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INAUGURAL DISSERTATION

ON

TIC DOULOUREUX;

TOGETHER

WITH A FEW CURSORY REMARKS ON INTERMITTENT
FEVER, AND ITS SUPPOSED CONNEXION WITH
THE FORMER :

SUBMITTED TO THE

Medical Faculty of the University of
Edinburgh,

IN CONFORMITY WITH THE RULES FOR GRADUATION,

BY AUTHORITY OF THE

VERY REVEREND PRINCIPAL BAIRD,

AND WITH THE SANCTION OF THE

SENATUS ACADEMICUS.

BY

JAMES HEYGATE,

M. R. C. S. L., &c.

_____ disease, though long my guest ;
That plucks my nerves those tender strings of life.
Young.

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MDCCCXXXVI.

TO

SIR WILLIAM HEYGATE, BART.

FORMERLY MEMBER OF PARLIAMENT FOR SUDBURY,

&c. &c.

MY DEAR SIR,

To me it cannot be otherwise than a source of the greatest gratification to be permitted to dedicate this trifling production to one, whose public and private life has been marked by so many estimable qualities.

That you may long live in the bosom of your family, to enjoy health and happiness, is the heartfelt wish of,

DEAR SIR,

Yours, very sincerely,

THE AUTHOR.

July 1836.



P R E F A C E.

THE following scattered remarks are purely practical, founded on some years' close observation of the phenomena of disease ; and I do trust they will induce others (who have still more ample practical opportunities), to trace the origin of this most formidable complaint, and to determine, more clearly, Nervous Irritation, in contradistinction to Inflammation ; for satisfied am I, that pure nervous irritation is not only frequently mistaken for Inflammation, or Congestion, but that the treating the one for the other leads to the most melancholy results. The fact, that severe Facial Tic Douloureux often originates in organic disease of the head, seems to have been scarcely ever entertained, much less decided upon.

Since writing the following account, the Nervous System has, more than at any former period, engaged the attention of medical authors.

Much, in a very short time, has been written to elucidate the influence of the nerves on the animal economy, both in health and disease, without any immediate reference to Tic Douloureux.

It is gratifying, however, to see that the Nervous System is as much studied, and now claims as much attention, as the Sanguiferous System has done; for, in all probability, it will be found that the former plays a more prominent part in disease than the latter, and that too much attention has been devoted to the one, to the exclusion of the other.

A FEW
REMARKS
ON
TIC DOULOUREUX,
OR
NEURALGIA.

I WAS particularly led to the consideration of this subject, from a case of peculiar severity, which came under my observation some few years back, and of which I shall give a rough sketch in the ensuing short Treatise.

Observation has brought me to believe, that Tic Douloureux, in one shape or another, is a far more frequent disease than at first sight would appear. That it has not received that attention from medical men which the frequency of its occurrence would demand, seems equally certain. I do not presume to attempt to supply this desideratum; but if what I suggest

should stimulate others to explore a field left hitherto in a most uncultivated state, my object will be gained.

Unfortunately, the greater number of the cases which have as yet been recorded by the various authors who have written upon the subject, have not (of course generally from unavoidable circumstances) been followed up by dissection. Had such been the case, perhaps most of the severe cases would be found to originate in organic disease, principally situated at the origin of the nerves. Likewise it is said to be a disease that is seldom fatal. If such be the case, few opportunities have offered themselves for post mortem examination. It is unquestionably frequently most protracted in its nature, and leads the patient on through years of suffering, when life is sometimes terminated by some other attack, and thereby the practitioner loses sight of the original complaint.

Whether Tic Douloureux is, of itself, often fatal, or not, it nevertheless would be a most interesting subject of investigation, to ascertain, in the severe cases, the state of the nerves supplying the affected parts, either in their origin or progress, or the state of the parts adjacent to the origin of the nerves, in order to prove whether some organic derangement do not almost invariably appear. The clearing up of this question would at least be a satisfaction to medical men, and, I should think, to the friends of the patients

themselves, though (if the inference I draw be correct) a melancholy one.

Numerous, indeed, are the cases of simple Tic Dououreux, which arise from functional derangement only, especially of the digestive organs; and to distinguish between this species (functional derangement) and the other (organic derangement), ought to be the primary object of every practitioner. I do not know that any rules for this purpose have ever been attempted to be laid down; and if we reflect on the hidden nature of the proximate and predisposing causes, we may readily conceive how vague and ineffective any attempt must be, to write down decided diagnostic symptoms.

The origin of organic disease in the head, is peculiarly difficult to distinguish from functional derangement; in fact, until organic disease has made some progress, it is frequently quite impossible to discriminate; and even then, many collateral circumstances must be called to our aid, such as, the peculiarity of the individual temperament, the idiosyncrasy, both mental and corporeal, &c. In truth, nothing, save the most rigid and persevering observation at the bedside of patients, can render any information at all satisfactory; and, still digressing from the immediate object under consideration, it may be remarked, that observation is of such vast importance, and so essential, that he who thinks to gain all that is necessary

from the most valuable treatise ever published, will, when he comes into actual practice, find the finely spun class of symptoms constantly varying; for scarcely did there ever exist two cases of the same disease, in which the symptoms, in their minor detail, did not in each very much vary, requiring a dissimilar plan of proceeding.* Observation, indeed, is so important, that he who is blindly led by preconceived notions, who does not make the subject-matter of every case, of *every visit* to a patient, the season for fresh and distinct thought, will be constantly erring—will find himself prescribing against, instead of for, existing symptoms; and, I would ask, how many are the complaints, where the *existing symptoms* are the only data upon which our prescriptions can be judiciously formed?

Tic Douloureux, in its severest form, is certainly one of the most painful diseases which “flesh is heir to,” and, to the medical attendant himself, whose resources are so limited, and whose prospects of cure are, generally speaking, more than doubtful, the watching it through its various stages, is not only unsatisfactory, but peculiarly distressing, especially to the mind of a man imbued with keen sensibility, and whose grand object it is to afford speedy relief to his patients. We are, however, often left to deplore the

* When speaking of observation, of course I mean that it should be based upon sound theory, unincumbered by ignorance or prejudice.

inefficiency of our art, and to lament the as yet great uncertainty in which this part of medical science is involved;—still, notwithstanding all this, it is our bounden duty to exert all our energies to relieve, where we cannot cure; and, sure enough,

“ Some must watch, whilst others weep,
Thus runs the world away.”

The milder form of the disease, and this, fortunately, is most frequent, is far more under the influence of remedial agents; and proper treatment will frequently lead to the happiest results.

Every one in practice, especially in malarious districts, must have met with a number of anomalous cases, where the patients complained of “ shooting pains” about the head and face, which, instead of being relieved, were increased, by the usual treatment for inflammation; and I have frequently heard patients, after applying leeches, use words to the following effect: “ The part affected was better whilst the blood was flowing; but, after each application, the pain returned with redoubled vigour.” These, surely, are cases of nervous irritation, or, in other words, simple *Tic Douloureux*. They may, in some instances, have set in with inflammation; but frequently are purely led onwards from nervous irritation; and no doubt the precise point is often difficult to decide, viz. where inflammation ceases, and ner-

vous irritation, or pain of the nerve, from weak irritability, begins.

Mr Travers, in his work on Constitutional Irritation, after acknowledging the difficulty of discriminating between inflammation and nervous irritation, broadly defines inflammation as power, and nervous irritation as weakness. This definition is calculated often to mislead; for acute inflammation is often accompanied by the greatest imaginable prostration of strength and striking debility of all the vital organs.

As the right treatment of the two cases is so diametrically opposite, it is the more important that our diagnosis should be accurately formed, and that we should not be treating nervous irritation for inflammation, "et vice versa." Attentive observation, and long experience, will enable us to discriminate more accurately, than the most refined definitions, which the ablest writers are capable of placing on record.

DESCRIPTION OF THE DISEASE.

Tic Douloureux, or Neuralgia, which is now the term generally made use of, it would appear, was scarcely known, much less understood, till about the middle of the last century, when M. André, surgeon of Versailles, embodied a description of it in a treatise on the Diseases of the Urethra. In 1766, Dr Fother-

gill, in the Medical Observations and Inquiries, vol. 5, gave a more ample detail of its symptoms, and, from its comprehensiveness, contrasted with the brevity of M. André, it has been considered as the original account of the disease. Afterwards, MM. Thouret and Pajol gave to the world a valuable account in the Memoirs of the Society of Medicine of Paris, in the shape of cases, described with much care and minuteness. Since which time, others have occasionally written on the subject.

Some of the ancient authors have likewise given descriptions of painful affections of the head and face, which approximate very nearly to what we now know of Neuralgia of these parts. Amongst the oldest of them is Aretæus, who described a class of symptoms, which bore a more faithful resemblance than any that were given for a long time afterwards; nevertheless, as there were no correct definitions introduced, it is impossible to say whether these painful affections might not have been attacks of inflammation or rheumatism merely, and as the advantage, in a practical point of view, of stating the opinions of these authors, is very questionable, though they may be interesting to the medical philosopher, I shall, with this exception, pass them over.*

* Aretæus says: "Formæ Cephalææ infinitæ sunt. Quibusdam enim perpetuus dolor; nonnullis per circuitus revertitur, ut iis qui quotidiana intermittente febricitant...dolor modo est in toto capite, modo in dextra magis, modo in sinistra, modo circa frontem, aut sinciput: hæcque co-

For some time the ravages of this complaint were supposed to be confined to the nerves of the head and face, described under the term Neuralgia Facialis, or, as Dr Kerrison in his Inaugural Thesis calls it, Neuralgia Faciali-Spasmodica; but well marked cases, in the feet and breast, induced the late Dr Goode to describe three species, Neuralgia Facialis, Neuralgia Pedis, Neuralgia Mammæ. From the various shooting lancinating pains which seize other organs and parts of the body (which pains, from the effects of

dem die incerte et erraticæ fieri solent. Quidam dextra tantum parte dolent, quidam læva; qua tempus, vel auris, vel supercilium unum, vel oculus ad medium usque terminatur, vel qua nasus in æquas partes dividit; ultra quem terminum dolor non progreditur, dimidiam tantum capitis occupans. Haud leve malum: quamvis intermittit, quamvis exiguum esse prima specie videtur: nam si acute interdum impetum faciat, fœda atque atrocia detrimenta adfert: nervi distenduntur, facies obtorquetur; oculi vel contenti instar cornu rigidi sunt: vel huc, atque illuc, interius convelluntur, ac vertiginose agitantur: in ipsisque dolor profundus usque ad intimas tunicas descendit. Neque ulla causa præcessit, perinde ac si quis ligno plagam infixisset."—*De Caus. et Sign. diuturn. Morbor. lib. i. cap. 2.*

Wepfer, who wrote at a comparatively speaking later period, gives the following good description, in the case of a female, æt. 52, under the name "Hemicrania læva." He says: "Dolor subito illam invadit: occupat partem genæ sub palpebra inferiori, ubi os maximum maxillæ superioris situm est in dextro latere, inde vergit versus tempus, simulque affligit frontem supra oculum et nasi partem dextram, et portionem labii dextri infra pinnam narium, ut attactum plane non ferat; graviter quoque circa radicem oculi dextri excruciat, ac oculum quasi retrahit, lacrymasque profuse exprimit—dolor est lancinans, urens, pungens, tendens, *prope intolerabilis*, sed *brevis et momentaneus*: sæpe per duas aut tres septimanas affligit, aliquando in una die, in una hora sæpius illam adoritur. Dum me hodie convenit intra horam plusquam sexies eam invasit, qualibet vice lacrymas ex solo dextro oculo expressit, oculus rubuit, inde labium tremebat in dextro latere."—*Observatio 50.*

treatment, clearly testify that they cannot come under the denomination of Inflammatory or Rheumatic, &c.), I have been led, without much hesitation, to say, that every distinct organ is occasionally the seat of this painful disorder. Undoubtedly, the nerves of the head and face are oftener the seat of pain than any other part of the frame; though even here, the cause of severe Neuralgia, unless some local injury has been given, or there is some external mark of violence, generally, I am inclined to think, resides at the origin of the nerves, either produced by some unnatural growth or spicula of bone, or some other disorganization.

The French divide Tic Douloureux of the head and face into four species; the frontal, suborbitary, maxillary, and Neuralgia of the facial nerve. Various French authors have also mentioned the following species: 1st, "Neuralgie Intercostale;*" 2d, "Neuralgie Ileo-scrotale;" † 3d, "Neuralgia Lom-

* Siebold describes a case. The pain was between the 8th and 9th ribs.

† "M. Delpech en a publié une observation. La douleur se faisait sentir dans la région lombaire, l'aîne droite, et surtout dans la partie postérieure, et supérieure, de la grande lèvre correspondante: elle ne s'étendit point jusqu'à l'os eschion; mais elle se prolongea dans toute la vulve, le vagin, l'utérus; la constitution était profondément altérée. Les remissions qui duraient souvent plusieurs mois de suite, n'étaient jamais complètes, les douleurs subsistaient alors dans les grandes lèvres et les seins; mais des douleurs de poitrine souvent accompagnées de toux d'oppression, et d'hémoptysies, des convulsions hystériques, très-frequentes disparaissaient alors, et la malade reprenait de l'embonpoint, jusqu'à de

braise ;” 4th, “ N. Spermatique ;” 5th, “ N. Cubito-digitale ;” * 6th, “ N. Femoro-pretibrale ;” 7th, “ N. Femoro-poplitée ;” † 8th, “ N. Plantaise.”

For a long time, physicians confounded “ Neuralgie Femoro-poplitée” with Rheumatism. This species shews itself, more especially during cold and wet seasons, in nervous temperaments,—also it is caused by the sudden checking of a violent perspiration, and sitting or lying on damp ground. Simple Neuralgia of these parts is not very uncommon, and it is of great consequence to distinguish it from any inflammatory or rheumatic affection, as the successful treatment is so opposite. Here, generally speaking, strengthening the system, at the same time, allaying nervous irrita-

nouveaux paroxysmes. L'établissement d'un seton, par le moyen du cautère actuel, à travers les points douloureux de la grande lèvre, amena un changement avantageux, depuis lequel la maladie se reproduisit à plusieurs reprises, mais avec beaucoup moins d'intensité, et cessa enfin complètement.

“ M. Chaussier a vu cette Neuralgie plusieurs fois ; elle a son siège dans le rameau de la première paire lombaire, qui, longeant les muscles psoas et iliaque, se rend au scrotum ; la douleur, suit ce trajet, et les phénomènes locaux secondaires sont le resserrement du scrotum, la retraction du testicule, la secretion de l'urine n'est point altérée.”

* “ Cotugnot a observée un assez grand nombre de fois ; elle a son siège dans le nerf cubital ; la douleur commence au niveau de l'olécrâne, suit le bord cubital de l'avant-bras jusqu'à la main, et remonte quelque fois vers le bras.”

† “ M. Chaussier a substitué à son nom, ancien et vague sciatique nerveuse, celui de Neuralgie femoro-poplitée, qui fait parfaitement connaître sa nature, une irritation fixée sur le nerf femoro-poplitée (sciatique), et qui la rattache au genre des neuralgies.”—*Dictionnaire des Sciences Medicales.*

tion, will succeed best. Thin, nervous, languid, constitutions, from 40 to 70, are most liable to be attacked. It may be distinguished from the numerous other affections to which these parts are subject, by its invariably following the course of the great sciatic nerve, or rather from the very peculiar nature of the pain, by the parts being unattended by any discoloration of skin or swelling, or any other external appearance whatever. I may here remark, that as a cure for this species, the essential oil of turpentine appears to have been many times successful in the hands of the late Dr Home* of Edinburgh, and Dr Recamier, of the "Hotel Dieu de Paris." With the latter, large doses given three times a-day, completely cured seven cases in six days. Also the late Dr Duncan found the extract of Aconite very efficacious in this species.

Whether Tic Douloureux be really on the increase in this country, or whether this idea arises in one's mind, from its not having formerly been so well comprehended, I do not pretend to say; but of its coming more under the cognizance of the profession, I have not the least doubt; and I would ask any medical man, if he has not frequently met with cases of acute pains in different parts, which have resisted all the usual remedies for inflammation and rheumatism, but which would legitimately come under the description of "nerve-ache or nervous irritation," as evinced by the

* Vide Dr Home's Clinical Cases.

success of the treatment employed, namely sedatives and tonics.

Mr Abernethy, in his Lectures, used to say, "When the nerves are affected locally, it most frequently depends on general disturbance of the whole nervous system. You may have numbness in a part and local pain, but in general, together with weakness and twitching of the muscles (for here I must connect the muscular and nervous system together), depend on something wrong in the nervous system. In short, I believe every disease as originally nervous." Now, this is a sweeping clause, and probably requires some qualification. Nevertheless, "nerve-ache" in distant parts, whether produced through the medium of the stomach, the brain itself, or any local injury, is far more frequent than has generally been admitted; and as a proof, correcting the digestive organs, and giving those medicines purely calculated to allay nervous irritation and tranquillize the system, generally produce far more benefit than all the antiphlogistic measures ever recommended.

Notwithstanding what has been before said, the most frequent situation of the disease is unquestionably in the branch of the fifth pair of nerves,* more

* "From whatever cause, whether from the more exquisite sensibility of the fifth pair of nerves, or its more remarkable connexion, certainly all nervous affections are peculiarly apt to fall with a concentrated force upon it. In irritation of almost any nerves, the pain will strike to the face and jaw."—*Sir Charles Bell on the Nervous System.*

especially the filaments of that branch of the fifth pair, which come out at the infra-orbitary foramen ; also the fifth pair, though like the spinal nerves performing a double office, that of motion and sensation, may be considered essentially the organ of sensation to the sides of the head and face ; and so agonizing sometimes are the paroxysms of pain, that patients, with the hope of cure, have submitted to a division of the infra-orbitary branch. This operation has, in some few instances, been for a time successful, but I should, generally speaking, much doubt its expediency ; for, in the first place, the cause is mostly beyond the reach of the knife ; and, secondly, if you destroy the communication in one branch, it may concentrate its virulent power in some contiguous twigs, thereby merely diverting the pain from one channel to another. This, also, ought to be more strongly impressed upon our minds, when we bear in recollection, that two violently diseased actions are seldom in force at the same time ; that the one, as it were, seems to counteract the effect of the other.

On this subject, Mr Abernethy says, “ Some persons have been led to divide the nerves of the part, but I say you might as well expect to cure a man with gout, of the pain in his great toe, by dividing the nerves going to the toe, as to cure a person of Tic Douloureux, by a division of the nerve. In both cases, the complaint is perfectly constitutional.” Now, al-

though I would go far in maintaining the accuracy and judiciousness of Mr Abernethy's remarks on this complaint, I must think, that frequently, the severer form of the disorder arises purely from a local and incurable cause, as instance the case hereafter recorded.

We may distinguish it from other diseases (as rheumatism, hemicrania, and toothach, with which it may occasionally be confounded) by its invariably following the course of the nerves. This (with the *suddenness* of the pain coming and going) is the best diagnostic symptom, and one that will never deceive us. It occurs always in paroxysms, and though these are of short duration, the intervals between each attack gradually lessen.

Tic Douloureux may be known (it is said) from rheumatism, by the fit being excited by the slightest touch, by the shortness of its duration, and by the extreme violence of the pain. The touch must be a very equivocal criterion to go by, as pressure sometimes produces the greatest relief: this I have myself witnessed, on parts where a pad of linen and a bandage are admissible. It is distinguished from hemicrania by occupying the branches of the affected nerves.

Many are the teeth that have been uselessly extracted in this complaint; but it behoves every medical man carefully to inquire into the history of the case,

before he exercise such unnecessary brutality ; by so doing, the characteristics will mostly be too glaring to be mistaken.

In the French Nosology, the disease is thus described, which, though concise, is admirably correct. “ Douleur vive et déchirante, avec des élancemens et des tiraillemens successifs, sans chaleur, sans rougeur, sans tension et gonflémens apparens.—Le siège de la douleur est fixé sur une tronc, on sur une branche du nerf, et elle semble sélancer du point primitivement affecté sur toutes ses ramifications.”

It is needless here to prosecute a farther description, as the case at the end will afford an ample detail of facial neuralgia ; and if any other part of the body is affected, the real symptoms are essentially the same.

CAUSES OF THE COMPLAINT.

For the sake of ascertaining the causes, and simplifying the treatment, I would divide Neuralgia into Simple and Severe. By the Simple, I would understand those cases which arise from functional derangement only ;—by Severe, those which come under, or are produced by, organic derangement.

With the *Simple*, the stomach and digestive organs generally play the most active part ; and it is probable that any portion of the body may be affected by

these causes. But, even in Simple Tic Douloureux, it may readily be admitted, that the causes may be various (for instance, *malaria* is one very fruitful cause), though derangement of the stomach and duodenum the most frequent source; and this is satisfactorily accounted for, when we remember the known sympathy which exists between the nerves of these parts and those of the head and face, and, we might add, between almost every part of the body.

Mental agitation is another exciting cause; and this, in all probability, acts through the medium of the stomach, as is familiarly instanced in the most powerful appetite being suddenly taken away by great mental excitement.

In constitutions predisposed to attacks of this sort, nothing will more readily induce them than *malaria*. The slightest exertion of body, damp air, a current of wind, are immediate exciting causes of a paroxysm. *Any commotion* of mind will sometimes bring on a relapse; indeed, when this complaint is once established, nothing will so readily bring it into action.*

* Some French authors have found it to depend on the suppression of an habitual evacuation of the menses, of an hæmorrhoidal flux, of leucorrhœa, of an ulcer; many times on the suppression of a nasal catarrh, of an old fistula of the gums, of the suppression of caustics, especially when placed above the knee, have frequently caused "Neuralgies fémo-ro-Poplitée." Sauvages states the presence of worms as a cause, called in his Nosology, "Ischias Verminosa;"—also a violent spasmodic affection, but it is generally spontaneous. The urine, citron-coloured during the remission, is aqueous during the accession, offering all the characteristics of urine called nervous.

In severe cases, from want of post-mortem examinations, the causes are not so clearly ascertained; but perhaps they almost invariably arise from some organic disease. Some tumour, ulceration, or spicula of bone, at the origin of the affected nerves; in fact, any substance that presses on the nerves, at their origin

The following remarks, found in the "Dictionnaire des Sciences Médicales," are worthy being recorded.

"Ceux-là ont dit qu'elle participait de celle du vice—Cancéreux, mais l'existence du vice cancéreux a été justement révoquée en doute, et les partisans de M. Broussais voient dans le cancer le dernier terme d'une irritation prolongée, qui a envahi et les vaisseaux blancs, et les vaisseaux rouges, dont sont composés principalement nos divers tissus: ceux-ci supposent la réalité d'une humeur acrimonieuse dans les environs du nerf, ou dans le nerf lui-même; mais ces vieilles explications, puissées dans l'humorisme, ne sont plus en harmonie avec l'état actuel des connaissances physiologiques, et ont cessés des long-temps de satisfaire les esprits impartiaux et judicieux.

"Le célèbre Professeur Chaussier, à qui on doit cette observation, a remarqué encore, que dans la sciatique, le volume du nerf femoro-poplité était manifestement accru, et que ses vaisseaux très développés, offraient une sorte de dilatation variqueuse; état qui a été également noté par Bichat.

"En résumé, les différentes dissections de nerfs, qui avaient été le siège de neuralgies, n'apprennent rien, ou très peu de chose: les phénomènes les plus ordinaires qui ont été observés, sont l'augmentation de volume du nerf, du quelquefois uniquement à un état œdémateux, de son tissu cellulaire, et des varices plus ou moins volumineuses, et multipliées, des veines qu'il reçoit—Reste à savoir si ces phénomènes sont effets ou causes."

This augmentation, in all probability, is merely the secondary *effect* of lengthened irritation and pain; the *cause* of which is either at the origin, or nearer the origin of the nerves than the parts actually affected. The sensation being at the extremity of the nerves, especially in Facial Neuralgia, the pain and irritation which are in the branches may produce an alteration of structure in them, and yet the cause be more deeply rooted, namely, in the head itself.

or in their course, may certainly, by the irritation it produces, cause Neuralgia at the ends of the nerves. A carcinomatous sarcoma was the cause of the case I shall hereafter have to mention. Sir Henry Hallford has published a few cases, accompanied by some most excellent remarks, where dissections demonstrate the fact, that diseased bone, &c. are frequently incurable causes of (what I call) "Severe Tic Douloureux."

Dr Parry, in his "Elements of Pathology and Therapeutics," advocated the theory of increased vascularity, and attributed the pain to a determination of blood to the neurilema, or vascular membranous envelope of the nerves. I should think dissection would seldom bear him out in this assertion; for though, in the first stage, inflammatory action may occasionally occur, and require depletory measures, the result of experience will shew, that the treatment most successful is totally different from that used in increased vascular action.

Tic Douloureux is said seldom to originate under thirty years of age;—probably the Severe form may not, but the Simple form frequently attacks much younger people; and I have lately had a well-marked case of Frontal Neuralgia under my hands, in the person of a young woman about twenty years of age. Over-exertion of mind or body, generally, was the immediate cause of a paroxysm coming on. The severity and duration of them, for the last year, have gradually lessened;

so gradual, indeed, has been the amendment, that I am most sanguine as to a perfect recovery ultimately. At first, local bleeding, blistering the nape of the neck, and tincture of iodine applied externally; then carbonate of iron, arsenic, mercurials, &c., were tried, but no effectual relief was produced. For the last sixteen months, or more, she has taken, merely when she finds the paroxysms coming on, the tincture of opium in cinnamon-water, repeated till the pain gives way; the aloetic pills have also been given, to counteract the constipating effects of the opium. The result is satisfactory, inasmuch as a less frequent application to these medicines is necessary, the distance between the attacks greater, and when they do come on, they more readily give way.*

As derangement, or an ill condition of the digestive organs, is not at all an unfrequent source of nervous

* This young woman has remained free from any attack for about a year, and I have every reason, from her general state of health, to conclude that she is effectually cured. 1835.

When young people, especially females, are afflicted with Tic Douloureux, in the course of my practice, the form I have generally found it at first assume, has been that of *Frontal Neuralgia*. They were mostly bloodless-looking subjects. The pains occurred irregularly, though after the fatigues of the day I noticed them more particularly. The catamenia were generally interrupted, but this appeared always more the *consequence* than the *cause* of ill health; and its restoration (instead of being brought about by emmenagogues) seemed to be the natural result of a return to a state of convalescence. I mention this last circumstance, because I feel assured that the disease is often prolonged by attempting to provoke this discharge, with irritating emmenagogues.

irritation, producing, in fact, Simple Tic Douloureux in various parts of the body; and as the duodenum, or, as it has been appropriately called, the "Second Stomach," bears a foremost part in diseased action of these functions; perhaps it may not be thought deviating too much from the immediate subject under consideration, were I to make a few practical observations on duodenal irritation, which it has fallen to my lot so frequently to witness.

I may begin by giving a concise view of digestion itself, as far as the stomach and duodenum are concerned. The food, being mixed in the stomach with the gastric juice, is reduced into a pultaceous mass, and, somewhat diminished in bulk, passes into the duodenum. The chyme having passed the pylorus, is mixed with the liquid issuing from a vast number of glands, placed more especially at the beginning of the duodenum. Aided partly by the action of the intestine, and partly by the diaphragm, during respiration, its contents are passed onwards, and being mixed with the pancreatic and biliary juices, undergo a farther change, by which is produced the chyle. Thus we see the duodenum bears a prominent part in the digestion of the food, and when we anatomically pursue it through its tortuous windings, carefully considering its close connexion with the gall-ducts and liver, its being bound or tied, as it were, to the colon, right kidney, &c.; and, in fact, its being vitally con-

ned, by proximity of situation, with organs so necessarily involving the right action and health of the system, we may not be surprised that disease of this intestine should be frequently complicated with disease of other and more distant parts. That pure derangement of it has been mistaken for disease of the liver, I myself have witnessed, and the taking mercury, so as to produce salivation, has only added to the mischief.

Moreover, the nerves which supply the duodenum have an extensive communication with the rest of the body, by a connexion with the par vagum and great sympathetic, through the medium of the semilunar ganglions. Well may irritation, then, or obstruction of this intestine, produce Simple Tic Douloureux pains.

It certainly does appear, that the baneful effects of continued indigestion in this intestine may prove more distressing than in the stomach itself. Looking at the sympathy which obtains between the chylopoetic nerves and almost every part of the body, distant symptoms are produced, of a very painful nature, and these generally will be found to be those of nervous irritation.*

* Sir Charles Bell, in his truly valuable work on the "Nervous System," when speaking of the fifth pair of nerves, says—"The painful affection of Tic Douloureux is seated in the fifth, and mostly in the second division of the fifth pair; and so convinced am I that it is the more direct connexion established betwixt the sympathetic nerve and the fifth pair

More especially as regards Tic Douloureux, let us particularly reflect from whence and from what various sources the duodenum derives its nervous influ-

that produces this pain, that I could wish to divide the sympathetic in the neck, if I could do it with safety." Again: "I am of opinion that the disease called Tic Douloureux has its source in visceral irritation, communicated through the sympathetic nerve." While Sir Charles Bell would confine Tic Douloureux to this source, Dr Elliotson,* on the contrary, says—"We have never seen one case referable to such an origin" (viz. the digestive organs).

It would be difficult to reconcile such conflicting opinions, did we not take a comprehensive view of the subject, and such as the nature of the disease would seem to demand. Sir Charles Bell relates a case, where pressure on the root of the fifth pair, from a tumour containing a fluid, produced violent pain in the face, and ultimately death. This he does not call Tic, though marked with all the characteristic symptoms. He would not call that Tic, where the internal branches of the fifth pair, being irritated by disease, produce pain in their external branches. Did we even allow this line to be drawn (for which I do not see the shadow of a reason), I think it would often be found difficult, in the first stage of these painful affections, positively to declare whether they arise from organic disease in the head, from malaria, or from visceral irritation merely. At the same time, surely one would not hesitate to look upon them as cases of Tic Douloureux, especially when the pains put on every character of this complaint, are purely confined to the nervous branches, and, in fact, exhibit no marked difference in any way.

Sometimes, no doubt, the visceral irritation is so obvious, even from the beginning, that we can pronounce with a tolerable degree of certainty; but, generally speaking, till the disorder has made considerable progress, it is difficult to decide on organic disease in the head as a cause.

On the whole, the conclusions I would wish to draw are, that there is a severe species of Tic Douloureux, arising from organic derangement; that there is also a species arising from functional derangement of the digestive organs, and from malaria (this last, as I have so frequently seen, shewing itself in the shape of periodical headaches, of the Neuralgic kind). Also, that, when the membranous envelopes of the nerves are seized with inflammation, they should be called and treated as cases of inflammation, in contradistinction to that sufficiently extensive catalogue of ailments—nervous irritation, or Tic Douloureux.

* Vide Dictionary of Practical Medicine.

ence; and thus we shall see how, when deranged, it may involve the head, the whole abdominal and thoracic viscera, in diseased action. From its peculiar situation and connexion, perhaps it is difficult to decide on disease in this intestine—(it must be by dint of the most patient observation, with many collateral circumstances being borne in mind, that can enable us to arrive at any thing like a satisfactory conclusion)—but I have, however, frequently known patients describe pain and soreness precisely through the course of the duodenum. One pregnant cause of this pain and soreness is from the nerves of the intestine being overstretched from distention of its coats, produced by flatulency, the consequence of bad digestion, or produced by obstruction. What is this but nerveache, or at least a species of Simple Tic Douloureux? Thus we see, from nervous influence, how mere functional derangement of the digestive organs may produce Simple Neuralgia in various parts of the body.

Then the next query is, How is this duodenal obstruction, irritation, or whatever aspect the derangement may put on, to be removed? Certainly not by violent measures. Regulate the diet, and if fever and furred tongue attend the symptoms, I generally give the saline medicine in a state of effervescence, adding a scruple of the sulphate of potash to each dose, with a few grains of the extract of hop. I certainly have found the sulphate of potash a very valuable auxili-

ary in removing obstructions of the duodenum, not inducing that weakness of the stomach which the other neutral salts are apt to do; and therefore can with some degree of confidence recommend it. At the same time, I give the following formula, with or without aloes, according as symptoms require:—

R Pilul. Hydrar.,	.	.	gr. ij.
Pulv. Rhoëi,	.	.	gr. ij.
Extract. Conii,	.	.	gr. iij. M. ft.

Pilulæ duæ omni nocte vel alternis noctibus sumend.

If there be no fever, it is better to give some simple bitter infusion, with the sulphate of potash, and the above pills. Of course, we must somewhat vary the treatment, according to the symptoms; but, by steady perseverance in the plan described, the patient will frequently get rid of a troublesome train of symptoms, which have baffled more active antiphlogistic measures. Should a more powerful sedative be required, the liq. opii sedatio, or muriate of morphia, has been added, instead of the extract of hop. Unless the duodenal irritation be allowed to go on, so as to occasion chronic inflammation, I am inclined to think that more essential good is done by (if I may be allowed the expression) humouring the digestive organs into good conduct, than by the more violent cathartics,

even should the state of the bowels seem to indicate the use of them.

Another cause of the distention of the duodenum, is from this intestine not freely discharging its contents; this, as well as the extrication of gas, may so distend the nerves, as to produce Tic Douloureux pains. A person accustomed to manual examination, can readily discover to what extent this intestine is distended: the pain will vary according to the morbid irritability of the patient's nerves. I say, you may have this pain, without one atom of inflammation, or any symptom bordering upon it. A want of tone and strength in the muscular coat, a want of energy in the system altogether, coupled with decided symptoms of dyspepsia, will produce over distention, occasioned either by the extrication of gas, or great accumulation of its contents, from inertness of action; these causes give those pains of the nerves, which may be called purely neuralgic. These pains will often come on periodically, and will frequently be very severe and protracted in their nature. I might here remark, that children are peculiarly liable to complaints from distention of this intestine, produced by an accumulation of its contents.

That long continued irritation here, as elsewhere, may induce chronic inflammation, and ultimately organic disease, there can be little doubt; but this is, comparatively speaking, rare, and may most frequently

be prevented by timely judicious treatment. The pulse may deceive, as it is tight, and (if I may use the expression) bound up; this is the case with the secreting as well as the circulating system; thus, stimulants and direct tonics often do great harm.*

Physicians are frequently called in to patients suffering under violent spasmodic pains, to use their own expression, "across the stomach," with which, they say, they were suddenly seized, and which will return at stated times, either before a meal, or very soon after.

Flatulency, occasioning over distention of the coats of the stomach and duodenum, and thereby exquisite pain of the nerves of these parts, is frequently the sole cause. As there is a species of these spasmodic affections, which arises from nervous irritation, it might with truth be called Spasmodic Neuralgia.†

TREATMENT.

Numerous, indeed, and various are the remedies that have been extolled; and the cases published at

* If we take into account what Dr Elliotson says on Neuralgia, in the Dictionary of Practical Medicine, and what Mr Teale says in a Treatise on Neuralgic Diseases; also Sir Charles Bell's remarks, &c., we may easily see how divided medical men are in their opinion, as to the causes of this complaint.

† I regret much not having kept notes of numerous cases of this description which have come under my own observation. I never found bleeding give actual relief. A dose of calomel and opium was, in the first instance, prescribed with advantage.

different times in the medical Journals, display as many specifics as are sent forth to the medical world for the cure of hydrophobia. Not only, however, in these diseases, but in many others, if we were to allow a few additional years of experience, of the same specifics, in the same diseases, to pass before we so warmly and confidently recommended our favourite remedies; our tone of commendation would frequently have occasion to be much lowered; for it is a curious fact, which I have frequently observed, that at one time (whether arising from the season of the year, or a peculiarly favourable state of the atmosphere, or from some unknown causes) we may have a run of the success in the treatment of complaints, when at another time, the very same treatment, under apparently identical circumstances, may produce as many failures. Thus, you constantly find cases hurried to the periodicals, with medicines sent forth to the world, as never failing and invaluable remedies,—the reader, equally sanguine, adopts them, and often, with what success, I need not tell the experienced practitioner. I do not say this by way of disparagement of the recital of cases (for of all species of information this, as far as practical purposes are concerned, is the most valuable), but to prevent disappointment, and to shew with what caution we ought to receive advice, written under the excitement of a train of pleasing results.

The first object in the treatment of Tic Douloureux,

should be to ascertain the state of the digestive organs, and to put them in proper order. Even where the digestive organs are not the sole cause, none of the usual remedies ought to be tried, till we have put them into as good a state as the circumstances of the case will admit of; and if the symptoms are not effectually relieved, we must resort to the catalogue of remedies usually recommended; but so much depends upon the state of the pulse, and the existing symptoms altogether, that no regular plan of treatment can be laid down. Medicines, which under some circumstances might prove highly advantageous, might under other circumstances prove equally detrimental. So various and so varying are the states of constitution, the habits of body, temperaments, and peculiarities of mind, attendant on this disease, in different individuals, that much must be left to the discrimination of the medical man in actual attendance.

After these observations, which may be thought not wholly irrelevant, all I think it necessary to do, and in fact, I was going to say, all I can do, is to enumerate the different remedies that are made use of in this complaint, and to remark on the merits of the most successful. But, again, as regards the digestive organs, the late Mr Abernethy even went so far as to say, "That if you put the patient on a rational plan of diet, and his digestive organs be got into a right state, this affection will not come twice. Now, I say,

I have seen several cases of this kind, and I am convinced that the treatment of Tic Douloureux should be constitutional treatment, and such as is calculated to allay irritation of the nervous system."

Sir Astley Cooper, in contradistinction to this, says, "The principal relief has hitherto been derived from operations, and these operations consisted in dividing some of the nerves of the face."

Here, indeed, is a contrariety of opinion; but I should incline much more to Mr Abernethy's ideas, inasmuch as the plan is more rational, and more in accordance with sound reason, at least, as far as sound reason can be advanced on this subject. Should, however, a patient wish to submit to the operation, for facial Neuralgia of the suborbitary nerve, it should be divided a quarter of an inch below the orbit.*

It is clear that where the malady arises from some organic disease at the origin of the nerves, nothing but an alleviation of the symptoms, and temporary ease, can be expected; and I am afraid many, if not most of the severe cases, have an origin somewhat of this nature.

Here opium given internally, and applied in its various forms externally, can alone be depended upon, as producing that satisfactory relief, so anxiously sought for by the suffering patient. I would also par-

* For a full description of the operation, see "Sir Astley Cooper's Lectures on Surgery."

ticularly suggest in the severe cases, a drain being kept up in the nape of the neck, either by means of an issue or seton. The weakness it may produce is very trifling, and may generally be guarded against by tonics and a more generous diet. A seton has the power of diverting and lessening the local diseased action going on in the head, and joined with other measures, gives Nature the only chance of righting herself again where absorption can take place, or (if she can't do this) of delaying for a time the fatal result.

During the use of opium, great care should be taken that the bowels be kept open, by some simple aperient; in the choice of which, we must be guided by the state of the patient at the time.

The *sulphate of quinine* has been strongly recommended by M. Dupré, and he has published some observations, coupled with two cases, in which Dr Rabey tried the medicine with success, which would lead one to consider it very efficacious, and looking at the nature of the other medicines, most successful; I can readily give credit to its efficacy, in certain forms of this complaint, especially that which arises from malaria. When the sciatic nerve is affected with this disorder, I have seen the quinine steadily persevered in, together with local stimulants, effectually cure, after all other plans had failed. Sometimes a sedative was given at bed-time. I have often seen a spe-

cases of protracted Lumbago of the neuralgic character, yield to tonics, especially quinine.

Arsenic, upon the same principle, has been tried, with great advantage; and, judging from its favourable influence over intermittent fevers, compared with the Sulphate of Quinine, I should consider it a far more powerful remedy, in most forms of the disease, more especially as it has been thought that there is some similarity in the two complaints. Certainly, though the characteristic symptoms are widely different, Simple Neuralgia is frequently produced by the same cause, viz. Malaria; and I have frequently known violent pain of some part to attend the periodical attacks of Ague.

Whilst upon this subject, perhaps I may be allowed to state my experience of the benefit of Arsenic, in the cure of Intermittents.

During the years 1826-7-8-9, when Ague was completely epidemical in this county,* raging to an extraordinary extent, I had under my care at least between six and seven hundred cases. The Liquor Arsenicalis I almost invariably found a *speedy* and effectual remedy. I certainly have found this solution succeed, when bark, quinine, and all other remedies have failed. Many of the patients had taken the sulphate of quinine for a long continuance, before they applied to me, without apparent advantage, and, though some of the cases were singularly obstinate,

* Buckinghamshire.

I found none that did not give way under the use of this solution.

In very few instances was it at all necessary to use the lancet.* The plan adopted was, if I found a foul stomach, indicated by a furred tongue, first of all to give an emetic and gentle aperient: if a pale, universally white, bloodless tongue, with bowels open, I immediately began the solution, gradually increasing the dose, and a very few days at farthest would most-

* I would here most unequivocally enter my protest against venesection in the cold stage of intermittents—a plan urged with such confidence by Dr Mackintosh in his *Practice of Physic*. It can be only necessary, in extraordinary and very rare instances, and will almost invariably protract, if not prevent, the cure. Whoever has been in the habit of watching this complaint, must be struck with the extraordinary debility which accompanies it; and though the equilibrium of the circulation is unquestionably greatly disturbed during the accession, I never knew any harm follow it, and the readiest mode of curing it is by removing the cause (*viz.* the paroxysm), by pouring in remedial agents during the intermissions. Even where bleeding is called for, from any *continued* local congestion, I would rather bleed immediately than wait for the cold stage.

Cases getting well under its employment in the cold stage, can *alone* be no criterion of its advantage, as they will frequently do this under almost any treatment; and it sometimes producing temporary relief would not lead me to entertain a more favourable opinion of the plan. I feel also satisfied, that, had it been adopted in many of the cases I had to treat, particularly amongst the poor, its consequences would have been disastrous in the extreme, in inducing a still greater tendency to dropsical effusions, &c.

Generally at the onset of this stage, the following draught will give even more effectual relief, and its ultimate consequences are salutary:—

℞ Tinct. Opii, gtt. xxxx.
 Vin. Aloe., ℥ss.
 Aq. Ment. Pip., ℥i. M. ft.

Haust.

y check the paroxysms. Often, the hot stage would be attended with violent pain, either in the stomach, the bowels, the head, the back, or the limbs, which, from its violence, would, under other circumstances, make one strongly suspect common inflammation, to which deception the urine would add, being often high coloured, leaving a brick-dust sediment. After the paroxysm was over, it would again put on a healthy appearance, till the accession of another.

Whilst taking the solution of arsenic, to insure its full benefit, it is of great consequence to keep the bowels gently open, and, should a furred tongue continue, or rather come on, with much heat and thirst, during its administration, it was ordered to be omitted for a few days; and, in the mean time, the saline medicine, with antimony, was given; resuming the sovereign remedy as soon as circumstances would allow. I must own, that relapses very frequently occurred, arising from leaving off the medicine too soon; but the symptoms were as speedily checked, by a repetition of the same means, unless, in some few instances, where, by repeated attacks, the constitution had become so deteriorated and beaten down, as to render change of air, and other restorative measures, necessary. Under these circumstances, I found change of air of essential service in *perfecting* a cure; for, though the solution would always check, relapse after relapse occurred, till this measure had been adopt-

ed. These were, however, comparatively speaking, solitary cases.

Though intermittent fevers were previously almost unknown in these parts, there no doubt was, during the years above mentioned, a sort of miasm in the air, that not only generated, but continued acting as an exciting cause, and proved an insuperable obstacle to a perfect renovation; the system became extenuated, and so weakened, that every gush of wind appeared sufficient to induce a return.

Notwithstanding these untoward circumstances, I have never known an instance (when unattended with any other organic disease) of a fatal issue.* Under all circumstances, however, I not only found it advisable, but generally, to insure a permanent cure, absolutely necessary to continue the solution, in diminished doses, for a length of time, after the paroxysms had left the patient, and never to leave off the medicine suddenly. There can be little doubt, from universal testimony, that the sulphate of quina is a powerful remedy, and I wish to be distinctly understood, as merely speaking of the comparative merits of arsenic and quinine.

A very interesting physiological effect I have often noticed in patients, from neglecting to be seen, and

* Intermittent fever, in hot climates, is more dangerous, and not unfrequently fatal. These observations, therefore, must be considered as confined to this country.

continuing the solution too long, or taking it in larger doses than was intended, viz. together with the usual symptoms of an over-dose, a tumefaction of the face, particularly round the eyes, and even sometimes a general swelling over the body. These symptoms, of course, induced one immediately to suspend the medicine; but I never found any serious consequences follow this state, and, when the solution was omitted, the œdema in a few days quite subsided. This was always the case, and must be considered quite conclusive, as to the swelling being the direct effect of the arsenic. Whether this curious physiological fact was owing to the arsenic entering the circulation, and irritating the extreme vessels, or whether it was owing to its action on the nervous system only, I believe cannot be well ascertained. A swelling of the surface of the body, when arsenic has been pushed rather too far, seems not to have excited the attention of authors, or to have been noticed by them, except by Dr Schlegel.* I can vouch, from ample observation, that it is a very safe remedy when judiciously given. Considerable additional experience since the year 1829 of its efficacy in intermittents, has not at all lessened the value of the solution in my estimation. On the contrary, wherever I have given it, I have found it equally successful.

* Several cases of this nature have been described by Dr Schlegel of Meinengen, and in one of them, the swelling, particularly round the eyes, appears to have been considerable.

The cases, assuredly, principally happened amongst the poor; and probably in the wealthier classes of society, more active antiphlogistic measures might be required, in the first instance—in truth, such I found to be the case—still, these measures premised, I always found the solution equally successful with the better fed as with the poor. Bleeding, either local or general, was here resorted to, according to the *extent* of the local determination of blood to some organ, which local plethora or congestion, more frequently shewed itself in the head.

Another circumstance I noticed, viz. that, if vomiting happened during the use of arsenic (which is often the case, under all circumstances, during the paroxysms), a greater quantity of bilious matter, to the no small relief of the patient, would be thrown off the stomach than is generally produced by emetics. Contrary to what has been often supposed, I never knew any permanent bad consequences follow the employment of arsenic—such as disease of the heart, &c. ;—and, from having narrowly watched its effects, I am inclined to consider it the most *powerful* tonic we possess.

In 1820, Mr Hutchinson published many cases, proving that the subcarbonate of iron, in large doses, frequently repeated, was a most excellent remedy, and, since then, it has held greater reputation than any other medicine. I recollect Sir Astley Cooper, in

his lectures, strongly recommended it. Others, again, from its being obliged to be taken so long before any decided benefit is felt, have considered it almost inert. Moreover, Mr Hutchinson subjoins other treatment, which perhaps may detract from the sole efficacy of the iron; for instance, he takes off inflammatory action when present, attends strictly to the abdominal functions, forbids mercurials and purges, and all other medicines likely to debilitate the nervous system, and regulates the diet. Perhaps many of these successful cases would have as readily yielded, and in as short a time, or less, to the plans recommended by Mr Abernethy for restoring the health, joined with local treatment. Still, the carbonate of iron deserves its meed of praise; and when one reflects how much of the pathology of the disease is built upon irritability and debility of the constitution generally, we must allow that the iron, as also the sulphate of quinine and arsenic, are likely to exert a favourable influence over the disease. The carbonate of iron, even in the case I shall hereafter have occasion to mention, for a time, seemed to prove somewhat useful. I gradually increased the quantity, till the patient took doses of three drachms, frequently repeated. In fact, so much has been said on the advantage of administering this remedy, that certainly we ought not to allow an obstinate case to pass without trying it. We had better begin with doses of a scruple, taken three

times in the day, at the same time carefully attending to the state of the *primæ viæ*, as any remedy of this sort must be worse than useless, unless the stomach is kept tolerably clear, the biliary secretions in proper order, and the bowels regularly acted upon.

Here, perhaps, I may stop to remark, that it is most essential to watch the state of the mind. The influence which the mind has over the corporeal functions, more especially over the digestive organs, is too well known, to require any comment from me, but if ever there were a class of diseases over which its influence is more evident than other classes, nervous affections are most remarkable; amongst which, I need not tell the reader, Tic Douloureux bears a prominent part. Every thing, therefore, calculated to relieve a disturbed state of mind, must be promptly attended to, change of scene, change of air, for though many of our fashionable watering places have obtained high repute, and the efficacy of their waters spread far and wide, most probably the greater good springs from change of scene and change of air. I myself have so frequently witnessed the advantage derived from change of air, even from one county to another (and that an adjoining one), when people are, as they call it, "out of health," that I cannot lay too great a stress on this point. The advantages are unquestionably more clearly seen, where a person has been residing for a long time in one situation, and when this

is the case, I have known all remedies fail to restore perfect health, till this plan had been adopted; you may go on and vary your treatment as much as you please, but Nature seems determined to persist in diseased action, till change of air has been adopted,—a change, even from the country to the smoky atmosphere of London itself, I have known to do good.

The next medicine which deserves mention, on account of its supposed powerful influence over Neuralgia Faciei Spasmodica, is Belladonna. A late writer (Mr John Bailey), has recorded many cases, which were attended with excruciating agony, which had resisted all previous means, but which effectually gave way to this medicine. Two or three grains of the extract, or twenty to forty minims of the tincture, in any vehicle, were administered every four hours. This tincture, also, may be used as an external application. As it seems to possess a specific action on the nerves, in many instances it may prove more effectual than any other sedative in allaying irritation; it ought, however, to be given with great caution.

The Americans consider emetics, above all other modes of treatment, the most useful.

The late Dr Armstrong, for the following reasons, determined on trying bleeding (and that not sparingly), both general and local, together with active cathartics, and the occasional application of a blister to the nape of the neck.

A strong idea had been impressed upon his mind, that severe Neuralgia Facialis, had its origin in the brain. This idea was much strengthened by the examination of cases which came under his own observation, where the affection of the face was preceded and accompanied by evident cerebral disease, as pain, confusion, giddiness, or some other unpleasant feeling in the head, the external senses deranged, with (he says) symptoms of congestion, or of increased action of the vessels of the brain—sometimes the liver and stomach would sympathize. Most likely, however, these troublesome symptoms may have sometimes originated in the stomach and liver, or the duodenum, and the head prove to be merely the secondary or sympathetic affection.

Though the measures recommended by the above physician may prove serviceable in some few instances, at the very commencement of genuine Tic Douloureux, I should doubt the wisdom, or even prudence, of persevering in these depletory measures, when the disease has once shewn itself in all its characteristic symptoms, as bleeding often decidedly adds to the mischief.*

* I think it would be more in unison with sound Pathology, and prevent much confusion, were we to confine the term Neuralgia to irritation, apart from inflammation; for, granting that the neurilema, or vascular membrane which covers a nerve, is liable to seizures of inflammation, why not designate these attacks purely inflammatory, as we do when the coverings of a vein or artery are so affected? It is not difficult to ascertain the presence of inflammation, as by tracing the course of the nerve, *pressure* will give *acute* pain.

Here, again, the discriminatory faculties of the practitioner must be called into action, as he must guide his treatment according to so many various windings; also to act wisely, he must have his mind unencumbered, and capable of penetrating into the very recesses of his patient's constitution, and upon the most deliberate acquaintance with *all* the bearings of the case must his judgment be formed. All the attendant circumstances must be steadily borne in mind, and then the diagnosis, and even prognosis, may, in this harassing complaint, be frequently arrived at with a tolerable degree of certainty; and one of the essentials for this purpose, is a correct knowledge of the origin and distribution of the nervous systems.*

Hydrocyanic acid is another sedative which has been given with advantage. It acts by subduing the sensibility of the part affected.

Hyoscyamus, Datura Stramonium, Camphora, Assafoetida, and Aconitum,† have been severally recommended by different individuals, but in severe cases, the muriate of morphia is the best anodyne. The oxide of Zinc, Mercury, and Strychnia, have also had

* Vide Sir Charles Bell on the "Nervous System."

† An alcoholic extract of monkshood is being given at the present time in Germany with great success, in Neuralgia and a certain species of Rheumatism. Dr Christison has been trying it in the Clinical Wards, but not as yet with the decided advantage which seems to have followed its use by his continental brethren.

their advocates. This last medicine exerts an extraordinary power of exciting the spinal cord and nerves.

The efforts of nature are often powerful in this complaint in effecting a cure, and from this circumstance, a mistake might often arise in attributing the success to the last remedy given; and even after clearly resisting all remedies, it has been known to disappear spontaneously. This is particularly the case in Frontal Neuralgia.*

The external applications recommended have been as numerous and as various as the internal ones. Paralyzing the nerves with the superacetate of lead, is recommended by Sir Astley Cooper. He relates a successful case from the use of this application. Two scruples, formed into an ointment, are rubbed in an hour before the paroxysm is expected. He continued the application for a month. The effect of the lead is said to be striking, by quickly relieving the most excruciating agony.†

I have seen decided advantage from *pressure*, where

* I might also notice a mild species of Periodic Neuralgia or nervous headach, too well known to many who have endured intense application of the mental faculties, which yields very readily to a tolerably strong infusion of green tea. Professor Christison, in his lectures, speaks very highly of green tea, and even in rather obstinate cases, has found it successful in speedily removing the pain.

† Veratria has been warmly advocated by Dr Turnbull,—10, 20 grains, or more, of the alkaloid, to an ounce of axunge rubbed over the seat of the disease. Acupuncture is sometimes efficacious in Neuralgia of the hip-joint.

it was applicable, and this may be resorted to whilst using embrocations.

In France, the acetic ether is recommended to be applied externally; and Baron Larrey was very successful with the moxa.

The tincture of iodine has likewise been used with apparent benefit, applied with a paint brush, to the part affected, twice a-day, even until the skin become vesicated. The extract of henbane or hemlock, I have occasionally seen ease the pain. Fomentations of poppy heads and chamomileflowers, are likewise sometimes resorted to with advantage. The application of blisters over or on the part affected, is not at all advisable, as they are apt to aggravate the pain, but if applied on the parts adjoining, as counter-irritants, I have seen good accrue from them.

Local bleeding has been recommended by some; perhaps in the first stage of Neuralgia, cupping or leeches may be applied with advantage; but even here, as before mentioned, the recommendation is questionable, and decidedly, in long standing cases, the practice is to be highly deprecated.

Since writing the foregoing account, I have read a work on Neuralgia, which accidentally fell into my hands, written by Dr Macculloch. He relates many cases of Neuralgia, in different parts, and wishes to prove, that these painful affections and intermittent fevers are one and the same diseases. Malaria, the

cause of intermittent fevers, does certainly occasionally produce anomalous affections of the nervous system, which, from the attendant pain and irritation, may be designated Simple Neuralgia, and these cases, generally, will more readily give way to *arsenic* than any other remedy; but, barring the attacks in both being periodical, I see, in the generality of cases, no connection or even similarity. Moreover, we may rest assured that Neuralgia will be produced by causes that never can generate ague. In intermittent fevers, we have distinctly marked three invariable symptoms,—the quaking or cold stages—the hot and sweating stages;—whereas it would require a more penetrating and inventive genius than Dr Macculloch possesses, to make it appear that the paroxysms of decided and unequivocal Tic Douloureux, are invariably, or even ever, attended with all those aguish symptoms, which are necessary to constitute Intermittent Fever.* It has fallen to my lot frequently to witness the hot stage of Intermittent Fever, and (as before I have had occasion to mention when speaking of ague), attended with violent pain in the head, or abdominal viscera,—the urine of a high colour, with lateritious sediment, and as these symptoms did give way, and the patients re-

* During the time Intermittents raged, we had a fever of the typhoid character, prevailing in the same localities, and yet in no one instance do I remember both types coexisting in the same patient. Though these were produced by similar causes, no one would consider them synonymous.

cover, under the use of arsenic, and other tonics, recommended in ague, perhaps these pains may, by some, be thought to be a peculiar species of Neuralgia; hitherto, I believe however, no one has presumed to designate them so.* Be this as it may, my experience would lead me so far to agree with Dr Macculloch, in considering these (as *he* calls them), periodical “Inflammations of the mucous membranes of the stomach and bowels,” as not common, but specific, *sui generis*; and the circumstance of their being cured by arsenic and bark, prove them to be so. In the years before mentioned, I had ample opportunities of verifying this statement. Ague has occasionally raged with more or less violence, in this neighbourhood, up to the present time, 1833, and I can still bear undeviating testimony to the efficacy of arsenic. I may with truth say, in no case have I found it to fail:—this I cannot say of any other remedy. Would, that it were equally efficacious in Neuralgia, but alas! here, Dr Macculloch would find his theory, however ingeniously wrought, and elaborately displayed, too truly falsified; neither, in fact, do I altogether see the utility of making out Neuralgia as a species of intermittent fever, especially when you are obliged to go so

* I certainly found the malaria, that generated ague, very frequently produce troublesome neuralgic pains of the head and face, without assuming any of the characteristic symptoms of Intermittent Fever. In fact, from observation, I am perfectly satisfied, that wherever this malaria is afloat, Neuralgia, in its simple form, will be a very common affection. I would here strongly urge the use of arsenic.

far out of the direct road as Dr Macculloch has done, to found a theory, and, with all deference, on so flimsy and obscure a superstructure.

“Obscure Intermittent” is an expression frequently used by Dr Macculloch, in reference to Neuralgia; but in what complaint have we not *obscure* intermissions; or, in other words, are there not exacerbations in all complaints?

Dr Macculloch’s mode of curing Neuralgia is grounded on its connexion with intermittent fever, and from his treatment the following may be abstracted:—“But the chief and most energetic remedies in Neuralgia, be the form what it may, are the tonics; and of these, as in intermittents, the most efficacious are bark and arsenic. As to the value of arsenic, compared with bark, I have found it more generally efficacious in Neuralgia, while it has appeared less so in intermittents.” Here (from what I have said before) the reader will perceive that I am at issue with the Doctor, for I have invariably found the reverse to be the case; and I would almost venture to say, that farther experience will corroborate the fact. Arsenic may be remarkably efficacious in those instances of Neuralgia which arise from malaria, but I must own I am far from being sanguine of its boasted efficacy when it arises from other causes.

The application of steam to the affected part, by the usual means of a pipe, sometimes relieves the

pain. Pujol says, in his treatment of Tic Douloureux of the face, that he found electricity of great advantage; and Leydig, Narless, &c. have recommended galvanism.

Some continental physicians have given phosphoric acid with seeming benefit.

Case of Tic Douloureux, or Severe Facial Neuralgia, produced by a Carcinomatous Tumour on the base of the Brain.

Mrs B., aged 53, the lady of Captain B., R. N., had been for some time troubled with inflammation in both eyes. Notwithstanding the conjunctivæ were considerably suffused with red blood, and lymph thrown out on the corneæ, she felt no pain in the eyes. This inflammation reluctantly gave way to the usual remedies, and the effused lymph became absorbed.

She, after some time, again called me in, and then complained of pain in the left side of the head, especially *over the temple*. This continued (with only temporary relief from local bleeding, blistering, &c.) for many weeks, when the affection began to put on a more formidable appearance, and was marked with all the characteristic symptoms of that most painful disorder—"Facial Tic Douloureux."

In the first instance, the pains, preceded by a shivering fit, used to come on regularly every evening

about six o'clock, and usually lasted till two o'clock in the morning: they were felt principally in the course of the supra-orbital nerve. Mrs B. was able to pursue her usual avocations, and was quite free from pain, except at this time of the day and night. This periodical character was, however, at length lost.

Paroxysms of severe pain afterwards extended over the cheek-bone, commencing at the infra-orbital foramen, reaching the side of the nose and upper lip, which was considerably drawn up, shewing two branches of the fifth pair of nerves to be affected.

These parts were affected with spasmodic twitchings, and so intense was the pain, that she would roll about the bed in the greatest agony; and though possessed of more than an ordinary degree of firmness of mind and placidity of temperament, the suddenness of the attacks, coupled with the acuteness (for she would frequently say, "it was worse than any sharp instrument cutting the flesh"), would oblige her to cry out in the most agonizing manner. The line of demarcation was most clearly drawn, the nerves of the left side of the face being implicated only. The pain was not attended by any discoloration of skin. She complained of great numbness, which extended to the left half of the tongue, producing an imperfect power of taste, and during the latter part of the illness she seemed to have lost that power altogether. Occasionally the cheek and temple were puffed, which

appeared the consequence of intense pain ; still there was no tenderness on pressure ; and Dr Robertson of Northampton, of whose able advice I was glad to avail myself, suggested, amongst other means, compression, which seemed at first to deaden the pain a little.

Severe fits of pain would sometimes reach the ear, clearly shewing the auditory nerve to be affected ; she soon, however, became quite deaf in this ear. The digestive organs, in the earlier part of the attack, were not materially deranged, but as the disease progressed, they began, as might be expected, greatly to sympathize.

Thus things went on, with nothing decidedly and unequivocally to lead one to suppose that there was organic disease at the origin of the nerves at the base of the brain ; but my suspicions gradually began to strengthen, when no real or hardly temporary benefit followed the use of the most approved remedies, steadily and systematically persevered in ;—such as counter-irritation, by small blisters on the adjacent parts, kept open ; tincture of iodine, applied to the affected surface itself, &c.—Internally, carbonate of iron, in large doses, and for a long continuance ; then followed arsenic, quinine, and, in fact, the whole catalogue of medicines usually recommended. Anodyne plasters, applied down the face, with fomentations of like matters, together with opiates taken internally, gave the only satisfactory relief.

After suffering for about four months in this way, it was perceived that the left eye-ball began by degrees to protrude, till it was pushed out to a very considerable extent. Whilst this was going on, the power of vision in this eye became completely lost, as well as the ability to move it. Then followed, at first in a trifling degree, and afterwards more and more profusely, an acrid discharge from the left nostril, of a very offensive nature. It was now clear that there must be ulceration, and, from the nature and seat of the pain, it was reasonable to infer that this ulceration was seated where the nerves supplying the head and face make their exit from the brain. Mrs B. gradually lost the power of mastication, and her speech became also very indistinct. During this time it was obvious enough that diseased action was extending its ravages;—the glands on each side of the neck became much enlarged, and ultimately encroached on the œsophagus; so much so, as to render the passing of fluids only allowable.

After the discharge from the left nostril had continued, and increased in offensiveness, for about three months, bloody matter began to flow from the right nostril also, and the sight of the eye on that side gradually diminished, till at last she could not distinguish any person or object, however closely presented to her view. Thus things went on from bad to worse—the tumours in the neck increasing, the distortion of the

features becoming greater, the spasmodic pains, remarkably acute, had reached the right side of the face also; inability to raise herself in bed, and amazing prostration of strength.

If interrogated about her head, she would say there was a feeling of torpor and heaviness, not to be described. This discharge of matter was occasionally very copious, and when it did not issue so freely from the nostrils, it passed into the pharynx, and as swallowing was very difficult, it frequently produced a sense of suffocation; latterly it seemed INSENSIBLY to pass into the stomach, and through the bowels.

She became extremely emaciated, and after suffering the most excruciating agony, with exemplary patience, and with only short intervals of ease, for upwards of a year, she was seized with a diarrhoea, which had frequently before threatened, and which now terminated a most deplorable state of existence.

It is perhaps worthy of remark, that Mrs B. had, comparatively speaking, no fever, at least after medical assistance was resorted to, though her maid told me she had for some time previously complained of pain in her forehead, which came on every evening, accompanied, as I have said before, with considerable rigors. Whether this periodical attack put on the other characteristics of an intermittent fever, I could not clearly ascertain; but as medical aid was not called in, and her general health did not participate,

I conclude the nature of the attacks did not assume the character of pure Intermittent Fever.*

Though there were distinct intermissions afterwards, the paroxysms were uncertain in their duration and time of coming on. They gradually increased in frequency and severity, till within a month of the fatal issue, when Mrs B. seemed bereft of the power of feeling, and the intellectual faculties, which, at the outset of the attack, were extremely vigorous, became, during the latter part of it, well nigh destroyed.

For two months before death, I was no less than five or six times summoned suddenly to the bedside of my patient, having been each time previously told by the nurse that she was dying. I found her labouring under all the symptoms of an apoplectic fit—total insensibility to any impression, stertorous breathing, gurgling noise in the throat, foaming at the mouth, incapacity to swallow, &c. She, however, rallied after these attacks, and became, to a certain extent,

* The inference to be drawn is, that these periodical or intermittent attacks approximated more closely to the description of Frontal Neuralgia given in the Dictionnaire des Sciences Medicales.—“La douleur est ordinairement periodique, intermittente, revient regulièrement tous les jours, *plus souvent le soir*, que le matin, et après avoir duré trois ou quatre heures, elle cesse entièrement pour ne reparaitre que le lendemain.”

I have since closely questioned Mrs B.'s maid, and as she was an indefatigable and most anxious attendant, I have every reason to be perfectly satisfied with her recollection of the fact, viz. That in no other way, save the shivering, did the evening attacks bear the semblance of ague.

herself again, though the general torpor of the system after each attack evidently increased, and left her, as I said before, at last well nigh without the power of sensation.

Post-mortem Examination of the Head.

On dividing the dura mater, and gradually lifting up the brain, I discovered a tumour (which I have preserved in spirits) at the base, about the size of a pullet's egg, resting partly upon the left crus cerebri and tuber annulare. On cutting into the tumour, it appeared of a hard, white, cartilaginous consistency. The surface of the tumour on the fore-part was ulcerated, as were the parts of the ethmoidal and sphenoidal bones adjoining.

The great pressure produced by this extraneous body on the left optic nerve, accounted for the loss of sight in that eye. Ulceration had likewise extended itself along the course of the optic nerve, and matter was found seated behind the eye-ball. This accumulation accounted for the eye-ball being protruded. Ulceration had also extended itself to the right optic nerve, and, from the pressure of the purulent matter which surrounded the nerve, we may account for the sight of that eye, in the latter part of the illness, giving way.

The scalpel, through the ulcerated parts, passed very readily into the nostrils and left eye-ball. There was more water in the ventricles than is usually found. No other deviations from health were observable in the brain. The abdominal viscera were not examined, neither was the structure of the glandular enlargements in the neck. Further dissection was omitted out of delicacy to the feelings of the surviving friends. I do not, however, consider it would have thrown any additional light on the case.

A short time before her death, pieces of slough were occasionally removed from the back part of the mouth.

What was the remote cause of the formation of this tumour, must remain an obscure question. I could not ascertain any hereditary disposition to scrofulous or scirrhus diseases; neither had the patient herself, in any former period of her life, displayed any symptoms of these diseases. The situation in which she resided for the last eight or nine years of her life, was very different from the one she had been accustomed to, as, though the ground was high, the air was peculiarly damp, owing to the nature of the soil, producing that sort of malaria which had given rise to a vast number of ague cases.

The following two or three conclusions may, however, be allowed to be drawn from this case. First, that it had some connection with the catamenia, which con-

tinued till within two years of her death. The cessation of this discharge caused, in all probability, a great increase of morbid action in this hitherto indolent tumour. We know that cancerous diseases frequently appear to originate, or rather are brought into active operation, at this period of life. Secondly, As Mrs B. had occasionally complained of a "dull pain," and "odd sensation," above the left eye, this tumour might have begun to form some years. Moreover, when well, she frequently expressed a wish to her maid that her head should be opened after her death, feeling convinced, from what she frequently felt, that there was something uncommon to be found there. This last reason is almost conclusive that some mischief was going on, though she pursued her usual avocations, and did not call in medical aid. Lastly, let us bear in mind, that wherever there seems to be a *fixed* determination, however slight at first, for diseased action to go on, our prognosis should be doubtful; and, satisfied am I, with all deference to the opinions of others, that the more formidable, or, I might say, permanently incurable species of Facial Tic Dououreux, arises, if not always, far more commonly, from organic disease, or some extraneous tumour in the head, than has generally been admitted. So little, indeed, has this view of the subject been advanced, that, with the exception of Sir Henry Hallford, I know

of no author who has attempted to substantiate the fact.

In addition to this view of the subject, my object has been in this paper to make it appear, 1st, That there is a species of Simple Facial Neuralgia, very frequently happening, which arises purely from functional derangement of the digestive organs, and which young people are nearly as liable to be affected with as those more advanced in life; and, 2dly, Another species, not at all uncommon in malarious districts, which is obviously produced by the same cause that generates ague, though it assumes none of the characteristic symptoms of ague, except that the pains are periodical: Also, 3dly, That the duodenum is not unfrequently the seat of a peculiarly painful nervous irritation, which might be justly designated Neuralgia; and that there is a species of spasmodic affection of the stomach, arising from painful irritation of the nerves, which might with truth come under this character. Lastly, That the grand object in the treatment of all these affections is that of allaying nervous irritation.*

* Lately, Dr Francis Hawkins read a paper at the College of Physicians, London, styled, "Observations on the Brow Ague." He has evidently used this name, instead of Frontal Tic Douloureux—why (from the description given of the complaint) it is difficult to imagine, for he adduces no other reason, save that one of the occasional causes is malaria. Inflammation, exhaustion, fatigue, sympathy, and mental emotions are likewise cited as causes; but no symptom approximating ague is introduced, except the pains being intermittent. With reference to this

Not long since, Mr Scott published several cases of Tic Douloureux, with a view to shew the beneficial effects of a local plan of treatment, which, it would appear, had been most successful in his hands.

Two scruples of the Deuto-ioduret of Mercury were formed into an ointment, by being well mixed with one ounce of lard. This was rubbed on the affected side of the face, night and morning, until the irritation could be no longer borne. It seems the pain is soon relieved, but very apt to return, on the remedy being omitted; and in the case of a lady, her sufferings so far exceeded any thing she had ever suffered from the Tic, that she would die rather than undergo the trial again.

last symptom, it is judiciously remarked, that “when the symptoms are intermittent, we hear some people argue that the disorder cannot be *nervous*, but must be of a febrile nature; but the very circumstance of fever being often intermittent, proves how large a share in their production must belong to the nerves. The nerves being subject to exhaustion, cannot support for an indefinite time any single sensation.”

This, surely, is of itself a sufficient reason why the severe pain attending Tic Douloureux should be intermittent, without necessarily blending it with that fever.

The pain attending an ague fit I found was generally more suffused over the head than in Frontal Neuralgia. In ague, the equilibrium of the circulation seems disturbed; and a sort of local congestion, if not actual inflammation, occasionally causes pain, which accompanies the paroxysm, and ceases with it. Though I have seen many cases of Frontal Neuralgia, I never saw one assume all the characteristic symptoms of ague. The complaints, I humbly submit, are quite distinct.

We may easily understand, that, setting up a stronger local action than the disease itself, would, to say the least, for the time relieve the affection, and, in some cases ultimately cure. Even though constitutional measures were made use of during this application, experience has taught me (in the use of somewhat similar counter-irritants) to be less sanguine of the almost invariable success which so happily seems to have attended Mr Scott's application. He says, "in those cases in which the disease depends on local causes, it will yield to local treatment." Would that it were even generally so: presuming some alteration of structure, or extraneous body, at the origin of the nerves, as a frequent cause, I do not see how any local treatment can insure a cure.

FINIS.