel is to be preferred. Where there are only weakness and exhaustion, quinine or bark and ammonia may be more appropriate. Where the pain is intermitting, with more of irritability than general weakness, arsenic will act most beneficially. Sometimes, these medicines are most effective when given singly, at others, when in combination. Where the pain has been excessive, and where great exhaustion is produced by it—after the congestion

has been relieved, much good, besides temporary ease, is to be gained by sedatives given in doses of sufficient strength, and repeated at short intervals, until a decided impression has been made on the pain, or on the system. Of the sedatives, I have found belladonna the most efficacious, more particularly so when the pain is irregular; where the paroxysms are regular and periodical, I have preferred a grain or two of solid opium, with camphor, taken an hour before the pain is expected to return.

It will be found in this, as in other diseases, that the pain resists the effect of the remedy, and that doses which are set down as guides in our practice are quite inert; it is therefore necessary to give them in doses sufficiently large, either to make a decided impression on the pain, or until some of their effects are manifested on the system; and it is also necessary to give moderate aperients occasionally, when recourse is had to sedatives.

It is impossible, in any essay of this kind, to enter into a detail of the various remedies that may be found necessary to overcome the peculiar state of the digestive organs, which has just been described, as the treatment must be modified to meet the peculiarities of every case. Enough has, I hope, been stated to prevent the irreparable injury and ill consequences that must obviously accrue, if these

cases are treated in the empirical and indiscriminate manner in which hitherto many of them have been.

As examples of this kind, the two following cases may be shortly detailed, they were evidently produced by long continued anxiety.

Mrs. H. C——, ætat. forty-one, a lady naturally of strong health, from the year 1828, was much afflicted by sickness in her family, which terminated in the loss of two children, and lastly, of her husband. Toward the end of this long and anxious nursing, her health began to fail, she lost her appetite, became thin, her naturally clear and fair complexion grew dark and sallow, her tongue foul, her bowels irregular, with a cold skin, and her pulse feeble. In this state she continued for some months, indeed until the spring of 1831, when she first felt pain in the branches of the fifth nerve of the right cheek; the paroxysms, for some time, occurred several times in the day and night, at different hours; they gradually became more regular, returning about an hour and half after each meal. To ascertain if there existed any connexion between the meals and the pain, the former were varied both as to time and quality, but the change made no alteration in the return of the pain. The attack that followed her dinner was commonly the most severe. The paroxysms were always preceded by a sensation as if a heated wire were passed from

about the region of the duodenum, through the chest, neck, and back part of the fauces to the cheek. The pain then began in the cheek, and continued to increase in violence for an hour; it remained at its height about half an hour, and then gradually subsided, leaving the cheek quite easy and free from pain, even on pressure. The treatment that had been adopted was four or five minims of liquor arsenicalis made into pills with black pepper and given three times a day; this produced no effect.

I commenced by giving an emetic, followed by purges of calomel and compound extract of colocynth at night, with jalap or salts and senna the following morning: this was repeated for ten days; she then recommenced taking the arsenic in doses of five minims, which were gradually increased, with ten grains of the carbonate (now bicarbonate) of potash in warm aromatic water, three times a day. A dose of blue-pill with compound extract of colocynth was also given every other night. No benefit, however, was derived until the quantity of liquor arsenicalis had been increased to ten minims, when its usual effects were felt on the stomach. The pain then subsided.

I persevered in this plan for several months with occasional intervals, the quantity of arsenic being gradually diminished. Since which time, there has been no return of the tic.

Mrs. —, of Torquay, æt. 57, in whom a series of domestic afflictions and other causes had created much anxiety of mind for two or three years, and had greatly impaired her health—first by destroying her appetite and impeding digestion, to which wasting of flesh and debility necessarily succeeded. After a time, she perceived an uneasiness in the cheek and lower jaw, particularly at the foramen mentale, the pain returned frequently during the day, but seldom at night.

When she consulted me in 1835, she was thin, feeble, with an expression of anxiety and care, her complexion was not clear, her tongue was loaded, bowels costive, urine limpid, and she was much troubled with acidity and flatulence. The pain was most violent about eleven o'clock in the morning. She had lost most of her teeth on the affected side, some had been removed in consequence of decay, and others that were sound, in hopes of obtaining relief.

After an emetic and some brisk cathartics, she commenced taking arsenic, which was continued in the manner described in the last case. At the end of ten days, she was affected by it, but the pain did not yield until its action was very strongly felt, when the pain subsided, the medicine was omitted. As soon as the effect of the arsenic had diminished, the pain again increased; the tongue not continuing clean, a repetition of the purgatives with blue-pill

was resorted to, and when the stomach appeared better, the arsenic was again taken, and was continued in smaller doses for three months, but varied occasionally according to the severity of the pain. At the expiration of this period, the pain had quite ceased, and her general health and strength were perfectly restored.

In persons of feeble powers, in whom, with the congestion, there is also much debility and irritability, some modification of the plan is requisite. A course of deobstruents and purgatives of a milder nature, or the more powerful given at longer intervals, must be trusted to; the general strength supported at the same time with as much nourishment as can be borne and digested, with a free exhibition of cordials, the aperient plan occasionally intermitted, and the general irritation and distress soothed by the well-timed and cautious exhibition of sedatives. As soon as the secretions are perceived to be improving, it is desirable to combine with the purgative some tonic, gradually increasing the latter and diminishing the former. When, from the complexion having become clearer, the tongue having lost its fur, and from other unequivocal symptoms, it may be fairly inferred that the congestion has been removed, and a more healthy state of the viscera been obtained—should the pain continue, which in these feeble persons is to be

expected—we must endeavour to overcome it, by tonics and sedatives. At first arsenic is to be preferred, beginning with small doses, and gradually increasing them until the pain is somewhat diminished; for arsenic can often be borne, when steel and quinine will disagree, and it is useful to keep the pain in check by opium, belladonna or conium, giving a sufficient dose at night to ensure good rest, and smaller ones, if necessary, during the day to allay the general irritation, watching the tongue at the same time, to prevent a recurrence of the disorder of the digestive organs. When the pain is overcome, care and attention are still required to strengthen and give tone to the system generally, in order to prevent a relapse, which in these delicate persons is much to be feared. When there is no longer any necessity for continuing the arsenic, it may be replaced by quinine, or steel, or perhaps by a combination of the sulphate of iron with the quinine, particularly in females, if the uterine secretions are pale and scanty, with a bloodless state of the whole system. This plan should be continued for many months, until a stronger and more healthy state has been attained. Care, however, should be taken to avoid the common error of attempting to cure quickly by too large doses of the tonic; for this will generally defeat the object.

CHAPTER V.

Tic Douloureux arising from Anæmia.

CASES of tic douloureux are occasionally met with, which cannot be traced to any particular cause, and in persons who are not of the weak irritable nature as those already described.

The class of persons now under consideration, naturally of strong robust constitutions, have become anæmic, their pallid skin indicating a deficiency both in the supply and quality of their blood; and to these causes, I am inclined to attribute it. This opinion is rather confirmed by the fact, that whatever replenishes the system with pure and healthy blood, removes the pain. This may be shown by the following case.

Miss L——, ætat. 24, consulted me in August 1825, for tic douloureux affecting the superior maxillary nerve, and portio dura of the seventh, on the left cheek; she had been a sufferer from it for several years, and had been relieved temporarily

on three or four occasions by the carbonate of iron. The paroxysms of pain returned at all hours, without any apparent cause, sometimes suddenly, and with great violence; at other times, they more gradually increased in severity. The lady was pale and thin, and her breathing was short in walking up an ascent, with palpitation of the heart. Her bowels were rather obstinate, she menstruated regularly, but scantily, her appetite and digestion tolerable, tongue clean but pale, the left cheek was wasted, giving her on the left side the appearance of a woman of sixty or seventy years; whilst the right cheek, although thin, was in proportion to the rest of her body.

After repeated and searching examinations, I could not detect any local cause of irritation or disorder to account for the pain; and as she had been previously relieved by the carbonate of iron, and as there was sufficient evidence of the necessity of a chalybeate, I again gave it to her in scruple doses three times a day, with three grains of scammony in each, which freely acted on her bowels. After a few days the dose was increased to half a drachm every six hours, substituting the compound extract of colocynth for the scammony. The quantity of steel was also increased by degrees, until it amounted to two drachms every six hours.

Six weeks elapsed without any mitigation of the

pain, although her countenance appeared more healthy.

About this time, I was suddenly called to my patient and found her rolling on the floor with agony. To afford immediate relief, I gave her a grain of the extract of belladonna at once, and directed the same dose to be repeated for three successive hours, unless the pain was previously relieved. Soon after the third pill was taken, the pain began to subside, and she was soon easy. I observed no very marked effect of the belladonna on the system, the pupils of the eyes were only a little dilated, and there was some degree of drowsiness. On the following day the symptoms of its action were more decided, the pupils being more dilated with some indistinctness of vision, and there was a dryness in the fauces; and she continued easy.

These effects of the belladonna subsided in a few days, and she had no return of pain until the expiration of a week, when it was immediately checked by a single grain of the same medicine.

The steel was continued unremittingly for many months, until there was sufficient evidence of a material improvement in her appearance and in her health; more colour in her lips, with some tinge of red in her cheeks. The pain occasionally returned, but it was always subdued by the belladonna,

which was instantly taken on the recurrence of the slightest symptom of pain. After the pain had ceased for several weeks, the steel was discontinued, but remembering her former relapses, she again consented to take it for more than a year with an occasional interval of a few weeks.

After two years had elapsed, I accidentally met her, but such was the improvement in her appearance, that I did not recognize her: she informed me that she had continued quite well, and that the wasted cheek had gradually regained the size of the other; indeed at that time, there was not the slightest difference between them.

Mrs. C——, ætat. 30, a married lady of Reading, consulted me at Totness, in 1828. This lady had gradually lost her strength, and was reduced to a state of anæmia without any distinct disorder of any part. She was ill with all the usual symptoms indicative of that state, and with the addition of severe pain in the nerves of the right cheek, from which she had suffered for several months.

I gave her the carbonate of iron with the infus. rosæ comp., and ordered her as generous a diet as her stomach could digest, with two glasses of port wine daily. I also recommended her to take exercise in the open air, and an occasional dose of blue-pill with cathartic extract, and to sponge her body with tepid sea-water. In a few weeks she began

to improve both in appearance and strength; the pain diminished in proportion as her strength increased, and ceased altogether in two months.

She continued this plan until her health was completely restored, and has remained ever since free from the pain; and, what is very unusual, there was not any falling back during the treatment, but a steady progressive improvement until she was quite restored to health.

From several similar cases, the repetition of which would be needless, I have been led to believe that these are the class of cases in which the carbonate of iron, (certainly steel in some form or other,) is most appropriate and most successful. I do not, indeed, mean to deny that the carbonate of iron is not of great service in other cases, but I have been so often disappointed by this at one time so popular a remedy, that I do not feel disposed to place the confidence in it which its reputation might warrant.

The effect of the belladonna in the first case was too decided to allow it to pass unnoticed, for I attribute much of the success of the plan to the power of that medicine, in allaying the great general irritation of the system which accompanied the anæmic state: whilst it afforded relief to the pain, it prevented the exhaustion which would otherwise have ensued; and, if I may be allowed the expression, it gave time and opportunity to the

constitution to rally, and thus derive all the benefit from the chalybeate. The first case also proves the necessity of continuing the steel for a very long time, long after the pain had ceased, and the constitution had been restored to health; for the improvement ought to be so decided, and the strength so confirmed, that all danger of relapsing into the former state should be removed before the chalybeate can be safely given up, or rather it should be continued until the organs of supply more than counterbalance the organs of waste.

CHAPTER VI.

Tic Douloureux, arising from Morbid Action in the Spine.

IN the following cases of morbid action in the spine, which are examples of a numerous class, the neuralgia of the cheek was, at the commencement, and for a considerable time afterwards, the only feature, which continued to be a very prominent one, during almost the whole course of the illness. The obscurity of the origin of the tic in these cases, and difficulty attending the treatment of it, make it necessary to consider them in a separate chapter, and to detail somewhat more minutely the principal phenomena exhibited from time to time in their progress.

Miss E. S——, ætat. 23, a lady of strong, good sense, and much resolution, who had been subject to spasmodic asthma in previous years, which had been from time to time relieved by steel medicines, was attacked, early in the spring of 1825, with severe pains in the branches of the fifth nerve of the right cheek, occurring in paroxysms, at irregular intervals, without warning, and subsiding as suddenly and as un-

expectedly. She continued otherwise in good health. After repeated and careful examinations nothing was discovered that threw any light upon the origin or cause of the pain. After some purgatives, an attempt was made to overcome this morbid action by increasing the general tone of the system by the carbonate of iron, which was given in considerable doses, with occasional aloetic purgatives; at the same time temporary relief was sought for from the use of opium, belladonna, both internally as well as locally. Subsequently, arsenic and other tonics, in various combinations, were fully and fairly tried, but all failed in affording relief; indeed, the steel always appeared to increase her suffering, and to disorder her general health. She then went into an adjoining county, seeking relief from change of air and scene. During her sojourn there, calomel, so as to affect the system, was given under the idea that the liver was the seat of the disease: this remedy shattered her health without mitigating the pain in the cheek; and, in addition to which, she suffered from a similar severe pain, shooting through the nerves of the corresponding arm.

In 1828 I was again consulted, and found her in a much worse condition. The pain in the cheek continued unabated, with the addition of pain in the left side at the edges of the false ribs; severe pain in the head, shooting from the occiput to the fore-

head: she was pale and haggard, with an anxious countenance, and with an aspect of much suffering; the skin was harsh and dry, but not hot; bowels rather obstinate, menstruation regular, and natural as to quantity, but attended with pain; the pulse natural, the tongue moist and a little coated. Warm aloetic purgatives, with the volatile tincture of valerian, were then prescribed, with gentle but regular horse exercise; moderately generous diet and early hours. But from bad she became worse. In a consultation, a few months afterwards, the case was still considered hysterical, depending on a general constitutional derangement, and the same plan was agreed to be pursued, with the addition of a shower-bath. Very soon after using the latter, she became more feeble, particularly in the lower extremities, of which she gradually, but sensibly, lost the command, and acquired the gait of a person partially palsied. The loss of power in the legs was accompanied by diminished sensibility and rigidity of the muscles. She also felt a sensation as if a wire was tightly drawn round her waist, separating her body into halves. At night there was also cramp in the legs, and occasionally in the muscles of the back, producing a kind of opisthotonos. When in bed, her legs were invariably and involuntarily crossed, so that the tendo achillis of one leg rested on the front of the ankle-joint of the other. These symptoms led

to an examination of the back, when she informed me that she had for a considerable period felt a weakness in it, but had not thought it of sufficient consequence to mention it; that some years before she had fallen and injured her back, but the effect had soon apparently passed off, the injury being too slight to require any attention. It was about three months after this accident that she first felt the pain in her cheek. On examining the spine, no irregularity or distortion could be discovered; but there was pain on pressure in two or three of the middle dorsal vertebræ, and on the last dorsal and two upper lumbar, without any morbid tenderness of the integuments: any movement of the trunk increased the pain, and sitting upright soon produced fatigue and weariness; pressure caused a sensation of sinking and dying at the precordia. The power over the abdominal muscles was much diminished, and the bowels, consequently, were relieved with more difficulty. The urine, which had been before plentiful, was now more scantily secreted, and became opalescent on the surface. The dysmenorrhea increased, and the menstrual secretion diminished in quantity.

She was now put on one of Mr. Earle's beds, issues were made on both sides of the tender spine, and kept open by the occasional application of caustic. In this state she continued a very considerable time without amendment, but afterwards

she experienced relief in all her symptoms, particularly in the pain in her cheek when the issues discharged freely, and a corresponding aggravation of all the symptoms when they were permitted to heal too much, or discharged less copiously than usual. The pain in the cheek was relieved in a striking manner the day after the application of the caustic. All medicine was discontinued, excepting aloetic aperients and a mixture of ether, assafœtida, and camphor, to quiet the occasional spasms. After some months' confinement, she passed, with much pain, several small renal calculi, called by Dr. Prout the crepitating calculi; but, by degrees, the pain in the back lessened, and, *pari passu*, the pain in the cheek, the latter of which entirely ceased for some months before she was completely relieved from the pain in the back. The rigidity of the muscles relaxed, and she gradually regained the perfect use and power over her lower extremities, which had been for so long a time palsied, and ultimately she was restored to health, with the exception of occasionally passing the renal calculi, which, however, she has not done for some years, and she is now (1841) quite well.

1831. G. T——, ætat. 18, a fat, unhealthy-looking girl, of sedentary habits, had been subject to hysteria in various forms, from which she was relieved for a time by brisk purging, combined with assa-

foetida, galbanum, and medicines of that class, and regular exercise in the open air. In 1831 she was attacked with severe pain in the left cheek, in the branches of the second division of the fifth nerve. The pain came on in paroxysms, both by day and night, and sometimes awoke her suddenly from sleep. Relief was sought for by great attention to her general health, with steel, warm aperients, various narcotics, regular exercise, and keeping her in the open air as much as possible. Steel, however, in every shape and combination disagreed, producing a feverish state, with aggravation of the neuralgic pain. The other remedies had neither an injurious nor a beneficial effect. In the course of a year, it was observed that she became less and less able to take exercise, and complained of weakness, which rendered sitting upright and a small degree of exercise irksome and fatiguing. The feeling of weakness was soon accompanied by a dull pain in the back, which was followed by a gradual loss of power over the lower extremities, cramps in the legs, and other symptoms indicating morbid action in the spine. These symptoms led to an examination of it, when there was found to be pain on pressure on two of the upper dorsal and three of the lumbar vertebra, with a morbid tenderness of the integuments extending above and below the parts, where the deep-seated pain was referred. There was difficulty of breathing, a peculiar

barking cough, occasional globus hystericus and other hysterical symptoms, which led to the opinion that all her ailments might still be nervous. Appropriate measures were accordingly adopted, and steadily persevered in, until the symptoms of mischief in the spine, accompanied by loss of power over the legs, with rigidity of the muscles, became so urgent, that an immediate change of treatment was found to be necessary. She was, therefore, placed on one of Mr. Earle's beds; blood was taken from the back, and afterwards caustic issues were opened on each side of the painful portions of the spine, and kept open by occasional applications of the caustic. For several months no apparent relief was afforded by the issues either to the pain in the cheek, which had seldom varied, or to the back. At length, however, the former began to diminish in severity, and gradually lessened until it altogether ceased; but neither the abstraction of blood, nor the application of the caustic afforded, as in the preceding case, any temporary relief to the neuralgia. The disorder in the spine proved obstinate, and yielded slowly and reluctantly to rest and counter-irritation. As it improved, the muscles of the legs became less rigid, and power over them was gradually regained, the legs recovered their power, the other symptoms subsided, the patient was perfectly restored to health, and has not had any return of the pain in the cheek since.

Miss A. B., ætat. 37, has for the last seventeen years, with an occasional short interval of a few weeks, suffered martyrdom from tic douloureux, affecting the second division of the fifth nerve, and the portio dura of the seventh of the left cheek. She has been from childhood remarkably sensitive and nervous. At an early age she was subject to chorea of unusual obstinacy, which continued several years. Afterwards she suffered from a kind of hysterical catalepsy, and subsequently from spasmodic asthma. About the age of twenty, after much worry and anxiety, she was seized with pain in the right side, which was treated as an hepatic disorder, and she was much reduced by the remedies employed to remove it. Not long afterwards a similar kind of pain attacked the cheek, which soon increased to great agony, at first in paroxysms with intervals of complete ease; but for many years the cheek has seldom been free from pain, continuing always tender to the touch; the pain has usually been more severe at night, often awaking her from sleep. She suffered most acutely in November, and during the cold months. During very severe paroxysms of pain the muscles of the cheek were twitched, and the countenance much distorted.

This lady has consulted many of the principal medical men in London with this result: that she has invariably found tonics of every description, steel in a variety of forms and combinations, quinine,

ammoniated copper, arsenic, &c., increase her sufferings; hemlock, belladonna, morphine, indeed all sedatives (excepting Battley's liquor opii sedativus,) fail in mitigating the pain. Once, for a short time, she was relieved by large doses of creosote, but the most decided temporary relief has been obtained by the abstraction of blood from the spine by cupping. This has invariably given immediate ease to the cheek, and to this remedy she has too frequently had recourse.

1840, January 8. Her present state is as follows:—The skin is blanched by the repeated losses of blood; her face is puffed, the eyelids especially so, which are of a dark colour; pulse small and frequent; tongue foul, bowels confined; menstruation regular, but the discharge rather scanty; skin dry and harsh, not hot; there is constant pain in the left cheek with frequent paroxysms of an intense kind, particularly towards night, and then the cheek is twitched and drawn on one side; when the pain is more than commonly severe, it is accompanied by attacks of catalepsy. To obtain temporary relief, she takes from 100 to 200 drops of liquor opii sedativus at a dose. The integuments over the spine from the occiput to the sacrum are morbidly tender, and there is a deeply-seated pain in two of the dorsal, and two or three of the lumbar vertebræ, which is increased on firm pressure. She

is obliged to walk on her toes, for if she bring the heels to the ground, the spine is so jarred that all her sufferings are much increased by it. There is much palpitation and irregularity in the action of the heart, with attacks similar to spasmodic asthma. Shortness of breath is felt, as well as pain in the left side at the edges of the ribs in walking up an ascent. The legs swell and pit a good deal on pressure. She has also occasionally severe pain, apparently in the centre of the brain, which, accompanied by pain in the cheek, is immediately produced with very great intensity by pressure, either on the painful dorsal or lumbar vertebra.

I first gave her pills of pil. hydrargyri and extract. colocynth. comp. every night, and when the tongue became cleaner, she took the extract of belladonna three times a day, gradually increasing each dose to one grain, without any apparent effect, excepting dilatation of the pupil, when it was discontinued. Arsenic was then fully and fairly tried without relief. Being much importuned, I consented to her being cupped on the loins; five or six ounces of blood were drawn, which gave complete relief to the pain in the cheek and head, and that in the back was also much lessened. The blood was dark, but the cupper informed me it was not so much so, as it had been on previous occasions. The relief to the pain in the cheek continued

a fortnight, at the expiration of which period it returned with its usual violence: considering that every kind of medical treatment had failed under the direction of the most skilful physicians, I thought it hopeless again to go over the same ground, and being encouraged by the result of the two former cases, I recommended a caustic issue to be made on one side of the painful dorsal and on the opposite side of the lumbar vertebra; and it is worthy of remark, that the instant the effect of the caustic was felt on the skin, the pain in the cheek seized her almost insufferably. The issues were kept open by occasionally applying caustic to them, and the pain in the cheek was invariably brought on as soon as it was applied, and continued very severe for several hours.

In this state she continued until April without any alteration, when the application of the caustic ceased to bring on the pain in the cheek, and soon afterwards the paroxysms gradually lessened in violence, and in May ceased altogether. The tenderness of the integuments over the spine had also worn off, and the pain in the dorsal and lumbar regions was much lessened, the cataleptic fits had also ceased to return. The issues were kept open until August, when the spine appeared well; they were then allowed to heal, and the back was daily cold sponged with salt and water, and afterwards well rubbed.

Not long after this the lady met with a severe domestic affliction, and in attempting to raise a sick friend, she strained her back. Soon afterwards she went into the country.

On her return in November I found that the pain in the spine, where it had been strained, had gradually increased. Another issue was therefore opened, and the application of the caustic again reproduced the pain in the cheek, which, however, after three weeks subsided. She had never entirely lost the pain in the side, nor the palpitation of the heart, for which she occasionally took, with advantage, small doses of the *liq. opii sedativus*, and hydrocyanic acid. In March, 1841, being much better in every respect, she wished the issue to be healed, and, contrary to my advice and that of Mr. Copeland, whose opinion was taken on that point, it was allowed to dry up, and within three months the pain in the cheek returned and gradually increased to its former intensity: the issue was reopened, and again relieved it, and she has continued free from pain up to this time, (December, 1842,) but, although better in most respects, she has not been restored to the same degree of good health, as was enjoyed by the persons alluded to in the two preceding cases.

During my attendance on the first case, I did not consider the pain in the cheek and the disease in the spine to be so intimately connected as they

afterwards appeared to be ; although the applications to the latter afforded such relief to the former.

It was not until three or four similar cases fell under my notice, that I was led to conclude that the neuralgia of the cheek was only the effect or consequence of morbid action in the spine ; but the history of the foregoing cases, and still more the effect which the remedies applied to the spine had on the neuralgia were so striking, that it would be difficult to doubt their connexion. It would be still more difficult to explain the reason why there should be pain in the cheek from such a cause ; but there can be no more reason to doubt it, than that there should be pain in one arm, or in one finger under similar circumstances, as stated by Mr. Copeland to have been witnessed by him.

Dr. Jebb has also remarked that the effects are sometimes extended above, as well as below the seat of disease, as from the loins to the back, &c., proving the importance “ of the study of the sympathies of the various parts with each other in disease, and this seeming independence and distance of the effect from the cause, of the symptom from the seat of the disease.” (Copeland.)

It would be foreign to my purpose to enter minutely into the subject of spinal diseases, but the evidence, in the cases I have detailed, is so

strong, that the pain in the cheek was caused by morbid action in the spine, that I am unwilling to pass over the subject without some notice, particularly as at one time I had every reason to believe that the neuralgia in these cases was attributable to a deranged state of the general health, whilst in the sequel it was clearly proved to have had its seat in the spine ; but whether it originated in that part may be doubtful.

It is now universally allowed that for a considerable period, more especially from ten to twenty years ago, numerous young persons were considered to be suffering from disease in the spine, were confined to their couches or beds, and tormented by cupping, leeches, issues, setons, &c., to the serious injury of their health ; whilst the pain in the spine and the accompanying, rather than consequent, debility was the result of disorder of the general health, requiring the adoption and firm perseverance in a plan of treatment directly contrary. I think, however, that it must be also admitted, that of late years the opposite error has been fallen into, with far more serious results.

It cannot be doubted that inflammation and real disease in the spine have, in numerous cases, been overlooked, and that the pain in the back has been considered nervous or hysterical ; the incomplete palsy, to a want of volition in the patient ; and that

attention only to the general health, forced exertion, fresh air, &c., have been persevered in until the disease in the spine has attained to such a height, that the bones and cartilages in some cases, but more commonly the spinal cord and its envelopes, have become disorganized, and protracted misery or death has been the result.

Examples of this error have fallen within my own practice, and several other instances have occurred in that of others, who have mentioned the cases to me.

From an anxious and close attention for many years to a considerable number of these cases, I have been impressed with the conviction that many come rightly under both definitions. I mean, that in the commencement, and for a long period after, the pain in the spine is purely nervous or hysterical, depending on some morbid condition of the body generally; but that after an indefinite time, and when it has not yielded to the treatment adopted, the disorder degenerates gradually into real disease; the state of nervous excitement in the part inducing increased vascular action, a low kind of inflammation, which ultimately produces the disastrous consequences before mentioned.

What is seen occasionally in cases of neuralgia of the nerves of the cheek arising from morbid action at a distance, tends rather to confirm this hypo-

thesis. In a case of this nature, at first after the paroxysm is over, no tenderness, no swelling is left in the part affected: but after frequent and violent returns of the paroxysms, the nerve and surrounding tissues continue to be tender in the intervals between their occurrence. After a longer continuance or repetition of the disease, the part affected becomes swelled, and remains so (as if from infiltration of serum,) and most acutely sensible to the touch, so that a stream of cold air blowing upon it, or the slightest touch, will immediately bring on a violent paroxysm of agony.

A remark of Sir B. Brodie's bears out this view. "Nerves," he says, "which have been kept for a long time in a state of irritation will become tender to the touch, and, more than this, may be followed by increased vascularity, by a slight degree of swelling, by actual inflammation. I do not mean to assert that any very active inflammation will be established, such as will end in suppuration and abscess; it will be moderate in degree, but it will be inflammation nevertheless, and marked by the usual symptoms." Dr. Elliotson has related a case of rheumatic sciatica in the eighth volume of the 'Medical Gazette,' which was relieved by the carbonate of iron, with the exception of the pain in the foot, and there it was attended with heat and throbbing, which was removed by the application of leeches. If

this, then, occurs in one part of the system, why should it not in another, in the spinal cord and its envelopes under similar circumstance?

If this is granted, the difficulty still remains of ascertaining when the transition from excitement to inflammation takes place; for the gradation from functional derangement into structural disease is so insidious and imperceptible, that it is almost, if not quite, impossible to discover where the one ends and the other begins. The difficulty is greater in nervous subjects; for, after inflammation has actually commenced, the hysterical symptoms often continue so strongly marked that they completely mask and conceal it. And it is possible that both these states may coexist, inflammation in one part of the spine, with exalted nervous excitement and sensibility extending above and below it.

It is also evident that morbid action may exist in the spine, or in some of its contents, for a period sufficient to disturb and derange the general health in various ways, manifesting itself in parts very remote from the seat of disease, without any local symptom which would lead to a suspicion of the true nature of the case. Mr. Copeland has remarked "that even in cases of injury of the spine four or five years have passed between the time when the injury was received and the palsy that followed it, and although the health has been variously disor-

dered, the cause of the derangement has been seldom discovered until the incurvation has taken place." This oversight is not so likely to happen at present as at the time Mr. Copeland wrote; but it is not unfrequently overlooked at the present period from the operation of another cause, which is the evident inclination or predisposition to attribute all such cases, especially if they are accompanied with any preternatural tenderness of the integuments, to hysteria; an error fraught with as much danger as that, prevalent about twenty years ago, of indiscriminately considering these cases as diseased spines.

The former practice led to worse than useless confinement and painful remedies; the latter to irremediable misery, and oftentimes to death. It should, therefore, always be borne in mind, that real disease may exist with hysteria, or may come on at any period; and that, if the symptoms do not yield to general treatment, after a fair trial, careful examination should be again made to ascertain if the case had been mistaken or not; or if that which was at first merely sympathetic, may not have become real disease, and thus require a different, if not an entirely opposite kind of treatment, or, perhaps, a combination of both.

In some other cases, so nearly resembling those already detailed, that it would be superfluous to

relate them, all plans of treatment, every kind of medicine failed to afford relief, and tonics especially were injurious, until the treatment was directed exclusively to the spine, which succeeded in every instance in removing this painful malady. The time occupied in the cure varied in the different individuals. One remedy above all others, in two or three cases, acted so powerfully and injuriously on the spine, that the real nature of the disease became quite apparent very soon after it was resorted to, as was shown in the case of Miss E. S——, the first here recorded. This remedy was the cold shower-bath.

CHAPTER VII.

Tic Douloureux arising from Disorder of the Uterus.

MRS. L——, ætat. 39, had a severe and lingering labour, attended with flooding, in 1820; since that time she has remained pallid and comparatively weak, and has suffered from both menorrhagia and fluor albus. In 1826 she was attacked with pain in the right cheek, which she attributed to her teeth, and consequently had several decayed, and some sound ones extracted, but without relief. She then took the carbonate of iron, by the advice of her usual medical attendant, with some slight but temporary benefit. To this remedy she had recourse several times during the space of two years.

In 1828 I was consulted, when the paroxysms came on regularly at three a.m., (almost always *awaking* her from sleep,) and occasionally during the day. She was pale, bloodless, and exhausted by the continual drains. In other respects she appeared well. After an emetic and an aperient she commenced taking five minims of the liq. arsenicalis

three times a day, with ten grains of the carbonate of soda; at the expiration of a fortnight the pain was much mitigated, and finding that so small a dose gave relief, she took, without my knowledge, a much larger quantity, (although she had been told the name and nature of her medicine;) how large I could not ascertain. Shortly after taking it she was seized with cold sweats, fainting, retching, and other symptoms of the poisonous action of an overdose of the medicine, and for a few days she was seriously ill, though not dangerously, but the pain in the cheek was quite removed. As she recovered from these unpleasant effects the pain returned, though less severely; I then gave the same medicine (for safety) in the form of pills, three minims of the liquor arsenicalis made into two pills, with pulv. piperis nigri. These she continued to take at intervals for several months. The pain gradually wore off, and at length quite ceased.

It should be mentioned that she lived only a little removed from an ague district, which might possibly have had some influence on her debilitated constitution. She was intrusted with the solution of arsenic in the form of drops, which should never, as her imprudence shows, be allowed to any patient.

I have lately ascertained, 1842, that she has not had any return of the pain, although she has con-

tinued to live in the same place, where the ague has since been very prevalent.

After the first interview, I did not make any note of the state of the uterine discharges, and her memory cannot assist me respecting them; but as she regained perfect health and strength it is not unfair to infer they were at least restrained. She has now ceased to menstruate, and is very robust.

Mrs. W——, ætat. 35, about the age of twenty, suffered very severely from nervous headach, which was ultimately relieved by chalybeates. From that time she enjoyed uninterrupted health until August, 1830, when she was delivered, after a short labour, of her fifth child, which was followed by very profuse hemorrhage. It was found necessary to introduce the hand into the uterus to remove the coagula, and to excite it to contract. She suffered a good deal from the usual effects of a great loss of blood, and she was further weakened by inflammation of the uterus and the remedies employed to remove it. She also nursed her infant. About a month after her confinement, a very profuse sanguineous discharge occurred from the uterus, and she *then* for the first time perceived an uneasiness in the nerves of the right cheek, which soon increased to decided pain. Within a month this pain had all the characters and severity of tic douloureux. For several weeks the paroxysms were

irregular in their attacks, but gradually became more periodic, commencing about two o'clock p.m., and continuing five or six hours. The cheek was never quite easy in the interval; very slight causes, such as cold air blowing on the part, or its being slightly touched, would immediately bring on a paroxysm. She nursed the child seven months, and soon after weaning it, she menstruated very profusely, and the pain then became excessively severe.

During all this time she had considerable leucorrhœal discharge, and took various remedies, such as bark, quinine, and carbonate of iron.

Many external applications were also tried in vain. After weaning the child, the pain continued to return as regular as a quotidian ague. I gave her, after an emetic, five minims of the liquor arsenicalis three times a day, increasing the quantity daily until it reached ten minims for a dose. Within ten days she felt the effect of it on her stomach, but it was continued until very decided and marked symptoms of its action were manifested, and then it was omitted. This produced a complete interruption of the pain until the next menstrual period, when it returned as violently as ever, and continued until arrested again by the arsenic, to the action of which remedy it again soon gave way. The pain returned at every successive period for several

months, lessening each time in severity and duration. The arsenical solution was taken at intervals during the whole of this time, whilst care was taken to keep the system always under its influence just before and at the time of menstruation. Each time it required less to produce the effect, which Mrs. W. found necessary should be produced before the pain gave way. This effect was a sensation of sinking at the stomach, but more particularly a peculiar tingling in the fingers and toes. The medicine also gradually checked the menorrhagia and leucorrhœa, and ultimately restored her to good health.

In 1838 she accidentally wounded the ulnar artery, and lost a large quantity of blood; while she continued very weak, she had some of the precursory symptoms of the neuralgia, but the pain did not return, and she has now, 1843, ceased to menstruate and remains well.

This case, with others, was published in the twenty-first volume of the 'Transactions of the Medical and Chirurgical Society,' in an Essay on the effect of arsenic in restraining menorrhagia.

Mrs. C——, ætat. 42, has been a martyr to tic douloureux for nearly fifteen years. The seat of pain is in the branches of the superior maxillary nerve on the right cheek. She gave the following history of her sufferings: she was naturally a very strong, robust person until the birth of her only

child. Her labour was protracted and severe, and was terminated by the aid of forceps: it was attended by considerable flooding. From that time she has never been strong, being kept weak by menorrhagia, the discharge not only being very great, but continuing much longer than it ought to do, and leucorrhœa.

A few months after her confinement, the pain in her right cheek attacked her for the first time, and soon became very severe, and has never been relieved by medicine. The pain is more violent during the months of April, May, and June.

Sometimes it is periodical: at other times not so. Occasionally, for a few weeks, it returns every eighth day, unless menstruation interferes with it, and then it invariably comes on, and continues, with little or no intermission, for twelve or twenty-four hours. At the commencement of that discharge, and during the whole of its continuance, the attacks are more frequent and severe than at other times. The increased pain is accompanied by vomiting of large quantities of limpid, sour fluid. The arm and hand of the affected side swell, and are benumbed. There is a sensation of coldness in the corresponding foot, and the sight of the eye of the same side is, temporarily, much impaired. The bowels are habitually costive; the skin dry and harsh, excepting after the occurrence of a paroxysm,

at which time she is exhausted and covered with cold perspiration.

This account was confirmed by her usual medical attendant. It was in this condition I first saw her in 1834; the menstruation was very profuse, the paroxysms of pain had, for a few days, come on regularly at five a.m., and had continued, in frequent repetition, for twelve hours.

While I was with her, the slightest movement of the cheek or lips, in attempting to speak, immediately caused violent plunges of pain, and her countenance was very much distorted by the spasmodic twitchings of the muscles of the cheek, and she frequently vomited quantities of the sour fluid. She could scarcely distinguish light from darkness in the right eye; in fact, she was a perfect picture of misery and pain. The tongue was furred, her pulse frequent with little power, and the bowels obstinately confined.

I gave her the following pill every four hours:—Extract. colocynth. comp. gr. iv, ol. crotoni $m\frac{1}{4}$, with a draught containing the carbonate ammonia, until the bowels were thoroughly unloaded; by which operation she was much relieved. On the 15th she began taking the liq. arsenicalis in doses of five minims each, with ten grains of the carbonate of soda three times a day, increasing the quantity of the liquor arsenicalis daily, and regulating the

bowels with the extract of colocynth. On the 16th I was induced, from the extreme violence of the pain, not to wait for the action of the arsenic, but to give, in addition, the extract of belladonna and stramonium in the following manner: One grain of each for three successive hours, unless the pain was previously mitigated. She, however, took all three doses; in four hours the pain was much lessened, it diminished in proportion as she felt the action of the narcotic. On the following day, the 17th, she awoke with some little pain in the cheek, and for three hours had occasionally slight twinges; she was still under the influence of the belladonna, but not to the extent that might have been expected from such large doses of it. The pupils of both eyes were dilated, and the vision of the dim one was more clear and distinct. On the 18th and 19th she had not any severe return of pain; and on the 20th she perceived the action of the arsenic; and on the 21st she was delighted to tell me, that she had slept until seven, and she awoke perfectly easy. The effect of the medicine was now more apparent, causing slight nausea and sinking at her stomach, a tingling in her fingers and toes, and a glow of warmth all over her. The pain, hitherto, had generally subsided very suddenly, but now it had gone off more gradually. The arsenic was discontinued, and she remained

perfectly easy, as long as the effects of the medicine were felt; but at the expiration of a fortnight, an unpleasant sensation in the cheek, with throbbing, returned. She therefore recommenced taking it, in doses of four minims, which produced its former effects in three days, when the throbbing ceased and she passed through the menstrual period with little pain.

She persevered in this plan, with occasional intervals, for several months, and had slight relapses, only at the menstrual periods.

The sanguineous discharge not having lessened, and the leucorrhœal continuing unabated, an examination per vaginam was made, and the uterus was found free from disease. Injections of alum and sulphate of zinc were recommended, but were not used. During this time the bowels required the assistance of the compound extract of colocynth.

In December, having omitted taking her medicine for a longer period than usual, the pain returned at the menstrual period, with nearly its former violence. She then took the liquor arsenicalis with black pepper, thus, liq. arsenicalis \mathfrak{mij} , pulv. piperis nigri gr. \mathfrak{vj} , ext. papaveris gr. \mathfrak{ij} , and pil. \mathfrak{ij} , ter die sumend. These were continued for several weeks, and she remained tolerably free from pain. In the spring, however, it returned

with violence. Being disheartened, she began, but would not regularly persevere in any plan, and she continued to suffer from time to time, as she had previously done. In this case the arsenic had no control over the uterine discharges, and she refused to use any local remedy.

With the exception of occasionally taking the arsenic, all attempts to obtain relief were abandoned, and she continues to suffer, although in a less degree than before. Arsenic, however, always exerts some degree of influence in mitigating pain. She has always led a very sedentary life, and has spent her days in a small confined room at her employment as a milliner, and never takes any exercise excepting on Sundays. To this may be, in a great measure, attributed the general derangement of her health.

Mrs. V——, a lady of nervous temperament, had a very protracted and difficult labour with her second child, in 1822, which was followed by considerable hemorrhage. She very slowly recovered from the effects of it, never, indeed, perfectly ; and from that time her health has been delicate, and the powers of her life very feeble. She has ever since been subject to menorrhagia and leucorrhœa.

In 1830 she was attacked with pain in the nerves of the left cheek, at first not severely, but it soon increased in violence. She has been under the

superintendence of various medical men, and has taken a great variety of remedies.

The carbonate of iron was resorted to, in the doses recommended by Mr. Hutchinson, for many months without relief. The menorrhagia, during its exhibition, was more violent than usual. With the hope of finding relief, many teeth, both decayed and sound, have been extracted, but unsuccessfully.

In July, 1835, I first saw her; she was pale, weak, and exhausted by her sufferings and uterine discharges. The paroxysms of pain returned frequently during the day and night, shooting through the branches of the second division of the fifth nerve, more particularly the inferior maxillary branch. The tongue was moist, and covered with a yellowish coat. The lining membrane of the mouth and fauces was pale and bloodless. The bowels were regular, excepting a few days previous to menstruation, when they were irritable and relaxed. The catamenial discharge returned regularly; for the first two days very profusely; but continued in a more moderate degree for ten days or a fortnight. The tic douloureux was more severe during these periods, particularly at night.

On examination the uterus was found to be of its natural size, and not tender to the touch.

After some mild aperients of rhubarb and sulphate of potash, I gave her the liquor arsenicalis,

commencing with five minims three times a day, with thirty of paregoric, gradually augmenting the dose, until she felt its effect decidedly on the system, which she did, when the quantity in each dose amounted to ten minims: this sensibly moderated the pain: she then discontinued it. As soon as the peculiar feelings from the arsenic abated, she recommenced taking it in smaller doses.

At the next period the pain was very severe, and the bowels were as irritable as they had usually been in the previous months. Immediately before the following period, in addition to the arsenic, I gave her a grain of the extract of belladonna four nights successively, which allayed the general irritability of the system, kept the bowels quiet, and, together with the arsenic, diminished the menstrual discharge. The pain also was decidedly lessened.

The leucorrhœa continuing profuse, an injection per vaginam was used twice a day, of ten grains of the sulphate of alum and zinc, dissolved in half a pint of cold water, and retained in the vagina for a few minutes. This was managed by the pipe of the female syringe being passed through a soft piece of sponge, which was firmly pressed against the os externum. I also recommended the free use of cold water every morning and evening, and strict rest on a sofa, for a few days before

the appearance, and during the whole time the catamenia continued.

I steadily followed up this plan for more than twelve months, omitting the arsenic from time to time, taking care, however, that it was always taken a few days previous to the menstrual period.

The uterus gradually recovered its tone, and performed its functions properly, the leucorrhœa ceased, and the tic douloureux, abated in proportion as the uterine disorder was remedied, until it ceased altogether.

From that time, 1836, she remained well until 1840, when she consulted me again, in consequence of a return of the pain in the cheek, which she attributed to taking cold when she was menstruating, which produced a slight return of menorrhagia. The increased discharge, however, was soon checked, the pain also subsided, and she now, in 1843, remains well. She had remarked that her sufferings were always more intense in the months of May, June, and July.

The foregoing cases go very far, if they do not fully prove the connexion between the neuralgic pains in the cheek with a morbid condition of the uterus; that condition being one of weakness, irritability, and accompanied by discharges.

When it is remembered how many nervous pains in different parts of the body may be referred to

the uterus, during the irritable and disordered state of that organ ; it is not surprising that it is occasionally the cause of the severe suffering in the nerves of the cheek, which is termed *tic douloureux*.

In some of the preceding cases the agony was as intense as it was possible to be conceived, quite equal in intensity to those that have been reported by authors, as arising from the mechanical irritation of the nerve by diseased bone.

The intimate connexion in disease between these two distant parts is corroborated by the frequent occurrence of pain in the temple, cheek, and teeth, not toothach from caries, but pain in the nerve, in the early months of pregnancy, than which nothing is more common ; although, generally, that pain is not sufficiently severe to demand the attention and care of the physicians, yet now and then a case occurs, in which it is nearly as violent as that caused by *tic douloureux*. I met with one lady whose sufferings in the commencement of six different pregnancies were so great, that I am induced to detail her case, in confirmation of my opinion, that the uterus is one of the sources to which neuralgia of the cheek may be referred.

Mrs. H. R——, a strong and apparently robust lady, but in whom there were strong grounds for suspecting some lesion or imperfection in a portion of the nervous system, she being quite deaf in the

right ear, nearly so in the left, and amaurotic in the right eye. She was seized with violent pain in the right temple and side of the face, quite in the commencement of her pregnancy, for she had only passed a week beyond the usual time of menstruation. She was bled, leeches, &c. without relief by her medical attendant. At the expiration of ten days, the pain assumed the character of intermittent headach, which subsided, after some time, under the use of arsenic. She had no return of it until about the same period at the next and all her subsequent pregnancies; she was generally relieved in about ten days. During her first pregnancy this lady was under the care of my father, and subsequently under mine.

Two other ladies, sisters, who suffered pain in their cheeks in the commencement of their pregnancies, also suffered occasionally during nursing; at these times, however, they remarked that the pain was always preceded by slight sanguineous discharge from the uterus. They were relieved by quinine.

The following is a curious example of the intimate connexion between the uterus and the nerves of the cheek, for which I am indebted to Mr. Harvey, of Great Queen street: "Mrs. E——, the mother of two children, when about seven months advanced in pregnancy, was seized with pain in a

tooth on Monday, the 18th of September, which regularly returned during the day and night in paroxysms of an hour's duration, with an interval of ease of two hours. I was consulted on the following evening, and found the pain had extended to the superior maxillary nerve and supra-orbital, and was more of the character of *tic douloureux* than toothach. I advised an opiate, without any relief; the pain continuing to return as regularly and as violently as before, the paroxysms always awaking her from sleep. During Tuesday night, when she was awake by the pain in the cheek, she discovered that the liquor amnii was escaping; from that time she remained free from the neuralgic pain until Wednesday night: I then made an examination, and discovered that labour had commenced, and that the head of the child presented; but as there was no expulsive effort I gave her a dose of ergot, which soon excited labour-pains, and the child was presently delivered. During the continuance of the labour the neuralgic pain in the cheek was very violent, but subsided as soon as the child was born. The placenta was retained for a considerable time, and while the uterus was in a quiescent state, the cheek was free from pain; but on attempting to remove the placenta, as soon as the fingers reached the uterus, the neuralgic pain returned violently, and continued during the ex-

amination and process of extraction, but ceased immediately the removal of the placenta was effected, and has never since returned."

I may also allude, in corroboration, to the frequent occurrence of a similar kind of pain in the cheek and teeth, which many delicate young females suffer every month just before they menstruate ; this does not often fall under the cognizance of physicians, from its not being very violent ; it is only of short duration, and it is relieved as soon as the catamenial discharge appears. In one case only of this sort I have been consulted ; and in this person the pain usually preceded the discharge four or five days, returned each day with great regularity about three o'clock p.m., progressively increased in violence for three hours, and then as gradually subsided. In this case quinine failed, and arsenic soon removed it.

Although the disordered and irritable state of the uterus may be justly considered the immediate cause of neuralgia ; yet it would appear most probable that there must be some other cause, latently in operation, to produce it ; otherwise it might with reason be expected, (considering the great number of females who have lingering and exhausting labours, followed by hemorrhage, and other debilitating drains,) that a much larger number would suffer from neuralgia than appears to be the

case, unless, indeed, there are some the cause of whose misery has not been detected; I, therefore, cannot refrain from repeating my belief, that there is a peculiarity of constitution predisposing, or rendering some females more liable to neuralgia than others.

To return to the consideration of the cases I have detailed: those of Mrs. W—— and Mrs. C—— appear quite conclusive (although they terminated differently,) that the tic douloureux was caused by the state of the uterus, for in both, the pain commenced soon after their confinements, and always returned at the menstrual periods: in one, the disordered uterus was cured, and *pari passu*, the tic douloureux; in the other, the uterus was not relieved, neither was the neuralgia.

Although, in the other two cases, the pain did not commence until several years after the accouchements of these parties; yet their accouchements were evidently the causes of their broken health; and in the case of Mrs. V—— it was made more evident by the simultaneous recurrence of the pain in the cheek, with a return of slight derangement in the functions of the uterus, after she had been quite well for four years.

Pain is not the only effect that the gravid uterus produces in the nerves of the cheek. I once witnessed a case of risus sardonicus, from palsy of the *portio dura*, on one side in a lady while pregnant,

which continued until her accouchement, when it subsided spontaneously, and never occurred again in her subsequent pregnancies.

Perhaps it may not be out of place to notice here, a case of neuralgia of the ulnar nerve in a lady, under similar circumstances : in 1825, I was consulted by Mrs. P. respecting severe pain in that nerve, which came on when she was about four months advanced in pregnancy, and continued until her confinement ; after which, it immediately ceased, indeed before she had left her bed.

In all these cases, the carbonate of iron had been taken by the parties in large quantities, for a considerable time before I saw them. This medicine appears peculiarly indicated by the character of the pain and weakness, and exsanguined aspect of their countenances. It failed, however, in all of them, by increasing the menorrhagia, and thereby inducing greater debility.

These cases may be considered valuable, as pointing out the necessity of inquiring minutely into the state of the functions of the uterus, lest (from the debility that is produced by immoderate discharges) steel or other tonics should be indiscriminately recommended ; for although bracing may be required, yet these remedies will often prove detrimental, from the febrile excitement they frequently produce, as well as from the consequent increase of the menorrhagia.

It is to cases of this nature, that arsenic is peculiarly adapted; whilst its efficacy is shown by subduing the morbid sensibility of the nerves, there is reason to believe that it also restrains that kind of sanguineous discharge, which is termed passive menorrhagia. Among the remedies I have found useful are belladonna and opium, administered at intervals, a few days previous to the menstrual period. These medicines, by allaying the general irritation of the system and mitigating the pain, tend greatly to moderate the discharge.

Where there is great irritability and relaxation of the bowels, a few days preceding the period of menstruation, as in the case of Mrs. V——, the exhibition of small doses of ipecacuan with the sedative, and of lime-water with the arsenic is often found to be beneficial.

Cold astringent injections to the uterus, steadily persevered in for many months; cold ablution; or what is more powerful, the use of the cold hip bath, with or without the addition of bay salt, sufficient to saturate or supersaturate the water, are valuable adjuvants in giving tone to the uterus.

Occasionally, when there is much pain, and a sensation of weight in the loins, the abstraction of a few ounces of blood by cupping may be serviceable: I need scarcely remark, that this remedy

requires much circumspection and caution before it is resorted to in these cases.

The clothing over the loins should not be too warm; lounging on warm relaxing couches should also be avoided.

After the menorrhagia has been checked, and the pain removed, benefit is often derived from quinine, for this medicine will then be advantageously taken; it braces and strengthens the whole system, and thus confirms the cure which had been effected by other measures.

The possibility of the menorrhagia being kept up by a loaded state of the bowels, and gorged state of the liver, should always be remembered, for Dr. Locock has clearly shown, that on this condition of those viscera, the menorrhagia frequently depends: by impeding a free return of blood through the portal system, a congested state of the abdominal and pelvic vessels is produced; and until this is removed, it is useless to endeavour to restrain that excessive discharge, than which nothing is more likely to keep the system in a state most fitted for neuralgia, besides the deleterious effect it produces on the uterus itself.

CHAPTER VIII.

Tic Douloureux arising from Disease of the Brain.

Tic Douloureux affecting the nerves of the cheek and of other parts has sometimes its origin in disease of the brain, of which it is only a symptom. At first, the pain may be of an intermittent character, with an entire absence of every symptom which would lead to a suspicion of the serious nature of the disease. The pain occasionally subsides altogether, at one time spontaneously, at another, from the effect of remedies, a fact which further tends to disguise the cause of it.

By degrees, however, the attacks become more frequent and violent, at length constant and accompanied by other symptoms, such as confusion of thought; partial loss of memory; impairment of vision or entire blindness; difficulty in articulation; tottering gait; and subsequently palsy of some part of the body. These symptoms, however, come on slowly, perhaps long after the pain has been felt.

As the disease in the brain increases, the true nature of it becomes apparent, and the pain, which at first was intermittent, then becomes constant, or subsides altogether before the patient dies.

The following is a case of neuralgia arising from this cause. P. H. was attacked in 1824 by brow ague, which was relieved by arsenic, and he remained well for many months. The pain however returned, at first, two or three times every year, and was always relieved by medicine; gradually the attacks returned more frequently, and at length became constant. Pain also attacked the superior maxillary nerve of the right cheek; the eye of the same side, and subsequently both eyes; the sight became dim, and at length was entirely lost; the eyes gradually wasted and sunk; the right cheek, and afterwards the whole side of the body was palsied; and he died exhausted. The exact state of the brain was not ascertained, as an examination was not permitted.

A case has been published by Dr. Bright, of Tic Douloureux depending on a tumour at the base of the skull. Mary Grosmith, ætat. 40, was admitted into Guy's Hospital in August, 1827; she was thin, and her countenance was strongly marked by the effects of long suffering. Her most prominent symptom was extremely acute pain on the left side of her face, which was seldom removed, but became

more severe in paroxysms ; it resisted all remedies. After death, the dura mater was found immediately under the anterior part of the middle lobe to be considerably, but irregularly elevated by fungoid tumours, equal, collectively, to about the size of a pigeon's egg; the bone beneath was diseased.

CHAPTER IX.

Tic Douloureux arising from local Mechanical Causes.

WE are indebted to Sir H. Halford for the first regular notice, that the irritation of nerves by diseased or unnatural growths of bone is sometimes a cause of Tic Douloureux. Since the attention of medical men has been thus directed, numerous cases have been published in confirmation of his remarks.

Under the head of local irritation, must also be included many other causes, besides those referred to by Sir H. Halford,—such as tumours growing in the track of nerves; irritation of nerves from foreign substances; local injuries of nerves, &c.

The faithful report of those cases have been of service, inasmuch as they have shown the necessity of tracing and carefully examining the irritated nerve through its whole course, when the situation of it will permit. The pain seldom occurs in the exact spot, where the irritation exists, but is commonly referred to the extremity of the branch of

the irritated nerve, and occasionally to that of another.

When the cause of the pain is permanent, we might naturally expect that the pain itself would also have been constant, and thus be assisted in our diagnosis. Such, however, is not the case; the pain, in cases in which the cause is permanent and mechanical, returns both irregularly and periodically.

That diseases of the teeth should have been at one time suspected as a cause of *Tic Douloureux*, is not surprising, from their situation and intimate connexion with the fifth pair of nerves, which are more frequently affected with neuralgia than the other nerves. The teeth should in every case be carefully and repeatedly examined, both during a paroxysm of pain and in the absence of it. This examination, during the paroxysm, is by no means conclusive, for the pain in one or two teeth, even when it arises from other causes, is generally so severe, that it is difficult to persuade the patient to ascribe his sufferings to any other cause. If pain be found to commence in any particular tooth, and that tooth during a paroxysm is sensitive on pressure, or on being slightly struck with a metallic instrument; again, if during the absence of pain in that tooth, pressure on it immediately and invariably excite a paroxysm, the cause of the sufferings

would be sufficiently apparent to justify the removal of the tooth.

When the teeth are decayed, they should be extracted or plugged, as the irritation from them often impedes the cure, although they may not be the cause of the neuralgia.

On examination of a tooth (apparently sound) after it has been extracted, one of the following diseases will probably be found in it. Either a small exostosis on the extremity of the fang; or a lamina of bone covering the roots in the place of periosteal membrane; or a rough scabrous state of extremity of the fang.

The following are examples of neuralgia caused by these diseases of the teeth.

Miss W——, a lady who had long suffered from neuralgia, and had been subjected to a variety of treatment, having lost several of her teeth without being relieved, applied to me. After several examinations, I recommended that another should be removed, and a small exostosis, about the size of two pins' heads, was found at the extremity of one fang; the operation was quite successful.

A gentleman, who had long suffered from tic douloureux, having had a tooth extracted, the fangs were found covered with a lamina of bone, instead of periosteal membrane, the tooth was therefore too large for its socket, and had caused the

pain: by the removal of the tooth he was relieved, but for some time exposure to cold gave him pain from the shock of the original disease. This form of disease in teeth, I am informed by experienced dentists, is very common.

In 1830, I was consulted by Mrs. D——, who for several months had been suffering intensely in the second division of the fifth nerve on the left cheek. Her sufferings were most acute, but I could not detect any derangement of health sufficient to account for them. She was quite convinced that the pain always commenced in the last molar tooth, by pressure on which, it was aggravated; and if this pressure was made when she was free from pain, it immediately provoked a paroxysm. The tooth was therefore removed, and although perfect on the crown, the fangs of it were rough and scabrous. The extreme violence of the paroxysms was relieved by the extraction of the tooth, but they returned regularly until subdued by large and repeated doses of belladonna; which medicine had been previously given without affording relief.

Mrs. B—— was cured by the extraction of two teeth. They were not unsound in their crowns, and far from any exuberance of bone, the roots were quite scabrous.

Small fragments of the fangs of the teeth are often broken in the operation of extraction, and

left in the jaw, and subsequently prove a cause of irritation to the nerve; from the gum closing over them, they frequently elude detection. Occasionally a minute aperture in the jaw may be detected on a very close examination, which leads to the fragment, and becoming a guide to the dentist, enables him to remove it.

It may not be irrelevant here to remark that the teeth are more frequently the sufferers from tic douloureux, than the cause of it. I have often observed that the teeth of persons, long afflicted with this disease, however good and firm they may have been originally, become suddenly afflicted with caries, which does not appear to touch the crowns of the teeth, but merely that point at the edge of the gums, at which the enamel begins. Many teeth, indeed, the majority of those in the jaw, the seat of the pain, have become affected almost simultaneously. Whether this is to be attributed to the deranged state of the general health, or to the repeated excitement in the teeth themselves, is uncertain. That this disease in the teeth does not produce the neuralgia is evident, from the fact that the teeth do not always become unsound until after the neuralgia has been of long continuance, and sometimes, not until it has been cured.

Disease and exfoliation of bone have been mentioned as causes of tic, and Sir H. Halford has

related a severe case, "which terminated in exfoliation of bone from the antrum hymorianum, after which the pain ceased. The bone had been probably hurt by a fall from a horse some months before."

Tic douloureux sometimes follows blows and other injuries of nerves, of which the following case is an example :

Mrs. B——, about twenty-five years ago, when in perfect health, received a blow from a child's head, (whilst in the act of stooping,) on the lower side of the socket of the right eye, which caused instantaneous and agonizing pain. A continued succession of paroxysms, at irregular intervals, succeeded. The pains were most acute and darting, often two or three paroxysms in twenty-four hours; sometimes, only one in two or three days, and were more frequent in the night than in the day. The cheek was always heated and swollen during each paroxysm; but the paroxysm was most commonly preceded by a coldness in the part. Exposure to cold, night air, damp feet, or a close hot room brought on an attack, which was more frequent and severe in hot and cold seasons; an attack was generally attended by a deranged stomach, and always accompanied by much flatulence. In spite of the best efforts of Dr. Baillie, Sir A. Cooper, Dr. Baynton, and of others, this lady has never quite

lost the pain, although it is at present (1840) much less severe.

She found no relief from medicine, excepting from the extract of stramonium, which blunted the severity of the spasms.

A case has been published, in the eighth volume of the 'Medico-Chirurgical Transactions' by Mr. Wardrop, of Neuralgia in the forefinger of the right hand, which followed the prick of a gooseberry thorn, the general health suffered considerably, and the patient was attacked with nervous symptoms. She was only relieved by amputation of the finger.

Several cases have been published of neuralgia, arising from the encroachment of tumours on the course of the nerves, and the consequent irritation. Mr. Swan relates one, in which an aneurism was the cause of the pain, and was relieved by the cure of the aneurism. In this case, the pain was quite periodical.

Where the tumour is large, it cannot well escape detection, but occasionally, it is so small as to lie unnoticed by a careless observer.

I am indebted to Mr. Harvey of Great Queen street, for the following case :

"Miss S. D——, had been subject to tic douloureux in the lower jaw for the last two years. When I first saw her, she was considerably out of health and exhausted. The menstrual functions were

performed regularly, although the secretion was of a pale, dirty colour. Having some defective teeth on the painful side of the face, they were removed with temporary relief. She was subsequently treated with tonics, and amongst them, she took arsenic, which lessened the duration, but not the regularity of the return of pain. On combing her hair, she discovered a tender spot, which, when pressed rather sharply, gave her one of the severest attacks of tic. I found on examination a tumour about the size of a horse-bean situated on the parietal bone. Pressure was again and repeatedly tried, and always produced the same severe pain. The tumour was removed with permanent relief, and a speedy return to health; it is now sixteen months ago, and there has been no return of pain.

A similar case has lately been published by Mr. Hamilton in the 'Dublin Journal of Medical Science.'

In the 'Medical and Physical Journal,' Mr. Jeffries has described a case of neuralgia cured by the removal of a fragment of china, which had been lodged in the cheek for fourteen years.

That pain should be excited in nerves by irritation caused by tumours and foreign substances is not extraordinary; but it is difficult to account for pain in one nerve, when another is irritated. There can be no doubt but that such is the case, as the

following example proves, in which the nerve irritated was in the stump of the thigh, and there was pain in consequence in the cheek. It is the case of Lord ———, which I quote from a description given by Sir J. Murray in the 'Dublin Medical Press,' who states, "that there was no symptom of tic douloureux for more than a year after the amputation, and not until the stump was injured by its being violently struck against a post, which produced excessive pain at the time, and, subsequently, exfoliation of bone. Since that time it appears the extremity of the nerve has been most irritable, and this has produced great constitutional irritation and disorder, which have apparently caused and kept up the pain in the cheek."

A case analogous to this occurred in the practice of a friend, which was relieved by the removal of the irritating cause in the stump.

In a former chapter it has been stated that disorders of the digestive organs are amongst the most common causes of tic douloureux. It is equally clear that tic douloureux, whether arising from injury or any local irritation of nerves, or from any other cause, deranges the functions of those organs, which reacts on and keeps up the original pain. The cases of Mrs. B—— and Lord ——— are evidence of the correctness of this assertion.

This complication of the disease always renders the case the more perplexing ; for if the disease has been of long standing the difficulty of ascertaining which cause is in operation becomes very great. Although the local cause may have been removed, the tic may continue, affected as it is by the general disturbance of the health ; in which case, the object should be to restore the general health, and by so doing, we may fairly hope that permanent relief would be afforded to the neuralgia. Should, however, the local cause still exist ; successful as we may occasionally be in allaying the irritation, and in relieving the neuralgia for a time by improving the general health ; yet in this case, any accidental circumstance, any temporary or slight derangement of stomach, will immediately reproduce the tic, and the sufferer will be precisely in his former condition. The case of the Rev. Mr. Hutchinson, of Firle, may at first sight appear to be a proof to the contrary ; but on considering the nature of the primary injury, his case rather confirms than militates against it. The original accident was a strain, the irritation produced derangement in his health, in which, the part injured participated. When the health was re-established through the agency of the Carlsbad waters, the local effects of the accident were also removed, there being no mechanical cause of irritation. Where the cause is

permanent, such a happy termination cannot be expected, as a case related by Dr. Denmark proves, for his patient, who had received an injury in the ulnar nerve by a musket shot, was only relieved by amputation of the arm.

While the local cause continues, the difficulty of restoring deranged health, and curing the neuralgia, or, indeed, any other disease, which may be an effect of it, is further proved by a case, amongst others, published by Mr. Langstaff, "of a young woman, whose arm had been amputated, and who afterwards suffered agonizing pain in the stump, attended by convulsive action of the muscles and other nervous symptoms. This constant pain and irritation greatly injured her health, in spite of the best medical treatment; as a last resource, the arm was again amputated, and the nerves were drawn down and cut off half an inch higher up than the integuments. By this operation she was relieved of all pain; her health was restored; she had no return of convulsions or hysteria; and afterwards was enabled to gain her livelihood. The extremities of nerves were found greatly increased by deposition of organized lymph."

This case, and that of my friend already alluded to, prove that when, after an amputation, the local cause of irritation is in the stump, and at the spot where the divided extremity of a nerve has become

bulbous, which is not an uncommon occurrence, or where it is entangled in the cicatrix, it is not altogether beyond the reach of art, and an attempt to relieve by another operation may be made with a reasonable hope of success. They also show the absolute necessity of removing the local cause of pain, without which removal, relief will seldom be obtained, and when it is obtained, will be only temporary. But when this is not feasible, much may be done towards moderating the sufferings of the patient, by keeping his health as good as possible, by giving tone and strength to the system, and by using the best and most appropriate means of allaying irritation.

Where the paroxysms of pain are regular, the medicines, known to possess power in overcoming intermittent action generally, will sometimes exert a beneficial though temporary influence in cases, even where the cause is mechanical and permanent; a cautious trial of them may commonly be recommended.

CHAPTER X.

Tic Douloureux arising from Malaria, Recession of Eruptions, and other causes.

NUMEROUS cases of tic douloureux have been published, and are to be found in the different periodical publications, which have been attributed to other causes than those alluded to in the preceding pages.

Among these causes of neuralgia, malaria is a very prominent one; but the very able manner which everything relating to that subject has been treated by Dr. Macculloch precludes the necessity of anything further than an allusion to it.

Tic douloureux has been also known to follow the recession of cutaneous eruptions. Dr. Bright has related one case of neuralgia that succeeded herpes zoster, and was cured by the subcarbonate of iron.

In two severe cases of neuralgia of the genito-crural nerve, the cause appeared to be some disease, most probably a contraction of the large intestine at the sigmoid flexure of the colon. The pain was

preceded either by an obstruction of the contents of the bowel in their passage through it, or by a diarrhœa. When there was an obstruction, the descending colon was distended with wind, and the pain was *immediately* relieved by the passage of the fæces through the constriction, before they were evacuated from the bowel. When the pain was caused by diarrhœa, it was relieved by opiates. Both cases have been much improved by regulating the bowels by the decoction of aloes, in combination with morphine, and the prolonged use of small doses of the hydrargyrum c. creta, given every alternate ten days for several successive months. The bowels were relieved more regularly, and the size of the fæces was increased. The neuralgia seldom returned, and with less severity than before.

In a case attended by a friend, intense pain in the nerves of the cheek was produced immediately on tying a pile, which continued until the ligature was removed, when it instantly ceased.

CHAPTER XI.

Periodical Headach.

THE intermittent or periodical headach is a very common form of neuralgia. The seat of this complaint is usually in one temple, rarely attacking both temples at once, although after frequent returns, it sometimes attacks the temple opposite to that first affected.

The type it usually assumes is the quotidian, more rarely, the double quotidian or tertian; but for some time before it takes the form of a regular intermittent, the headach, in some cases, is diffused, and comes on and goes off at uncertain times; at length it returns with more severity at particular hours, and then gradually assumes the intermitting type, thus rendering the diagnosis difficult before the periodic character is developed.

When it is fully formed, the paroxysm commences with uneasiness on the temple, rather than pain, which increases in severity during one or two hours, until it arrives at its height; the pain then

becomes excruciating, and continues very violent for an hour or more, after which it gradually subsides, leaving the individual perfectly easy during the interval.

The paroxysm is sometimes preceded by a general feeling of chilliness and discomfort, or only by a local coldness. During the paroxysm, there is increased heat and excitement in the vessels of the part, and also much general heat, but not more than may have been expected from the violence of the pain. The seat of the pain is usually circumscribed, at least, at the point of its greatest intensity; from which it diverges in all directions, in a more moderate degree. The pain, sometimes, includes one eye, which during the paroxysm, becomes intolerant of light; suffused; the vessels of it injected; and the sight remains for a time dim and weak.

This form of neuralgia often arises from malaria, to the influence of which, if two persons are exposed at the same time, it is a curious fact, but which frequently happens, that one will be attacked with ague, the other with intermittent headach; a plain proof of the close relationship of these diseases, whilst the form may perhaps depend on some idiosyncrasy of the individual.

It also comes on apparently from no other cause

than mere debility, particularly in persons who have previously suffered much from it.

It sometimes occurs in the early months of pregnancy, an instance of which I have given in a preceding chapter. It is a more frequent consequence of over-nursing; anxiety of mind; indeed any cause of exhaustion or debility in weak and irritable habits will produce it. It also attacks the strong and robust without any apparent cause, and is often the effect of organic disease in the brain; but in this case, other symptoms arise in succession, by which the true nature of the disease is developed.

Amongst the curious phenomena, attendant on this disease, is the tendency to return annually at the same period, which is shown by the following cases.

Mrs. T——, a lady, who for several years had a regular attack, sometimes in one temple, and sometimes in the other, always in the month of August. Another good example of this occurred in 1826.

C. S——, in April, 1825, was attacked with brow ague, while living in the woods of Newfoundland; after several months of severe suffering, he returned to England for advice, when it soon yielded to arsenic, after an emetic and some brisk cathartics. In April of the two succeeding years,

he had regular attacks of the same complaint, which were, however, soon removed. It then occurred to me to try the effect of the medicine, which had hitherto removed the attack, administered a short time before the periodical return, by which I hoped to anticipate the annual attack, and prevent a return of it; under this impression I gave him, in the following year, an emetic, and some calomel purges, and then the arsenic, a fortnight before the expected period of attack, at which time he had experienced admonitory sensations. This plan succeeded, and being repeated the following year, prevented any return of the complaint.

After a person has suffered severely from brow ague, he becomes so liable to an attack, that any exciting cause, which would have had no influence on the individual in sound health, will often provoke it. This form of neuralgia is usually easily cured, particularly if the case be recent. It is advisable to commence the treatment by a thorough evacuation of the stomach and bowels; this, indeed, is not always necessary, but in the majority of cases the relief will be much accelerated by such a practice. The practice of giving emetics is not very general at present, but was commonly followed by the profession in the last generation, more especially in the districts where this disease prevailed.

Some cases, indeed, will resist every remedy, until this plan has been adopted.

It is very valuable also in cases in which the pain, although diffused, is evidently of a nervous character, for it often decides the case, by accelerating the appearance of the periodic type.

In the case of Mrs. T——, already mentioned, the necessity of this previous evacuation was clearly shown, for quinine and arsenic singly, bark and arsenic combined, frequently failed to afford relief, until, after an emetic; when either of those remedies quickly, and as certainly, succeeded.

After this evacuation, quinine or arsenic should be given, until the pain is subdued, and for some days afterwards.

From the testimony of many physicians, it would appear that large doses of quinine, given at long intervals, have more effect in controlling and overcoming brow ague, than small doses frequently repeated. Dr. Bucknal has lately related his own case, where the usual doses completely failed, which induced him to take twenty grains of quinine for a dose twice a day; the first dose was taken an hour before the expected paroxysm, and he never afterwards experienced a return of the pain.

The Portuguese plan of curing this disease and ague is somewhat similar. They order an ounce of powdered bark and an ounce of black pepper

to be made into an electuary, with two ounces of the syrup of white poppies. The patient is to commence taking it early in the morning, and to take the whole by teaspoonfuls, before the attack comes on, after which, they give large quantities of beef tea. If the case is recent, it is usually cured in one day.

In the generality of cases, doses of one or two grains of quinine, three times a day or every six hours, will afford relief; and as unpleasant effects sometimes follow large doses of this medicine, it is better to be content with smaller doses, although it may require a longer time to effect a cure, than to run any unnecessary risk.

From the frequent adulterations of quinine, care should always be taken to obtain it from sources that can be depended on.

Where arsenic is employed, it is proper to commence with a small quantity and to increase the dose daily until the pain is subdued, which will seldom be the case, until some of the effects of the arsenic on the stomach has been felt. The pain will then be found, almost invariably to subside.

The same medicine must be continued for two or three days after the pain has ceased, and repeated for a few days, at the expiration of a week, otherwise the pain is very apt to return about the tenth day, after the medicine has been discontinued. If

this should be the case, the same plan of treatment must be again resorted to.

A relapse of this nature has so often occurred, that I always caution my patient against it both for my own sake, as well as for his benefit. The advantage to me of this caution, and the ill consequences to the patient of neglecting it, are shown by the following case :—

Mrs. E——, consulted me in September, 1831. She was suffering very severely from brow ague, but was quite relieved by arsenic in ten days; so completely, that she disregarded my warning, and would not take her medicine again, as I had advised. At the end of a fortnight, she again came to me suffering as acutely as ever, and told me, that the pain had returned, as I had predicted, on the tenth day, and but for my warning, she should have consulted some other person from my apparent want of success.

A paroxysm of brow ague, as well as of common ague, may be interrupted by an emetic given a short time prior to the expected return of the paroxysm, but no further benefit appears to be derived from it, than an exemption on that day from the pain which, on the following day, will return with equal violence.

Sometimes the pain is moderated by local applications, such as opiate or belladonna plasters, or

by the friction of the aconitine ointment. In one case, which was under the care of a friend, an empirical remedy succeeded, after many others had failed—Le Fay's pommade.

A combination of capsicum or black pepper with the quinine or arsenic, will sometimes cure more quickly than either of those remedies used separately.

In some obstinate cases, arsenic in substance has been known to succeed, when the solution has failed. It has done so in my practice, but the great objection to arsenic given in this form, is the possibility that it may not be accurately divided. I have, however, known it frequently given by a gentleman during the last twenty years without inconvenience, or any unpleasant symptom arising from it.

The improvement in the general health, by a change of air, from the comparative impure atmosphere of a city to clear and open air of the country, is well known, and when the complaint has been severe, or of long standing, this change should be recommended; if not during the medical treatment of the complaint, at least as soon as it is cured.

CHAPTER XII.

Sciatica.

WITH the exception of the fifth and seventh pair of nerves, none is more liable to be painfully disordered than the sciatic : and as the painful affections of this nerve pass under one name, sciatica, much confusion and difficulty have attended the successful treatment of them.

The disorders of this nerve are very various. It is prone to inflammation, both of an active and a chronic kind. It is also liable to suffer from true neuralgia ; and painfully from the pressure of tumours within the pelvis, and to be implicated in the diseases of the different pelvic viscera.

The disorder, which was at first, perhaps, of an active inflammatory character, may become chronic, or perhaps simply neuralgic ; thus the proper treatment of it is rendered difficult, and necessarily different at different periods of the disorder.

Of acute inflammatory sciatica the most frequent cause is exposure to wet and cold, particularly standing in water, standing or sitting on wet ground, in boats, or on the tops of coaches. When sciatica arises from either of these causes, the attack soon follows the exposure, and commences with pain in the trunk of the nerve, (which soon becomes severe,) shooting through all its ramifications. The branches of the nerves are sometimes the first affected, the pain then extends upwards to the trunk.

The pain is much aggravated by the slightest movement, indeed it is frequently so violent, that the patient is completely (as it were) pinned to his bed, from the excessive pain produced by the slightest attempt to change his position. This condition is attended by great constitutional disturbance, high fever, hard, rapid pulse, white tongue, great heat of skin and thirst.

The appropriate treatment of this form of sciatica is obvious. It must be strictly antiphlogistic. From ten to sixteen ounces of blood should be taken by cupping, the glasses being applied along the course of the nerve, followed by brisk purging with calomel and the common black draught of Epsom salts and senna, and to each dose should be added from twenty to thirty drops of the *vinum colchici*, or perhaps, what is preferable, from three to six grains

of the powdered colchicum. This should be repeated every four hours until it has produced a powerful effect; after which, if the fever is much lessened, a full dose of Dover's powder, ten or fifteen grains, will give great relief. A repetition of the cupping is seldom necessary, if a considerable quantity of blood be taken at the outset, (although occasionally it may be required in strong and full-blooded persons) the first cupping followed by purging, particularly, if it is combined with colchicum, generally subdues both the intensity of the pain and the severity of the fever.

The pain, however, by these remedies is seldom reduced in proportion to the reduction of the inflammation and constitutional symptoms; this should always be remembered, lest further and repeated losses of blood be resorted to; that practice will not only fail to give relief, but will probably tend to render the cure more difficult, by reducing the strength and powers of the system.

After these measures have subdued the violence of the attacks, more benefit will be derived by substituting for them a combination of calomel, pulv. colchici and pulv. Doveri, in the proportion of two grains of calomel, from four to six of pulv. colchici, and five of pulv. Doveri, which should be repeated every six hours with some diuretic; and should the fever have been much relieved, and there be a great

aggravation of the pain towards night, an extra dose of opium may be advantageously added. The black draught should be repeated every second morning.

When colchicum is thus administered, it is always advisable, that the effect of it should be carefully watched; for should the inflammation be active, large doses must be given to ensure the best effect, and the quantity lessened, as soon as that is accomplished; for as soon as the antagonizing power of the disease is overcome, this medicine will not be quietly borne; the effect of it tending to distress the patient and weaken his general strength.

After these measures have been adopted, the pain will often be found to continue pretty severe and obstinate. Further abstraction of blood being inadmissible, counter-irritation by the application of blisters along the track of the nerve will prove very useful; and it is, in general, necessary to apply a succession of them, first to one part, and then to another, but more particularly to that portion of the nerve, which is situated immediately behind the greater trochanter.

If, after the application of two or three blisters, they cease to afford relief, it will be advisable to strip off the cuticle and dress it with an ointment of equal parts of ung. hydrarg. and cerat. sabinæ, so as to produce a puriform discharge.

It is often requisite that a modification of this

plan should be persisted in for a considerable time, indeed until the gums are slightly affected by the calomel, before the inflammation will be removed, and to prevent it assuming a chronic form.

Of other local applications during the activity of the disease, hot fomentations are alone admissible, and their effect is far from being always beneficial. In some cases they afford relief, in others, they seem to increase the pain ; but upon the whole, they are found to be so often of service, as to warrant a recommendation of them.

The majority of cases of this nature, if early attended to, and actively treated after this manner, will be soon relieved, and prevented from becoming chronic, to which sciatica is very prone. A state much to be dreaded from its obstinate resistance to remedies, as well as from the partial loss of power in the affected limb ; an effect which occasionally follows, and which the most skilful efforts cannot always prevent.

This chronic state shows itself by an absence of all those symptoms of fever and great constitutional disorder above described, and by pain of a less acute character in the track of the nerve, attended by a powerless state of the limb ; and if it has existed a considerable time, by a wasting of the muscles and shrinking of the whole extremity. The pain, at first constant and severe, now intermits in violence, but

seldom wholly subsides, it returns in paroxysms of greater or less severity, and is usually much aggravated, as soon as the patient becomes warm in bed. The pain is oftentimes accompanied by a kind of nocturnal fever.

A derangement of the general health ensues, which, although in a great measure caused by, and dependent on the local malady, reacts on, and increases it.

The characters of chronic inflammation are so identified with the symptoms of pure neuralgia, that it becomes difficult to discover which state predominates, and thus the selection of the most appropriate remedy is rendered more difficult.

In some cases, the accession of the nocturnal fever assists a good deal in our diagnosis, and the state of the urine is also an additional guide. Where there is chronic inflammation, the urine will be found generally scanty, high coloured, and depositing a lateritious sediment. Where neuralgia predominates, this secretion will be pale, plentiful, and perhaps deposit a white sediment. This, however, is uncertain, as the quality of the urine depends on so many contingent circumstances, that, although it will sometimes assist, it should not always entirely guide us.

Opportunities seldom offer of ascertaining by dissection the condition of the nerve in this disease,

but the marks and effects of inflammation have been traced upon it; the neurilema has been found thickened and indurated with turgescence of its vessels; and, according to Mr. Lawrence, the nerve itself is "expanded, and its fibres separated, as if by effusion into the cellular membrane, which connects its filaments together." It has also been found of a reddish colour. Where persons, from the nature of their employment, are exposed constantly to wet and cold, the disease comes on more gradually, without any of the more active symptoms already described, and assumes, from the first, a more chronic form. The only symptoms, at least the most prominent, are pain and lameness; the pain is not of the same acute character as in the more active form of the disease, but is described as a dull, aching pain, and is usually accompanied by nocturnal exacerbations, so as to deprive the sufferer of rest. The general health, good perhaps at first, becomes, in the sequel, disordered; thus rendering the case more complicated. The patient in this state is not deprived of the power of walking, but is affected with lameness and weakness in the limb, which soon becomes fatigued by exercise, and at length wastes and withers. If this state be not relieved, the whole body of the patient wastes; his spirit and energy decline; and the expression of his countenance is painful and anxious.

This chronic state is by far the most frequent. The pain is said to assume occasionally the quotidian type, but I have never met with such a case, with the exception of those, in which the disease appeared to be more closely resembling neuralgia than chronic inflammation, unless the nocturnal exacerbation be considered a periodic pain.

The treatment of chronic sciatica, either commencing in the more active form, or in that last described, must vary a good deal, according to the circumstances and peculiarities of each case.

Of the internal remedies, mercury will be found most efficacious, and should always be resorted to, unless there be any cogent reason to prevent the use of it in any particular case. It may not, perhaps, be of much consequence what preparation of mercury is used, calomel with opium is generally preferred, but I have been in the habit of giving the phosphate, of which the following is an excellent combination, and I, therefore, prefer it:

R Hydrargyri phosphatis, gr. j.

Opii, gr. j.

Antim. potassæ tartratis, gr. $\frac{1}{8}$.

Fiat pilula.

This I gave every night. The addition of the antimony is very valuable in inducing diaphoresis, and obviating some of the unpleasant and occasional effects, both of the opium and mercury. But it

should be premised, that when a patient has been ill for some time before medical aid is sought for, especially, if he be of an advanced age, the bowels should be well cleansed with calomel and compound extract of colocynth followed by castor oil, by which means sometimes large accumulations of hardened fæces are evacuated, to the manifest improvement of all the symptoms; sometimes, indeed, under this treatment, little else has been necessary than a steady persistence in the use of purgatives until the large bowel has been thoroughly relieved. This fact shows that what may appear to be the effect of chronic disease in the nerve is to be attributed to a loaded state of the large intestine.

In addition to the mercury, should there be much nocturnal fever, accompanied with pain on pressure on the nerve, with high-coloured urine, and a deposition of a lateritious sediment; colchicum and the nitrate of potash in moderate doses two or three times in a day, and an aperient given in the morning twice every week will be of much assistance. If there is much exhaustion of the strength with general emaciation, from long-continued suffering, the decoct. sarsæ comp. with the addition of the liquid extract with the mercurial pill, will operate beneficially in restoring the strength and health, and will also be of service to the local disease. To this should be added, where it is feasible, a change

to country air, or a removal to the coast. It will be found, generally, necessary to persist in this plan until the gums are a little sore, more than this is unnecessary, and may be injurious, and the patient should be kept under its influence for some little time after the pain has been removed.

It is in these chronic cases that counter-irritation is so necessary and beneficial. Simple blistering is seldom sufficiently powerful unless the surface is kept open by the ointment already mentioned, and when it is used, it is advisable to keep the blister open for ten days before it is allowed to heal, and then to open another in a similar manner near the first, still on the track of the nerve.

There is another and more efficacious counter-irritant; the tartar-emetic plaster, which, when applied to a surface that has already been blistered and healed, will speedily produce a plentiful crop of pustules, often affording very sensible relief, and a succession of the pustules is readily kept up afterwards by the tartar-emetic ointment. When both the former have failed, a caustic issue made behind the trochanter, and kept open by the occasional application of the caustic potash, will often succeed, even in very old and apparently inveterate cases.

It may happen, that, during this treatment, there will be a considerable aggravation of the pain, with some degree of fever, the abstraction of a little

blood by cupping, and some brisk purgatives, will generally subdue these symptoms, and allow the other plan to be again pursued. It should also be remembered, that although these powerful counter-irritants will relieve, yet if they are kept open too long, they appear to keep up the local and general irritation, which they are intended to cure. When this plan is proceeding satisfactorily, we ought to see, in addition to the cessation of the pain and nocturnal fever, the power over the limb return, and the withered and shrivelled appearance of it, give place to a more healthy one, an appearance of greater freshness and filling out, as it were, of the skin, more easy to be discerned by the eye than to be described. Where the disease depends on chronic inflammation, this plan will be found very successful, but not invariably so, for the inflammation may be removed, whilst the pain will continue, and will then assume more decidedly the character of simple neuralgia.

Before I proceed to the consideration of this form of sciatica I must advert to another remedy, the iodide of potash, of which, indeed, I have not had much experience; but from the powerful effect it produced in the cases that I am about to detail, I am induced to hope that it may prove a very valuable addition to our remedies in this disease.

A gentleman, of middle age, of strong robust

health, a great fisherman, was seized with a violent attack of sciatica in both legs, after having stood for many hours in water. The violence of the attack was subdued by medical treatment; it then gradually dwindled into a chronic form, and resisted the efforts of numerous physicians and surgeons for the space of four years. The consequence of this protracted suffering was impaired health, loss of flesh; loss of spirits; of energy; and power over the lower extremities, which were wasted in a greater degree than his emaciated body. The pain was constant, with great nocturnal exacerbations, and with some degree of nightly fever. In this miserable state, after every remedy, rational and empirical, both here and in Germany, had been tried and failed, he was advised to take three grains of the iodide of potash, in the decoction of sarsaparilla, three times a day. On the fourth night, the pain was sensibly diminished; on the fifth more so; and at the expiration of ten days he was perfectly free and easy. He continued the medicine six weeks; at the end of which time he was restored to his former health; he had also recovered the use of his legs, which were ultimately restored to their usual size and firmness. For this case I am indebted to a friend. The following is the only one in which I have had the opportunity of trying this remedy:

Mr. C—, ætat. 70, had been suffering from

sciatica in the right leg for two years, during which time he had been more than once relieved by colchicum, when the pain was more than usually severe. He was also of a gouty habit, and he had derived benefit for a short time from the waters of Wiesbaden; he applied to me in April, 1843; at that time, he was suffering very severely from sciatica, which was more severe at night, and attended with some degree of fever; the nerve was painful on pressure behind the trochanter. In other respects he was well. After a brisk cathartic, I gave him three grains of the iodide of potash three times a day, with an occasional aperient. At the end of a week he was much relieved; after another week the pain had entirely left him, and he was able to resume his usual employments, which were of the most active kind.

This gentleman, besides gout, had suffered from more than one attack of brow ague. How far future and more extended experience will confirm this favorable report yet remains to be proved; but if we consider the great value of this salt in inflammation of periosteal and other membranes, we may hope it will operate beneficially in sciatica depending on chronic inflammation of the investing membrane of that nerve, or of the nerve itself.*

* Since writing the above, I have heard the result of Dr. Graves's experience in the use of the iodide of potash, which leaves no doubt of its value and efficacy in particular cases.

The severity of the pain often requires the assistance of sedatives, of which opium is perhaps the best, but I have seen very great relief from a combination of the extract of belladonna, stramonium, and hyoscyamus.

The cannabis Indica, a sedative recently introduced to the notice of English practitioners, is reported as giving much relief, and to be unaccompanied by the constipating effect upon the bowels which opium has. But this class of remedies is more appropriate and useful in those peculiar cases of sciatica, which are characterized by an absence of all symptoms of inflammation, and which more closely resemble true neuralgia of other nerves.

This form of it sometimes succeeds to chronic inflammation, and sometimes arises spontaneously. Of this form of sciatica pain is the only symptom; pain that intermits, with intervals of complete ease; pain that comes on suddenly in paroxysms, shooting through the nerve like electric shocks, and sometimes returning with the regularity of an ague, not in nightly exacerbations, as that of chronic inflammation, but at various periods of the day. There is, at least in the commencement, no disordered health, often no apparent cause; but, happily, this kind of sciatica, in its most aggravated form, is not of frequent occurrence. When, after careful examination, I have been unable to discover any cause

to which I could attribute the disease, I have treated it as pure neuralgia, on the principles already described; first by purgatives, and afterwards by steel, quinine, and arsenic, in combination with sedatives, as the nature of the case and the constitution of each patient seemed to require.

I have already observed that sciatica occasionally commences in the extremities of the nerves, and extends upwards to the trunk; this I have never seen; for in all cases that have fallen under my own observation it has clearly commenced in the upper part of the nerve, and has extended downwards. The pain does not always occupy the whole extent of the nerve, but there are particular points in which it is most felt, and which appear to be the various terminations of the various branches. If we might draw an inference from two or three cases, it would appear, that it is occasionally possible to cut short an attack of acute sciatica, provided it is attempted before the symptoms become very severe; and where this opportunity offers, the attempt may be made without risk, although the effects of the remedy are, indeed, violent and unpleasant, but transitory. This is illustrated by the following case, which occurred many years ago: A gentleman had been caught, while shooting, by a violent storm of rain on Monday; to shelter himself, he sat against, rather

than on a high bank, by which the seat of his trousers became wet; during the succeeding night he was attacked with pain of great severity in the loins, extending down the right sciatic nerve. As he had an appointment of some moment on the Thursday following, he was most anxious to have the attack arrested: my father gave him immediately an ounce of turpentine; this soon made him sick and giddy, indeed he became quite tipsy, with continual vomiting, and in this state he continued several hours. The medicine acted powerfully on the bowels. Before night the pain had quite left him; he slept well, and awoke the following morning also easy and well, with the exception of a headach, which gradually wore off, and he was enabled to fulfil his engagement. After an interval of fifteen years, I had an opportunity of repeating the medicine on the same gentleman, with the same result; and I have used it successfully in two similar cases, but it has failed in some others in which I have given it. Such large doses of turpentine can seldom be necessary, as smaller are quite sufficient for the purpose.

The foregoing description of sciatica refers more particularly to the disorder when it is seated in the nerve itself or in its envelopes; but there are many cases in which the cause is remote, and the nerve appears to suffer secondarily.

Hemorrhoids and prolapsus ani sometimes produce it, of which the following is an example: Mr. H. R——, from about the age of 35, suffered occasionally very acute attacks of sciatica, which lasted three or four days, or a week, and then subsided, without its being very much influenced by the medical treatment adopted; and there did not appear any very evident cause for it. After some time, he complained much of large internal hemorrhoids, which were often protruded, and became so troublesome that they were at length removed; from that time he continued free from sciatica, until he had a return of hemorrhoids and prolapsus ani some years subsequent to the removal of the former. With them the sciatica again returned, and continued to trouble him occasionally until they were removed, since which he has been quite free from it.

In this case, although the result of the operations go far to prove the dependence of the two diseases on each other, it could not be satisfactorily ascertained, during the attacks of sciatica, that they were connected.

Females, during the latter months of pregnancy, sometimes suffer very severely from pain in the sciatic nerves; and until they are confined, little can be done for their relief, except soothing by opiates, and opiate frictions, or belladonna plasters;

and these applications seldom afford much relief. They find some degree of ease from the recumbent position, and by supporting the heavy abdomen by means of bandages, which take off somewhat of the pressure of the uterus from the suffering nerves. Luckily, the pain usually subsides soon after their accouchement.

Mrs. M——, ætat. thirty-six, being pregnant in 1832 for the first time, began to experience, about the seventh month, pain in both sciatic nerves, particularly in the right, which gradually increased in severity, and with it, she slowly, but perceptibly lost the power over the limb. Some little relief was obtained by friction with a soap embrocation, containing extract of belladonna, in the proportion of one drachm to an ounce. The pain, however, continued until after her confinement; after which, in the course of a month, it ceased, and she recovered the use of the leg. She had no return on the next pregnancy.

This happy termination does not always follow, as the two following cases will prove.

Mrs. T——, when pregnant for the second time, began to feel pain in the right sciatic nerve, more particularly, immediately behind the hip joint. The pain was always more severe at night, and increased in severity as she advanced towards her confinement, and nothing gave her the slightest

relief. After a short and natural labour and a good recovery, it was hoped that the pain would have subsided, but it continued with nearly its former violence, and remained fixed in the nerve, just behind the trochanter, extending up to the ischiatic notch, and also downwards to the ankle; it was increased by pressure, by standing, or attempting to walk. There was but very little febrile excitement, or general disorder. Local loss of blood, with calomel and opium, and blistering gave some relief. These measures failing, a perpetual blister was established, which discharged thick puriform matter, with a little temporary benefit. Various other measures were successively resorted to and failed. On examination the uterus was found enlarged to the size of a turkey's egg, or rather larger, as well as it could be ascertained; but not painful on pressure, and there was no discharge from it. At this time she experienced constant pain and uneasiness in the back and right side of the pelvis, the pulse was frequent and small, the tongue white, and there was considerable emaciation. Five grains of the *pil. hydrargyri c. cicuta* were ordered to be taken at night, and four grains of the iodide of potash three times a day, with the use of the tepid hip-bath. After this plan had been pursued ten days, the pain was much diminished, the other symptoms also were improved,

and hopes were entertained of a complete recovery. The plan was persisted in for the space of six weeks, at the expiration of which time the pain almost left her, and the uterus was reduced to its natural size. The pain, however, increased again, and did not yield to a repetition of those remedies: other medical advice was then obtained, without any favorable result: the lady has since borne two children, and towards the end of each pregnancy the pain has always been aggravated. Since I last saw her, abscesses have formed within the pelvis, and have broken externally: sinuses have been formed, which continue to drain. The pain is now diminished, and she has recovered much of her health and flesh.

Mrs. C——, ætat. twenty-eight, a delicate lady, when pregnant of her second child in 1840, between the sixth and seventh month, was seized with pain in both sciatic nerves, on the pubis, and sacrum, that she could with difficulty walk. After her confinement, the pain continuing, a consultation was held, and it was considered that there was inflammation in the ligaments of the pelvis, and perhaps of the periosteal membrane: a pelvic bandage was ordered, the iodide of potash given, and rest enjoined. From this treatment a certain degree of benefit was derived, but the pain never entirely ceased, and the lady soon again became

pregnant. During the whole of her pregnancy she suffered more or less; but after her confinement, by strict rest, alterative doses of mercury, with sedatives, mild aperients, and afterwards the hip-bath, she was relieved.

These cases have been detailed, merely to show that sciatica is occasionally produced by pregnancy.

The exact cause of the continuance of the pain, in the last two cases, was never satisfactorily ascertained, so that no practical inference can be drawn from them.

I witnessed and watched for several years the following distressing case of sciatica, and had the pain and mortification of seeing how inert and powerless medicine will sometimes prove, although directed by the ablest and most scientific men in our profession.

A lady, ætat. 67, who had been subject to violent nervous headaches, and was naturally of a delicate habit, was suddenly seized in the ham with most violent pain, in a spot, which she could cover with the point of her finger; it was momentary, and returned at intervals, varying from one minute to five. It was accompanied by a slight spasmodic twitch of the whole limb, and felt, as if a red hot wire was suddenly darted into the flesh. This continued many months; the pain then shot through the nerve, from the hip to the ham, afterwards to a

spot in the calf of the leg, and lastly, to the outer ankle, leaving the interstices free. The pain, therefore, was felt at four different points, sometimes more violent in one spot, sometimes at another, whilst all four points were seldom attacked together. During the interval between these attacks, she was perfectly easy : this state continued year after year. The pain was less violent and less frequent at night, but returned during sleep, as was quite apparent from the sudden jerk, which was involuntarily made at the moment of the return of pain. At length the limb became benumbed and sleepy, and although the lady never lost the power of walking, yet she lost all confidence in the limb affected, not being, at all times, certain that the foot was fairly on the ground. She described the sensation as similar to that which is felt, when an attempt is made to walk, whilst the foot is asleep. This continued until within a few hours of the lady's death, which was occasioned by pneumonia. She was always worse, when from any cause her general strength was reduced. She required much support, was always better from a generous diet, and derived temporary relief from ether and the fetid gums. It should be stated, that there was very great distortion of the spine, which had increased during the last twenty years, and to which this pain may perhaps be attributed, but of

this, I can only speak doubtfully, as there was no post-mortem examination.

In addition to the causes of sciatica, already mentioned, the sciatic nerve is liable to be painfully interfered with by tumours growing within the pelvis, as well as in the track, and substance of the nerve itself. The nerve is also liable to accidents and wounds, as are the other nerves and with similar results.

Acupuncturation is well spoken of as an efficient remedy in sciatica; it is most useful in cases, in which there is neither heat nor inflammation in the part affected. This observation should be remembered in all cases, where this remedy is tried. To derive the greatest benefit from acupuncturation, it will be necessary to allow one or two needles to remain inserted for an hour or longer, as, by this plan, they afford greater relief than when many are used, and are removed more quickly; if the seat of the pain is changed, the needles should follow and be inserted in each part, as it is successively affected. Sometimes one or two operations relieve the pain, at others nine or ten applications are required.

No satisfactory explanation has yet been suggested, as to the *modus operandi* of this extraordinary remedy. The needles, when made of steel, become oxydized, and galvanic phenomena are

occasionally developed, but neither clears up the difficulty.

The application of the moxa and electricity have been used with benefit in cases of sciatica, particularly the latter.

Persons subject to attacks of sciatica should always wear flannel drawers, and if they are very susceptible to the influences of the weather, they should wear washed-leather drawers over the flannel, during the winter months.

CHAPTER XIII.

On Intermittent Action.

ALTHOUGH intermittent or periodical action of disease is a subject beyond my ability to explain, yet I am induced to add a few remarks with reference to the treatment of neuralgia, when it assumes a regular intermittent character.

The type usually assumed by neuralgia, is either the quotidian or tertian, more rarely the quartan, or double tertian. Sometimes the paroxysms return three times a day; occasionally, every second or third hour throughout the night, as well as the day; sometimes they recur at the expiration of eight days, a fortnight, or month; and in some cases, annually, in particular months.

In the periodical character which it assumes, neuralgia resembles ague; the type varies in the former as well as in the latter; a quartan changes into a tertian; a tertian into a quotidian; and sometimes an intermittent neuralgia becomes remittent.

No explanation, I believe, can be given, why one form of intermittent should change to another, a tertian become a quotidian and the reverse: but there is reason to believe, that, when an intermittent becomes remittent, it is to be attributed to some alteration in the condition of some of the viscera. This opinion is confirmed by the effect of remedies given for the cure of it. I have seen cases of *tic douloureux*, originally intermittent, which had become remittent, and again assumed the former type; in some, after an emetic and brisk purging; in others, after a free use of calomel, sufficient to affect the system.

Dr. Macculloch, in his ingenious treatise on Malaria, alludes to such an explanation as being probably correct in similar changes in intermittent fever; but, in the absence of positive proof, declined giving a decided opinion.

It does not follow that the treatment, which is proper and adapted for the cure of *tic douloureux*, whilst it remains intermittent, should be equally proper after the pain has become either constant or remittent, more especially, if the change in the character of the disease is owing to a change in the condition of the viscera just alluded to. The correctness of the assertion is proved by the augmentation of the disease, if such a plan of treatment be continued after the character of the disease has

changed, especially if bark or quinine be the remedies selected for that purpose. Fortunately the symptoms that point out the necessity of a change in the medicines, also indicate the peculiar character of the remedies required under the altered circumstances of the case; these are evacuants and deobstruents. The morbid state of the viscera, on which the remittent action depended, having been relieved; the former medicines will frequently be again required, and will then effect the cure. But during their administration, the occasional exhibition of an active purgative, or a grain or two of calomel for a few successive nights, will very much assist their operation, and accelerate the cure.

Beneficial as is the effect of change of air in all cases of intermittent disorder, in none is it more clearly seen than in intermittent neuralgia, more especially when it arises from malaria.

Although the cause of the more common intermittent types have hitherto eluded research, yet the periodicity of neuralgia can in some cases be traced to a morbid action going on at the time in the system. One or two examples of it have been already described. The case of Mrs. H. C—— is one in point; in her the neuralgic pain returned at a particular hour after her meals, and was preceded by a peculiar sensation passing from the region of the pylorus to the cheek, and as soon as it reached

the latter, the pain commenced. She was relieved of the neuralgia as soon as the condition of the liver and stomach was improved.

In cases where there was a periodical return of the tic every month, I have found that the pain was connected with the menstrual function; which is sufficient to point out the necessity of directing the attention of the medical attendant to that secretion, and of correcting any irregularity attending it.

The annual return, or exacerbations of pain, I am led to believe, depend on some alteration in the general health, to which many persons are annually subject. In them, I have occasionally prevented a recurrence of the disease, by attending to the first symptom that has been felt of general disorder, or by anticipating the disorder, as I have already described.

CHAPTER XIV.

On the Use of Sedatives.

IN the treatment of neuralgia, few remedies require the exercise of greater judgment and discretion than sedatives ; and from the urgent entreaties of the patient for relief, it requires much firmness on the part of the medical attendant to refrain from giving them, even in opposition to his better judgment. It may, therefore, be useful to add a few remarks upon their use.

In the early notices of *tic douloureux*, these remedies were highly extolled, as a means of cure ; first, by Dr. Fothergill and Dr. Jackson, who recommended conium ; and by other physicians, who preferred belladonna, stramonium, &c. ; but in the recent notices of this disease, they have been considered more as powerful auxiliaries in giving temporary relief than as remedies to effect permanent cures.

In some cases the pain being dependant on the peculiar constitutional disorder, of which irrita-

bility and weakness are the most prominent features, sedatives appear to cure, by subduing the pain and allaying the general irritability ; whilst at the same time the strength is repaired by change of air and habits of life, improved diet, and other accidental circumstances, which oftentimes are not sufficiently taken into the account, inquired into, or considered by medical men.

The quantity necessary to afford relief must depend on the constitution of the individual, and the severity of the disease. In cases where their use is most required, doses of ordinary strength are of little or no avail. In order to obtain benefit from them, in some cases, it is necessary to give them in such doses as would, under other circumstances, be followed by very unpleasant symptoms. This was observed by Dr. Fothergill, and has been confirmed by Mr. Lawrence and other writers. These authors agree that in order to obtain relief, such doses must be administered as will produce the symptoms peculiar to each respective remedy ; vertigo, nausea, &c., by conium ; dilatation of the pupil, indistinct vision, dryness of the throat, &c., by belladonna ; and so on with respect to the other narcotics.

That large doses are necessary to produce these effects, and do not cause any of the dangerous symptoms sometimes to be anticipated from them, may be

thus explained. The state of the system, on which the pain depends, has either the power of resisting the action of these medicines ; or a certain amount of their power is expended in bringing the nervous system to its normal state ; and until that is effected the usual symptoms of their action will not be developed ; that, however, being effected, a small additional quantity will produce the symptoms above alluded to ; which will clearly indicate that the required quantity has been administered, and that relief will soon be afforded, or must not be expected from them.

To effect this object, these medicines may be given in various ways ; either in a large dose at once ; or in a smaller one, and by gradually increasing it ; or by a more frequent repetition of an ordinary dose.

The first plan is the least advisable, as it is impossible to determine, *à priori*, what quantity may be sufficient or excessive.

The second is the most uncertain, for unless the dose is increased rather rapidly, the constitution will become accustomed to the effect of the medicine, and will accommodate itself to it, so that the expected relief will not be produced.

The other plan is the preferable one ; which is to repeat the largest ordinary dose at short intervals,

every two hours ; and in urgent cases, every hour, for three or four doses, or until some symptom of its action is apparent, and then it should be discontinued. In this way I have often afforded relief without having incurred the slightest risk in any case.

When this point has been gained, the better plan is to suspend the exhibition of the sedatives until all the effects of the medicine have subsided, and to watch the patient narrowly during the time he is under the influence of the sedative, in order to ascertain the extent of its operation, and the amount of relief afforded by it. From the experience thus gained, we may learn what may be further required or expected from the medicine, and in what doses it may be necessary to repeat it.

When a complete check to the pain has been given by the sedatives, I have often found that a much smaller dose will subsequently keep the pain and morbid irritability under control : whilst a permanent cure is attempted by the application of other medicines.

For this purpose I have found belladonna the most successful sedative, of which the largest quantity I have given has not exceeded one grain for three successive hours. It is, indeed, seldom necessary to give more than two of these

doses, and care should always be taken to visit the patient before the third dose is given, and when practicable before the second. In one or two instances I have combined the extract of stramonium with the belladonna without any perceptible advantage.

There is one point always to be remembered, that vegetable extracts are very apt to spoil, therefore great care should be taken that they are of the best quality.

When the effect of the medicine has worn off, the pain with some symptom of irritability will generally return; in that case, a smaller dose, a third or half a grain, should be given, and repeated once, twice, or three times a day, as may be found necessary, and, perhaps, a larger one at night. The dose should be repeated less frequently as the case improves, and the patient should be instructed to take a dose at any time, whenever the pain threatens to return; for sometimes it is of the utmost consequence to prevent the violent return of pain, which is always followed by loss of strength. I have found it of advantage to explain to the patient the object to be attained, and the whole effect expected to be produced by the medicine, so that after a little experience he will be able to assist the medical attendant in effecting the cure; and to judge, when

the sedative may be necessary; and to what extent it must be taken to accomplish the purpose desired.

The state of the pupil is a valuable guide to the physician, as the indistinctness of vision is to the patient, when belladonna is given. The remark of Dr. Holland as to the condition of the pupil is likely to prove of great assistance in choosing the sedative best adapted to each particular case. As far as opportunities have been offered me since my attention has been particularly directed to this point, they have certainly confirmed his views.

It is impossible to lay down any rules that will be found applicable to every case, there is always an ample field for the exercise of the judgment and sagacity on the part of the medical attendant in the proper application of these powerful remedies. In reference to them, I will, in conclusion, briefly allude to the nature of those cases in which they have been of service, and to those in which they had a contrary effect.

As a general rule, sedatives should not be given at the first interview with the patient, unless the case is very clear; for should they be, the difficulty of unravelling the perplexities of the disease is often increased. The symptoms produced by them overcome, and, as it were, obscure some of those

peculiar to the disease ; which last, although of themselves of little moment, often lead to a discovery of the cause, and right apprehension of the nature of it.

The operation of sedatives will be found very advantageous in cases where the neuralgic pain depends on, what may be called, a neuralgic habit ; in cases of which debility and irritability constitute the most marked features, without any particular derangement of the general health.

After having subdued the pain by one or two full doses, it will be generally beneficial to repeat the medicine in smaller quantities, but sufficient to allay irritation without producing any very marked effect on the system. The various vital processes appear to be performed more regularly and kindly, while the system is thus quieted ; the sleep is more refreshing ; the appetite and digestion improve ; the bowels become more regular ; and should they still require assistance, a milder kind of aperient will effectually relieve them.

Advantage of this tranquil state should be taken to give tone and strength to the system by other measures, both of a medicinal and general kind, and in proportion as that is effected, the quantity of the sedative should be gradually diminished, until it is wholly discontinued. The necessity for

which should always be kept in view, for two reasons: 1st. When the influence of the sedative is no longer required, the power which was expended in allaying irritability and controlling pain, will operate prejudicially in the system. 2d. Lest a habit of taking sedatives be acquired, which would with difficulty be overcome.

In cases of neuralgia, complicated with uterine irritation, sedatives are also serviceable, particularly at the time of menstruation; for that is the period, when there usually is an increase of irritability and pain. When menorrhagia also exists, the judicious employment of sedatives, a few days previous to the commencement of menstruation, has sometimes a very happy effect in moderating the discharge, allaying irritation, and preventing an increase of the neuralgic pain.

It is a good practice to give some mild aperient, such as castor oil or the compound decoction of aloes, with or without a few grains of grey powder or blue pill, as circumstances may demand, to ensure the removal of any accumulation in the lower bowel, before the sedative is given, in cases complicated with uterine irritation.

Some females are liable to a fretful diarrhœa a few days before the catamenia appear, as in the case of Mrs. V——, which adds greatly to the general

distress; for these individuals an aperient of rhubarb and magnesia, or the decoction of aloes and lime-water will be found the most appropriate. The lime-water, if necessary, may be given with the sedative and other remedies; it neutralizes the acid in the large intestine, and thus removes one of the irritating causes.

Where neuralgia depends on mechanical causes of irritation, sedatives often afford much relief; but having already entered at length on their use in the chapter on this subject, I need not dwell on it again here.

When the pain in the cheek is connected with a morbid action in the spine, the effect of sedatives and the propriety of their use varies according to the state of the spine. When the pain in the spine arises simply from general weakness and irritability of the system, they may be given with good effect conjointly with quinine or steel. When the pain has been of long standing, and is complicated with visceral obstructions, their effect will be deleterious; and when the continued excitement in the spine has become a fixed disease, little relief from sedatives can be expected.

Having already dwelt on the use of sedatives in anæmic cases, and in sciatica; I shall not again enlarge on that subject here.

When *tic douloureux* is clearly attributable to morbid sensibility of the mucous membrane of the stomach and bowels, much circumspection is required in the administration of sedatives. I have seen a few cases benefited by them, but in the majority of cases they have been injurious. When it is thought expedient to give them, the practice of combining them with *ipécacuanha* and occasionally with a few grains of the *hydrargyric. creta* is to be recommended. In cases of this nature minute doses of the sedative are preferable to larger; the object being to soothe and allay, rather than to overcome, the morbid sensibility by powerful medicines. I have sometimes found the state of the urine to be a good guide; when that secretion has been plentiful, of a pale colour, low specific gravity, and only a little, if at all acid, sedatives will operate beneficially; and the reverse, when the urine is scanty, high-coloured or turbid.

When the neuralgia is complicated with congestion of the several abdominal viscera, sedatives will not only fail to give relief to the pain, but will generally be injurious, by impeding the due secretions of those organs, thereby increasing the congestion and prolonging the disease, on which the neuralgia partly depends. Happily in those cases, the severity of the pain is diminished in proportion as the viscera

are unloaded, although it may be at first increased under the use of deobstruents and purgatives. If, however, the pain should continue violent after the viscera have been unloaded, the tongue clean and the secretions healthy, sedatives may be administered with every prospect of benefit: under these circumstances, a full dose should be given at once, or moderately large ones repeated often, until the pain is subdued; afterwards doses in smaller quantities, but sufficient to keep the pain under subjection. A brisk aperient should be repeated every three or four days during the continuance of the sedative treatment under these circumstances.

In cases of delicate persons whose neuralgia is thus complicated, an exception must occasionally be made to the strict prohibition of sedatives; persons of this description appear almost worn out by the violence of the pain and operation of the medicines, and I have found that a temporary cessation from the aperient medicine, and the exhibition of an occasional sedative to be much advantage, and did not interfere with or prolong the disease.

This plan of treatment, however, requires much circumspection and caution: if sedatives can be avoided they should not be given; for it is far preferable to pause a little in the deobstruent plan

of treatment ; to give time to the strength to rally ; to support the patient by diet and cordials ; and to seek relief from ether, Hoffman's anodyne, camphor and medicines of that class, and external applications, than to risk the retarding of the cure by an interference, which the action of sedatives has almost always a tendency to create.

When the proper time for the exhibition of sedatives has arrived, they may be given alone, or conjoined with blue-pill and ipecacuan, as circumstances may require.

CHAPTER XV.

On the Sesqui-oxyde of Iron.

THE sesqui-oxyde of iron is a powerful medicine, which, at one period, was almost considered a specific for tic douloureux. I have already alluded to it, but it is too valuable to be passed over without some additional remarks.

I have already mentioned, that I have given it with most success in cases in which the pallid, exsanguined state of the system has bespoken a deficiency, both in the quality and quantity of the blood. But the relief that has followed the use of this medicine in other states of the system shows that, whilst it replenishes the system with healthy blood, it also exerts its beneficial influence in some other manner; for a very small proportion of the very large doses of the iron that have been recommended, and given by physicians of high authority, can possibly be absorbed into the system; the passage of large quantities of iron through the bowels confirms this fact, and of which, the recommendation to combine it with treacle or some other

aperient, in order to prevent a dangerous accumulation of the iron in the intestine, is a tacit acknowledgment. I have occasionally given this medicine with success, when there has been no obvious cause of the neuralgic pain; in patients, who could not, perhaps, be considered plethoric, yet certainly were not in the opposite state.

The majority of recorded cases of neuralgia, in which the sesqui-oxyde of iron has been administered with success, merely prove the fact of the cure having been effected by that medicine, without reference to the cause of the pain, or to the state of the patient's health at the time.

Various conjectures have been hazarded as to the manner in which it operates so beneficially, but that point is still to be discovered.

I have seldom known it afford immediate relief; several weeks have generally elapsed before any beneficial effect has been produced, which has led me to believe, that it cures by giving tone to the system; thus overcoming the idiosyncrasy, or peculiarity of constitution, the remote cause of neuralgia. This opinion has induced me to recommend it to patients, who have been relieved from the pain by sedatives, arsenic, and other remedies, in order that the cure may be made secure and permanent; and it has appeared to have assisted in effecting this object.

CHAPTER XVI.

On the Use of Arsenic.

FEW medicines act more powerfully and beneficially upon disease than arsenic does over some kinds of neuralgia ; whilst upon others, its influence is not only useless, but prejudicial. The uncertain result depends, either on some difference in the disease itself, or in the cause of the disease, or in the injudicious administration of the medicine. I may, therefore, be allowed to offer a few observations on the use of it ; on the nature of those cases, in which it is likely to be beneficial, and in which injurious ; on the preparation of the patient, previous to the exhibition of the medicine ; on the precautions necessary to be taken, and the manner, in which it should be given, in order to produce the requisite effect on the system to subdue the disease.

Arsenic operates most favorably on persons who are of lax fibre, accompanied by a languid state of the circulation, and whose secretions are rather profuse than otherwise ; the urine pale and plentiful, and

more especially on those whose skin is cold and moist. In persons of this description, whilst arsenic, to an extent far beyond other medicine, relieves the neuralgic pain, it improves the general health, and gives firmness and vigour to the constitution.

I do not mean to assert, that arsenic invariably disagrees with persons of an opposite condition of the system ; but when the urine is of a deep colour, and scantily secreted, or when it deposits the lithate of ammonia ; the tongue loaded, especially if the tip or edges of it are red ; arsenic almost invariably disagrees, and aggravates the pain. But as this morbid state of the system frequently depends on, or is complicated with, disorder of some important viscus ; arsenic will often agree, and relieve the neuralgic pain, after the visceral disorder has been removed by appropriate remedies.

Between these extreme states of the system, there are many shades of difference, which require modifications both in the general treatment, and in the use of arsenic ; which it would be needless, were it possible, to describe.

Arsenic is a peculiarly appropriate remedy for neuralgia, arising from malaria, especially if it be strictly of an intermittent character ; indeed, most cases of neuralgia, in which there is distinct and regular intermissions of pain, from whatever cause

the disease may have arisen, are likely to be benefited by the class of remedies, of which, arsenic is the type of the mineral; as quinine is of the vegetable; with the proviso, that the system is in a state fitted for the reception of them. I do not even except some of those cases, in which the pain depends on an organic cause; these, also, are as often temporarily relieved by arsenic, as by other measures, which tend to improve the general health.

Of the value of this medicine in cases arising from (what I have termed) a neuralgic habit; from morbid sensibility of the nerves distributed over the mucous membrane of the stomach and intestines; and from a disordered condition of the uterus; I have already written so fully, that I need not again allude to it.

When neuralgia is associated with some morbid action in the spine; with anæmia; or arises from injuries of nerves; or local irritation of nerves by diseases or unnatural growth of bone; or if it be complicated with engorgement of the liver and other viscera; arsenic is usually injurious, and I believe, seldom useful.

I have little doubt, it will appear to many medical men, that I have laid too great stress on the necessity of thoroughly unloading the viscera, and of stimulating them to a more healthy action, before tonics or sedatives are resorted to; but I

have been induced to do so, from the fact (of which I have had personal knowledge) that in practice, this point is not sufficiently attended to, although so much has been written on the subject; and this preparation of the system is as necessary before the administration of arsenic, as of sedatives, or other tonics.

During the exhibition of arsenic, the use of fruit and every kind of acid should be interdicted, otherwise from the griping, pinching pains in the bowels and diarrhœa, which they are apt to produce, it will be found necessary, occasionally, to omit the medicine.

In cases, where it has been found requisite to prepare the patient by purging and the use of calomel, arsenic will operate more easily, if a grain of calomel, for a few successive nights, or an occasional aperient be given with it. By this mode of treatment, the use of arsenic may often be persevered in with success, whilst, under a different plan, it would prove inadmissible.

After due preparation, it is usually advisable to commence with giving four minims of the liquor potassæ arsenitis three times a day, sometimes only two minims for a dose, with double the quantity of the tincturæ camphoræ comp. ; and if there is evidence of the presence of acid, a few grains of the bicarbonate of potash may be added to each dose.

An additional minim of the liq. potassæ arsenitis should be added daily, until some effect is produced; after which, it is seldom necessary to increase the quantity further, but by continuing the same dose for a few days, or until the pain is diminished, sufficient effect of the medicine will be produced on the system. The arsenic should, then, be omitted altogether until the symptoms of its action have subsided; when the pain, if it has been relieved by the medicine, will generally return: as soon as this occurs, the medicine should again be given in the original small doses, and the plan followed up in the manner I have described in detailing some of the former cases.

If the neuralgia be of that description that arsenic will act favorably on it, the pain will generally lessen in proportion as the effect of the arsenic is produced; and if any decided diminution of the pain should take place, much hope may be entertained of the complete success of the plan of treatment; a plan, however, requiring much perseverance, and various modifications before the cure will be effected.

Although there may be, occasionally, necessity for giving arsenic, so as to produce rather strong effects of its action on the system; yet in no case should it be carried so far as to produce very unpleasant or distressing sensations. In general, if

the arsenic causes a deposition of the lithate of ammonia, or the urine to be less plentifully secreted ; a disinclination for food ; rather a hot skin ; a sensation of warmth of the person, with a tingling in the fingers and toes ; these symptoms of its action will be sufficient. All these symptoms, however, are seldom manifested simultaneously.

The effect of arsenic on the stomach depends much upon the state of that organ when the medicine is given, whether empty, or when there is a certain quantity of food in it. As a general rule, if the stomach be irritable, the better plan is to give it, either with the food, or soon after.

I have met with several cases of neuralgia, in which, the disease has resisted the effect of arsenic in solution ; but has yielded to the action of this medicine given in a solid form. The great objection, however, to this mode of giving it, is the danger resulting from the arsenic not being evenly divided. I have known it frequently given in this form during the last twenty years, without the slightest unpleasant occurrence, and I have good authority for stating, that this plan was followed with the same result for the last fifty years ; and it was a favorite practice of the late Dr. Parr of Exeter. With ordinary care on the part of the chemist, there cannot be more risk attending this manner of exhibiting arsenic, than in the use of other powerful remedies.

The dose of arsenic, when given in substance, varies from one twentieth to one tenth of a grain, made into a pill with a crumb of bread, after the arsenic has been well ground in a mortar with a little black pepper.

Occasionally persons are met with in practice, who, from some idiosyncrasy, are unable to take arsenic, even in the smallest dose, without inconvenience; in such persons, this medicine produces great distress and a peculiar eruption, and *fails* to afford relief to the neuralgia. The case of the Rev. Mr. Hutchinson of Firle is one in point: he writes—“After taking it, my body and limbs were much swollen, and covered with erysipelas: my hands and feet underwent a complete desquamation: my nails lost their natural colour, an abscess formed under the affected arm, and several large pustules, containing a thin watery fluid, broke out on the temples.” But he does not mention what quantity of the medicine was given to him.

I once had a patient, a young lady, who upon taking arsenic was immediately affected with a slight vesicular eruption, and with other symptoms of its disagreeing, but they subsided quickly on discontinuing the arsenic. Neither Mr. Hutchinson nor this young lady received any relief from this medicine. A fact, which (in the case of the gentleman) may be easily accounted for, as the cause of his

sufferings was afterwards discovered to be a gorged state of the liver, which was relieved by the Carlsbad waters : a clear proof of the necessity, to which I have so often adverted, of thoroughly unloading that organ. As it is impossible to ascertain the existence of this idiosyncrasy, it will be prudent to give arsenic in small doses at the commencement, to watch the effect of it, and to increase the quantity slowly, until some symptoms of its action is perceptible.

The danger, also, that attends the accumulation of arsenic in the system is another point connected with the use of this medicine, that ought not to be passed over without observation.

From the danger arising from this occurrence having been so strongly insisted on by various authors, I was induced to pay particular attention to the operation of arsenic ; and I am inclined to believe that the danger of accumulation is much overrated, and can be easily avoided, if common caution and prudence are exercised on the part of the medical attendant.

Arsenic should never be given without intermission for many months successively, but should be discontinued from time to time according to the effect it produced, and the use of it should never be resumed, until all symptoms of its action have subsided. I have often observed, that one of the

earliest indications of its operation is the change in the state of the urine. The urine is less plentifully secreted, becomes more acid, and of a deeper colour; and precipitates, if the medicine be continued for any length of time, the lithate of ammonia. Should no other indication be manifested after arsenic has been given for some time, and in pretty large doses, the use of it should always be suspended, when this alteration in the urine is perceived. In the case of one gentleman, no other symptom was produced, with the exception of a hot skin, although he had taken the liq. p. arsenitis three times a day for a considerable time, and for several days in doses of twenty minims each; he was not relieved by the medicine. But there was, subsequently, as complete a desquamation of the skin as that which usually follows scarlet fever.

CHAPTER XV.

Local Remedies.

THE effect of external remedies in any of the cases already mentioned, although they have been resorted to in several of them, have not been noticed, or alluded to by me, for my object being rather to point out some of the causes of neuralgia, than to offer directions for the treatment of it.

The power of external applications has, however, been too clearly proved to allow us to doubt their efficacy; or to pass them unnoticed; although the cases in which they have been successfully used are comparatively few. This want of success is probably to be ascribed, more to our ignorance of the peculiar cases to which they are applicable, than to any want of efficacy in the remedies themselves.

The state of the nerve (the seat of pain), to which the pain may be referred, is evidently different in different individuals, and often varies in the same person during the continuance of the disease. In

one, the nerve is most sensitive to every impression, however slight; pressure always increases the pain in proportion as the pressure is increased; and the part around the affected nerve is swelled, heated, both during the continuance of a paroxysm of pain, and after it has ceased. In other cases, the pain is relieved by firm pressure, and the part affected continues in its natural state as the heat and swelling, even during a paroxysm.

These circumstances alone are sufficient to show that there is a material difference in the condition of the nerve in neuralgia, a difference not necessarily dependent on the cause of the pain, and which may somewhat explain the reason why an external application sometimes succeeds in affording relief, and at other times fails.

External medicines are of two kinds, very opposite in their nature, sedative and counter-irritant. Aconitine, veratria, belladonna, and stramonium, are among the most powerful of the sedatives, and of these aconitine appears to be the most efficacious. Several cases have been published, which have been permanently relieved by it. The aconitine gives relief, by producing a kind of palsy of the parts, on which it is rubbed. In every case, where I have used it, such has been the effect, but the pain in all returned, as soon as that effect had worn off,

and a repetition of the remedy did not always afford the same amount of relief.

When aconitine is used, the proportion of one grain to a drachm of ointment is sufficiently strong ; this should be applied with the finger over the painful part, and gently rubbed on it for two or three minutes, and should be repeated twice a day. The aconitine prepared by Mr. Morson, of Southampton Row, is generally excellent, and can be depended on.

Belladonna alone and in combination with ung. picis and creosote, I have known in several cases to relieve the pain, but only temporarily.

I have often used with advantage, a poultice made of equal portions of linseed-meal and bruised stramonium seeds. This application was recommended to me by an old and very experienced surgeon, particularly in cases of neuralgia.

With veratria I have never succeeded in giving even temporary ease, although I have used it, in the proportion of ten grains of veratria to half an ounce of ointment.

Where the integuments are very sensitive, heated, and swelled, soothing the part by the application of steam, poppy-head fomentations, give much comfort ; warm turpentine, mustard-poultices, stimulating plasters sometimes succeed.

Mr. John Scott has published some cases, in which the application of an ointment made of ung. hydrargyri and ung. antim. tart., and others, in which the deuto-ioduret of mercury was successful.

In cases of tic douloureux connected with a neuralgic state of the spinal cord, the application of the extract of belladonna to the spine has been employed with advantage in the proportion of a drachm of the extract to two ounces of soap liniment. Sometimes very powerful effects are produced by it ; the patient, overcome by the power of the remedy, becomes apparently lifeless, and requires the aid of sal volatile or ether to restore him. I have never witnessed this effect of belladonna thus applied ; but Mr. Copeland, who suggested a trial of it on a patient of mine, warned me of the possibility of such an occurrence. He himself had observed it ; but had never known any unpleasant effects, except the temporary alarm, to result from it.

It must be obvious that, however useful these remedies may be as auxiliaries in the treatment of tic douloureux, they can only be of temporary benefit, when the disease depends on a constitutional cause ; or when the nerve is only sympathetically affected ; unless, indeed, the continuance of the pain and irri-

tation has altered the condition of the nerve, or has created a habit of being thus painfully affected, which might require a local application to remove.

I do not offer any suggestion as to the best method of distinguishing those cases, in which the use of these remedies will be found most beneficial, as I feel the necessity of much further experience in the trial of them, before I can presume to lay down any rules for their application.

CHAPTER XVI.

Concluding Remarks.

ALTHOUGH my principal object has been to connect tic douloureux, affecting the nerves in the cheek, with morbid action in different parts of the system; yet, neuralgic pains of other parts may be accounted for in a similar manner, and are to be treated on similar principles.

Besides the various causes of tic douloureux that have been enumerated in the preceding chapters, there are others so obscure, as to evade for a long time, if not altogether, the most searching investigation. In these cases, we should endeavour to detect any disorder that may exist in the system, and to correct it; and to watch every phenomenon, that may arise during the progress of the disorder, through which a clue to the right understanding of each case may possibly be obtained; much judgment and discretion, however, will be required in the physician to enable him to do this with readiness

and certainty, until the nature of this disease is much better understood than it is at present.

There can be little doubt, that, in addition to the causes, to which I have attributed tic douloureux of the cheek, and of other parts, and which may be considered as the *immediate or exciting causes*, there must also be another, a remote cause, which has not as yet been discovered; were it not so, tic douloureux would be more prevalent than it is; for the disorders I have considered as the causes of neuralgia are of frequent occurrence, but that disease, itself, is comparatively rare. How many females are there who have been almost worn out by tedious and exhausting labours, followed by hemorrhage and other drains, tending to impair the general health! How common are cases of anæmia and dyspepsia! Indeed, of all those disorders already described, yet how seldom does neuralgia arise from them! I cannot, therefore, refrain from again expressing my conviction, that there must be some constitutional cause; some idiosyncrasy; or some proneness in the nervous system of particular individuals, congenital or acquired, to which, as a remote cause, neuralgia must be referred.

The importance of ascertaining the truth of this opinion is great, in reference to the treatment of neuralgia; for the object of the physician should be,

not only to relieve any general or local disorder, the *immediate* cause of the pain; but to subdue, as much as possible, the abnormal state of the nervous system or constitution, *the remote cause*, in order to effect a permanent cure. This will require a steady perseverance in appropriate treatment; not, perhaps, so much of a medicinal nature, as a well-regulated plan of living; a plan, which, whilst it strengthens the constitution generally, will also especially brace and give a healthier and firmer tone to the nervous system.

Many cases of tic douloureux will be met with, which will baffle our best exertions: and many, in which, after resisting every effort and every remedy, the disorder will gradually subside, apparently of itself, or as it is commonly said, will wear itself out; whilst in reality, the state of the system, on which the disease depended, or at least, was favorable to the continuance of it, has slowly and imperceptibly given place to a more healthy condition, to which change, so many circumstances in the present artificial system of life tend to produce; and tic douloureux will sometimes be relieved by the supervention of other, and perhaps more active diseases, which, with the remedies employed for their cure, subdue and remove the morbid action and the neuralgia together.

Perhaps, there is no disease that demands greater

perseverance, both in the patient and the physician, than neuralgia. Very frequently the causes of it have existed long before the pain was felt, and to remove them, will often require a corresponding length of time, after the pain has been relieved. Therefore the treatment, both medicinal and general, should be persisted in long after the pain has ceased to return. The peculiar constitutional disorder also, on the excess of which, the neuralgia sometimes depends, will frequently, perhaps generally, continue after the pain has subsided, although in a more moderate degree. This must likewise be entirely overcome, and a new and more healthy action established, before the patient will be safe from a relapse; otherwise, trifling causes will quickly reduce the system to its former state, and tic douloureux will soon again be the consequence. There is reason to believe, that inattention to these points frequently occasions disappointments, and the relapses, which are of so common occurrence in neuralgia.

These remarks are more or less applicable to every case, but especially to the class of delicate persons described in the first chapter, and to those cases of tic douloureux, which originate in anæmia and dyspepsia. It is difficult to convince persons, who suffer from the latter cause, of the necessity of strict attention to their diet and mode of living; the

consequence is, that their digestive organs are often deranged: this leads to a permanent disorder of the stomach; they are, consequently, seldom free from neuralgia.

In this, and all other causes of neuralgia, whatever tends to increase them must be constantly avoided, if neuralgia is to be permanently cured; for it would be as reasonable to expect, that a person, who has been apparently cured of ague, should remain free from it, if he desisted from taking the proper remedies, as soon as the paroxysms had ceased to return, and before the poison had been thoroughly eradicated from his blood; or that he should never be again subject to an attack, on fresh exposure to malaria, the original cause of the complaint.

THE END.

