

An essay on the remittent and intermittent diseases, including, generically marsh fever and neuralgia ... / By John Macculloch.

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Macculloch, John, 1773-1835.

Publication/Creation

Philadelphia : Carey & Lea, 1830.

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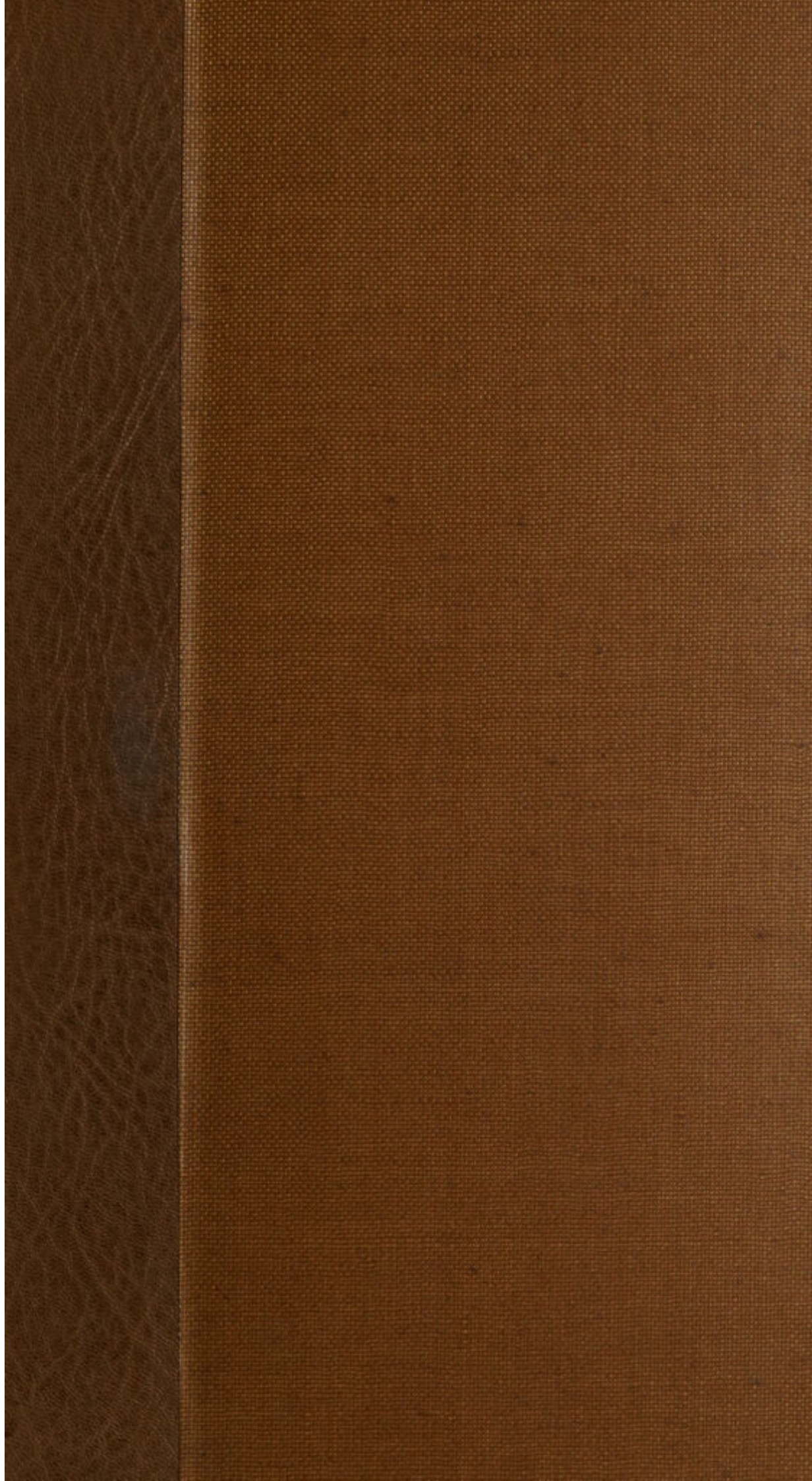
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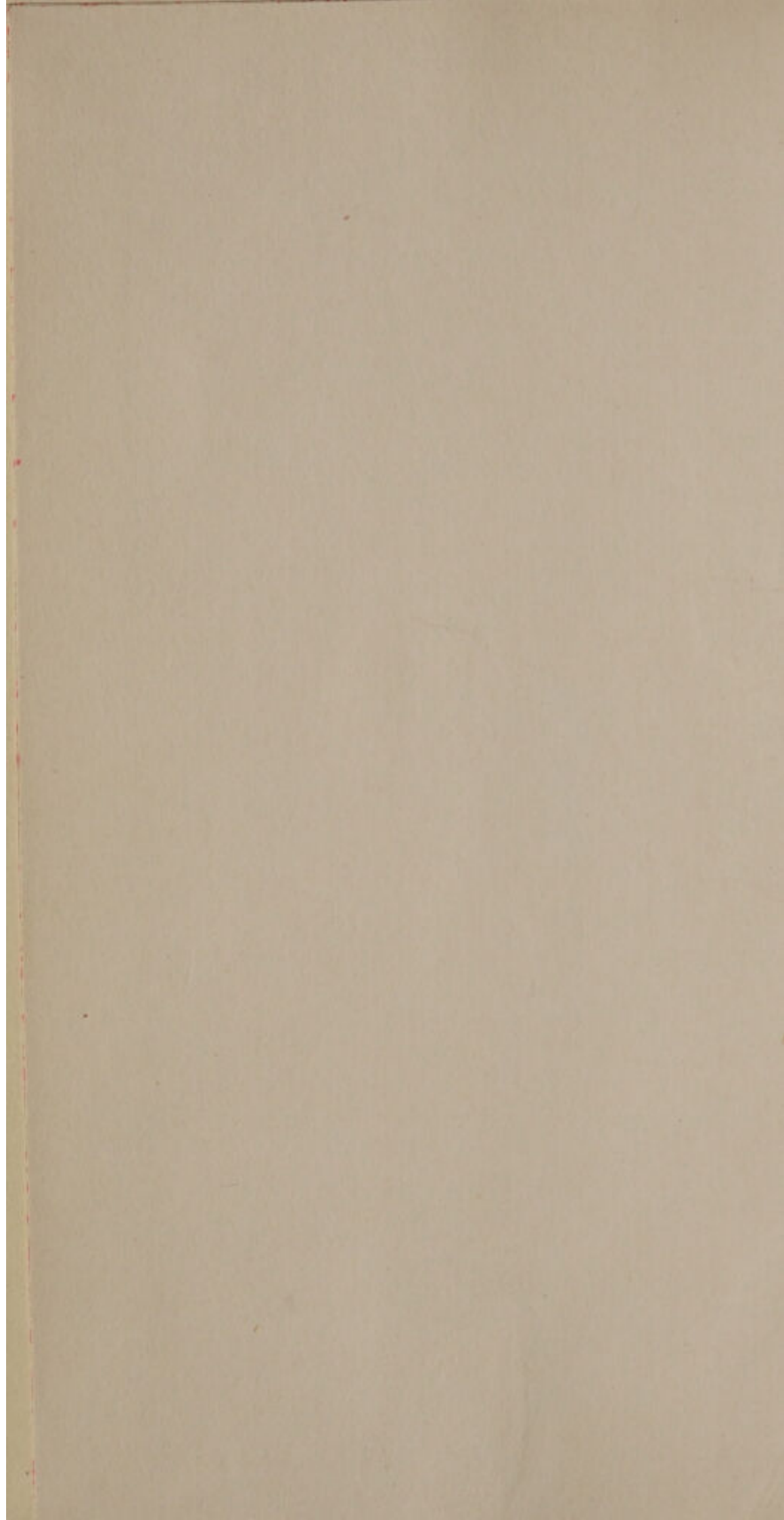


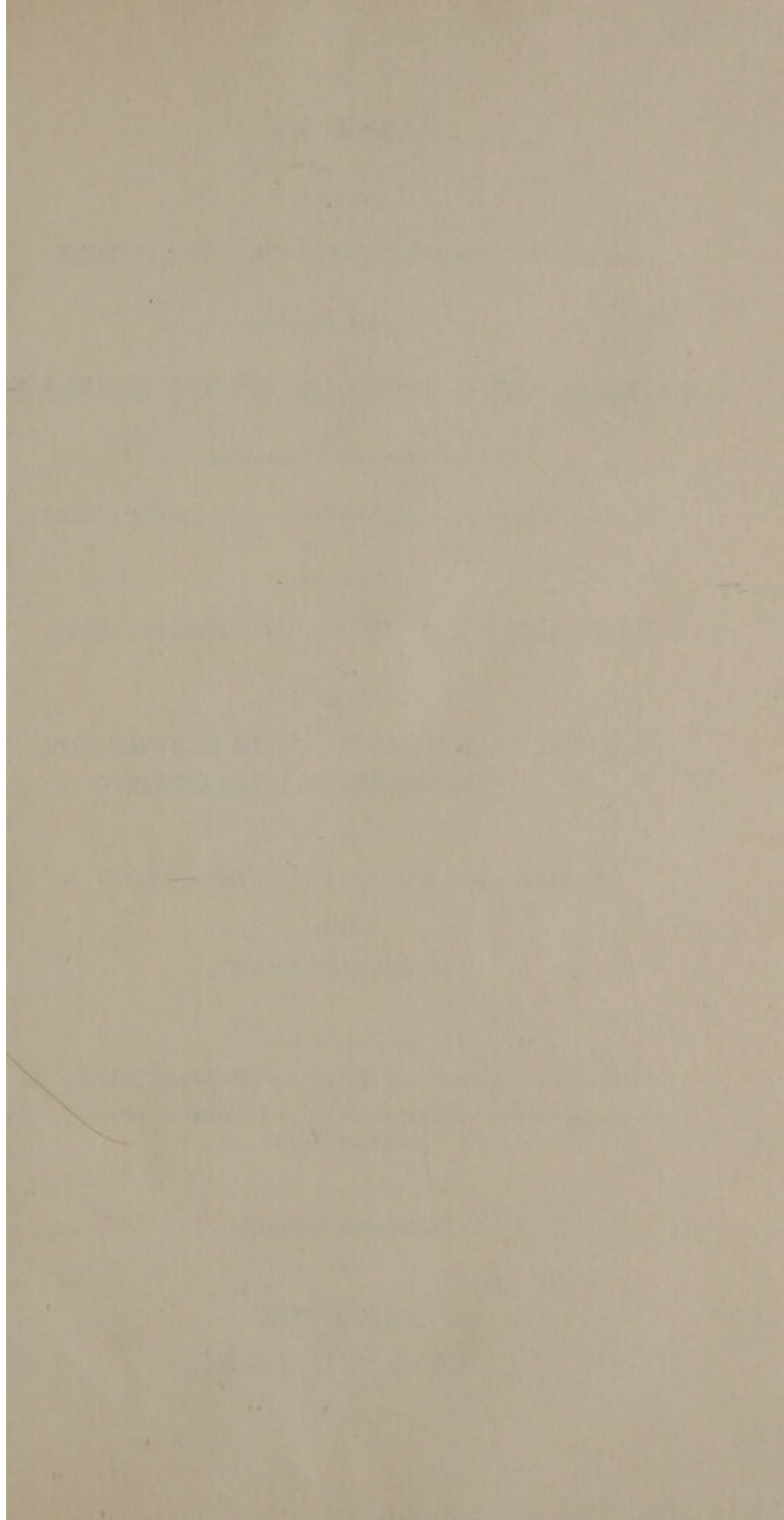
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AN ESSAY
ON THE
REMITTENT AND INTERMITTENT DISEASES,
INCLUDING, GENERICALLY
MARSH FEVER AND NEURALGIA.
COMPRISING, UNDER THE FORMER,
VARIOUS ANOMALIES, OBSCURITIES, AND CONSEQUENCES,
AND, UNDER A
NEW SYSTEMATIC VIEW OF THE LATTER,
TREATING OF
TIC DOULOUREUX, SCIATICA, HEADACH,
OPHTHALMIA, TOOTHACH, PALSY,
AND
MANY OTHER MODES AND CONSEQUENCES
OF THIS
GENERIC DISEASE.

BY JOHN MACCULLOCH, M. D., F. R. S., ETC. ETC.,
PHYSICIAN IN ORDINARY TO HIS ROYAL HIGHNESS PRINCE LEOPOLD
OF SAXE COBOURG.

Philadelphia:
CAREY & LEA.

1830.

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PREFACE.

As long ago as the period of my college studies, my attention had been excited by what has been called the *Tic douloureux*: and, even then, I came to the conclusion which every successive year has confirmed, that it was intimately connected with intermittent fever, both in its nature and causes; while it therefore became an obvious conclusion that its remedies should be sought among those by which that disease is cured.

I could not, then, nor long after, discover that this view had been adopted by any one: and finding no support, either from books or in the existing profession, for an opinion which, the more I studied the subject, appeared to involve consequences the more important, I have, even till now, forbore to make it public in this manner; unwilling to lay claim to the character of a discoverer, to pretend to be the only correct observer among the thousands who cultivate physic.

Nor, though I have never ceased to communicate that opinion, as well to patients as to my own profession, have I succeeded in giving it currency: having thus influenced but a very few of my most intimate medical friends, and even with those, not producing that more extended conviction as to the subject at large, which I am now about to attempt in another manner. If I also attempted, in a brief essay, some time ago, to call the general attention to the whole subject of Malaria and the diseases produced by it, I found no better success; since some years have now passed, and no result has followed as to any one of the subjects then pointed out for investigation.

My wish was, that some one else should undertake a task to which I felt no inclination; and though the great bulk of this work, including the essay on Malaria, has been ready more than ten years, I had no desire to increase the mountain of medical books; to add my own volumes to the three hundred thousand, which, according to a French Bibliograph, physic has already produced. But I have

waited in vain, and have perhaps done wrong in waiting for others so long.

If, at the present day, there may be a few practitioners who have commenced to take the same view, it is unsettled and vague, as it is limited and imperfect: while I think that I can generally trace it to the propagation of my own notions; not very likely to make much impression, either on my professional brethren or on that body which is called the world. Were a proof of that state of medical opinions required, it would be found in the practice as to this disorder; than which, even now, nothing can well be more unsettled and more tentative; empirical, even where it chances to be right, and imperfect even then, for want of general and just views. And indeed on this point, nothing can offer a stronger proof than the adoption of that practice which consists in the division or extirpation of the diseased nerve; an expedient than which nothing can be conceived more unphilosophical, while it is also useless; and, though now fallen, or falling into disuse, abandoned, not from juster views of the nature of the disease, but from want of success; while still regarded with affection by some who no longer venture to adopt it. And could this be still doubted, it will be sufficient to read what has been written on this disorder, both in professed essays and in casual notices: while not to quote these, that I may avoid disagreeable criticism, we may find cases, even of very recent date, considered as inflammation of nerves, and treated by the remedies of inflammation, even by persons of the very highest repute in physic and anatomy.

And not only will these proofs be found in the writings on this specific subject, but in those which treat of the various obscurer diseases belonging to Neuralgia or connected with it: since in not one treatise on those disorders which I shall hereafter prove to be of this nature, be they palsy, headach, toothach, ophthalmia, or what not, do I find the slightest allusion to this cause or connexion; even when the recorded symptoms are such that it often appears wonderful how the fact could have been overlooked.

It is far from agreeable to draw the same conclusion from a reference to persons, even though I forbear to name them: but it really is so necessary to produce every apology that can be found for a new medical book, that I must, even thus, attempt to establish the claims of the present one to novelty; as that quality which, in addition at least to utility, forms the only excuse for publication. These persons were physicians in extensive practice and of unquestionable education; and, of them, two carried the disease to their

graves, after many years of extreme suffering under erroneous practice; one also having been the victim of the disorder itself; while the other, after nearly twenty years of the same fate, is still a sufferer, and has also paid for his want of knowledge by the almost total loss of his intellects.

Thus much it appeared necessary to state in the way of explanation, as to the primary causes of this book. But in the course of the original investigations, it seemed to me that I discovered, both in practice and in books, many disorders which appeared to be ruled by the same analogies, yet of which this view had not been taken: and thus was I gradually led to investigate the whole wide question of the intermitting diseases, and lastly, what soon became unavoidable, to inquire into Malaria as the great cause of the most conspicuous of those.

Hence a wide field became at length opened: while I found that it would be impossible to elucidate the one subject which had first occupied me, to the conviction of others, without bringing forward those analogies and that generalization which I had formed for myself, and on which I considered that I had established the doctrines here produced. Thus would the very dependence of Neuralgia on the febrile intermitting diseases, have compelled me to examine into these latter; as, without their history, it could not have been elucidated; since the whole, as I trust to prove, form but two departments of one subject.

Even thus, this book must have become what it is; including the essay on Malaria. But the course of observation on English opinions and practice, on the great neglect which the febrile diseases arising from this cause had experienced, produced other reasons; and that there also were, in addition, justificatory ones, I have become more convinced, by a course of reading which was not entered on till long after these opinions were combined into that essay which has received from those authorities nothing more than support or illustration.

In assigning these reasons, I have the same unpleasant task to go through as with respect to Neuralgia; implying an assumption of discernment and knowledge above those to whom I write; though it is, in truth, no more than must happen to every one who, in whatever department of science, proposes to convey instruction. Unfortunately, physic is the science in which this is the least endured: from causes which I shall leave to the enlightened members of my own profession to assign.

But as far as there is any ignorance in our own country, as to

Malaria, or as to the obscurer intermittent disorders which it is here my sole object to elucidate, it is but just to attempt an apology; and this is, that while the modern improvements of England have very much reduced the production of that poison, so the rarity of decided intermittent fevers may have led to ignorance and neglect respecting their obscurer varieties; though I know not how to find any apology for those who persist in mistaking the fevers of marshes for typhus. But thus must tradition, example, habit, govern the majority in every thing; since all cannot be philosophers and observers. Let the value of this apology be what it may, it must appear extraordinary to say, that a class of diseases so prevalent as this is, and on which the treatises may be reckoned by thousands, should now be a subject of obscurity or error to physic and physicians in any country. Nor will it appear less confident to suggest, that where the causes of Malaria, and of these disorders of course, have so long been known, any ignorance could prevail as to the locality or nature of those, or any neglect as to the prevention of the incalculable misery which they produce. Yet I have shown that this is most notoriously true of England: while as to the diseases thence arising, if it is among ourselves also that the ignorance and inattention are most prevailing, even the medical profession in other parts of Europe is far from exempt.

These are remarks which will, I hope, be fully established hereafter, in as far as they have not already been so in the essay on Malaria: and they are therefore sufficient to complete the present apology: since, if there is any portion, of which the novelty and importance are sufficient to justify a new book in physic, the same reasons apply to the whole.

Nor would any motive but the hope of adding something to our recorded knowledge, and of rectifying erroneous opinions and practices, for the purpose of diminishing the sum of human misery, have tempted me to make public, after this long delay, what I would more gladly have received from the pen of some one of higher repute and authority; knowing well how little is the impression which must be expected from one who has no name in physic as a teacher or a practitioner, and who, to his obscurity adds the misfortune of being a contemporary, though not a rival; and a contemporary perhaps too much known in other departments of knowledge. This is a situation which, in our own country at least, has ever been a condemnation in itself; as if the knowledge of science in general was an obstacle to the knowledge of the sciences in particular, and as if the powers of observation and reasoning were not

faculties of universal application; as fitted to extract the truth from one class of phenomena as from another. But if it is the conclusion of the ignorant, it is perhaps also the conclusion of a commercial country, where science and literature are alike regarded as trades: and being the especial and peculiar conclusion of England, we must all submit to what we cannot rectify.

If I regret this, it is because the effect will be to diminish that utility which is my sole object, and to which authority is so essential. But I shall have discharged my conscience; since my sole object is to diminish human suffering, or to increase human happiness; a duty which every man owes to society, and, I do not speak it fanatically, to a much higher Source. It is the especial duty of that profession, of which the very end and purpose are but this, however lost sight of under other and interested views: and if circumstances have prevented me from doing that duty in person, I must atone for it thus; convinced that I am here putting into the hands of mankind the means of benefits to which my own personal exertions would not bear the most minute proportion.

This object will, I trust, atone for an anxiety to enforce and prove what is advanced, of which I am too conscious not to perceive that it betrays itself every where, even to repetition and superfluity. But I hope it is a pardonable one; since depending on a conviction that physic can or could save human life and remove human suffering where it does not, it is the feeling that life is lost, and misery produced from want of knowledge, and that in taking less trouble to prove what I consider right, I should myself be culpable. Such anxiety will perhaps seem to imply a bad case; a feeling of doubt, which is often indeed expressed in foretelling a want of success. But that anticipation is the result of experience; of the only ground of prescience: since, having failed to convince in conversation, I know not why to expect better success in print. Yet this is not a question of opinion, but of evidence. If the facts are true, and the induction correct, then must others become of the same opinion; unless they have, as Locke well remarks of the entire world, no ground for opinion but habit and example, and disclaim that quality which is presumed to distinguish man from other animals.

The facts have been taken as they occurred; they are the common property of physic and physicians, and I believe that they are all admitted. They have been approximated and classed, fallacies have been rectified, superfluities eliminated: they are facts still. This process has been continued until one leading fact has been

found to appertain to the whole: it has been deemed the essential one. This is the induction: if it be a legitimate one, the facts continue to be evidence, or the point is proved. This is the usual machinery of all science: and by this process have the sciences been erected: rescued from the chaos of empiricism, and consolidated. Any one may use it: but if it is not available in physic, let it be shown why. Physic has indeed been too long empirical; but it ought not, and I think it needs not. It has proceeded too much on what was apparent; and thence its errors. I have attempted to trace a train of analogies, and to arrange a multitude of appearances under one simple principle: I may have failed; but this is at least the right road: and if earnestly followed, it will in time be successful.

To return to some explanatory remarks as to the plan of this work. If I have been so minute on the existence and sources of Malaria as to have occupied with that subject the volume which precedes these two, I cannot think that I have been more full than it deserves, when I reflect on the ignorance which prevails respecting it in our own country, and on the contempt in reality in which it is held, as if it were a fiction or a romance, and on the enormous mass of evil consequent on such a state of the public mind. Of that essay, and of its possible utility in preventing diseases, the public will now be able to judge. That the present volume necessarily refers to it, was as unavoidable as that it depends on it: nor could I have acted otherwise, without materially enlarging the bulk of the medical portion of this work, while even then leaving it an imperfect one.

With respect to that part which relates to marsh fevers, I must observe that it was not my intention to write a treatise on those disorders in their decided forms; since, on these, the world abounds with books, and often of great merit. Here, I could but have compiled, as many systematic writers have already done: and while I had no intention of adding a compilation to the heap, I had no wish to copy or extract where I could so much better refer to the originals, or to compilations without number. Had I indeed treated of every disease belonging to this subject as it deserves, I must have extended the present volume to many more, as will be obvious from the number of disorders which it already embraces. The object in this part of the essay, has been to explain those modifications of marsh fever which have been misunderstood or overlooked; that I might rectify the opinions and the practice on many matters that have been greatly, and in my own view, dangerously

mistaken or neglected. Hence I have made use of the purer forms of these disorders no further than was necessary for the attainment of this leading object; otherwise than as I have thought it useful to offer remarks on them as they occur most commonly in our own country. Thus I have even dwelt on the slighter cases or varieties, while I pass over the severer ones; and thus also is the chief attention bestowed on the chronic, the obscure, and the anomalous disorders of this nature, since, to explain what has been mistaken or unknown, is the object of the work. And as it is to the already educated, and not to mere students in physic, that this essay is directed, I have often passed over matters which cannot fail to be known to every one, and which would have swelled a book already too large, to an unnecessary bulk. And it is for the same reasons that I have omitted to treat of dysentery and cholera, together with a large list of disorders endemic in marshy situations; avoiding further, those great consequences, the visceral diseases, from motives equally obvious.

I have now one general observation to offer as to the whole of these irregular marsh fevers, which I consider an important one as far as it relates to the credit which ought to be attached to the remarks on them. I might equally have applied it to the division of the Neuralgiæ, had there ever been any thing written on this subject with which my own remarks could at all have come into collision.

The entire opinions respecting the former disorders were founded on my own observations, and must be considered therefore as entirely free from previous bias or borrowed theory. Their origin was what I have already described; and a space of much more than twenty years has been occupied in correcting and confirming them. Nor was it till long after they had been generalized into the present form, that I even thought of inquiring into the opinions of others, not supposing that my own possessed any peculiarity; while the entire essay was written before I undertook that examination of authors whence I have since made those additions from which I thought I could derive authority or elucidation.

The coincidences therefore, wherever they occur, I must consider as a proof of the truth of such views, while I am bound to say, whether it shall make against this truth or not, that I have been unable to find any such general view in any of the authors whom I have consulted; and while I see also plainly, that many, of even the highest reputation in physic, at all periods, have proceeded under the errors which I have here attempted to correct.

Among these, I cannot very well except any one but Strack, whose work on intermittents, as it relates to this subject, is by far the most decided; though, even under his collection of cases, he does not appear to have seen the full importance of the subject, nor to have formed that generalization which we might have expected. That he did not see his way through the entire question, is indeed plain; nor, from his work, should I have been able to form the present deductions: and when a recent careful writer, Dr. Philip, has not drawn the same conclusions, even when largely quoting him, it is sufficiently plain that they were not really indicated, and that physicians in England have not, to this day, been aware of the importance of the subject: a fact indeed which the slightest examination of modern practice will amply prove.

With respect to authorities generally, if those which I have cited are not very numerous, they are, I trust, sufficient for the purposes of a work which was not intended to be a compilation. It was for the sake of giving weight or adding elucidation to what might have seemed insufficiently proved or obscure, that I required authorities; and if there are not more, it is not that I did not seek them, but because they were difficult to find; since my task was often that of translating or analyzing confused or misunderstood histories of disease, or of seeking under very improbable designations, for that of which I was in want; while often therefore compelled also to perform a critical office on what I have borrowed or quoted.

Such as they are, I hope there are enough for the end in view; and if I have neglected much and distrusted more, that will not require much apology to those who have read widely in medical reading. There are many physicians who will, I believe, agree with me in the fruitlessness of seeking among the antiquities of this science, for correct information or solid opinions. It is but an affectation indeed which attempts to establish medical doctrines on the works of the remoter ancients, on Hippocrates, Galen, Celsus, and so forth; however interesting, and even necessary in a certain sense, it is, to trace the antiquity and infancy of this, as of every other science. But to recur to those days for evidence or information, is as if we were to commence our studies of natural history and chemistry with Dioscorides, and Theophrastus, Aristotle and Pliny, as if we were to found our music on Aristoxenus, or our astronomy on Ptolemy. The knowledge of natural history, and of physic as one of its branches, was, in those days, nothing: it was nothing for nearly twenty centuries after: and though we have much reason to blush at the small progress we have made in

our own department of this great study, yet has it been greater in the last century than in the whole preceding age of the world. "Galen and Hippocrates" will always be valuable to the learned in physic: but to hope to learn physic from them, or to build books on them, is to be pedantic rather than ignorant; or it is to be ignorant of the truth of the parallel which I have here drawn, and of the history of knowledge.

If, when I count the pages of this entire work, I am inclined to apologize for its length, I am rather more induced to ask pardon for its brevity when I recollect the subjects and the diseases which it undertakes to discuss. With respect to the manner of treating the medical questions, I know of nothing in physic to prevent it from being examined in the usual manner of every other philosophical investigation, and in the most ordinary language. The more obscure, and the more inductive and conjectural the philosophy of physic is, the more does it demand every simplicity in the mode of discussion that we can apply to it. And if technical forms of reasoning or technical phraseology cannot always be avoided, they cannot be too much shunned; not merely because they corrupt the English tongue, but because words and phrases thus become the substitutes for ideas, cheating us with the semblance of reasoning, and "signifying nothing." With such language, it is easy to write books on all subjects, not on physic merely: but to translate them into intelligible English, is a test which he who loves to think that he has acquired knowledge, must not apply.

But we cannot always avoid what we would wish to shun: for as it is the fate of science to begin with conjecture and assertion, as its infancy is the reign of the imagination, so is physic yet in that very infancy, wandering about in its own fairy land. Ptolemy and Theophrastus were indeed the predecessors of Newton and Linnæus, but the Newton of physic is yet to come: and he who knows this study best, knows best also, that it is not the metaphysicians and the jurists, the Platos, and the Kants, the Tribonians and the Heineccii, alone who have appropriated to themselves the language of vacuity and chaos. If this science abounds in bad observation, in imaginary experience, and even in positive *mala fides*, so have the laws of philosophy and logic scarcely yet found their way into it. The language of truth is simple and brief, but that is not the language of physic. Its words have meanings, and the same words have always the same meaning: but this is not the language of physic. The language of error is multitudinous, variable, vague and unsteady; and this is the language of physic. If there be a philo-

sophical reader who doubts this, if there be a logician, a man accustomed to evidence, who has not read medical books, let him read even the most celebrated and be satisfied.

But he who is now the philosopher in physic is also a Pythagoras while he does not perceive it. There is a dogma, not to be questioned: a principle to which the facts are to be referred: and, once invented and laid down, it is, as in the Catholic Church, an article of faith, never again to be questioned; till a fresh sect separates, to enact its own equally infallible laws. This might be as inoffensive as the eternal fitness of things or innate ideas, did it not interfere with human life and happiness. But to borrow the expression of a learned friend on the subject of legislation, the physician is like Nebuchadnezzar: he dreams, and death is the sentence of him who cannot divine what that dream was.

Let me make one further explanation and finish. The object of this essay is to propose some changes of opinion, and to recommend some alterations of practice, as to certain disorders. The very attempt therefore implies a disclaiming of former and present opinions and practice: while in desiring to establish that what is different, and proposed, is right, it becomes necessary to prove that what was and is, was and is not right. But as opinions are the opinions of persons, and as practice involves their actions, no assumption of wrong as to the state of medical science or practice, can be made without implying wrong in those by whom it is cultivated and administered. Hence the unavoidable criticisms on the science and the art, must always appear to involve those cultivators who form the profession: while the inconsiderate will imagine a general personality to be contained in that criticism which is as purely impersonal as it is unavoidable.

To end. If, in the preceding volume, or essay, I have preferred the Italian term *Malaria* to *Miasma*, so I have here adopted the term *Neuralgia*; because, while the associations attached to words become almost insurmountable, I consider that the trifling French term, *Tic Douloureux*, has long been an obstacle to the knowledge of these diseases, from its inveterate association with the face exclusively: since it would be as difficult to convince the people at large that a disorder under this name should exist in the finger or the toe, as that it might be attended with very little pain, or be an inflammation, or even a "fit of the Ague."

CHAPTER I.

On the ordinary Remittent or Marsh Fever.

IF it were my purpose, as it is not, to compile a general account of this disease from authors, I know of none in the whole circle of physic on which I have read with less satisfaction. He must labour with no small discrimination, who would, from medical works, extract any rational account of the immediate causes of the disease or of the real condition of the system under it, who would discover any intelligible and consistent method of cure, who would even be always certain that it is of this disease and not of contagious fever that he is reading; as he must also possess talents at reconciling or balancing evidence which are not the lot of all. It is more likely that he who imagines he has done this, is an *ex parte* judge; seeing the question by his own one light, or cutting the knot which the patient investigator could not untie.

If that is true of this disorder as it is known to us, and if it is partly owing to that confounding, in practice, of marsh fever and contagious fever which I have criticized in the essay on Malaria, it is not less so, if from different causes, of the disease in that form of greater severity which it assumes in hot climates. And while, in these varieties, I have no personal experience, I feel that I have as little right to doubt or criticize, as I have, but too often, little reason to place confidence. Fortunately, it is not of great importance as to the present essay; of which the object is rather to notice the diseases of our own country, and to point out obscurities, which, however known to many physicians, are not generally so, either to practitioners or patients; while it is a further object to class together some disorders which appear to have been as much misplaced as misunderstood, and which, misplaced as to their causes and characters, have been necessarily treated in an erroneous manner.

As the head, unquestionably, of that great class of diseases originating in Malaria, it was impossible, in any view, to omit the Remittent Fever. It is the most important link of the philosophical chain, and, further, it is connected with others as their apparent cause; or, that disordered state of the body which commences as remittent, may terminate in almost any other modification of the diseases of Malaria; probably in all.

But, even as a simple and original disease, the common remittent fever requires notice here. It is usual with physicians, and very naturally, perhaps properly, to treat of diseases in their more perfect forms; but a perfect disease is far less common than an ill-defined one, a highly severe one than a more mild. And while, in these two sets of instances, the obvious symptoms may vary exceedingly, it happens, even daily, that the unreasoning practitioner or the bad observer, unable to refer the disease to its usual description, becomes at a loss, or falls into grievous errors. Hence arises the necessity of describing the varieties of a given disease, as far as it is possible to classify such varieties or simplify their description: and this becomes peculiarly necessary when such varieties are subject to be mistaken for some other disease where a different kind of treatment is necessary.

Hence it is that, in this variety of marsh fever as well as in the intermittent, my purpose is chiefly to notice that which is either obscure in itself, or least generally known; proposing both these divisions of the present essay as supplements and additions to the numerous treatises already existing, rather than as systematic descriptions in themselves. If there are authors, as there are some, who have casually noticed such modified forms of those diseases, they have not yet been all brought together under one consistent view; nor, what is perhaps even more important, have they been associated into one system with the still more obscure, local, and partial disorders with which I here purpose to prove that they are connected.

There scarcely appears a reasonable ground of doubt in the present day, that the cause of remittent fever in its perfect form is the application of Malaria. Cases, however, do occur, under the most apparently careful observation, while they swarm in medical writings, which would prove that various other causes do produce it; such as mere heat, errors of diet, fatigue, cold, mental affections, or other sources of debility. But every one of these is an accessory cause of many other disorders; so that the same may be true here also: while if it has been proved in the former essay, that Malaria is more easily generated, and transported further than common opinion had decided, if it is often present when unsuspected or neglected, it is still likely that it is the real exciting or productive cause, and that all the others are but casual or assisting ones.

This question I have, however, examined under all the lights I could throw on it in the preceding essay: to recur to it here, would be mere repetition, when I consider that, to enlightened medical readers, this is rather the second volume of a single treatise than a complete work, and that, without enormous repetitions, I could not have rendered this portion inde-

pendent of the former. All therefore which I can here permit myself to say is, that I have attempted to prove that all the fevers of any moment which are not produced by contagion are the effects of Malaria, very often, perhaps very generally, in our own country overlooked; and that while these two leading classes constitute the great mass of fevers throughout the world, those which arise from the other causes here alluded to, are proportionally very small in number, and of very little moment as diseases, from their trifling power on the body. But if I have said that such causes are, by themselves, of little influence in producing fevers, that opinion can but be given as including a high probability; since, in physic universally, we have not yet arrived at such accuracy as to enable us to decide on any exclusion in such a subject.

One only real exception seems well grounded. It is that cause which depends on habit. It is a practical observation, that, not only in intermittent, but in remittent, at least in our own country, causes in which Malaria cannot be conceived implicated, do in reality reproduce, if they do not produce, both kinds of disease; or that the accessory cause, united to habit or to facility in receiving or suffering diseases, is sufficient to excite those fevers. Thus does the remittent, like the intermittent, become at times even habitual; renewed, even over and over again, for years, though the patient should not quit his chamber; and thus bearing an analogy, remote it is true, to contagious typhus, where one relapse at least can take place without the application of a fresh contagion: unless indeed, in this case, the patient's own contagion, applied in various obvious ways, may be the cause in question.

It is a fact, formerly noticed, that the intensity or severity of remittent is commensurate to the heat of the season or climate, provided the soil be a wet and a vegetating one; and therefore the quantity of disease is in a direct ratio of either the quantity or the quality of the Malaria, or both. M. Deveze is but one of many who consider the quantity as constituting the real difference. There are at least as many more who presume on essential differences in the quality of the poison: but to what purpose do we compare opinions when we are in want of facts? Unless, indeed, those which I formerly noticed when speaking of Malaria should be admitted as arguments in this case.

As in all cases of physic, however, either of these conclusions would require some modifications, and might even imply somewhat more; even to disputation. The subject of the disease itself, the human body, may be so affected by collateral causes in these instances, as to suffer more or less from the same strength or action of the primary cause. And while this is

thought to be proved from the effect of mere heat on the biliary system in the case of pure cholera. if this disease be indeed the consequence of mere heat, it is easy to understand how an aggravation of the power of Malaria might accrue from the combination of such an effect with a simple fever. And thus may the greater power of any other of the secondary causes in this case, produce a severity of disease which, from neglecting this, might be attributed to a greater virulence or quantity of the primary one. This is a question, however, which I took occasion to examine in the essay on Malaria, or in that which is the first volume, properly, of this work; so that I need not repeat the doubts or arguments there suggested, as I could but go over the same ground again. If it is a necessary question here, so was it one there: and while that is true of so much more, I can only regret a separation which was forced on me, and trust that many of the readers of these purely medical volumes, have mastered the preliminaries without which much of the present ones will appear obscure.

It is there also, in the last chapter, that will be found the detailed argument, to which I have just alluded, respecting the causes of fevers; attempting to prove that many of the received ones are imaginary, and that the great, nearly the exclusive cause, of every conspicuous fever that is not contagious, is Malaria. That argument was there most needful; as on its value, is very much built the necessity of those precautions which that volume teaches and inculcates: that it was needful here, is no less obvious; while I must take it for granted that it has been read, and, I hope, admitted.

There also have I explained, in the eighth chapter, what relates to the influence of climate and season, as of other collateral circumstances in the production of fevers or epidemic periods, and in modifying the characters of those; so that on this point also, which I should otherwise be here compelled to speak of at some length, I must assume that my reader is in a state of information.

On this subject I shall only here add, that barely to enumerate these recorded varieties, would be, in itself, to produce a long chapter of little better than repetitions; details without end, which must be consulted in the abundant originals where they are recorded. Should any reader not have travelled further through this species of reading than even in Rush's writings, he will, I am sure, readily excuse me if I do not even abridge what, though abridged, would form no small volume; what, as it relates to every country and every epidemic, now constitutes, not volumes, but shelves of volumes.

To pass to other matters, it is a question of some importance what are the comparative effects of Malaria in this case, on the

natives and on strangers, or visitors; and it is one of some little intricacy, or on which at least there are many contradictions, real or apparent. Such as these are, they will be generally solved by distinguishing between what, for want of better terms, may be called the chronic and the acute action of Malaria.

What the diseases arising from this poison are, and what their effects on the natives and inhabitants of unhealthy districts, have been detailed in the preceding essay. In this place I must add, that, setting aside what may be called the chronic effects, and the disorders exclusive of fever and dysentery chiefly, it is not the fate of the inhabitants to suffer acutely from the latter in every season; while it is plain that if this were the case, extermination must be the speedy consequence. The more usual cause is, that after one, or perhaps more, severe fevers, this disease becomes chronic and intermittent; persisting uniformly in some cases, and, in others, ceasing during certain periods, whether annual or of longer duration, to be again renewed in a similar manner: a few becoming freed from it after a certain number of years, and at a period of life seldom under fifty, while a greater number carry it to that grave, of which the time ranges for them between thirty-five and fifty, if they have escaped as far as the former period. Such is the nature, and quality, or extent, of this acquired habit of resistance by the natives of an unhealthy district; or, in vulgar language, the "seasoning," which is also acquired by emigrants, if in a much inferior proportion: though I have stated a definite and perfect case, from which very many must necessarily vary, but with which they can be compared.

Thus such seasoned persons, or natives, escape many of the acute fevers which seize on emigrants and visitors; but in seasons of peculiar epidemics, they also suffer similarly; their powers of resistance extending only, as it would seem, to a certain point: and hence the mortalities so often recorded, which mark peculiar years, involving all in a common destruction. These considerations, varied according to climates, countries, or circumstances generally, which it would be tedious to detail, will explain the chief facts here concerned: while among minuter particulars which it would be endless to examine, it must be remarked that in certain climates, intermittent, or a chronic state of fever with facility of recurrence being more rare than in others, such a fever, once undergone, may be the pledge of a long continued security. I shall only remark here, to prevent mistakes, that convinced by the evidences produced by Pym and others, I view the security against the "yellow" "Bulam" fever, produced by the same cause, as of a different nature, inasmuch as I must believe that this is a separate disease from the

“yellow,” marsh, or remittent fever. And the security in question is, in certain parts of Flanders, Holland, and elsewhere, acquired even by young children; so that having once passed a certain ordeal, they may lead a life of tolerable health, and even attain old age.

If it is on emigrants or visitors therefore that the marsh fevers, whether in autumn or spring, as remittent or intermittent, exert their chief action, so is it important to remark that those are most susceptible and suffer most, who emigrate, or are travellers, from healthy and mountainous countries: while the natives of flat, moist, or marshy ones, even should they not have undergone such fevers, are comparatively secure. This has often been remarked in France and Italy; and it is said to have been very conspicuous in our army at Walcheren: while it is plain that it offers a valuable hint respecting the selection of troops for peculiar services; but one, it is painful to say, which like much more as to this department, has not been considered or acted on as it deserved. On analagous grounds, I must also remark, that residence in a hot climate produces a similar power of resistance, or a “seasoning,” even though the person in question should not have undergone that constitutional change which disease seems to produce.

Yet there is a remark to be added here which is of considerable importance, if true; as I see no reason to doubt, when it is that of an experienced and careful observer, Pym; namely, that no residence, however long, in a hot country, produces this security if the winters are cold, or if the climate is not truly tropical: such periods of cold appearing to nullify the effects of the intervals of heat, and the important conclusion as to military service being, that Gibraltar, or any other hot country of Europe, does not operate as a “seasoning” for troops which are destined for the West Indies.

Such is the state of the leading question; but there is still a general contradiction remaining which I must attempt to explain; since he who should read on this subject in the hands of other writers, might come to a diametrically opposite conclusion: a conclusion indeed which might be formed from many parts of this very essay. This relates to the susceptibility of fever, commonly of intermittent, in those who have already experienced the disease: a susceptibility far too notorious, since few of those, among many others, who suffered from the fever of Walcheren, have escaped its returns in a chronic form on a fresh exposure to the causes. And this, in truth, is the fate of the unfortunate residents in unhealthy districts; since it is by continued or repeated exposure to the causes, that their fevers are renewed, and since the only cure in most cases is a migration to a healthier country.

The explanation seems simply to consist in a difference between the susceptibility for an acute and for a chronic disease, as I have already hinted, at least for the majority of cases: the facility of undergoing the former being decreased, while that of renewing the other is augmented: though I should also add, that as far as my own observation and reasoning go, I do not consider the doctrine of "seasoning," as to acute fevers, so well established as to deserve implicit reliance, and that wherever the disposition exists, it would be an act of prudence to avoid any such exposure, notwithstanding the experience and opinions which I have detailed. I need scarcely add, I presume, that, as happens respecting many other diseases, there are persons so constituted as to be unsusceptible of marsh fever in any form; and what is not less familiar, that certain races of men are far less susceptible than others, even independently of any presumed "seasoning" which they may have derived from climate.

On the former fact, the resistance offered to Malaria by certain persons, or from certain unknown causes, or at some periods of time and not at others, I have one fact which deserves quoting, because of its extremely precise character as a philosophical experiment, and because it would not be easy to find others of a similar nature. A young man was recommended to acquire an ague, from some fanciful project for removing a previous chronic disorder, and was sent into one of the worst parts of Kent for that purpose. The attempt was made by standing in a moist, but not watery, ditch, of bad reputation, for a certain number of hours every evening, so that the level of the ground was near his face. The project could not have been much better chosen; but it required nine days of perseverance before the end was obtained. It is a fact which, whatever other conclusions it may produce, will also serve to show how little we can prove a negative with respect to the power of any given spot in producing Malaria, in consequence of its failure in exciting disease; as it will scarcely, I think, be now argued that the poison required nine days to operate.

Another preliminary question remains before I enter on the history of the fever itself, and it concerns the time which intervenes between the application of the poison and the production of the disease; and whether that be remittent or intermittent fever, is of no moment, since these are, truly, but modes of one disease. That there are some singular opinions on this subject which I am unable to explain, is true of so much more belonging to the history of these disorders, that it will excite no surprise.

If my own frequent observations show that fever may be induced within half an hour after exposure to Malaria, and that a single inspiration, or the space of a very few seconds, is amply

sufficient for the purpose, this is also an opinion most decidedly stated by many French and Italian physicians whose experience and acuteness will not be questioned. It is equally the opinion of other observers, not physicians, and therefore without the bias which might be suspected in such cases; of military, and chiefly of naval men, whose observations have been founded on the momentary and transitory effects of a breeze of wind, and especially of a land wind blowing off to sea. In France and in Italy, to confirm this, instances are known and recorded, of labourers dying instantaneously from merely sitting or lying down on the ground, and of others who from looking into a ditch or drain, have been struck dead by that poison which, of course in a minor degree, would have merely produced a fever. Lind, also, whose authority stands high, describes the instant seizure with nausea and delirium, as many others have done; so that respecting this part of the question there needs be no dispute.

The more difficult point to determine is, to how long an interval after its application the action of this poison can be delayed: and here, to quote Lind again, this limit is extended by him as far as twelve days. As I have had occasion to say elsewhere, it is not believed by any one of whom I know, that Malaria can, like the matters of contagion, be attached to a substance of any nature, and thus conveyed to excite its diseases; and the observations necessary to determine this interval are not therefore entangled; while it is plain that, to make them truly, the patients must, after a momentary or brief exposure, be completely removed from all the original causes. It may be questioned whether this has often been carefully done or recollected; while it is certain that from a very frequent or general neglect of the obscurer spots or causes producing Malaria, such persons may often have been unwarily exposed to them, thus easily leading to unfounded opinions on this subject. And as many of the recorded ones have been derived from facts occurring where armies remained on a given spot of ground, though the individual was not a second time exposed to the more obvious cause, it is evident that fallacy is easily introduced into the observation: particularly when what has been formerly said on the propagation, as well as the production of this poison, is considered.

Whatever the truth may be in this case, the present doubts are not expressed without as ample an examination of evidence as it has been in my power to make, and that examination consisting in attempts to ascertain at what most distant period remitting fever has appeared in ships after leaving the shore and thus getting out of the influence of the land winds. At first sight indeed, the opinion in question would appear to be confirmed by many of the cases which I have obtained from the

log-books of ships of war, of which I shall however name but one, as it will be sufficient for the purpose. In this instance, a remittent appeared among the crew when on the coast of Africa; when the vessel put to sea on a cruize, notwithstanding which, however, other men became sick in succession during the space of twenty days, after which no further cases occurred.

It is plain that this is the kind of experiment almost alone by which the fact of a long dormant state of the poison could be proved: but unfortunately it still leaves room for doubt, from our knowledge of the fact noticed elsewhere, that a remittent will become, or perhaps produce, in any given individual, a contagious typhus, under confinement; so that in this instance, as in other analogous ones, the fact may have been of this nature. Nothing but extreme accuracy on the part of the ship's surgeon in ascertaining the nature of such a fever, can render such cases evidence; and unfortunately, as I have more than once remarked, practitioners at large have seldom exerted themselves in making this distinction as it ought always to be made; since in every season, and almost in every place in our own country, to this very hour, the autumnal and marsh fever is called a typhus and considered a contagious disease. And when what I have formerly said respecting the production of Malaria by bilge water is recollected, it is plain, that, on this ground also, the above observation does not determine the question in doubt, and that it will always be a case very difficult of examination, from the uncertainties which must exist respecting the purity of the facts in evidence.

But whatever my own doubts may be, I am bound to state the opinions of others, yet not without the remarks to which they seem exposed. Many physicians or surgeons, both English and French, have said that even after six months, many soldiers who had been at Walcheren and had escaped the fever there, were seized with the same disease in other countries; asserting also that the poison had remained during that time dormant in the constitution. Pym is one of those who thinks thus, and so I imagine does Blane; while Bancroft believes that the intermittents of spring are the produce of Malaria received in the previous autumn. Baumes, resembling Lind, limits the term to fourteen days; but Ferrus, coinciding with the former, relates in proof, a case of a soldier who having escaped at Walcheren, was affected with this fever six months after, on the Niemen; as there is also a case quoted in evidence, where an English regiment became attacked in the same circumstances in England, after eight months.

It may very naturally be asked why a fever produced on the Nieman should not have been produced by it, or why any such fever, any where, must necessarily be that of Walcheren, or of

any other former residence, since fevers of similar characters may occur in many places: or why, because an English regiment which had formerly been at Walcheren suffered from fevers in Spain, these should not have been the produce of Spain. These questions are obvious; while, on physiological grounds, we must be troubled to conceive a poison of this, or of almost any nature, lying dormant in the body so long. It is much more reasonable to conceive a new disease and a new poison, of which the presence was overlooked; or, as perhaps sometimes happened, that the disease had formerly been suffered, though in a slender form, and easily neglected among so many cases and difficulties; thus producing that susceptibility which would mark one set of men rather than another as the victims of a new cause. I need only add, to these objections, that disorders of the spleen are frequently produced, without very obvious fever, and that as these give a susceptibility of Malaria, many of the cases in question have probably been of this nature. Why we should believe, with Bancroft, that a vernal ague should have remained dormant from the preceding autumn, when we daily trace the cause itself, or the exposure, and the consequent disease, it would be rather difficult to say. Let me therefore leave this subject to the opinions or prejudices of others; for thus will it probably be determined, by each for himself; as is generally the fact in such cases. I may proceed to the consideration of the disease itself.

The symptoms of pure, or simple remittent fever, are too familiar to physicians to require detail, being that of every febrile disorder. And while I may refer to a hundred books for what I could not describe better, I must really also refer to them for such a history as should be a full one; since in so many of the recorded cases or epidemics, the variation in number, order, intensity, and superfluity of symptoms is such, that it would require no small space even to abridge what ought not to be abridged. Headach, lassitude, pains of the limbs, general debility, derangements of the *primæ viæ*, diminution of the intellectual powers passing to morbid excitement and delirium, augmentation of heat, with thirst and disturbances of the pulse or circulation, which may be mere acceleration, or more, include a sketch of the ordinary symptoms; while the heat, being temporary or paroxysmal, terminates, or not, in perspiration, and is sometimes preceded by cold, though the proper cold rigour is rarely found in this fever, after the first paroxysm, often also forming the first symptom of the attack. In some cases, the heat and cold occur in a very irregular or disorderly manner; but while I merely pretend to give a sketch, since to medical readers the bare term fever is sufficient, I need not detail these variations. Nausea or vomiting may exist also in the simplest

disease, but are more commonly depending on local affection; while the state of the tongue, always febrile, varies with the quality and nature of local disease in the *primæ viæ*.

If I here forbear to give an accurate detail of the history of fever, so, for the more complicated forms of this disease, and for pictures of the more severe cases, as for the history of epidemic varieties, I prefer a reference to the endless authors on the diseases of hot climates; but I may mention, that while an undue, and apparently a morbid secretion of bile is the most conspicuous and common local affection, producing sometimes what is emphatically called the yellow fever, so the brain and other organs, and above all, the stomach and the bowels, are often found affected by inflammations, modifying materially the symptoms, and also demanding important modifications in the practice.

From these circumstances, variously modified and combined, and from others possibly, consisting in the nature of the season or climate, in the previous condition of the patients, or even in the very nature of the Malaria itself, arise those endless varieties of this fever, not merely as it relates to individuals but as to whole periods of epidemics, which have filled volumes, and of which a mere abstract would make no small book. Important they assuredly are; since, while they so often account for the discrepancies of medical writers, not merely as to the history of these fevers, but as to the practice adapted to them, so they are the necessary causes of great diversity in that practice. But where even a systematic writer on fever alone, is compelled to confine himself to a general abstract, and to refer to authors for these varieties, I shall be still more easily excused if I follow the same example; while I also refer to such systematic writers as Fordyce, Clutterbuck, Philip, and many more, even for that minute general history which it would be a mere waste of the reader's time to repeat.

It is necessary, however, to notice that characteristic symptom whence the disease derives its name. This is a remission or diminution of the intensity of the several febrile symptoms; occurring once in twenty-four hours, but exceedingly variable, not only in the period of its arrival, but in the length of its duration and in the degree of relief which the symptoms experience. In severe modifications, and not unfrequently also even in mild cases, it either becomes difficult to mark this remission, or the fever appears to be thoroughly continuous, or is actually so, as far as any fever can be; though I should remark that oversights are not uncommon on this subject, from the occurrence of the remission during the night, or at a time when the physician is not present to observe it. It is important, however, that it should be watched and ascertained; as the salutary exhibition,

not only of medicines but of food, often depends materially upon it; while it often can be discovered by due inquiries into the feelings of the patient during our absence, into the state of the appetite or desires at particular periods, and into the hour at which sleep is obtained. It is commonly by a gradual prolongation of this interval of remission, that this variety of the fever of Malaria becomes an intermittent; and this leads me to consider the terminations of this disease, though for a fuller detail than I think it here useful to indulge in, I must again refer to the numerous well-known writers on the diseases of hot climates, as well as to those who, like Fordyce and others, have written fully and specifically on the subject of fevers.

I must still, however, remark somewhat more pointedly, as to the question of remission, that even among the most accurate and able observers, we find ample histories of this fever, more properly perhaps therefore called marsh fever, where it has been perfectly continuous, at least as much so as a typhus fever ever is; while in such cases, the additional presence of petechiæ and the other associated appearances, renders it sometimes utterly undistinguishable. Hence in part, among other remarkable instances, the almost endless disputes respecting the Bulam yellow fever, so well known to every physician; and hence also disputes, even more numerous, if less conspicuous, respecting various epidemics occurring in military and naval service; disputes often including errors which have furnished misapprehended evidence as to the very existence of contagion. How intimately this question concerns us, even at home, I shall often here have occasion to point out, as I have indeed already done more than once in the essay on Malaria; since from an unfortunate blindness as to the existence or presence of Malaria or its causes, added to want of reflection among the mass of routine practitioners, and perhaps not a little aided by the now popular and vulgar use of the term typhus, it is almost the invariable usage, not merely of the people but of the generality of practitioners, to give this term to every continuous marsh fever; and not only so, but, more inexcusably, to apply it even where the most ordinary discernment and reflection would indicate a true remittent.

That fever is often regulated by certain critical periods, so as to terminate preferably on the third, fifth, seventh, ninth, eleventh, fourteenth, seventeenth, and twentieth days, has been ascertained by abundant observation; but as to such other minutiae, or more questionable effects, which may belong to a similar influence, whatever it be, I must refer to Balfour and other writers. The same authors also, will describe those cases of excessive severity, unknown to our more fortunate climate, where the disease terminates in death within the first days; but

in our own country, I know not from experience that it ever thus terminates sooner than the seventh: yet if death at that early period is unusual, except under very improper treatment, we may often witness the entire recovery, or the sudden and decided transition into intermittent, after a very few paroxysms; in rare cases, even after one. Three weeks may probably however include the much greater number of terminations in recovery when the disease submits to the law of the critical days; while it is not uncommonly protracted to six weeks; and even in cases where its extreme mildness might have led us to expect an earlier solution. Where this law does not seem to exist, we can assign no period for the recovery, as we can fix on no particular time when it is to be fatal; but I may remark that except in the case of relapse, the protraction of remittent beyond six weeks is a very uncommon occurrence; though, in my own experience, this long duration is not extremely rare.

The termination of remittent is often perfect, and in every climate; while, as I have just remarked, it sometimes subsides into an intermittent. This intermittent also frequently disappears after a few paroxysms, and even without remedies; as, often also, it is easily removed by the well-known medicines. But in other instances, it not only becomes durable but inveterate, assuming any one of its numerous modifications. This event is decidedly much more common in the tropical and hot climates than in our own; while it seems to be peculiarly conspicuous in certain countries or situations, preferably to others, where the cause of the difference is not obvious. Some parts of China have been noted in this manner; and it has also been asserted of some particular situations in Greece, in Italy, and in Spain; while, if my information is correct, the intermittents that follow the fevers of Moldavia are particularly noted for their inveteracy, as well as for the peculiarity of their attached symptoms. A fuller enumeration of this kind might easily be made; but it is better to refer, as before, to the well-known works, for that which would serve little purpose, thus separated from the entire histories of peculiarities in this disease, or of the varieties to which marsh fever is subject. Yet I must also remark, that in this case, it would seem as if certain situations, or peculiar varieties of Malaria, or else perhaps the fevers which they produce, had an especial power in generating, not simply an inveterate intermittent, but a habit of acquiring, or a facility in renewing the disease, which often renders it the inheritance of what may remain of life. Walcheren, I need scarcely say, has been a noted instance of this nature; and that the cause has been deemed to consist in the formation of certain durable organic derangements, is a question which I shall have occasion to inquire of hereafter.

As remittent may terminate in intermittent, so does it produce, or end in, the local and painful affections of the nerves which may be ranked under the general term Neuralgia. This is a subject however which will find its more proper place under that head; as it must then be brought forward as a proof of the common origin and connexion of these two apparently most distinct diseases, and of the general dependence on Malaria, of the several disorders which I have treated in this essay.

The production of paralytic affections by remittent, or its termination in such disorders, is a subject somewhat complicated; and thus, while often overlooked or mistaken, or else denied, it cannot be named without entering into some necessary explanations and limitations, that, if possible, the truth, and nothing more, may be stated.

That marsh fever does act directly, itself, or its generating poison, on the nervous system, is proved by the state of apoplexy or profound coma with which the attack is sometimes ushered in; a fact common in Italy, and known by the name of *febbre larvata*; though, in this case, mere intermittent may also be the supervening disease, instead of remittent. That, in these fevers, the affections of this nature have been attributed to local diseases of the brain, I know; and such events may doubtless occur. But this does not explain the cases in question, where the affection of the brain is instantaneous, following directly the application of the poison, even before fever is produced, and resembling that which occurs from the application of other poisons, whether to the lungs or the stomach.

Farther, as it is the effect of Malaria to produce the local affections of particular and single nerves, either with supervening or present palsy, or without either, while the brain is not affected, and while no local inflammation or other disease of that organ can be supposed to exist, from there having been no previous fever, it is plain that Malaria does exert a power of some kind on the nervous system directly; on the whole, or on more or fewer of its parts, even to a single point in the minutest nerve.

Thus then the larger paralytic affections, such as hemiplegia, or palsy of a leg or an arm, consequences occurring from intermittent as well as remittent, are probably direct actions on the nervous system; while, as paralytic diseases, more or less durable or extensive, do also follow that merely painful affection of the nerve which was the produce of Malaria, the whole of these effects seem to be concatenated under one general cause or action.

And in this manner we can probably also explain that diminution of the powers of the intellect, often proceeding, even to perfect idiotism, which sometimes follows severe or long conti-

nued remittents; and which has been known to influence the faculties through life; though, in this latter case, there may sometimes be organic diseases in the brain itself, the produce of local inflammation during the fever. I am still more inclined to conclude, however, that, whatever the diseased state of the brain, as of a single nerve in the analogous cases, may be, the cause of this injury to the mental faculties, as of all the paralytic affections, is not a previous inflammation, in the vulgar sense of that term; because it will be remarked by those who can forget the prejudices connected with their practice and derived from their hypothesis, that these fatuous and paralytic symptoms or disorders are peculiarly apt to affect those patients in whom bleeding has been misapplied; just as the same mistaken practice often causes the merest local affections belonging to Neuralgia to terminate in the same manner.

This particular subject must necessarily come under review again, in treating of the local affections of the nerves produced by Malaria; but I cannot terminate it at present without offering one suggestion. The local application of cold sometimes produces complete palsy, as is well known; and it seems to me that the hemiplegia of labouring people, often attributed to drinking spirituous liquors, is sometimes at least, and probably very generally, the consequence of sleeping on damp ground, particularly after fatigue. And in such cases it also appears, that, however the action of Malaria may here be suspected in certain climates, simple cold, in a country free of Malaria, is sufficient to produce the effect; just as a general torpor of the whole system, particularly in feeble or old people, is often the result of a long-continued exposure to a low temperature any where.

But if Malaria does produce direct apoplexy, as it also often brings on a comatose state which is exceedingly durable, both in remittent and intermittent, and if also it produces, not only local and similar effects on single nerves, but complete hemiplegia, it will be most necessary to inquire whether some of the cases of paraplegia or other palsy, especially as occurring in certain climates and in campaigns, are not instances of the same nature; since, whether our practice in such a disorder should be different or not from the treatment of palsy produced by simple cold, the philosophy of physic cannot fail to be improved by discovering causes and assigning distinctions.

The last class of diseases following remittents, and appearing, whether really so or not, to be their produce or to form their termination, are the visceral glandular affections, comprising chiefly those of the liver and the spleen. As the supervening dropsy is generally esteemed but an ulterior consequence of these, though much oftener, I believe, the direct produce of inflammation than it has been thought, I shall not here notice it

further. Or rather, I must entirely avoid treating of this disease, in whatever mode it is produced by fever or by Malaria: not that I consider its history to be thoroughly understood, far from it, or the practice as to its several varieties disentangled and clear; but because, should I attempt to treat every disorder connected with this principal subject, I should write a treatise including a large portion of an entire system of physic.

It is evident that, in certain cases, the remittent has existed before there are any appearances of the glandular diseases; while it is common for those to show their symptoms most strikingly, after the fever has subsided or disappeared. Hence the not unnatural conclusion, that the injury of the gland is the produce of the febrile action; although it has also been concluded reversely, that the glandular disease is the proper cause of the fever. Thus diversely do different hypotheses cause men to look at one object.

Is it not possible also that they may sometimes be independently associated? The question is a difficult one, but there are facts which would seem to prove that this is the truth, at least in many cases. I observed formerly, that the liver affections of India seemed to be the produce of its Malaria, and the apparent substitutes for that which, in some other situation, is simple remittent, in others again, intermittent; though if they have attracted most attention in that country, it seems, by the report of many physicians, that they are, perhaps, not less common in Africa; while, if they occur also in the western tropical climates, it is less generally and less independently. Here then, acute glandular disease at least, would be an independent effect of Malaria; if indeed it be certain that the attendant fever is not truly the marsh or remittent fever, modified by this inflammation, or else mistaken, in consequence of the prevalence of an overwhelming local symptom. Thus also, through France, Italy, Sicily, every where, it is common to find, not merely single instances, but a whole population, suffering from glandular diseases in their worst forms; while no fever is present, and while also, in many cases, it seems to be ascertained that no fever has preceded, or that there has at least been no severe remittent or intermittent as the cause. I feel it necessary to make this limitation; partly from the difficulty of procuring accurate information as to individuals, and partly from the fact, that if glandular affection shall be judged the produce of fever exclusively, there are, in such countries, in justification of this opinion, intermittents in abundance, of a character so slight as scarcely to excite the notice of a people to whom the disease is endemic; and where, as every one suffers alike, it is scarcely conjectured that such a thing as health exists, or that all the world is not in the same condition.

But, however different physicians may decide this point, whether from their previous views or from more extensive observation than has fallen to my lot, I have met with numerous instances in this country, of diseased spleen at least, and that to a considerable extent, where patients, sufficiently observant of their healths, in a few instances very remarkably so, and some being even medical men in practice, could pronounce with confidence that no previous fever of any nature had ever existed, neither remittent nor intermittent; though at the time of applying for advice, there were present some of those obscurer derangements of health, or local nervous affections, which I have here classed under the diseases of Malaria.

Thus the subject must rest for future examination; as I do not think even this last evidence completely satisfactory, and feel no inclination to found my own belief, at least, on any thing but evidence: considering that the opposite tendency is now, as it ever has been, the leading obstruction to the progress of medical science; tempting by its facility because requiring neither labour nor talents, levelling all men, and, in every sense, ruinous to the progress of knowledge.

Such is a sketch, as far as it appears requisite, in the work which I have proposed to myself, of the general character and results of common remittent fever. I need not point out the differences or resemblances between this disease and the fever produced by contagion, or the typhus, nor again repeat, after the numerous times that I have noticed it in the essay on Malaria, how often the one has been mistaken for the other, and with what consequences: while a full inquiry on this subject in all its bearings belongs to a regular treatise on fever; an investigation not within my plan or limits, nor, for my peculiar purposes, necessary. For what I have thought fit to pass over, I can refer to a thousand authors: but to name titles which any man can read in the *Bibliothèque des Sciences Médicales*, would be the extremity of affectation.

Yet I may perhaps here add to what I formerly said, that the inveterate and common error to which I have just alluded, has probably been the chief cause of an opinion lately promulgated with some energy, namely, that no fever is contagious. It is perfectly true, that when we really examine the great mass of fevers occurring throughout the country, they are not so; but because wrong has been committed on one side, we must not double that error by running at once into the opposite extreme. I believe, myself, that in the present state of society, in England at least, or wherever the lower orders are in a state of decent comfort, contagious fever is in reality very rare, even among them, whatever it may be in Ireland: but to assert that there is not such a thing as contagious fever, is to discredit evi-

dences as numerous and incontrovertible as science, or human affairs, have ever produced. And let us not forget also, that even in proving the fevers in question not to be contagious, there is but little gained, unless it is also believed that these are in reality marsh fevers, or fevers of Malaria, whencesoever arising: since, to rest in some vague notions of a fever which is not contagious and does not belong to this class, is to deprive ourselves of the means of prevention, and, further, to incur the hazard of a faulty practice, from misconception of the character of the disease.

CHAPTER II.

On the chronic or relapsing and obscure or anomalous remittent.

THE preceding sketch of the common marsh or remittent fever, has been given, not as a proper or full history of that disease, but as an indispensable basis towards the examination of those varieties which may be comprised under the general title of this chapter. To explain those, has been the sole reason for introducing, at all, this branch of the diseases produced by Malaria; as the entire purpose of this essay is, not to repeat what is already known or ascertained, but to explain what is considered as obscure, or as having been neglected or mistaken. Had I not given this previous sketch, I should not have had a point of reference for the varieties in question; and must often have introduced, as a subject of comparison and illustration, what did not precisely belong to the question under immediate consideration.

To begin with a general view, it is by no means uncommon to find, in our own country, to which, as far as my own proper descriptions and opinions are concerned, I shall here invariably limit myself, a modification of fever which is, often, little noticed, and very generally misapprehended, while it is a source of great distress. This, as it appears to me, can be referred only to the remittent; bearing the same relation to the definite and severe disease, which the slight but permanent intermittent does to the equally severe and regular ague. If this peculiar variety is sometimes sufficiently severe and marked to be es-

teemed a fever, it is far from uncommon for it to be so slight as to pass for hectic, for what is called debility (a term without meaning) or for ill health, or delicate health, terms equally convenient to cloak ignorance; while not unfrequently also, it is characterized by the no less convenient phrase nervous, or even brings on the unlucky patient the charges of hypochondriasis or affectation.

To be now more particular, there is a fever not uncommon among us, to which the popular term nervous fever is applied most accurately when it is of a slender nature in regard to its symptoms, however durable it may sometimes be. This is a disease which, with unpardonable carelessness, as it appears to me, systematic writers, and Cullen among others, have often, perhaps always, confounded with contagious fever under the name of Typhus mitior. It is not, in general, the produce of contagion, and it cannot be communicated. As far as my own observations indeed go, I should say that it never was a contagious disease, nor produced by contagion: but I must not refuse assent, absolutely, to the assertions of other observers of reputation, and am therefore willing to believe that there does exist a contagious or typhus fever of this peculiar and slender character: a possibility indeed to be inferred from the very slender varieties of plague which are sometimes known to occur. Yet when I grant this, I must still express my doubts that a real typhus, produced by contagion, and of this mild character, can ever be a long-continued disorder. In cases where there appears to have been a certainty of contagion, with a mild fever consequential, this has been short as well as slight; and the same is true of the mild plague. Durability, or the property of prolongation, seems to be a peculiar character of marsh fever under all its forms: and until an unequivocal case of contagious fever thus mild and thus durable is produced, I must continue to believe that all long-continued, or often relapsing fevers belong to the disorder under consideration.

If I have hazarded these remarks on the typhus mitior of Cullen's arrangement, I am not less inclined to offer similar suggestions as to his Synocha and Synochus; observations which are a somewhat more direct continuation of that investigation which has preceded in the essay on Malaria, and to which I must here refer. I cannot pretend to say, that there is not a pure inflammatory fever, as it is called, unattended by local inflammation, which is neither the produce of contagion nor Malaria, and which may be the produce of mere cold or of the other assigned causes which I formerly discussed in the essay alluded to; but I believe that the disorder so called is very frequently a fever of the remittent family, and produced by the same causes; a terminable attack, whether naturally, or

through remedies, of a disorder which is as various in its characters and duration as any one in the catalogue can well be. This opinion will at least be supported by those foreign writers hereafter to be noticed, who consider that the intermittent may consist but of one paroxysm, finding also its natural termination, without remedies. With respect to the Synochus, it is not to be denied that a contagious fever will begin with symptoms of one order and proceed to its termination under the very opposite ones: but where the marsh fever is so perpetually confounded with this species, and when it is so general a character of remittents to commence with a class of symptoms requiring bloodletting, but soon terminating in very different ones, it is to be suspected that the very loose term Synochus has often been applied to these, as it, not improbably, was by the nosologist himself; whose ideas, practically, as to fever, do not appear to have been very definite, and whose "First Lines," in numerous places, whatever their medical reputation may be, offer most unsatisfactory specimens of reasoning, as well as of the statement of facts, to him whose notions of philosophical writing have been derived from other courses of study than a medical one.

I have already said, that we cannot yet decide absolutely, what causes besides Malaria may produce such a fever as that under review; for, notwithstanding what I have formerly adduced in disproof of the other reputed ones, it must be recollected, that our present knowledge of causes in physic is really very imperfect, and that the question itself is a very difficult one. It is as bad philosophy as it is too common, to hasten to conclusions; and, in physic, it is far too general a practice to forget the pursuit of truth in the chase of an hypothesis. But while I showed, in the discussion to which I have here referred, how easily deceptions may creep in as to these imagined causes, I have also there most fully proved that Malaria is far oftener present than has been imagined. And if the fever in question can sometimes be clearly traced to that cause, its whole character, when carefully studied, is that of remittent fever in its pure and acknowledged form, and in its severer modes. Its duration, and its tendency to critical periods, are the same, and it is rarely if ever without a diurnal remission; which nothing but neglect will prevent the physician from tracing, though it often does require a minute attention, on account of the want of contrast between the paroxysm and the intermission, arising from the feebleness or small severity of the symptoms. Further, it often terminates in an intermittent as slender and obscure as the original disease: while it also is not unfrequently followed by the local affections of the nerves, such as periodical headach, toothach, intermitting rheumatism, and even marked Neuralgia.

And further yet, while it displays characters which should always have prevented it from being confounded with contagious fever, it is apt to become habitual, or to recur in frequent relapses, even through a long course of years; a circumstance never occurring in contagious fever, and on which I shall have occasion to dwell presently. In this it resembles the analogous intermittent; as in this also, it copies, in some measure, the much better marked remitting fever; while, the methods of cure will be found to correspond, and while further it is not unusual for it to be attended by glandular visceral affections.

Such are the arguments for considering this "low fever," "fever on the spirits," "fever on the nerves," (for by these names also, as well as nervous fever, is it known,) as a modification of remittent, and probably as a fever of Malaria: and if these are not satisfactory, we must perhaps erect a new genus for it; since it can never be truly classed with the only other durable fever that we know, the fever of contagion. Let physicians at least say how we shall dispose of a fever of this character which does not belong to one or other of the two leading classes; since I must confess that I know not where to place it, and am unwilling to go on as we have hitherto done without ideas; satisfied with a term, and, once possessed of the word fever, inquiring no further what are its causes or what its analogies. Physic will never thrive thus; for thus has no science ever thriven; while, if I have not here truly pointed out its analogy, let some one else attempt it; yet through ideas and not words, by means of better evidences than those which are here brought forward.

And it is far from unimportant that this point should be clearly understood; as it is only thus that our practice can be justly regulated: while it is most certain, that by mistaking it for other diseases, the sufferings of the patients have often been, and are daily and every where, materially aggravated. And if the cause, the original one, be Malaria, as in the case of acknowledged remittent, whatever the causes of the relapses may be, we thus acquire the means of prevention; of which, as long as we mistake its nature, we cannot avail ourselves: while further, if I have here proved that such relapses are often, probably in the far greater number of cases, brought on by incautious exposure to the cause, through ignorance of that as The Cause, and through ignorance of the places which produce Malaria, we have also acquired the means of curing, as it may be termed, a disorder notoriously troublesome in its relapses; since, in this case, prevention is cure. If those who still doubt will watch it carefully, they can scarcely, I think, fail to be convinced, if at all capable of observation and free from prejudice; while some further arguments may perhaps aid in deciding their judgment. One of these is, that it is among those habitual diseases included under

the vague term ill health, which are the produce of low and wet situations or of some of the soils formerly described as productive of Malaria; and I think this will appear the fact to those who will bestow a careful attention on the patient's history as to residence, past or present, and on the soils connected with this which I have stated in the former essay as the causes of fever: while I need not say that such an investigation demands care, very particularly where aught is to be trusted to the patient's own recollections. Another argument is, that its relation to the marked or severe and terminating remittent, in slenderness of symptoms and in the frequency of its recurrence, is precisely that which intermittent, equally slender and equally returning, bears to a limited and severe intermitting fever; while I may lastly add, as a proof of its cause and return, that if it is especially subject to relapses in low and wet situations, as well as indebted for its very existence to those, so it is best cured, and especially when relapsing or repeated, or chronic, by change of air; that is, by change to a drier air as it is usually termed, or, what is the fact, by removal from its causes; a circumstance explanatory, alike, of the value of travelling and of migrating to watering-places.

I have here frequently regretted the necessity of commenting on the obscure cases of disease recorded by physicians, and there are few men better entitled to this apology than Haygarth: but the obvious utility, and even necessity of such a proceeding in a work of this nature, is the best apology that can be offered to a sensible man. In the Medical Transactions of the College, this able physician describes as inexplicable, a peculiar state of permanent debility, enduring even for years, and without very marked disease of any kind: and he notes it also as being common in young females, and in the opulent ranks of society. I must not say absolutely that this was or is the disease here in question: but unless where I have readily traced this not uncommon disorder to the abuse of purgative medicines, and occasionally of bloodletting and cupping also, (a circumstance noticed in a future part of this essay,) numerous instances of this precise nature, or at least agreeing precisely with Dr. Haygarth's description, have been decidedly proved to be the variety of remittent, or fever, which I am describing; while in the greater number, the duration has extended to two or three years, or even more, with intervals indeed of tolerable health, in spite of all common remedies. I shall be surprised if others, hereafter, taking this view of what cannot be uncommon in any physician's practice, do not in future arrive at the same conclusion: but I shall submit this conjecture to the reader's own judgment when he shall have perused the present chapter.

It will now be necessary to describe, as far as can be done,

the symptoms of this fever, and most particularly when those are most slight; since these are the very cases where erroneous observation is most common, and is followed by equally erroneous practice.

This disorder may be found, and not unfrequently, with scarcely any marked symptom except mere muscular weakness; a debility on any attempt at exertion, which seems unaccountable, inasmuch as it occurs in persons, even in youth, and apparently strong, and is not very obviously accompanied by any proper febrile symptoms. At times, not even the appetite seems affected; and here, almost necessarily, the result is, to suspect the state of the patient's mind, or his moral dispositions, rather than his health; to suppose, for example, as I have often seen, that a soldier is "shamming," that an opulent female is indolent or affected, or a studious or professional man hypochondriacal.

Yet, let an acute physician watch this disease, and he will be convinced that it is a disease, and moreover a fever. It commences and terminates like the remittent when best marked; and when it appears to be prolonged for months or years, as is sometimes the case, it will be easy to see that it has had intervals of cure, generally of self-cure, and relapse; and that, to each relapse, there is a period of weeks, not very uncommonly of six, while the intervals vary from one or two to any given number. Further, either the patient or the physician, or both, must be very inattentive if they do not discover that the paroxysm of extreme debility is fixed; that it is, in fact, a paroxysm, let its length be what it may, and that there is a diurnal period when it diminishes, or where the patient, who, possibly, could not stand, on getting up in the morning, is enabled to exert, and even to enjoy himself at night.

Hence, as to some cases, at least, the truth of, as well as the reason for, a very common remark, that midnight is the nervous patient's holiday; though there are unquestionably many cases of nervous affection, and even of periodical returns and intermissions in this complicated class of disorders, which do not appertain to a remittent type of fever, or perhaps to any fever. The particular case here quoted, is one, of course, where the paroxysm attacks in the morning and the remission is at night; but while the periods are necessarily various, so are the results, as to the complaints, appearances, or sufferings of the patient. I shall presently trace some others of the more marked of these modifications.

I have assumed here that pure debility may be the sole symptom of a remittent; but it would have been more correct to say the sole obvious one, since it is rare but that the patient at least, if an attentive observer and a good reasoner, and if at the same

time free from the morbid influences of the imagination, will not discover other indications of a febrile remittent disease; however the physician may overlook them, from neglect, or perhaps from ignorance, or system; or, as may also happen, from want of sufficient opportunities for personal observation. He moreover who would discover what he cannot see, by cross-examination, must know well what questions to put and how to present them; or he may remain ignorant, from assuming a wrong course, or else gain the very answers which he has suggested. A leading question is too often as deceptive in physic as in legal procedure.

The obscure symptoms which I am now to point out are those, as might be anticipated, which, whenever they become marked, are also easily discovered; and which, as they gradually multiply, and become also more conspicuous, indicate a more severe disease, gradually passing into a form so distinct, that the character of true remittent fever can no longer be denied to it, even by the most prejudiced. And these gradations of severity, if I omitted to adduce them just now as an additional argument in proof of the true nature of this disease, are, in reality, among the strongest evidences of its argued origin and cause; since it would not be difficult for any attentive physician in tolerably extensive practice, to collect a series of his own cases, rising in exact gradation from the simplest debility to the most perfect and defined remittent fever.

I noticed that the appetite was sometimes not affected; but, even in the slightest cases, a careful observation will show that it is partial and irregular, or, in common language, capricious. The fact in this case is, that it vanishes during the paroxysms, returning in the interval; a term which I choose in preference to intermission; while the common inaccuracy of observation as to this fact, or a diversity of judgment as to the condition of the appetite, arises from a coincidence, or the want of it, between the conditions of the fever and the usually established hours of eating. He whose paroxysm includes the hour of breakfast, may be unable to eat in the morning, while he can dine; whereas a paroxysm extending till night, may make him suppose that his appetite has entirely vanished; when, did he attempt to dine, or sup, at midnight, or at some period of the night, should that be the interval of health or abatement, he would cease to make this complaint. And thus it is also, that we meet with cases where the appetite seems unaltered amid considerable disorder; because, in these, the paroxysm returns at night, and the days form the intervals. Hence a rule in the cure to be noticed hereafter, which relates to the hours of eating; and, as will also be then shown, on similar grounds, which equally refers to those of sleep.

It is barely possible that in these slight cases, the condition of the tongue may be healthy, or nearly so, and that the *primæ viæ* may also be in a state of regular action. More commonly, both are affected in modes too familiar to require further explanation: but these, as belonging to so many other disorders, are seldom of any value as diagnostic symptoms; not seldom also misleading a bad observer, and being considered the cause of disease, of which they are merely the consequences. In the whole catalogue of ordinary practical errors, I know few indeed more common than that which views a sluggish state of the bowels as a primary disease, sometimes also a consequence of theoretic disorders of the liver, instead of considering it what it really often is, the produce of a febrile state, belonging, either to this fever or to some other initiative and similar cause. Nor is it difficult to account for this error, vulgar as it is common; since it is the consequence, partly, of seeing, in a disorder, nothing but obvious symptoms, and partly of that empirical practice for which England is so celebrated, and which, while it tends to blind the judgment, can, from its facility, be conducted by any one; while I need not tell the medical reader to whom we are indebted for its present influence and abuses; an influence and abuses which, whether they are now increasing or diminishing, are convenient to indolence, by superseding the necessity of thought or investigation, and by reducing the whole practice of physic to an empiricism, to which I know not that its entire history can produce a parallel example.

I feel no hesitation in saying that fevers of this character are a very general cause of the chronic and common derangements in question; and have no doubt that there are many physicians who are aware of this, and that many more will come to the same conclusion when they shall re-examine the disorders of this character under the present views. And consequently, that while these are symptoms of fever, not primary affections and causes of a febrile state, as is the common error under the system which I have been censuring, they may appear to constitute the sole disease, if the other symptoms are slight; just as mere debility does in other cases: ready therefore to mislead, even an attentive physician, and much more certainly the cause of false judgments in those of a reverse character. In this fever, however, as is to be expected, such derangements become, in certain cases, more marked; or, as the disease at large approaches to the more perfectly defined or more severe remittent, there occur all those circumstances which, as belonging to acknowledged fever, I need not dwell on.

What perhaps may appear most remarkable, is the state of the pulse; and it is the symptom, above all others, which misleads unobservant practitioners. There are persons who cannot

conceive a fever without an accelerated pulse: whereas, even in severe cases of remittent, the pulse often gives no indications of any disorder, or the very reverse of what such practitioners would have anticipated. At the very most, the periods during which the pulse is affected are sometimes so very transitory, that it is a chance if the physician should be present at the time; while it is an observation seldom required from patients themselves, though, in such cases, perhaps improperly neglected. Thus it will happen, that in point of velocity, or of character in every way, the pulse may be natural during the far greater portion of the day, while for a period of an hour, or even far less, it may undergo that very peculiar change, consisting in asperity, or hardness, or diminution of size, or feebleness added to acceleration, generally, but not invariably, and sometimes indeed quite the reverse, which marks the commencement of the paroxysm, or the whole properly febrile state; and which is all that we ever find of what may be called the cold stage, or of the hot one; since these are, commonly, scarcely distinguishable in this fever, and since the former in particular can scarcely be said to exist at all in many cases. And if this state takes place in the night, as does, and not unfrequently, happen, in spite of the well-known remark that the majority of quotidian attacks of fever occur in the day, it may be as unobserved, or even denied, by the patient, as it is unknown to the physician. It is not therefore wonderful, should it happen, that, finding no proper or obvious febrile symptoms, hearing of nervous fever and nervous disease, and witnessing perhaps only nervous symptoms, dyspeptic ones, derangements of the bowels, debility, one, or more, or all, the practitioner who is influenced by a wrong system, or is without any views at all and is merely guided by terms, should conceive himself in possession of a "nervous" patient: acting accordingly, or doing nothing right, with perhaps a good deal that is wrong.

Here also I must remind the reader, that even in well-marked remittent fever, there is often a period of the day in which the pulse becomes slow, frequently falling below sixty; while it is not unfrequently also full, as if under coma, and while this state is further attended by actual sleepiness approaching to coma, and not seldom, if this is not present, by lowness of spirits or melancholy. The same occurs in the slighter disease under notice, and in different degrees; while being also what is called a nervous symptom, it tends still further to mislead the negligent or ignorant practitioner; him who is guided by a correlative comparison of names and receipts, terms of diseases and the antagonist terms of medicines.

The diseased state of mind may however exist at two distinct periods of the paroxysm, and under two different states of the

pulse. Under the accelerated or contracted one, it is a state of peevishness or irritability, attended by the feeling of despondency or not: or it is a modification of the great leading passion anger, which together with fear, the equally inclusive and principal passion, forms those deranged states of mind appertaining to hypochondriasis, which appear under so many modes and modifications. And if under the full and slow pulse, it is commonly simple or passive despondency, or, in extreme cases, despair, so if the opposed condition or passion, irritability or peevishness, belongs to the accelerated pulse, that, in similarly extreme cases, may amount to anger, or to a tendency to that fundamental passion, easily excited by trivial causes; not seldom, difficult to restrain, even when no external cause is applied, or proceeding to causeless conduct, even in solitude, unaccountable to the patient himself.

Now this mental derangement, be its mode what it may, is a symptom of unquestionable fever; and in the modification under review, where it equally exists, it may be the only symptom visible to a bad observer. Hence another common source of error; and thus is this modification of remittent, when slight, so often mistaken for hypochondriasis as it is, generally, for what is called a nervous disorder. Should there be undisputed fever, then is it nervous fever: and hence probably the origin of a term which has aided in misleading practitioners, and systematical writers too, so long.

Though I shall have occasion to notice these particular mental disorders or symptoms again under the head of intermittent, I must still prolong these remarks here for a short space, chiefly because of the erroneous conclusions to which they lead; while I must also observe, as is also true respecting the whole, that while they are sometimes absent in severer cases, or, possibly, attract less notice, from the severity of more teasing or painful symptoms, so they are often very conspicuous in milder ones, possibly called into notice by the absence of greater evils, while equally tending to mislead the patient and practitioner.

Despair and fear, analogous passions, are, rather than anger and its modes, the two great mental affections of all hypochondriasis; and hence it is that fear chiefly, often attends the paroxysm of this obscure remittent. This, however, is true of marsh fevers generally, whether remittent or intermittent, and under all the modes of these diseases. So remarkable indeed is this mental condition, fear, in the disorders of this nature, that in some parts of the Mediterranean where these fevers are endemic, the only name by which they are known to the common people, is *Scanto*; fear or fright. Nothing can express this character more strongly; while it is singularly justified, as I am well informed, by the extraordinary effects on the conduct and

opinions of the patients which it produces. Anxiety is but a mode of fear; so that I need not refine on the display of these mental sufferings. This state is, as I have said, most often attached to the depressed pulse, though it also accompanies a partial delirium attending the reverse state; or the cold fit. And as the impressions of external objects, or occupation, counteracts these passions, so is it common for them to be conspicuous in the night, even when little troublesome in the day. Hence if these particular states should occur in the night, those passions acquire their full sway; the observation, as to the occurrence of a feverish fear and unreasonable anxiety at this period, being familiar, when the cause has been overlooked or unsuspected. Moral writers have noticed it familiarly, as well as medical ones; and were I inclined to quote a passage to this purpose, I know not that I could select a better than from the letters of M. de Sevigné.

In many cases, the morbid state of mind amounts to absolute, if transitory, delirium; while good observers, accustomed to watch the actions of their own minds, can ascertain that there is often an activity of thought, a hurry, or a confusion, which metaphysicians know to be the approximating condition, but which, as is usual in all slight cases, can be removed by the presenting of other objects, or of subjects diverting the attention; by the mere act, for example, of introducing a light, or by conversation, should any one be present. This is the delirium of a febrile paroxysm: there is fever present, from some cause: how many other causes may produce such fever, it is not my business here to say: it is sufficient that it is the produce of the remittent in question, while it is important to notice that if it is sometimes mistaken for nervous disease, as the phrase is, so is it attributed to dyspepsia, or to a presumed hectic fever, the supposed result of imperfect or disordered digestion. It will be for physicians to inquire whether this disease, real enough at times, has not also been imagined to exist when the real disorder has been the one under review.

It is far from my intention to generalize so widely, and so unwarrantably I may add, from one cause, or so to give myself up to one theory, as to suppose that every case of transitory nocturnal delirium, or aberration of judgment, is the produce of remittent fever such as I now view it. Far from it. I do not suppose that our knowledge of the causes that may act on the brain is sufficiently advanced to decide on any thing, scarcely even to infer any thing, as to this subject, with a rational probability. But the inquiry is an important one when the effects are often so serious; and it will surely be a justifiable question, whether among these cases, there may not have been some which were the produce of the febrile paroxysm of the modifi-

cation of fever in question, aided, as all those conditions of mind are, by the absence of objects fitted to divert the train of thought. Whatever be the causes, it is a fact well worth recording or recollecting, that some of the most remarkable suicides have been committed on rising in the morning, and in a certain paroxysm of fever, which many persons, who have felt and checked that inclination, have described as attended with confusion of thought, thirst, a tremor of the hands, and other unequivocal symptoms of fever.

To quote noted instances of this nature would be abundantly easy, but it would be painful, and cannot be necessary; while perhaps, with them, we might safely rank a well-remembered murder, that of Mr. and Mrs. Bonar, where no previous design, nor no purpose to be gained, seems to have existed. It is a subject, altogether, which might be discussed at great length; but I am scarcely justified here in pursuing it further: while, as a marked symptom in the disorder under review, it could not have been passed over.

Yet let others reflect on a view of this suspected occasional cause of the highest moral misconduct, which must not be rejected because it is new, and which I would attempt to illustrate further, did I not think that my readers would be more likely to admit it if allowed to examine it for themselves, than if thus urged on them. If it be a cause, it cannot be unimportant as to questions of medical jurisprudence, in modes that I need not suggest: while, as to suicides, the term febrile delirium should evidently be substituted for lunacy, affording an easy solution in the place of one which is, far too often, expedient rather than just. If it be true also, or indeed were it untrue, but could it be believed and also generally known, it might operate as a salutary restraint on many whose delirium is not so engrossing as to deprive them of all reasoning power, and who in being thus convinced that their false views were the produce of bodily, not mental, disease, and that they would change with the hour and open better prospects, might acquire firmness to resist a temptation which is well known to be often very transitory.

To finish with the affections of mind belonging to this obscure remittent, I cannot omit its effects on the intellectual faculties; though as these are not a very universal possession, their condition is not often brought under cognizance of the attendant practitioner, who ought also to be a person of intellectual attainments and habits himself, before he could observe their operations in others. That they are variously affected by this disease, I have that assurance from observers and from observations, which admits of no doubt; while it is most essential to remark, that among men whose intellectual faculties are in constant requisition, at all

hours, and who are not under the influence of a morbid imagination, or of selfishness as to their personal ease or inconvenience, such effects are sometimes the sole disease complained of. The physician who may be consulted on such subjects, and who may not have attended to this question, may perhaps learn to profit by the remark. It is a remark however which deserves a few more words; since surely there can be no physician, engaged among intellectual patients at least, who has not been assailed with complaints of this nature; though it is to be feared that they are often treated with a contempt which they do not merit. And he who will watch them, will find that they are often very regularly periodical; while a little exertion, or interest in the patient, will also trace, in certain cases, the very febrile disease of which I am speaking: though I must not say that every such periodical mental affection belongs to this remittent. And if such a character in this disorder has always appeared difficult of explanation, here is a solution for at least a certain proportion of cases; while, what is more important, that solution indicates the method of cure. And if, in a disease not much claiming medical aid, such opportunity should not be afforded to physicians, or should they, from want of sufficient intimacy, or other obvious causes, not have the means of investigating it accurately, the patients themselves, with these hints, may learn to trace the real nature of the affection, by attending to the various concomitant symptoms which are here pointed out in so many places, and to the causes whence the original disorder arose and through which it is renewed.

And if I dare not here enlarge much on a subject which would carry me far into the history of the slighter mental derangements, I am still bound to observe, that some very remarkable cases of this nature, which had been attributed to various imaginary causes, and even to a tendency to mania, have proved to be nothing more than these delirious conditions (if such I may call them) connected with a remittent fever of a slight character; while these cases have been most striking in men called on for much exertion: partly because that exertion prevented the suspicion of fever, and partly perhaps because the mere mental labour itself aggravated the symptoms; calling them at least into more notice. Let those to whom cases of this nature may hereafter present themselves, keep this at least in view; since I cannot help thinking that it will often be of much service to physicians, and of still more to their patients: while if any one is inclined to suspect this statement to be fanciful, let him investigate the mental conditions of the inhabitants of acknowledged districts subject to the chronic fevers of Malaria, in France and Italy, and even in England, and convince himself that what I have here stated as a disease connected with this cause, is actually so

dependent upon it. How widely mischief, or even serious injury, has been inflicted on the patients in these cases, by mistaken modes of cure, applied on wrong views of the cause, will appear in a more proper place hereafter, when the effects of remedies as to good or evil in all these disorders, is examined.

There are two states of mind in this case; and while they generally occur, both, within the diurnal period, they are also, when duly watched, found so accurately to accompany the states of the febrile paroxysm to which, even from theory, we should refer them, that we can scarcely entertain a doubt as to their dependence on a fever, and on a remittent fever; whether it shall be granted that I am right or not in referring that fever to the class of diseases under review. When however I say remittent fever, in this, as in any other case where these symptoms have been detailed, I must repeat one remark and make another: the first, namely, that the same results occur in habitual intermittent, and the second, that while there are double intermittents, so there are also double diurnal paroxysms in this remittent; in consequence of which, not only the mental symptoms, but all the effects, become complicated, so as to demand consideration, or exceptions, in reading these remarks; as they also often require acute attention on the part of the physician who would make those cases his study. In fact, as I shall have future occasion to notice, the limits between this mild and chronic remittent and the intermittent of the same character, are so very indefinite, in every sense and as to every symptom, that it is only to change the terms, and nearly the same rules apply to both; while we cannot sometimes decide which of the two names we should give to the disease, and while they pass backwards and forwards into each other, or are interchanged in various modes.

The conditions of the intellect then which I would here remark, are those of torpidity on the one hand and excitement on the other: the first consisting in an inability to think, sometimes attended by confusion of thought, and the other in an excessive flow or crowding of ideas, necessarily, in many cases, attended also with similar confusion, but from the reverse cause. I am much mistaken if both these states are not well known to many studious persons, and most of all to authors; the latter, which may be classed with the state of delirium, being not only friendly to rapidity of composition, but to the exercise of the imagination, provided it be not in excess, while the former is hostile to every thing.

It is for authors and studious men themselves, to investigate from how many causes they are subject to these two states of mind: my business here is merely to show how they are associated with a marked fever which possesses so many other decided symptoms, is so perfectly a remittent or an intermittent,

or both in rotation, with a cause to be traced, and with a progress not to be disputed, that no question can exist respecting its power and action in producing those mental conditions.

In this marked disorder then, the state of torpidity or inability accompanies that condition which must be considered as the cold stage, or which is the commencement of the diurnal paroxysm; being noticed, of course, only when the attack commences in the day and in the hours of labour, and therefore often passing without remark. And in every fever, this is the period of peculiar mental inability; the one observation confirming the other.

The period of excitement, or of increased, if of hurried mental power, on the other hand, is the hot fit, or that which is here its substitute; a period of partial delirium: and here also, that condition of mind which is useful in moderation, is illustrated by the other, or by that excess which causes the imagination to run wild. Reversely, if the opposed condition is also a state of the fever, it is that which, in a higher degree, becomes coma, and in its extreme, apoplexy; yet it must be recollected that inability to think may also be the result of exhaustion or fatigue during the interval, though this is, metaphysically, a very different species of inability from that which depends on the torpor of the nervous system. These conditions, it is plain, are the torpidity and the excitement of the nervous system, which form two such hackneyed terms in physic: yet while physicians have been accustomed to use them as causes, it is plain that they are but effects: and that, used in the former sense, as they have been, they but lead us round in a circle, explaining nothing. This is the loose and useless language of physic, by which readers as inattentive as the writers are misled: and he who chooses to read what Cullen has written on mania and on sleep, will easily convince himself that I have not stated what is not true; since he will at once perceive that the whole of that, and much more, is a specimen of this encycloidal—reasoning, I ought not to call it. A better logician would have seen that he was abusing words and deceiving himself.

But I must cut short a subject that would admit of a volume, in the usual way of discussing such questions, and proceed to notice the remaining bodily symptoms of this particular fever.

In the very slightest cases, headach may not be present, but it is far more common in women than in men. Very frequently, debility, with headach, constitutes, with that sex, the sole, or the sole obvious disease: and with these symptoms, alone, or apparently so, the disorder will sometimes run a course of six weeks, and with such severity as to confine the patient to bed. In this case, the act of confinement constitutes it a nervous fever, in the conception of those to whom a bed forms an essen-

tial part of a disease. The man who will not, from temper, or disdain, hold to his bed, is not supposed to have a nervous fever; while respecting the woman in the same disease, of the same severity, there is no doubt. To what judgment the male patient may in this case be subjected, depends on his rank, his pursuits, his opulence, his love of physic, and much more than it is needful to discuss here: but this is the case where the unlucky soldier is found guilty of fraud, as the persevering spirit which will not surrender, and which adds, to the natural debility of the disease, the exhaustion produced by his efforts in spite of it, is the object of another kind of censure to those whose minimum of good sense and good nature cannot distinguish between excess of fatigue, or positive exhaustion and loss of temper.

Here also, and whenever the disease becomes somewhat better marked, we find the other common symptoms of fever; fits of restlessness or lassitude, with occasional pain in the limbs, and not uncommonly in the feet and ankles; and as these are noted or complained of, the disease is commonly judged to be a fever or not. It is, in short, in all its points, when slight, one of those disorders more judged of by the patient's courage or debility of mind than by its own intrinsic symptoms: an excellent rule of judgment, assuredly, and one that is very likely to throw light on diseases.

With respect to sleep in these varieties, it is regulated by all the laws that hold in the more perfect and marked remittent fevers: but as the appearances are generally neglected or mistaken, while they also lead to wrong practice, and as the inconveniences to the patients are not small, they deserve an inquiry before I terminate this account of the disorder.

I must first remind the reader, that a comatose state, or a drowsiness, is a very common symptom in this disease; occurring also in that intermittent, between which and the disorder that I am now describing, the distinction is so difficult to make. In fact, as I have more than once said, it is little more than a dispute about terms; as the disorders themselves are essentially the same, and as the same patient, if suffering chronically, will experience both, in different seasons and circumstances.

This attack of drowsiness, when it exists, generally commences with the paroxysm, and is often the first warning of it; while it is often so sudden, that a patient will fall asleep even in the act of conversation, or may find the greatest difficulty and pain in preventing it. It offers an exact analogy to the more perfect apoplectic state, which is so often the first attack of the fevers of Italy. Sometimes it is temporary, terminating in half an hour, a quarter, or even within one minute; but, while irresistible, those who have experienced it, describe it as more re-

sembling what they should conceive to be the effect of a narcotic poison, than natural sleep. In other modes it lasts for many hours; the patient being unable to rouse himself into a properly waking or active state, while, at the same time, he cannot procure even a minute's real sleep; the bare attempt defeating his object. All those who have suffered this symptom from the chronic fevers of Italy, describe it as extremely distressing, and as one of the most vexatious parts of their disease; and I need scarcely point out to medical readers, that while it may rank under the *Quotidiana soporosa* of Sauvages, they may find abundant mention of it in medical writers, at least in cases of severe or marked fever, though it is so often overlooked or mistaken in our own country. Even in foreign writers, I must however remark, I can find no decided view of this disorder as appearing in a fever of this slight character, or in one, of which, while the proper fever is easily overlooked, this constitutes the only very marked symptom. It seems to me, on the contrary, that it is generally confounded with a simple and primary disease, if indeed there be such a disease which is truly independent.

The error to which I allude is that of calling it by the vague term *Lethargy*, and it is often an error of a very serious nature; since, among vulgar or unobserving practitioners, it leads to the practice of bleeding or cupping; remedies which, in general, materially aggravate the chronic disorders of this nature, sometimes even inducing real palsy: or, as is also not unusual, it is judged a reason for courses of purging and of abstinence, similarly injurious, if less actively mischievous. There can hardly be a physician who has not met with instances of this nature; while, not occurring necessarily in corpulent or aged patients, and the fact indeed being often quite the reverse, it might at least be conjectured that it did not arise from that cause, excess or misdirection of the circulation in the brain, to which such diseases are vulgarly attributed.

Now, it may happen, as with respect to debility, formerly mentioned, that this drowsiness will be the only conspicuous symptom of the chronic fever in question; and it is most frequently so in those who are not of a complaining character, not given to watch their morbid sensations, or who are under the necessity, or in the habit of exertion. And if, in such instances, it is thus the only conspicuous or obvious disorder, it is so because it forcibly commands that attention, from its interference with the actions or occupations of the patients, which the other symptoms, if present, do not. It will rarely however happen, but that a watchful physician, accustomed to observe and reason, he who is habituated to the analogies and generalizations of philosophy and is not the mere slave of terms, will trace other symptoms, sufficient to convince him of the real nature of this

imaginary lethargy. He will, or he ought to observe its periodical attacks, and he will also generally find that other periodical changes attend it: he will trace a periodical change in the pulse; and, what is perhaps as decisive as any symptom, though it is that which is especially neglected, he will be able to discover the commencement of a paroxysm in the altered physiognomy of the patient; in a shrinking of the features, especially of the nose, and in a corresponding paleness of the skin, similar to that which commences the cold fit of an intermittent. Whenever this disease is found in a patient who has been habitually a sufferer from decided remittent or ague, that alone ought to prevent it from being mistaken.

I could easily fill pages with cases of this nature, as of others, illustrating every modification of this disease which I have described; but while this would be to occupy room, it would add nothing to the evidence which the generalization presents. In all instances, the evidence afforded by cases can be no greater than that which is deduced from them by the recorder's own generalization: while reversely, in both, in the particular as in the general, incapacity for observation, prejudice, or *mala fides* will equally vitiate the testimony.

But I cannot pass from this symptom without briefly pointing out, though it rather belongs to the cure of these diseases, the mode in which erroneous practice often confirms the false conclusion, that such a disease is that which medical writers have called lethargy, and associated with the purely apoplectic and paralytic disorders. I shall hereafter show how, in all these diseases, the practice of bleeding leads to paralytic and permanent affections: and while this is also one of the proposed remedies for lethargy, it is easy to see that when the sequel is palsy, the original error will be confirmed; when the very practice itself has been the cause of the evil which it was intended to prevent. Of such events, I have seen cases enough to convince me that they are not of uncommon occurrence.

To proceed to the state of natural sleep in this disease. It is common for it to be irregular or disturbed; variable or unnatural as to the period, or interrupted inconveniently. In these cases, it will be found that its irregularities depend on the period and proceeding of the diurnal paroxysm, though the appearances are various and often intricate. Hence, it is protracted beyond the usual period, or the patient is unable to sleep till a late hour of the morning, or else is awaked at some hour of the night with his sleep unfinished, being under the necessity of repeating it after the interval of watching has passed away. In this latter case, that confusion or hurry of thought already described, amounting nearly to delirium at times, is not uncommon: and it is also remarkable that the hour of morbid awaking

will, through long periods, return with the utmost punctuality. This indicates the connexion with the paroxysm of remittent here noticed; while the proof is completed by this fact, that while, in the chronic cases of remittent and intermittent, the hour of the attack will remain unchanged, even for a long course of years, or for life, so does the hour of awaking under this modified disease, remain equally constant. One case, which I shall briefly state, will illustrate sufficiently what I could elucidate by many more.

In this, the patient had, for thirty years, been subject to nearly all the diseases in rotation which I here rank under those of Malaria, namely, to remittent, to intermittent, and to almost every known variety of Neuralgia; having apparently acquired the incurable habit of these disorders at an early period of life. In several long intervals among those more marked ailments, the same person had also been affected, for long periods, with simple coma or drowsiness, and further with nocturnal awaking in the state of partial delirium just described: and it was his invariable remark, that the hour of awaking in this manner, was always precisely the same as that which marked the paroxysms of the intermittent and those of the Neuralgia, indicating their joint dependence on one cause and one habit; while that hour scarcely ever had varied by many minutes during the whole of his life of disease.

I am not about to deny that similar symptoms occur, possibly from mere habit, and that they happen in many febrile and nervous diseases where the existence of remittent cannot be suspected. But as they are portions of this disorder also, it was necessary to notice them; particularly as they seem to have met with very little attention as such, and as a discriminating knowledge of the cause is important in determining on the mode of cure.

In any cases of this nature there is a remark which I feel bound to make, be the cause of the disturbed sleep what it may; as it is a fact on which the comfort of patients of this class materially depends, and as the popular opinions in this case are often rendered very oppressive to them, implying also, as they do, a proverbial piece of vulgar morality. It relates to early rising, presumed to be peculiarly salutary; as the contrary practice is even held to be immoral. Thus is the unfortunate invalid, who, from whatever cause, is subject to a late period of sleep, or to interrupted sleep, condemned to square his life and risings by the rule of those to whom ill health is unknown, as among them, it is doubted or despised. And thus also do conscientious or timid or superstitious persons impose this law on themselves, with consequences which all those who have submitted to it know but too well. Of these consequences, the chief are, ina-

bility for exertion generally, and for thinking in particular, during the remainder of the day; when the cure, or prevention, would have been found in following the obvious dictates of the feelings, and in sleeping through that period in which exertion of any kind is injurious, or while the peculiar febrile state is present.

This would be the real economy of time, if that be the motive; and it is, no less, economy of health, as it is avoidance of suffering. But not until those reasoning faculties which are thought to distinguish man from the inferior animals shall really become the general property of men, will it serve any end to say that *he* is the early riser whom a sound constitution has destined to a long life, and that it is not *because* he has risen early that he sees the borders of fourscore? A still harder task is his, who, in addition, has to encounter one of the proverbs which serve the purpose of evidence and philosophy equally, to the vulgar, great and petty; still more, who would oppose that superstition which conceives itself to be religion, and that latent, but ever-active asceticism which imagines the voluntary infliction of pain a merit.

It is to be expected that the *primæ viæ* should be deranged in this disease, as I have already remarked; but while I did not choose to dwell on what seems always to possess a peculiar attraction for the multitude of writers and practitioners, I must observe that where the visceral glands are affected, as is very usual in cases of a chronic or repeated nature, such events are peculiarly to be expected; while, on such a subject, the reader may easily refer to numerous treatises respecting those glandular diseases; as I do not intend to include any account of them in this essay, for the reasons which I assigned, when speaking of dropsy formerly.

Whether connected with that state of things or not, I must however, offer some remarks on what is called dyspepsia; a Protean disorder, as it is commonly apprehended, and one which is rarely absent, in some form, from the chronic remittent and intermittent. It is not here my business to enter on the consideration of dyspepsia as a disease, nor on that of all its possible causes: it is sufficient if it is here a symptom and a produce of the disorder under review; while, being so, the fact is important as connected with our practice in it.

That it is actually so, every man's observation may satisfy him: that it must be so, if the great glands are affected, every one would anticipate; so that this consequence requires no further illustration. But it is important to show how it arises in the simpler fever, where those diseases do not exist; because we are thus led to a method of cure, or rather, of prevention.

In every fever, and in the remittent of course, the stomach

is in a disordered state; while where the interval is perfect, it recovers its powers, totally, or partially, as it may happen, during the cessation of the paroxysm. I ought also however to remark, to prevent cavil or error, that in all these fevers, whether severe or slight, the affection of the stomach is very various; as it appears, in some cases, to be the chief organ suffering while in others it may almost escape, and even where there are no differences in the severity of the fever to justify these different conditions. Like much more, it is, probably, rather a local disease attached to the primary one, by means of collateral and connected causes unknown to us, than an inherent essential symptom or portion of the total morbid change. But since I have, in another place, given the remarks of French writers on the direct production of dyspepsia from Malaria, while I have, in noticing the theory of remittent, pointed out the inflammatory state of the stomach, and while I need not, to medical readers, describe those severe affections of this organ which take place in the remittents of the tropical climates, it is here unnecessary to dwell on facts or illustrations which are either independent, or very materially so, of the particular modifications of this disorder under review.

The point now to be remarked is this, that while, in the decided remittent fever, the digestive powers may recover during the interval, yielding under the paroxysm, so a similar effect often takes place in the chronic and gentle remittent; or in the disease under consideration. And in the severer disease, if it is not attended to as it ought to be, all physicians of any observation must know, that if food is to be given, the interval, and even its first moment, ought to be selected; that the digestion may, if possible, be completed before the return of the paroxysm: and that to allow it during that stage, is not merely to defeat its object, but to increase the fever, and often to lose the remission, or render the disease continuous.

The case is precisely similar in the chronic or mild disease under review: but the obvious result in this case, is indigestion, with its usual train of symptoms: as the ordinary conclusion also, by the physician who does not know the disease that is present, is, that the patient is merely labouring under dyspepsia.

Thus does remittent in this form, to vulgar eyes, put on the mere character of dyspepsia; since, as in the other cases, the other symptoms may be neglected, and from the same causes; which I need not again repeat. Nor need I repeat how the diagnosis, as physicians term it, may be formed in this case; though it is important to remark that the cure, at least to a certain extent, will be found, as I formerly hinted, in merely varying the hour of eating: selecting, of course, the interval or the diurnal

period of health, be that what it may. The patient's own feelings or appetite in this case, will often be a sufficient guide, where better are wanting: while it is plain that in such instances, the established habits of society in regard to eating, must often be broken through.

If I could prove that this is a correct view of a certain proportion of the cases of imagined dyspepsia, by means of specific histories of such, this is another of the instances also in which such evidences would be superfluous, and for the same reasons. Let physicians watch their own cases of this disease with this new light, and they will scarcely fail to find evidences of their own which will be much more satisfactory. And they will recollect also, when they reflect on their practice, how often they have found dyspepsia periodical under diurnal returns of various kinds, how often periodical and dependent on seasons, how often they have seen it cured by merely altering the hours of eating, how often by bark, or by arsenic, or by the other tonics that cure the remittent and intermittent diseases; and how often by change of air, as also by mental affections, or causes operating on the imagination, such, among others, as the change of physicians; all of them remedies for the intermitting diseases in question.

I dare not enlarge on this view, important as it appears to me; since were I to pursue the illustration of every disease which occurs as a symptom in the anomalous or obscure fevers arising from Malaria, I should write a universal treatise of physic. Yet amid all the treatises, almost numberless, which have been written on dyspepsia, this is a mode of contemplating it which I have not found: while I need only say that any one who will reflect on those circumstances appertaining to it which I have just suggested, will see that they can all be explained by the theory here proposed, while there are few that admit so easy a one, and some that will scarcely admit any other. Of the very numerous real causes of this common disease, I cannot pretend to give even a catalogue, as that would be to transgress my plan; nor could I therefore enter upon any comparative view of the predominance of these several causes, or attempt to suggest what place the one here proposed may deserve among them. As far however as utility is concerned, it will be sufficient if physicians shall become aware that there is such a cause; while the method of ascertaining its presence will scarcely now be difficult to a careful practitioner.

I must now notice the occurrence of hysteria as one of the symptoms occasionally attending this fever; because, though rather an incident than a portion of the disease, it is important that it should be known to practitioners to arise from this cause, more generally than it appears to be.

In the better marked remittent fever of this mild and tedious character, it is not an unusual symptom; and if, as is probable, it is most common in women, it occurs in both sexes. That, with such a symptom, the terms nervous fever, and fever on the spirits, should appear well applied, is not very surprising: but as humanity or compassion to the sick, from those who are well, is not one of the most prevailing of virtues, and as any disease usually associated with debility of mind in the common estimation, is a general object of contempt or censure, it is not uncommon for the whole disease, even in this case, to be attributed to feebleness of mind, a nervous constitution, or any other cause which may justify that contempt with which the diseases called nervous are so commonly treated.

In the severer, or more strongly characterized remittent, or low fever, (to adopt this popular term,) where the general febrile symptoms are sufficiently marked to admit of no dispute, while there are generally present most of the ordinary symptoms called nervous, the occurrence of the hysterical paroxysms, which is rarely more than a fit of crying, is commonly as regularly periodical as any other portion of the disease. I am not however quite satisfied respecting the part of the febrile paroxysm to which it belongs; but have generally observed that it attends the subsidence of the pulse, and therefore, that it occurs towards the end of what would be the hot fit, or at the termination of the excitement, were that stage well marked, which it very often is not.

Now, on the other hand, it often happens, that either the fever has so far subsided that no marked symptoms of it remain, or that it has originally been of so slender a character as to attract little notice, as fever; particularly should the patient be of a courageous disposition, and determined to affect health as far as possible: while there are also cases in which it really is extremely slight. Yet even in those states, the same paroxysm of hysterical weeping or feeling will occur; while I have observed, in some cases, that not only it is the only part of the disease which the patient's efforts cannot resist, but that it is often rendered additionally certain and conspicuous if he has made efforts to conceal the febrile paroxysm, or to exert himself under it. A long-continued attempt at exertion, or at concealment, which is exertion, is, in such cases, generally followed by a hysterical affection unusually severe.

In females, if other nervous symptoms are present, and if there are especially that despondency and irritability which I have shown to belong to this fever, and if, further, the attendants are prejudiced and the physician ignorant or careless, such cases are sometimes considered as purely nervous, and consequently, very commonly maltreated. Whether they may be

common cases or not, I must leave to the observations of others; as respecting these, my own opportunities have not been exceedingly numerous, though far more than sufficient to establish the fact; while I shall also leave it to the consideration of others, to judge hereafter, when I shall take an opportunity of referring to authors, whether the cases of periodical hysteria thus recorded, do not belong to this disease, far more extensively than in those instances which such systematic or casual writers have quoted, and whence Sauvages has erected his variety of *tertiana hysterica*. As far as I can perceive, such hysteria has been noticed under this head, only where there was a proper and perfect intermittent; whereas, according to this view, it may be the only very visible disease.

Thus I have enumerated the leading and conspicuous symptoms of this modification, or of these modifications or varieties, of remittent fever, as far as they may be considered general; reserving those which seem more properly of a local nature to another division of this subject: though with regard to the stomach as affected by dyspepsia, that might also have found its place hereafter, since I must reserve that affection of this organ which consists in vomiting, to that future place. Unfortunately, such is the character of the stomach and its diseases, that the latter may often be considered equally in either light.

I have now therefore only further to remark, that it is one of the effects of this remittent, particularly when chronic or habitual, to produce those general derangements of the entire health which it would be tedious and equally useless to enumerate, as they are familiar to every one; while with that, the temper, and even the moral character, as it may be considered, become also permanently or habitually injured. This, however, I shall have occasion more particularly to notice under the head of intermittent; and I shall therefore terminate this part of the subject with pointing out one effect, in females, which especially demands notice; because it is far too common to overlook its causes, not only in this case, but in many others, and to treat as an original disease, that which is only a consequence of others.

I allude here to menstrual errors, which may be of any nature, while the more common are dysmenorrhea and amenorrhea; the latter in particular being frequently attended by a chlorosis, which has often been mistaken for an original disease, as I have witnessed: most especially, of course, in those cases where the accompanying fever was slight, while the deception is, further, easily maintained by the existence of headaches, equally belonging to the proper fever, and not to this local and secondary disorder. On those derangements I need make no further remark, than to request practitioners to inquire sedulously into their causes, and more especially respecting the one under

review, (since this is the only part of that subject which is under discussion,) because, on this, the cure must be founded: and further to reflect, that they are, in themselves, much more commonly the results of some derangement of the health, than the sources of that ill health by which they are accompanied, and which is generally attributed to them. It is a subject, however, which will necessarily be noticed again when speaking of the anomalous intermittents: while this unavoidable necessity of almost repeating the same statements in two different places, because of the division of marsh fevers into remittent and intermittent, together with other consequent disordered arrangement which I have been unable to avoid, inclines me often to wish that I dared to have departed from the common usage of physic on this point, and treated, as one whole, things which are not essentially different.

If I have now sufficiently described this modification of remittent fever, as I consider it to be, through its obscurer modes and symptoms, and if I have also given such distinctive characters as shall enable any one, with a moderate degree of attention, to recognise it, I have hitherto spoken of it as a definite disease, occupying the usual periods of others and more severe remittents. This was necessary for the sake of distinctness, and that it might the more easily be compared with the ordinary and acknowledged remitting fever: but it is a description that will seldom apply in practice, as far as the duration of the disease is concerned; and, on this point, I must now proceed to offer some remarks.

Let me also here premise one observation, which, though already made, requires to be stated more distinctly and forcibly. This disease, in actual practice, is commonly of long duration, as I shall soon show; while it frequently follows a severe attack of decided remittent, or an equally distinct one of quotidian or double tertian intermittent. It happens also that, according to season, or from the nature of the exciting cause of a fresh relapse, or from other circumstances, possibly not very apparent at present, it puts on rather the appearance of an intermitting than a remitting disease: the intervals, or intermissions, being perfect, perhaps long; while, further, there may be a distinct cold stage, however short, at the renewal of each paroxysm. Thus might it equally have been classed under the head of chronic intermittent with the quotidian type; though had I treated of it there, they who may now know it, or hereafter remark it, as a remitting disease without cold stages, might equally complain that I had misplaced it. There was but a choice; and I have placed it in the division to which I have found it most frequently conform: while it is plain, that the dispute, should it arise, is not worth entertaining, inasmuch as the whole is but one dis-

ease under different modifications. It is, in short, the chronic febrile state of fever or fevers, which attend the unfortunate people who reside in the pestilential countries described in the essay on Malaria: putting on an endless variety of appearances, from which I have attempted to condense, as far as lay in my power, a general description adapted to the majority of cases, or at least capable of serving as a point of reference for disorders which differ in almost every individual. It is, in reality, the chronic marsh fever; approaching, on one hand, to the acute and regular disease, and, on the other, to that undefined condition of the same nature which is so often called, simply, ill-health: while, as to type, it maintains the same gradation of character; being continuous, in a limited sense, or remittent, or intermittent, just as are the severe marsh fevers to which it is affiliated. I am utterly indifferent where it is ranked, provided it be understood, for the sake of those who are its victims.

But if I here expose myself to criticism by professing my inability to decide whether this disease should be ranked with quotidian or double tertian, or else with remittent fever, I shall at least coincide with those who do not admit the existence of quotidian; while I am but in the same condition as those who invented the term *hemitritæa* to get rid of this difficulty. Sydenham, Strack, many more, even including Celsus long since, seem to have felt similarly on the subject, though their remarks apply to an acute and severe, and not to a chronic or slender disease. But I have already said that these are often distinctions without differences; and since remittent and intermittent are virtually the same disorder, we can only smile at the verbal refinements of those who, unwilling to abandon the term intermittent, say that its accessions may be protracted and confounded, and that it can thus become, deceptively, even continuous. Let us not split the hairs of logic on these subjects, now that we have shaken off the weight of the schoolmen in so many other matters.

As I observed just now, the disorder in question is a frequent termination of a severe remittent, or of what is called a nervous fever; as it also is the sequel of a marked quotidian, under which I here include the double tertian. Such a remittent may terminate in a curable intermittent, or in the chronic one so difficult of cure; but it will also subside into this particular disease, a copy of the original as it may be termed, but on a reduced scale. While the severe intermittent also, of whatever type, may terminate in a chronic one of the same character, the quotidian may similarly become chronic: continuing well marked, or else, by losing its cold fits and acquiring less decided intervals, ending in this chronic and mild remittent, so difficult of cure, and perhaps, of all the terminations of this disease, the most dis-

tressing, from the almost uninterrupted state of disorder, both in the bodily and mental faculties which it maintains.

In such cases as this, and when the patient's history can be traced, as it almost always may, with care, it is highly discreditable for any physician to mistake it for any of those diseases; bearing the corresponding collateral symptoms already described, which resemble it in those particulars: or, as is the fact, to mistake the prominent symptom for the real disease, negligent of its cause and origin. Yet is this a daily error; as he who has watched medical practice will soon discover, or as he who has trod the routine of names will even discover in his own practice, if he has only talent to observe, when the right path is pointed out to him, and but candour enough to acknowledge his errors to himself. There is somewhat more of excuse when, from the beginning, the character of the disease has been mild; though even here, no one who can commit the error, deserves the name of a physician; if, to be a physician, is to be the philosopher which it was once supposed. He whose very science is the most obscure under the guidance of analogy, and whose knowledge, therefore, without an eye for analogies, is nothing, must be satisfied that he is but a practising artist, a man of receipts and names, if, under analogies so simple and obvious, he is unable to perceive what are the facts before him, and what their connexions and causes.

Let me still point out one or two of the most common modes under which this disorder appears; or rather, some of the most ordinary misinterpretations to which it is subjected; since thus, perhaps, shall I best explain to others the views here taken of the diseases which they see and do not look at in the same light. It is in vain to describe any thing, unless we can bring it before the eyes of others by placing ourselves in the same position, as they may be; and, with some more, the following are perhaps the most common appearances and conclusions among those whom it would be unjust to censure for not studying a science, when all which they profess to do is to practice an art, or, as a harsher criticism has often said, to conduct a trade.

It is remarked, that after a severe fever, certain patients become "nervous and ailing," as it is termed, for a long period; and the vulgar opinion then is, that the constitution has "received a shock," or that the brain or the nervous system has been injured, or any other convenient reason of words. It is also remarked, that certain persons are very subject to slight fevers, that any little irregularity produces a fever, and so on; while of others yet, suffering less from this cause, it is merely concluded that they have bad constitutions, or ill health, or are nervous subjects, or much more that I need not be at the trouble of repeating.

Now, in the case where the "nervous fever," as it is called, has preceded, the imagined injury to the constitution is merely the relapse, or series of relapses, to which remittent is subject; or it is the mild disease already noticed, in a chronic or habitual form. The debility, the affections of the mind, the febrile symptoms, the nervous ones, all this and more, are the symptoms of the fever itself, and nothing else; and assuredly did they depend on a "constitutional" cause, or were they the effects of organic disease, the constitution might well be supposed injured. It is doubtless injured, and materially so, should the visceral glands be diseased, as does sometimes happen in these cases; but all the appearances of disorder in question may exist without that; while these disorders, whatever other evil they may produce, can scarcely be the causes of what may equally exist without them, and are assuredly not the exclusive ones. Thus also, possibly, may the nervous system, that is, the anatomical structure, or the functions of the brain and nerves, be permanently injured; though, as we have at present no knowledge of the nature of such injury from anatomy or physiology, we cannot reason respecting it; while we further know, that the mere disease in question, while in action, will produce, temporarily, the effects that might be attributed to a permanent derangement of the nervous system or its functions.

The facility of suffering from fevers, repeatedly, and from slight causes, or a habit of "taking fevers," will be found to be nothing more than the chronic disease in question. It may be so acquired *ab initio*; or, every fever, from the commencement, may have been a slight one, while the disease does not become the less chronic or habitual: but a careful examination will very often discover that the original attack has been a well-marked one, or that the mild fevers are the repetitions of a severer original disease. The case is the same as to constitutional bad health, debility, dyspepsia, nervous disorders, or what not, generally referrible, with care to some previous fever; while in almost all these cases, (presuming of course, that the causes are those here under review,) a watchful eye will discover the periodical character, or the other diagnostic symptoms, past or present, which have already been pointed out.

And further, in those disorders, an examination of the patient's present or former residence, or of the places which he has frequented or visited, will often also enable the physician to trace the origin of such affections to Malaria; confirming what the symptoms may indicate, or, sometimes, even proving what their obscurity or that of the patient's narrative may have left in doubt. It is very often with this narrative that a physician will have chiefly to contend; so deficient is the multitude in observation, and so incapable of even explaining that which, to those

who do not reflect on the ignorance and inaccuracy of mankind in general, would appear abundantly easy. And if in attempting to give the natural history of Malaria, I have so often inculcated the necessity of carefully studying the obscurer sources whence it may arise, so often maintained that this knowledge formed an essential portion of every practitioner's acquirements, here among many more, is one of the cases where a perfect knowledge and a discerning eye as to this subject, will become an important auxiliary in the formation of a diagnosis, as physicians term it.

One remark more on popular errors respecting this disease, will be useful, before proceeding further in the account of it. It is a very common observation, that persons who had suffered much from ill health in youth, or at a certain period of life, recover, and become stronger and healthier than even before. I do not here pretend to enumerate the various disorders under which such a state of things may occur, but I have succeeded, in many cases of this nature, in tracing the cause to a chronic fever of this character, persecuting the patient during the earlier years of life, and often, for an extensive period; as happens in chronic tertian and quartan: diseases, like this one, which, in after life, disappear, or are cured, by remedies unperceived by us, or by revolutions in the constitution of the subject.

And this particular fact, the subsidence or disappearance of marsh fever at a certain age, whether merely chronic or intermixed with acute attacks, is one of the circumstances remarked of all the insalubrious parts of France and Italy: where the period from thirty-five to fifty, as I observed in the essay on Malaria, is the period of trial, and where, if this is once passed, the individual often attains old age. And for the sake of those who prefer facts from our own country, it will be found that the same rule holds in Hampshire, and in the other districts subject to the fevers of Malaria, wherever these become chronic, or attend the whole of life, as they do in the countries just named. These are cases without dispute, or which at least ought not to be disputed; because the connexion is apparent, and the causes obvious: in those to which I allude, the causes are the same, and so is the disease: but these are the instances in which both the causes and the nature of the disease have been overlooked, or mistaken, from the general inattention and ignorance respecting this whole subject, so often here pointed out.

Reversely, let me offer an analogous remark on what has been called the climacteric disease; and if I should here appear to be infringing on the rights of Halford, as I must seem already to have done on those of Haygarth, by offering an explanation of his cases; I must not be understood to say that the cases of disease under this term, which he has noticed in the same transac-

tions, were themselves instances of chronic remittent or intermittent, but that I have seen patients whose ages and disorders correspond exactly to those which he has described, that these had been considered the climacteric disease, or, as I have elsewhere noticed, a "breaking up of the constitution," and that they were proved to be the fever in question, misapprehended, and, commonly, long, also, overlooked. Other physicians may consider this subject, and decide whether they have not, sometimes, at least, followed Halford in this opinion, and whether also, they may not have sometimes deceived themselves.

Supposing this disorder, which I may perhaps safely call the chronic remittent, to have been once established, from whatever original cause, its duration and character are, both, various; so various, that to describe them all, or to adduce cases for the purpose of illustrating them, would prove insufferably tedious. To notice some of the more ordinary and prominent characters of such varieties, will, I hope, suffice for forming a ground of judgment respecting the existence of the disorder; and the rest must be trusted to the discernment of practitioners in applying these general principles.

Though it does happen that this disease, whether as a marked fever or a merely inconvenient and almost undefinable feverish state, will appear to endure for many months, or even years, it is more usual for it to consist in a series of distinct attacks, or of relapses, with intervals of health, or of something like health; since, when the intervals in particular are short, the patient is seldom restored to his proper vigour, and is seldom also without some inconveniences. This I already remarked of the better characterized "nervous fever" or chronic remittent; and it is equally applicable to the most slender or scarcely discernible affections of the same nature. But the state of interval between any two periods of the disease is not very conspicuous when the recurrences are themselves slight in character; as there is not then the contrast between marked good and bad health, or between the more disordered condition and that of imperfect recovery, which renders the assignment of the disease, in the opposite cases, comparatively easy. Thus it will often appear, that there is a continuous disease enduring for long periods; while this may sometimes be the fact in reality; or else the intervals may be so short, and the recurrences so frequent, that they can scarcely be defined.

Supposing, on the other hand, the reverse case, or a recurrence of decided intervals with relapses, one of the simplest and best marked, is that where the patient, in the vulgar eye, is subject to fevers, as it is called. In such cases, there is a distinct fever, running a regular course, though as a fever commonly slight in character, unless under gross maltreatment, and

terminating in health; when, after an interval varying from weeks even to months, it returns, from a distinct cause or not, again to subside into health.

In these cases, by no means uncommon, while there are endless varieties in the lengths of the intervals, the duration of the fevers, or relapses, also varies; though, as far as my experience has gone, the longer are more common than the shorter ones. Thus I have more frequently seen periods of six weeks than of one; although, even in the same patient, it will happen that successive relapses will put on every period of duration to which a single attack of this fever is subject.

When, now, the relapses or returns occupy the longer periods, such as that of six weeks, or a month, while the intervals are short, extending, as is not unusual in the worst cases, not beyond a week or a fortnight, and while in such cases the patient, particularly if debilitated by a long continuance and frequent repetition of the disease, or naturally of a feeble constitution, has scarcely time to recover his health until the next attack comes on, he often appears, both to himself and to his physician, to labour under a continued state of feverish bad health, or even of absolute fever, lasting through many months, and even through years.

These, then, are opposed extremes, as to recurrence in this disease; and, between the two, there will be found, in practice, innumerable varieties, which I need not detail. And, however obscure, however even mysterious, such a state of disease, continuing so long, and producing no ultimate bad effects, may appear to an ignorant or inattentive physician, a more watchful reasoner, he who applies philosophy where others follow blind rules, will rarely if ever be at a loss in tracing, not merely the relapses and their intervals, be they as obscure as they may, but the diurnal variations of the disease itself during the continuance of the proper accession.

With respect to the duration of this relapsing or habitual remittent, it is as various as every thing else; as various as that of the chronic intermittent, be it tertian or quartan. I have seen it last one year, two, three, twenty; nor is it more wonderful, doubtful as the fact, thus stated, may appear to those who have not studied or known this disease, that a quotidian periodical fever, be it called quotidian or remittent, should last twenty years, than that tertians and quartans should be equally permanent: as they are well known to be. And if any physician should doubt this statement, as, personally, I have found it doubted or denied by every one with whom I have communicated, I must again refer to France and Italy for the proofs: since this is exactly what happens to all the wretched inhabitants of their pernicious districts, whose condition was pointed

out in the essay on Malaria. And there is the same reason for its occurring in our own country, if all that I have been attempting to prove is established: while, in truth, it is known, or may at least be seen, by any practitioner in our fenny counties who will make himself master of this subject as I have been discussing it.

Of the causes that may render this fever thus durable, I have formerly mentioned a residence among the sources of Malaria, or, as it is popularly considered, in a damp or unhealthy situation; or the frequent exposure to such causes, from ignorance or necessity. And we can now see more distinctly, the importance of the cautions laid down in the former part of this work respecting soils and situations; since this is the "bad health" of which they are the ordinary cause, and since it is matter of ample experience that the avoiding them is often the only method of curing the disease, though, when long established, even that often fails.

Besides this original cause of all the evil, however numerous, other causes inducing debility will reproduce the relapse, and thus tend to perpetuate the disease; and the more readily as it is a more confirmed habit. Such are ordinary cold, fatigue, intoxication, bleeding, the excessive use of saline purgatives, mental affections, with others unnecessary to name; all of them equally efficacious in recalling the returns of a chronic tertian or quartan. Of all those causes, I would particularly notice here the use of purging, and mental affections; as, respecting the other, no one doubts much, and as they are commonly avoided. That what is called "a course of salts" will very often reproduce an attack, I have abundant proof; and it is especially necessary to notice this, since it is commonly resorted to as a remedy for the imagined diseases to which the symptoms of this fever equally belong. Hence the frequently injurious effects of that fashionable folly, the frequenting of mineral wells; a practice resorted to by presumptuous patients, or by vulgar practitioners, as if it must be universally salutary and was incapable of doing harm. And the common error in this case, as it is the especial cause of this erroneous and pernicious practice, is the mistaking the derangements which I formerly noticed for dyspepsia, as it is called, or liver complaints, or whatever else, under this received phraseology which is now so current; while the empirical practice to which I then alluded is applied without examination.

The mention of blood-letting also induces me to offer, here, another caution on that subject, (though it is a question which will be fully examined in treating of the cure,) should local pains, not unusual in this disease as I shall presently show, appear, in ordinary hands, to justify it; since by this error, here

as in chronic intermittent, the disease is invariably aggravated, and commonly prolonged or perpetuated; too often also with the addition of many other distressing symptoms. As to the influence of mental affections, it is rather a matter of curiosity than use, as the injurious occurrence of these can scarcely be guarded against; but it is, in the philosophy of physic, an interesting fact to observe, how instantaneously sudden grief, fear, disappointment, or other strongly depressing passions, will bring on that relapse which will generally run the same course as all the preceding.

It is a common opinion in physic, that a fever of this nature cannot exist without organic disease; and I presume I need scarcely say that such habitual fever has been often considered and called a hectic, the produce of such disease. Of hectic, the real produce of organic disease, no one can doubt, nor of the singularly periodical diurnal character by which it resembles remittent fever. But it is highly necessary not to confound things so essentially differing; while the distinction assuredly often demands great attention on the part of the physician. And from numerous cases, of such a nature as to leave no doubt whatever, I am convinced that such chronic fever, bearing all the characters of this imagined hectic, do exist without any organic disease, and even for long periods; since, while not the least symptom of such affections could be traced during their continuance, the absolute and entire recovery of the patients, and a recovery lasting for the remainder of life, has followed. Nor needs this be doubted, when we see that intermittents, equally chronic and durable, and where also organic disease had been suspected, terminate in perfect health, lasting equally through the patient's life. It is too common for physicians, in these cases, to suspect organic disease, because it sometimes exists, and, as I before remarked, because they have formed an hypothesis that nothing but such a permanent exciting cause could perpetuate or thus prolong the febrile diseases of *Malaria*. As to the question of hectic, I shall not now pursue it, because I must again notice it when on the subject of intermittent; when I shall also point out some circumstances which facilitate the investigation and distinction.

Respecting the organic affections, I have already shown reasons for avoiding that discussion here. I can but allude to a class of disorders to which I dare not give the space which they would require. But I must distinguish at least, lest I should be supposed to give less value to these affections as connected with chronic fever of this nature, than they amply demand. I have said that the mild disorders of this kind may exist without organic derangement, or without conspicuous affections of this character, not that they always do so. In our own coun-

try, however, I believe, this is common; and particularly where the original fever, or the habit of such disease, has been acquired accidentally, or by transient exposures to the cause; where it is not maintained as it was produced, by a permanent residence in a pernicious district. In the reverse case, there is more cause for suspicion; and it will frequently also, it is probable, be found that there is organic disease present: though when this is not considerable, the difficulty of ascertaining it is often great, particularly in the case of the spleen. In such cases as I allude to, it is plain that the circumstances resemble those which characterize the pernicious climates of France and Italy, however inferior in power; while in those, independently of what is asserted or believed by foreign physicians, we might infer that the organic diseases were a frequent or general accompaniment of the fevers in question, whether considered as rigidly necessary to their existence or not.

With respect to this chronic remittent, I ought to add one more practical remark. It is, that other circumstances being equal, it will, in practice, or, as a disorder calling for medical aid, occur more commonly among females than males, (or thus at least it has occurred to me,) and also be more apparent to physicians in the higher than the lower ranks. The causes of this are of a moral, not of a physical nature, or at least predominantly so; though the greater delicacy or irritability of females may render them greater sufferers, in reality, under slight modes of this disorder. The moral causes are, abandonment of mind, self-indulgence, luxury: conditions on which I need not dwell, and which I need not apply more particularly, but which, it is evident, aggravate all slight diseases, not merely to the eyes of the physician but to the feelings of the patient. And reversely, while courage, exertion, or resolution not to submit to aught but absolute necessity, diminish the effects of all such diseases on the patients, it is further true, that a powerful exertion will often terminate the accession altogether; just as similar efforts of mind often cure intermittents, and have removed even gout, ordinary fever, and other diseases.

I must however also remark, that there is a not uncommon physical reason for the greater suffering of females in this disease; and it arises from the menstrual derangements which I formerly noticed; which, however they may be an effect, and not a cause, appear in themselves to produce injurious consequences as to the health. Whether from this cause, or from the general state of disorder in the system, it is a circumstance also demanding notice, that in severe and continued cases, barrenness is not an unusual occurrence; commensurate with its appearance, and when shown to be removed, by indications of pregnancy, giving often the first decided evidence

of the termination of the whole disease. That anaphrodisia occurs in an analogous manner in the other sex is no less true.

I might perhaps safely still add to these, another cause, and of a physical nature as to its action; however dependent on mental circumstances, but on manners rather than morals. This is the comparative uniformity of occupation and of residence to which females are subjected: a uniformity which, with respect to the latter, when such disease is present, may, and does, become a continued life of seclusion or confinement, with the addition of indolence, self-indulgence, or utter listlessness both of mind and body; and of a mind also which, but too often neglected, possesses neither power to act nor ideas to act on or with. In those cases, there is nothing to break the habit of disease once acquired, as there is no mental or bodily action to oppose it; and I have, here, more than once, shown how the chronic diseases of this nature are dependent on habit. As the reverse of this, it is superfluous to point out the various circumstances in the opposite sex which tend to remove or counteract these influences; since they are obvious. Nor need I now suggest to physicians, that which they must so often have seen confirmatory of this; while numerous cases resembling those which Haygarth has pointed out, and which seem to me to illustrate these very facts, probably, among others, must be familiar to every practitioner versant with the opulent and unemployed classes of society.

I must now state the progress of a single accession or relapse; as there are variations in that, which demand notice. As a point of comparison, the original attack of a remittent of the more severe form, is frequently, perhaps generally, by a cold fit, and often as decided and severe a one as that of intermittent. But in the progress of the disease in the mild form, as generally also in the severe one, the cold fit disappears, or becomes at least difficult to trace. Still, there are often indications, consisting in partial cold feelings, or the affection of particular spots in the body, in the asperity, acceleration, and contraction of the pulse, in yawning or stretching, often attended with an indescribable feeling of uneasiness which seems to penetrate every muscular fibre of the body, in a sensation resembling that which the excessive use of tobacco produces in those not habituated to it, or in a shrinking and paleness of the skin, or even in a mere alteration of the physiognomy, sometimes felt in the muscles of the face by the patient himself, at others, visible only to the watchful and discerning spectator.

Thus also in the chronic or prolonged remittent, it sometimes happens that the first paroxysm of the new accession or relapse is attended by a marked cold fit, while, in every succeeding one, nothing can be found but one or other of the symptoms

just mentioned, and sometimes not even those. Again, it happens, that the cold fit, however short and slight, is sensible at the commencement of each daily paroxysm, or at least for some time: and thus the disease acquires the character of a chronic quotidian, as this is the boundary by which these two congenious diseases can alone be easily separated. In other instances, the commencement of the relapse is marked only in the stomach, by a total and almost sudden loss of appetite, sometimes attended by a slight nausea. And again, it is not uncommon for the disease to proceed as it commenced, in a manner so uniform, that scarcely any indication of a cold stage can be traced through its progress, while it is seldom that the physician has an opportunity of witnessing its commencement.

Such is all that it appears necessary to say in addition, respecting this fever as a chronic or habitual disease, while, as such, it may possess any or all of the symptoms described as belonging to the simple disease, and which I need not repeat; and while, particularly, it is not uncommon to find it associated with the local and painful disorders that will be described hereafter. But before quitting it, I must also add, that although in the description of the mild remittent, I have spoken of it as if it were a disorder limited to one period of fever or to a single disease, for the sake of simplicity, it is rare that this is the fact; and the description then given of it must in reality be considered as most generally that of a chronic disease; of the fever just discussed, which becomes habitual, or has a tendency to relapse through a period of months or years.

But before terminating this portion of the subject, it will be useful to recapitulate in a brief summary, the characters of this fever, and to add one, equally brief, of the proofs of its cause and nature; that the reader may see in a condensed form, what I have been obliged, for the sake of proofs and illustrations, to treat of in some detail. And this is the more necessary, from the evident neglect which this disorder has experienced, and from the great errors daily committed respecting it: errors, such and so general, that it is somewhat difficult to find a practitioner who seems truly aware of its existence, and, on the contrary, much more common to experience the incredulity, both of physicians and patients, when attempts are made to demonstrate its presence, or, by this, to explain the obscure derangements of health in question. So difficult is it to introduce new views among those who are guided solely by habit, and not by observation; and so singularly contradictory is the conduct of physic, which, while it complains of the general imperfections which it acknowledges, always meets attempts at improvements in the details, with an opposition which implies that it possesses no imperfections, but that we have arrived at a complete knowledge of this truly obscure science.

When the disease in question is mistaken for consumption, for dyspepsia, for hypochondriasis, for atrophy, for "nervous disorder," and, if with local affections, for many more diseases, even for palsy, it is fully time that its real nature should be explained and understood; as the sufferings which it produces are scarcely exceeded by those of any disorder in the catalogue, and as these are not merely endured as incurable, but since additional diseases, and even death, are the frequent result of erroneous practice under false views of its nature.

If this obvious disease has been so much overlooked or mistaken, I doubt not that it will shortly appear to be very common, now that it is distinctly pointed out. And perhaps, the explanation which I will now suggest may also form that apology which every just critic is bound to find when he can. England is so generally free from the intermittent fevers which form the readiest road towards its analysis, or towards even the ready knowledge of common remittent, that out of thousands of medical men, and especially in the metropolis, there are hundreds to whom they are unknown; as may also be truly said with respect to their causes, or to the existence of Malaria and of places generating it: a subject however less pardonably overlooked, and perhaps chiefly so from the perpetually mistaking remittent for typhus. And further, as it is from books chiefly that the great majority of ordinary practitioners draw their knowledge, they do not see a disease of this nature unless it be marked as books mark it, severely and distinctly: while, I may add, that from limiting themselves chiefly to English and to modern, and also to systematic writers, they exclude themselves from a knowledge which could scarcely be acquired but in a very different course of reading, if indeed it could even thus be attained.

Hence an ignorance which is somewhat excusable, naturally enhanced by what is less to be excused, the viewing diseases as definite events under definite terms, instead of generalizing them by means of analysis and analogy. If remittent fever in its ordinary form is somewhat better known, and if a due study of this disease might have led to the conclusions here drawn, yet has this also been too generally misapprehended, both as to its nature and its cause, as I have often shown; remaining a subject of vulgar error as to its theory, and of empiricism in practice. Such is the apology; nor can it be otherwise, while, in the very great majority of those who pursue physic, it is a mere art, or, in reality, a trade, not a philosophical study as a branch of natural history: and he would be an unreasonable critic indeed who should expect from a manufacturer of mathematical instruments or of chemical drugs, that which he ought to seek in the Aragos and the Barlows, in the Gay Lussacs and the Daltons. Physicians themselves, at least, know that this is a just view of the

state of this art and science; as it were unreasonable to expect that it could be otherwise: if the public commits the very natural error of supposing that the art and the science are the same thing, they must not imagine that censure is passed when there is merely drawn an acknowledged distinction.

The summary, now, which, having explained the causes of the neglect of this disease, I would give, is the following.

It is a remittent fever, bearing all the characters of that disease as it is universally known; but in a modified degree, and often so slight, as to require some attention in tracing its form and even its existence.

It is apt to become habitual, or to recur at frequent but variable intervals, during an indefinite course of years, so as even in some instances to occupy almost a long life. In such a course, it also varies its characters and symptoms, and in some cases, becomes a marked chronic intermittent; while in others, the imperfection or brevity of the intervals may cause it to appear as a continued febrile state.

Its accessions, when they are to be defined, are as various in duration as those of the ordinary severe remittent.

It is the sequel, in some cases, of quotidian intermittent or of double tertian: and if a mild fever of this nature follows a common tertian, the length of the interval will oblige us to rank it under tertian, as a chronic disease. It is also the sequel of common and acknowledged remittent; and thus it may also be a sequel of what is called typhus fever, because the remittent is often thus misnamed. It is equally a sequel of what is called low fever or nervous fever, which, equally mistaken for a mild typhus, is a remittent. And these also are the proofs of the real nature and origin of this disease; since it is their continuation, or forms varieties under them. And, while its causes must be sought in Malaria, (though others are not absolutely excluded, in our present state of knowledge) even when it occurs as a primary disease, this also establishes, even further if that were necessary, its true nature.

Such is the simple disease: a chronic or relapsing fever without accessory symptoms; or rather, without incidental, or attached, or superfluous symptoms. I need not here dwell on the ordinary attached or necessary symptoms of all fevers: but it will be especially useful to recapitulate, or further point out, all those which, belonging to this disease, may also arise from other causes, or may be original or separate diseases; because to mistake those in this manner, is the greatest source of the errors which occur in practice in respect to this disorder, whether as regards the diagnosis, (as it is termed,) or the treatment. And when they are of a marked nature, while the mere fever is slight, or when the practitioner is of that class which never pe-

netrates beyond a symptom, or when as the slave of names, a symptom is to him a disease, or when, lastly, with even better discernment, such symptoms are erected into diseases because there are other disorders in which they are the obvious or essential part, for which the varieties of this fever are thus mistaken, it is most certain that the errors which I trust this enumeration may at some distant day correct, must have been, and still are, frequent and serious; in proof of which I might, with great ease, produce cases that would materially enlarge the bulk of this volume.

These varieties, or the chronic remittent with superfluous or attached and unessential symptoms, or with some of its symptoms peculiarly distinct, or aggravated, and the more deceptive when the mere febrile condition is slight, compose what the title of this chapter means by anomalous remittents. Hereafter, where the intermittents of an analogous character are reviewed, I have adopted also the term *simulating*; not that it would not have been equally justifiable to introduce such a division here, but because I have not seen examples of this mode of marsh fever where the simulations have been so numerous and perfect as I have found them under the more distinct types, or in those cases where the febrile state and the peculiar symptom, or disease, with it, were derived from some form of intermittent. Hence I have reserved the whole of the *simulating* marsh fevers for one chapter to follow that on intermittents; though I am bound here to observe that some of them have occurred also in the chronic disease now under review. If I had been permitted to treat of remittent and intermittent fevers both, under one general head, I should have avoided, not only the present inconvenience but much repetition; but I must submit to received usages, as the reader must to the additional toil. Whether the few varieties which will now complete this chapter should be called *anomalous* or *simulating*, deferred till I treat of intermittent or described now, is one of those undeterminable questions of arrangement, of which there are here but too many more; so undefined are often these irregular disorders.

It is with little reflection assuredly that debility is considered as a disease; yet is this condition, one of the marked symptoms of the disorder in question, often to be found, in military returns in particular, as if it could be an independent disorder. From how many other sources it may arise, it is not for me here to inquire: it is enough that it is one of the very general effects of that febrile state, in this disease, which, from its slenderness, or from the brevity of the attacks, or from negligence, is so frequently overlooked. And that thus mistaken, and of course neglected, when arising from this fever, it is a very common source of trouble and misery to patients, just as, in soldiers, it

leads to suspicion of fraud, as was formerly suggested, I have abundantly ascertained.

Lest however I should be thought to have overrated this class of error, (though military physicians of real learning will, I believe, scarcely disagree with me,) I may quote the celebrated *Morbus Pannonicus* of Hungary, or the *Morbus Hungaricus* of Jourdan and of Manget, as also an analogous disease formerly much noticed in Virginia, described by the name of the *Asthenia Virginica*. No doubt can remain on the minds of those who will read these histories under the views which I have here afforded, that the former disorder, under which so many soldiers died, was the chronic fever in question, rendered mortal, it is probable, by bad food and bad treatment: while, with no small blindness on the part of the narrators, every cause but the true one is assigned; such as drinking bad water, the heat of the climate, bad food, and much more; many of them, doubtless, connected with the mortality; yet but as incidents, or as belonging to the cause of the disease, inasmuch as producing the previous fever in question, which was overlooked.

Thus when thirst is the most vexatious symptom of this fever, it is, if not marked as an independent disorder, supposed to arise from some mistaken cause, while it is a mere symptom of the febrile paroxysm.

Indigestion, loss of appetite, irregularity of bowels, these and other ordinary symptoms of a deranged stomach, are thus attributed to dyspepsia, as I have already remarked; an undefined disorder arising from many causes, and scarcely to be considered in any case as original and simple: while the error is confirmed when occasional thirst, headach, debility, and other well-known symptoms of this disorder are present, and when these accessory ones are the symptoms of the fever. Thus also the affections of the mind which are notoriously the produce of chronic remittent, are conceived to be the hypochondriasis of dyspepsia; while that which is called the hectic of dyspepsia will often be found to be nothing more than the fever of this disease; rather, the very disease itself, and the cause of all the rest.

And if such dyspepsia, as a chronic and endemic disorder among the people, in all the insalubrious or marshy situations in France and Italy, has often been pointed out by the physicians of those countries, it is not less true that it exists even in our own island, as a similar endemic, and from the same cause; confirming the view here given of its occurrence in single cases, and in a manner so apparently independent of such fever, as to be mistaken for an original disorder, or at least for a disorder dependent on some other and separate cause. It is from information, however, not from present observation, yet from information which appears worthy of reliance, if I here state, that

in certain parts of Hampshire, and in some other of the districts subjected to Malaria, the general, and almost the only complaint made by the mass of the common people suffering under the chronic disorder in question, whether as the sequel of acute fever or otherwise, is dyspepsia, or, as it is expressed by themselves, "the stomach." And while this leads to erroneous judgment and erroneous practice in the hands of those who are unaware of the real facts, so does that leading symptom, viewed under the fashionable prejudices of English practitioners in the present day, produce that injurious and often destructive practice to which I already took occasion to allude.

What are called nervous symptoms, a list that would weary human patience to specify, but which cannot require enumeration, are, further, most common symptoms of this chronic fever, while the fever itself is invisible or unnoticed: and there are perhaps few errors with regard to it more common, than that of designating it under this cloak for ignorance, and treating it accordingly: though, fortunately in one respect, the remedies of change of place and air, so commonly resorted to for "nervous diseases," are the cure of this one; if that good fortune is not in some measure counterbalanced by the ignorance as to the true cause which is thus perpetuated. And, of that ignorance, the leading evil is, that this cause is not avoided by the different migrants or travellers: who thus, often, not merely lose all the advantages which they would have gained from change, but much too frequently plunge headlong into the very dangers which they ought most carefully to shun, and most frequently in the case of travelling to the warmer climates of Europe. This is a subject which I have noticed in the essay on Malaria, but which I ought not to avoid repeating, important as it is; since it is most certain that the evil consequences to which I here allude are very frequent, and have been especially common since travelling has become more easy and more general. I need not dwell on hysteria, thus mistaken, after what I formerly said respecting it; the more as I shall have occasion to notice it hereafter as a symptom of intermittent, and as often producing there, a truly simulating and deceptive disease. All that I need remark is, that if the hysterical paroxysm should be conspicuous, and the febrile symptoms obscure or gentle, or if the uninformed practitioner should overlook the one, to notice the other and more striking, this fever will be mistaken for mere hysteria, as I have often witnessed. And if in such instances the paroxysm may be as regularly diurnal as the febrile attack to which it belongs, so may it be irregular, by missing to return; in which case it will become still more difficult to convince the attendants of its real nature, as the insufficient practitioner will also more easily mistake it for an original and independent disorder.

If I might, here, have entirely reserved the case of headach, considering it as a local disease, and thus placing it in the same division with all those more purely topical disorders, chiefly of the nerves, to which I can here but allude as connected with remittent, and if, in fact, I have been obliged so to treat of it among the intermittent topical diseases, I cannot still avoid speaking of it here, as being one of the most common of the anomalous appearances of this fever; while, like the stomach, such is the nature of this part, that its disorders may almost equally be considered general as topical; and the more so as the headach is a leading symptom of all fever.

It will be found on a strict investigation, that many of the durable or chronic headachs are merely those which belong to this fever; and while, as lately remarked, it would appear that the female sex is more subject to headach than the male, from whatever causes arising, so I have observed that, in the habitual remittent, it is more common as a symptom in women than men. And in more than one patient, I have found that where this disease was habitual, some of the accessions, or distinct periods of fever, consisted in a series of headachs alone, while others bore their ordinary character; or at least this symptom was so predominant, that the accompanying febrile disease would have escaped the notice of an ordinary practitioner, as it did of the patient; perhaps even of a more acute one, had he not been able to trace the previous progress, and not been acquainted with the whole history of the patient. To know that such may be one mode of the chronic remittent, is important, considering the frequency and the obstinacy of this disorder, the headach, and the numerous causes from which it appears to arise: while the proofs of its identity or connexion, consisting in what I have now stated, will be found by any one who will study the disorder which I have here described.

For what else I might have introduced into this chapter, I must refer to that on the simulating intermittents: and if there is a considerable division of symptoms or diseases which might also have found a place here as connected with this chronic fever, the division which I have been compelled to adopt for the sake of the proofs, obliges me to defer them to a future part of this essay.

If I have hitherto quoted no authorities in support of these views respecting the chronic remittent, it is not solely for the reasons hereafter given in explanation of the plan adopted in this essay, and which were also hinted in the preface. I have not succeeded in finding among the authors whom I have consulted since this essay was drawn up, (though that is not a small number,) any detailed histories, nor even any general views,

whence I could have derived such support: excepting, that as to particular facts, I have found many valuable ones noticed under the head of intermittent types, which I have consequently accumulated for illustration in a subsequent chapter.

But if I have not found in such books, descriptions whence I might have drawn, or by which I might have supported my own, no details, no account of such a chronic fever, I cannot for a moment doubt that it must be perfectly known to the French and the Italian physicians; though so completely overlooked by our own writers and practitioners as far as those are known to me. This disorder, in all its varieties, must not only exist, as I have already said, but it must even be the habitual state of disease or suffering, otherwise than as intermittent types may share, in all those European countries where Malaria is severe and its diseases the endemics of the soil. This must, in fact, be the perpetual state of fever, under which it is said, by all foreign, particularly French, writers on this subject, the unfortunate inhabitants exist, such as that existence is: and if they have not entered into details, it is possibly because it appeared to them too common and familiar, too well known to require such a history: forgetting perhaps, as is not unusual, that any one could be ignorant of what, to them, did not appear to demand teaching.

CHAPTER III.

On the proximate Cause of Remittent or Marsh Fever.

I BELIEVE that it will be a phenomenon in medical writings, to find an essay on such a disease as fever, unattended by a theory of its proximate cause. Yet were it as well, if the professor who spends months in exciting the wonder or applause of a juvenile audience, with phraseology which he does not himself understand, would substitute for all this waste of words and time, the confession of his own and the general ignorance, if his successor would strive after something more useful than inventing a new system, of which the only merit lies in the difficulty of finding new forms of phraseology equally unintelligible; and it would also be no small advantage, if the time of students, seldom too abundant for all that is really to be learned in physic

and its collateral studies, were occupied in something more profitable than disputations about words, reading as idle, and attendance on wordy lectures, more idle than all, inasmuch as they are the cause of all this perversion of time. Then also would medical writings shrink in size and diminish in number: consummations all of them, to be wished, but not to be expected while words shall usurp the place of ideas; as long as the substitution of one term for another shall be considered philosophy, and the word logic be an empty and an unmeaning sound.

Where ignorance exists, the consciousness, with the confession of ignorance is, if not the first step to knowledge, the preliminary and the necessary one; for never yet has philosophy thriven by dressing up fiction and vain speculation in the garb of truth and sense. Physic knows not how the poison of fever acts, nor on what it acts; what are the preliminary effects which produce the symptoms which are obvious to our senses. It cannot even conjecture why these actions should cease, why they should be renewed, and with a regularity, often not to be exceeded by that of a machine, or why they should cease to be renewed.

Doubtless, the inquiry is a most interesting one; but how can we inquire when we have not the slightest element ascertained, on which an inquiry can be founded? We know not where to begin: it is to solve a problem in dynamics without weight, time, or velocity; to analyze an unknown substance without the means of analysis, when we do not even know that it is a compound one. That what is now impossible is always to be so, is not however what I mean to insinuate; far from it; but as the career of philosophy has proceeded through facts, and never did advance one step while it toiled through words, so must physic submit to follow the same and the only road. When we understand the physiology of the animal body, we shall have laid the foundation of a knowledge of its pathology, and, with that, it will be time enough to attempt an inquiry into the proximate cause of fever. If there is any one who, leaving his schools, or who, confined to medical writings, and knowing only medical laxity of reasoning, fancies that he understands physiology, even, I may say, any one point in physiology, let him pass a few years in the study of the accurate sciences, in the mathematical ones, and in chemistry, and in the habits of a rigid logic, and let him then return to his medical writings and question himself. He will not require the answer that could easily be given to him.

Yet, though averse to enter on this endless subject, and very especially on any of those speculations which are either innocent in themselves or have now lost their influence on practice, I cannot well avoid noticing some recent doctrines of this na-

ture, which are as little proved, though perhaps more plausible; while productive of, or threatening, dangerous consequences.

I shall leave that theory which represents fever as consisting in inflammation of the brain, to the answers which it has already received. The action of Malaria, say the French, is "sthenique," and the various symptoms of debility are the effect of exhaustion from the previous stimulus. The natural question is, what or where is an excitement or a sthenic effect which does not occur at all in innumerable cases. If indeed the action of prussic acid, or lightning, or a cannon shot, is sthenic, then the assertion will not be disputed: and thus he who, under the action of Malaria, falls down instantaneously with apoplexy, has died of over-excitement.

The fever of marshes, say others, under whatever form, is a gastro-enterite; or, essentially and radically, it is but an inflammation of the inner membrane of the stomach and bowels, one or all; and every other effect and symptom is sympathetic or consequential: or "adynamique," arising from "sur excitation." On this is the practice founded, by those who thus believe in the last new theory; while, it is said, the success of the practice, consisting in bloodletting and so forth, proves the truth of that theory. Let us inquire as to both: to say nothing of the evil results which flow from acting upon this fashionable hypothesis.

But first of all, how can such an inflammation, and of such a membrane as this, generally, is, produce so deadly, so universal a disease; a disease so abounding in symptoms, present and subsequent, so endlessly varied, and so fatal? The stomach, and the bowels also, are often much more and more extensively inflamed, and without such fever, or such symptoms, or such effects. In these fevers there is often no pain, not even on pressure; and where then is the inflammation? Thousands of persons die with all the symptoms of this fever, even within a few days, within a day, within an hour; the gastro-enterite, here, ought to be excessive, yet there is none, for there is no pain. There is none, for a much better reason; that it is not found on dissection. We may refer to a thousand authors, for thousands of dissections, where, if the bowels and stomach have sometimes been found inflamed, there has not been the slightest trace of present or previous inflammation in numbers without counting. And if this were not enough, we find patients who die of fevers with very slender symptoms, where there has been no pain; and yet dissection proves the bowels to have even been seriously ulcerated. If inflammation had killed the patient in any case, how is it to disappear and leave no trace? and what species of essential cause or symptom is that which is not always present?

Whatever dissections have taught, they have not taught us the cause of marsh fever; and let he who doubts, read all the monstrous volumes on this subject. They have taught us that certain effects take place occasionally: that is their use: and the gastro-enterites, the inflammations, be they what they may, are, in reality, symptoms or effects: how far they must regulate the practice, is a question not for this place: but let them regulate it in as far as they are such, not as being the essence and the proximate cause, and then they may effect good and not harm.

It is scarcely worth while to ask, after this, what kind of inflammation that must be which can return periodically, and with such severity as to destroy a patient, and yet have no existence within another hour. If I have elsewhere shown that an inflammation connected with intermittent really possesses this singular character, it is a fact which will not invalidate the much stronger arguments already brought forward. This sole objection, which has been urged against the French theory, is not therefore, in itself, valid: because when it is asked how can an inflammation cease, return, or last for life without causing much mischief, it is forgotten, or rather it was never observed, that the ophthalmia of this character was the inflammation of intermittent fever; while the caprices of gout, erysipelas, and rheumatism, show that this is no uncommon occurrence. It is, in reality, an inflammation of a peculiar character; *sui generis*, distinct from common inflammation: and hence also the supporters of this theory may retort, (though from want of making this most necessary distinction, here I believe first decidedly pointed out, they have not done so,) that the fact of its being cured by bark and stimulants is not an objection, because this is precisely what happens in the intermittent or neuralgic ophthalmia.

But I need not proceed; as I hold that the answer is complete. As to the schismatic theory of Monfalcon, who considers the whole matter to consist in a predominance of the white capillaries above the red, in an unusual "developpement du systeme lymphatique," and a "subordonnement des capillaires sanguins aux blancs," I presume we may rank it with Dr. Cullen's proximate cause of rheumatism, which consists in an "inflammatory affection of the sanguiferous system, with a peculiar affection of the muscular fibres." I shall pass on to the cure of remittent fever.

CHAPTER IV.

On the Cure of Remittent Fever.

I MUST commence here, as before, by renouncing all intention of treating of this part of the subject as it relates to the severe remittents of the hot and tropical climates. I need not compile when I can refer; nor could I speak with confidence of the cure of diseases that I have not witnessed and treated. Nor indeed would it be an easy task to elicit the truth amid the disputes and contradictions which are found to pervade those endless works. The most opposite opinions have been entertained, and the most opposite practices followed. As happens in tetanus, all these modes have failed, all these modes have seemed to succeed. The conclusion of him who knows nothing of physic, will probably be that the imagined remedies have had no concern in the cures, though he will scarcely conclude that they have had none in the ill success; while a fatalist in medicine, as fatalists there are, will perhaps determine that the efforts of the physician are nugatory as to either event.

In our own country, there have been similar discordances of opinion, with corresponding revolutions of practice, from the time of Sydenham downwards. In the days of my own education, at Edinburgh, the great, and indeed, almost the exclusive remedy for all fevers, was wine. I returned a few years afterwards, to find wine out of fashion, and to see the same diseases treated by bloodletting. Assuredly, the action of these two remedies is not the same; but patients died under both and recovered under both. And here it is that the public forms unfavourable judgments of physic and physicians. Yet if physicians can explain to them, that even such apparently opposed means may both be right, the true physician knows full well how often both are wrong in the hands which have not learned to make distinctions, any more than have the public which passes this very natural judgment on what it does not understand. The fault is, that parties and fashions divide on apparently opposed questions, because it is easier to follow than to reason, and because the spirit of opposition is, itself, the sufficient reason to far too large a portion of mankind, in every thing. To ignorance, fashion and party are all in all. These remarks were

unavoidable; since, on no one point in this subject is it possible to speak, without some investigation of opposing opinions; unless indeed by adopting a system and deciding by it, as those decide who, having once settled what they consider a belief, find no difficulties in any thing.

I must here commence by separating, in some measure, the treatment of the acute from the chronic remittent, or the simple from the relapsing or habitual disease, since there are some important differences in the practice; while also I can but consider the acute one as it most generally appears in our own climate.

Can emetics cut short the disease, when given at the commencement of the attack; and if an emetic be given, is antimony preferable to ipecacuanha? Here is the first example of differences in opinion; or rather, there are two points in dispute. The value of emetics given at the beginning of the fever has been too often decided on theoretical views, and consequently, as is usual in all such cases, exaggerated. Whoever shall judge of their power by his own experience, will probably not place much confidence on what, nevertheless, he will as probably resort to, if at least called on before it is too late. That they do occasionally terminate, or at least shorten the fever, must be admitted; while they seem to be chiefly useful whenever the disorder is attended by an increased action of the liver, or in that variety which, with us, goes by the name of bilious fever.

They who consider, that, in this case, antimony exerts a useful action on the skin, with some who are willing to believe in some mysterious febrifuge power appertaining to this remedy, are of course strenuous defenders of the superiority of the emetic tartar; while among those who view the evacuation of the stomach as the great end to be obtained, ipecacuanha becomes the medicine. I must not undertake to decide: but it must be remembered that when the stomach is essentially disordered, when apparently it is affected by that very singular inflammation which so often occurs in these fevers, it may be, and often is, the effect of antimonial emetics to augment that condition, and even to induce an irritability, as it is called, which often becomes of serious consequence in the progress of the disease. How often even death has been the result of such emetics, given improperly or pushed too far, is but too well known: and by such considerations probably, will a judicious physician be guided in his choice. That any peculiar advantage arises from so administering antimony for this purpose that it shall act also as a purgative, I cannot see, when this particular object can be attained by more manageable and less doubtful means.

Presuming now that the disease is established, I need not enlarge on the general treatment, commonly called the antiphlo-

gistic regimen, since it is as familiar as it is admitted to be necessary in all fevers; while a few of the circumstances which are esteemed to belong to this, or to regimen, must be inquired of shortly. I may proceed to inquire into the use and value of the other remedies which have been recommended and adopted.

Respecting purgatives, not only at the commencement but through the progress of the fever, the general agreement is such, in our own country at least, that there can be no hesitation in recommending this class of remedies; at least in an English writer and physician. But it is a question demanding some detail.

Universally, and through the whole disease, that a state of bowels approaching as nearly to the natural one as may be, should be preserved, is a point on which there are not two opinions among ourselves; while the remedies required, various as they are, are too well known to need enumeration. One caution only is necessary on this point: and it is, not to forget the distinction, too often neglected, between the medicines which evacuate the entire system, or the saline purgatives, and those, the resinous ones as they are called, including also rhubarb, senna, &c., which act chiefly or solely on the natural evacuations of these organs. There are often strong reasons for avoiding the production of debility; and where bloodletting is improper, the watery evacuation produced by the excess of saline purgatives is also injurious. They are, in fact, causes which frequently aggravate the disease, and very often bring on relapses: and I need not say that when the other class of purgatives are so administered as to produce the same effects, the consequences are necessarily equally injurious in the same cases. Let this practice be viewed in its analogy or otherwise to bloodletting, and the physician cannot well be at a loss how to regulate his medicines.

If I have not yet named calomel in this class of remedies, let me premise that if I have hitherto considered our remittent fever as it is when a simple disease, it is common and particularly in hot summers, for it to partake more or less of the character of the severer and complicated disorders of the hot climates, from derangements of the biliary system; forming that bilious fever, which is too often supposed to be a distinct disease: the additional symptoms, always sufficiently obvious, consisting in, or being founded upon an increased, and possibly, a further morbid, secretion of bile.

It is in these cases that calomel is considered to be an almost necessary purgative, or at least to effect purposes less easily attained by other means; while with respect to its repetition, no rules can be given save that of its apparent necessity, as indicated by the symptoms, and of attention to the effects which it

produces. Here also I must remark, that the imaginary objects to be attained by emetics in these cases, are, by many physicians, thought to be better gained through this remedy; and further, that an early and effectual administration often mitigates or abbreviates a disease that might otherwise be severe and durable. That it has any other effects on our own native fever than such as are derived from its power over the biliary system, I cannot discover; while I have no right to judge whether or not it exerts any different or mysterious action over the severer remittent of hot climates.

I must however, while on this subject, make a remark on the use of calomel in the chronic and relapsing variety: but whether it will be confirmed by others, cannot be known till the views which I have been attempting to promulgate respecting this disease shall have become more general. And when, as will be perceived in the course of this work, I am one of those physicians who consider that this medicine has been greatly abused, the remark will probably command more confidence, as the result of experience opposing what may be almost viewed as a prejudice against this much misplaced remedy.

This remark is, that in the relapsing disorder, even if the attack should occur at the end of winter, in patients free from all suspicion of deranged liver or biliary affections, and when not the slightest indications of these can be traced, and when, further, the relapse may be the twentieth or fortieth to that patient, the operation of calomel is to produce obvious effects, which, if I need not specify them, physicians know well to be those which never occur except under derangement of this secretion. And at the same time, what is the important point here, it will be found that after every such effect of the medicine, the force of the disease diminishes, and that whenever the natural secretions recur, that particular relapse is about to terminate. Hence therefore I am led to consider, that even where it is least suspected, and indeed not to be believed present, there is often, in the chronic relapses, a derangement of the biliary functions; and that calomel, being the remedy for these, is apparently a remedy which cuts short or cures that relapse. That the biliary derangement is here the cause of the febrile return, we have no right to say from this evidence; or that calomel, because it is the cure of this, is the cure of the disease. But be the theory what it may, the utility seems unquestionable: and till I find that other practitioners shall fail where I have succeeded, I am bound to point it out as a remedy, and among the primary or initiative ones; recommending also its cautious repetition just as long as it shall be found to produce the evacuation of morbid bile, while, from the moment this ceases, it becomes injurious.

With respect to sudorifics, we have, as on all else, contending opinions; while it needs not be said how their supposed value has been most commonly derived from a favourite theory rather than from observation. That sweating is often an attendant on the natural solution of a fever, is true, as the same act often terminates the paroxysm of the remittent or the intermittent. But after a hundred such solutions of paroxysms, these fevers do not the less return; though if artificial sweating can really be produced, it will often shorten the disagreeable or distressing portions of the whole which consist in the cold and hot stages. But when the critical solution or the termination of a fever is attended by sweating, it merely proves that a revolution has taken place in the deranged functions, of which this is the test and effect, not the cause; though it appears to be very much from mistaken reasoning as to this fact, that the virtue of this class of remedies has been so much extolled. This much appears certain, that when it is difficult to produce this effect by remedies, it is because the disease is unconquered, and that when they do act, it is because that is about to yield; while that which is a coincidence is held to be the virtue of the remedy. And it is also familiar, that if we can succeed by the more powerful sudorifics, such as Dover's powder, in forcing this effect in an early stage of the disease, nothing seems gained by it, while it is often effectual when produced by milder means; a proof that the useful result is an index of a natural action, and not the effect of the remedy. Thus it is for the milder effects of a similar nature; a moist and soft skin succeeding to a harsh, hot, and dry one; marking a favourable change in the disease itself, and not being the produce of remedies, which, in reality, are commonly inadequate to any purpose. If Mindererus' spirit, or the acetate of ammonia, the vulgar remedy of ordinary practitioners, or saline draughts, or aught similar, amuses the patient's anxiety, or serves to pass the time of expectation, they may usefully occupy the mind; and in this view they are at least innocent remedies.

Yet even here, I would add one caution, and that is respecting the state of the stomach, often singularly affected; while it applies to all cases of amusing or *placebo* remedies, be the purpose of these to gratify a patient who cannot imagine the use of a physician who gives no medicine, or to make up that bill, or remuneration, which a most injudicious custom has agreed to give in no other manner. It is easy to observe, daily, in this disorder, that thus to tamper with the stomach, not only increases and protracts the paroxysms, but prolongs the whole disease, and that those cases, on the average, succeed far best, where the least of this injudicious and empirical interference takes place.

The use of opium requires also a few remarks, as it has been alternately lauded and condemned, chiefly from not attending to some very necessary distinctions. Generally, that it must be improper when it is necessary to administer purgatives, would be a natural conclusion; yet even here it is often useful, by facilitating the action of these from its antispasmodic effects; as it further is, by removing that irritation, which is apt to follow their salutary action.

As to its value in procuring sleep, though there may sometimes be even a state of drowsiness approaching to coma, and protracted also long through the disease, it is more common to meet with sleeplessness, or disturbed, or irregular rest; while I have even seen this consequence carried to such a degree, that the patient did not procure above an hour's sleep out of the twenty-four, during the whole period of six weeks which the disease lasted.

In all these cases, as long as the want of sleep is the produce of the febrile action, or attends the paroxysm, the use of opium serves but to increase the evil, as far as I have observed, or is productive of no advantage, at the best. But it does also happen, that during the remission, there remains an excitement, more visible in the faculties of the mind than in the body, preventing sleep; a condition under which opium is often advantageous, by procuring that rest which would not have come on till the new paroxysm was again ready to break it up. Thus also, as might be anticipated, it is more applicable towards the end than the commencement of the fever. With respect to its power as a stimulant remedy, whatever that be, its utility and application will be judged and guided by the same rules which regulate the use of wine.

If I place here that which relates to food, (not its usual situation in medical writings) it is because of a connexion which the rules respecting it have with the immediately preceding remarks; and if I formerly noticed this subject, it is still necessary to recur to it here, in somewhat more detail.

It is a common error in all fevers, to administer food frequently and in small quantities, under popular and theoretical notions respecting the powers of the stomach. To pass by what does not relate immediately to the present subject, this is frequently a very injurious practice in the remittent fever, even when its character is mildest. Even though there should not be a repugnance to food, the process of digestion is suspended, or at least deranged; and the consequence is, not simply that the food thus given is useless, and not merely also that it produces sensible inconveniences, but that its effect is to prolong the paroxysm, or to render it more severe, or, in some cases, to destroy the interval altogether, and to render the fever continuous.

Both as to medicines and food, the stomach cannot here be trifled with or deranged with impunity: and so true is this, that even in the most mild and chronic remittent, as was formerly remarked, the same bad effects, namely, increase of severity, or the protraction of the paroxysms, is a frequent consequence of the injudicious use of food. There is but one period in which it can ever be given with safety, and that is, the interval, or remission; and, as I formerly noticed, the choice should fall on the commencement of that, while in the severer cases, where the distinction between the paroxysms is most imperfect, it is for the physician to watch the time when the least evil is likely to accrue, keeping in his mind these general principles.

And further, as, in many cases, this is a disease of debility, as it is indeed in all, after the commencement, it is plain that food, as far as the stomach can manage it, is even an important remedy. As to the choice, that must necessarily be guided by trial and by present circumstances, of which the attendant must judge; remembering, however, that there is no greater, and no more common error, than that which imagines insipid articles of diet, such as fish, chicken, and all the rest of the farrago, whether vegetable or animal, usually recommended to sick persons and convalescents, to be the most digestible, or, as it is termed, the most light. The truth is as much the reverse as it can well be; while in general, the fancies or desires of the patient are the best guides which the physician can follow; though he will distinguish those conditions where stimulating food would be improper, remembering that this also is really that which is the most digestible.

It would be well if we could avoid believing, that not merely on this point, but in much more that relates to the management of the sick, that ascetic principle which, often unsuspected, never acknowledged, intrudes itself so perpetually into all our opinions and conduct, marring, by habit, that happiness which it once opposed from principle, and multiplying the miseries of which there is surely no want, did not also intrude itself into the direction of sickness, rendering more oppressive its inherent evils. But there is much of this control, and many of these follies, which an acute observer will easily trace to that principle; the humane principle which has determined that whatever we wish for most and like best, is precisely that which is most injurious, and in which we must be controlled: a rule that gains its full and pernicious sway, when it is aided by that inherent principle of tyranny and love of command which enjoy their full scope over the helpless bed of sickness.

I cannot avoid here naming the external application of cold, of cold water; or, under modifications of the state of the disease, of the tepid bath. How much it has been praised by Jack-

son, Currie, and others, is well known to all medical readers, as are the cautions which relate to its use. That the chief benefits derived from it, have also occurred in hot climates, I need not say: while I shall refer to the authors whom I have named, for information and opinions which I could not well discuss here, and which are not rigidly necessary; inasmuch as it is a practice little resorted to in the fevers of this character in our own country, and perhaps not very often applicable or necessary.

I must now return to medicines, and to the use of tonics, as they are called; reserving to the last the two more disputed questions which relate to the use of wine and to that of blood-letting.

If the use of bark, which may here stand as the representative of all the tonics, as it is that especially adopted, has been condemned by numerous and enlightened physicians in the proper remittent fever, there are not wanting as many who place confidence in it; guided sometimes by experience, and at others by habit, or by theories: just as is true of those who oppose its use. It is a complicated question; since, like every other one in this disorder, its utility or disadvantages will partly depend on the individual characters of cases, as of epidemics; not unfrequently on peculiarities in the patient himself, and on a variety of collateral circumstances as tedious to detail as they must be superfluous to medical readers. Without doubt, there are instances where, even though no inflammatory condition is present, it does not cure the disease, but aggravates, not merely the paroxysms but the entire disorder; whether, however, by any greater action than that of deranging and oppressing the stomach, appears uncertain. Even thus it may be pernicious: but I see no evidence of a very common opinion in physic, that, thus given, it is the cause of the glandular visceral diseases so common in these fevers, or so commonly following them. These occur equally where bark has not been given; they are often in existence even before the fever, and appear in many cases to be quite independent of it; while, ignorant as we are of their immediate causes or nature, we have no right to assume that they could be the result of a remedy with whose actions also we are equally unacquainted. This is one of the inconsequential and gratuitous conclusions in which physic abounds but too much; but it is one that is examined by evidence elsewhere, and on which I need not therefore now dwell.

The leading objection to the adoption of bark in this fever, is, however, derived from the presence of what is called inflammatory action, consisting in a high state of pulse and so forth, and very particularly from the presence of topical inflammation: and it is in these latter cases that it is so violently condemned by French physicians. Yet even here, opinions

are divided; and it has often actually been found to be the remedy in such cases. It is as painful to a writer to leave his readers in suspense on points so essential, as it would be presumptuous to decide; yet it may be suggested that if, as will hereafter appear, the inflammatory affections of remittent are of a peculiar character, and not proper phlegmasiæ, and if certain visible and demonstrable ones are actually cured by this remedy, and aggravated by evacuants, the question will not improbably be decided in favour of those who recommend it in all cases; and it may not be difficult then to discover that prejudice or incorrect observation will explain that testimony against it which has been thought to be derived from experience.

The utility of bark or of tonics in general is, however, scarcely disputed in those cases where the symptoms are those of debility; and still more where they are what are called malignant; nor, in the advanced stages of a disease of this nature, even should the fever be almost continuous, or with imperfect remissions. Still less is it questioned when the length of the intervals and the perfections of the remissions have brought this disease into the congenerous class of intermittent fevers. As soon as that character is at all formed, this remedy may be used, and even by those who object to its general use, with the caution that it is not urged beyond the remission or intermission, if indeed that be necessary; and thus it often terminates at once a disorder, that might pass into a troublesome or chronic intermittent. For all else that belongs to its use, I may refer to the treatment of intermittents, hereafter discussed.

It is with some hesitation that I enter on the question of wine, disputed as it has been, and under the revolutions which its use in this disease has undergone. It is, perhaps, impossible to find a just medium between opposing opinions; but it is, at any rate, possible to state a few doubts and queries as to this subject, on which others may reflect, and, perhaps, arrive at some conclusion.

Theoretically, wine is held to be injurious, because it excites the action of the heart, and increases the tendency to inflammation, and because this disease is held to be of an inflammatory character. There are here two points involved; and, to prove that wine must be injurious, it is necessary that both should be established. The question of experience forms a separate subject of consideration.

It may appear a very extraordinary doubt to suggest, against the almost uniform and continued opinion of physicians; but is it proved that wine increases inflammation, when existing, or produces the tendency to it in healthy subjects or in diseased ones? Will those who believe it ask themselves why they do so, and whether it is not one of the hereditary opinions of phy-

sic, established, no one knows why, and followed because it has been followed? But, granting that there are cases of inflammation, or a species of inflammation which wine would increase, physicians know full well that they are utterly ignorant of the real distinctions among inflammations which, to the sense or the eye, may appear the same; and that while there are some kinds or varieties which are to be cured by stimulants both local and general, as I shall hereafter show very fully, so are there inflammations, and apparently inflammatory states of the entire system with increase of circulation, where wine is a remedy instead of being injurious. Nor does it appear that the habitual use of wine produces a tendency to inflammation in healthy subjects; since it is notorious that among water-drinkers, the diseases of active inflammation are most frequent, and require the most energetic treatment.

But this whole question is too long to be indulged in here; and I may therefore ask, in the next place, whether it is proved that the general accelerated state of the circulation in the remittent fever is an inflammatory condition, and whether the topical affections are of a nature to be augmented by wine. This question, however, is particularly involved in the inquiry respecting blood-letting; and I must therefore suspend it till I have examined into this practice, when it will admit of a more decided answer.

Here, also, I must avoid the question of the fevers of hot climates, or submit my belief to the experience of those who hold forth blood-letting as the only remedy in this disease, or at least as a most efficacious one. I am, however, inclined to believe that, if there are fevers of this nature with severe topical affection, in which blood-letting, in the hands of good observers, has been found a cure or a source of repeated and unquestionable relief to these affections, while the disorder has at the same time terminated in health, such affections have been of that inflammatory nature which blood-letting is known to relieve, and that it has here, of course, been a judicious practice. And further, if, without topical affections, blood-letting does truly cure the remittent fever in any situation, then must its utility be necessarily granted: though I must here make a reservation respecting probable differences in the essential character of this disease in different climates, seasons, or instances, from causes assuredly very little known to us at present.

And this I believe to be the fact; and that all the discordances of practice and opinion have arisen from that fault, far too universal in physic, of judging diseases by their names, or concluding that the definition of a nosology or the general rules of a systematic writer, are applicable to every case. And if there are cases in which this practice is injurious or destructive, as is on the other

hand most certain, then is it most essential that physicians should cease to be guided by a universal rule, or, as is truly the case, by the predominant opinion of the day.

On this subject, I can but state my own experience and the opinion derived from it, leaving it to others to confirm or contradict that by their own observations; while, should it even be an imperfectly founded one, it will have the good tendency of causing those to inquire into the cases before them, who have hitherto been blindly following the rules laid down for them by others.

That opinion is, that in the far greater number of cases occurring in our own country, the practice of blood-letting is most commonly nugatory or superfluous, or else injurious. But I must enter into some details on this subject.

In the first attack of the fever, and often through many successive diurnal periods, the pulse is hurried, contracted, hard, or full; or the general appearance, to a common careless observer, is that of a state of circulation similar to what takes place in inflammatory affections. This state however is, when accurately viewed, the commencement or the first portion of the paroxysm, and its analogy is found in the similar state of circulation occurring in the first stage or stages of the intermittent paroxysm. And if it proves durable through any one diurnal period, or durable as it relates to the whole disease, it merely marks that condition of the paroxysm and of its returns, which equally occurs in certain cases of the pure intermittent. In other instances, it will be found that the duration of this state of the circulation is brief; or it subsides without the interference of the practitioner, as the paroxysm itself proceeds towards remission.

This fact and this analogy ought to explain what the real nature of this particular condition in the remittent is; and if it is so generally mistaken for an inflammatory state, perhaps the term inflammatory fever, and the apparently groundless erection of a disease of this character by nosologists, has aided in establishing an opinion which must however be chiefly traced to that servility of routine by which the unthinking mass follows the road which a predominant theory or a prevailing fashion points out to them as the easy one: since, of this quality, must the mass be every where.

Further, it may happen that there is also present some topical symptom, such for example as headach, the most common of all. How often headach is the result of conditions the most opposed to local inflammation or inflammatory action, I surely need not say; but if, in the case under review, it exists with this particular state of the circulation, it is easy to see how, under the previous theory or prejudice, it will be conceived to depend

on a fixed topical affection of the brain. Thus also is a *casus catarrh*, not an unusual accident in this disease, attributed, under the same prejudice, to inflammatory action in the lungs; and thus even does it occur frequently, that such a combination is actually mistaken for pleurisy or peripneumony. The same reasoning applies to other topical affections, and I need not therefore dwell on it; besides which, as I have already suggested in speaking of bark, and shall hereafter explain more distinctly, the predominant, I do not say the whole of the topical inflammatory affections in this disease, are of a peculiar character, and not true phlegmasiæ. And, if I wished for a very high authority of a somewhat distant date on this point, as I have, in speaking of intermittent, alluded to many modern ones, I would refer to Lobb, who decidedly rejects blood-letting in fevers of this nature, however violent and inflammatory the symptoms; and even in the cases where acute pleurisy or rheumatism are present, or in the diseases so often considered as pure pleurisy and pure acute rheumatism. It is not, however, for me to deny that real inflammations requiring the lancet, may exist or have existed in recorded cases that have not come under my own recognisance.

It is easy therefore to see the causes which, united to a prejudice, or in hands governed by a routine, lead to that which I here consider an erroneous judgment; and I may now inquire what the effects of blood-letting really are; since, although in the majority of cases, it is, as commonly practised, injurious, as there are others in which it is without important effects of any kind, there are a few in which, under restrictions, it appears beneficial.

In a robust patient, at the first attack of the disease, and when the fever is the first of its kind to that patient, blood-letting is often useful, and at least not injurious. Its good effect is that of reducing that activity of the circulating system, or that vigour generally, which renders the first portion of the paroxysm correspondently energetic; thus moderating the whole result, not only of the first, but also of the subsequent paroxysms, and consequently of the total disease. And to judge respecting the propriety of its repetition, we must be guided by the same rules: a consideration of the constitution and character of the patient, and further, not merely of the appearance of the disease in that patient, but of the prevailing character which the endemic of that particular season may possess: as it is most certain that in different seasons, the remittent does vary most essentially in its character.

And here it is that watchfulness is required; since that remedy which commenced by being beneficial, may become, in its repetitions, not simply superfluous, but injurious, and even fatal.

It is by no means uncommon to find, that immediately after a blood-letting which even appeared to be justified by the symptoms, sudden debility follows, or the whole character of the disorder is changed to one the very reverse of what it appeared to be originally; often causing the physician to repent of his judgment or his haste. Yet even here, the routine practitioner often continues to follow that which custom has laid down as the remedy, while even the more cautious one is sometimes induced to persist in a pernicious practice, misguided by the topical affections; or else, by casually arriving at that period of the paroxysm, when the circulation tends to re-excitement, is misled into wrong, when more care, or more frequent visits, would have led to a different system or a different judgment. I know not that I need dwell longer on what ought to be sufficient to furnish the grounds for decision in this case; but I must further add, that it is an occasionally beneficial effect of blood-letting to convert the almost continuous fever into a decided remittent, or to produce, still further, perfect intermissions: an effect sometimes also occurring in the analogous case of intermittent, under the form of a change of type.

It is perhaps a more common fact in our own country, as I have already hinted, for blood-letting to be nugatory in this fever, or to produce no effects either good or bad; though I must limit this result to the cases in which the remedy is applied but once, or perhaps twice. When rashly repeated, as is but too common under the erroneous views just noticed, it rarely fails to be highly injurious, or even fatal. In using the terms nugatory or superfluous, I must, however, explain them by saying, that the condition, in the first place, which it is applied to remove, is that state of the circulation which would equally have subsided in the progress of the paroxysm, and have continued to return with gradually diminishing energy through the course of the disease; the remedy appearing to have produced an effect which would equally have occurred without it: while if no injurious results follow, it is because of the existence of a disease naturally mild, or of a constitution correspondently fitted to bear with impunity what, in another case, would have been injurious.

The cases in which this remedy is likely to be injurious, whether in one application or in its repetitions, may now be easily judged of, *a priori*, by attention to the preceding remarks; while, in practice, the consequences of its use, when bad, ought not to be obscure to any practitioner of almost the most common discernment; if at least he is one who is accustomed to reason for himself from his own observation of the individual cases before him. What those evil consequences are, I need not point out in detail; as they are those which conduct to a very pro-

tracted case, with long-continued debility, injury to the intellect, or affections, general or topical, almost incurable; or else to a fatal termination, marked by the previous sinking of the vital powers, and by all those symptoms, so often attributed in these cases to dangerous or fatal typhus, as they also occur in that kind of fever.

That these are very common events in this fever, from such errors and from such misapplied practice, it will require but little of original observation and reasoning to see, every where and in every season; and were I to pronounce respecting an average, from my own experience, it would be, that, in England generally, the evil consequences arising from misapplied blood-letting very far exceeded the good, and further, that it was the most common cause of fatal terminations or ruined health. I shall hereafter have occasion to show more particularly how it acts with respect to the cases combined with local nervous affections; as this must form a separate subject in the present essay.

Were I indeed to indulge in that violence of generalization so usual with physicians, and so much too prevalent among those who undertake to point out or review a system of practice, it would be to assert that it were better that blood-letting should be utterly abolished in this fever, than that it should hold a place so egregiously abused. But while such sweeping judgments are too often the produce of temper or arrogance, as well as of opposed prejudice, they are as ill suited to physic, in all the branches of this most complicated department of natural history, as they are unworthy of philosophy and opposed to humanity. Let he who writes on physic never forget that his opinions involve human life and happiness both; and that to gain a victory of opinions will afford small gratification to him who reflects that he has gained that at the expense of even one life.

As I need not protract the remarks on this subject, I may now return to the question of wine, unfortunately also, too often made a question of fashion and temper, rather than of rational and sober inquiry.

If this remedy has been misapplied in the remittent fever, it cannot now be very difficult to see the cases in which it might be concluded injurious; since they should be those, from theory, in which blood-letting is beneficial. Thus would it be avoided in the commencement, especially, of a disease attended with great affection of the circulation, in patients of robust and vigorous habits, in seasons of peculiar epidemics, and in cases where there may be suspicion respecting the exact nature of the topical affections which may chance to be present. And while in such a disease and in such stages of it, no peculiar benefit could be expected from wine, even should it prove innoxious, it is al-

ways safe at least to avoid its use, even though the character which it possesses of augmenting such a state of circulation should be a false one.

Reversely, its use is pointed out in the opposed circumstances; and that it is a remedy of value I can entertain no doubt, though assuredly far from the specific or powerful one which it was thought not many years since. That its singular combination of stimulant and sedative powers renders it one of the most convenient of the remedies generally classed under the vague term of tonics, seems to have been established by experience that can hardly be disputed; and the most determined theorist can scarcely deny to himself, that he has gained decided advantages from its use in the low or later stages of fever, and that it has often appeared to him the means of at least supporting the patient to a favourable termination. As to the minute details of its application, or of the obvious substitutes, it would be quite superfluous to enter on them. He who cannot act in physic without definite rules, is not fit to conduct it; and to lay down such directions, is most generally to produce more evil than good, by putting tools into hands unable to apply them or to decide on the propriety of their application.

Such is the leading catalogue of the general remedies in remitting fever. I have said nothing of the use of mercury as a remedy acting on the general system; preferring a reference to authors on a subject which I do not profess to understand and on which I also doubt.

I gladly leave this question to those who may possess more knowledge of it than myself, to offer the last remarks which I have to make, and which relate to the rigidly topical remedies.

These may be reduced to local blood-letting, blisters, and the local application of cold. It does appear that the former sometimes relieves the affections of the head in particular, while even in case of erroneous application, no great inconvenience can be apprehended from it, unless pushed to excess or repeated too often. It cannot be very necessary to give minute directions on this subject; since the general principles already explained are equally applicable to it: while, in as far as deceptive good effects, leading to ultimate injury may follow, I shall have occasion to explain these in a future part of this work, to which I shall now therefore refer. Let the practitioner keep in view, that in very many cases of this nature, there are apparent good effects which do immediately follow the use of this remedy, but that these are shortly succeeded by bad ones; and that even local blood-letting, whether through cupping or leeches, may be so abused as to produce the same injuries as general bleeding. Let him also recollect, that this state, which is conceived to be an inflammatory condition of the brain, is often of a very dif-

ferent nature, as I shall show hereafter; that pain in the head, presumed, under a false theory, to be within the skull, and dependent on disorder in the brain or its membranes, is very frequently external; and moreover that it is very often a merely nervous disease, analogous to Neuralgia, not to be removed by local blood-letting, but aggravated by it; and lastly, that even when absolute inflammation is visibly present, as in the ophthalmia of this character, it is an inflammation which is augmented by blood-letting, as I shall prove distinctly hereafter. And before I quit this subject of the cure of remittent fevers of whatever variety, let me say once for all, that the reader must not condemn it as superficially detailed, nor attempt to apply it till he has read through the whole work. Had I attempted to render it complete, it would have been to anticipate much for which he is not yet prepared, from the want of facts and evidences that belong to a later part of these inquiries: while I must also have made many repetitions, in saying here what it will be much more necessary as well as more useful to say in a future place.

With respect to the local application of cold, its effect is sometimes to relieve such pains; and this is a remedy from which no evil that I know of can follow, under any misplacement of its use or extravagance of application. Of blistering, I cannot speak in the same favourable terms; as far at least as my own experience goes: believing that while it rarely produces any marked good effects, it is very seldom without vexatious results to the patient, by producing an irritation, and an absolute increase of all the febrile symptoms, or at least of symptoms which materially aggravate the sufferings arising from those. They who imagine that a blister is merely the local application which it seems to be, must be very incurious observers, to say no less; since be the cause what it may, whether the poison of the cantharides is absorbed into the system or not, there is an effect, and often of considerable duration, produced, which does not result from a vesication of the same extent excited by other means.

Yet I know and feel that while I thus decide, I may possibly be very wrong, differing as I do from many physicians to whom blisters have appeared a most valuable remedy. Yet it is my duty as writing from observation, and not compiling opinions, to state the results of that observation: while I am willing to believe that others may conscientiously have taken the reverse view, and also under greater opportunity for observation, as well as greater capacity than my own. And this may be explained as to both the opinions, opposing each other as they do, by that fact which I have here alluded to so often; namely, that the characters of fevers, whether as single cases or epidemics,

are extremely various, and often demand remedies as different; so that, after all, it must, as on so many other points, remain for the judgment of the physician himself, in each case, to decide either for or against this remedy, by observation on his own practice, and by knowledge, or trials, of the particular epidemic or fever which it may be his lot to treat. This, however, I would still remark as to the remedy in question, as I might of so many more all through physic; that a fancy or prejudice is not less often the cause of a favourable judgment, than it is the inducement to adoption, when the experience itself is of no value: while I have had abundant proofs of this by witnessing, in a hospital practice of great extent, and through a long course of years, the invariable use of blisters in these cases by one physician, and the as invariable neglect of them by the other, in equal attendance; when the results, as proved by the registers, were absolutely equal for both, during the whole period.

Such are the views relating to the treatment of well-marked remittent; but I must now add some remarks respecting those milder varieties which I have described at so much length; a length for which I should apologize had I considered that subject understood as it ought to be.

A sweeping conclusion as to the ordinary simple fever of this character, would be, that it requires no remedies at all; and most assuredly, it is far better left to its own operations, or to nature, as the phrase is, than that it should be tampered with by intermeddling and routine practitioners. There is little good to be done by remedies; but it is not so as to the harm. Left to itself, its periods proceed in a very orderly manner to a favourable conclusion; but it is rarely so when a busy or active practice interferes. What the evils to be produced may be, can so easily be concluded from the preceding remarks, that I need not detail them.

When however I say that it is best left to its own progress, this is a remark which merely excludes active practice or decided remedies. Here, as every where, we cannot dispense with the removal of all causes of offence and irritation; or with what may be called negative practice, by means of repose, tranquillity, the removal of thirst, and so forth.

And if, in the description of these varieties, I was obliged to notice the evils produced by exertion, I cannot here dispense with some further remarks on that subject: since the paroxysms are thus frequently prolonged or aggravated, when, by more care and attention, they might have produced comparatively little inconvenience: an occurrence also more common, for obvious reasons, in the slighter and chronic cases than in the better marked "nervous fever."

Thus when the whole visible paroxysm is nothing but a muscular debility which, with care and rest, would have been limited to a few hours, an exertion through that time will not only protract it through a considerable interval, but also produce other symptoms and greater inconveniences: such as, increase of pulse, headach, additional loss of appetite, and an augmented sense of general suffering. The same consequences also follow from mental exertion under the same circumstances; and if I need not repeat what I formerly said respecting sleep, it is plain that the reasoning is the same. In all these cases, that indulgence to the feelings or caprices of the patient which humanity ought to dictate, is also correct medical practice; much too often, however, controlled by the ascetic principle on one side, and by that of what, for want of a better term, I may call tyranny on the other.

Perhaps, under the head of negative rather than positive practice, I may include that attention to the bowels which consists rather in maintaining a natural condition than a system of purging; though, here, there are modified cases, where real purgatives, and among them calomel, will be necessary; while that necessity must generally be left to the judgment of the practitioner, as definite rules for it in all cases, cannot be laid down. This was a subject, however, which I took occasion to discuss at some length when treating of the severer fever of this nature; so that I may here refer the reader to what was most conveniently examined then. And as an attention to the action and state of the stomach and bowels is in reality nearly all that is required, in the majority of cases, while that also is indispensable, so is it requisite that the administration of food should be regulated strictly by the rules which were formerly pointed out. In this moderate fever also, if wine is not absolutely necessary, it is always convenient or useful, as it is almost invariably safe, and not less agreeable to the patient, for whom, as in every fever, attention to the feelings and comfort is essential; an attention which, whether it concerns the mind in one way or in another, is far too often overlooked or neglected in all diseases, either from negligence or want of active humanity, or from that callousness of sympathy which is too common in those who know not by experience what disease and ill health is, or in whom it has been worn out by use or by multiplicity of practice; that feeling of trade it may be called, which forgets the fellow-creature in the routine of business.

There is a state however in this variety, most commonly entirely overlooked, where positive medicines are useful; while by an accidental coincidence rather than design, they are often blindly given in reality, if less effectually than they might be; the practitioner himself doing the good which he did not intend.

It is by no means unusual, as I remarked before, for it to subside into an intermittent, while the paroxysms are so slight and so indefinite as not to attract the attention of the routine practitioner, who sees in the debility which attends this state, nothing but what is termed convalescence: a convalescence however which is apt to be a very durable disease, and not unfrequently to subside into a long-continued train of local affections, and even into the chronic or relapsing remittent or intermittent.

An observing physician will however easily trace this termination, even though there should be no symptom but a persisting and unaccountable debility; as he will find that it is paroxysmal, and further, that it is accompanied by some symptom or other, in the shape of headach, affections of the appetite, or of the sleep, or even of the state of the pulse, at certain periods, which indicates an intermittent fever, however gentle or obscure. Here it is that bark, or perhaps arsenic, becomes an active and useful remedy; sometimes terminating, even in a day or two, a series of teasing symptoms, or a condition of dubious convalescence, or a better-marked disorder, which might otherwise prove what I have just remarked, and which, while it is exceedingly common, is very often a subject of much wonder, and also of not a little error, as well to the patient as to the unobserving practitioner.

And in these cases it also is, that a similar and sometimes sudden cure is produced by change of habits, or by change of air as it is called; while the action of this particular remedy is, as might be anticipated, most conspicuous in those cases where the residence of the patient is in a situation subject to the influence of Malaria, and while also, and chiefly in these cases, this proceeding succeeds when tonic medicines fail; just as happens in chronic intermittents of whatever origin. And if I have just remarked that this condition is often cured by practitioners, blundering practitioners I may really call them, who are unaware of its nature, that is the consequence of a routine practice which, whether for the purpose of swelling a bill of charges, or from some vague notions of giving strength by tonic remedies, furnishes the patient with a specified number and course of "bark draughts." In fact, it will be found, if I mistake not, a much more common occurrence in physic than it is suspected, that while the notion of producing strength by tonic remedies, and above all by bark, is one of those vulgar opinions where one *term* is set in hostility to another *term*, not the action of a remedy on the body opposed to the action of a disease on it, the most frequent success of such "strengthening" remedies in removing weakness, is, in reality, the power, whatever it be, which they exert over the obscurer intermittent affections.

I will not however terminate these remarks, without adducing the fact which I have now stated, namely, that of the intermittent and obscure fever which so often follows the apparently simple continuous or slightly remitting fevers, as an argument to prove further, or to confirm what I formerly stated, namely, that the fevers of this class, be their character and duration what they may, are real remitting fevers and the produce of Malaria.

And if I consider this argument or fact as one of considerable weight in the general one which attempts to prove that the ordinary fevers, so commonly, or rather universally, attributed to speculative or imaginary causes, owe their origin to Malaria, I have reserved it to this place, partly for the sake of continuing the impression which I desire to make, and partly because thus placed in union with the other circumstances to which it belongs, its value might be more apparent. The fact generally stated, but still more particularly explained, as it occurs in practice, is this; that whatever may have been the character of a common fever, a fever which is not marked, and certain, or a proved and admitted, remittent or marsh fever, or a fever which, in the essay on Malaria, I have supposed or granted to belong to a third class, its very common termination is to disappear by first assuming a perfect intermittent type. If practitioners do not remark, or authors and bookmakers have not distinguished, this very common fact, it is incumbent on themselves to explain the reasons: but if the former have not so done, these reasons will possibly be tolerably apparent in the manner in which "business" is conducted, while, for the far greater part, authors are systematic writers who do not concern themselves so far, or who from some other causes which can be imagined or assigned by those who choose to meditate on such matters, too often omit what requires investigation, research, or original thinking.

And if this particular fact, or the subsidence of a continuous fever to health through the intervention of an intermittent type, occurs very commonly in even the minor fevers, be their duration but a few days, or even one or two, then will it become additionally probable that even these fevers, be their technical names, or their imaginary causes, what they may, are dependent on the same cause as that which produces intermittents, or that they are true marsh or remittent fevers; since this is one of the essential and remarkable characters of remittent fever in its most unquestioned form. And if this particular mode of termination or evanescence never occurs in the fevers of contagion, or in the true typhus, which, from all my reading and observation is the fact, then is it at least proved, or rendered highly probable, that these minor fevers do not belong to typhus, how-

ever physicians may still determine to persist in referring them to the several doubtful or imaginary causes formerly discussed.

Such is an argument which will be satisfactory, however, only if it be admitted that intermittent is a disease produced by Malaria alone; since I must not mislead myself or my reader in a manner too common, by omitting views that would defeat the force of the argument. But on this subject, all that can be said has been stated on different occasions elsewhere, or may be deduced from the general bearing of this essay throughout; and it is, briefly, that while Malaria has been proved to be a cause, and the common cause, of intermittent fever at least, no other cause of this disorder as an original one has been proved; and that while it is unphilosophical to assume superfluous causes, there are abundant proofs of various fallacies, as well as of a usual or prevailing laxity of language, or of what is called reasoning, in physic, which are capable of leading, and have led to that popular belief which I here conceive to be an erroneous one.

And let me make a general remark here, which is, that because physic has been accustomed to proceed in defiance of all the rules of philosophy, persisting in those processes, commonly called reasoning, which it had inherited, as it has continued, from the days in which all philosophy was of the same character, always professing to follow a better system, yet never acting on it, it seems, even to this day, to have indulged its indolence in believing that it was not amenable to the rules of philosophizing, and has chosen, very perseveringly, and not less conveniently, to suppose that its obscurities were insurmountable, and that it might go on for ever, trifling with impunity, an exception to all other science; authorized to assert instead of proving, to dogmatize instead of investigating, and to imagine instead of observing.

If now the fact be as I have thus stated it, and as appears to be the truth in our present state of knowledge, then may remittent fever be not merely a fever of the slenderest nature, but limited to a duration as brief as two or three days; as I formerly suggested: being thus the commonly reputed inflammatory fever of the people, or the synocha of systematic writers and nosologists. In this very fever, it will be often observed that the termination is in an intermittent, slender perhaps and brief as the original disease; terminated, itself, either by the remedies adopted, or, as appears equally common, by the mere fact of leaving the house and confinement for the open air: a change similar to that greater "change of air" which so often cures the better-marked intermittent. Nor, from previous reasoning, is there any cause why this should not be true of remittent; since

a perfect intermittent of the most marked character is often similarly cured after two or three paroxysms, or even after one.

If this view of the frequent terminations of fevers in an intermittent of this slight and neglected character, throws doubts on the distinct nature of the synocha of Cullen, so will it confirm those doubts which I formerly stated respecting his synochus as being always a mode of typhus; while, independently of all former reasons for that judgment, an immense proportion of the severer fevers, commonly called typhus and reputed contagious, must be taken out of this list and placed in that genus to which they justly belong. This really is a serious subject, not simply on account of the wrong practice to which it leads, but of the useless and troublesome precautions so often adopted from mistaken notions of contagion, from the alarm thus produced, and from the neglect of patients to which that alarm so often gives rise. Let it not be supposed however that I am one of those who deny the existence of the contagious fever which is produced by the human body, so long and so well known; since if there is aught of evidence in physic, the evidence for this is most uncontrovertible.

All that now remains is, to speak of the treatment of the chronic or relapsing remittent; while the remarks applicable to it may be equally applied to that disease or those diseases of similar character, the relapsing quotidian and the double tertian; terms, which if it were of any importance here to be very accurate and minute, would probably apply with more justice to the majority of cases that occur in actual practice.

I know not that I should be very wrong if I were to commence by saying, in an equally sweeping manner as of the simpler modification of remittent last discussed, or of the simple fever without returns, that it is incurable by medicines, or beyond their power. I know of no great average of instances at least, in which the returns or relapses have been prevented by mere medicines, or where those seem to exert any influence for good, over the paroxysms of each relapse, or over the total state of a whole relapse. The inveterate career of this disease appears to be equal to its obstinacy of character in each recurrence.

If however the relapses be severe, the same rules apply as to the single disease, and those I need not repeat; but that relapse past, no remedy, no medicine at least, appears to prevent the habitual and expected return; or the returns are the same in point of period and force, where medicines have been used in the interval and where they have not. And it is in this disease that bark, arsenic, and the remainder of the tonic remedies, seem to be peculiarly without power; and not less so when the intermissions during the relapse, or the commencements of

each paroxysm, are so well marked as to leave no hesitation in referring it to the quotidian and double tertian rather than to the proper remittent.

This at least is the result of my experience, and pretty generally of my reading also: but I shall be very well pleased to be contradicted by any one who may have had more success with medicines; as there is perhaps no disease in the whole catalogue of human miseries, attended with greater suffering, and not one with equal inconvenience. To spend years of life in the sufferings of fever, sufferings which a spectator cannot appreciate or even comprehend, indefinite as they are, and unmarked by visible disease or by absolute pain, however well known to those who have felt what fever is, might be even misery enough, comprising as they do, bodily evils as unceasing as they are numerous and distressing. Add to this, nights resembling the days, sleeplessness, often with that delirious activity of mind which aggravates the present as it anticipates further evil, which longs not to think, but is compelled to be ever thinking: add to it the consciousness of ability for mental exertion, yet the perpetual torment of being for ever checked in the attempt, the utter insensibility to every pleasurable feeling or impression, the dark present and the darker future, the "*lasciate la speranza*" which is so highly characteristic of this disease; add to it again the persevering coma, where the patient cannot rouse himself, yet cannot sleep, and a slight idea, slight indeed, may be formed of this tormenting disorder; less known, fortunately, to our happier climate, than to those pestiferous regions described in the first part of this essay, in which life is, most literally and truly, one long disease, and where death is indeed the only physician.

And let the patient too who has idly calculated on the tolerance at least, if not on the sympathy of imagined friends, not forget what he has endured from their neglect, contempt, incredulity, or tyranny, if he would induce physicians to labour in discovering the means of curing this opprobrium to them and their art. Nor let him forget the continual insecurity, even in the periods of tolerable or comparative health; the insecurity? the certainty on the contrary, that he dares not leave his home, that he dares not adopt that change of place, or follow that system of foreign travel which is recommended as a cure, that he dares not form any plan of life, even from week to week, assured that whatever he designs to do will be defeated, that if even his life is safe, he holds his health on a tenure which renders life useless. And if this be the picture, (and a slender sketch it is of the truth) let physicians remember that this is not a solitary, not even a rare case. It is the history of tens of thousands, in every country of the world, over all that geography

which I have noted, and far more; the prime curse of mankind, availing to their torment, while little availing to the useful ends of disease, the thinning of the human race; since, if it is the picture of this fever, so is it that of every chronic intermittent, be its character what it may.

Yet is this disease occasionally cured; while, however, there is little in the power of mere medicines. Revolutions in the constitution, of which we can give no account, do terminate it after an uncertain series of years. On similar principles, probably, it is removed by the occurrence of other severe diseases, as even the more acute intermittents sometimes are: and there is no one who would not willingly undergo the longest periods of the heaviest visitation in the catalogue, in exchange for it; often even with all the hazards that may befall.

Of what is in our power, if it is always just to the patient to labour through the whole round of tonics, with whatever little hope, there is nothing which seems really efficacious but change of habits; change of air, change of climate, change of every thing. And thus is the disease sometimes extirpated. But the value of this remedy is greatest when that change is from a soil productive of Malaria, or from any other situation generative of the causes of the disease; for by this is it often kept up, when it would otherwise disappear. Thus, as I formerly hinted, is it often supposed to be an habitual disease of the constitution, or even a disease dependent on organic affections, when, in truth, it is not a disease of relapses, but a succession of new diseases, produced by repeated applications of the cause.

Nor can I help thinking that this remedy is of much more general application than it has been commonly esteemed; in every case at least where the patient suffering, or having suffered, from fever, would otherwise remain in the place where the disease was produced: the corresponding neglect arising either from mistaken views of the nature of the fever, or from ignorance respecting the sources of Malaria. In chronic cases, or after the termination of the disorder, this expedient is very frequently or generally resorted to in tropical climates; yet even there, very often, without any definite ideas of its nature or action: and hence the practice of sending West Indian patients into the mountains, African ones to sea, and East Indian invalids even to Europe, where the object might often be attained by a much more moderate and less inconvenient migration. But in our own country, it is far too much neglected; or rather, it is scarcely known, or considered as a remedy, so that a protracted disease or a series of relapses is a frequent consequence; or else, in the fenny counties, an inveterate intermittent becomes the vexatious result of this neglect. And the cause of this must be sought in that obstinate and still incurable

ble ignorance which will persist in considering our autumnal fevers as typhus; repeating the same error year after year, and profiting as little by experience as by all that has been written on this really most simple subject.

Hence the unfortunate patient is retained where the poison is ever active around him, ever active and ever acting, prolonging a disorder that might have terminated in three weeks, to six, or leading to relapse after relapse, or, lastly, causing the fever to settle into that intermittent form, which is so apt to become the inheritance of life.

Thus, to give a familiar and tangible example, in this year, 1826, have the inhabitants of innumerable places in England, suffered severely and widely from fevers; proving also, that production of Malaria in those districts to which I formerly alluded, as it further proves the power of a hot summer, in augmenting that production, while it is even doubtful, if one such attempt at removal or change has been suggested, in any one part of all England, even in the fenny counties, or in those places where the cause of the disease is known, and its production from the soil acknowledged; though, in most places, the name typhus has been as generally conferred on it, as is usual in all such cases.

This general assertion I could easily prove by a great mass of specific facts, were it not for the reasons assigned in the essay on Malaria, though I may venture at least, to say that I could point out many towns and villages, even in the neighbourhood of London, where almost every house has been affected by fever, and where, in some, every resident individual has undergone the disease, while in those, the causes of Malaria have been most palpable, though the disorder has been called typhus, and not one attempt has been made to remove a patient from the place, even when one after another in the same house was sickening, sometimes dying, and when relapse after relapse was the lot of those who escaped. Thus also could I name villages in Lincolnshire, in Essex, Kent, Sussex, and in many other parts of England where the people really are aware of the cause, if perhaps carelessly viewing it, and in many of which not a house escaped in this summer, and in which also the greater portion of all the inhabitants were affected: falling under the disease one after another during the whole autumn, and even dying in a fearful proportion, yet making no attempt to quit places which the practitioner at least should have known to be the cause of all this disease and mortality, as containing distinct sources of Malaria. Not to name these exact places, is perhaps an unnecessary refinement of caution, as it relates to any injury which might be suffered from specifying, for salutary ends, and with useful views, that which is known to thousands. But,

having adopted the rule from good motives, I must abide by it: while, perhaps, it will not only serve the same purpose, but be even more satisfactory to persons to whom these places are known, as ordinary residents, or as practitioners, to make these remarks for themselves, each as to the district which may be his own; taking for his guide the general statements made in so many parts of this and the preceding essay. Or, to profit by these remarks, let an inhabitant of Woolwich or Greenwich, for example, places in reality very little and very rarely affected by these fevers, or let a resident at Marston in Lincolnshire or at Hythe in Kent, as situations more exposed to the causes, investigate the number and characters of the fevers of 1826 about him, then reflect on the nature of the summer, the direction of the winds, and whatever more may be necessary, next examine the lands, and attempt to discover where the Malaria is produced; lastly, endeavouring to find out, as to any specific case, when and how the exposure took place, and I cannot doubt that he will come to the same conclusions which I might here have drawn for him; convincing himself that the fevers in question were remittents, and the causes those which I have here described, and, further, acquiring that discrimination as to the causes, which will become to him a source of that practical utility which it is the object of this work to inculcate. And that his own conviction, thus produced, will be more impressive and useful than any belief which he could have adopted from me, I cannot for a moment doubt; while I do not wish to claim belief as a due, nor desire concurrence to any thing which is not absolute evidence.

There can be no hesitation in making it a general rule, even among ourselves, and in a milder disease than that of the tropical regions, that every patient under a fever in summer or autumn, be its appearance what it may, or though its vulgar name be typhus, should be removed to another situation whenever this is possible, and most particularly whenever the present habitation has produced the disorder or is productive of its causes. There is here at least a chance of shortening the duration of the fever, and also of rendering the existing symptoms milder: and though the success in such cases cannot be proved to be very conspicuous or very certain, since those who doubt can always withhold their consent as to the cause of any event, there can be no question whatever of the great utility, or rather, of the absolute necessity, of such removal, as soon as the patient becomes in the slightest degree convalescent; as thus we have the best, often the only chance, of preventing relapses or final intermittent.

It would be abundantly easy to quote cases in proof of the truth of these views and the success of this practice, both at home and abroad, in single instances, and on the great arithme-

tical scale of naval and military service; but I must content myself with a mere specimen or two from the latter class of records, and chiefly because naval and military surgeons will find no difficulty in confirming them from their own experience.

In the first example, out of sixteen men from a frigate, under the African fever and in the hospital, eight were taken on board and to sea, the other half being left on shore; the consequence being, that all the former cases recovered perfectly and without relapse, while every one of the remainder subsided into an obstinate intermittent. This is a pointed case on a small scale. A recent and a very conspicuous proof, on a far greater one, of the utility of removing the convalescents from fevers to a healthy district, occurred at Rangoon in the late Birman war: the troops, in great numbers, which had continued to be sick and incapable of duty for many months at that place, after the fever, having recovered immediately and perfectly on their removal to Mergui. And though I must not suppose that in this particular instance, that proceeding was not adopted as soon as it was possible, it is but too obvious, that, apparently from the lax ideas entertained of the purpose and value of the change of air, as it is always idly called, in these cases, the greatest neglect has often occurred in similar circumstances, and that the deaths of thousands, as well as the inefficiency of armies, have been the consequence. And if I could produce some analogous facts from my own observation, I doubt not that this class of medical observers can recollect many more, and also better marked, where even the tropical remittent has been actually cut short by simple removal, in cases where circumstances of retreat before an enemy, the necessity of leaving a station, or aught else, has compelled the sick to be removed; and even where death had been expected to follow the mere attempt at a conduct so apparently violent and hazardous.

With such views, and which I trust are not only well founded, but will prove so in practice, should they ever be received among ourselves with favour, it is not easy to contemplate with tranquillity the facts which every autumn exhibits in England, and which that of 1826 has perhaps displayed, as I have just noticed, in as high a degree as any modern seasons have done. In hundreds of places, besides those to which I have just alluded, we might have found in every one of the past years, as we shall doubtless find again, whole families, even whole villages, attacked one after the other, and individual after individual, with this fever, yet all suffered to remain, in spite of such warning, till all had sickened and many died; and even those who had recovered, kept on the same spot, in the same house, till relapse after relapse had ruined the patient's health or perhaps terminated his life.

If such carelessness took place respecting the poor only or the lower classes, there is the ample excuse that it is impossible to remove them; but nothing but pure ignorance can explain this conduct as to the opulent, whose chance has hitherto been scarcely better than that of their inferiors. If I could produce cases at the very moment I am writing this interpolation, where nine, ten, sixteen persons in one house, and in opulent families, have been permitted to take the fever, gradually, in a succession of four, five, and six weeks, with the loss also of some patients, and when the neighbouring land too was a land of meadows and ditches and half the lawn was perhaps a fish-pond, there is no excuse, as there is no solution but in the ignorance of the practitioners. And if that consists in not knowing the value of a change of place, and in not knowing also, or not believing, that such land will produce Malaria and fever, it is founded perhaps even more on that most unfortunate, yet almost universal error which I am never weary of repeating, that of calling and considering these fevers typhus.

That such is the belief even now, 1826, among the people, and, what is the real misfortune, among practitioners, in spite of all experience, is amply proved by common conversation, by the newspapers, by the very language of practitioners themselves. That such it has generally been, is not less certain and less proved; while successive seasons arise without teaching those to whom experience can teach nothing: not even in Lincolnshire, as I have just said, where at least, the nature of the disorder might have been conjectured, and where the value of the remedy ought surely to be too obvious to be overlooked. And I must think it extraordinary, in physic, at the present day, and so soon after a war which must have rendered the nature of these fevers generally known, that in more than one village, even of Lincolnshire, not to mention hundreds of other places, not merely was the character of these fevers mistaken to the very last, but half of the entire mortality had occurred before the practitioners had made up their minds how the epidemic was to be treated; seeming indeed to have even forgotten that there was such a disease, and expressing an alarm, as well as a surprise, at an occurrence which, if it has been rare in England of late, might have been found from history, medical or ordinary, to have been once sufficiently common; as it should have been still better known to be the common epidemic of analogous wet situations on the continent of Europe. That I do not name these specific places, which I might full easily do, is that I may avoid a species of criticism which, however useful to the public, might be painful or injurious to individuals.

Here then we see more distinctly, the value of the remarks on pernicious soils and on the propagation of Malaria, which

have been detailed in the essay on that subject. It is this study which must form the real basis of the cure, in this as in all the chronic or repeated intermittents. The cure consists in the avoidance of fresh causes, new excitements: and, to be enabled to apply it, these must be familiarly known, accurately studied, and carefully investigated. He who would be the real physician here, must be the acute observer and the philosophical naturalist; for where he cannot act he must learn to avoid, since the cure is negative, and in avoidance as the remedy.

And now may also be further seen the value of this knowledge in a more general and geographical view. It is to rush into the lion's mouth, to leave the Malaria of England for the ten times more destructive ones of France and Italy: and thus it is that the foreign travel which is intended for the cure, becomes too often the aggravation, or perhaps the source of death; as it sometimes thus is, when resorted to for chronic diseases whose nature is misunderstood, and which are misnamed; for disorders which, in reality, depend on the same causes, or originate in the very Malaria, to which, in a degree a thousand times more diffused and active, they are sent for a remedy.

I cannot enforce this in stronger language; while I wish I could believe that this would have the effect of making careless physicians pause in their recommendations of foreign travel, or at least inquire what the country is to which they send their unfortunate patients, too often from weariness or the dread of reproach. And if, here also, we can see more distinctly the value of that work so much to be desired, a statistical or geographical detail of Malaria, there is nevertheless a considerable extent of this knowledge to be procured by those who will seek it in those geographical works and books of travels which abound, and which it is highly discreditable in the physician who thus tampers with the lives and healths of his patients, not to know. Long ago did Smollet, a physician himself, remonstrate against Montpellier, in a much more simple and obvious case; and yet does a culpable ignorance still consider it the proverbial Montpellier which it was once so falsely said to be.

But to return from a subject which I cannot prolong here, and for which the plan of this essay affords no room, I must now remark as to the cure by change of place, that while that change requires a very obvious selection, on the principles now laid down, it is also often very useful to repeat it from time to time. Thus it will happen that the first change will terminate the present disease, or protract the interval of health beyond the usual period. Still the disorder again returns, and it must then be met by a fresh change; while it is often successful, even to return to the original place, provided it is not in itself an unhealthy one, as it becomes convenient when the patient's cir-

circumstances do not admit of any other. Thus, frequently, may the disorder be kept at bay; or the persistence of the several returns is gradually reduced, or else the intervals prolonged, till it finally vanishes altogether.

I need not enlarge on this practice, of which however the inconvenience is unfortunately too palpable, as it is too frequent and too great; since it cannot often be very applicable, except to the independent or opulent, implying, as it does, so many obvious sacrifices. It remains to examine into the utility of the only mere medicine, besides the tonics, which I know of, namely mercury.

On the presumption that the chronic fevers of this class were necessarily connected with organic diseases of the visceral glands, this remedy has naturally been recommended and followed. That it does act in the chronic inflammation of the liver as in the acute one, admits of no doubt: but there are many physicians of far greater experience than myself, who doubt with me of its power over the other chronic diseases, the real permanent diseases, or the obstructions as they are called, whether of the liver or the spleen. But this is a subject by no means so clear, difficult as it is to discover what the exact state or nature of the disease in these glands may be, as to prevent us from trying a remedy which is often doubtless a powerful one. That it is a practice often rashly and injuriously pursued in the present day, and especially in England, is however but too plain; while it is easy to trace the origin of this pernicious abuse to the physicians of our colonies, and especially to opinions formed and fostered in India.

To enumerate the evils now daily produced, by this medicine, in all its forms, in innumerable disorders and patients, by what a French writer, censuring English practice, calls "*l'inevitable calomelas*," and not only in real disorders but in imaginary ones, and in subjects that may be considered healthy, would be a task worth undertaking; while it is one on which I must not venture in this place. It is, or has recently been, a fashion, almost amounting to an insanity, and which has not merely abused this active and hazardous substance in medical hands, but which has rendered it familiar to those, a now numerous class in this age of universal aspiring, and of assumption especially on the subject of medicine, who take upon themselves to treat their own diseases, real or imaginary, and, still less pardonably, the ailments of their acquaintances. If, besides the unconscious dead there are thousands living to rue the day when mercury became the Universal Medicine in the hands of English physicians, there are tens of thousands who, if they were conscious of the fact, should lament the hour when first they imagined themselves qualified to practise that which he who has studied it most

and longest finds the most difficult of arts, and the more he studies it, the more difficult, and who should repent too, that they ever knew, even the very names of "calomel and blue pill." Well may entire Europe wonder at English practice; and more still may it express its surprise at that universal self-empiricism, before which all the professed quackery of all Europe shrinks into nothing, and in comparison of which the temporizing *ptisanerie* of France is absolute philosophy.

To return. If the visceral glands are disordered, the cure of these is an obvious claim on the physician, whether they should be a maintaining cause of the chronic fever or not; and a judicious physician will here act with those necessary cautions for which it is impossible to lay down rules. But I must point out one ground of caution as to the fever itself, from ample experience of the evil effects of mercury as to it, and of effects, as far as I have seen, very little suspected.

I have formerly said that its recurrences are produced by any debilitating cause, and it would not be very easy to find one more active to this end than mercury. As for calomel, as a purgative, injudiciously pursued, repeated beyond utility or obvious necessity, it is one of the most pernicious of the whole tribe, while even thus it also produces its constitutional action. Inducing salivation, in this or in any other form, I need not point out its effects of this nature; while its effective use, far short of this, induces also a state of debility which often becomes durable; lasting long after the proper effects of the remedy have disappeared, and sometimes appearing to last even through the whole of life.

Thus it happens that from the injurious effects of mercury, a chronic disease of this nature is rendered more inveterate; or new accessions, finally becoming a habit, are brought on, when the disease might otherwise have terminated of itself, as it so often does. And if in persons thus artificially debilitated, the effects of other occasional causes in re-exciting the disease are augmented, so are the sufferings of the patient increased by the feebleness of resistance, opposed to the action of the disorder. I have such unquestionable evidence of the aggravation and the protraction of these fevers from the use of mercury, that I have often been inclined to doubt whether it should even be hazarded when there is demonstration of visceral disease accompanying it: and if, as is supposed by the most judicious physicians, the fever is itself the cause of the glandular affections, it is plain that the imagined remedy becomes in these cases a poison. Let practitioners at least attend to this fact, and watch carefully the effects of the remedy, for good or evil: and thus will it be comparatively easy to form a correct judgment respecting its propriety or utility. And it is a caution the more

necessary, because it has been boldly asserted, and by hundreds, that in this as in all cases of chronic intermittent, mercury is not merely a remedy, but *the* remedy, a specific, while it is a doctrine, by which thousands have been misled.

On the other hand, now, so intricate is physic in every point, there can be no question that in this assertion there is some truth, or that there are cases in which mercury does most clearly produce a cure. That it has produced such cures while it also removed glandular affections, there is no doubt; while it is further possible that the cure of these disorders may have been the removal of the causes of the fever. But it is certain also, that it does cure this disposition to the renewal of fevers, even when there is the most perfect demonstration of a healthy state of all the viscera. In this case it seems to act by inducing a new disease, or an entire change of habits; just as acute diseases of various kinds remove it, or it is removed by any other important change in all the habits. Thus have I seen habitual fevers of this nature gradually disappearing under the use of mercury, while it was easy to trace the progressive connexion between the effects of the remedy and the diminution of the disease.

How impossible it is to give rules for judging of the cases in which it may thus be useful, must be very obvious; nor can it be judged of but by the physician's own discernment. But with respect to its administration, my own experience has shown that it ought never to be so pursued as to induce its obvious effects, or even any marked debility; though I have at the same time seen cases, where, on the occurrence of the first symptoms in the mouth, an habitual remittent of many years standing had disappeared to return no more. Nevertheless, a temporizing practice is perhaps the most generally applicable, as it is the safest, while it may thus be sometimes carried on, even for years, with perfect security, with the final cure of the disease, and with no apparent evil results.

So uncertain is medicine, and so difficult must it continue to be to reason respecting it, while we remain so imperfectly acquainted with all its fundamental principles. I shall only add here in concluding this account of the means of cure, that where mercury has been thus found to cure what is called dyspepsia, I have much reason to believe that the cases have sometimes been truly the slighter fevers of this nature which I pointed out formerly. Yet I must subjoin, that if I have here omitted to notice those varieties of the remittent which I have called anomalous, it is because as far as any peculiar treatment is required, this will be better reserved to the place where I shall discuss the remedies of anomalous intermittents.

CHAPTER V.

On the Dysentery and the Cholera.

SINCE dysentery is one of the most important and severe of the disorders produced by Malaria, I could not absolutely omit all mention of it, inasmuch as it might be supposed that I had either formed erroneous views of its cause and nature, or did not perceive that it formed a most important link in that great chain by which pure fever from this cause is connected with the local affections which that also produces. But if I am unwilling to treat of this disease under the limited and imperfect experience which I possess respecting it, and which is not easily attained in this country, while I can at the same time refer to authors out of number, from whom I could but compile, and whom I ought not to pretend to elucidate, I am scarcely less disinclined to inquire respecting its proximate cause, or in what manner and from what circumstances it differs from fever, seeing that it is produced by the same general cause, Malaria. Yet in future parts of this essay, there will be found some remarks respecting the localization of this class of disorders, or, as relates to partial affections or symptoms superseding a general morbid effect, or united with that, which will perhaps convey some idea of what I would have said on this subject, had our knowledge been such as to allow of more accurate and definite language than it is possible to apply to such discussions at present. To illustrate, slenderly, what is here meant, we have, in severe cases of the remittent fever, that local affection of the stomach which causes the black vomit, that analogous one of the liver which produces what are called bilious symptoms, affections of the head, &c., besides all the more rigidly local and partial diseases of which I have here treated at some length. It is not therefore difficult to comprehend, yet very generally and broadly, how such localization, or determination to the intestines, may produce dysentery; while this will vary as fever is conspicuously combined with it, or as the local affection is such as to supersede in a great degree the general one: while yet further, it is easy to imagine that if the affection in question should attach preferably to one or to another portion of the intestines, to the duodenum for example in one case, and to the colon in another, (a fact very conceivable from their differ-

ences in character, structure, or sensibility,) all the varieties of dysentery as to the most obvious effects might be the result.

Such a view, put into other language, becomes similar to that French theory, often differing from former ones only in its terms, which supposes dysentery to be an enteritis, or to consist in an inflammation of the mucous membrane; to be, according to circumstances, a gastro-colite, a gastro-duodenite, and so on. It is however, as thus expressed, little more than a theory of words; when the very same affections are held to be the cause of remittent and intermittent fevers. There is much more required before we can explain to those who look beyond words, why the same poison should in one instance produce mere fever, and in another mere dysentery; particularly if, in both, inflammation of the same organs is esteemed the proximate cause.

Thus much at least of what may approach to a theory of dysentery, seemed necessary for the purpose of tracing its general connexion with mere marsh fever. In our own country, it is neither frequent nor severe, while the treatment is in general equally simple and well understood: and as it occurs in other countries and climates, it has been so amply described by numerous authors that any notice of that would be as superfluous as inconsistent with my plan. I shall only remark, that, with us, it is very commonly mistaken for diarrhea by the mass of ordinary practitioners; a recent notorious example of which I need not call to the reader's mind: while, fortunately, being generally slight under this error, and while there is also no small confusion respecting the proper treatment of mere diarrhea, no great injury is the consequence. I should remark however, that whatever well-known and essential distinctions there may be between dysentery and diarrhea, there are instances in practice, where in an autumnal disease of this general character, arising in persons exposed to Malaria, the term diarrhea is the most applicable; as it is in reality given, and especially by those, the very great majority, who are not aware that our own diseases of this leading appearance are the produce of that influence. Hence an excuse for the original error as to the penitentiary; while I can add, that in a parallel case often submitted to my temporary charge in former days, namely the Woolwich hulks, every symptom of the autumnal disease in the very great majority of patients, which often included the whole of the prisoners, was that of diarrhea, and nothing more; so that but for the collateral and obvious circumstances of place, season, and so forth, together with the occurrence of some marked cases of true dysentery out of the number, I should have pronounced it an ordinary diarrhea. In reality, there does not seem any very marked limit in practice between these two disorders, however theoretically different: or rather, while there are diarrheas which

bear no relation to dysentery, there is one, arising also from Malaria, which is not radically distinct from it. And I imagine that this must be nearly the opinion of French physicians acquainted with the distinct production of Malaria; because a diarrhea of great obstinacy is marked as one of the endemics of those situations. Nor is this difficult to understand theoretically: as it is easy to imagine that the local peculiar inflammation which is the cause, may vary from the simplest affection to the most violent; from little more than mere irritability to positive ulceration.

Here also, and for the same reasons, I cannot avoid putting some queries (I cannot well call them more) respecting cholera, and particularly respecting the disease so termed, which has of late excited such attention in India. It is necessary to speak with caution of what we have not seen, and of a disease indeed so very imperfectly described, that it is far from easy to comprehend what its nature and characters are. Yet from some facts that have been related to me by accurate observers without system or prejudice, officers ignorant of medicine, and therefore, as I believe, the more to be trusted in a case of such evidence, I cannot help concluding that it is a disease to be added to the products of Malaria; notwithstanding the decided opinions to the contrary which have been held by some of the disputants on this question: an opinion which rendered it imperious on me not to pass it without some notice, however slender and conjectural.

Of these facts, one will answer the purpose as well as the whole; since the nature of all is the same; while that which I have selected is pure, or free from distracting circumstances.

A frigate had cruized long on the coasts of India where this disease was raging on shore, retaining her health however, and, as was believed, by rigidly avoiding any communication with, or even approach to the land; the captain's conduct in this respect having arisen from his experience of African fevers. Being on one occasion at anchor about three miles from the shore, the land wind came off to the vessel, and with such effect that the usual smell attending Malaria, well known to the officers and men from their African experience, was immediately sensible. There was not at this time a sick man on board, while there had been no communication with the land for many weeks: and the alarm being immediately taken, the vessel was ordered to weigh for sea; while, as had been the constant practice, every man not wanted on deck was ordered below, for the purpose of avoiding the effect of the Malaria thus blown off to sea in the manner which I have described in the essay on that subject. An accident having happened to the iron cable, the armourer was the first man employed, almost alone, on deck, in disengaging

it; and though in perfect health when he came up, he was immediately seized with giddiness, was quickly rendered incapable of proceeding with his work, became insensible within three hours, and died of this cholera, which also seized on four of the crew before the vessel could get under weigh; the whole of them dying in the same manner.

Such evidence as this seems to establish that a Malaria is the cause of this cholera also, to whatever circumstances it may be owing that the produce is not the usual fever. And if so, it may be conceived to be in a state of unusual activity or virulence; the effects in question bearing an analogy to what sometimes happens in the plague. In this disease, further, the local affections of the stomach and bowels, or of these and the liver together, are the most remarkable symptoms; or we may consider it as a localized remittent of peculiar severity, and with two or three local affections at one time. Thus, to illustrate, it might be compared with black vomit, with dysentery, and with ordinary cholera, all united; or as also happens, with the two former combined, without the third: or, at one and the same instant, there is a local action in the stomach and in the liver, the first, if not precisely the black vomit, being a state analogous to that, or intermediate between it and the more moderate affections of this organ occurring in remittents of less severity.

If this view be the correct one, this most remarkable disease is not the proper cholera known to us, but is rather a peculiar remittent with local affections, at once numerous, extensive, and violent; a fever in which minutes perform the destructive duty of hours, days, or even weeks, or in which, from its rapidity, there is scarcely an initial stage; as if the disorder had commenced where it more usually terminates. Under such a view, it is almost superfluous to say how little are the hopes of a cure, at least for the severer cases, by any means as yet in the possession of physic.

This is all that I can venture to say on a disorder which I have not seen, and respecting which what I have read (which is I believe all that has been written) has not given me any very definite ideas. Whatever obscurity as to its cause or nature remains, thus much at least is certain; since the solitary case which I have recorded is as perfect as a thousand could be, or since it is one of those pure facts which, in science, forms evidence as complete as the greatest number could do, and infinitely more so than a million of cases where the same simplicity is not present. That deduction is; that this cholera is the produce of an atmospheric transportable poison, generated upon or by land, resembling therefore Malaria in all its obvious properties and origin; while if it is not the same Malaria which produces remittents, and the disease is not a mode of that great class, there

must be Malarias of different chemical natures, capable of producing very distinct disorders.

This was a question brought forward in the essay on Malaria and left unanswered: while if it shall be concluded that this is the fact, then may there be many more Malarias, as was suggested in that place; or the several kinds of fevers, as well as of other disorders, namely, tertian, quartan, remittent, and so on, together with their endless modifications, and together also with cholera, dysentery, and even the several neuralgias, may be actually dependent on Malarias of as many different qualities or chemical modifications. Thus will each variety be productive of its specific disease, as the different contagions are; though should this appear groundless or false, we must rest in the original belief that these different disorders depend, severally, on quantity or virulence, as I have suggested above, or on collateral circumstances influencing the body as predisposing and modifying causes; since we have but that apparent alternative. All this is indeed but conjectural, or possible: but it opens wide views respecting a subject of great interest both in a chemical and a medical view; and a subject also which I do not despair of seeing hereafter elucidated by that chemistry which is yet destined to do for us, things of which we have despaired, and much also respecting which we can scarcely now even form a conception.

And this leads me also to offer a few remarks of a similar nature on the genuine or ordinary cholera; since this too seems to be one of the disorders that is produced by Malaria. Here also I shall not treat of a disease so well known and so common; as English experience does not suffice to enable, probably, any one to understand it thoroughly, and, still more, to question the prevailing opinions and practice.

It has been generally thought, that the action of the sun, or of heat simply, long continued, if our climate is in question, less necessarily protracted in a tropical region, was the cause of cholera; or that, from such an action, the liver became gradually disordered, so as at length, and by a species of accumulation, to break out with the symptoms of this violent and singular disease. The same doctrine has been applied, I need not say, to autumnal or remittent fevers in general, as occurring with us in England; while I have here attempted to show that this hypothesis is gratuitous or conjectural, if not as yet demonstrably in all, yet at least in the great majority of cases; and that whatever this cause or others may effect, the true or prevailing source of such fevers must be sought, in our own, as in the hot climates, in Malaria; though that is seldom or never noticed, from inattention to the natural history of this poison, or from ignorance as to the soils which produce it, or from prejudices respecting its

exclusive attachment to the swamps and marshes of Italy and Holland.

With respect now to cholera, I have here, in speaking of remittent, followed the common opinions in supposing that mere heat could affect the biliary system, and thus modify the nature of such a fever; nor am I about to question openly that this may not be the case, and that perfect cholera may not be produced without the presence of Malaria, however I may think it necessary that this subject should be reviewed by a fair series of observation, instead of being taken for granted, as has hitherto been the case. Yet let us remark the following circumstances; and we may then perhaps be inclined to doubt whether the prevailing theory is the true one, and whether this disease, like remittent and dysentery, is not the produce of a cause common to the whole: the distinction consisting in the part or organ to which the local action is determined.

If heat alone were the cause of cholera, it should be produced in the earlier parts of the summer, supposing that such summer had been both early and warm; or if it required one month, or two, of the sun's action to generate this derangement of the liver, it should be indifferent at what part of the year that was exerted. The same argument indeed applies to the case of remittent; equally, and probably under the same error, supposed by many physicians to be the produce of mere heat. But, in practice, cholera, as well as remittent, is a disease of autumn; or it appears together with fever and dysentery, after a long, or a certain, duration of heat, and when, as is now admitted in as far as remittent and dysentery are concerned, some change has taken place in the vegetating surface of the soil, to which is owing the production of Malaria.

Further, cholera belongs, predominantly if not exclusively, to the same climates, the same soils, or, generally, to all those countries and places in which the other diseases of Malaria abound; and if as numerous in respect to cases as these are in such places, resembling them also in severity. Reversely, it is rare in the reverse climates and countries or places. Of this we shall easily be convinced, even in our own; as the most superficial examination will show that this disorder is common where fevers are common, and rare where they are rare, that the places where both appear are precisely those which indicate the existence or probability of Malaria, and that autumn is equally the period of all. What may also serve to confirm this is, that where the present autumn, 1826, like some of the preceding, has been remarkable for the number of fevers, these having been also conspicuous for heat and for the prevalence of east winds, cholera has been far more frequent than in former and distant years; and that it has thus appeared even in Scotland, and al-

ways most remarkably in low and wet situations, where its existence had been formerly unknown.

Such are the direct facts which may lead us to infer the common origin of these several diseases, or to attribute cholera to Malaria, even though we cannot assign the accessory cause which determines the action of this poison to the liver in such cases, rather than to the brain or the whole nervous system, as is probably the case in fever. But this offers no further difficulty than dysentery; since here also, through causes which we cannot at present discover, the chief action of the Malaria is exerted on the intestines; and still more remarkably on a specific portion of those. As to these difficulties indeed, or in as far as the collateral causes which determine the local action of Malaria are concerned they are far too numerous to cause any surprise that we cannot assign them for the case of cholera: since, as I have shown in other parts of this essay, the same poison, at the same time, and in the same place, acting on different persons, produces, not merely fevers, remittent or intermittent, but local diseases of very different kinds, even to the simplest painful affection of a minute point in a nerve.

And this, which I have thus reserved, is the great argument against the opinion just thrown out, and stated also in the essay on Malaria, that there are different qualities of this substance capable of producing distinct diseases, or their actual causes. If one spot can produce every species of these disorders in different individuals, the cause, it may be said, must be sought in the individual himself, not in the poison; or, that being the same for all cases, it is to influencing or collateral causes that we must attribute the specific forms or varieties of disease produced. The conclusion seems incontrovertible; and I am fully aware of the difficulty of maintaining the reverse opinion against this fact. And yet if that opinion is not, in some measure at least, well-founded, how are we to explain the familiar circumstances stated in the essay on Malaria, namely, that certain forms of fever are peculiar to certain places and countries, and that these differences are often no less marked than they are constant? I must confess at least my own incapacity, with my own willingness to believe any thing, provided it be proved; while I think it best to state every difficulty and every contradiction, since where we do not know, the best proceeding always is to satisfy ourselves very clearly of our ignorance. To return to the question of cholera.

Certain analogies may also be produced to confirm what seems to be thus indicated; and it is perhaps obvious that I am about to allude to the case of inflammation of the liver, the produce, as I have elsewhere remarked, of the Malaria in certain countries; as in India and Africa notably, and, if less remarkably, in

the West Indies also. Here, the poison that might produce fever, exerts a sole or a predominant influence on this gland, generating inflammation; as, in a different set of cases, it may affect muscles or membranes, and cause rheumatism. And if it can produce inflammation of the liver, it may equally produce cholera, since both are apparently increase of action, though in different sets of vessels: while that possibility is further confirmed by other cases described in this book, where the action of Malaria on a glandular system is demonstrated in the production of diarrhea and diabetes, or where the febrile disease becomes localized in this peculiar manner.

Another analogy in confirmation of the same views, is found in the character of the remittent fevers called bilious, and very especially in those where the affections of this system form a conspicuous part of the disease. Such is, notably, the usual fever of Walcheren, known in the country by the name of the gall disease; and such, I need not say, are the still more noted yellow fevers in many cases. In all such instances, though with various modifications, we may consider the disease as a fever with cholera, or a mixture of the two, while as the one or the other may predominate, the character of the disorder or the case varies. Or, with the general action on the nervous system, generating pure fever, there is a local one on the liver, productive of cholera; just as occurs with respect to dysentery, or as also happens in the much less serious disorders of this great class, where a Neuralgia may be accompanied by a perfect and marked intermittent, or where that may be nearly insensible. Thus, to put extreme cases, we may conceive that in the simplest ordinary cholera, there is only the local affection, or the general one is so slender as to be unnoticeable; while, where a remittent is accompanied by the slenderest possible symptoms of affection of the liver, or becomes a moderate "bilious fever," we find a case the exact reverse.

I shall not dwell on this subject longer: but such are the views respecting cholera which seem to me borne out by analogy and by direct evidence both; though willing to be corrected by different views of facts, as far as such views may be founded on similar grounds; on real evidence, not on medical dogmas. The value of such a theory, as to the practice in this disease, may not indeed prove much; but it will always be advantageous to investigate the truth, and, if that can be done, to bring our scientific views of diseases into a more philosophical shape: besides which, should this view of the cause of cholera be the true one, we shall have made the same step as to its prevention as we have done in the case of fever and much more. This is at least a main object of the present inquiry, if it is not the principal one: it is that which was the chief inducement to write

this brief chapter on a concatenated set of disorders which it was not my intention to discuss fully, and on the cure of which, well understood as it is, I do not propose to treat. My medical readers will, I trust, not forget what the object of this book is: that its purpose, throughout, has been to explain, under new views, what appeared to me imperfectly known or misapprehended; not to produce, and least of all to compile, an entire system respecting a class of diseases which, at some future day, will justify a new compilation in the hands of some systematic writer.

CHAPTER VI.

On Intermittent Fevers.

So much has been written respecting intermittents, and, I may add, so well has this been done, that it may almost appear presumptuous to meddle with that subject again. It is at least superfluous for me, in this place, to dwell on the more obvious forms of this class of fevers: but while I have undertaken to mark the more obscure and complicated cases, I cannot avoid entering on the whole subject, at least to a certain extent; trusting to my medical readers to supply from their own knowledge and from the crowd of authors on this disease, what I purposely omit that I may not unnecessarily prolong this work.

Nor, even had it been superfluous to note the obscurer cases of intermittent, to record my own observations, and, still more, to repeat what may be found in authors, could I have avoided such an examination; since the whole of the local affections, which may be ranked under Neuralgia, so long and so generally misunderstood, are intimately connected with these, and since the proofs, as to their real nature, must be deduced from their connexion with such obscure intermittents. Thus also while, under the present view, it will be proved that many disorders which, generally, under the popular one, appear to be original and separate diseases, are but symptoms dependent on intermittent, as has already been shown in the case of remittent, I shall not only smooth the way for understanding these anomalous and troublesome disorders, but, further, explain much that

must otherwise have found a place in a different part of this essay, and often in a less luminous manner or position.

That intermittents, of whatever type, are the produce of Malaria, is a fact as universally established as any thing in medicine can well be; while, as I have formerly observed, it is by no means proved that there is any other cause, at least of the original disease, or first attack, however such causes may have the power of re-exciting an intermittent where it has once existed.

If I have already shown that it often follows remittent, when it may be considered as, in fact, the same disease, but with paroxysms and intervals differently arranged, so it is often a primary disorder; or the first effect of Malaria is to produce an intermittent of some type, and not a remittent. Arithmetically, it will further be found that this effect of Malaria predominates in the colder climates and the colder seasons of the year; or that while remittent rather than intermittent is the disease of hot climates, and of autumn or summer, the latter is most frequent in the colder climates and in spring. How far this variety of effect may depend on the quality or quantity of the poison, and how far on the conditions of the human body, I have already said all that I know, and all, I believe, that physicians appear to know on a very obscure subject. And having sufficiently noticed the manner in which it follows remittent fevers, I may now limit myself to the consideration of the primary or original disease.

The attack of this class of fever seems, like that of remittent, to follow sometimes instantaneously on the application of the poison, while in others it is protracted to analogous distances in time; though I know not if physicians have fairly observed that it may be later than twenty-four hours from the exposure to the cause. This is a difficult observation to make; but having already discussed the subject as to remittent, I must leave it to others to attach that credit to authors, on this point, wherever they have supposed the interval longer, which they may seem to deserve.

The attack, in the ordinary cases, is marked by what is called the cold fit; and the recurrence of this peculiar state indicates equally, if under many modifications, the commencement of each new paroxysm: or the whole disease is a succession of distinct fevers, limited, each, to periods varying from an hour or two, to twenty or more, and separated by intervals of what is called health, imperfect as that may often be; conditions which are, at least most generally, not states of fever, be they what they may. The term cold fit, however, conveys a very imperfect idea of the actual nature of this singular stage. There is a sense of coldness, it is true, and often excessive, attended also by shiverings in many cases, and sometimes so violent as al-

most to amount to convulsions, attacking every muscle of the body, or occasionally limited to a few. But be the sense of cold what it may, it is very distinct to the patient's feelings from that which belongs to catarrh, or to the accession of any of the other diseases which commence in this manner: insomuch that patients suffering under chronic ague, can determine at once, by the peculiar feel, whether a cold fit is the recurrence of that disorder or the indication of another and a different one. It is not situated in the skin alone, in this case, as it most commonly is in other cases of incipient disease, but appears to penetrate even the bones, and to occupy every fibre of the body; while it is accompanied with an indescribable sense of universal pain, and of a fatigue resembling, but far exceeding, that which follows long-continued and excessive exertion; fatigue which no rest or position diminishes, and which seems often to cause the greatest sufferings of the patient. With the cold fit also, there generally attends that distressing pain in the loins which belongs to all fevers, and which, from the very peculiar kind of suffering attending it, appears to have its seat in the numerous and large nerves of that region.

Headach and unquenchable thirst are also frequent symptoms of this stage; while so far from the temperature of the skin being necessarily lowered, it is sometimes hot, while dry, to the touch, even when shrunk and pallid, though it is much more common for it to feel cold to the by-stander: in which cases the shrinking is extreme or almost approaching to lividness, as if from the effects of external cold. Thus also, yawning often attends the cold stage; and sometimes to such a degree of irrepressible violence, as to threaten the dislocation of the jaw; as spasms in the muscles of the throat produce involuntary sounds, which a by-stander often supposes to be the produce of feebleness of mind. In this stage, the pulse is generally contracted, hard, and accelerated, in different degrees; and not unfrequently this state precedes, when watched, the sense of cold and shivering, or is the immediate warning of the cold fit.

It is to this stage also, that the comatose state so common in intermittent belongs: frequently present, though in different degrees, sometimes producing short fits of painful sleep and more painful waking, and, in certain cases, so profound as to resemble apoplexy. I already noticed this circumstance as marking the first attack of the remittent fever, in Italy notedly; and while it occurs similarly on the attack of intermittent, so it often, even in the chronic disease, is the sole apparent cold fit, or takes occasionally the place of the more regular attack. As I shall hereafter show, and have indeed already pointed out, it is a most important variation to notice, from the dangerous errors in practice to which it leads. Of other accessory symptoms,

the only one requiring notice at present, is the increased secretion of urine.

When death is produced by intermittent fever, it sometimes happens in the cold stage, though it is in quartans chiefly that it occurs at this period; being apparently the produce of the same action, whatever that is, which causes the apoplectic symptoms. In other types, and consequently in the great majority of fevers, it is the hot stage which is the period and the apparently immediate cause of death. The duration of this state is extremely uncertain; since it may terminate in almost a few minutes, or last many hours; while the severity of the paroxysm, as of the entire disease, is generally proportional to that of the cold fit. In the perfect form of the disorder, it terminates in the hot stage. In this, the sense of cold is succeeded by that of burning and dry heat, of which the indications are sensible in the feel of the skin, and by thirst aggravated, with continuance or aggravation of the headach; or, as sometimes happens, the headach and the thirst commence with the hot fit. If the sense of fatigue diminishes or disappears, the pain of the loins commonly continues, while the pulse becomes generally freer, though still continuing rapid and full.

In severe cases, delirium occurs, or is a substitute for the coma of the previous stage; but painful as the hot fit may be in all the ways that fever is distressing, it is very commonly a relief from the much greater severity of the cold one, if that at least has been long. Anxiety of the præcordia, the common symptom of all fevers, also frequently attends this stage, as it does the former; sometimes with more decided affection of the heart than that which had preceded, and also with spasms, apparently in the larynx, or throughout the pulmonary system, producing a distress often amounting to the sense of imminent death. This affection, when remarkable in proportion to the other symptoms, seems to approach to that variety of the disease to which the term "asthmatic," is given by nosological writers; however, that peculiar modification may sometimes be of a much more decided and distinct character. The painful restlessness so common in fevers, also belongs chiefly to this stage; and in slighter cases, is sometimes even the symptom which attracts most of the patient's attention, or may cause the chief suffering. The duration of the hot stage is, like that of the cold one, very uncertain, as it may equal, or exceed, or fall short of it; while cases occur in which the former occupies a large proportion of the whole fever, or is almost the only very striking part of it; as, on the other hand, the cold one may acquire a similar predominance. Let the disease be modified as it may, it would not be very easy to point out one which condenses into so short a space a greater quantity and variety of suffering: while, to a

spectator, it may appear but a small evil, to be cold, and hot afterwards, for a succession of hours, such is the effect of the common ideas attached to those two terms, while so very little do those terms express the facts.

In the regular disease, the hot fit terminates like the cold one, after a certain time, and is succeeded by a relaxation of all the symptoms. The pulse becomes fuller and softer, and more natural in every way, the pains and the thirst disappear, and a perspiration occurs, often extremely profuse; at the termination of which the patient is free from obvious disease, however enfeebled he may remain. It is a critical solution of a fever; and is a miniature, in point of time at least, of what sometimes occurs in the fevers of longer duration. It is not unusual however for nausea, or vomiting, to come on before the period of fever is finished; and far most generally in the cold fit, which it sometimes terminates: and, as I shall hereafter show more particularly, when this symptom is conspicuous compared to the others, there is produced a variety to which the term *Emetia* has been applied.

It only remains to notice the state of the mind during the fit of intermittent; and it is chiefly important on account of its effects on the conduct or feelings of the patient, in those cases where the bodily symptoms are less striking, or in the very obscure or milder disorders of this nature, whether chronic or otherwise, in which this appears to the by-standers almost the only disease. To judge correctly respecting its cause, is most necessary; as well for the sake of the moral judgments that may be formed as to the patient, and for his consequent comfort, as for the self-regulation of his own mind and conduct. If these remarks concern rather the chronic and milder diseases than the acute one, in which the visible severity of the fever seems to justify or excuse moral aberrations, it would be inconvenient to divide them, while it is necessary to mention the facts here.

If the state of the mind in intermittent resembles that which occurs in the remittent fever, already described, it seems to suffer more generally and more severely from irritability, while the existence of this condition in chronic cases, when scarcely any other symptoms are very conspicuous, or when habit has almost reconciled the patient to them, never to be reconciled to this, renders it especially worthy of remark. This state of feeling attends the cold fit especially; and hence it is that it is more common in intermittent than in remittent: while, as it is often coupled with feelings of inexplicable misery and despair, and with false views of every thing, it produces those often formidable, and always distressing consequences which are so common in this disorder. And if, as a portion of the cold fit, it generally subsides with that, or disappears during the interval, it

is, sometimes, the only, or almost the only symptom attracting the attention, either of the patient himself or his circle. It is, in fact, at times, the sole cold fit, or almost the only disease; though a watchful eye may always discover that it is connected with that collapse of features or change of expression which attends every cold fit of intermittent, and, very commonly, with that peculiar physiognomy, easier recognised than explained, which, to an observant eye, is always sufficient to indicate every disease, general or local, connected with intermittent, or arising from Malaria; an appearance which, when more strongly marked in the pallid hue of the face and the shrinking of the nose, ought to decide the question, even to the most negligent observer.

Of its true nature and cause, be the moral results what they may, no doubt can be entertained, because of the suddenness of the attack and of its periodical character; and it thus happens that almost in a second of time, and even in the midst of active good humour, or passive feelings of comfort or happiness, the fit of ill temper, or irritability, or despair, of a moral change under modes too various to detail, will occur, to last as long as the cold fit would have lasted had it been present; or lasting, when that is visible, just as long as the duration of the peculiar physiognomy which I have described. To be aware of this fact and this cause, on the part of the patient's circle, is to be furnished with reasons for making that charitable excuse which is seldom made, if ever, for what self-control might be supposed capable of preventing, and perhaps not much oftener for what is unavoidable; so rare is this species of charity: for the patient to be aware, himself, of the cause, is to furnish him with a guide for his own conduct in these circumstances, and a check over the display of those feelings; while it is also to offer him the consolation of knowing that it is his body rather than his mind which is diseased; that his perverted temper is not a moral and voluntary fault or failing; but as involuntary as it is capable of being remedied. I need scarcely say how easy it is for ignorance and intolerance, the intolerance of good health, and sometimes of what is not so pardonable, to combine the peculiar physiognomy of this disorder with its peculiar effect on the mind, and thus to suppose that the moral disease has affected the physiognomy, confirming the erroneous judgment; when both are the parallel and independent effects of a third and inevitable cause. Nor need I repeat, how, as in remittent fever, such a disorder of mind, ill observed, is mistaken for hypochondriasm; as is also a very common case.

I have here described the milder moral derangements in the milder and chronic intermittents; but in severe cases of both, the united state of irritability and despair is apt to produce the far more serious effects of stimulating the patient, at least to

think of suicide. This insane desire is a very common complaint of patients labouring under intermittent, and a very frequent source of great alarm and horror; while it occurs equally in patients who, before that, were cheerful, as well as youthful, in the female sex as in the male, in persons where, either from previous knowledge of their opinions and characters or from observation in the absence of the fit, we are quite sure that it cannot depend on a wrong state of mind or of opinions, but is as rigidly a portion of the disease as it is found to be a periodical one. And if in many cases, patients even of this unsuspected character, have desired that windows should be screwed down, that no edge tools should remain within reach, and so on, it is to be suspected that actual suicide, occurring as it does so often without any apparent moral motive, has been the result, in other characters, or in severer states of the disease, or in cases where a peculiar facility has been united to this morbid and accidental temptation. It is not often indeed that patients will confess this feeling to their physicians, far less to their friends; being unaware of the cause themselves, and dreading naturally the censure that would follow; but the physician who has not met numerous cases of this nature, must either be very unobservant, or ignorant of the real disease under his eye, or else unfortunate in not acquiring the confidence of his patient.

How important it is that the patient, and the friends equally, should be aware of this moral effect of intermittent, and of the real causes, it is far too obvious to point out; and this explanation will, in particular, be a great relief to the minds of those who, under these circumstances, have been haunted, for even years, with this species of frenzy or alienation of mind; since it will be to relieve them from fears respecting their moral condition, so painful as to be generally concealed with the greatest care; while, by holding out its real nature, and also the prospects of a cure, it will operate as a preventive to such rash conduct. It is well known that the desire for suicide is often exceedingly temporary, even when it is most overpowering; and I remarked formerly, when treating of remittent, that if controlled with resolution, for even a short time, it will pass away.

That such cases are often, very often, connected with the disease in question, I entertain very little doubt; and it were to be wished that this could be more generally known and believed than it is ever likely to be from all that I have here written. I need only add in this place, what I formerly indeed pointed out slightly, that as all modifications of delirium are increased by the solitude and silence of night, so does this desire for suicide become strongest in those circumstances, should night chance to be the period in which this fit occurs. If I have known a man high in intellect as in rank, a general officer who had brought

this disease from Spain, enter his mother's bed in the night, in this state or agony of mind, it is not difficult to understand how it may have led to actions of similar aberration and far other consequences. Such, as I formerly suggested, is the probable explanation of a noted murder which I then quoted: while it is abundantly easy to see how the presence of the passion of anger rather than that of fear, as in the case just noticed, might tend to murder, as the other would have produced suicide.

There is another mark yet, which it may be worth while to make on this mental disease, whether or not it is really connected with intermittent in all cases. I have clearly ascertained it to be so, at least in some; or rather, every instance of the desire or attempt in question under this peculiar variation, which has come under my knowledge, has been a case under intermittent. As relates to the desire, the simple fact is, that the patient feels a species of antipathy against some peculiar part of his body, added to the general disordered feeling, or he longs to commit the act by wounding that particular point; while, whether his aberration amounts to the desire of suicide or not, this very point or place is the one eternally forcing itself on his imagination as an object of hatred and revenge. And so perfectly insane is this feeling, that I have been informed by more than one patient who has suffered from it, that there is no conviction at the same time that death would follow; or rather that the impression is as if the offending part could be exterminated or cured by the injury, and that the patient would then be well. And that suicide has actually been committed under this particular aberration, is well known from the more curious records of physic; while I need not do more than suggest one peculiar part of the body which has been often the offending and selected point; the act having been sometimes also, but not always, followed by death. Nor has the motive always been a religious one in this case: and even when that may have happened, I believe the fact to have generally been, that the corporeal feeling, with local antipathy, precedes; exciting by an obvious association, that peculiar false reasoning coupled with religion, which appears, reversely, to be the cause of the particular antipathy; and the more easily if religious fear or anxiety chances to be a ruling passion. How this may happen, metaphysicians will be immediately aware. The bodily sensation is one that has been accustomed to excite mental associations; while, by a natural and common reversal of the order of the train of thought, the mental feeling becomes the apparently primary one, and the cause of what follows, in an order that I need not explain further.

To shorten a curious subject on which it would be abundantly easy to dilate, and to omit examples, some of which must be

well known to medical readers, and one of which cannot be recollected without some regret, by most persons, the philosophy of this, as far as my opportunities of observation have gone, and on the indicated ground of explanation, for these cases at least, is, that while the irritable, or jointly despairing and raging or angry state of this chronic fever is present, there is also a particular part of the body affected by an uneasy but undefinable sensation; such that the mind constantly reverts to it as a source of suffering. And if this local affection is not a Neuralgia, or a condition of absolute pain, yet it is a local and nervous one of an analogous nature, always returning to that one point under the same stage of the fever or delirium. When, as is not unusual, it is seated in the head, it is even distinguishable by a dull pain, or a confusion, or a sense of "buzzing" (for thus it is described by patients,) in one fixed place, indicating pretty clearly its real nature: while, in that particular case, I have the assurance of such patients, that the suicidal desire is exclusively directed to that individual spot, and that while a pistol would be the only acceptable mode, there would also be no satisfaction unless that were directed to this actual and only point. But I will cease, and allow physicians to exert on this solution of no easy question, the ingenuity which has not hitherto succeeded in producing an intelligible explanation.

Such is a general description of one paroxysm of the intermittent, or of a single fever. I have meant it to be but general, and as representing the more ordinary average of cases that occur in our own country; while if it is nevertheless long, it is that I wished to detail, as an observer, some particulars which have not been described, and others which, in the ordinary modes of describing this disease, do not make a sufficient impression on readers; and also, to dwell especially on certain points, the interest of which belongs to the obscurer cases rather than to the simple, acute, and highly-marked disorder.

Let me however, even in incurring some repetition, describe a perfect, I had almost said the ideal and abstract form of a paroxysm of intermittent, that I may not be accused of too far abandoning the ordinary practice of medical writers. The commencement is marked by weakness, weariness, restlessness, indescribable uneasiness, melancholy, depression, or fear, and generally, yawning, often extremely violent. The skin feels cold to the touch before the patient is sensible of coldness; and it is then pale, or puts on the goose-skin appearance; the face, and chiefly the nose, assuming also a very peculiar aspect of shrinking and subsidence, with the air of misery; and often becoming, further, of a greenish yellow, or a clayey tinge, or even of a livid hue. The feet first become cold, when the trembling follows; but the coldness may be partial or general, while a sense of in-

ternal heat is often felt; the skin also becoming hot to the touch towards the end of the cold stage, while the patient still suffers under the sense of coldness.

In this stage, the pulse is small, frequent, irregular, and, sometimes, not to be felt at all: the breathing is frequent and anxious, and there is sometimes cough, often sighing, with tightness and oppression about the præcordia. Stupor or coma is not unfrequent, but there is rarely any delirium till the hot fit: and with that, there is numbness, together with a diminution or loss of the sight and hearing. Pains of the limbs, and chiefly of the back, also accompany, with shrinking of the skin and extremities, often attended by the drying up of ulcers and the subsidence of tumours, should those be present; and violent thirst never fails to take place. If nausea and vomiting occur in the hot stage, they chiefly belong to this one, happening, particularly should the liver be affected; and the evacuation in this way, of bile, sometimes a similar purging also, is the consequence.

Such is the cold stage when extreme, lasting from minutes even to many hours, but most short as the paroxysms are more approximated or the fever most severe. The hot fit follows, and immediately after the vomiting, should this have occurred. The skin now swells, and the features enlarge; the temperature rising sometimes as high as 105, with a burning sense of heat to the touch as to the patient himself. The pulse becomes strong and full, increasing also in velocity, to even 120 and upwards; the sensibility, to noise and light especially, is increased, and even the senses of taste and smell become often unusually discriminating. Sometimes, but not always, the breathing is relieved; the oppression indeed is, on the contrary, often materially augmented: the headach, which I neglected to notice in the cold fit, is aggravated, and delirium comes on, with great increase, if that be possible, of the thirst; and the urine, which had been abundant and limpid, diminishes and becomes high coloured. Sometimes the nausea goes off, but that is not invariable; while even vomiting sometimes happens, and the occasional occurrence of hemorrhages, commonly slight, completes this catalogue. With the sweat, which follows, the pulse abates, the urine deposits a red sediment, the patient generally falls asleep, and the paroxysm terminates, leaving behind it debility varying in degree according to the character of the disease. I need only add, that according to some authors, there is in the sweat, a peculiar indescribable odour, which I do not however profess to have discerned; and that according to Strack, this is so remarkable, as even to form a criterion of the disorder in those obscure and anomalous cases which might otherwise, from the prevalence of peculiar symptoms, be confounded with some other original disease.

Such is a perfect or abstract picture of the intermittent paroxysm, cleared also from every occasional or supernumerary symptom which belongs to peculiar epidemics, or peculiar varieties, such as, those which are accompanied by inflammations of various kinds, by extreme affections of the liver or the brain, by what are called malignant symptoms, such as are petechiæ, by peculiar nervous affections, or by those several appearances or additional diseases which I have described under the head of anomalous intermittent. Among these, it must especially not be forgotten, though I have not thought it here necessary to treat of those severe kinds, preferring a reference to authors, as I have done in the case of remittent of similar characters, that among the malignant epidemics, pure intermittents, even tertian or quartan, are not uncommon, though unknown to our own climate; and that, like the remitting or continuous or marsh fever, these kinds occur in autumn. I urge this, that I may not be supposed to have forgotten what I do not think it necessary to describe; having here limited myself to what alone I have seen and to what England sees alone. When a tertian is fatal in the second or third paroxysm, it is evidently a disorder with which, at least as an epidemic, we are unacquainted: and with respect to the treatment as to the history of such epidemics, there is, as in the case of remittent, no want of accurate and valuable information.

But independently of this, and while with us also, the intermittent paroxysm is rarely so extreme as I have here represented it, there are numerous variations in its course and character, of which I must notice a few among the most conspicuous, even now: though such irregularities must come under review in the account of the chronic and anomalous varieties, where they are much more frequent and more necessary to be known.

Thus, the cold stage, or the hot, or the sweating one, may be absent, as may any two of them; or the hot stage may appear before the cold one, or there may be repeated alternations of heat and cold, as in remittent, or, not to enter into further minutiae, the whole may be a scene of confusion. In some rare cases, the entire fever, or any portion of it, is partial; or, one part of the body, even to a limb, may undergo a regular or an irregular paroxysm.

In quotidian, resembling remittent as it does in so many points, the cold stage is shortest; and, reversely, it is longest in quartan; but the entire paroxysm is longest in the first, and shortest in the last; tertian, in both respects, holding an intermediate course. It is a general observation among authors, that the attacks of intermitting fevers are, in the proportion of nine to ten, more frequent in the day than in the night, and that the period from eight to eight will generally be found to comprise

all those which last less than thirteen hours. The remark is, I believe, sufficiently true as to acute or recent fevers of this nature: but it is far less so as relates to the chronic or relapsing ones, and, as I have here remarked in another place, is not an unfrequent accessory cause of errors, often of no small moment.

With respect to the duration of a paroxysm, should it occupy the whole twenty-four hours, or should the intermission be ill marked, it becomes a remittent; in which case also, as in all quotidian or diurnal intermittents, the cold fit bears a small proportion to the other parts of the paroxysm. A perfect intermission constitutes it a quotidian; and this variety therefore consists in one diurnal paroxysm with one complete interval of health, or of freedom from actual fever. Such is the simplest type of intermittent; a quotidian ague; while in the variety of the times of recurrence, we find the other types of this disease.

There can be no reason to doubt that intermittent and remittent are but modifications of one disease, and equally, that the same poison produces both, even in the same individual spot, modified perhaps in quality, or else acting differently in consequence of differences in the quantity. It is a mild fever or a severe fever: mild when vegetation and putrefaction are least active, as in spring, and severe when the reverse occurs after the heats of summer. And thus it sometimes happens, that while, on certain occasions, the spring disorders entirely disappear, leaving the solstice free of disease, when the autumnal ones succeed, in other cases, according to circumstances in the season, there is no interruption; while it has even happened in England, as I once before remarked, that the remittent has appeared in spring and proceeded throughout the whole summer. I speak here of our own country; because in the hotter climates, original and vernal intermittent is comparatively little known; the epidemics, even from their commencement, being of the remittent character.

Thus, and for obvious reasons, it is also a general rule, that the vernal diseases, being intermittents or otherwise, are more inflammatory; while the fevers of autumn are more generally malignant, or have the characters attending debility, together also with a greater predominance of bilious affections. And if we proceed along the season in the same manner, we shall find that while remittents continue in their proper form during the hot weather, they begin to intermit, even in hot climates, on the setting in of the cold. A natural conclusion which follows this, is, that be the power or effect of Malaria what it may, or however its production may be regulated by the state of temperature and the corresponding conditions of vegetation, there is, in

the mere action itself of heat on the body, an accessory cause which is of considerable effect in determining the form and character of marsh fever. The well-known rarity of simple and original intermittents near the equator, must therefore be supposed to depend on these different circumstances combined. That, of the different types, quotidian and tertian are the general intermittents of spring, and quartans those of autumn, is a remark as old as physic itself.

If it is a rarer case, it also occurs that two distinct paroxysms take place in one period of twenty-four hours, constituting a double quotidian; while if, with respect to this variety, it sometimes happens that one paroxysm belongs to the night and the other to the day, there is a similar tendency to that which I just remarked of intermittents in general, namely, to bring as much of both the fevers as possible within the hours of day. When the paroxysm occurs but once in the period of forty-eight hours, the type is tertian, while the same occurrence in seventy-two hours produces quartan; beyond which it does not appear that any regular single type has been often found, though, as I shall presently show, such peculiar cases do occasionally happen. In the tertian, obviously, one period of twenty-four hours is free from disease; while, in fact, there is generally much more, as the paroxysm scarcely ever occupies its own twenty-four; and thus the quartan also leaves two days of health. Hence it is, that if these types, and the latter in particular, are the most durable, or tend most commonly to the chronic state, they are the least inconvenient, as they do not entirely disable the patient. Hence it is, that in so many parts of France and Italy, the business of life is conducted, and in some places almost solely, by a population of which the far greater number, and sometimes the whole, are labouring, and even through life, under these chronic agues.

Particular cases of types extending beyond these, are, as I have just noticed, to be found in authors; but, as rare instances, they are objects of curiosity rather than of use. The most unexpected one that has occurred to myself was one of a quotidian attack, recurring three successive days, but interrupted by intervals of six weeks, and thus lasting for some years; and from this case it will be easy to conjecture how many strange modifications of intermittent may exist.

Boerhaave, Van Swieten, and others besides Galen long ago, describe a quintan type; while some speak even of regular recurrences as distant as the fifteenth day. In some authors, we find accounts of intermittents occurring once a month, once in two months, and so on; while, where others speak of annual types, it is abundantly plain that this is a mere perversion of terms. For such histories, De Haen, Sauvages, the authors

named above, and many more, may be consulted; while their Erraticæ are the chronic and irregular diseases which I have here noticed very fully. As to the endless terms by which the older authors have distinguished varieties in these fevers, such as amphimerina, epialis, syncopalis, hemitritæus, subintrans, and so forth, they are as useless as they are idle refinements or superfluous and trifling distinctions: but he who, following Sydenham, may feel any affection for them, may easily store himself out of Sauvages. Of the distinctions grounded on anomalies, however, I must speak with respect; because they are of considerable value in calling the attention to the obscure and simulating cases; and I have here accordingly noticed them wherever that appeared to be proper. As to the quotidian type, I should add in this place, though compelled to notice it when speaking of remittent, that its existence has been denied by some authors. It is probably true, that, in the hotter climates, quotidian, perfectly distinguishable from remittent, is rare; and we must conceive that the authors of this opinion have drawn their conclusions from such countries, since the existence of well-marked quotidian in our own can admit of no doubt. Otherwise, it may be a mere dispute of terms; some physicians considering as a highly-marked remittent what others would call a quotidian.

But there are fevers also of double type, which, coming under some general law, however obscure that may be, are more deserving of notice than the protracted one just named. The most common and the best marked of these, is the double tertian; the existence of which can admit of no dispute; while I shall soon show that it is one of those types frequently connected with the local diseases, confirming the views respecting these which I have held out. If this type may sometimes be confounded with quotidian, as it also is at times so little distinguishable, when chronic, from remittent, that I have hesitated about the proper place of many of these diseases, the distinction may commonly be made, with due attention. Either the two consecutive fits do not recur at the same hour, or they differ in strength, or in duration, or the several parts of the paroxysm are differently apportioned, or a particular symptom attends the one which does not accompany the other. If I have read of combinations of tertian and quartan, of triple quartans, and of others that may be imagined, I have no experience in them, and shall, as formerly, for their descriptions, prefer a reference to the authors by whom they are described; as they do not appear to throw any useful light on the nature of these singular diseases. It may be an object of curiosity however barely to notice some of these: but the warranty for such types must rest with those

by whom they have been observed, and it is indeed probable, that in our own country, at the present day, it would not be very easy to produce many examples deviating from the more ordinary forms.

The ordinary double tertian, as I have seen it, is marked by a daily paroxysm; but with the characters, on any two succeeding days, so different, as to convey the impression that there are present two distinct tertian fevers, the one of which had originally commenced on a given day and the other on the succeeding one. But in the other variety, two paroxysms occur on one day, and there is an intermediate one free from disorder. In that which has been called a triple tertian, there are two paroxysms on one day and one on the intermediate; as if three distinct fevers had been brought within the space of two days. In the double quartan, as in the double tertian, there are also two varieties noticed. In the first, two paroxysms occur on one day, to be reckoned the first, leaving two intermediate days free, and the fourth day containing also two paroxysms: while, in the second, there is a paroxysm on the first, on the second, and on the fourth day; the third being a day of repose. The triple quartan is described as having, in its first variety, three paroxysms on the first and three on the fourth day, only; and, in its second, a paroxysm on every day, so arranged, that the first and fourth, commencing from any one of the three days, always correspond in character.

If, in speaking of the chronic remittent, I have placed under that disease, many febrile disorders or states which have hitherto not been so explained, and at the hazard, as I conjecture, of no small criticism and opposition, I am not yet courageous enough to state my own conviction that intermittent fever may consist of but one paroxysm, finding also its own natural termination after one attack; and consequently, that the fever called *ephemera* is, in reality, often a single intermittent. Yet such is the decision of Strack, whose experience in this disorder seems to have been equalled by his attention to it, and who is not to be lightly doubted. And from his observation, this is the disease which terminates in an eruption on the lips; while the reason for believing that this view is a correct one, is, that in the intermittent, such an eruption does terminate the disease after any number of paroxysms, and that the returns are often perfectly regular. It is always difficult to be certain that we can safely refer to Hippocrates for support, such is his brevity, and too often his obscurity: but if his testimony as to an intermittent fever which terminates by ulcerations of the lips is here applicable, the authority may add to the weight of the evidence on this point.

It remains to notice what is called anticipation and postponement, and also change of type, as parts of the necessary history of intermittent.

In the anticipation of paroxysms, the hour of attack becomes earlier, as in the postponement it becomes later; the former being generally esteemed to mark the aggravation, and the other the diminution of the disease. These states, however, belong principally to the terminable or limited intermittents; as, in the chronic ones, the periods are generally remarkable constant, even for a long course of years. And from an analogous procedure, as remittents terminate in quotidian intermittents, so do these latter sometimes settle into tertians. And, further, if tertians change into quartans, or even into more complicated types, such as the triple quartan, so do they reversely, become quotidians, and even remittents; while I must observe that changes in this direction, being the approximation or aggravation of paroxysms, are the very general proofs of a severe and dangerous disease, occurring chiefly in bad seasons and climates.

It is an old notion that vernal agues at least are salutary, nor is it by any means out of date among the common people in our own country. That they purify the blood, remove chronic diseases, and lead to old age, was even the opinion of Boerhaave, as it was not less entertained by the noted physicians of our own island, whose names have at length become great names in physic. It cannot be very easy to discover how an opinion like this should have found such supporters: except that where an intermittent may have appeared to remove a chronic disease, it has, not improbably, been one of those cases hereafter pointed out, where a simulating one had become simple and regular.

I must also add here a remark on one effect of intermittents for which I could not conveniently find another place, while it is also connected with the opinions in question, inasmuch as it has not improbably given rise to them. It is the tendency which they often produce in patients to become fat, as is well known in Flanders especially, it is said. This happens after acute cases or single attacks; even when there is no suspicion of organic disease: nor indeed is the obesity confined to the omentum, or abdomen; the whole person enlarging, and often with surprising rapidity. And what is remarkable, this occurs also in the most obstinate chronic cases, and even when the presence of diseased spleen is proved; while even the daily occurrence of fits does not check that tendency, unless the febrile state should be very strongly marked. And in such cases also, it will frequently happen that while a period of unusual severity, or a new relapse produces emaciation, the patient recovers his usual superfluous bulk, within a week or two, even though the chronic

and slighter disease is going on. Whatever be the explanation, it is a fact from which we might perhaps argue that the constitution suffers little serious injury from the disease, though in all such instances the loss of muscular power is generally very considerable. How often emaciation, on the other hand, is produced in such cases as are every where seen in the unhealthy districts of France and Italy, where serious organic disease is present, it would be superfluous to say. And though I formerly remarked, from French authority, that such obesity was not of a healthy or firm nature, while it is even asserted that a portion of this unnatural bulk consists of water, it does not by any means appear that this is the opinion in Flanders and Holland.

It is unnecessary to detail further the history of intermittents in their most simple, marked, and ordinary form; and I must now therefore describe the chronic state; not merely because of its own intrinsic importance as a frequent cause of great suffering, but because it is under this mode that the greater number of the anomalous and simulating cases occur.

Any type of intermittent may become chronic, and any type may also become durable; though it is a general observation that the quartan is the most enduring, and that it also is the one which proceeds longest with the least interruption. It is not rare that a quartan should last even to twenty years, or through life, be that what it may. I know not comparatively, what may be the duration of the other types, as it would be an almost impracticable labour to extract it from the records of cases; but it seems ascertained, that after the quartan, the tertian is, of the simple types, that which lasts the longest.

If any type may thus become chronic or durable, I must also remind the reader of the resemblance between the chronic or repeating remittent and the intermittents of a quotidian and double tertian type. I do not know, at the same time, how far the quartan may be interrupted by long intervals of health, or absence of fever; as our experience in this country respecting that type is very limited, and as it is not easy to discover the exact truth from the writings of authors. But in the other types, while the disease is still chronic, it is often interrupted; or there are successions of distinct intermittents of the same character, separated by intervals more or less durable of health, as happens in the chronic or repeating remittent.

Such is a general view of the character of this set of diseases; while, with respect to the progress, though the general type, and even the hours of recurrence may remain the same, during years, and at whatever distance of return or length of interval, it will frequently happen that the strength or energy of the separate returns vary, or that the local symptoms which existed

in one recurrence, may be absent in another. And thus also, when the disease finally disappears, it is generally in consequence of, or in sequence to, a gradual diminution of the energy or length of the successive recurrences.

Further, with respect to such recurrences, and chiefly in the most ancient or enduring cases, there is often a great irregularity in the lengths or energy of these. Any one may be severe, and may be protracted even for months; while a subsequent, or perhaps a next one, may not extend beyond a few days, or even one fit, or may be so slight as scarcely to be discoverable by any one but the patient himself, whose attention habit has sharpened as to this subject. And thus, further, it may happen that the possessors of a chronic ague have arrived at such a state, that no traces of the disease remain but a susceptibility of recurrence on slight causes, while the paroxysms thus produced almost terminate with the exciting circumstances. And here also we see distinctly the necessity of avoiding them; above all, the caution requisite respecting Malaria, and the advantage of studying carefully all those circumstances under which that may be generated or conveyed. As in quartan, the length of time through which this state may last seems indefinite; and where the patient continues exposed to the great exciting cause, or to reside in a land of Malaria, any one of them may be the inheritance of life; such as life is, in those cases and those countries.

Still, it is necessary to state on the other hand, that in some countries, as in French Flanders for example, it is remarked that while these fevers terminate of themselves, with the season that produced them, recurring however again in the same seasons, perhaps for two or three years, it is not uncommon, for children particularly, to become seasoned to the climate as it were, and to suffer no further, unless however they are re-exposed to the more active exciting causes. And thus also in other cases and countries, just as happens in the remittent, do persons become seasoned to intermittent, as it is commonly considered; or, after recovery from a severe attack, they become unsusceptible of fresh ones, or of attacks of similar severity. This is the very singular history of West Indian fevers, in the division of remittents, as formerly discussed; while what was there said applies in a great measure to the case now under examination. In the pernicious districts of Italy, Sicily, and France, it is also not unfrequent for the people to become, as it were, callous to intermittent, or at least to severe attacks or severe renewals, though the existence of the disorder in a chronic state may still be often traced; while, as far as we can judge from that mass of reports for which we must trust to some bad observers as well as to the better ones, this effect appears to predominate where the glandular diseases have been produced. It would

seem therefore from this fact, and from what I formerly stated respecting the production of glandular diseases in India as a substitute for fevers, that such disorders may often be the cure or prevention of remittent and intermittent both, such as that cure is, instead of being the maintaining cause that has very commonly been imagined. And that there are individuals who seem, from constitution, almost unsusceptible of the effects of Malaria, is a fact already noticed in treating of remittent.

Whatever else I might have said respecting this mode of the diseases in question, will be more conveniently deferred to the next chapter, since it is peculiarly entangled with the subject there treated; and I must now therefore proceed to describe the varieties of intermittent which differ from the well marked and more regular diseases of this nature; following the course which I have pursued as to remittent. I might, with some affectation of refinement, divide these, throughout, into such terminable or acute cases as are of an imperfect or anomalous character, and into those which are limited to the chronic or persistent forms of intermittent; but so entangled are all these matters, that it could not be done without producing repetitions which would be but ill atoned for by such an attempt. It will be more convenient and brief, in noticing these anomalous cases, to mark occasionally, in proceeding, under which of these two divisions they occur; while the far larger number will be found to belong to the chronic or habitual diseases. I also think it here superfluous to recur to the subject of the types, since that also would be to prolong this account to little purpose: it being sufficient to remark generally, that the anomalous fevers, like the simpler chronic disease, may appear under any type. I may here also premise further, that as many of the remarks formerly made on the chronic remittent apply equally to the chronic forms of quotidian and double tertian, while, as I then also observed, different persons may choose to view this disease under these different terms, I may often be compelled into what may appear repetition, though studying to avoid it wherever I can satisfactorily refer the reader to what was then said. And lastly, when I am compelled to notice the occurrence of local diseases in these cases, I must often refer to the last division of this essay, where I have been obliged to treat of them in one mass, for the reasons formerly assigned. Hereafter, should physicians become satisfied that the views which I have held out respecting these disorders are correct, it will become easy to remodel the whole history of the diseases of Malaria; but to have done this now, under evidence which may be deemed by many unsatisfactory or imperfect, would be to prejudge in some measure an important question, and to incur the charge of premature generalization and love of system. I must submit to the opposite charge

of repetition and tediousness, that I may avoid this one; being placed between Charybdis and Scylla: and thus leave to some future observer the credit of doing what I might myself have easily done, had I thought it justifiable in the present stage of this question.

CHAPTER VII.

On the anomalous, obscure, and simulating Intermittents.

IN the very slender sketch which I gave of the well-marked and severe, or of the ordinary remittent, being as unable to avoid some notice of that form of fever, from its fundamental character and connexion with all these diseases, as I was, reversely, unwilling to repeat what has so often been written, I purposely avoided noticing those cases or epidemics where very marked local inflammations of different organs accompany it and modify its character; often indeed to such a degree in relation to the practice, as to render the mere fever of comparatively little moment. I reserved that notice for this place; that I might, by means of that general fact, the better illustrate the anomalous, localized, or simulating intermittents, the knowledge and discrimination of which, and perhaps most of all in their slighter forms, appear to me so essential.

Let me therefore now remark, that in remittent fever, there may be present, inflammations of the brain, of the lungs or the pleura, of the throat, (anginae of different characters,) of the bronchial membrane (catarrhs, of the stomach, the intestines, the liver, the spleen, the peritonæum, perhaps of other internal organs or viscera, and also of the muscles and ligaments (rheumatisms:) all of these varying in their intensities, in whole epidemics as in individuals, and thus, at one extreme, producing cases, which, under peculiar characters also in the essential fever, may simulate, or almost equal, cases of phrenitis, pleurisy, and so forth; calling for material variations in the practice, and not unfrequently becoming the grounds of most inconvenient disputes among physicians not sufficiently aware of the nature of what they had not witnessed; as also of recommendations as

to the treatment, not less easily misapplied, and frequently highly pernicious in their results.

Now if these local affections occur in remittents, or, as must equally happen, in marsh fevers of a continuous character, sometimes even leading to error as to the fundamental nature and cause of the disease, or passing for pure inflammatory diseases whenever the physician is unaware of the nature of the epidemic, or when its true character has not yet betrayed itself, so they occur also in the severer intermittents, as might, without much effort of thought, be expected. In these cases perhaps, the varieties are not only greater, but error is even more easy. The inflammatory, or local affections, be they what they may, may be slender and truly supplementary; but they may also prevail so far above the fever, as in remittent, that they may appear to be a distinct disease, or the superior one; while if, further, the local affection should be permanent or continuous, when the fever has its intermissions, and perhaps long ones, as in quartan, and while, still further, that fever may not be very conspicuous compared to the local symptoms, it is easy to see that erroneous views and erroneous practice may follow.

That, as to intermittent no less than remittent, the occurrences, or varieties, which I have thus indicated do exist, ought practically to be known to every one who has had any intimacy with those fevers; although, that they are but little known or suspected in England, is a fact which I believe I may with safety assert. But those who are thus situated, may convince themselves by consulting numerous, but almost solely foreign authors; while as one convenient reference at least for these cases, I may point out the nosology of Sauvages where such intermittents have even been distinguished as distinct varieties, as far at least as this laborious writer was enabled to produce authority. I am aware that he has been both censured and ridiculed for erecting these varieties, as if it were an unnecessary and trifling refinement: but, so far from joining in remarks which must have proceeded from those who were unacquainted with this subject, or whom I must consider as uninformed or inattentive practitioners, I look upon these distinctions as of great practical value, by directing attention to varieties, an ignorance respecting which I shall shortly show to have been a fertile source of the greatest practical errors.

Though I have thus referred only to the inflammatory local affections, as the most conspicuous in deducing this resemblance between the varieties of remittent and intermittent, the same analogy holds as to other variations or combinations, among which the nervous diseases, to use a popular term, form the great mass; or, as there is a pleuritic remittent and a pleuritic

intermittent, so apoplexy or palsy may be united in different modes to either mode of marsh fever. Such diseases, or such varieties of intermittent, will here be enumerated as far as they are known to myself, and also where, having never met with them, I can borrow from valid authorities; but I must now state, generally, the reasons why I have made of this subject so extensive and detailed a chapter, and how far what I have described, differs from what will be found in authors on intermittent fevers.

I had long ago been led to seek for the chronic and obscure forms of intermittent, or remittent, (for a distinction is scarcely necessary) because I perceived that they were very generally overlooked, and because I found that I could thus, not only explain, but cure disorders which had been considered mysterious or inexplicable: a proceeding, of which the evidence appears in many parts of this essay. In this pursuit I soon and necessarily perceived, that if many of these cases were surrendered as inexplicable, in many others the prevalence of some peculiar and marked symptoms gave rise to error, as well in practice as in opinions, and often of a very serious nature: that symptom receiving the name of the original disease to which it most commonly appertained, or which, in some cases, it formed, and the adopted practice following, of course, the usual routine recommended for such diseases. If, in the course of these observations, I recollected in authors, single cases which seemed to confirm my own conclusions, I did not recollect that any general doctrine of this nature had been promulgated, and assuredly it had not been taught in the medical schools, while the more I watched the general practice of others, the more I was convinced that it was either a neglected or an unknown subject. Considering it therefore as of great importance, and the neglect as not less so, I resolved to generalize the facts as far as I could, and to allot for it a distinct and formal chapter; dwelling on it also with a detail which I should certainly not have adopted in any case of known disorders, because thus hoping to making the greater impression.

In how far I was justified in thinking that medical writers in general, and the authors on intermittent especially, had not formed any definite opinions on these anomalous and simulating intermittents, will appear hereafter, when I shall have occasion to quote their detached cases; when I shall then also show, that my own observations could not have been biassed by what I had not then read. But I must remark here, that while I had at one time supposed that this was not a new question, however much I might have thought so from observing how little it seemed to be known by our present practitioners, and how little, even the most recent authors on such a disease as palsy for

example, seemed to be aware of it, forming this passing opinion from an inspection of nosological tables and indexes, a further examination proved that I was here in error, and that my original conclusion, namely, that it was a neglected subject, was the true one.

That examination taught me, that with few exceptions, which I shall notice in their proper places, the anomalies or peculiar diseases appearing under marsh fever, which authors had described, related to acute and violent diseases, intermitting as well as remitting; and that, as a sort of general neglect, as if by a kind of universal consent, had reigned respecting pure chronic intermittent, so very particularly, it was scarcely any where indicated, that disorders apparently original, might be united to chronic as to acute marsh fever, and still less that these might be so constituted as to deceive the physician, from the obscure, irregular, or nearly insensible state of the proper fever. In some authors I did indeed find indications and cases of this nature, as I shall hereafter point out; marking principally Strack, as the chief collector of facts, but even then, not being able to perceive that he had formed any general views on the subject, and the more convinced of this from finding that later systematic writers, such as Philip, had not, in their otherwise praiseworthy books, appeared to derive from him, while largely referring to his authority, the conclusions which I had been led to adopt from my own observations.

Thus much I thought it necessary to say in defence of the space which I have occupied in this chapter, and in defence of my thus making a separate chapter of what has been treated not merely with neglect, but, as I have elsewhere said, with ridicule: and I have only to add, therefore, that while I consider the chronic, anomalous, and simulating cases as even more deserving of discussion than the acute ones, inasmuch as they are less suspected and more frequent causes of error, so whenever, with little exception, I refer to a title in Sauvages, it must be remembered that his examples do not exactly tally, inasmuch as they are very generally instances of the acute, and not of the chronic diseases.

Lastly, thus strongly to distinguish between acute and chronic forms of one disease, and thus to dwell on the latter rather than the former, may in reality not be very consonant to the usages of medicine, or even of science; but the justification must be sought in the causes I have already stated, while it must be remembered that if it was fruitless to dwell on what was already well known, the object of this essay is Utility. If I succeed in attaining this end, I shall little lament any censure that may follow as to other matters.

I would willingly have adopted a more formal order for what

is about to follow, as I would willingly have treated of many of the varieties which I have noticed, in more detail. But I have imagined that arrangement which best illustrated the matters described, to be better than one which should have no other merit but its regularity; and as to the other point, it has been a leading object to keep these discussions within as small a compass as possible, lest an inconvenient bulk should become the consequence. I shall now commence with the affections in which the nervous system is chiefly or ostensibly implicated.

I formerly noticed the apoplectic state which sometimes commenced the attack of intermittent as well as of remittent; but it is necessary to recur to it here, on account of its great importance as connected with the practice in these disorders, and because of other analogous symptoms sometimes occurring. This state is not limited, either to the first attack or to the acuter forms of these fevers, although in Italy that appears to be the most common mode of its occurrence; as I have seen, in this country, a perfect apoplexy, to the eye, in all its characters, sufficient to deceive both the attending practitioner and the friends, lasting for eight hours, and occurring in a chronic tertian of many years standing, as a substitute for the cold fit.

The danger of error as to the nature of such an attack is, in practice, very great, as I shall hereafter more fully show; since the effect of blood-letting, so commonly resorted to by practitioners under such symptoms, be the cause what it may, is often to induce palsy, sometimes death, and, in any case, to produce additional bad symptoms, often of a very serious nature. In many instances, I have seen local and limited paralytic affections produced by this mistaken practice, and in more than one, a perfect and incurable hemiplegia; while I have reason to think that this has happened very often in Italy, in the hands, however, chiefly of English practitioners unacquainted with this anomalous variety; though I also know that it has been the result of Italian practice, notwithstanding the much juster views generally entertained in that country respecting these "*febbri larvati*." It will be for English practitioners in our own country, and chiefly for those who live in the agueish districts, to inquire whether they have not committed similar errors; while there is reason to suspect that they are not very uncommon, or rather, extremely frequent.

A modified condition of this nature, is the lethargic or comatose state, which occurs in the chronic intermittents as well as in the remittent of that character, and which also sometimes ushers in the first attack of an intermittent, in the same manner as the more perfect apoplexy does. It is incumbent on the practitioner to investigate this symptom or condition where it occurs, much more accurately than it is the custom to do; while

it is abundantly easy to discover whether it belongs to this disease or not. To view it as an independent disorder, and as arising, according to the popular and fashionable error, from what is called a flow of blood to the head, is a most unpardonable mistake, from its leading similarly to injurious practice; to blood-letting and to cupping: the consequences of which also are, sometimes, paralytic affections, at others, slight epileptic ones, or even more decided fits of that disease; in others again, a modified fatuity, or a diminution of the intellectual powers, or a condition little short of absolute idiotism: and, even, in the least evil event, a long train of debility and nervous symptoms, with the further frequent consequence, as in the former case, of rendering chronic a disease which would otherwise have terminated by itself, or of protracting much longer and more severely, a disorder already chronic. It is one of the cases, and one of the modes of practice, yet but one out of many, which so often causes medical interference to aggravate the diseases of this nature. I shall only further remark, that this error is most generally committed, as I have seen in numerous instances, and as perhaps might have been anticipated, when the patient is corpulent, or of a certain form, or advanced in life, or when suspected of indulgence in eating and drinking: when it will be fortunate if he escapes blood-letting or cupping, to be simply deprived of the use of wine, or restricted in diet; though even practice of this moderate nature is not always without its bad effects.

As connected with these I may proceed to the palsies or paralytic affections which sometimes occur in this disorder; forming an anomaly, if I may so call it; and sometimes, as in other analogous cases, when so marked in comparison to the febrile condition as to appear the sole or real, or the chief disease, producing a simulating disorder, it may be, even to an attentive physician, unless aware of this particular fact; while, as far as I can discover from all the reading on this subject in which I have engaged, or from observation of the opinions and practice of England, this knowledge is rare, or perhaps scarcely exists. At least I have not myself found any practitioners who seem to know that palsy is the frequent produce of Malaria, or the substitute for intermittent fever, or a symptom in that disorder; while it is plain that if this be a common case, at least, among the well educated, if not a general one, there must occur, in practice, to persons of a different class, many cases of this nature, where the paralytic disease is even attendant on a very distinguishable or marked fever, and where nevertheless that would be overlooked, from the attention of such practitioners being absorbed by the ostensible symptom. I need only add, as a prefatory remark to this particular subject, that paralytic affections of this nature, or appertaining to this cause and connexion, occur also in the lo-

cal intermittent disorders ranked under Neuralgia, so that they must inevitably come under review again: but I could not, in any view, avoid treating of them here, and very particularly on account of their connexion with the apoplectic affections just discussed.

Apparently as a substitute for, or modification of, apoplexy or coma, however obscure the exact cause may be in either case, the first attack of an intermittent is sometimes a numbness, or a more perfect paralysis, varying in its extent as well as its severity, so as to affect only a few muscles, in different parts, or else to produce an absolute hemiplegia; which, however, may also be slight as well as complete, or may consist in a numbness or loss of feeling to that extent, without depriving the patient of his command over the muscles. Should the truth of such a cause for palsy be denied on the ground that we cannot explain its action, it must be recollected that it is no more a mystery than the production of apoplexy in the same cases; while the possibility is confirmed by the numerous instances of the same nature which occur, limited to single, and sometimes very small nerves, and either original, or succeeding to painful conditions of those. Every thing indeed tends to show, that if the diseases produced by Malaria are not, purely, and all, mere affections of the nervous system, the principal action of this poison is on that system, and the greater proportion of the disorders which are caused by it, disorders of the nerves. Whether the paraplegia so often occurring from exposure to cold, and especially among soldiers in bivouacs, is sometimes, or ever, a disorder of this nature, is a question that I cannot answer from such evidence as I have been able to procure, however this may be suspected in some cases.

If these paralytic affections sometimes usher in a new intermittent disease, being, like the coma, a sort of substitute for the cold fit, so have I seen them occur in the chronic state, and, in both, under circumstances that could admit of no dispute as to their real nature. A single fact, out of many similar, will serve to explain the grounds of this judgment. This is, that in a situation exposed to Malaria, and never free from its diseases, where in fact scarcely any one ever escaped it, while the other members of a large family had the intermittent under different, but ordinary, forms, two were attacked with paralytic affections, suddenly; the one in the leg and thigh, the other in the arm. Being the younger members of the family, and though it was the first time that any case of this nature had come under my notice, I viewed these palsies as modes of the apoplexy of intermittent; and the judgment was confirmed by the almost spontaneous disappearance of the disease in both, and the immediate establishment of the regular quotidian. In the chronic cases,

there ought never to be any doubt, because the preceding intermittent explains the cause; though the most serious errors may be frequently found in practice, even in cases of this more obvious nature.

The practical error in the case of such paralytic affections, is the same as that in the former two conditions; the imagining a "flow of blood to the head," and a palsy to be treated by bleeding and evacuations; and the result very often is, perhaps in severe attacks always, to confirm as a perpetual palsy, that which would have passed away of itself, had there been no interference, or which would have been removed by the common remedies for intermittent. If there are many other cases of palsy occurring in practice, which might otherwise have been temporary, whether arising from the effects of cold or not, and which have been rendered incurable by this pernicious and common treatment, I have little doubt that innumerable ones will be found, by those who have the means of making the inquiry, where this result has been the consequence of such evacuations applied in the palsy of the intermittent.

Of such cases I might have stated a great number from my own observation; respecting which, while I entertained no doubt, even on the first inspection, the confirmation was rendered complete by the previous history of the patient, by his diseases, his residence, and his treatment. But to relate those, is to subject myself to the suspicion of having viewed them under an hypothesis of my own; for which reason I will here describe one or two not under my own care, because, while I suspect the nature of them to be that which I have stated, I shall leave the decision to others; taking from the reports of the physicians engaged, what I had not the means of examining personally, but taking only the naked facts, as the medical attendants had formed no opinions respecting the cause. In the consequences, they coincide exactly with what I have seen where I could pronounce on that cause. As to the utility of such cases, it is that they will serve the purpose of directing the recollections of practitioners to what they may have seen under similar errors; while a very wide range of observation, prolonged during thirty years, convinces me that this species of error is not only common, but almost universal.

In the first case, two sisters, in one family, about the age of thirty, were strongly marked with that complexion and physiognomy so well known as attendant on diseased spleen, and were subject to those strange symptoms, of various kinds, which occur in the chronic intermittents, already described for the most part. It had also happened that they had passed a large portion of their lives in one of the most pernicious districts in England; but whether they had suffered from acute intermittent, I was

not informed. The occurrence of what are, very indefinitely, called spasms, led to bleeding in both cases; and this, producing more nervous symptoms, was followed by more bleeding and more cupping. The result, in one of these patients, was hemiplegia, and in the other, paraplegia; and further bleeding being also resorted to for these disorders, both of them died.

For the other case, I must borrow from a medical friend; glad of facts from those who have not the bias of which I may be suspected. It was that of an officer, in whom it could however only be conjectured that intermittent was the original disease; but it will serve at least to illustrate the effects of blood-letting in such cases, by, I believe I may say, whatever cause produced. An inexplicable palsy of one limb was here the first occurrence, and in a man of a constitution and time of life where the usual vulgar cause could not be suspected. Blood-letting was followed by palsy of the other leg; and on repeating it successively, both arms, one after the other, became similarly affected, so that the patient at length became and remained almost an immovable carcass. It is not known to my reporter how this case terminated: and if it is not absolutely proved to be an instance of this nature, it coincides so exactly with those which I have seen where the same practice produced similar effects, that I entertain little doubt of its having been the palsy of intermittent.

To confirm at least the possibility of so universal a palsy, and arising from Malaria, I may quote a case related by Keratry, occurring in that poisonous district in France, Ile et Vilaine; where, while the internal functions were carried on, the patient was for many years so utterly paralytic, that nothing but one side of the face was capable of voluntary motion; though, as the treatment is not related, no suspicion appearing to have existed in France more than elsewhere, of such effects being produced by bleeding, it can only be conjectured that this practice had at least aggravated that effect of the previous disease, or that a partial palsy had, as in the preceding case, been rendered universal by, probably, repeated blood-letting. That a universal palsy is also possible, is confirmed by Etmuller; while here at least there is no difficulty in tracing the disease to an intermittent. It succeeded to a tertian which had lasted during a year, and was accompanied by nocturnal sweatings, pains in the hands and feet, and a livid countenance: while, with an ignorance which appears somewhat surprising, it was attributed to scurvy, and called scorbutica; apparently from the colour of the face: there being little doubt, from this, of the presence of a diseased spleen, while it is by no means unlikely that the palsy had been the consequence of an evacuant practice.

The following case is of a similar nature, inasmuch as it serves to prove the pernicious effects of this practice; while it illustrates

that, perhaps even more strongly, in consequence of the gradual cure, aided probably by change of air, which followed its suspension. It is also an explicit one, though but one out of many, since it elucidates the connexion, equally, between apoplexy and palsy, and intermittent: while valuable in another sense, as showing how easily the palsy succeeding to the apoplexy in this disorder, whether from mal-practice or otherwise, may be mistaken for that disease depending on original apoplexy. In this example, an officer, a young man, who had suffered from the remittent fever in Spain, was suddenly seized on an English parade with a fit; or what is commonly called such, which was considered as apoplexy; being in reality a return of his intermittent. Being placed under the usual discipline, he was rendered partially paralytic, and at length, under two years of the general routine, became the mere shadow of a man, while previously most robust; losing also, with his strength, the better part of his intellect. Determined at length to join his regiment in the West Indies, he embarked in a transport, where, from there being no surgeon, all medical practices were suspended; from which moment he began to recover, and concluding just what I have here concluded, was in a few months restored to perfect health.

With respect to this consequence of intermittent, or of marsh fever generally, and very particularly of the effects of the evacuant system in producing it where it would not have occurred, or of aggravating it where it is existing, I have reason to be surprised that it appears to have made little impression in Italy and France, compared to what might have been expected; that judgment being formed from at least different and numerous works which I have read on this subject, if I have not read every thing. That Keratry was unaware of it, and that his reporter, Monfalcon, offers no commentary of the same nature, appears to me a sufficient proof of the truth of this suspicion; namely, that although the general fact is known and admitted, due value has not been placed on it, and very particularly, as it does not seem to have been observed that such as I have noticed is the result of blood-letting. Were not my own experience ample and satisfactory on this point, this would have rendered me doubtful of my own conclusions; but that has been far too wide and precise to permit me to surrender my own judgment, even to authority and experience such as I have named. And if I have received, from Italy, English patients, rendered paralytic under Italian practice, in these very circumstances, and by this treatment, and when the whole history was most precise and clear, I am compelled to believe, that even in that country as well as in France, the palsy of marsh fever is not understood as it deserves and requires, important as it is; while I am sure that they who will

seek for such cases, will soon find ample confirmation of all that I have here asserted.

Of partial palsies in the face, and of more general ones in the legs and in the arms, traced by the patients to cold, and, under my own views, appertaining to intermittent, I have known many instances rendered complete or incurable by blood-letting, when, from my own experience in similar ones, I have reason to believe that they would have passed away had the physician not interfered.

Of these, I need not relate the cases themselves, since the fact must be familiar to almost every practitioner: while I am bound to remark that although often attributed by the patients to cold, it is the usage, that of habit and carelessness, to imagine some affection of the head, and to treat them accordingly by evacuations; thus generally aggravating or extending them, or rendering them incurable. Even when, in more careful hands, or from whatever cause, this pernicious practice is not followed, they are viewed as merely local disorders, and treated in a manner which is nugatory; in consequence of which they often also become inveterate, and at length, possibly, incurable. So important do I consider this view of paralytic diseases, and so entirely have I found it neglected, even by modern and recent writers on palsy, as well as by writers on intermittent, that I almost wish I dared take room for such cases as might serve to make a deeper impression than what I ought perhaps to expect from this general statement, strongly as I wish to urge it by thus dwelling on it.

When I name this neglect, I ought to point it out distinctly, that a term thus often carelessly used may not be supposed carelessly applied. The fact itself is, that if it has not been my good fortune to see every treatise on palsy, I have read a great number, and the most recent; while I may conclude that what the latest compilation has not noticed, is not very likely to exist. And if, in these books, I have found no account of such a cause of palsy, in some, even in the most recent of all, (which to avoid appearing to censure the author I will not name,) there is not even the slightest allusion to it; as if the physician, writing on this express subject, had never even heard of such a cause for the disease which was his especial study. And when I recur to a long series of observation, much more on the practice of others, of course, than in my own, I find such a mass of cases where it was to be often proved, very often suspected, that the paralytic affections arose from this very cause, that I am compelled to conclude that, in the first place, the cause in question is a very general cause of palsy, and, secondly, that the error of practice arising out of a wrong theory and the common one, is the source of the far greater number of incurable palsies daily

met with in society; the increase of which also has been notoriously great for some time past, while it bids fair to proceed in augmentation, as the diseases of Malaria, from whatever cause arising, are themselves increasing, and as the improper practice to which I have alluded becomes also daily more prevalent.

But besides the more palpable and sudden paralytic affections attending intermittent, and under whatever modification or in whatever stage of the disease they occur, there are others of a more gradual nature which it is necessary to point out, not merely from their bearings on the practice in this disease, but from the light which they throw on the nature of intermittent, and very particularly on the other local affections belonging to it. If the variety in the effects or the appearances may be considerable, regulated as these must be by the nature of the nerves affected, and by the extent of the affection, it will be sufficient to describe one of these cases, and that account will perhaps also form the most convenient description.

This was an instance of a relapsing or chronic quotidian, in which there had, at no previous time, been observed any affections of this nature. During the relapse in question, which lasted the more general time of six weeks or two months, there came gradually on, a feeling of weakness in one leg, and more particularly in the foot, which increased so much during the disorder, that the patient could with difficulty make a step on that foot. And although there was no pain, or Neuralgia, it was easy to trace with the finger the course of the fibular nerve from the middle of the leg into the foot; as the slightest passage of the finger over it was attended by the well known tingling sensation produced by a pressed nerve; while a stronger pressure where it is nearest the surface, gave the equally well-known shock produced by striking the elbow, in another superficial nerve. It was obvious that the muscles chiefly affected in this case, were those to which this nerve principally belonged, and therefore that it was in a diseased state; that derangement appearing to consist in a diminution of its energy or power, added to an increased or morbid sensibility. The analogy of this to the proper Neuralgia is evident; and it must be considered, in fact, as a modified degree of this disorder, offering one of the proofs, out of so many, respecting the real nature of this disease, or its connexion with the intermittent and Malaria.

In this case, the relapse now described was succeeded by one much more severe, and successively by a third, more serious still. In these, the affection of the nerve of the leg, which had become little noticed during the interval, returned with increased severity; while, in the first, there came on a similar affection of the ulnar nerve of the right arm, and in the second, a similar one of the left; the others remaining. In this, most complete

attack, the courses of the nerves in both arms could equally be traced by the finger in the same manner; while, further, the patient was unable to extend the arms without immediately feeling the tingling, as of a compressed nerve, along the whole course, from the arm-pit to the fingers; that sensation being increased by increasing the extension. And in this case also, it was evident that the muscles chiefly supplied from those nerves were the ones affected; being feeble, or occasionally benumbed, as in the leg. Whatever be the exact affection of the nerve in this case, it is plain that it must be of a local, and, if I may use such a term, of an anatomical nature; or that it was one which might possibly have been ascertained by dissection and inspection, had that been possible, and were we sufficiently acquainted with the intimate or ultimate structure of a nerve.

I need only further add respecting this case, that while the nerves of the arms recovered, yet very slowly, after the cessation of the fever, that of the leg remained diseased for many years after, and perhaps continues so still; extremely sensible on casual pressure, even as far as the toe, so as to render great precaution necessary in walking, while the debility of that leg remained equally marked. If we see here the resemblance of this condition to that which succeeds to decided Neuralgia, so is its resemblance to the effect of sciatica on that particular nerve equally obvious; while I propose hereafter to consider sciatica, in all cases, as a pure and perfect Neuralgia.

Considering apoplexy to be one of the general or more extensively constitutional anomalies of the intermittent, or of marsh fever in general, as it is also the best known, I would willingly have separated it from the less general, or more local disorders of an analogous nature, or from the paralytic affections depending on the same cause, and deferred those till hereafter, so as to have treated of all the confined or partial disorders in one general view. But their natural connexion rendered that inconvenient; nor, where palsy is sometimes a general disease, and sometimes a purely local one, is it possible to adopt any arrangement which shall be unexceptionable. To have introduced it here was indispensable, even though it must be noticed again hereafter: and while I am bound to quote such authorities as I can find, in support of these views, I may therefore introduce them here, and perhaps more usefully than at a future period of this essay.

As I have more than once remarked in this essay, while the observations on which it has, throughout, been founded, were purely drawn from my own experience, without reference to authors, without even being aware that what was not taught in modern systematic writers and medical schools was at all known, and as the very essay itself was written before any such references were made, I shall here, as on other occasions, supply the

parallel cases and authorities which I have since found, without disturbing what I had written; because, thus, as it appears to me at least, will the reader feel more confidence in the facts, as being the uninfluenced observations of independent and remote observers.

On many of these cases, as on their authors, I must also remark, what I think essential, but for purposes of utility, not for the sake of criticism, that it has rarely been seen that the paralytic affections were really an inherent portion or variation of the disease, while, too frequently, they have been looked on as mysterious cases, more generally as incidental combinations. The former has been particularly the case where these affections have possessed any remarkable peculiarities, and most of all where they have been united to other nervous symptoms. To place the few cases which I have thus selected out of the number, in a condensed approximate order, and with such remarks as I may venture to make on them, will, therefore, I trust, be of the greatest use, by opening the eyes of practitioners to what has been strangely neglected or misunderstood. And if it has not been seen, and by physicians of such high reputation as I must here quote, that palsy was so often but a mode of intermittent, there is the more excuse for the large mass which can never do more than follow; while I am inclined to attribute this serious error, in a great measure, to the errors that have been as universal respecting Neuralgia, or to ignorance of the real nature of this disease: while the occurrence of palsy in those local intermittent affections, not only illustrates the general fact, but draws still closer the analogy between those diseases and ordinary intermittents.

As a marked instance of a paralytic affection of a peculiar character, though permanent, Sauvages quotes a case from Fabricius, where, in an epidemic dysentery, which, I need not remark, is but a mode of marsh fever, there was a palsy in one arm and the alternate foot, produced, says he, by the improper use of astringents and opiates. He calls it obscure; thus additionally proving that neither he nor his author was aware of the connexion which I have here been pointing out. The only other remark I may make on it is, that it could scarcely have arisen from any conceivable disorder of the brain, as it is too much the custom to suppose; since two parts so discordant in position, could not thus have been easily deranged through the brain; while it offers a tolerably convincing specimen of the origin of this disease in derangement of the nerves themselves.

But when the same nosologist quotes from Chaptal, a case of Hemiplegia under the very term *tertiana hemiplegica*, it might be supposed that the criticism which I have just made was unfair, particularly as the disorder was cured by purging and

bark. Yet we find nothing among those details and remarks, of which he is assuredly not sparing, to make us think that he was really clear on this subject; and as to this particular case, in spite of his term, it would appear that the bark was given to cure the tertian, and that the combination was considered as accidental rather than dependent.

A more marked case, quoted by this assuredly learned and industrious physician, ought, it might be supposed, to have completely opened his eyes on this subject; and with this and other instances which he has quoted, together with the adoption of the term above-mentioned, and not only of that, but of other terms to which I have here often referred, I had expected, on consulting him, to find not only this part of my subject, but the whole question of simulating intermittents, not merely illustrated, but established and anticipated: an expectation in which I was disappointed. In this case, the paralytic affection came on every day, and disappeared with the accession of the proper quotidian.

Palsy in the form of paraplegia, of a periodical and quotidian intermitting character, is also described by Torti, from Chaptal. Where the same writer, from the same authority, quotes a similarly periodical hemiplegia absolutely perfect, while it was quotidian and intermitting, lasting also for ten hours, he remarks, that it was always increased by purging as well as by blood-letting, and that on changing the practice, it was cured by bark in nine days. This particular case is of value, as a warning to practitioners; and, from the nature of the attending and preceding symptoms, perhaps, of somewhat more value than common. No intermittent fever seems to have been at first suspected, by the description, which notes only a vertigo, attended by a full and quick pulse and a burning heat in the head. How easily this may, in any other such case, be attributed to disease in the brain, is most apparent; as in truth I have seen more than once in the practice of others, while unable to enforce my own views; while it is abundantly plain, that had these symptoms been duly noted and described in the related cases, they were but those of intermittent fever; possibly, indeed, in this instance, and in other cases besides this one, partial, as that disorder so often is in its paroxysms.

A case from Morgagni is even more remarkable than some of the foregoing: because, in this, one side was permanently paralytic, while the other was attacked every evening with a palsy, which disappeared in the morning; the patient, after seven or eight such fits, dying of peripneumony. Various irregular cases of the same nature, where the palsy was attended by convulsions, are noted by the same author; while as far as I can perceive, neither he, more than Sauvages, appears to have been aware of the true connexion between the palsy and the intermittent. And

when I consult the writers on palsy specifically, even those as recent as Cooke and Swan, I do not find, although such cases are quoted and referred to, that their nature had been apprehended, or that any suspicion seems to have been entertained that Malaria was a cause of palsy, or that there was a mode of this disease especially dependent on intermittent.

It is scarcely less remarkable, that although in the medical reports of the army, it is noticed that a predisposition to palsy and apoplexy was frequently produced by "fever, visceral disease, and dysentery," no such remarks are deduced from this, even by those writers on palsy who quote it, as, I trust the reader will now perceive, it ought to have produced. Whether Strack, who has collected so much respecting anomalous intermittents, had been fully aware of this connexion, it is not possible to know; but if we judge from his book, where he relates but one case, and that of apoplexy and hemiplegia united, in a girl of eighteen, and cured by bark, we should conclude that he had not formed any definite ideas respecting it, nor generally indeed on the entire subject, since he enters into no general discussions on the question: rather appearing to have been guided in his practice by a strong affection towards this remedy, as a means of cure in numerous diseases never considered by him or any one else as appertaining to intermittent. Hence, his work, valuable as it is, is only so as a register of useful cases; since he has left to others to generalize and explain what he apparently did not view in the light which it required.

And while I feel a great debt to a writer from whom I have derived many valuable facts, perhaps even the more valuable from their precision and simplicity, and from the total want of any general theory under which they might have been observed and registered, I must be allowed to say, that they appear to be, throughout, in a philosophical sense, empirical facts, and under an empirical practice: while if even perhaps more valuable for my purpose, from their independence and freedom from bias, from that bias which a philosophical view might have given them, I must consider that we have thus lost a great deal which his experience and assiduity, united to his apparent accuracy, might have collected, and would have collected, under such general views as the present; of which he seems to have entertained no idea, or of which at least he has assuredly given no indication.

If I have remarked that Morgagni describes cases of this nature attended by convulsions, as there are also cases, noticed here, in another place, where mere convulsions or perfect epilepsy, alone, formed the variations of the intermittents, others may conjecture whether an obscure passage in Hippocrates, where he says that convulsions sometimes supersede and remove a fever, may not be explained in this matter, since, otherwise,

the explanation is not very obvious. One case, mentioned by M. Baumes, is valuable on account of its definite character under this combination, and because it may serve to illustrate more obscure ones: the paroxysm, which, in my view, should have been that of an intermittent, consisting of convulsions, attended by a palsy of the tongue.

Of such obscure cases, I shall point out one especially, which has been represented as of a very mysterious nature: and while, to myself, it appears that it can be explained in this manner, and only in this manner, or that it was a chronic and a simulating intermittent, I must leave that to the judgment of others, after they have read this essay, while apologizing to those whose difficulties I thus endeavour to explain. This is the self-related case of Vieusseux in the *Med. Chir. Trans.* reported by Dr. Marcet, which I need not transcribe, as it is so easy of access, while of great length: and if, on reading, it may appear too intricate for the solution which I have proposed, it must be recollected that when a patient, and he a physician, describes his own case, and that a nervous one, minutely, the details here found are not a very unnatural result. But I shall allow practical physicians to reflect on this subject, and to consider how far they may find solved in the same way, any similar difficulties or mysteries that may have occurred in their own practice.

To return to the principal simulation of intermittent connected with this one. I need not repeat that the case of apoplectic intermittent is much better known, and is indeed really understood, at least in Italy; a fact which renders it the more surprising, that obscurity or misapprehension should have so generally existed respecting the paralytic variety. On this, I have nothing therefore left to do but to quote a few authors for the purpose of reference or illustration. That single cases are common, I have already said: and he who desires to read authority on this subject, may consult Ramazzini, who describes this occurrence at all periods of the disease as well as at the commencement. It was also known to Morton, who, perfectly aware, as we must suppose, of its nature, recommends bark. It is a more remarkable fact, and especially worth noticing, that in certain seasons, not less than in certain situations, as I formerly remarked, or in certain epidemics, this variety has prevailed: while it will form sufficient examples of this, to refer to Thion de la Chaume for two seasons of such a tertian occurring at Ajaccio in 1773 and 1778; and for a similar event, in Bresse, the most pestiferous part of the Lyonnais, to Delorme. How far the epidemic prevalence of such a variety may prove that Malaria is a variable poison, or that its different effects depend more on quality than quantity, is, after what I have formerly

said on this subject, a question which I do not well know how to contemplate.

In terminating this part of the subject, I must not omit to mention an instance of the shaking palsy, as it is called, following an intermittent, described by a Scottish physician whose name has escaped out of the list of my quotations. A particular value attached to this case is, that arsenic has been frequently accused of producing an effect which we here see is but a result of the disease itself.

Having dismissed this very main portion of the present subject, I cannot well elucidate what immediately follows, without returning to the chronic intermittent in its simple form, and to certain facts which were passed slightly over, that I might notice them here, or were purposely reserved for the sake of the present elucidation.

Whatever the type may be, the paroxysm itself is subject to variations from the more perfect form of that as already described, analogous to those differences which are found between the chronic and the simple remittent. Thus it may happen that the duration of the cold fit may be very brief, and also very little marked in any manner. The sensation of cold may be so partial as to occupy but a limb, or a single spot, and even but for a few minutes; while, if more universal, it may be equally short, and also slight. It will further happen that there is not even the feeling of coldness; and the substitute for it may be the comatose state, in a slight degree, or mental affection alone, consisting in melancholy or irritability, or displaying itself in various practical modes unnecessary to detail; or it may be, general restlessness, or mere inability of mind, or the sense of fatigue, or debility, or, even more simply, a mere insensibility to pleasurable impressions; symptoms occurring in the very slightest cases only, if they occur alone. Or, in somewhat severer degrees, it may consist in thirst, in loss of appetite during a certain period, or in headach; or it may be marked by nothing but an increased secretion of urine, or lastly, it may be scarcely sensible to the patient himself, used to constant ill health, and be only recognised in that peculiar physiognomy which I have already described. Thus also, more or fewer of these symptoms may be combined, or they may vary in degree, separately or united, so as to produce an infinite variety of appearances to the practitioner; while it is under these anomalies or imperfections, that this disorder is often the subject of mistakes similar to those which occur respecting the chronic remittent. Hence, as in remittent, imaginary atrophies, imaginary consumptions, dyspepsia, hypochondriasm, nervous affections, headachs, and much more, leading to wrong practice, and not seldom to the increased suffering of the patient or the entire ruin of his health.

In the chronic intermittent also, there are the same uncertainties respecting the hot fit, whether as to length or intensity; as is not less true of the sweating stage: and in the milder cases, it is frequently difficult to mark any of the portions of the paroxysm; while, further, any one, or even two out of the three, may be absent altogether, or else so slight as to escape a careless observer. In extreme cases of this nature, the whole paroxysm is an indefinable period of various inconvenience, with scarcely any point where either of the stages can be marked; and those are cases which, for want of being aware of the cause, or want of careful observation, appear mysterious, equally to the patient and the practitioner; often leading to bad practice, and very often also, as in similar remittents, subjecting the former to the charge of nourishing imaginary diseases.

When the paroxysm is more palpably a febrile one, the irregularity is sometimes such, that the whole may be, or appear to be, a cold fit; neither heat nor sweating appearing; and such cold fits will even last for twelve hours or more. In other cases, an endless number of cold and hot periods will occur, as if twenty or thirty paroxysms had been condensed into one period; while in others again the whole is a hot fit, or, as also happens, a mere period of sweating, or of a tendency to this which is roused on the slightest exertion; the preceding portions or stages, if they really occur, being insensible. And thus also a temporary or diurnal variation of the pulse is sometimes the only palpable appearance, at least in a patient not given to complain of moderate inconveniences, or not morbidly alive to his own feelings.

Particular cases without end could be described in illustration of these states; but if amusing to a certain class of patients or readers, it would be a useless labour in a scientific view. Among such, will be found the endless strange cases known in America by the name of dumb ague; as they would include also much of the history of the common people, as well as of their betters, in the countries especially exposed to these diseases. But a subject fertile almost to romance, must not be indulged in, where enough remains of what is necessary, to occupy both the writer and the reader for many further pages.

If the cases which may be ranked under the preceding general sketch can always be assigned to their true cause, with moderate attention and a due knowledge of this disease, it is less easy to judge truly, or rather the errors are chiefly committed, when some one symptom is very distinguishable beyond the rest; and most of all, when these are of a local nature, or when they are accessaries rather than essential parts of the disease. The former cases might be distinguished by the two terms obscure and anomalous, were it necessary, or were it indeed al-

ways possible, to define the limits, in practice, under words the sense of which is apparent: the latter may also be sometimes included under the term anomalous; and they become the simulating cases of this chapter, when, from the absence or obscurity of the periodical fever, and from the marked and important nature and prevalence of the attached symptom, they are liable to be mistaken for separate or original diseases. Were I more largely in possession of such varieties, I might have attempted to classify them under those separate terms; as it is, I could not do this to any purpose, and shall therefore describe those which I have seen, without any pretence to order. And if I have been obliged to reserve some of those for a separate consideration, because of their having been erected into separate diseases, the reasons which have thus compelled me will hereafter be apparent to the reader.

In commencing this examination, I must even confound in some measure what must be considered as effects of the intermittent, with what appear to be symptoms or modes, because of the light which the one set throws on the other; being sensible of the inexpediency which I could not avoid, of separating the paralytic symptoms of those diseases, from the paralytic consequences which succeed to other and different symptoms.

It is a noted fact, that it is the effect of chronic or habitual intermittents to injure or destroy the intellectual faculties, as I had occasion to point out already when treating of remittents. This is notorious in the countries where these disorders prevail, and very remarkably, as I formerly said, in the Maremma of Tuscany, where even absolute idiotism from this cause is common; the fact being marked, even to cursory travellers, by that apathy, listlessness, or indolence of mind, gradually approaching to fatuity, which I formerly described. If the cause be obscure, it cannot well be more obscure than every thing else which belongs to the action of Malaria; while the fact of the universal influence of this poison on the nervous system, local as well as general, leaves no difficulty, at least in believing that it may produce such effects on the mind.

It seems to me that there is here an analogy between the local and the general diseases of the nervous system, worth noticing; but whether it is much more than a coincidence, whether there are really analogous causes for these analogous effects, it would be now impossible to decide; as it may almost be thought presumptuous to suggest.

In the intermittent, as a new disease, or for a long period of its existence, as sometimes happens in the chronic or mild remittent formerly described, the effect which the mind undergoes is chiefly a state of irritability, or a condition generally, which may be considered to belong to excitement, if we can

venture to use so vague and abused a term; or to consist in a susceptibility to pain, or in an increase of sensibility. Every thing marks this state of things: the peevishness, the false and exaggerated views of evil, the morbid excitement of the mind, extending even to the intellectual powers, and sometimes even with good effects, as I formerly observed, as far as certain of their actions are concerned, and lastly the increased sensibility to bodily suffering; to say nothing of nervous sensations beyond numbering. But in its progress, the opposite effect generally takes place, or the mind is found to be benumbed; and hence, among many other appearances, that striking listlessness and submission to the present evils, that total want of even a wish to escape them, which is so striking a feature in the mass of people in countries subject to Malaria and its diseases. Thus also, in single cases, even in our own country, the same effects take place from a long continuance of the disease; while debility of mind, proceeding even to absolute fatuity, sometimes occurs, and especially if to this be added the injudicious interference of physicians, by means of blood-letting and other debilitating remedies. That such a condition amounted at times even to an insensibility to bodily injuries, I remarked formerly on French authority; while what I have now said explains further the apparent contradictions on this subject.

That this disease produces an insensibility to pleasurable impressions, if I have but recently mentioned it, is a fact too remarkable in its results not to be noticed here as a part of the general illustration of this condition of the nervous system. Nor is that consequence a secondary one, originating in false or perverted moral views, or in an aberration of the reasoning faculties; since it appears, on the contrary, where that does not exist, or to be, absolutely, an insensibility, or a primary disorder, in the nerves of those organs of sense, which are the mediums of pleasure. I cannot doubt this, from the facts related to me by patients thus suffering, and who were at the same time good metaphysicians; those facts and their complaints being, that beautiful objects, such as pictures, natural scenery, and so forth, which, before that, or when in health, had been most pleasurable or engaging, seemed to make no impression at all, on the sense; and not because their minds were affected, because these things were viewed under a state of mental anxiety or derangement, since that state of mind was not present, but simply from failing to make the usual and expected impressions. From such patients I have received also the same complaints and statements, with respect to the other usual causes of simple pleasurable feelings; and very particularly from those who, as musicians, were accustomed to delight in music, not less from science than feeling; those being, that they seemed to suf-

fer under a positive insensibility as to what used to be a source of the most refined delight, although labouring under no affection of the temper, nor any of those sensations commonly called hypochondriacal. And thus have others complained that the most grateful odours had ceased to give pleasure, that the scent of a rose was not only powerless, but produced absolute pain by reminding them of what it once was; while every attempt to revive the former associations connected with this and other similar objects of delight, was unavailing. And what perhaps will illustrate this condition still more strongly, though it may possibly excite a smile, was the complaint of one of these patients, deeply in love, that in this state of disorder, the touch of the hand of the fair object, which used formerly to reach his heart, appeared no more to him than the contact of his own or of the most indifferent person's. That all this has been bitterly complained of as adding deeply to the torments of this disease, by those who were conscious or informed of the cause, and who were at the same time persons of refined taste, education, and feelings, it is almost unnecessary to remark.

Now, "*mutatis mutandis*," this is precisely the progress in those cases where single nerves are affected, instead of the whole cerebral system, or when such local affections are severe in proportion to the general one. In the Neuralgia, the first action of the cause is an increase of sensibility reaching to the highest imaginable degree of pain, and indicated further by numerous symptoms which will be more fully pointed out hereafter. But the progress of this is to palsy; or the excessive sensibility is succeeded by a diminished one, as if, in this case, as well as in the former, the sensibility had been exhausted by previous over exertion or over excitement. The former may be considered a succession of effects as to the whole nervous system, corresponding to that which, in the latter, occurs in a single nerve, or in a single portion of one. And what tends still further to confirm this view is, that if the debilitating or evacuating system of physicians accelerates or augments this effect in the former case, or as to the whole brain, so does the very same practice produce the analogous effects as to the single nerve; as it is thus that the paralytic symptoms which might otherwise be long in taking place in Neuralgia, are accelerated or increased. If this analogy is as well founded as it appears to me to be, it is not only curious as a question of pathology, but it serves to confirm the views hereafter deduced from other arguments, respecting the true nature of these local diseases and their connexion with the causes of intermittent. I need scarcely remind the reader of the analogous fatuity, formerly noticed, which occurs as a consequence also of remitting fever, and most generally under similarly improper treatment. The facts are in reality the same, and

so are the general causes and conditions; though some variations of effect take place, proportioned to, or depending on, the differences that are found in these two varieties of marsh fever.— And if I have here been compelled to separate these consequences, and to treat of them in two places, not avoiding therefore some repetition, and disjointing a subject which I would gladly have brought under one general view, this has all arisen, like much more of similar inconvenience, from having been compelled to follow the usual practice of physicians, in separating these associated diseases, or rather these two varieties of one disease.

Did I think that any specific evidence on this subject was required, I could easily relate many individual cases of debility of mind, and of a state of almost ultimate fatuity, occurring from the action of chronic intermittent; and what is perhaps even more important, some very striking ones, in particular, of the effect of blood-letting in producing this consequence. I dare not prolong these pages for the former purpose; since what I have said, being a deduction from facts and cases, could receive no further support from the cases themselves? yet I will note one or two briefly which relate to the latter fact, because of the very marked nature of the action of the misapplied remedy.

The first of these was a patient who had been subject to repeated attacks of quotidian, in successive years, under my own care, while a vigorous and intelligent young man of twenty-five, in the upper ranks of life. In a subsequent and similar attack during my absence, it was the fancy of his physician to prescribe blood-letting within the first days of the disease, under some erroneous view of its nature. No very obvious consequence followed the first operation; but on the second, it was remarked that he ceased to complain as he had done, which appeared to give the temptation to a third trial; immediately after which he fell into a state little short of idiotism, while the quotidian became also attended with many anomalous symptoms. Thus I found him, and just in time to prevent a fourth bleeding, which would probably have produced an extension of these consequences, and might easily have terminated, as I have more than once seen, in palsy, epilepsy, or death. The disease was cured in the usual way, by bark; but the debility of mind was not removed for six months, while I have reason to suspect that it was even much more durable. If such effects have not been oftener, it is probably from the much greater predominance of this disease in the lower classes, where such mental consequences would attract little notice, or where the general neglect of the mental faculties, and the slender uses to which they are applied, would render such consequences insensible.

In another case, which I could watch, but had no opportunity

of treating, the history, and the age, were similar; but, in the paroxysms, this patient, himself a military surgeon, was tormented by headaches. Successive blood-letting and cupping, on the usual principle, brought on at length fatuity, but so slightly, that after a few weeks from each bleeding, he began, on every occasion, as he does yet, if more slowly, to recover his intellects. With that, he also recovers some complexion, with a return of strength and appetite; but whenever a casual headach returns, or if an imagination naturally rendered morbid, in his physician, possibly, as well as himself, conceives that there is about to be another "flow of blood to the head," he is again subjected to blood-letting, and again becomes a mere infant. What the final result may be, it is not difficult to foresee.

I should now add, that while I have made a considerable search into authors, on this point, I have had little success in discovering cases or remarks by which to support the opinion, that this consequence was the frequent result of similar and improper treatment, while there is no want of evidence of the mere fact as connected with intermittent: the former opinion, like most others in this work, being derived from my own observations. Whatever suspicions I may entertain as to some few not sufficiently positive to quote, they are better left to the judgment of others: though from what I do read in modern books, I entertain no doubt, that, in this, as in remittent, the depravations of intellect so common, in chronic cases as after acute ones, have been the result of an improper practice; and if this is not to be deduced in so many words from the narrators themselves, that is a circumstance of which the causes are too obvious to require explanation. Whether the ancient and foreign writers who have often so well illustrated the anomalous intermittents, have been unaware of this frequent consequence, or have overlooked it, or explained it in some other manner, is what I cannot decide: but I am pleased to find at least one high authority, and equally distinct, in Sydenham, when he remarks, that fatuity is not an uncommon effect of tedious intermittents, and very particularly where evacuations have been excessively or improperly used. Hence, his *Amentia Quartana*; since it seems to have been under that variety chiefly that he had seen this consequence.

It would also appear that mental disease of a more severe character may be produced by these causes; or that it may occur in so early a stage of intermittent, that we ought, perhaps, rather to refer it to the cause of that disease, than to the disease itself as a cause of the second order; while, occurring at a later one, it may be supposed a consequence of the previous operation of the fever on the nervous system, as happens with respect to fatuity. In the former case, the analogy would be to apoplexy as

the primary attack of Malaria, and the disorder thus produced would be an anomaly, or a purely simulating case, as the latter must be classed with consequences. Had I been in possession of more cases, I might have distinguished and separated these circumstances, as I might also have investigated the whole subject to more purpose: but under such a poverty of facts, I must content myself with much less, leaving what I cannot better illustrate now, to a day of further information.

I allude to mania; though it is a somewhat obscure question, since, in ordinary mania, where there is no reason to suspect this cause, the exacerbations are sometimes regularly periodical. I do not wish to go deeply into a subject which appears to me to stand very much in need of elucidation, and must, therefore, request my readers to examine carefully such cases of this nature as they find on record, or may occur to them in practice; while it would be proper that this suspicion should be better known to practitioners at large than it appears to be, since I have seen four cases at least of absolute and pure mania, of most distinct tertian and quotidian forms, which, from this ignorance, as it appeared to me, became the subjects of gross mistreatment. The exacerbations were, in all, as distinct as those of a common intermittent would have been, and as regular, while the two tertian cases left a day intermediate of the most entire sanity of mind: the period of the paroxysm being a perfect mania, and not a febrile delirium, and while, in fact, no marks of fever could be discovered. And in one of these at least, the cause was as easily as it was distinctly traced; since the disorder had commenced as a common tertian, which seemed to have entirely disappeared to be exchanged for the mania: while of the other, whatever my suspicions were, I could not procure a distinct previous history, from the inattention and ignorance of the friends and the patient. In the quotidians, not only were the accessory, if obscure, symptoms of intermittent to be found on an accurate inquiry, in both the cases, but while the original cause, in one of them, was distinctly traced, so was the truth of the conclusion confirmed by the success of the method of cure which was adopted, after great maltreatment.

As to one of the quotidian cases just noticed, like some other examples of similar mania which have occurred to me, I feel incompetent to decide whether it was connected with intermittent or Neuralgia, since I could procure no sufficient information respecting the previous history. But while, as will hereafter be more apparent, I do not consider the distinction of any moment, I think it possible, that although such a mania may be the replacement of some intermittent or neuralgic disorder, arising as it does, in or from both those forms of disease, as well in their natural course as from improper treatment, so it

might also constitute the primary attack, or be the first and sole effect of the cause. There is no want of analogy to support such a view. The primary attack of Malaria is sometimes in the form of delirium, or absolute mania, as, in other cases, it is in that of apoplexy; and instances of this, even to an epidemic extent, are noted by various authors. The primary attack of Neuralgia, also, as well as of intermittent, is sometimes palsy without pain. And since cold will produce palsy or fatuity, primarily, since fatuity, palsy, and mania, are but analogous or connected states of the nervous system, as I shall hereafter attempt to show, it is as possible to conceive that mania should be the immediate and sole result of the cause of Neuralgia or intermittent, as that this should be palsy or fatuity.

And this argument from analogy is supported by facts: since among other cases, Vandermonde describes an intermittent mania, or delirium, of two months' duration, which was cured by bark, having been all along without any febrile symptoms. Whether a periodical mania, termed *lunaris*, and described in the *Ephemer. Naturæ Curiosor.* may be quoted as another example in support of the same view, I am not willing to decide. But it is evident that whether we suppose the cause, or the disease, to be Neuralgia or intermittent, it does not affect this argument: inasmuch as wherever the action is local, it may, under different modes of viewing the disease, be ranked with either. As to a mania dependent on intermittent and following it, there is a confirmation of that fact, and on a very large scale, by Mezeray. In this case, as in those of fatuity just quoted, the accessory or secondary cause was similar maltreatment, or the abuse of evacuations: but the result, which occurred in great numbers of people, was a perfect mania, or a durable phrensy or delirium without fever. It is scarcely, indeed, more difficult to comprehend how this should happen than fatuity; since the conditions of the nervous system, or brain, in both cases, cannot be very remote in kind.

To pass from these subjects to one of a very different nature, that nosology, to which I have so often referred, and which, be its logic even as faulty as has been said, far surpasses in real value the whole of its competitors, has enumerated a variety of intermittent under the term *emetica*, referring it, however, to tertian. It is very necessary to notice this particular anomaly, on account of the errors to which, like all other anomalous cases, it gives rise, and further, because it occurs under the quotidian type as well as the tertian, to whatever variety in these fevers that return may be long.

I have already remarked, that the ordinary paroxysm of an intermittent sometimes terminates in vomiting, while nausea also occurs in these as in the chronic remittent, often very dura-

ble, and forming a very distressing addition to the other symptoms. In the case to which I would here especially call attention, and which are the chronic ones, the vomiting becomes the most conspicuous symptom, or even the only one which the patient may notice; when inattentive practitioners are subject to mistake it for an original disease, dependent on some mysterious cause, or to assign a wrong one to it.

It is true that there occurs, and in females almost exclusively, a disease of this nature, of an original or separate character, and which must not be confounded with this; while the distinction is always rendered perfectly easy by the periodical returns of the disorder, under review, and, to a careful observer, by the presence of some other symptoms of chronic intermittent, however slight, or by the alternating of this one with some other symptom, or lastly, by inquiring into the previous history of the patient. I must also remark, especially, that it is very commonly preceded by a state of drowsiness, of which it is the termination. It is, in reality, in all the cases where it occurs, the real termination of the paroxysm, as in the well-marked intermittents; though that may be so slight as to produce little inconvenience to him who, long accustomed to this disease, does not know what health is. Thus at least has it appeared to me; but considering how often the stomach appears to be the principal object of attack in all the fevers of Malaria, I can also conceive that it is a real misdirection of the febrile paroxysm, just as that is sometimes misdirected to the heart, or as it produces the various affections classed under Neuralgia; while the possibility of what I here call a misdirection, in chronic cases, is illustrated by what happens in the black vomit of remittent, and in the inflammatory affections of the stomach occurring in all the severe marsh fevers, of whatever type or form.

Those who may hereafter have opportunities that have not occurred to myself, will easily, with this hint, discover how the fact really stands. I need only add, that as far as I have seen, this vomiting is very transitory; occurring whether the stomach is full or empty, and, when past, leaving it without any derangement, or rather being the immediate forerunner of the interval of temporary health. And, when its period is arrived, the slightest cause, even a glass of water, will bring it on instantly; while it also comes on at times with so little previous notice, that the patient has not even time to leave his seat, or change his position. Thus have I seen it continue for three months; being either removed, only by the cessation of that particular relapse, or else becoming exchanged for some other local symptom. When it thus occurs in cases of Neuralgia, as is also the fact, the explanation is now rendered easy; while it confirms, if that could need confirmation, the views here entertained of

that disease. As to remedies, its cure, it is plain, must be sought among the general remedies of chronic intermittent; while I may add that the ordinary kinds of medicines in use by that class of practitioners which sees nothing beyond symptoms, serve only to accelerate the period which they can neither prevent nor cure.

I formerly remarked that hysteria, or nervous affections such as belong to that disease, sometimes occur periodically, or otherwise, in remittent; and thus also are they found in the chronic quotidian, as well as in the tertian and quartan, where this variety is noticed by nosologists. These cases are occasionally very troublesome; and that they should be obstinate, is to be expected from the inveterate nature of these chronic diseases; while such obstinacy must also often depend on the ignorance or error of the practitioner as to the true cause. The symptoms, whether for number or intensity, may be any or all of those which belong to this Protean disease; while I must remark also, that the periodical vomiting just described is sometimes united to them, tending, as I have seen, still further to mislead the practitioner unaware of the nature of these obscure intermittents. Thus also may one slender symptom alone occur: and in this manner have I seen the globus hystericus, in males as well as females, returning at daily regular periods, and enduring for many months, nay, like the disease in other forms, even for years; while its true nature was proved by its becoming exchanged for another anomalous symptom, and by the previous history of the patient, as well as by the mode of cure.

I can give no other direction for distinguishing this hysteria than what I have already given as to the vomiting, and as to the whole of this chronic intermittent; but while I need not also point out any other than the general mode of cure, I must caution practitioners against blood-letting, because it has been often recommended and often practised in these cases; and with the result which it invariably has, in every case and variety of chronic intermittent, of aggravating the disorder, or of inducing new symptoms, and, finally, of destroying the patient's health for ever.

If I am, myself, inclined to consider the palpitation which is one of the most remarkable and the most distressing of the anomalous symptoms or forms of chronic intermittent, as a Neuralgia of the heart, as one of those local misdirections of this disease which, affecting other nervous organs or separate nerves, produces those very marked disorders, and if therefore my own desire would have been to have ranked it with those, and thus to have deferred it at present, I am fearful of giving more cause, by these new views, for that incredulity and those objections which I foresee. I shall therefore treat of it here as a merely

anomalous symptom of chronic intermittent; reserving to myself the privilege of a different and better classification, when the alarm at these novelties shall have subsided.

The modes, as to the patient's feeling and as to the recurrences, in which the heart is affected in these cases, are so various, that I must examine them at some length: a proceeding which becomes absolutely necessary, from the almost universal errors on this subject, from the pertinacity with which these cases are maintained to be independent nervous affections, or are referred to organic derangements that have no existence, and from the consequent maltreatment of the patients; to which are too often added alarm and anticipations, materially aggravating a disease which is in itself sufficiently distressing.

Increase of the velocity or of the strength of the circulation, or of both, attended by an increase in the force of the blow given by the apex of the heart, is the most simple of these affections, while this may be merely sensible to the patient himself, or else may be visible to a bystander. In other cases, that increase of action is attended by irregularities in the force; or there are occasional palpitations, of short duration, but repeated; or they are sometimes limited to single starts or spasms, or else there are intermissions under every irregularity that can be imagined. These disordered actions, which must be felt to be understood, are often attended with the most distressing sensations in the brain and in the whole system, affecting even the mind in various ways; producing among other things uncontrollable fear or inexplicable alarm, and sometimes seeming to threaten immediate death. When of any duration, they also often leave the patient exhausted, as if from the excess of fatigue; and this, constituting an inexplicable derangement, often lasts during a whole day, or long after the palpitation has ceased. In the heart itself, among other strange sensations, it is not uncommon to feel as if it was grasped by a hand, and compressed; while there is sometimes also the sensation of its being paralyzed, or about to cease from motion altogether. In other instances, and in the mildest cases, the affection is no greater than that which commonly attends fear, or that peculiar and slight alarm which may occur, for example, in a timid or anxious speaker about to rise in public; and, apparently in consequence of association, it is the effect of this to produce alarm, or fear, or anxiety, for which the patient, aware of its real cause, can find no reason, but which another, ignorant of this, or morbidly active in seeking for moral evils, easily refers to events or circumstances in life that are dreaded or anticipated. Or, as will be very obvious, the principle of association produces, by inversion, the passion or feeling which, in the ordinary cases, excite these peculiar actions of the heart. Hence it is, that to be aware of the nature of this

disorder, is important to the patient; as, by explaining to him the true cause, it will prevent him from seeking for imaginary evils that will aggravate his sufferings.

Such are the more ordinary forms of this palpitation; and how often it has been referred to enlargement of the heart, to ossifications, and so on, I have seen in but too many instances. But I must also remark, that this diseased action sometimes takes place in the inferior aorta, as well as in the heart, or is occasionally transferred from this organ to the artery; constituting an affection well known to occur in what is called dyspepsia, which, for aught I know, may depend on many nervous diseases, but which, as before observed, I have often most clearly traced to the class of disorders under review. I need not remind the medical reader of the description of this particular disorder given by Dr. Baillie; nor ought I to pretend to conjecture the cause or causes as it did occur to him; but while I have traced it to the cause under review, I am bound to add that this inference was drawn from observing that it alternated in relapses, and indeed in periods of long duration, with a palpitation of the heart dependent on intermittent, and itself alternating with relapses of common quotidian, as well as with the intermittent periods themselves, in a case of long standing subject to many other anomalies.

If the real cause of these affections of the heart be often obscure, there ought never to be any difficulty in ascertaining their nature when any other symptoms of chronic intermittent are present, when the patient is constitutionally subject to this disease, or is known to have suffered formerly from it, or when, as frequently happens, this affection alternates in any manner, with any of the ordinary, or of the anomalous symptoms of intermittent. These form the easier grounds of judgment to the physician, often as they are all overlooked; and in these several modes do those derangements of the heart often occur.

Presuming that the disease is regular in its returns, and connected with obvious intermittent, the palpitation, as far as I have observed, belongs to the same period of the paroxysm as the cold fit, or generally so; while in cases where it is the only symptom or the only very visible disorder, it has equally appeared to me to be the substitute for this. Thus also, when slight, it may usher in the paroxysm, subsiding in a short time; and here it corresponds with that general and common affection of the circulation which attends the commencement of the diurnal fit. The duration of a paroxysm of this kind, like the violence, is consequently variable; extending from an hour or less to twelve or more; possibly, in such cases, occupying the entire time of what would be a paroxysm in the common intermittent: and I have met with one instance of a double quotidian form, in which

the two returns left very little repose to this organ during the twenty-four hours, and in which the patient was nearly deprived of all sleep, procuring it only during the very short intervals. This case, after lasting three months, while sentence of condemnation had also been passed against the patient, under the supposition of a disorganized heart, was cured in two days by the remedies of intermittent; proving clearly that the judgment which I had formed respecting it was correct.

Supposing that the returns of palpitation are regular, whether in the quotidian or tertian form, and further, if the duration of the attack is also limited, I have stated a case that ought never to leave a moment's doubt to the physician, even though there were no other symptoms of intermittent present. But it will often happen that there are others, such as an indication of a previous cold stage, or rather of its commencement; and that stage, if not marked by absolute coldness, being distinguishable by an acute eye, in the physiognomy of the patient. It is also not uncommon for it to be accompanied by a state of drowsiness, which, while it is evidently the coma of intermittent, is often, or perhaps always, mistaken for a derangement of the brain produced by that of the heart, and which thus leads to the erroneous and destructive practice of blood-letting, founded on the vulgar and not less fashionable dogma of "a flow of blood to the head."

I do not, myself, conceive that this disorder, the intermittent of the heart, or, as I would call it, the Neuralgia of the heart, can ever exist without some of the collateral symptoms of chronic intermittent, which I need not now repeat; being, I believe, attached to the chronic varieties chiefly, or being a chronic, and not an acute disease, as are, I believe, all the Neuralgias, any more than I can conceive any Neuralgia, however local and limited, so unattended, while I have assuredly never seen such a case. But if I say that all Neuralgias are chronic, it is not that I suppose this a necessary part of their nature, or that they may not be transitory as well as intermittent. This however will be proved, or not, hereafter, when they become better known and better treated: and in the meantime, as far as they are such, it ought to be plain that this may be the consequence merely of ignorance and maltreatment, suffering the disease to establish itself and thus assume that character.

But the disorder under review may appear to be unaccompanied by such symptoms, to a careless or hasty observer, or to a practitioner, generally ignorant, or ignorant of the true nature of this disease, or to one who adds prejudice to want of discernment or knowledge; as is notably true respecting common Neuralgias, in which this connexion is almost always overlooked, and where, had it not been so neglected, the theory and the prac-

tice too for that disease could not have so long been that discredit to physic and physicians which it has been. And as it is subject to many irregularities and obscurities, these irregularities, should it be so mistaken, as in fact it has always hitherto been, not merely tend still further to confuse the judgment of the practitioner, but afford him reasons for persisting in his errors, and further, for disputing the views here held out. I shall hereafter notice another ground of erroneous judgment, arising from the term rheumatism of the heart, and from a false decision as to that disease.

It becomes necessary therefore to describe these irregularities, and, as far as possible, to explain them; though I must limit myself to what I have seen, and to my own powers of explanation; finding no assistance whatever from the writings of others: not even a single case, such as I have fortunately been able to extract on some of these subjects, from authors, in support of my own views.

It happens that the fits of palpitation are interrupted, as I have just remarked; and the analogy, in this case, will be found in those intermittents where the common paroxysm is similarly irregular, or where there is an intermixture of numerous cold and hot stages in one paroxysm. If there are two fits in a day, it may be a double quotidian form, such as I have just described; while it is plain, that if regulated by the other complicated types of intermittent, there is scarcely an irregularity which it may not exhibit. If it is irregular in ways not reconcilable to those cases, its analogy will still be equally found in those chronic intermittents which consist in irregular returns, of an endless variety; while, if only occasionally produced, and by some cause inducing debility, irritation, or perhaps mental affections, we have precisely the same appearances in the common chronic intermittent. And thus, in fact, do the fits of palpitation frequently occur, in patients who have been infested with chronic intermittents; single attacks, lasting perhaps for a few hours, not to recur for some weeks or months, and often traceable to a marked cause.

I will not extend this class of irregularities, nor need I dwell further on this analogy as affording the explanations. It is obvious that there may be others, if I have not seen them; but the physician in possession of the grounds of reasoning can rarely be at a loss in explaining them to his own satisfaction.

One other mode and cause of irregularity must however be pointed out; because, while it is needful to be known, it belongs to the proofs of the nature and cause of this disease. In this case, when the palpitation disappears, it is to be replaced by some other local symptom or anomaly, or else by a perfect intermittent, or by some irregular and partial form of this. In practice,

here, the error is to suppose that the palpitation is a disease of itself, distinct from the others, be those what they may; that the patient, for example, has a disorganized heart; and an intermittent also, or some other disorder, or that the whole are symptoms of some nervous disease. A more careful observer, or one at least who is acquainted with this subject, will however perceive that if the palpitation yields to an intermittent, it is because the disorder has changed its character; or that if vomiting, or hysteria, or diarrhea, or any other of the symptoms so often mentioned, appear when this retires, it is because the local action of the chronic intermittent has taken a new direction. And thus, by watching, does he learn to explain what appeared to him under a false light, and to regulate his practice accordingly.

The other class of irregularities occurring in these palpitations, demands a different explanation; since, as far as I can perceive, these do not admit of one from any analogy deduced from intermittent, while they seem to be illustrated by what occurs in the other local and similar affections, or in common Neuralgia.

They are all referrible to the effects produced by external or adventitious causes, such as exercise, position, or any thing which may interfere with the ordinary actions of the heart. Thus, while a fit of palpitation can sometimes be removed by various means, so is it irritated, or augmented, or prolonged; while these facts tend to mislead the practitioner as to the imagined cause and nature of the disorder, as they may also afford arguments to those who are unwilling to admit the explanation which I have here given. I may state the most extraordinary case of this nature which ever occurred to me; because while it had been determined that organic and incurable disorder was present, it vanished suddenly on the appearance of an intermittent quotidian, which was soon afterwards cured.

In this case, the patient had no relief from the palpitation, which was both incessant and violent, except in the erect posture, when awake, while it returned instantly on sitting down, and while, frequently also, it could be removed only by walking about the room, in which manner he was compelled to pass nearly the whole day. Thus also, at night, was it instantly produced by attempting to lie down; so that the little sleep that was procured, and not till after urgent necessity, was to be obtained only by being bolstered up as erectly as possible.

It appears to me that the explanation, here, is to be derived from the analogy of common Neuralgia, where it is well known that external irritation will prolong or re-excite the fit of pain, as it is notoriously also increased and prolonged by exercise or use of the affected part, as happens in a very marked manner in

sciatica, and as also occurs in the "Tic" of the face on attempting to eat.

I perhaps need scarcely now suggest to medical readers, how easily a disorder of the heart of this character might be confounded with that affection which Dundas has described under the term Rheumatism of the Heart. The symptoms, ostensibly, are the same, and may, in every respect, resemble those which he has described, even as relates to their violence; since, in reality, scarcely any conceivable appearances of disease could exceed those which occurred in the case that I have just described, or any variety of distress and of feelings as to the patient, or of symptoms to the practitioner's observation, be produced by the uttermost disorganization, which did not occur in this case. And it is also plain, that the fact of the occurrence of a local, or, as it happened also in this instance, of a more general chronic rheumatism, alternating with such an affection, or preceding, or following it, while both were but localizations of the chronic intermittent, would tend to confirm this error, and possibly, lead to considerable evil, in consequence of a misapplication of remedies. Nothing can however be more plain, than that the disease recorded by Dundas is of a very different nature, as the dissections prove; while, respecting the present, equally violent in apparent character, rendered singularly deceptive also by the concomitant circumstances, there can be no hesitation; inasmuch as this patient survives after twenty years from the attack. And while I suspect that the disorder which I have described has actually been often thus mistaken for this far more serious disease, as it assuredly has for organic affections of the heart generally, I cannot help suspecting, also, that the case recorded by Pemberton, and appended to the descriptive paper in question, had actually been one of this nature; though more willing to leave that to the discretion of my readers, after they shall have compared the facts there narrated, with the description which I have given of the palpitation dependent on intermittent.

Before quitting this particular case, I may yet remark, how easily the impression made by the record which I have here examined, may have assisted in impeding a proper inquiry into the nature of this disease as I have described it. It is sufficiently apparent, also, how error would still be produced by a partial observation which, while it saw that this palpitation alternated with rheumatism in some external muscles, should not perceive that it alternated also with other affections, as I have just pointed out; and further, did not remark that this rheumatism was itself a periodical affection belonging to intermittent, or a species of Neuralgia. On this I shall speak more particu-

larly immediately; but it will now be plain how much the views here held out simplify the whole history of these disorders, by assigning one general cause productive of numerous local actions, and generating diseases therefore which depend for their visible characters on the peculiarities of those organs: diseases misleading those who look only to obvious symptoms, or are unhabituated to philosophical generalizations and abstractions.

The proofs of the truth of the view of these palpitations, thus given, are now sufficiently apparent not to require a formal enumeration; but on this subject I will sketch one case, because it was in itself such as to include almost every one of these variations. If I have avoided loading this essay with ordinary cases, I must still claim the privilege of describing such as offer illustrations, which, while they are perfect, can be comprised within a small space.

In this patient, the palpitation was of the most severe character, and had lasted for some months, occupying a large part of every day, or recurring in successive fits, but without any great regularity, and always increased by irritations of various kinds. It was of that kind and character which seemed to justify the belief in an organic disease, as far as this ever can be conjectured: while there were no marks of temporary fever, or of any other derangement, to be traced, and while the patient was even robust, and, when not suffering extremely from the fits, capable of all the usual occupations of a very active life. After much cross-examination it was discovered that he had for many previous years been subject, annually, and nearly always at the same periods, commencing with the end of summer, to different diseases; being in one season, periodical toothach, in another diarrheas, in a third rheumatism, and in others, anomalous affections of the urinary organs, dyspepsia, hypochondriasm, pulsations of the aorta, and further, to a marked, though a very slight, quotidian intermittent. Thus was my judgment of the true nature of the disorder formed, while it was confirmed by the further progress; as it afterwards disappeared almost suddenly, to be replaced by a periodical rheumatism of the deltoid muscle, which was succeeded by "tic douloureux" or Neuralgia of the face, and, in succession, by quotidian intermittent and other Neuralgias; that patient having in himself exhibited a perfect nosology of all the anomalies of chronic intermittent, of which this very marked and independent palpitation was one. And if this is one of the most perfect cases which I have met with to prove the cause of such palpitations, so does it afford a marked evidence, to be confirmed hereafter by much more, of the nature of all the Neuralgias, of their common connexion, and of their dependence on intermittent or their origin in Malaria.

I may thus conclude the account of what I wish to call the Neuralgia of the heart; an account which I might have prolonged, and also illustrated to a much greater extent, had I chosen to make of it a separate essay, instead of considering it a symptom of intermittent, or a local variety of one general disease. But if I have judged it rightly, what more might have been useful for its illustration will be deduced from the general and particular accounts of the diseases with which it is connected, since it is here a variety and not a distinct species: while in an essay embracing so many things, I could not justly have suffered it to occupy more space. I shall only further remark in conclusion, that it will sometimes be found in patients where the existence of glandular visceral disease is to be suspected; a condition which confirms this view of its nature, while it is also one which, under mistaken views as to the disorder of the heart, is apt to mislead the practitioners into the belief of organic affections of a far different nature. Of the methods of cure I need not here speak, as they belong to the general character of the whole disease: but it will now be apparent on what principle it is that tonic medicines act in removing palpitation, as they also do in many of the nervous and mistaken affections so often originating in the same general cause.

It is not within my plan to inquire into the other causes which may produce palpitations of the heart, as there are unquestionably many; it being sufficient that by separating this particular kind, I shall have diminished the difficulties in which the whole subject is entangled: and here as elsewhere, I request distinctly to repeat, that while in many other cases than this, I have referred diseases, or apparent diseases, to chronic intermittent, I am not so blinded by one view of causes as not to admit all the others which physicians have assigned to such diseases, however, in individual cases, I may disagree with them, by choosing the cause here under discussion where they may have selected another. It would indeed be to encourage and perpetuate the evil which has so much retarded the progress of physic, to indulge in such ravenous hypotheses, and in prejudices so unworthy of philosophy, or even of the pretensions to it.

I must not however quit this anomaly of the intermittent, or this local direction of the diseases of Malaria, without pointing out another affection of the heart which I have observed in intermittent. It is probably a rare one, and therefore the less deserving of notice; since, in my own views at least, the rarer cases in physic are of infinitely less value than even the most common; while they unfortunately possess the same attraction for the multitude as the history of monstrous productions and other accidents or mysteries, has ever done. It does however demand notice, because it may possibly be more common than

my experience has induced me to think: and, as to know that such a symptom has been recorded, may not only lead to the observation of other such cases, but afford that relief, both to the patient and practitioner, which always follows from knowing that even what is mysterious is not solitary.

If I were bold enough to give a violent term to this symptom, I should call it a palsy of the heart; a paralytic affection rather, or a diminution of energy, corresponding to that similar effect which occurs in all the nerves that have been unduly excited by the active or painful state of Neuralgia. And, in its own system it presents an analogy to that singular condition of the circulation so often occurring in the chronic intermittent, when the pulse subsides from its former hard, contracted, and irritated state, so as to become slow, feeble, and languid; diminishing, as I have sometimes seen it do, from a hundred and twenty with extreme contraction and asperity, down to fifty, as if from the effect of digitalis, and with correspondent languor and compressibility.

It must in reality be plain, that under this state of the circulation, the powers of the heart are diminished; though the effect may not be so extensive as to be sensible to the patient, in the form of a feeling in the heart itself, sensible as that organ is in other respects: and it is therefore easy to see how a material increase of this debility may produce the more serious symptoms which I must now describe; a diminution in the energy of the heart as the prime mover of the circulation, so considerable as to be sensible to the patient in the organ itself.

I have but one case, from observation, on which I can rely, and as I cannot therefore generalize, I must describe it. In this, there was a quotidian, of a chronic nature, in which some of the relapses were as severe as any original disorder could well have been; while the obvious character of many of them was rather that of remittent, so long were the paroxysms and so imperfect the intervals. In this case, when the active state of the circulation was past, there succeeded a slow one, as just described; but so great was the loss of power in the heart, that it generally required a voluntary effort on the part of the patient to maintain the pulse, while that paralytic state, if it may be so called, was, throughout the whole disease, proportioned to the severity of the paroxysm or of the fever. The suffering was extreme, even frightful; as the sensation was always that of imminent or immediate death, and of death which nothing but a strong exertion, both of the mind and body, could have prevented.

Thus it was necessary for the patient to move his limbs to maintain the circulation; while, on remaining immoveable, even for an instant, the sense, with the agony, of instant death

immediately occurred; continuing during the whole period of this condition of the heart, and thus often lasting for even twelve hours in a day. In a similar manner, this occurred on any attempt to sleep; while as the paroxysm was also attended with coma, the whole day was passed in a constant succession of struggles between the act of falling asleep and that agony of death which immediately aroused him to new motion.

It was further remarkable, as proving the necessity of some foreign stimulus to prevent the absolute quiescence of the heart in this case, that when it did not stop merely by keeping the limbs immoveable, it immediately subsided on shutting the eyes to exclude the light; the pulse gradually disappearing: while on those trials; the patient often fell into a coma and appeared to be in the act of death. Nor must I omit to mention, that the revival of the action of the heart after this almost dormant or feeble state, or the restoration of the circulation to its former condition, was attended with great suffering, particularly at those times when the pulse had previously almost disappeared: the patient describing his feelings as if currents of melted lead had been flowing through all the veins and arteries of the body, and this universal pain lasting, though gradually diminishing, till the pulse had regained its former strength.

Nor was this a mere nervous sensation or a deception of the imagination. On desiring the patient to remain immoveable, the pulse, as I have just hinted, became gradually slenderer, till, even in a few seconds, it was reduced to the size of a thread, becoming finally insensible; at which moment the agony became insufferable and the patient generally started up under the sense of immediate death. It was supposed by the other attendant physicians, that actual death might have ensued, by a voluntary effort of this kind, or by a steady resolution to remain at rest; and considerable alarm was consequently excited by one or two trials that had been pushed too far: but I know not if this actually could have happened, from the excess of the apparent agony, though it was obviously an experiment that was not to be tampered with. It was remarkable at the same time, that when the worn-out patient did really fall asleep, the pulse, after subsiding during the attempts, which were often greatly prolonged till the very instant of slumber, gradually recovered its size. I have only to add respecting this state of the disease, that the patient was himself convinced that he could put an end to his existence by stopping the motion of his heart: while he gave proofs of his power over it, by an effort described as a voluntary command to it to cease to act; illustrating a solitary case already well known in the records of physic, that of Colonel Townshend, but in which, after some such demonstrations, death was the actual consequence.

It may be useful still to add respecting this case, and particularly as this most distressing symptom is more likely to exist in a moderate state than in one of such excessive violence, that the patient continued for some years subject to relapses of the same fever, almost indeed to a continuous chronic state of it, but in a more moderate degree; and that, during the whole time, he never passed into the state of sleep without undergoing the same agonies, as of instant death, often repeated from minute to minute, even during many hours, and frequently so threatening and so insufferable, as to compel him to rise, under the insuperable conviction that the attempt to sleep was to die.

If I said that this case was a solitary one, I must presume that this proceeds from my own limited experience, as I cannot doubt that affections of the heart, more or less similar, must be common wherever intermittent is endemic; and also, that among the numerous, and often singular cases of palpitation occurring every day to practitioners, there must be many owing their origin to this same cause, if perhaps no two cases can appear under the same precise aspect and character. This will be ascertained when practitioners shall hereafter re-examine their cases of this disorder under these new views: when Neuralgia shall become really understood as it demands, and whenever also intermittent, and especially under these irregular forms and substitutions, shall be known to English practitioners as it never yet appears to have been.

But there is a case of no uncommon occurrence which appears to me to be connected with this last variety, or to depend on what I have called a paralytic tendency, or loss of energy, in the heart; though a mere shadow, in point of strength or effect, compared to the one just described. And if I might have noticed this vexatious, and reputedly nervous symptom under the paragraph allotted to the mental affections, it will perhaps even better find its place here, because I believe that the mental affection, though it is the ostensible symptom, and that of which the patient alone complains, is purely dependent on this very state of the heart, or on a loss of energy consequent upon the previous excited one which appertains to an intermittent paroxysm.

The ordinary complaint of patients in this case, is an unaccountable sense of fear, rather than of anxiety, but sometimes of both united, coming on at some period of the day, but very generally at night, and, above all, upon the first attempts to sleep. And this sense of fear is described as being sometimes so violent or perfect, as to produce that trembling in the limbs, which notoriously attends this passion, although the patient is on his bed, and can assign or discover no cause for fear. Yet, as might naturally be expected, through the principle of asso-

ciation, reasons of this nature must often make their appearance, since there are few who cannot find something to fear; while the whole train is very generally called up by the bodily sensation, to the infinite annoyance of even the patient who is aware of the cause, far more of him who is not metaphysician enough to discover the solution.

Now, as far as I have examined such cases, I have found them to depend simply on this condition of the heart, and that they have occurred on the attempt to sleep, in those whose previous day had been occupied by a paroxysm of chronic intermittent. And it has been equally easy to perceive the diminution of the pulse, which, as in the former case, followed the attempt to sleep, or the act of falling into the state of slumber, and to see that the sense of fear was proportioned by this, and produced by it. I shall only add, as to this very vexatious complaint, that I have sometimes had reason to believe that it had become in itself a distinct and independent habit, though originally the attendant on an intermittent; or that, without any mark of a diurnal paroxysm, this paroxysm of diminished energy in the heart, with its accompanying fear, had become an habitual and periodical disease.

As I have noticed the occasional connexion of the Neuralgia, or intermittent, of the heart with rheumatism, I may proceed to treat of that disorder in as far as it belongs to this class of diseases; being almost as unable to preserve any regular order in these anomalous modes of intermittent, as I am unwilling to appear to prejudge a disputed question, by adopting what I should consider a better arrangement. If it is thus awkward to separate what is called the rheumatism of the face from other local or periodical affections of the same kind, I could not well have divided that from the Neuralgia with which it is connected, as I could not, equally, in the present state of this inquiry, have ventured to arrange all the affections which I have here brought together, under the head of Neuralgia.

The theory of rheumatism in its various forms, is at present almost as obscure as that of any disease in the catalogue; and considering its familiarity and apparent simplicity, the fact is not very creditable to physicians. It is not my office here to attempt to rectify it; but I must endeavour, as well as I can, to separate those modes of this disorder which arise from intermittent or are connected with it; though, from the erroneous views of practitioners on this subject, and the obvious prejudices or ignorance under which the disease is so often described, and under which cases of it are misrepresented rather than represented, it is extremely difficult to disentangle this subject.

If the ordinary division into the acute and chronic rheumatism is a very lax one, and if additional confusion has been

brought into this subject by classing under this general term other painful diseases of the joints, I trust there will be no difficulty in showing, that, under each of these first leading heads, and probably also under the third distinction, ill understood as that is, there will be found cases that belong to intermittent, that are superfluous symptoms of the chronic variety, or misdirections, or anomalies; cases bearing an analogy to certain modes of Neuralgia, and possibly differing from it, as to the immediate cause, by the affections being seated in the numerous and minute ramifications of a nerve, instead of attacking a trunk or a leading branch; while a peculiar species of inflammation is thus also excited, as happens in other cases hereafter to be described in their proper place.

The most simple case of all, while it is one that ought never to be mistaken, is that where a rheumatic pain in some particular muscle is strictly periodical, returning and ceasing in regular paroxysms. In such cases, the part affected may sometimes be exceedingly limited, occupying only a few fibres of a muscle, though, even then, the pain is often severe; while in others, the extent may be very considerable. Thus even the whole body may suffer under it; or rather there may be so many different muscles affected, in some place or other, that scarcely any movement can be made in which some one or more of the disordered portions is not brought into action; conveying thus, to the patient, the feelings as of a universal rheumatism.

If such a periodical recurrence is not sufficient to satisfy a practitioner respecting the true nature of such a disease, it will often be found attended with other symptoms explanatory of its cause, while these also form the proofs of the propriety of thus considering and arranging it. Thus it will be found to occur in persons who have been, at other times, affected by intermittent: forming, in itself, a period of relapse, and a substitute for the more common modes of the chronic disease. In other cases, the rheumatic pains will alternate with any of the other marked symptoms belonging to this disease; as, in the case last described at so much length, it does with palpitation of the heart. Or it may cease on the appearance of the common symptoms of intermittent, or the patient may recollect that it had formerly existed and suddenly disappeared; without apparent cause, or from change of place, or from the action of feeble or fantastic remedies. And hence, I may remark by the way, it is, that so many absurd or imaginary remedies have gained credit in rheumatism generally; as it is the character of intermittents thus to cease of their own accord, or to yield to trifling changes, or even, as is abundantly notorious, to give way to remedies acting on the imagination; even to charms.

But the physician of observant habits, and who has really stu-

died the diseases under review, can seldom be at a loss to discover collateral symptoms or appearances, sufficient to enable him to determine the real nature of such rheumatisms; while, for me to detail all these, would be to repeat what I have already explained so largely, and while I ought to trust, that after all that has here been said, not only this variety, but all the others which remain undescribed, should be intelligible with little further explanation. One remark however I will repeat, because it is on a circumstance almost always overlooked, and yet one of the most explanatory of all that occur, not only in this case, but in every disorder that I have ever yet seen depending on this cause. It is the physiognomy of the cold stage, never absent at some period, however wanting the actual feeling of cold may be; and which has, on endless occasions, enabled me to pronounce, from the first sight of the patient, and even at a distance, on the nature of a disorder to which I had been summoned, with the assurance of its mysterious nature, and a confession of inability to discover it, on the part of the previous medical attendants. I ought however to remark, that the power of distinguishing this physiognomy, never to be mistaken for any thing else by him who has once known it, however slight it may be, belongs, if under a different sense, to what physicians call the *tactus eruditus*; while I have reason to think the circumstance cannot be much known, inasmuch as I have not found practitioners aware of it, except when accompanying an absolute fit of ague, and have often had much difficulty in convincing my casual associates of the fact, or in making them indeed perceive it when pointed out.

I have here stated a very simple case, that of a marked periodical fit of pain, with an interval more or less perfectly free from it. But as I have shown that the other local or peculiar disorders, or anomalous forms of intermittent, may be irregular in various modes, just as even the pure disease often is, it is evident that this may also be the case with the rheumatic affections, though I need not now repeat what those variations are, nor the analogies by which I explained them before. It is only for the reader to recollect what has already been said on this subject, to perceive that a rheumatism may be truly a modification of the intermittent, under any irregularity, and even while it may seem continuous; since this happens in the simplest quotidian fevers of this nature.

But to detect their true character in these cases, becomes more difficult than to discover perhaps that of most of the other anomalous intermittents; not because of any greater inherent difficulty, but on account of the prevailing prejudices respecting rheumatism, as if it was always an original and distinct disease: a difficulty which will always, and obviously, occur in the great

majority of cases, because the great proportion, in physic, must always be routine practitioners, guided by symptoms, and can be nothing else. To such persons, it is impossible to give any further aid, or directions that will meet every case: observation and reasoning are what are required; to discard words, and rules, and receipts, to govern themselves by analogy and induction, and to learn, if that be possible, that he alone who is a philosopher will ever be a physician.

It is plain that, under those ordinary and current views, the cases to which I have here been referring will generally fall under the division of chronic rheumatism, as the symptoms in question are the produce of a chronic disease. I do not pretend to enter into all the possible causes of chronic rheumatism, nor to conjecture what proportion of the cases which occur, be they local or more general, may be original diseases of a distinct nature, and what comparative number may belong to the cause under review. But it is probable that the latter cases do form a very large proportion of the chronic rheumatisms occurring, and that we are thus enabled to explain their inveteracy of duration, as well as their tendency to recur; properties of all the disorders arising from this cause: while it will also explain the action of the modes of cure that are successful in this disease. Hereafter, possibly, physicians may be induced to examine this disorder with more care, and by this light; and we may then perhaps approach somewhat nearer to a true view of a disease, of which our ignorance has hitherto been so disgraceful.

It is not difficult now to see, how a case of this nature might be mistaken for an acute rheumatism of an original and independent character, or considered as such; since the limits between the two modes of rheumatism are not, in all cases, and in the popular estimation at least, very well defined. A very acute or painful case, or one affecting many muscles, might be considered an acute rheumatism; and should it terminate within a limited time, that opinion would be confirmed; while it is plain that this might happen though it were a dependence of intermittent, since it occurs in the simple intermittent itself.

The more serious question remains; whether that which is esteemed acute rheumatism, a disorder too well defined and too familiar to require description here, may be a mode of intermittent. I do not mean to suggest at present, that every acute rheumatism is a disorder belonging to this class of diseases, or that, as in the chronic variety, there are not cases which are independent disorders, or affections generically different, although it seems to me, that even this is a question far from decided the other way. The question at present is, whether there are not acute rheumatisms of the most regular form, which are truly modes of the quotidian intermittent, or of the remittent, possi-

bly, originating in the same causes: and if it shall be decided that this is the fact, and that there is also an acute rheumatism generically different, then we shall probably be able to explain the causes of the contests so long maintained respecting the use of bark in this disease.

The facts which would seem to prove this opinion, are chiefly these. There is a periodical exacerbation, if there is not always an absolute remission of the pains; and the duration of the disease is very analogous to that of a remittent, or of one period of an intermittent. The causes correspond, if they are not identical, while the remedy is often the same; since, after all that has been disputed, there is no doubt that many cases are cured by bark, and that blood-letting is not only often ineffectual, but pernicious; its action altogether, being, in fact, very similar to that which it exerts on remitting and severe intermittent fevers.

Thus while, in acute rheumatism, the misapplication or abuse of blood-letting often produces the chronic disease, so does a similar practice frequently induce the chronic state of intermittent, or convert an acute and terminable case into a durable one. It is not impossible also that the termination of the pains of acute rheumatism, succeeded by affection of the brain, and so often producing death, may be an analogy to what happens in other cases of intermittent diseases, where one local affection is exchanged for another, or disappears to be replaced by an augmentation of the general fever: while I can further easily understand, that the misapplication or the injudicious excess of blood-letting in such a case, may absolutely produce that comatose state which sometimes occurs in this disorder, and which is so generally considered a transference of the inflammation; since this is the very apoplectic state, if I mistake not, which is produced in the same manner in remittent and intermittent fevers. With what propriety therefore blood-letting is resorted to in the cases of this nature, will be abundantly palpable, should this view be but even sometimes correct.

A priori, there seems no reason against this view, whether it shall be borne out by a stricter and fuller examination of evidence or not. If an intermittent of a chronic and slender character can produce, or find its substitute in, a rheumatism of similar qualities, so it is not unreasonable to suppose that the localization, in a corresponding manner, of a severe intermittent or remittent, may produce the acute disease of this nature. And there is abundant analogy besides, in support of the same views, from the various and truly acute inflammations, as far as rheumatism itself is such, which occur so often in remittents and intermittents, in certain seasons or epidemics especially, and of which, histories abound in authors, though my plan excluded

them. Such are pleuritic and catarrhal affections, anginae, hepatitis, inflammatory affections of the stomach and bowels and of the spleen, as well as, further, of the brain, and even more; and such is that severe though peculiar ophthalmia which I have been compelled to arrange in another place; while, were more decided facts wanting, it is fully shown by many foreign writers, that this very disease, an acute rheumatism, is one of the symptoms of such fevers, since it is from this very variety, apparently, that the *Arthritica* of Sauvages has been formed. Let the fever be obscure or irregular, or let it be absorbed by the attention to the local disease, or let the physician be inattentive, or have predetermined his theory, and there will then cease to be much difficulty as to this question, or as to the facility with which the error of supposing the acute rheumatism a primary and independent disorder may be committed; though the extent of its bearing and value must be reserved for a much more ample investigation: yet for one that must be conducted by persons willing to believe that they are still ignorant and have all to learn.

And let me add while on this subject, that when Morton asserts that the pains in acute rheumatism were often removed by emetics, when he describes distinct tertian as well as quotidian rheumatisms cured by bark and opium, and when he speaks of the "*Febris intermittens rheumatismum simulans*," he offers a strong testimony, with respect at least to the frequent existence of a rheumatism of this nature; as, I have little doubt, does Haygarth's well-known report. As to the rheumatism of the joints, as it is called, a disorder which, like the former, is, as far as it is intermittent, much confused by the ancient authors, in consequence of a vague use of the term "*arthritica*," we have also the modern testimony of Wardrop respecting the utility of bark as a remedy. But I will not venture further on this conjectural ground: it is sufficient if I have thus pointed out an important field of inquiry; while the determination must finally rest on evidence, but on evidence to be sought and weighed in a manner which we could wish to be much more common in physic than it is.

If I have said all that appears necessary in a general view respecting the connexion of rheumatism and intermittent, it is still necessary to point out varieties, depending on the parts which happen to be the seat of the pain. It is not because the general principles do not apply equally to all, that this is expedient; but from the experience that these have no influence with the mass of practitioners, whenever any thing remarkable in the place of the disorder, or the obvious symptoms, lead those who have no other guides than words and symptoms, to refer them to some familiar disease, however different the real nature

of that may be. If, in such hands, every acute pain in the chest is a pleurisy, it is easy to see what the consequences may be; and as this is, as far as I have seen, one of the most common of all the errors on this head, I shall bestow the first place on it.

To say that rheumatism of the intercostal muscles is perpetually mistaken for pleurisy, in the hands of negligent practitioners, is to state a fact known to every observing physician; and it must equally be known to many, that the practice of blood-letting, always resorted to under this mistaken view, is very often to perpetuate or render chronic what, under correct treatment, might have subsided in a short time. If I have seen constitutions utterly ruined by a perseverance in this wrong practice, if I have seen patients condemned to believe themselves labouring under consumption in these cases, with all the expensive and vexatious consequences that follow such an error, there are doubtless many physicians to whom the same facts have occurred. And though it is out of the bounds of the present inquiry, I cannot proceed with the subject, without observing, that even in decided cases of pulmonary inflammation, it is not uncommon for patients, and particularly after much blood-letting, to be seized with acute pains of the intercostal muscles, interfering with respiration; and which, in careless hands, very often, perhaps very generally, lead to the repetition of this remedy, when, in reality, it is not only useless, but has become highly pernicious. To distinguish these pains from internal inflammation, is most important: and it is often to be done easily by merely pressing hard on the painful point, which, it is well known, removes or suspends for a time a rheumatic pain.

Having stated this common fact, I am not, of course, about to maintain that every rheumatism of the intercostal muscles belongs to the intermittent; but I have seen many such cases where there could be no question on that subject, and where the most serious evils have followed the erroneous view and the wrong practice. If I state one case, as briefly as I can, in illustration, it is not only because it offers a good specimen of what is very common, but because there are facts in it which will illustrate this class of cases better than a general statement could do.

The patient was a young man in the higher rank of life, and the pain in the side was termed pleurisy, though no cough was present, and very little fever; so little, that not even confinement to bed was necessary. Blood-letting was resorted to, very actively, and was followed by increase of the pains; and, not to prolong a tedious history, these pains continued or returned occasionally, during nearly a whole year, while, during all that time, this remedy was repeated, often, many times in a week. If it was plain that this, by merely negative reasoning, must have been a rheumatic disorder, there was even much plainer evidence,

in the periodical returns of the pain, after some weeks, that it was also the intermitting disease; while the physiognomy and appearance marked, once in every day, a decided cold stage. Still further, after about five months, there came on a pain in the shin-bone of one leg, regularly periodical, and lasting five hours; during which the rheumatic pains among the ribs diminished or ceased, yet without leading the physicians to a correct judgment of this case, as it ought to have done; being a true Neuralgia, interchanging partially with the original intermitting rheumatism. And if, in the present stage of this essay, the explanation now given may appear unfounded or unintelligible, there will be abundant proof, in the following volume, that this view is a just one, and that analogous cases also are very common: this very class of facts, in reality, constituting one of the essential and characteristic circumstances of all these diseases. So far, however, were the attendants from even conjecturing the cause or nature of any part or form of this merely varying, but identical disorder, that, although there was, at this time, not only a regular cold stage, but the comatose state of intermittent, lasting daily for some hours, the disease was then reported as a wonderful and mysterious case; until at length it was actually proposed to make an incision through the periosteum, into the pained part, on some theory of a disease in the bone; though nothing was to be felt. This, I have in reality known to be done, in a parallel case; while the patient here fortunately escaped this evil, by the sudden cessation of the pain; very possibly the consequence of the alarm, which so often removes Neuralgia.

Not to proceed further as to this case, I shall only add, that as has happened in every similar instance of mistreatment that I have seen in these disorders, the patient's health was so much injured that he did not recover his strength during many years, never regaining his colour; and that while the chronic pains in the ribs recurred repeatedly, to be always treated in the same manner, there supervened spasms of all the muscles, with affections of the intellect, after one period of very severe treatment of this nature; and, at length, a marked period of the disease so long present under other modes, namely, a regular quotidian, which lasted nearly a year, and which, for aught that I know, remains uncured. If I must apologize for the length of this case, it will be not without its uses, as a very complete specimen of neglected evidence, of error and maltreatment, and of the consequences of this last; which are those that for ever follow under such erroneous practice, if in different degrees.

If the case that I have thus described was a quotidian, there is no evidence wanting respecting the existence of tertians of the same nature; though it is not from them, but from an acute

disease, probably also different, that Sauvages has derived his variety the *Tertiana pleuritica*: and I need scarcely remark over again, that any one of all the anomalies that I have described, or shall describe, may also be found under the quartan type, or under those complicated forms which I have not chosen to dwell on. It is plain that, in the latter cases, the chance of error, on the part of a careless or uninformed practitioner, is even greater; as the want of a very simple and fixed period, will deprive such a person of the most obvious criterion of the disease.

And I ought to make another remark here, though it has been occasionally noticed for other purposes, elsewhere; since it not only concerns these cases of rheumatism, when chronic, but many more of the simulating diseases of this connexion or genus; and because it is from ignorance of this common fact, or from inattention to it, that the characters of these disorders are, partly, mistaken, and, further, disputed or denied; or that the difficulty arises, of convincing persons who have not bestowed attention on this subject, and are unaware of the facts which constitute the very basis of this work, that such diseases do really belong to intermittent, and are but modifications of it; requiring the same treatment, and, in truth, scarcely ever to be removed in any other manner. This is, that in all ancient and inveterate cases of even simple intermittent, it is common for the disorder to become so very irregular, that nothing but great experience of such cases, or an accurate and philosophical knowledge of the disease as I have attempted to describe it, can recognise it, under that form, or even perhaps believe that it is the intermittent fever. Not only does it vary in type, in every mode, or cease to have any type at all, but it may recur in a single attack, or in two, or in any number, separated at irregular intervals, or, on the contrary, become absolutely continuous, or, in short, appear under modes of variety and confusion which are best left to the imagination to conceive. Thus also may it put on more forms than one: or what is a simple fever on one day, or through one week or month, may be an inflammatory affection, or a merely painful one, on some other occasion; such disorders even interchanging with Neuralgia, as I shall more fully show hereafter. Thus it is easy to see how, if the case should be a rheumatism, these irregularities, united to the common theory respecting this disorder, would confound the judgment of the practitioner, or render it impossible to convince him that a disease so irregular could possibly belong to an intermittent type.

As to the true pleuritic intermittent, an acute disease under a severe fever, I have no experience: and I may therefore refer to the nosologist above named and to foreign authors, for what has been fully described; whether I am convinced or not, that, in these cases, the lungs being unaffected at the same time, the

local disorder has been aught else than a severe rheumatism of the same parts. Yet with regard to a pleurisy of a perfect character, and possessing every symptom of the ordinary disease of this nature, but depending on intermittent, and often also, itself periodical and intermitting, in tertian as well as quotidian forms, there ought to be no doubt, since Morton says that he had seen a hundred cases, and that, like the fever itself, they were cured by bark, and by nothing else. It might possibly be supposed that such cases were sometimes the mere rheumatism of the intercostal muscle which I have described; but Morton is too good an observer to permit us to draw this conclusion universally, while there is no reason why an inflammation of the pleura itself, or even of the lungs, of this peculiar character, should not occur, as well as that of the eye or of the stomach and bowels.

Of other rheumatisms affecting particular muscles, possessing the character of intermittent, and being modes of that disease, I think it unnecessary to point out particularly any other than that of the loins; as this also is one of those which, having a name of its own, the lumbago, is very generally misapprehended, or perhaps almost never referred to the disease of which it is, sometimes at least, a modification. There is abundant evidence of its being often what I have now stated it to be, though, how often, I cannot here pretend to say; and if the evidences are similar to those already enumerated, I can add one very pointed case, where a disorder of this kind, particularly well marked, and long treated as a common lumbago, was suddenly and spontaneously removed, and immediately succeeded by the common Neuralgia of the face. There is also, if my reading has been duly remembered, a similar case recorded by Dr. Pearson; and I prefer any one's testimony to my own, when I can find such, because I am the more sure that there is no bias, or at least, that it will not be suspected: as it very naturally must, when the promulgator and supporter of the theory is also the observer of the evidence.

I might now consider those rheumatic pains, as they are vulgarly considered, which are found occasionally in places not muscular, and which may occur in almost any part of the body. But the term rheumatism is assuredly here misapplied, under any view: while there are many reasons for associating many of these disorders at least, with the Neuralgia in its more common form, and thus deferring them to the latter part of this essay. The rheumatism of the face and of the head, as they are called, belong to this division; and as it seems much more convenient to place these with the common Neuralgia, it would produce even more confusion than I have now made, very unwillingly, if I were to describe here the affections which are pre-

cisely similar in character, differing only in parts which they occupy. Hence some of the varieties apparently, which have been ranked under the term *Arthritica*, and which seem to me to belong to this division, will fall to be considered hereafter. Thus also will the headaches be much better treated of in the same place; on account of their obvious connexion with the most definite Neuralgia of the head.

But as to a true arthritic rheumatism or affection of the joints, I have great cause to regret, that since I have thus far extended my views of the local actions of intermittent, I have had no opportunities of treating or seeing that inveterate disease of the joints, of this nature, which is so well known, and which is so much more common in the female sex than the male. I cannot therefore discuss it, nor must I even dare to suppose that it may be a disease belonging to this place: but if what I recently quoted from Wardrop as to the value of bark in it, shall prove generally or extensively true, it will present at least a strong ground for suspicion that it really does belong to the anomalous intermittents.

I must therefore pass to some other diseases of a local or peculiar nature, connected with intermittent as symptoms or modifications, however rare a few of them are, and however obscure the connexion may sometimes be; while among them also, there are some that might perhaps have been most properly ranked with the Neuralgia.

Of these, diarrhea at least is perhaps best placed here; though it might indeed have been more correctly arranged with those cases where secretions are especially affected, and therefore under the head of Neuralgia. But there is always a difficulty of choice, here, in these arrangements; on account of the different relations of any one assumed disorder, to a general, or to a local affection, or to fever or Neuralgia, as its leading genus or division; independently of its relations to a continuous or remitting fever, or to an intermitting one: while all this inconvenience has arisen, fundamentally, from the vexatious necessity of following ancient prejudices and ill-combined systems, in treating of what belongs in reality to an arrangement as radically distinct as it is essentially new. And if I need not here repeat what I took occasion formerly to say of dysentery and diarrhea, I ought however to premise, that as far as a diarrhea depending on the action of Malaria, or on the remittent fever, is a continuous and acute disease, whether it should be accompanied by a marked fever or not, I need not here notice it again; my object in this place being to point out a chronic diarrhea rather than an acute one, and a periodical rather than a continuous disorder; and chiefly for the same reasons, the mistakes to which it gives rise; though partly also that I might bring under one general

view for the sake of mutual illustration, and for the purpose of establishing the general theory, as many simulations of intermittent as I could collect. It is plain however that there is no essential distinction between this diarrhea and the more regular one formerly noticed: though if remittent and intermittent are to be separated, there are the same reasons why all the simulations under intermittent should be separated from those under remittent fever. If these disarrangements are an evil, the radical evil lies there; and, consequently, there is at present no choice: while perhaps the good may really outweigh the inconvenience, on account of the advantages arising from it in the practice as to those disorders.

The diarrhea which I purposed chiefly to point out here, is one that belongs to decided intermittent, occurring in the chronic tertian as well as the quotidian, and, for aught that I know, in many other types. If I cannot at present find satisfactory cases in authors, and if it is not noticed in Sauvages' useful work, I have seen it occur most distinctly under both the types that I have named, as a substitute for the common fit of ague; while, in one instance, which might therefore claim the name of double tertian, the one day was regularly a common paroxysm, and the other a diarrhea, so punctual in the attack as never to fail at the hour of eleven in the morning.

So many causes may produce a chronic diarrhea, and the ordinary habits of the body, obedient as it is, in many other cases than ague, to diurnal periods, may so render such a common diarrhea periodical, that I am afraid to lay much stress on the cases of this nature that have come under my notice, or to refer them to the variety under consideration; feeling that natural fear of being suspected of undue bias to a system and a cause, for which the whole of the views laid down in this essay will appear to have given so much ground. Yet I think that physicians are bound to consider such a disorder as possible, and as possibly much more frequent than I can prove it to be from my own observations; while I could easily enumerate many more cases of periodical diarrheas, and, what is essential, occurring in persons who had, at other periods, been affected with chronic intermittents and Neuralgias, where this solution has appeared the probable one. And in every case of this nature on which I would lay any stress, the absolute necessity of quelling the disease by the ordinary remedies, and the suddenness with which it spontaneously disappeared on a change of place or habits, confirmed this view; since it is thus that all the modes of chronic intermittent behave under similar circumstances. To pass now to a very different disorder.

I need not minutely describe a species of cough which sometimes occurs; which is not pertussis, does not arise from af-

fections of the liver, and is not attended with any expectoration, nor apparently with any affection of the bronchial membrane or the lungs. Its common designation is, a spasmodic or a nervous cough; and, numerically, it is more common in women than in men; while its leading character is, to supervene in violent fits, commonly with long intervals of entire freedom from even the suspicion of disease. What it may be in all cases, it is not here my business to inquire; but that it is an intermittent disease, and sometimes of periods extremely regular, to be cured by the remedies of intermittent fever, I have often experienced.

I know not that this anomaly is ever of the tertian type, but have seen it under the quotidian, occurring at regular periods, and lasting a definite time; while in some of the cases, it was held to be a very mysterious disorder, though in others, called by the vague term a spasmodic cough, and treated, to no purpose, by the common antispasmodics. That, in one instance, after a long duration, and under such extreme severity in the cough, as to have produced repeated abortions, it was almost instantaneously cured by the remedies of intermittent, was to me a further proof that I had judged rightly of the nature of the disease. In another case, the quotidian regularity was perfect and definite; as the cough returned regularly at three o'clock in the morning, with extreme severity, and lasted precisely half an hour: while this patient, after many weeks of the disorder, was cured within three days by means of bark. It will be for practical physicians to review their cases of spasmodic cough, and to inquire whether some of them do not truly belong to this disorder.

There is something singularly periodical in the attacks of a catarrh which often comes on in summer, and, as it would appear, most commonly from exposure, not simply to heat it would generally seem, but to heat where vegetation is present. This well-known disorder is produced by hot-houses or green-houses: and, in the public estimation, it is particularly caused by hay-fields. Hence the term Hay fever, lately become fashionable. I do not mean to say that because this is a periodical catarrh it must be a mode of intermittent, or that it is a misdirected case analogous to all the former. But having a quotidian period, and being the produce apparently of heat and vegetation, it at least presents features of analogy which renders it worthy of being here noticed, and also of being more minutely studied; as far at least as we can investigate a disorder generally too trifling to attract much notice. But, if the method of cure is not that which removes intermittents, and offers therefore no confirmation of such a theory, I may remark, as a matter of utility, that it is aggravated by the remedies which

aggravate intermittents, namely, by blood-letting and evacuants, though, unfortunately for the patients, this is a common practice.

I have no experience in cases of such extreme severity as that described by Dr. Bostock, and must not therefore pretend to entertain any opinions; it must be for those who know it in such forms, to inquire further into its nature; nor could the inquiry be in better hands than those of him who has suffered from it. But I must add, that while I have never had any opportunity of treating it as if it was an intermittent, I have observed that opium, and stimulants in general, including wine, formed the most successful practice; while the slighter cases, still abundantly teasing, and conspicuously so to clerks in various offices in summer, among whom it seems to be produced by the heated air of their confined rooms, appeared to be most readily managed by resorting to the use of snuff, under which the habit also of suffering from this singular disease at length disappeared.

On other occasions, I have here shown that many of the local disorders thus described as belonging to the chronic marsh fevers, occur also in an acute form, in those of a severer character; the one occurrence illustrating the other, and, as appears a fair conclusion to draw, confirming the probability in cases that might otherwise be doubtful. How far therefore the possibility of such a catarrh as the one I have here described, if not of the individual disorder in question, is confirmed by the frequent fact of a catarrh united to severe marsh fever, remittent or intermittent, an occurrence whence Sauvages has derived his *Catarrhalis*, I must leave to the judgment of the reader. Yet I may also notice here, what is more particularly mentioned under the head of Neuralgia, that in cases of hemicrania, itself an intermittent disease, and very often a mode of common chronic intermittent, or a substitute for the ordinary form, it is not at all unusual to find a catarrh as rigidly periodical; sometimes accompanying it, at others a substitute for the headach, and occupying one nostril only, with not unfrequently also one eye. I need not say that in the summer catarrh above mentioned, the eyes are very frequently affected, and, in the severer cases, to a very high degree.

It might not perhaps be easily credited by those who have been little accustomed to watch the general practice for the purpose of supplying the defects of their own experience by that of others, still less by those who have never studied the obscurer forms of intermittent, that this disease has been mistaken for phthisis. Yet have many such cases occurred in my own limited experience; while the proof has been rendered complete, not merely by a narrow investigation of the symptoms, but by

the success of the remedies: having thus cured, more than once, such a reputed inveterate phthisis, and even of long standing, by a few ounces of bark or grains of arsenic. And thus have I seen cases of this nature cured, often almost suddenly, by change of air, as I have seen a journey into Italy recommended on that ground: while, doubtless, successful as this remedy is often likely to be, a reputed cure of consumption has been more than once effected under this error.

I know not whether I ought to consider these as cases of actual simulation on the part of the disease, or of ignorance and inattention on that of the practitioner: others must decide this point as is most flattering to themselves, should such a case have been their own. How far the symptoms are thus entitled to deceive any one, may thus be judged. The periodical fever is misinterpreted into hectic; and the debility, the thirst, the paleness and shrinking of the skin, possibly that of the vessels of the eye, the emaciation, not uncommon in such chronic fever, and more which I need not detail, have thus combined in deceiving those who forget to distinguish between a hectic and an intermittent paroxysm, and who do not recognise the very marked physiognomy of intermittent: while, should occasional pains of the intercostal muscles be present, an occurrence, as is here shown, often so striking as to lead to a belief in pleurisy, the error becomes complete. It is even more inveterate should there be cough, as may happen from visceral affections, or an occasional catarrh, which may occur to any one, or that catarrhal disease which seems to be one of the simulations of this protean fever, or lastly that cough of habit so common in persons who indulge in this act, and not very uncommonly produced by the smoke of London in many irritable individuals. I describe here the various causes of deception which I have witnessed; while I ought also to add, that in young females, chlorotic appearances, and disorders which I need not specify, frequent attendants on this chronic fever, receive the same interpretation. If, under such circumstances, I have more than once put a stop to a sea voyage or a journey to Nice, removing also the most unfounded and serious alarms, promising the cure which was sometimes speedily effected, or, even when failing in this, as we so often fail in chronic intermittents, relieving the patient's mind, I can give no other rules for the guidance of others in such cases, than to recollect that there are such diseases as I have here described, and to exert their observation in discriminating them.

There is a disease called nervous atrophy which it would be very desirable that physicians should describe or define somewhat better than has yet been done. That it arises at times from intense and durable grief, seems ascertained, as perhaps also from

sudden and severe disappointment: the disorder, in the latter case, producing its obvious effects in an analogous sudden manner, while more gradually in the former. That the disease of the mesenteric glands is thus sometimes misnamed, is also well known: but, beyond that, what is its nature and what its causes, if there be other causes, is a question yet to be solved.

Like others, I also have seen cases arising from the mental causes just named: but of all the reputed ones which have fallen in my way, whether in the practice of others or in my own, three-fourths have been instances of chronic remittent or intermittent, and, as far as I could ascertain, without any demonstrable mark of visceral affections, though where the spleen is the organ affected, it is far from easy to be satisfied of this fact. And from the hands in which I have seen such cases misapprehended, persons of the highest repute in physic, I have little doubt that it is a not unfrequent error, to add to the number of daily practical errors on this subject. Did delicacy allow me to name some of these cases, I doubt not that the reader would require little other evidence as to this oversight.

As in the case of simulated phthisis, I ought rather to call these cases of error on the part of the physician, than that of fair simulation on that of the disease; yet the facts as thus stated will not be less useful in practice. On one of them I must however observe, very pointedly, that the paroxysm of quotidian intermittent was most perfectly marked, but that its period being in the night, the attendant physician, of the highest repute, and I may add, deservedly so, and with the advantage also of being a friend of the patient, had not perceived it after a three weeks' attendance; the nocturnal occurrence of paroxysms being a source of error which I have had occasion already to point out in this essay. I need scarcely add, that this patient was cured, and very speedily, by a change of system; since it was a fever of the most regular character and of no very long duration. In some others, the cure has been effected by change of air, and in two instances almost instantaneously; though I had, even then, some difficulty in convincing my predecessor of the real nature of the disease. How it may be distinguished, it would be mere repetition to say: but it is easy to see how the paleness, emaciation, want of appetite, and so forth, which belong to this fever in so many cases, might be thus misinterpreted by a hasty or careless observer; while, in this case as in so many others, the term nervous atrophy is unfortunately at hand, presenting itself to the imagination of the physician, like so much more of the eternally mischievous vocabulary of physic, and thus quieting the conscience and saving the necessity of further thought or investigation. To conclude, I am satisfied, from sufficient observation, that what I have here said is not

superfluous, though Willis has pointed out the atrophy which follows long-continued fevers; since these are cases of a decided nature, respecting which no error ought to happen; though even here, it is not improbable that the disorder was, sometimes at least, that very obscure and chronic state of the original disease itself which I have described; well known to this observer, if too often neglected by his successors.

The last of the local anomalies of intermittent which I purpose to notice, may perhaps be placed under the *quotidiana stranguriosa*, though this might perhaps, even more justly than the preceding, have been referred to the *Neuralgiæ*. It may not possibly be very common; but having seen three marked instances of it within a very short time, and in a very limited practice, I shall not be surprised if it is not a very uncommon mode, though it will, like all the other local diseases of this class, never appear so until physicians shall become more accurate observers of causes, and pay more attention to that class of disorders which I have here been attempting to illustrate.

In each case, it was easy to determine that the disorder was truly a modification of intermittent, though there were differences. In two, it was the substitute for the more common relapse; while the accompanying and characteristic symptoms were those which I have already described, and while one of the patients had been subject to different returns of it. In the other, there had been no chronic disease before; but the first attack took place in the bladder and in a very young person; while the characteristic circumstances were found in the exact quotidian and temporary nature of the returns; that patient having also been exposed to a marked Malaria. In all, I ought to add, its nature had been at first mistaken, and, in all, it was cured by altering the treatment; the last, in a very pointed manner, by a few doses of kina. If I have ranked these cases under the *quotidiana stranguriosa*, it is to avoid multiplying distinctions; but in one of them the disorder was rather analogous to that irritability of the bladder which attends what is called its catarrh, while the other consisted in a dull pain, with a sense, as of occasional spasmodic contractions; the urine in both cases remaining unaffected. In the third, it appeared to be merely a rigid spasm of the neck of the bladder, producing complete suppression of urine as long as the quotidian paroxysm lasted, and demanding the aid of the catheter.

I shall now terminate this enumeration of the anomalies which I have collected from my own practice, as arising from intermittent fever or its causes; or of the modifications, if this is a better term, under which that disorder appears. I have already stated the impropriety of separating some of them from *Neuralgia*, and the comparative inconvenience of thus distin-

guishing even those that are not of the rigidly local character which would justify this precise term; while I have stated also the reasons of expediency, the unwillingness to shock common prejudices, which has led me to adopt a division that I cannot approve. Hereafter, I may possibly attempt to suggest some better arrangement.

It will nevertheless not be useless in the present stage of this description, to give a general, though an imperfect list of the disorders which will hereafter be described, and which are so intimately connected with those which have now passed under review, that the separation is often as inconvenient as it is arbitrary. It will be convenient therefore, even now, that the reader should foresee what is intended respecting these ill-understood diseases.

They consist then of local headaches, such as *clavus* and *hemicrania*, and also of periodical ones; all consecutively associated with those already described under remittent and intermittent fevers, but, as it happens, distinguished in physic as independent diseases, and hence compulsorily separated here. To these, as bearing a near and similar affinity, I may here add toothach, under a variety of appearances, and the proper Neuralgia of the face, or *tic douloureux*. In other parts of the body, there are Neuralgiæ of various characters, including sciatica, and apparently lumbago, together with the frequent consequences of all those paralytic affections; intimately connected with those already described, and with the apoplexy and lethargy fully discussed under the marsh fevers. Of inflammatory affections, the ophthalmia alone has claimed a distinct place, conformably to established custom; the analogous disorders having already been examined as far as it was necessary to refine respecting them.

This general idea may suffice; and with what has passed, it will convey a broad view of the diseases or symptoms arising either from marsh fevers or from the causes by which those are produced: sometimes palpably connected with a diurnal or periodical fever, at others less visibly so; whether from the actually inconspicuous nature of the febrile symptoms, or from the great conspicuity of the particular disorder or local effect, or from the errors and prejudices, or want of discrimination, which have erected these into distinct and independent diseases, thus tending to impede a correct observation.

The whole of this list, as it has passed and is to come, is, I am aware, a startling one, both from the number and the nature of the diseases. It is easy to foresee the criticisms to which it will give rise: no less than to foretel the remarks which will be made on the former attempt to prove a more general existence and a wider diffusion of Malaria than has commonly been supposed. I shall be accused of extravagant generalization, and of

that absorbing prejudice as to a favoured hypothesis in which physic abounds but too notoriously. But every man knows whether he is attempting to support an hypothesis, or to make an induction from facts; and I may therefore at least say that my belief is a conscientious one; because I have spared no efforts in sifting and balancing evidence, and because that appears to me to be *evidence*; while the conclusions have been drawn by the rules which I have been accustomed to apply to the accurate sciences.

Under such an impression, I should even consider it a crime against humanity not to state my experience; though, if the proofs which I have produced and shall produce do not lead to the conviction of others, this is no cause for surprise; because, in all similar cases, the same difficulties have been experienced, while time effects what argument and evidence never yet did, and while the most energetic opponents often become the most forward teachers of what they commenced by denying.

But, even including what remains to be described under Neuralgia with all that has preceded, and adding also what I am about to borrow from foreign authors, I do not by any means think that I have succeeded in making a complete catalogue of this class of disorders, or that I have done for this subject what some future writer may be enabled to effect, and which, whoever may attempt it, will now find a comparatively easy task; inasmuch as the more difficult part is accomplished, and the mode of proceeding marked out. A more laborious research into cases and records than I have had the inclination to make or the means of making, may perhaps add much illustration to what I have here generalized as well as I could, and may also add some new modes, or diseases, which I do not yet know as claiming to be ranked with my own list. Thus also will a greater range and variety of practice than have fallen to my share, with greater opportunities of observation, add, doubtless, much useful illustration; while they may confirm the present views by new evidence, and further, may perhaps add to the catalogue itself, by tracing symptoms or groups of symptoms hitherto limited to some other well-known disease, to a cause which seems to mimic in its effects so many independent disorders, and, possibly also, to be the sole cause of some that have hitherto been supposed of a widely distinct nature. But I must proceed to state what I have selected as of value in the further illustration of this subject, remarking only, that this illustration is meant to apply equally to the anomalous cases quoted under remittent, which I have so unwillingly separated from the present.

I have, more than once, stated some of my reasons for preserving my own cases and the observations from which I have derived what I must often consider new views of intermittent,

and of this subject in general, distinct from the authorities which I have quoted in their support; the chief of these being the greater weight which ought to follow from original and independent observation, and the consequent generalization of uninfluenced opinions and an unbiassed system. In addition to these, I shall only observe here, that as I should certainly no more have derived this generalization from the perusal of recorded cases than others have done before me, so, while I might have diminished the weight of my own remarks by intermixing them with the authorities which I only found long after this essay was written, I might not also have derived from those authorities the same support as I now hope to receive by exhibiting them in one unmixed mass. I shall now therefore, as on other occasions, select from authors, such facts on this subject as appear to me sufficient, while they are the most illustrative or valuable; some among them comprising cases which are parallel to my own, and the others being instances of simulation or anomaly which have not occurred in my own experience; and all tending, in different ways, to demonstrate or confirm the great importance of these views.

Sauvages, indeed, in the fifth class of his etiological arrangement, appears to promise an entire elucidation of this subject, when, in forming a list of intermittent diseases, he passes censure on those who have neglected them, holding out the cure by means of bark as being certain, when they are known. But when we inspect this list, we find a mixture of trifling refinements, consisting of mere terms, with some of the disorders in question, but with others also, perfectly irrelative; while the conviction of his want of accurate views respecting the subject is completed by the lists of diseases in some of his other classes, and by the utter confusion with regard to them which pervades the descriptive part of his still valuable work.

I will commence with a remark of Celsus, which, rather than pretend to decide on its absolute meaning, I shall submit to the judicious reader. It is, that fever is often very wonderfully an advantage, removing "*præcordiorum dolores*," "*jecinoris dolorem*," "*nervorum distensionem rigoremque*," and "*difficultates urinæ*." This is obscurely expressed; but it seems to me to imply the fact formerly stated, that the local affections belonging to intermittent, often disappear in consequence of its assuming a more decided and regular form. When Van Swieten describes obstinate headachs as cured in the same manner, when a case of palpitation thus removed by an intermittent is described in the *Mémoires* of the Acad. des Sciences of Paris, and when Strack relates a case of asthma cured in the same way, there is no reason to doubt that these are all instances of the same nature as those which I have described; while, that they have not been thus

commented on by the narrators, is a proof that they had not understood what I have here been attempting to inculcate, and that even Strack, who seems to have come nearer to the truth than any one else, from the multiplicity of his cases, had not formed for himself a definite view of the nature of anomalous and simulating intermittents. Where, further, and reversely, different authors, whom I need not quote, lest I should unnecessarily prolong these authorities, relate instances of the change of intermittent into some other disorder, and of its apparent cure in this manner, and when Strack, especially, notes an intermittent thus cured by a dysentery, the explanation is the same, and the last instance in particular, too obvious to need one.

Such substitutions, or apparent changes of the intermittent into a new disease, have also been cured by bark; yet even then, very often, as far as we can discover from the narrator's expressions, rather by a conjectural or empirical proceeding, than from any clear conviction of the nature of such disorders. Thus does Werlhoff name palpitation of the heart, and also rheumatism, succeeding to intermittent, and so cured.

As far as I have read, it appears to me that Cleghorn had arrived nearer to the truth than any one else; yet if he was aware, in his day, of what I have, as I trust ascertained on this subject, he does not express himself fully; while, that what he has said has made no impression, is apparent from the present state of opinions; not merely from the neglect of this subject shown by all the more recent authors, whether writing on the intermittent itself or on the diseases which it simulates, and not merely also from that of practitioners, but from the ridicule, already noticed, which many of the former throw on the nosologists for noticing these varieties; treating them with contempt as unnecessary refinements. Thus this able observer remarks that the intermittent is often accompanied by pains resembling those of pleurisy, phrensy, hepatitis, and lumbago, when the remissions are obscure; while he seems to hint that a marked symptom of this nature sometimes obscured the proper fever, and was a source of error by affording ground for wrong names. And I conjecture also that the same conclusions had been formed by Senac, and others of the older authors, when they describe cases of periodical headach, periodical delirium, and periodical coma, with or without fever; though, possibly, for want of a more definite generalization, these have been overlooked by their successors. To proceed with cases confirmatory of those which I have myself observed.

I have remarked that I had seen an obscure intermittent, mistaken for phthisis, more than once. To confirm this, I may quote Strack, who refers to many instances of the same nature:

all the symptoms, including cough, having been present, while the proof was as complete as in my own, since they were cured by bark. One case of this sort in a female, which he relates, is a proof both of his sagacity and resolution; because the sister had died of an hereditary consumption, and the father was labouring under one. Thus also, Morton, Werlhoff and Tralles describe a phthisis produced by or succeeding to intermittents, attended by the usual symptoms of that disorder, and successfully treated by bark: and an anonymous author quoted by Sauvages, similarly speaks of numerous cases, attended even by spitting of blood and pleuritic pains, which were decidedly periodical in their attacks and as regular as intermittents, and which were also cured by the same remedy.

Here is one example therefore, and as it happens, in the very first of these simulating, or, in another sense, simulated, disorders which chance has brought uppermost in these illustrations, where the authorities are as numerous as they are decisive and weighty. And yet is this one of the disorders, very especially, respecting which the greatest incredulity has been expressed. These at least are names which are not very safe objects of ridicule: it will be for the judicious and philosophical physician who may attend to this subject, to doubt whether a different accusation might not be retorted on those who may nevertheless be left to their own reflections on that subject, as on all else which belongs to this question.

On the subject of catarrh of this nature, if, in suggesting that a certain summer disease of this kind might arise from this cause, I referred to the catarrhalis of Sauvages, I must here remark that the cases quoted under this term are of a different nature, inasmuch as more acute, both in the local affection and the fever, while of such varieties I have no experience. The cases cited by different authors are, however, numerous, and leave the question beyond a doubt. In some, it is so severe as to pass into peripneumony, still betraying itself by an intermittent character, and cured by bark. Monfalcon, as well as Strack, seems to have been familiar with this variety. And a very marked case is noticed, which serves to indicate distinctly the true character of such a catarrh; the peculiarity being, that in a tertian, on the day of the paroxysm, the cough was dry, and on the other, loose.

To confirm the cases of dry spasmodic cough of the character which I have noticed in my own practice, I find in Monfalcon what he calls a pertussis, as a very common occurrence, preceding the paroxysm of intermittent, and cured by bark. Strack also describes a dry spasmodic cough of this kind; but both he and Monfalcon seem to have noticed such a disease, only where there was also a marked intermittent fever present; being ap-

parently unaware of the cases, even more important in practice, because less suspected, where there is no intermittent fever sensible, and the disease is a mere periodical cough.

I spoke at some length of a pleuritic pain attending an obscure chronic intermittent, or as being a substitute for it, often grossly mistaken in practice; and I then referred it to the pleuritica of Sauvages. I must however remark here once more, that his pleuritica is always an acute disease, or belongs to a well-marked, and generally a severe fever, either intermitting, or a proper remittent. Fernelius, Morton, and Strack appear also to have noticed no other cases: but such is their conviction of its true nature, that they decide freely on curing it by bark; a recommendation which has been little followed, or rather has been entirely forgotten, by almost the whole mass of practitioners of our own country, and indeed often elsewhere; since this is one of the cases where blood-letting is especially recommended and especially abused.

Of the arthritica, I have spoken but slightly, having had no experience of any value. But Strack appears to have often met with this variety, and in a very marked form. In some instances, the pains have been universal, but shifting; in others, they have been periodical and regular; in others again, unintermitting, and steadily affecting different parts; while, very often, entirely without fever, so as to have caused the usual deceptions. In these cases, the proof has, as usual, consisted in the success of the remedy, bark. On this variety I must further remark, that it might as properly perhaps be termed the rheumatica, while I need not point out how it illustrates what I have said respecting rheumatism, whether acute or chronic, without fever or with it, constant or intermitting, and of its cure by bark. If Rush also, not very amenable to the opinions of others, finds that there is a rheumatism of this character, it will be for practitioners to reflect on what I have said formerly respecting that disorder, and to see whether they have not very often persisted in a wrong and pernicious practice as to it. If I find further, that Strack notices a gout of this character, it is to this that the term arthritica should rather, and in strictness, be applied; unless it should be reserved for the rheumatism of the joints, should that disorder be ever proved to belong in any instances to this division; while I have, myself, no experience as to this variety.

As to the nephralgic intermittent, I must refer to Morton, as I must confess my inability to understand that variety as it has occurred to him. I have been obliged to notice it elsewhere, as being probably a neuralgic pain; but the disorder as mentioned by him, seems rather to belong to the inflammatory varieties of intermittent, and to rank with those which I have here been noticing.

To pass from these inflammatory varieties of the intermittent, I find that Strack quotes a case of atrophy, or inexplicable debility, which had been attributed to grief, and was cured by bark. This confirms the similar cases which have occurred to myself, when unaware of his remark; in two of which, grief was similarly a preceding circumstance and the imputed cause. It might indeed be a real one, even on this view of such cases; because that mental affection will reproduce chronic intermittent; as it might, when united to the ordinary cases of intermittent, give rise to a new disease, the character of which, it is not difficult to understand, might be modified by the state of the mind; this disorder being, as it is, so essentially connected with the nervous system.

If I have also noticed that menstrual irregularities are frequently produced by the chronic intermittent, or remittent, (it is indifferent which, for the present purpose,) I find this also confirmed by the same author. Ordinary obstructions, menorrhagia, and irregularities, have thus occurred to him as to me; cured by bark under his care, as, by myself, by different means directed to the fever and not to the apparent disease. Chlorosis, an almost necessary consequence in certain cases, is equally noticed by him; while he also points out, what I have not seen, a periodical menorrhagia accompanying the quartan paroxysm. When he mentions that, in nurses, the milk is often suppressed by an intermittent, it is a case which I may quote on account of its analogy, but of which I have not seen an example.

I also remarked formerly, that a hectic fever, attributed to incipient phthisis, to scrofula, or to obscure visceral disease, was often supposed present, when the real disease was the chronic quotidian or remittent, leading to no small alarm and considerable errors of practice. I find that Strack, to whose support I am so much indebted, had made the same remark; while I may add here, what I then omitted, that in addition to the ordinary tests for distinguishing intermittent of this character, it must be remembered that the recurrence of true hectic is in the evening, and that the great majority of intermittent paroxysms recur in the morning.

The presence of dyspeptic symptoms in the chronic remittent, was another occurrence formerly pointed out, together with the erroneous practice which resulted from overlooking the real disease. If I do not find any exactly similar remark in the authors whom I have consulted, I find however what fully confirms the possibility of such a state of things. It is stated by Montluet as being a common disease in the pestiferous tracts of the Lyonnais, and, generally, as of a severe character; though he does not notice the chronic fever, which however we know to belong to nine in ten of the inhabitants of those districts, as

the necessary endemic. Very naturally, according to the prevailing theory in France, he attributes it to gastro-enteritis or gastritis, which, in reality, may well exist to a certain extent, as it unquestionably does in many of the cases of even ordinary dyspepsia. We have the same observation from M. Nepple; who adds that though it is at first confined to the stomach merely, it extends in time so as to derange the liver also.

I recently mentioned diarrhea as alternating with intermittent, or as a substitute for the ordinary febrile paroxysm. I have not, as I then said, yet found a parallel case in authors; but a diarrhea, decidedly not a dysentery, is noticed by many French writers as common in their intermittent districts: a disorder without pain, and generally without fever, often succeeding to the fever, extremely obstinate, and after a cure, easily brought back by slight causes. This, I presume; must be the same disorder which I formerly mentioned as occurring in the hulks at Woolwich; and it is sufficient to have barely noticed the fact, for the purpose of preserving this series of corresponding observations as entire as possible. In Strack, I find cholera enumerated as a disease to be cured by bark; and I might thus suppose that he had formed nearly the same view of it as myself, while if I may judge from the practice, this must sometimes also have been the opinion of certain English authors. Or thus at least, it is probable, must the remedy act, when it is said that bark is the effectual medicine in cases of the excessive secretion of bile.

If I find no case of periodical vomiting resembling those which have occurred in my own practice, I at least see in Strack a case of a continued disorder of the same kind cured by bark, and therefore probably of the same nature; a misplaced intermittent. But with respect to hysteria, he quotes periodical disorders of this nature as being very common, confirming my former remarks; the types having been both quotidian and tertian, and either with or without fever. This is the modification of simulating intermittent, on which he seems most clear; censuring Sydenham for recommending bark in all cases of hysteria, and therefore leading us to suppose that this lauded physician had actually thus cured cases of the hysteria of intermittent, without being aware of the nature of the connexion here pointed out.

This terminates the list of cases which I find in authors as they had occurred in my own practice: it remains to notice a few which I have not seen.

Periodical hiccup, following a terminated intermittent, is one of these; and this I must consider as a species of translation or substitution.

Of neither epilepsy nor convulsions have I met any instances,

but I find them recorded in numbers by different authors. In a case of Strack's, the former disorder succeeded an intermittent, and with the same periodical returns, being cured by bark; and it is a further interesting one, by having been followed, subsequently to this cure, by a pain of the left leg and a palsy. This single case therefore, like many which I have described, shows the connexion between several of these local diseases, and their dependence on intermittent; as there is little doubt that the pain of the leg was a Neuralgia: though this author appears to have been perfectly unacquainted with the nature of that disorder, and has consequently left a serious defect in his otherwise valuable work. That he must have seen it in many other cases than this, is not to be questioned; while I may as well remark here as any where else, that of all those authors which I have consulted as to intermittent, ancient or modern, not one has noticed such a disease, while it is most certain that they must all have seen it: a clear proof that it had never been suspected to belong to the intermittents, as it could not, in that case, have escaped enumeration, and would on the contrary have attracted a principal attention.

Caldera, Bain, Sauvages, and others, also mention the epilepsy belonging to intermittents: but as it is unnecessary to dwell longer on this, I may mention that Strack and others have in the same manner described ordinary convulsions, especially in children, either attended by intermittent fever or not, and the returns being, in each case, periodical, while the same remedy was successful. One marked case, where, in a girl of seventeen, the convulsion returned regularly in the quotidian type, during nine days, each paroxysm lasting twelve hours, and which was also cured by bark, is too explicit a one to be here omitted. Of a cataleptic intermittent noticed in Sauvages, I know, practically, nothing, and may here be content with the term; while to him and his authorities I may also refer for the fact, having nothing of my own to say respecting it.

A periodical colic is noticed by Strack, as if it were a mode or a symptom of intermittent. I cannot exactly understand his description or views as to this case; but as I have had more than one occasion to suppose that the Neuralgia had, in some patients who had suffered this disease in various nerves, appeared in different parts of the abdominal cavity, it is possible that such cases may be of this nature. Unfortunately, his ignorance respecting this disease has impeded the evidence which we might possibly have received on that subject from him, as to these cases.

I have no experience of a case mentioned by Pacoud as not uncommon in the unhealthy parts of the Lyonnais, and which, if it is not precisely a transference or misplacement of the in-

termittent, is too nearly allied to such cases to be passed over. This is the alternation of ulcers of the legs with periods of the fever: and it is at least evident that it bears an analogy to all those cases, such as that of palpitation formerly pointed out, in which, when a local direction or symptom occurs during a chronic intermittent, the fever disappears, or becomes so slight as to attract no notice.

I have here described a palpitation of the heart of a very severe character, as one of the modes of intermittent; but unless the case which I have just noticed as existing in the *Mem. Acad. Sciences* is one of the same nature, I find in authors no cases of this kind: a proof that wherever they have occurred, as could not fail, they must have been misunderstood. There is indeed a notice of a similar case by Storek, but in that one there was an acute fever. Nor can I doubt but that if physicians had taken the view which I have done of this class of intermittents, and very particularly had it been known to the numerous authors on this disease, especially to those of France and Italy, where the opportunities of observation must exceed by a million of times any which England can offer, I should have been easily able to produce hundreds of cases in confirmation, where I have with difficulty found one; and it is very probable also that I should have materially extended the list of these simulated diseases.

There is one yet remaining, however, and that is, amaurosis. It is noticed by Storek, and also by Davidson; the disorder, in this latter case, returning with each paroxysm, and resembling therefore the intermitting palsy of the limbs mentioned when treating of that modification. That these cases are highly interesting, even as to the history of palsy, by showing how this extraordinary fever can influence a single nerve, and how singularly it can exert that influence, I need not urge here; but I consider them also of value, from the bearing which they appear to have on Neuralgia. Hereafter, I shall have occasion to show that this disease is the similar localized action of an intermittent, and that, in it, pain and palsy are intimately associated. And if I shall then also have occasion to suggest that amaurosis may be the produce or consequence of a Neuralgia which has occupied the eye, that suggestion will find no small confirmation by the present facts; while it may eventually also be proved by future observation, that this very obscure disease, amaurosis, is sometimes at least, and possibly much oftener than even I am inclined to suspect, connected with or dependent on intermittent of irregular character.

In terminating this part of the subject, since I cannot fail to be aware that it will, as well on a general view as in many of its details, if not in all, appear matter for doubt and incredulity,

and especially to those who have not studied or been familiar with intermittent fever, it might be proper, and possibly useful, to give a general view of the reasons, *a priori*, why that which appears to me to be proved by evidence, may be true, or ought to be true; to confirm by a general view of the action of the assumed cause, the facts here referred to that cause, as being in reality such as ought to arise from it.

To do this however effectually, and by a perfect induction, it would be necessary that we should be able to assign the proximate cause of intermittent, or that primary change in the functions of the body, or in the parts affected, which is produced by Malaria. Here however we are at a stand; or the very foundation of a complete philosophical induction is wanting; since, under the head of remittent, I have already shown that we are ignorant of the nature of this first effect, or of what, in medical language, is called the proximate cause.

I must therefore leave this part of the history of intermittent, a subject which generally occupies so conspicuous a place in medical systems, a blank, otherwise than as I have already noticed it in the case of remittent; since I have never been able to discover how knowledge is augmented by loose conjectures and by unmeaning terms and substitutions of terms. But that ignorance, the want of the fundamental step, does not prevent us from tracing useful analogies beyond this first foundation; while we may even safely and philosophically venture to do this by the adoption of an unknown effect or cause; effect on one side as it is cause on the other; or, to derive an illustration from mathematical reasoning, by the substitution of an unknown quantity. If useful truths are thus elicited in this department of philosophy, so may they be in the present case, and on very similar principles. On that ground, my task will be to prove, that the cause which operates on the whole nervous system, producing a certain effect which is the unknown quantity and the cause in this case, does operate also on less than the whole, and further, on its separate portions: that the visible effects are a joint result of this unknown action, and of the nature, or natural condition, or offices, of the different portions of the nervous system thus affected, and that these are the diseases under review; and, further, that the analogies which pervade the whole, are such as confirm the proof of a common, if unknown, cause and effect: acting in an analogous mode on nerves performing different natural duties, rendered thus diseased, and each disease being varied in consequence of the nature or functions of that particular portion of the nervous system which is thus deranged.

To be able to form such an induction, would be, it is plain, to add the philosophical reasoning, and the proofs, *a priori*, to

the evidence; and to give to the whole system that form which philosophy demands, and which will not be without value, though the actual proximate cause should for ever remain unknown. Even to approach to it, is to give a certain stability and unity to the present views; since it is an approach to that perfect generalization which constitutes science, and with a modified degree of which we are often compelled to be content, in sciences far more within our reach than physic. This is the attempt that I propose to make; but as it will be convenient first to describe all the other diseases which I have been induced to rank under the same cause, I must defer it till those have been discussed.

CHAPTER VIII.

On the Cure of Intermittent Fevers.

THE cure of intermittent fever in its common forms, or rather the remedies that are in use for it, are all so well known, that my task here will be but to repeat, since I have nothing strictly new to propose on that subject. It will be useful however to examine some of the remedies at a little length; for many reasons, and among others, for the light which they throw on the nature of this disease. On what may belong to the cure under the anomalous forms already described, the remarks will be best introduced where they will add the most illustration.

It is a somewhat lax and theoretical division of these remedies which I must here adopt, because I cannot easily discover a better one; as a true one could not indeed easily be formed, without knowing previously in what the disorder really consists, and without knowing, further, how medicines act on the body: a species of knowledge in which physic is as yet very deficient. The most obvious division then at present, is into those remedies which act on the mind alone, or on the nervous system through it; those which seem to act on that through the body, and the effect of which is judged to be solely on that system, from its rapidity; the tonics, which, if they do thus act, may be supposed to exert some other power also, or that power in a different manner; and lastly, changes of habit, be the nature of

those changes what they may. Of other remedies, such as blood-letting, not to be ranked under any of these heads, and very generally, of incidental or extraneous utility, if I may use such a term, I must treat separately as I best can.

It is here, however, very essential to commence by distinguishing between the simple and the chronic intermittent, or between a new disease and an habitual one; as the remedies that are effectual in the first, act with much less power in a disease that has relapsed or returned, and as, in cases of long duration, they seem to lose their power altogether; while it is from confounding those two very distinct conditions under one general term, that so many useless remedies are applied to the latter, and that so many failures occur, even in the use of valuable ones. I know not, however, that any distinction is necessary as to the types of intermittent; since, in all of those, the remedies are the same, requiring only to be regulated differently, by considerations drawn from the occurrences and lengths of the paroxysms and the intervals. Let me also here premise, that while I do not propose to discuss this subject as to the severe or malignant intermittents of hot climates, whether these be simple or complicated, so, in as far as this mode of marsh fever approaches to remittent, the methods of cure have been already examined, though it will here be impossible to avoid some repetition.

The simplest remedies are those which act on the mind, or through it; while their number is far greater than I choose here to record. But while there can be no doubt of their powers, and therefore of their value, it must be remarked that these are the remedies above all others, the action of which is limited to new diseases, or to those which have at least not relapsed often; while they are, further, scarcely ever successful, except where all the circumstances of the disorder are regular. Thus also do they appear to succeed better in tertians than in quotidians; while there seems no certain experience of their success in remittent. I ought to add also, that their action requires the belief or the confidence of the patient; or, Faith; without which, they are invariably nugatory, otherwise than as any other strong mental impression, such as disgust, fear, and so forth, may be the substitute for this. Thus it is that superstitious practices and charms, which succeed with the vulgar and ignorant, are utterly inefficacious with the incredulous, or with those who may possess a superior education; while among those, however, certain nugatory remedies will cure the disease, by inspiring that confidence to which either ignorance or false reasoning is necessary, when they fail with superior minds, capable of reasoning respecting causes and effects. In whatever way these remedies act, the fact itself is an important one as relates to the theory

of the disease; since that action, and the mode of it also, the suddenness, among other things, go far to prove that it is situated in the nervous system, or in the brain and nerves; and that to influence that system, directly and solely, is the cure, and probably the end to be aimed at by every remedy.

The charms used for this purpose, consist in mere words, spoken by some person reputed to have powers akin to the witchcraft of the days of superstition, or in texts of Scripture or other words attached to the person, like the periapts of antiquity, and the fetiches of Africa; contrivances among which the mystic word *Abracadabra* is or was one of no small note. Amulets, equally successful, are the remains of a very general practice, still preserved, if unwittingly, in the coral and bells of children, in the ear-rings of the French populace and military, and, with the open acknowledgment of superstitious folly, in the anodyne necklace even now used for dentition in children, and by those also who are reputed to be possessed of sense and education. Thus also is a piece of glazed or cambric pasteboard alone, found to be a cure for tertian; as are many more applications equally inactive as medicines, which it would be a waste of time to enumerate; since, provided the superstitious confidence of the patient can be excited, the application itself may consist of any thing. An endless number of plasters, appearing to possess the active medicinal qualities which they have not, might be added to these, as of more extensive powers; since they excite, by their names or sensible properties, the necessary confidence, in a class of persons far above the most superstitious and the lowest vulgar, at least in rank, if not always very strongly distinguished from them in mental powers.

Under this head, if I mistake not, I must also class a vast catalogue of internal remedies; medicines of the most discordant properties or of no properties at all, but having equally gained a degree of reputation, greater or less, from occasional or partial success depending on this principle. These form that mass of trash with which old women, of whatever sex, torment their neighbours, with that intrusive self-conceit which belongs to all voluntary empirics, and against which it is in vain to remonstrate, by showing that their utility is nothing without confidence on the patient's part, and that, in the chronic disease, they are utterly void of power, even over imbecility and ignorance.

Not to enter into an enumeration of a catalogue with which I might fill many a page, and where I might even commence with Cato's prescription, a formula well worthy of ranking with the balsam of *Fierabras*, I am even of opinion that bark itself sometimes acts in this manner; an effect not very improbable, when the universal confidence in it is considered. It is possible, I will not deny, that the celebrated Sicilian remedy, powdered

charcoal, may have some medicinal effect, but it is also not unlikely that it acts solely in this way, since it seems to have no action on the system and to undergo no changes in the body. With respect to spiders or other remedies exciting mere repugnance, they may act on the faith of the patient; but they seem rather to operate by exciting disgust, one of the strong mental impressions which removes this disorder: and this I also conceive to be the action of cobwebs, which, containing much ammonia united to some highly putrescent animal compound, form an exceedingly nauseous medicine.

Thus also does a strong mental impression produced by moral, and not by physical causes, cure the intermittent, or at least remove a paroxysm in similar cases. This effect has often been produced by fear, by the sudden necessity of exertion, by hope, or by joy, by unexpected success, and even by sudden grief or disappointment; and if in a recent work of African travels, the power of the sudden presence of a beautiful woman in this manner may excite a smile, there is no reason to doubt the truth of the narrative, as it is by no means a solitary case. I have only to add that in all such cases, the cure of but one paroxysm is often the cure of the disease; as if it was a habit not yet so firmly established, but that the mere interruption of it was a sufficient remedy.

With respect to the effect of charms, however, it is yet necessary to add one remark, for the sake of the higher vulgar, who are apt to lay too much stress on their efficacy: not perhaps on that of cambric paper, spiders, and abracadabras, but on medicines of apparent power, the action of which is, in reality, on the imagination. It is this; that the ague which is the most severe, is, in fact, very often the slightest disorder, paradoxical as that may seem. It is a disorder which is most violent in its commencement; or the fever, as the most perfect and regular, is then the most distressing, both to the patient and the spectators. But severity and obstinacy are different things; and thus also though a new disease is more severe in general than a relapse, it has not the same persistence. It is the ancient and chronic case which appears slight to the by-stander, and which, whatever the patient may suffer under it, is, even to him, not such a cause of absolute disability as a new disease. Yet this is precisely the case in which it becomes incurable, or difficult of cure, resisting medicines as well as charms: while the vulgar, naturally enough according to their own ignorance, conclude that what cures a severe disorder must, *a fortiori*, be even more efficacious in an apparently slender one.

The next division of remedies, may be sought in those which do act powerfully, and suddenly also, on the body, and through that on the nervous system, but whose action is temporary.

With respect to the whole of those, their effects on the disease seem to be restricted to their action on the stomach immediately before the accession of the paroxysm, or at least not long after its commencement. Their palpable effect is that of shortening or preventing the cold stage, and inducing the hot one; or else of shortening or diminishing the force of the whole paroxysm, or finally of preventing its occurrence altogether. Thus does the interruption of one paroxysm sometimes terminate the whole disorder; and hence such remedies act in some cases almost like charms; acquiring, in consequence, in the eyes of the ignorant and of the self-constituted prescribers with which the world abounds, a universal reputation which they are far from meriting. Occasionally, by repeating them before subsequent paroxysms, should they not entirely succeed at the first exhibition, they gradually reduce the force of these, and thus the disorder disappears. But it is very rare, that, in the chronic and confirmed intermittents, they do more than remove a single paroxysm, or diminish its inconveniences.

As to the medicines themselves of this nature, they consist of a variety of substances commonly considered as stimulants; and under whatever forms or combinations they may be given, or of whatever they may consist, alcohol, opium, and spices, will represent the whole. Brandy and pepper, brandy and laudanum, brandy with capsicum, or gin, or rum, or large draughts of hot wine, with spices or without, will serve as sufficient specimens of these remedies under their popular forms; while physicians need not be told under how many shapes they may be extracted from the pharmacopeia. Among these remedies before the fit, or at its commencement, I ought not however to omit the application of the tourniquet to a limb; but as it does not appear to have produced the advantages which were asserted by the person who introduced it, it seems to have fallen into just neglect.

This may suffice for a class of remedies, of which the application, to be useful, must, in most instances, be made before the fit, but of which, some also are applicable during the early part of it. If I could not make a division which would not have had its inconveniences, I must now therefore describe the treatment, as far as it is simply and rationally medical, through the paroxysm; yet while noticing bleeding and some other matters, mentioning them merely as they relate to the time of using them, and reserving till hereafter, that discussion as to their merits and utility, which, from its length and intricacy, requires a separate place.

The treatment in the paroxysm is rather palliative than curative. Warmth and warm drinks in the cold fit, the reverse in the hot one, with rest and silence, comprise the ordinary con-

duct necessary. In the former, purging, and still more, bleeding is improper; this last even causing sudden death. Emetics, however, will frequently bring on the hot stage, as, given before the cold one, they sometimes prevent the paroxysm; which also, I may here remark, is often brought on when not actually impending, by cold drink, by exposure to cold, and by mental affections of various kinds. I cannot discover the purpose of blistering on account of delirium, in the hot stage, because that will terminate before the remedy can act; while in any view, it is an idle suggestion, except in the severer diseases of hot climates, where local affections of the brain are demonstrated or rendered probable by the character of the epidemic. It is in the hot stage that purgatives are best administered; and this is also the period for blood-letting, when that is judged proper. Nauseating doses of antimony, and opium, are among the remedies applauded by many, in this stage; but while we, in England, are ill entitled to judge of their value in the malignant or severe intermittents, they seem unnecessary, to say no less, in a general class of disorders, the cure of which is intrusted to the remedies given during the intermission. This remark may equally apply to sudorifics. I shall proceed to the question of bark and of the other remedies used in the intermission, before I examine further into the value and use of the means now described.

The last division of the acknowledged remedies of intermittent, consists in the medicines which are called, it would not be very easy to know why, tonics. These may all be included under vegetable bitters, astringent vegetables, and metallic substances supposed to possess an analogous power; it would be equally difficult to say on what grounds, so unphilosophically lax are the ideas attached to the term tonic. At the head of each of these three divisions, we may place, respectively, the *nux vomica*, the Peruvian bark, and arsenic; and if numerous other substances can be mustered in each division, I know not that there is any reason to consider them in any other light than as varying in power, while under each head, all of them seem to be less effectual than the three which I have named.

I need not now give a catalogue which every pharmacopeia can furnish; but it is necessary to explain the mode of administration. This is, to give the largest quantity which can be taken without offending the stomach or producing disturbance, (since the rule seems the same for all,) during the intermission, and to avoid their use during the paroxysm. This rule, however judicious, must not however be drawn too strictly; as in the case of short intervals, such as too often occur in the quotidian type, it is necessary to break through it; in which case I must however

say, it is always best to avoid the use of such medicines during at least the cold stage.

It is not within my plan to waste words on the discussion of doses and formulæ, any more than on the varieties of these medicines; as such matters abound in every treatise: but I ought to observe that it is often useful, particularly in the cases of a violent paroxysm with short intermissions, and especially in the quotidian, to unite this class of remedies to the former; or to attempt to weaken the paroxysm, so as to diminish the duty expected from the other remedies or to gain more time for their administration.

If this is the most generally adopted, and also the most generally efficacious of the different classes of remedies used for the cure of intermittent fevers, I must still, as before, limit their efficacy chiefly to new or simple cases, or to those which have not become a confirmed habit. It is a lamentable truth, that they are of little efficacy when these disorders have become chronic, and that they seldom produce any effect whatever on a disease of long standing; such an opprobrium does the confirmed intermittent remain to physic and physicians.

This constitutes all which it seems requisite to say at present respecting the general treatment by means of the acknowledged medicines, as I must hereafter quote a few opinions on this subject: but a few remarks of an explanatory nature will still be useful. These relate chiefly to bark and to arsenic.

If, in much of foreign practice, it is the custom to give as large a quantity of bark as can be taken, within one, two, or more intervals, and then to cease; recommencing at some distance of time, should it fail, it is more common with us to give it in less quantities, and to persevere without limit. It is difficult to decide always on the comparative advantages of these two modes, from the great differences in the character of the disorder. But, while I must return to this question immediately, one remark seems well founded, however often neglected; and it is, that the perseverance in bark beyond a few days is nearly useless; while, if it has been said that whenever it offends the stomach it produces no good effect, this is contradicted, as I shall presently show, by other physicians. And further, it seems often true, while even less known, that where a large dose is inefficacious, a small one is often useful; or, in reality, that ten or fifteen grains will sometimes produce a better effect than a drachm. Of the various preparations, the now common combination of kina, its sulphate, seems the only one which deserves a preference to the bark in substance, while it will probably prove to be in every instance preferable.

Having thus simply stated the use and application of bark,

whether in remittent or intermittent, since the same remarks apply generally to all the modes of marsh fever, I must now quote from authors some particular opinions on this head, leaving to the judgment of the reader to decide for himself on what would involve endless questions and criticisms. A treatise that should attempt to strike the balance among opinions in physic, would never end: but a writer does not perhaps perform all his duty, if, after giving what he conceives is best, and what he thinks sufficient, he does not at least inform his reader what others also have thought. But even here I must select, for, even here, I should fill more pages than enough with variety and discordance.

Millar, Jackson, Lind, and many more, agree that bark does not produce visceral obstructions, but, on the contrary, prevents them, by checking the fever, which is their true cause. Brocklesby and Strack proceed even a step further; since they say, that, even after the cure of the fever, this remedy removes the obstructions of the spleen, and that it is even the best mode of treating the consequent dropsy. On the other hand, there are authors, perhaps even more numerous, who assert that the bark is the real and efficient cause of these obstructions; while, not to quote minor facts and authorities, I shall content myself with Ramazzini, who, in accusing the bark of producing dropsies in this case, quotes at once, an instance of four hundred soldiers becoming thus diseased, in one mass, and in a few days, in consequence of its use. If we should be inclined to think that the Italian here proves too much, we must also recollect the prejudices so long and bitterly entertained against this remedy; while we must also remember that to confound causes and effects is not very uncommon, that there is a considerably assimilating power in hypothesis, that gastro-enteritis is, with some, the cause of fever as of all other diseases, and much more which I shall leave to the judgment or discernment of the reader who has already at least discovered my own opinion, and can therefore require no more of my criticism. Whenever I find myself overwhelmed by facts like Ramazzini's, I always recur to the physician whom I once heard at the Institute, in Paris, who proved, by some thousand cases selected from Italian and French hospitals, that no intermittent fever ever lasted beyond fourteen days.

With respect to the administration of this remedy, opinions are not less various, and often not much less contradictory. A few must suffice as specimens; while the reader must, for the most part, exert his own ingenuity in trying to reconcile or account for them.

It is always unsuccessful when bleeding is necessary, says Rush: it is always pernicious or destructive, say the majority of

French practitioners; while, unluckily, the preliminary question as to bleeding, is not in itself agreed on. Gastro-enteritis, inflammation of the stomach and bowels, one or other, or all, is the cause of the fever, is the very disease itself, according to present France: and the theory being thus settled, it is obvious what the practice must be. An equal number prescribe it from the beginning, even in decided continuous fevers of this character, and in all cases except where demonstrable inflammation is present: nearly as many have proved that it is the remedy, even for the inflammatory state first quoted; or whence does it cure the disease at all, and why does it cure the intermittent ophthalmia?

Of minor matters; as to doses, Millar has given an ounce in a dose; Jackson, two ounces in eight or ten hours, in bad remittents. Cleghorn delayed it till the fifth day in tertians: many hundreds give it after the first fit, and often succeed in thus stopping the disease. If the intermission is short, it must be given through the whole fever, say some: in that case, say others, it is not to be given at all. Need I quote Pringle, Hillary, Brocklesby, Balfour, Johnson, and hundreds more, for examples of such differences? must I not rather say, that if there are prejudices, if there are hypotheses, and if there also are ignorance and bad observation, there are really differences of climate, constitution, seasons of fevers, which if they will not justify all that has been said on opposite sides, will at any rate teach us to be cautious in judging of what we have not seen, and should induce us of the medical profession to cultivate a little more forbearance towards each other's opinions than is very customary.

It is a variation of practice, worth noticing here under the head of authorities, since I have no experience of it, that in France, it is very common to increase the doses gradually through the intermission, or if it be long, not to commence at all till within six or eight hours of the expected return. Lastly, since I might not easily end on this subject, if it is a very prevailing opinion that bark is ineffectual unless the *primæ viæ* have been previously cleared, the French consider this as utterly unnecessary; while when Millar and many more assert that this remedy is useless should it purge or vomit, Jackson and Munro are equally decided that it is just as efficacious under those circumstances as when it is retained. And the former of these authors asserts, that no man dies of fever who has succeeded in taking two ounces of bark.

With respect to the varieties of the bark, after all that I have read or seen, I do not feel sufficient confidence to discuss their relative merits, and shall therefore trust to the reader to discover for himself the truth, if he can, as to the pale, the yellow; and

the red bark, the *Jamaicensis* and the *Caribbea*. Yet if kina is the efficient substance in Peruvian bark, it is plain that the yellow bark must be the superior remedy, since that variety contains a larger proportion of this essential salt, than any of the others. Of the value of magnesia or of lime-water as additions, I am doubtful: as to that of acids, it rests, for obvious reasons, on better grounds.

As to the bitters, after the *nux vomica*, it is scarcely necessary to enumerate quassia, wormwood, *carduus benedictus*, snake-root, gentian, centaury, chamomile, all of them remedies of a certain celebrity in different hands; while *angustura*, *Swietenia*, *cascarilla*, Winter's bark, willow bark, galls, oak bark, and even alum and more, have had their several abettors, just as, in the metallic class, iron, copper, silver, and zinc have taken their turns, among those who seek in variety for some mysterious powers which they perhaps scarcely acknowledge to themselves.

I am now bound to make a few remarks respecting the value and use of arsenic, which has been lauded beyond its merits, and often also condemned and shunned, rather from the fear excited by its name than any thing else. That it often offers a rapid and effectual cure for the intermittent, admits of no doubt; but it is as certain that it very often fails, while the decided prejudices against it, almost every where except in England, which have rejected its use, put it out of our power to discover, by a proper and sufficient experience, what its real value is.

I have little therefore but my own experience to judge from; and this is, in the first place, that it is less efficacious than bark in diseases of a highly febrile character and of long duration; or that as the intermittent approaches nearer to the remittent, arsenic becomes an uncertain remedy, and that in the very chronic disease, it appears to me to possess no power at all; though I know not, that, in these latter cases, it is more nugatory than any other remedy. In a new and a very simple intermittent, and in the tertian particularly, it seems to offer a more rapid remedy than bark, while its superior convenience is manifest.

But if I were to compare it with bark in those cases where the disease puts on the anomalous symptoms or characters which I have described, I should often judge it a more effectual remedy than that; and although my own experience is far from sufficient to decide this point, I have also found it the best medicine in all the cases of the most purely local affections, or in the Neuralgia; not but what it fails much too often, even in these, and particularly where they are of long standing.

In as far as it does fail, there is reason to think that the fault is very often in the remedy itself; and I cannot concede that the well-known combination of this substance, rather, of its primary acid with potash, commonly called Fowler's solution, is the

proper mode of using it. It is certain at least, that when this has failed, the same substance, or the common arsenic of the shops, in powder, has often succeeded, and even immediately. Of this, the sixteenth part of a grain is an equivalent to the common dose of the solution, and capable of being repeated three, or even four times in the day; while it is conveniently divided by means of white sugar, which also aids in reducing it to that fineness of powder which cannot be too perfect. With respect to the superiority of arsenic in substance to its neutral salt, I may quote the experience of a friend, who, residing in a district where *tic douloureux* is extremely common, and where the solution seldom succeeded, now reports to me that he finds the powder almost infallible; giving it without the least inconvenience to the extent of 1-12th of a grain for a dose, and finding that its utmost limit is 1-8th, which can seldom however be endured, though having administered 1-6th without further evil consequences than gripings.

As this remedy is held to be attended with danger, and also with ultimate bad consequences, I must here bestow a few words on that subject. When given in excess, short of its properly poisonous effects, the symptoms are various, but the following have been observed; headach, sweating, tremors, nausea, vomiting, griping pains, with spasms of the lower extremities, and, sometimes, affections of the urinary passages; more frequently a red eruption on the skin, with swellings about the eyes and other parts resembling that produced in what is called a surfeit, from eating muscles, and, in particular persons, many other substances. I must also remark, that, as in this latter case, there are individuals who thus suffer from it, even in the minutest doses, and that the eruption of the skin appears to be one of the most common effects, generally however limited to the face and the breast. That effect, together with slight nausea, are the ordinary, and commonly the sole ones, unless the dose be excessive.

These symptoms naturally produce alarm, when the patient knows the medicine which he is taking; but I have never seen any ill consequences resulting. They are all easily removed by brandy, as is the common surfeit, or by opium, and if not, they cease of themselves in a few hours. And I am entitled to judge thus, from having known different patients persevere in the remedy for many days, or even weeks, in spite of such effects, even when they were very severe; while their occurrence does not diminish the useful action of the remedy. It has been said that camphor prevents them from taking place; but my own experience as to its effects of this nature is imperfect.

Besides these striking effects, it happens that, after some days' use, the effects of arsenic become sensible in other ways;

though, even here, I have not found any further inconveniences following. The pulse becomes quickened, and the skin hot and dry; while there is that peculiar feeling of languor and debility, well known as the effect of mercury acting on the constitution. Inflation of the intestines, or a swelling of the abdomen, also very often attends this condition. If these effects are comparatively endurable by the patient, they seem to be such as could not be continued long without hazard; though I have not myself seen any further evil consequences. In this case, however, it is prudent to interrupt the use of the remedy, and to interpose purging, by means of which the effects in question disappear.

This is evidently an accumulation of the effects of this metal, analogous to what occurs in the use of mercury; and hence it has been argued that the poison might permanently attach itself to the body, so as, even at some far distant time, to produce evil consequences. It has been particularly said that it has induced palsy, or paralytic effects on particular nerves, when thus given in Neuralgia. But this is to mistake the result of the disease for that of the medicine; since I shall hereafter show that such effects are common as following the painful state of the nerve, and occur equally whether any medicine or none at all has been used. And when I have pointed out how often paralytic affections are the produce of intermittent, noting also a case of the shaking palsy thus arising, it is easy to see how, under ignorance as to this natural result, a discredit must often have been thrown on this remedy from false inferences.

Nor is it a sound induction to say, that arsenic must produce these effects under the form of a medicine, because when gradually breathed for a course of years or months, as it is by workmen in different manufactories, (but very rarely now that its use in glass-making is abandoned) it induces palsies of a local or more general nature. In these instances, the dose is incomparably greater, as is the continuance; and between the two cases respectively, there is exactly that similarity which occurs when mercury is gradually introduced through the lungs through a long space of time, in water-gilding and other manufactures, and when it is administered as a medicine. In the former case also, the consequences are palsy, and not the common effects of mercury as given in medicine; so that it is possible the mere mode of introduction may, in both cases, have effects which do not apply to the usual mode, in medicine, of taking it through the stomach. With respect to foreign, and particularly French opinions as to the use, or rather the danger of arsenic, they are expressed with too much violence to command much attention; since they are not the result of experience, but of the sound of the word; while they are but in conformity to that somewhat party feeling, which, in finding that mercury also is misused by

English physicians, sees no medium, and passes on this valuable medicine an almost universal condemnation.

I must here, now, not forget to add, that in France, great praise has lately been given to a combination of opium and antimony, (laudanum and antimonial wine) given in moderate doses, and in the manner of bark, through the intermission: but I have had no experience of it, and cannot find that it has been adopted in our own country, so as to admit of any deductions as to its utility or effects.

Such is all that I think it requisite to say respecting the remedies of intermittent, as far as they consist in medicines. But I must still inquire respecting other remedies that have been used or recommended, whether for their good or evil effects.

The cold bath has been tried, and I have little doubt that it might succeed, and has succeeded, under the same circumstances in which charms, or any sudden impression made, whether on the mind or the body, are successful. But, to this, its utility must be limited; unless indeed it might operate, if persevered in for some time, upon the chronic disease, in the same manner as any great change of habits does. Having no experience however, I can only point out thus its possible effects; leaving to practical physicians to consider the obvious cautions required in adopting such a remedy. I can equally suppose that the hot or the vapour bath might prove a remedy, if administered before the paroxysm, on a principle analogous to that which renders brandy and opium useful; and thus in fact has it proved one, although I cannot find many records of trials on this principle. But as far as my own observation has gone, it is pernicious in the chronic disease; aggravating the relapse itself, and producing a tendency to more frequent and more severe recurrences. That this should be its effect, might be also anticipated, from the fact that the same consequences follow from the use of any remedies that induce debility, as from all debilitating actions, be these what they may. If the administration can be so regulated as not to produce that effect, it is easy to modify this reasoning.

I have already said so much respecting the use and abuse of mercury when treating of the chronic remittent, that I need not go over that ground again; since the remarks apply equally to intermittents, with such modifications as must be left to the judgment of the practitioner in each case, and on which it would be endless to give minute rules. The general principles must be adverted to; and they are, that it may be useful by removing glandular affections, or by producing a new habit, in the chronic cases, or a new disease, in the acute ones; and reversely, that it will be pernicious by inducing debility, or by operating in a manner that we cannot definitely understand, on the nervous system, so as to increase that, which, for want of a real expla-

natory term, we must call by the customary and vague one, its irritability. That mercury does, even in a healthy subject, produce a high degree of both these effects, is familiar; and it is therefore easy to see how it may prove the pernicious medicine in this case, which ample experience has shown it often to be.

The remarks which I have made on purging, have also been chiefly anticipated; as I have further explained, in the same place, the different actions, or powers for evil, of the different classes of these medicines. All this applies to every form of the intermittent; and with the same distinctions as to the simple or new, and the relapsing or chronic disease. In the former, and under circumstances in the variety of the disease, or in the constitution or condition of the patient, or in the accessory symptoms, the nature of which it would be superfluous to explain, since they belong to general and well-known principles in physic, purging may often be positively useful; as, to maintain the regular action of the bowels, is always indispensable. But in the chronic varieties, and in these, in proportion to their duration and the debility of the patient, while it is not less indispensable to maintain the bowels in a natural state, actual purging is almost invariably pernicious, unless applied to for accidental and specific purposes, of which every physician can judge. The common, the very common effect of it, is to cause relapses or returns of a disorder that has ceased, and thus to render chronic a case that might have terminated; and when what are called courses of purging medicines have been resorted to, whether from any theory of their utility, or from a mistaken view of the symptoms and their cause, it is not unusual to see produced, the most inveterate cases of chronic intermittent, and very generally also to find them under some anomalous form that might never else have occurred.

It is for this reason that I may be pardoned for urging this subject again, and the more particularly as it applies equally to all the cases of chronic Neuralgia under its endless modifications. In some of these, as in some of the anomalous intermittents that have been already described, there are symptoms, or cases, in which purging is reputed to be the true or the sole remedy; such disorders being viewed as of an independent nature, or as depending on some imaginary, or even real, causes of their own; the possibility or probability of their arising from intermittent, or being modes of intermittent, being overlooked or unknown. And while this practice is thus esteemed, it has also, within a few years, become a fashion in England; or has acquired the reputation of an almost universal remedy, from writings and causes to which I formerly alluded, and with the usual pernicious consequences which attend every active system of practice thus rendered fashionable and thus empirically adopted. And also, that it is not merely a fashion, but one peculiar to ourselves, they

know full well who know the state of continental practice, and the horror felt by French physicians in particular respecting it, and against us; though, as usual in all such cases, the system of France runs to a pernicious extreme in the opposite way.

It is not within my limits to note all the evil consequences daily produced by this thoughtless and almost universal practice; since the history of its abuses would in themselves make a volume. But, be these what they may, it is not physicians who are now to bear all the blame, whatever share they may amply merit; since, while in our day of universal pretensions to knowledge, it is the fashion for every one to suppose himself a physician, at least in his own case, according to a vulgar proverb, this is also the class of medicines which every one thinks he can administer with safety and advantage. With us, it might be imagined that "calomel and salts" were not merely matters as simple to understand and as intelligible in their effects as articles of diet, but that they were almost necessary articles of diet themselves; nor is it ever imagined that they can do harm, any more than it is ever asked by these persons, whether self-empirics or trading ones, what the nature or causes of the disorders to which this universal remedy is applied may be, or what the circumstances or constitution of the patient. If the united ignorance and presumption of self-empirics could ever find an excuse, they might indeed claim it in this case; when they see practitioners of high fame, if notoriety be fame, following similar universal systems of cure, applying salts or "the blue pill" to every disorder or symptom in the nosology, and without inquiry; and thus, while saving themselves all the trouble of thinking, rendering physic an art which may be practised by any one without previous study or present observation; since the Alkalest does all.

If it is strong language, it is scarcely exaggerated to say, that this universal tampering with salts and calomel is one of the greatest misfortunes which fashion and folly united ever entailed on England; while it is even matter for satirists, to find that a course of the waters of Cheltenham or Lemington, at once powerful and precarious, a system of active practice which can never be neutral, and which if not useful must be pernicious, is held a fashionable necessity, a mode of passing time, equivalent to any other expensive system of idleness on which society has stamped a certain reputation. But this is a small portion indeed of the evil, when we review the whole of this most extraordinary fashion, in a manner, however, in which I cannot undertake to examine it here. Whether the old Roman practice of emetics was more or less pernicious than that of the dinner-pills or the morning salts, it is not here my business to inquire; but he is widely mistaken who imagines that the injury produced by

frequent or habitual gluttony is to be repaired by the further injury resulting from frequent or habitual purgatives.

And how far the health of families is preserved, or the rising generation, (to use a vulgar term,) rendered vigorous in consequence of the maternal medicine-chest or the daily visits of the apothecary, is amply evinced by the fact, that, in such families, and in such individuals, and often through a long life, sound health is as unknown, as a state of perpetual disease is common; while, with the usual inconsequential reasoning of vulgar observers, the diseases are supposed to demand that practice which is in itself, the very cause of them. Let any family, or any individual thus educated on purgatives, (provided indeed that the health is not utterly ruined,) take but courage enough to destroy the medicine-chest and lock the door against the physician, and they will soon find which was the cause and which the consequence.

And in spite of the wide prevalence of these opinions and this practice among physicians themselves, I can fearlessly appeal to hundreds, who will confirm by their own experience, that in innumerable cases of what are called nervous diseases, in ill health under endless forms, it is sufficient for the cure, simply to abandon the system of purgatives, and leave the patient to what is called nature; while this is very generally the real cause of the advantages derived from the adoption of a different class of remedies, inactive in themselves, but serving to amuse the patient while they become substitutes for what was pernicious. This also is the very frequent cause of the advantages of travelling; the effect of which, in such cases, is to suspend this destructive practice, and, very often, by simply abandoning the practitioner and the system under which it had been established.

It would be easy to illustrate all that I have here said, by facts and cases without end; but there is no observing physician who cannot produce abundance from his own experience, while to the opposite class such demonstrations would be useless. One however I may name, a single case out of hundreds; because it is an instance of what I must here notice through a few paragraphs more, namely, the effects of this practice in producing what are called nervous diseases. The patient was a single lady of thirty, of a vigorous and healthy family, and to all appearance of an originally vigorous constitution, without organic affections, and who had never known any real disease beyond the usual disorders of infancy, in their most slender forms. Every nervous affection enumerated in Whytt's formidable catalogue, had been however her torment almost from childhood; and on making that inquiry respecting her own practice which experience has taught me to place among the first, the answer was, that she had taken salts or calomel almost every day since she

was eight years of age, and was surprised that she should still be ill, and not in the least degree better.

Such, in reality, are the common effects of this system, even in sound constitutions, or where no real disease is present; and though other practices, which I shall hereafter have occasion to examine, have their share, I believe that this universal use of purgatives is the leading cause of the nervous disorders so prevalent in England, and which are obviously increasing every day. I admit all that must be granted to want of occupation, idleness, or luxury, as also to imagination and peculiar modes of life which I need not specify; since all these are unquestionably highly efficient in this manner. And while I admit also, so must I here notice, as perhaps the greatest and most general cause of nervous affections, particularly in men, a state of things which seems to have been very much overlooked by those physicians who have speculated on this subject. I allude to the great increase of mental employment, or of study and business, or occupation, requiring mental rather than bodily exertion, connected often also with that which frequently becomes a species of disease in itself, education, or study and talents, and the latter habitually exerted; added often to confinement and all its collateral evils, and further, too often accompanied by that anxiety, with its occasional attendants or sequels, disappointment, which is the produce of the especial ambition, either as to wealth, or honours, or fame, which denotes the present times. This it is which peculiarly distinguishes our own age from preceding ones, and one class of society from another; which distinguishes very particularly the better and the best ranks of the present day, from the ignorant, idle, hunting and fighting feudal animal once called a Baron or a Knight, and the equally intellectual and occupied retainers who, with less wealth, were of equal use to society.

But all this is inadequate to explain the prevalence and increase of these disorders, including what is called dyspepsia; while, if an observant practitioner will easily trace cases innumerable to the very cause that I have here assigned, he can be at no loss in explaining, on the principles of physic, why habitual purging should produce these effects on the constitution. That general irritability is often the result of even a single dose of calomel, or of salts, and, in some persons, very particularly of the latter, is notorious; but I must not here engage in the pathology of a subject that would inconveniently prolong this necessary digression.

It is easy to see how it will assist in explaining the peculiarly pernicious effects of purging in chronic intermittents, and, very particularly, the injurious consequences produced by courses of purging, or the habitual use of such remedies, in those cases

where the presence of local or anomalous symptoms mislead the practitioner as to the real nature of the disorder. This is what happens when such a disease has the character of dyspepsia, or hysteria, or is such as, in any of the modes already described, to mislead a routine practitioner. And the reasons are plain, however obscure the immediate or proximate cause may be. As I shall hereafter more distinctly show, the condition of the nervous system in such disorders, is one of great debility and irritability, (to use such vague terms for want of better) or it is analogous to that which purging, and also injudicious blood-letting produces. Hence it is apparent that such misapplied practice is to cause injury, not merely of an incidental nature, but directly and absolutely, by adding to the immediate cause, or by aggravating that primary morbid state of the nervous system which is the origin of all the evil.

Thus also, while the abuse of purgatives so often increases or even produces dyspepsia, does its effect here illustrate its injurious action in chronic intermittents. That this is often sufficient to produce the former disorder in a sound person, is well known to every observing physician; and how often it aggravates what it is adopted to remove, is perhaps still better known, at least to the class of physicians to which I allude. I mean by this term, the true and pure dyspepsia, depending solely on the deranged health of the stomach and bowels, as nervous or highly sensible organs; the nature as well as existence of which is unquestionable when it is produced by causes purely mental, or by derangements of the great cerebral or general system. Unfortunately for the unhappy patients, a recent fashion has referred all, or almost all, these cases, to organic derangements, or, generally and vaguely, to what are called the chylopoietic viscera; a convenient phraseology for evading all reasoning: as that fashion which this improved theory has almost superseded, had assigned them all to the liver, engendering the fashionable term bilious, which has, in itself, cost thousands all their comfort and health, and not a few their lives; since, while the false theory gave rise to the system of mercury as well as purging, it was the effect of the former remedy as of the latter, by its action on the nervous system, to aggravate, or even to produce, the very disorders which it was meant to cure.

I must next inquire respecting the effects of blood-letting in the intermittent, since I cannot well pass it entirely over in this place; while it will be better to reserve the full examination of this remedy till I have treated of the Neuralgiæ, as its abuses concern chiefly some of the local diseases depending on this great leading cause. As to the enumeration which has just preceded, its uses or abuses concern also chiefly the anomalous cases; while, respecting those, I have already noticed, if not suf-

ficiently, the evil consequences which it produces in paralytic cases, and in the painful affections, be they rheumatisms or what not, which are so generally mistaken for active inflammation.

Supposing the intermittent to be a new disease, of a simple character, the propriety, or at least the safety, of blood-letting may be argued in the same manner as in the case of remittent. Once administered, no evil effects are to be expected from it, particularly in a vigorous subject; while it may even be beneficial by reducing the force of the subsequent paroxysms. Besides this, it is sometimes one of the effects of this remedy to change the type of the fever; and thus it may convert an indefinite or obscure disorder, such as a double quotidian, into one of a more regular form, or, as I formerly observed, cause a remittent to intermit.

But it is rarely innocent, and probably never advantageous, when repeated, unless indeed some other disease, of an inflammatory nature, should be accidentally united to the fever; while, when the case has proceeded for any time, and, still more, when truly chronic, it is decidedly, and sometimes very highly, injurious. It is, therefore, like purging, cautiously to be avoided in all the chronic intermittents. I have already, when describing the chronic remittent, shown how it produces palsy, or converts a partial and temporary affection of this nature into a more general and fixed one; as I have also noticed its mischievous effects in the apoplectic attack; and as these remarks apply equally to all the forms of intermittent, I need not here dwell on them. With respect to such collateral or anomalous symptoms as, from their painful nature, might be judged inflammatory, and therefore as demanding blood-letting, it is the practitioner's duty to see that they do not belong to some of the cases already described, or else to the local derangements of nerves which rank under Neuralgia.

It is here, as in truth in all other diseases, that it becomes requisite to study the disorder, to ascertain its causes, connexion, or analogies: for this it is, and not a knowledge of remedies, which constitutes knowledge in physic, and makes the physician. Our means of cure are few, if our medicines are numerous; the methods of administering them may be learned in a day; and if we do not know, philosophically and truly, how they act on disorders, their obvious actions towards removing disease are as limited as they are generally plain to the senses. This is the physic that all can learn without study, and even without intellect; but this is not the science of the real physician. To him, the philosopher in his art, names and terms are matters of indifference, and symptoms, disorders, are but indications or evidences of derangements, or of causes of derangement, which form his object of inquiry, and by the knowledge of which he

becomes all that a physician can be; since, this once ascertained, the means of cure follow as a matter of course.

This question, blood-letting, is so serious a one, not less as it regards remittent than intermittent, that it is not easy to quit it, even when it appears exhausted; while having been rendered supremely intricate by the variety of opinion and the strength of assertion on opposite sides, it would, in reality, almost demand a length of criticism and investigation which it is impossible to bestow on it in an essay of this nature. But the more we read and compare, the more we come to the general conclusion, that in these contests, writers have been often referring to diseases, in reality, different; that is, essentially different in their symptoms or characters, though intrinsically the same, and inevitably designated by one term. It is, again, the question of the special cases, of which all physis practically consists; and often, of specially universal or epidemic cases, no less than of specially single ones. Hence, the perplexity arising from general rules is not less than the thoughtlessness or folly which would attempt to lay them down; while far too frequently, they have been the result of a predetermination and a theory, rather than of judicious and careful observation.

The differences in fevers, whether in single cases or in epidemics, or in seasons or climates, are enormous, as has more than once been shown; and as far as this remedy is required or concerned, these differences consist in local inflammations. Where such affections are ascertained, why should I repeat that there alone can bleeding be proper? while I am sure that I have the majority of sound and careful observers on my side, when I say, that even here, this remedy is not applicable except when the pulse is violent and the headach severe, or when severe pains indicate material local injury within the abdomen; that it is never of use except in the early stages of the disease, and is totally inapplicable, unless in very peculiar instances, in certain climates and epidemics, and invariably so in old or long standing cases; that it is not to be used but in the hot fit, that if resorted to in the intermission it does not prevent the following paroxysm from being as severe, and that it frequently kills the patient.

If, for these opinions, I could quote numerous authors of great experience and cool judgment, I shall content myself with Clarke and Lind; though to them I might, what is remarkable, add a very great number of the French theorists who consider that gastro-enteritis is the very cause of the disease. The former practitioner condemns bleeding, even in the remittents of hot climates, unless inflammation be absolutely present; pointing out, further, the greater hazard which follows its use in autumn, and in towns and hospitals; while Lind equally speaks of the

danger of resorting to it in the fevers of Bengal. Even Sydenham, whose extreme affection for this remedy is sufficiently notorious, confesses that it is a dangerous expedient, and often protracts the fever to double the time which it would otherwise have lasted.

The next question concerned in the remedies of intermittent relates to diet, under which I may include wine; and as I have noticed this last in as far as it is a positive medicine in the acute or new disease, when speaking of remittent, the remarks on it which follow apply chiefly to the chronic form.

Supposing the disease in existence, cases may be conceived where restrictions as to diet and wine may be necessary; and these can be determined from the general principles already laid down respecting blood-letting or other debilitating proceedings.

But in its progress, and still more decidedly when it has assumed the chronic form, a good diet, together with wine as a part of this, become necessary, and may even be enumerated among the means of cure; while the reverse practice, or low diet and abstinence, are found to aggravate it, or to render habitual and inveterate a disorder that might otherwise have terminated. This is a conclusion which might have been drawn *a priori* from the theory of the diseases and from the analogous evil consequences which follow all other debilitating practices.

It is not less the conclusion from experience, drawn in Italy and in France; while, remarkably enough, in the latter country especially, notwithstanding the prevalent theory to which I just alluded, of the existence of gastro-enteritis as the cause of even the chronic and ever-during fever which torments the inhabitants of its pernicious districts from the cradle to the grave, this very condition is attributed mainly to a bad diet and a poverty so great as not to be able to command wine; as these also are pointed out for the best means of cure, as of security from relapses. I could not well give a stronger proof of the little value of such a theory, when it is one that experience thus contradicts, nor much better arguments in favour of any practice, than that it is adopted by those whose theory it opposes. Such also is my own experience; and yet, sometimes from a recent fashion, at others from false views of the nature of these cases, nothing is more common among ourselves, than to find the most rigid restrictions on both these subjects; and even low diet with water, recently also with the addition of frequent small blood-lettings, recommended as the only cure.

With respect to wine or spirituous liquors, I must here, however add a remark which could not well have found a place elsewhere, and which yet does not properly relate to the subject of diet. When used in the chronic diseases so as to produce in-

toxication, they sometimes remove the disorder suddenly, at least for a time; and in some cases they may thus remove it never to return, or produce a real cure. Hence this practice has acquired a certain celebrity among the common people; though frequently misapplied, and chiefly from confounding the new disease, in which it acts in the manner formerly explained, with the chronic one in which it is infinitely less effectual, and not unfrequently injurious. If, however, it does cure in such cases, the effect is analogous to that which results from any other violent and sudden action on the body, or from the production of some other and temporary disease; and therefore it is most likely to be valuable in those who are habitually abstinent or sober. If it does harm, as is most frequent, it is from inducing debility; and thus will it be most mischievous by repetition, if it fails to cure. Thus we can easily judge of the degree to which wine may be allowed as an article of diet, and of the restrictions to which a patient labouring under chronic intermittent ought to be subjected.

It is probable that in the simple chronic intermittent, little evil actually arises on the average, from the direct prescription of low diet and abstinence from wine; and chiefly perhaps because such patients become weary of physicians, and weary equally of medicines and restraint. It is in the anomalous cases chiefly that this happens; and especially when the disorder is mistaken for some of those already described, for which low diet is esteemed necessary, and wine hurtful. Thus, for example, in the intermittent rheumatism of the intercostal muscles, such practice, persisted in from the notion of its being pleurisy or phthisis, while it would be followed on account of the reputed characters of such disorders, would be injurious, as tending to perpetuate the disease. And not only in this, but in all similarly mistaken cases, it is the effect of such a system, not merely to perpetuate the original symptoms against which it was adopted, but to induce other bad effects, and chiefly that debility and those trains of nervous disorders which any debilitating practice is found to cause. And further, if in the chronic and obscure disorders of this class, such a direct and continuous effect is produced, it is also the result of such a system of diet to induce a tendency to relapses, or to render a susceptible patient still more susceptible of the action of the exciting causes; just as similar treatment, or a diet habitually poor, renders the healthy peculiarly exposed to the diseases of Malaria.

This is the very French and Italian experience to which I have just referred, whether as it relates to the continuance or the reproduction of this disease, or of the several endemics produced by Malaria, or else as to the susceptibility of new diseases by those who have not been formerly affected. And such, in

these countries, is the extent of that experience, so ample also the demonstration of the nature of the disorder or disorders, that no reply can be made to what I have here been recommending; unless it were to assert that England does not possess those disorders, and that every thing which I have, in this essay, been attempting to demonstrate, is a pure dream.

To show, now, specifically, under how many forms of disease depending on this cause, low diet may be pernicious, would be to repeat what has been said before. In this case, as in that of blood-letting or purging, it is the knowledge of the disorder which must be inculcated; and as, when that is known, the treatment follows of course, the duty of a writer as to the methods of cure is nearly finished, if he has been successful in pointing out the method of distinguishing the disorder. But if I have taken occasion to indicate the influence of system, of fashion it may truly be called, as to certain remedies or medicines, it will not be useless to point out the existence among ourselves of a similar fashion respecting diet and wine. If it is partly digressive, it is not a pure digression: since being a blind practice, as it is an extensive and an increasing one, it possesses a considerable influence for evil as to the disorders under review, attributed as they so often are to causes in which such practice is deemed useful or proper. It is a subject however on which I must be brief; as to discuss it as it merits, would occupy space which I should not be justified in here allotting to it.

It would be amusing to trace the moral causes connected with this modern revolution of opinions, but it would lead me further than I dare now venture. As the fashion now stands, and taking the theory in its most perfect form, it is somewhat complex, but is comprised chiefly in the following laws; that all persons, at least in the upper classes of society, eat more than is necessary, or more than is salutary; that all cookery, meaning by that, refined cookery, as well as all condiments, is pernicious; and, to sum the whole, that a large proportion of the diseases of mankind is the consequence of too full or too luxurious a diet. This is a sober view of opinions not always stated so moderately; as there are many physicians who, from causes respecting which I need not inquire, maintain this doctrine in the extravagant language of the poets and the satirists. And, in medical practice, the consequence of such opinions is to produce an interference with the ordinary diet of society, in health as well as in disease, which is sometimes pernicious, and commonly very useless; not unfrequently as absurd on the part of the physician as it is teasing or tormenting to the subjects.

It would be long to discuss this particular question as it deserves; but a few words may suffice to render the truth of the theory at least doubtful. The diet, or the quantity of food con-

sumed by the better classes in England, has been most materially reduced in our own days from what it was in former times; as the very slightest historical and antiquarian knowledge will suffice to prove. With respect to any imagined excess in quantity, in any case, it is notorious that the body, Nature as it is called, possesses the means, however obscure these may yet be, of disposing of what is superfluous, without difficulty and without injury, supposing that the digestive powers are not in the first instance offended; or that there is a steady remedy, in all animals, provided against superfluity of food. For the reverse, on the other hand, there is no remedy: and for one case of disease produced by excess of food, it would be abundantly easy, even in well-fed Britain, to discover thousands of evils, and indeed of absolute diseases, caused by deficiency; the main and prevailing evil being premature age and a shortened term of life, as is most obvious in the labouring classes. If the upper classes are more durable, both as to youth, or beauty, which is nearly equivalent, and also as to longevity, on the average, than the lower, it is chiefly owing to a better balanced proportion between the food and the labour, or, what is the same thing, to food exceeding the precise quantity necessary.

And that the better fed and more opulent classes are the most durable and the most free from diseases, is certain, though we must take care not to make the quantity of medicine swallowed the test of disorders, considering how very much this is matter of luxury. Let those who doubt this, see what a soldier, a sailor, or a labourer, is at forty, compared with the opulent ranks; or what, in the other sex, is an opulent female of thirty compared to a woman of that age in the lower classes. And this is a fact of some importance in political arithmetic; however the reversionary tables of computation have persisted, from very obvious motives, in deriving their conclusions from an average which is no small source of profit; of profit not perhaps strictly just, could there be deemed any injustice in commerce, in demanding all that will be conceded and taking all that is given.

With respect to refined cookery, it is by no means proved that more food is consumed under this system than under a plainer one: while it is an uncontroverted principle, that the food, be it what it may, which is most grateful, is also the most digestible; such is the association between the palate and the stomach, or between the mind and the digestive powers. If it were to be made a question of votes, the opinion of France is also universal in favour of this view; though one exception may be allowed respecting the excessive use of strong solutions of gluten, or of meat reduced by cookery to that state; since it does frequently offend the stomach, unless mixed, as is the prac-

tice of France, with a due proportion of bread or other less concentrated nutritious matter. And as to condiments, of whatever nature, not only the practice and the instincts of all mankind, even in the savage state, show their utility, but they are admitted to be necessary by all rational physicians, whether as stimulants, or as increasing that grateful taste which aids the digestion of food. It is to be suspected that we must have recourse to the ascetic principle once more, operating unsuspected on so much of our common conduct through life, for the origin of this dogma; a principle, as I have already remarked, which has decided that whatever is pleasing is pernicious, and that to renounce most especially whatever is most agreeable, is the duty of man.

While I am on this subject of diet, always rendered intricate by the interference, a not very unnatural one, of prejudices and popular opinions, let me here make one distinction, referred to this place when speaking of diet under remittent fever, which, obvious as it is, is not always made, even by physicians. It is, the difference between digestible food and stimulant food. The former exists, in reality, in old meats and game, and, as to cookery, in that which is roasted; and, as it happens, such food is also stimulant, being digestible probably for that very reason. The reverse articles of diet, of which chicken may be taken as the type, and boiled chicken as the extreme, are least digestible, but then also they are least stimulant; whence, in practice, a very different rule of diet for those whose stomachs require stimulus and those to whom that is pernicious, or, in comparing a convalescent from fever with a dyspeptic person; whereas in ordinary practice, that distinction is too generally confounded, by adopting the general term a weak stomach, and treating all weak stomachs with the indigestible substances, fish, veal, and chicken.

Lastly, when it is said that superfluous eating is the cause of a large proportion of the diseases of mankind, it is an assertion that ought to be proved, by showing what are the disorders thus produced. Individual cases of actual and habitual gluttony must be excepted, or granted: but these are so rare, that it would be difficult to produce them in any number, and, still more so, to find cases where they generate decided diseases. I need not name the obvious disorders which they are supposed to cause, or do produce; since these are notorious, as they are limited to one or two: while out of the remainder of that enormous catalogue by which mankind is tormented or thinned, and of which many are supposed or asserted to be produced in this manner, by the vulgar, the ignorant, and the satirist, as by those who speak vaguely, thinking as vaguely or influenced by habit, there is not one that can be really traced to gluttony, far less

to simple exceeding in diet; and while, at the same time, the real causes of all these are notorious, or well known to physic. A critical analysis of this question would be abundantly easy, as the proofs could be rendered most satisfactory; but it is one in which I must not here indulge.

Yet the very case before us would, alone, go far to prove how little the excess of diet is concerned in producing the mortality, or even the diseases of mankind. I have already said that the disorders produced by Malaria include more than half of the total number prevailing at any moment throughout the world; as the deaths caused by this poison amount to half the mortality, or more, of the earth; since writers far less liable to suspicion than I probably now am, have stated it as far exceeding two-thirds. Here, at least, diet, or rather intemperance, has no influence; and indeed so far is this from being the truth, that it is insufficiency of food and of "luxury" generally, which is one of the great co-operators in this enormous mass of evil. Were I to add to this, Plague, Contagious fever, Consumption, Small pox, Scarlet fever, all of them, and more, aiding in the great catalogue, not merely of mortal diseases, but of diseases numerically, and all equally independent of intemperance, it would be somewhat difficult to see how this popular argument could be maintained, except as popular arguments are, in spite of demonstration; while a further analysis, which would be abundantly easy to make, but which I cannot with propriety state here, would leave little indeed to be said on the opposite side.

To restrain, to torment, and to terrify, have been too much the custom of physic and physicians, as they have been that of other sects in mankind, of far higher note, valuable engines of power as they are: and if this system is carried into much more of life, there is nothing which affords a readier handle than diet, since the restraint can be made incessant, while the terror and torment are most effectual; interfering as they do with our most necessary wants, as well as with our ever-repeated pleasures: pleasures, which, however, it may be unbecoming to speak of them, are denied only by hypocrisy, or overlooked because of their frequency and certainty; while the conviction would not be difficult or long to any one, under events that many have experienced, if it comes not to those for whom the world is a storehouse of cookery, and life a life of eating.

A similar fashion has, and recently also, been introduced with respect to the use of wine; and not as an article of inebriety or excess, but as a mere branch of diet. I do not use language that has not been seriously used by the more violent theorists on this subject, when I say that it is reputed as a pernicious and a poisonous substance. It may appear singular that such a fashion should have arisen, somewhat as in the case of food, just

at the moment when the use of wine in excess had fallen into disrepute in England; and that with its gradually diminishing consumption, this dogma has even gained ground. Of exceedings in the use of wine, it is not my business to speak, as I assuredly do not defend those: but even here, it would not be an easy matter to point out the disorders which it causes, if we omit that gross and incessant intoxication which destroys life, sometimes almost without causing a disease to which we can give a name. As to the pernicious effects produced by that moderate and rational use of wine which does not require to be defined, there is no physician, however inveterate his prejudice may be on this subject, who can demonstrate them, far less any definite diseases produced by it; while the whole experience of mankind, from the beginning of our knowledge of history, is against such an opinion. But while we may argue respecting asserted facts by means of general principles or by evidence, it is in vain to contest with prejudices, and above all with a prevailing fashion; with opinions originating in temper, love of notoriety, or what not, and disseminated by means of that multitude which is ever inclined to follow because it cannot lead. And if there are tormentors of others, so is there no want of self-tormentors, in this as in many other cases; the victims of many moral causes which I cannot here discuss, and not seldom of that ascetic principle again, which is instilled into us through our whole education, though not perceived in its influences, because not known to exist by those who submit to it.

I have left to the last place that remedy for intermittent which is popularly called change of air. Of its efficacy in this disease, and chiefly in the chronic variety, there is no question; since in the latter, it is often the only remedy; but it is not the less difficult to give any rational account of its mode of operation: while I could do little more than repeat what I have already said when speaking of the cure of remittent.

We can however easily understand, that where the disease is maintained, as it has been produced, by residence in the vicinity of Malaria, the cure may be effected by simply removing the cause, as in that disease: and this is probably the circumstance under which it is most generally effectual. And here, as in that case, it becomes necessary to inquire strictly respecting the character of the soil or country to which the patient is to be removed; or, the nature of the territories through or to which he may be compelled to travel; and hence, again, the necessity of that accurate statistical and geographical knowledge so often censurably neglected by physicians.

Independently of such a removal from the original cause of the disease, the chronic intermittent, and indeed the disorder when of a new character or of short duration, is, like the remit-

tent, sometimes cured by simple change of air or place, and without regard to any reputedly greater salubrity in the place resorted to. And I think that experience shows this to be the remedy chiefly to be relied on in inveterately chronic cases, or perhaps the only one which is really effectual; since, in those, every thing else seems to fail. If in some, however, one change is effectual, it much oftener happens that frequent removals are necessary, as formerly observed; or that a relapse produced after one remove, must be met by a fresh one. The operation in this case seems to be that of breaking the habit of the disease; since a chronic intermittent appears most often to be a mere habit, as mysterious as are all our habits, whether of disease or health.

If this be the case, a difference in the quality of the air breathed, which is what the popular phrase would signify, is not in itself the remedy; though respecting this we really are not in a capacity to argue at present, since it is most certain that the atmosphere, in different states or places, produces effects on the body, of which our present chemistry does not enable us to investigate the causes. The lungs, or the organs here concerned, to whatever extent, are in reality chemical agents superior in discernment or power to those of our laboratories; or the involuntary and unconscious animal is that chemist which the reasoning one is not; carrying on operations which he can neither imitate nor discover, and detecting substances which he cannot find. And thus also it is, even with regard to vegetables. If chemistry cannot detect that Malaria, or that contagion, before which mankind falls as before the thunderbolt, if where, to its finest tests, the atmosphere is the same compound, and yet even vegetables either thrive or die, there may be far more of which it does not yet know, capable of acting powerfully on the body, whether for health or disease. Thus does our nicest chemistry detect in the atmosphere of London, nothing more than what the touch itself discovers equally well, volatilized coal, soot; a substance which no knowledge of ours can infer to be a poison to vegetables: yet here vegetables refuse to live or cease to thrive; losing their powers gradually, or, as London extends, retiring to a further circle, as by a slow gradation they lose the power of producing fruit, at length to yield up even their lives.

But while we do not know that the air alone does act thus as a remedy for chronic intermittent, and while it is to be presumed at least, that change of habits is an efficient cause in the cure, it is expedient that, to change of air or place, there should be added every other change which can be made as to the former mode of life of the patient, whether as to occupation or what not, while the modes of effecting this are too obvious to require explanation. But I will not conclude this part of the modes of cure, without repeating what I said on a former occasion, and

what most obviously is one of the very frequent advantages derived from "change of air." By means of this, a pernicious method of practice is broken up or abandoned; or the disease is truly cured by casting off the misapplied remedies and the practitioner by which it was produced or maintained; as in many other cases, where other ill health is the result of tampering with medicines, and the effect, purely, of such medicines, it is removed by simply abandoning their use, while the credit is given to the travelling or the change of air.

It would be more agreeable, if points in medicine, or indeed in any other science, could be discussed without collateral censure; but it is plain that where there are no grounds for such remark, there is nothing to be corrected, or that science has attained perfection, and ought therefore no longer to stand in need of elucidation and inquiry. To attempt to point out what seems better or right, it is necessary to explain what appears bad or wrong: and it will scarcely be contended that physic has arrived at that point of perfection which admits of no corrections; while wherever it is imperfect, or erroneous, it being also an art administered by men, those who thus administer it must become implicated: an appearance of personality being thus conferred on remarks which are purely directed against the imperfections of the science and the art: imperfections in which we all partake, but which it is the duty of each to labour to diminish, for himself as for others.

If I have thus terminated all that my own and the general experience has dictated as to the treatment of chronic intermittent, I must not however pass over the opinions of Rush, however little they may agree with my own experience, and with that, I may fearlessly add, of practitioners at large. Yet it is impossible to disbelieve a positive assertion on the part of such a man, however marked by singularity these have often been: and the only solution therefore must be, that the chronic intermittent of Philadelphia or New York, or perhaps of the United States in general, is a different disease from that which bears the same name with us. His remedy consisted of blisters applied to the wrists, a plan which, according to his statement, was generally successful. When it was otherwise, one or two bleedings never failed to remove the disease, while bark was found useless.

I may now terminate what relates to the remittent and intermittent fevers, or the first division of the medical part of this essay: a discussion which, if it has occupied an unusual space, was demanded principally by the view here taken of the anomalous forms of this disease. It is in attempting to establish new views, that a writer is condemned to a length of inquiry which is easily curtailed when once these have become admitted; as it is in working his way through controverted points, that he

is compelled to accumulate evidence and arguments. And if, while the chief inquiries respecting the cure of these fevers have been directed to the obscure and anomalous cases, I have sometimes omitted to specify to which of these, respectively, the remedies, whether for good or evil, apply, the reader will have no difficulty in reasoning respecting the use and abuse of any mode of cure, when he has once convinced himself of the truth of these general views, and learned to discriminate the cases that may fall under his notice. A single example from each of the two main divisions, will suffice as an illustration of what it must really be now useless to detail more particularly or minutely.

If the case should be a palsy dependent on intermittent, the fundamental means of cure will be the same as in the simple fever, acute or chronic; or, to shorten the catalogue, it will consist in bark and in change of air. But in such a local case, we are also permitted or called on to use the local or other means which are found beneficial in palsy from whatever cause: the great caution, or exception, being this, that we avoid what, from being hurtful as to the fundamental or real disorder, must also be pernicious to this its mode or symptom; while what these things are, has been amply shown.

On the other hand, should the case be an inflammatory one, should it for example be of a pleuritic character, the fundamental caution, here also, should be the main circumstance in our recollection; or we must remember that while blood-letting does not cure, but aggravate, the original fever, it will also be prejudicial to this mode or symptom, exactly under the same circumstances and in the same degree. But here also, as in the case of a palsy, we are permitted to use such accessory means as are of service in diseases of this character, while not prejudicial to the fundamental one; while, if I need not specify what these are or may be, a distinct example of this nature will shortly come under review in treating of the Neuralgic ophthalmia.

CHAPTER IX.

Of Neuralgia in General.

IF I have already stated in the introduction to this essay, the great number of years which have passed since I considered Neuralgia under its best known form of *Tic Douloureux*, as a

mode or variety of intermittent, and if I have taken every opportunity in my power, short of a formal treatise, to make that opinion known, that it might be effectually investigated, the progress which it has made is so limited, and the conviction as yet so narrow and so imperfect, if indeed it can be said to exist at all, that it will here be necessary to give the grounds on which it was formed, in some detail. Should others have adopted the same opinion independently, though at present unknown to me, I shall be pleased to think that my own is thus confirmed: but that this is not a view generally entertained, is plain from that practice, the division of the nerve, still resorted to for the cure of other Neuralgiæ as well as the Tic, or, if abandoned, not renounced from a juster theory of the disorder, but from experience of its inefficiency. And this is not less proved, from the vacillations and the variety of the practice, among which I may include that of administering narcotics, lately in high repute, and from the nature of the treatises on this subject which have appeared: while if tonics, and particularly iron, have lately been introduced, they are not only of very recent date, unless in solitary and experimental instances, but are given, rather empirically than from any just theory of this disorder, or from any view of its connexion with intermittent fever.

If in enumerating the anomalous forms of intermittent, in the preceding part of this essay, I have had to encounter the hazard of criticism from arranging under it diseases not generally supposed to belong to that leading one, I have been in some measure borne out by former authors; though in doing this, I have sometimes placed there a disease which I should have preferred classing in the present division. Hence, in this one, there will be a deficiency arising from that cause: but it will be a small evil to be thus deficient, when I foresee what will happen from the attempt to rank under Neuralgia what I have actually done; diseases which no one has yet considered as belonging to it, and for which I cannot refer to the authorities and opinions which supported me in the former case. I must, in fact, consent to contend my way nearly through the whole, against inveterate habit and against prejudices; probably, often against pride not less inveterate: a disagreeable situation, since it demands evidence and arguments that might otherwise have been spared, while these are viewed with a jealous eye, or at least make that impression which arguments, and even evidence, ever do against prejudice, namely, nothing; and since it inevitably leads to a controversial tone of writing, as new opinions cannot be stated without contending with those to which they are opposed, nor even direct arguments produced without a critical investigation of former and contrary ones.

If I were now, at this stage, to give a list of the disorders

which I propose to rank under Neuralgia, or, as is the truth, under Intermittent, it would doubtless be the correct and logical mode of commencing the subject. It would be that which a scientific investigation ought to adopt; as the proofs would then also be arranged in such a manner as to establish all the facts in the briefest and most regular method. Thus might the preceding part of this essay, as well as the present, be reduced to a smaller space, and thus also would the two have been amalgamated under one general arrangement of species under a genus, or varieties under a species. But, to follow this course would be to commence by attacking, without preparation, a host of prejudices; to attempt to convince him whom we have begun, perhaps, by angering. This is not good policy; and though the proceeding be logical, it is not a logic which gains its ends. Therefore have I determined to sacrifice science and brevity to convenience; and by a gradual development of the subject, conforming as much as possible to previous opinions, to allow the evidence to come forward in the mode in which it is least likely to meet with opposition, or to shock those to whom the subject is new. Such an explanation was due to a certain class of my readers, as well as to myself; as those to whom I allude will admit without hesitation.

I must yet demand permission to make another explanation, in defence of a want of order and of correctness of division, which, in the present stage of this inquiry, and in the first general treatise on this subject, was not to be avoided, however easy to regulate when once the views which it proposes shall have been admitted. If it is similar to one I made before, it is even more necessary here.

In the disorders which I am about to enumerate, some have been considered as independent diseases, arising from very different causes, while, of these, there are a few which have even established an independent character almost as ancient as physic itself.

Others have been viewed as symptoms of some disorder, but not of this one; while others again have been considered as trivial, or else inexplicable; mysterious cases occurring once in an age, and out of the common rules of physic: while, still further, a few have been viewed as the produce of external injury; mechanical solutions of continuity or derangements of structure. Under such a confusion of names and opinions, I had no resource but to form an entire new arrangement, by creating apparently new diseases and forming new terms, or else to abolish old and received diseases with their names, treating them as varieties, or lastly, as least presuming, to treat as Neuralgia, under their old names, those varieties which were already named, and to suffer the others to remain as nameless as they have hi-

ther to been. And this plan, as the least offensive, I have adopted; while the inevitable consequence of it is a total want of philosophical arrangement, which, in any other science than physic, I should have been ashamed to countenance.

In pursuance of this plan, I shall now therefore commence with the Neuralgia of the face, or, as it was once exclusively viewed, of the superior maxillary nerve, commonly known by the name of *Tic douloureux*: since this is the variety which has attracted most attention, which, not very long ago, was the only one supposed to exist, and which, if not the most common, has at least been the most discussed; while, if I mistake not, it is the one which has especially served to mislead and blind physicians respecting the true nature and theory of the whole of the disorders of the nerves connected with intermittent.

However repugnant to my own views of order, I shall also reserve the proofs which I propose to offer respecting the real nature and connexions of all these diseases, to a late period of this inquiry; because I shall thus at least pave a way for their reception in the minds of those who might here have been startled at any such attempt to change their established and long-cherished opinions. I trust indeed that very little in the shape of formal proof will be required, after the diseases themselves have been described; as the facts will most generally carry their own evidence with them.

CHAPTER X.

Of the Neuralgia of the Face, or the Tic Douloureux.

I CANNOT exactly trace the period at which this disorder first began to attract attention in this country, under its present French name; but it is not a very distant one, while, as far as I can now find, there was nothing written respecting it before the notices of Heberden and Fothergill. As far also as I can discover, although the disease is described under various names, by nosologists, according to its several varieties as here brought under review, the term *Tic douloureux* seems to have originated about the year 1756, with André, hereafter mentioned as the surgeon who had also first recommended the division of the nerve. The public at large very naturally considered it, when first thus marked out, as a new disease, and still views it as a rare one.

But it is neither new nor rare: it is the term alone that is new, while the apparent rarity is the result of two causes. To be noticed as a case of this disease, the pain must be excessive, and must also be limited to a peculiar part of the face; and further, it must be found in the opulent, or in those who, little accustomed or willing to bear pain, fly to physic for relief, and thus call attention to themselves and their cases. There are thousands who suffer from it, under forms less marked; and thousands, in the middling and lower classes, who endure it, even in its worst form, but of whom the public never hears. He who will thus seek it out, will soon be convinced of the truth of this assertion, as I have long since been: and though he may find a much greater number of the cases not decidedly marked by the strongest and most peculiar features of this disorder, and therefore not known by this new popular term, he will be singularly unfortunate if he does not also meet many, of the best defined and most intense character, generally endured as best they may, and seldom forming objects of attention to the great mass of practitioners. If in a single and not very extensive tract in this country, I have produced, among the labouring classes, not less than a hundred cases in the course of a very brief investigation, it would be very extraordinary should others with the same care, not meet similar success. Thus also a late observer finds now that it is very common in India and Persia: while, if a suspicion is thus excited that it is in those climates connected with the Malaria, or the remittent, as I have ascertained it to be in the West Indies, there are unfortunately no details, as usual, by which this could be justified: such are the vexatious consequences which follow from the want of a correct theory.

It is natural to ask how this disorder was designated before the present popular term was introduced, or the more scientific one, Neuralgia, applied to it. It may not be very easy to answer this question satisfactorily; but the term rheumatism of the face appears to have been, as it is even now, the most common name under which it was known. Thus also has it often been attributed to disease in the *antrum maxillare*; an error still daily committed: while, in other cases, and under modifications, it has been called periodical headach, *clavus hystericus*, and toothach; and, if I mistake not, has not unfrequently also been attributed to gout; an error, even now sometimes committed. Under how many more excuses for ignorance it may have been described or named, it would be difficult to discover, without more inquiry than the question is worth; but it is easy to perceive that it has often been set down as one of those rare and mysterious diseases of which physic can give no account, while, by thus sheltering itself, it too often finds excuses for ignorance

and carelessness. And we shall commit no injustice if we attribute a large portion of this confusion or error to the nosologists: not to quote all of whom, however, I may merely notice the confusion of Sauvages on this subject; when, ranking it, not very improperly indeed, among his *maladies convulsives*, under spasms, he associates it with many other irrelative disorders besides *trismus*.

If the introduction of the term *Tic douloureux* has had the effect of rendering this disorder far more noticed than it had been, and has thus appeared to careless reasoners to multiply the cases themselves, it seems to me to have been attended by the countervailing disadvantage of checking the progress of investigation into its real nature. If it is too generally the effect of terms to become the substitutes for ideas, this is peculiarly true of physic; if indeed I do not here commit a great injustice in appearing to forget that such, or little better, has been the reputed science of Metaphysics, not merely in the hands of Kant, but almost even from Aristotle to our own days. And if this is, at least far too much, the character of physic itself, so is it most especially true of the mass of practitioners; to whom it is that art, that mere trade, which it ever must be, and who, possessed of the name of a disease and of the opposed names of the medicines with which it is to be fought, concern themselves no further than in applying the correlative hostile draughts in the quality and number that have been established. To this class, to the vast majority, a name is invaluable; for, deprived of it, they are helpless; and thus, while a term is their sole guide and rule of conduct, in that term are all their reasoning and all their philosophy centred.

And if, in the term *Tic douloureux*, there was no analogy implicated, nothing which could guide an even somewhat superior class of practitioners to reason respecting the probable nature and connexions of this disorder, the original limitation of that name to the most painful form of Neuralgia, and to that when occupying one particular nerve or spot, added to the singular severity of the disease thus partially designated, served in some degree to keep out of sight all its modified forms, whether as to situation or severity; and thus to entail a continued blindness on all those who, unable to reason without terms, unaccustomed to inquire about things, or unpractised in philosophical investigations or analogies, were incapable of seeing when deprived of their customary guides. The mere substitution of the term Neuralgia has here been of great use; by pointing out the road to a generalization, of which physicians have nevertheless been most tardy in taking advantage, as I trust to prove before long.

If I could point out many other reasons which seem to have

acted in blinding physicians as to the true nature of this disease, I am unwilling to prolong remarks that cannot be made without implying censure: but there is one which I cannot pass over, because, while it is a fact of principal importance as concerns the cure of this disorder, it is one which has most obviously tended to maintain the popular ignorance, as well indeed as the general ignorance of practitioners themselves, respecting its nature; as it is one of the strongest proofs of that, and a bitter one indeed to those who have suffered from it. If I were to say that those who are accustomed more to the use of the knife, or to mechanical operations, for the cure of diseases, than to medicine, are too apt to view physic rather as a mechanical art than a philosophical science, and too ready, almost in a literal sense, to cut the knot which a better reasoner would attempt to untie, I should perhaps be thought desirous of retorting a censure which the operating branch of this profession has, for some time past, with no very good taste and as little liberality, bestowed on physicians: from that spirit of rivalry in trade, apparently, which is the disgrace of this science, if not of others, in our own country. But if I desire to avoid an illiberality of comparison which cannot fail to be injurious to those from whom it proceeds as to those to whom it is applied, (while having, during many years of military service, divided my own time equally between both branches, and having consequently been taught to esteem both, I cannot feel as a partisan on either side,) it is to the practice of dividing the affected nerve, or to the inconsiderate and misplaced use of the knife, and therefore to surgeons and surgery, that we must very principally attribute that persistence in error respecting this disease which is yet far from overcome: while the fact of thus viewing it as a merely local disorder of a nerve, unconnected with any general disease of the system, speaking little as it does for the observation and reasoning powers of those who adopted and persisted in this error, appears to have acted in checking the investigation that might otherwise have been made into the analogous diseases, by cutting through almost literally, with the nerve itself, the very chain of analogical reasoning.

But enough of remarks which were however, unavoidable: and having thus said all that appeared necessary respecting the term *Tic Douloureux*, I shall in future avoid it as much as possible: wishing, for reasons now obvious, that it could be extinguished from the vocabulary of physic. The word *Neuralgia* has the advantage of being general; and it is one which even the people will find more manageable by their organs than that which they so invariably mutilate.

Anatomists, with a refinement which is made a matter of much exclusive boast, and of not a little vulgar wonder, have

undertaken to name the precise ramifications of the precise branches of the precise "pairs of nerves" in which the Neuralgia of the face must exist; and this petty pride has perhaps not had a small share also, in maintaining the ordinary false views of the nature of the disease. It may occur in any part of any nerve of the face; though thus reputed to occur chiefly or solely in the second branch of the fifth pair, and in the *portio dura* of the seventh: and I am almost inclined to blame myself that I should even submit to distinguish these particular seats of the pain from others, since the disease is the same wherever it happens. And not only is this most violent and decided form of it found in various parts of the face, but, indifferently, in the head also; since in one of the best marked cases of it that I have witnessed, and where the pain was so excessive as to bring on delirium, it occupied a small point near the insertion of the occipital muscles.

I need scarcely say, that, in this disorder as it stands in the popular acceptation, the pain is most severe; being probably as great, often, as the nervous system can endure: since all the surrounding objects sometimes disappear before its violence, or it deprives the patient of all other sensations; in vulgar language, of all his senses; frequently also inducing absolute delirium, as I just noticed; an effect rarely occurring from any other pure pain than the inflammation in the bowels. This extremity of pain is commonly instantaneous in its attack; resembling very much, in this respect, the electrical shock; and most generally it is similarly transitory, coming on in repeated fits during the continuance of the entire paroxysm. It is not, at the same time, always the sole pain; since a general painful state exists through the whole paroxysm; sufficiently severe, should it be the only one, as it often is, but appearing almost pleasure, when contrasted with the more acute shocks of the nerve.

During this state, the integuments, or rather the whole surrounding parts, become extremely irritable, or tender to the touch; and commonly more so to a gentle contact than to firm pressure, which, on the contrary, sometimes removes that consequence, diminishing the moderate pain of the nerve also: and it is often apparent that there is a general increase of vascular action in the neighbouring parts, or a species of temporary inflammation, very similar to that of rheumatism; an analogy of some value in the history of this disorder. As the pain ceases, this general soreness becomes commonly more sensible, remaining, often, for some time after that has disappeared; when the whole vanishes together, leaving the patient in his usual health, or rather, most frequently in a state of debility and exhaustion.

To this general description, which I might have made much more striking, even without exaggeration, I need only add, that

when the fit is impending, it is often brought on by any motion of the parts, such as, by the act of eating; as, during the course of a paroxysm, the same causes often re-excite the acute pain when comparatively dormant.

Such is a simple and ordinary case of a paroxysm of this Neuralgia; but many accessory circumstances of an equally obvious nature sometimes attend it. Thus, the neighbouring muscles, and even the more distant ones of the limbs, are often affected with spasms, occasionally to a considerable extent: while, not unfrequently, with the usual charity of the healthy, they are attributed to impatience and debility of mind on the part of the patient; as is more especially and certainly the case when these spasms seize on the larynx, producing involuntary cries, or converting the ordinary breathing into audible sounds. In truth, no one is entitled to assume the office of critic on a Neuralgic patient, who has not been a patient himself; and, for the cause of charity, it were perhaps to be wished that the disorder were more common, or that a short apprenticeship at least to it, were a more general lot.

Frequently also, there is an increased flow of saliva, and, much more often, of tears, which, in some cases, almost stream from the eyes; scarcely noticed by the patient, but not so by the by-standers, always ready to attribute to mental weakness, what, in this case, is a mere increase of secretion from disordered excitement of the glandular nerves; forming, in fact, a peculiar variety or modification of Neuralgia which I shall have occasion hereafter to point out more distinctly. And if it is an episodic remark, I know not where better I can introduce it than here; that in patients who have suffered severely from Neuralgia under any of its forms, if the lachrymal glands have once been materially affected by the disease, they rarely recover their healthy state: and thus, that tears continue to be, not only easily excited in those who scarcely knew, before that, what it was to shed one, but that they frequently occur, and even in streams, without any mental cause at all, and not uncommonly in sleep, though no dreams are present, or at the hour of awaking, often lasting a considerable time, and producing no small inconvenience.

Lastly, among the more obvious accompanying symptoms of a paroxysm of this Neuralgia, it sometimes happens that other and distant nerves become also excited to pain. Where anatomy easily traces the connexion, this is scarcely matter of surprise; and I shall hereafter show that such cases are not uncommon. Where there is no such continuous connexion, we must, I presume, suppose that the diseased condition exists in more places than one; unless any person is desirous to explain this by the very luminous term sympathy. I need not accumulate examples; as it will be easy to conjecture what may happen of this

nature, from one case, within my knowledge; in which, after the pain in the face became established, there came on a similar one in each thumb and each great toe, continuing, but with less severity than the primary pain, during the paroxysm.

Now if such is the obvious character of a paroxysm of this Neuralgia, the most popular variety, or rather that to which, almost alone, the name has, generally, and till very lately, been given, there is more, less obvious, which it is the business of the physician to notice, and which, had it been duly noticed and reasoned on, should long since have explained the true nature of the disease.

Immediately before the attack, if the pulse is examined, it will be found to put on that character which it possesses in the cold stage of an intermittent; while, through the progress of the paroxysm, it passes through the other analogous changes. If also a watchful patient, at least when directed to do so by his physician, (which I fear has rarely been the case,) attends to his previous feelings, he will find that there are most commonly some indications of a cold stage, generally obscure, it is true, as is the case in most of the anomalous and chronic intermittents, but still discernible; while doubtless it may sometimes be wanting or difficult to make out, as is so often the case in such obscure intermittents. When most distinct, it is like the sensation of cold water applied to some part of the face, or trickling over it, being indeed often thus described by patients; or there may sometimes be a sensation of cold, more general, if also transitory. The skin, at least of the face, also becomes pale and shrunk, with that peculiar physiognomy attending ague, so indicative of all these diseases, if so perpetually overlooked: and this is a symptom which, if unnoticed by the patient, ought never to escape the eye of an observing physician, explanatory, and often useful as it is. Occasionally, this paleness is local instead of general; and I have seen cases where I could pronounce that the paroxysm was threatening, from one side of the face turning suddenly white while the other retained its natural aspect and colour.

If this is the cold stage of this particular intermittent disease, the fit of pain appears to belong to the hot one, or thus at least has it always seemed in my experience: and if, as a hot stage, it is not a very marked febrile state, it is sometimes sufficiently apparent, in an increase of heat, local if not general, in the change of the pulse, and in a thirst which occasionally accompanies it. And if it is a slightly-marked hot fit, it is not slighter than that which often occurs in chronic intermittent when other kinds of local symptoms are present, or even when the cases are pure; while in such cases, as well as in this and other Neuralgiæ, the sweating stage is rarely well marked, or is per-

haps only discovered by the facility with which that effect is produced by exertion.

Thus I have described a paroxysm of Neuralgia as resembling that of an obscure or chronic intermittent, with the super-addition of its peculiar pain or local affection of a nerve; and it remains to see what resemblance the general course of the disease bears to the common or simple intermittent, or rather, since I am not yet formally discussing the proofs of identity, what are the remaining characters of this disease.

It may be considered that there are two forms of this, as of other Neuralgiæ, the acute and the chronic; or the disease may be new, or habitual; a distinction which it is important to make, because the latter is, like all intermittents, far less regular than the former, while being perhaps more observed, it has aided in misleading physicians respecting the true nature of Neuralgia.

In the recent state, or in the first case, it returns in distinct and defined paroxysms, occupying a certain number of hours, or even, in some instances, but a few minutes, and leaving an interval of health. Where I have had the best opportunities of observing it, the returns are daily, or the type quotidian, while they maintain a regularity of period similar to that of common intermittent, and subject also to the same variations as to time. If I have also met with tertian, and even with quartan periods, they have been, in my own experience, more rare: nor, in these cases, has the disease been so apparently regular, though I have little doubt that the practice of others will here supply my deficiencies.

Now when the disease is of long standing, or of a chronic character, it is less distinguished by this regularity, and, further, as far as I have had opportunities of seeing it, is even more uncertain than the analogies, in common or anomalous intermittent, with which it is best compared; with the single exception, as far as I have seen, of the affection of the heart. Whatever may be the causes of this irregularity, if it is not the only fact which has aided in misleading physicians respecting the true nature of this disease, it is one which will probably cause many to suspend their judgments upon it at present, or to deny altogether the theory which I have here adopted. As an instance of these cases, I may quote one from Sauvages, where had it not been so durable, and not watched by an attentive physician, no regularity would have been perhaps suspected. In this, the pain occurred but once in eight days, yet never failing, and lasting thirty hours; while, being in the temporal muscle, it is called by Salius the *Hemicrania lunatica*. The entire duration extended to three years and a half.

I know not that I am able to explain why it should appear to be peculiarly irregular when compared to other chronic inter-

mittents; yet if I fail, here or any where else, in elucidating difficulties, I must attribute it to a very narrow experience, arising from circumstances not worth detailing, and which I have vainly attempted to atone for by increased attention, finding little assistance from personal communication or printed records; so unsatisfactory are all these, from the fundamental deficiency of a system of observation founded on true views of the nature of these disorders.

As the matter stands, however, the first cause of obscurity must be sought in the rarity of the highly-marked cases and rigidly-local affections of this nature, which have secured for themselves the name of *Tic douloureux*. There is consequently a small number of cases from which to form an average and a judgment; whereas, were I to judge from all the cases of similar disorders, differing in violence and differing in place, which I intend here to rank under the same disease, I should decide that in the mass of neuralgic cases, the regularity was fully as great, under any type, as in the most acknowledged chronic intermittents.

Another ground of erroneous judgment as to this question, and which indeed I ought to have named first, has been the want of a correct original theory of the disorder; a want which, in science universally, is the parent of erroneous and deficient observation. In the ague, of whatever type, the most vulgar know the theory of this disease, and thus mark its regularity; while in this, where it is not known or expected, it is not noted, either by patient or physician: and accordingly, I have, in numerous cases, ascertained that a Neuralgia, before supposed uncertain, or never attended to, was found to be perfectly regular, as soon as either the patient or the physician had been informed that such was the character of the disorder. And it must be noted here also, that while a daily attendance on the part of the physician will scarcely happen in many cases, even among the opulent, while, with the lower classes, that is likely to be very casual, it is abundantly easy to conceive how the regular returns of a disorder, not previously suspected to be regular, should be overlooked.

There is yet another cause which has prevented the regularity of this disorder from being marked, where it is actually present: and it is an important one in some cases, as connected with the history and nature of Neuralgia. Even should the nerve be affected at the habitual period, that affection is not always a fit of the violent pain. On the contrary, it may be a very slender one, scarcely noticed by a patient used to much greater suffering; or it may appear as a toothach, or a headach, or what is called a rheumatic pain of the face: and thus, although really a paroxysm of the disease, may deceive both patient and physi-

cian, and most of all when, as in the cases last enumerated, it will admit of some common or vulgar name. Such in fact is the character of the Neuralgia, in whatever place situated: and the fundamental error here has been founded on that to which I formerly alluded, namely, the assigning it a name expressive of violent pain, and the separating this particular variety from all its analogies and variations. Such are the endless errors produced by ill-chosen terms, and by giving to such terms an improper value. And still further, as I shall hereafter more decidedly show, as this disease is but a mode of the intermittent, it may be exchanged for or replaced by a common paroxysm without any local pain: while even that paroxysm may be so slight as to attract little notice from any one, and at least of all from a patient accustomed to much keener sufferings.

Last of all, and particularly when of long standing, it becomes, like every other chronic intermittent, a truly irregular disease. Thus it may come as a single attack in the midst of weeks or months of repose, excited by some occasional cause; or it may, in the same way, adopt any modes of irregularity; which it is unnecessary to describe again, as it would be merely to repeat what I formerly said respecting chronic intermittents in their ordinary character.

Such then is the total character of the common Neuralgia of the face: and if I have dwelt on it at some length, this will render it less necessary to be minute as to its varieties, or as to other Neuralgiæ; since, the same general account will apply to all. Its similarity at least to intermittent, will even now be apparent, and very decidedly to those varieties which are attended by local diseases or symptoms; while the further evidences will appear in their due time. And if I might now treat of its cure, it will be best to defer this till I have enumerated all the other disorders of the same nature; since, with small exceptions, the same general rules will apply to all.

In examining now the varieties of the Neuralgia of the face which I am about to notice, or those of other nerves, be their apparent characters what they may, or though they should even have acquired names as independent diseases, it will save much repetition to premise, that, in every one, the same general symptoms or characters are present. The returns are periodical, under the same variations and exceptions; there are the same indications of a regular febrile paroxysm; they alternate similarly with other conditions of the same general nature, or with common intermittent; their types are similarly various; and they may either be acute or chronic, new diseases or habitual ones. Without such testimony, drawn from cases more or less numerous, I have introduced no disease here; while many are sup-

ported by analogies or collateral evidences, which will be stated whenever the necessity for them occurs.

As naturally connected with the marked Neuralgia of the face, I first must notice those disorders of this class which occur in the face and the head; reserving however to a distinct place, those that are attended by visible and permanent inflammation, and those that are accompanied by mechanical injury or derangement; though this separation, almost inevitable in the present essay, for the reasons formerly stated, proves often a very awkward one, particularly in the case of toothach, where I must sacrifice the distinction that I might have wished to make, to a popular term.

CHAPTER XI.

Of the Periodical Headach, and of Vertigo.

OF all the disorders which I have thought fit to arrange under the great leading head of intermittent, this at least is one respecting which there can be little dispute, well known and pointedly defined as it generally is. Yet though it has been considered an intermittent disorder, as it in fact, could not fail to be, and, further, frequently treated by the same remedies as the common intermittent, I cannot perceive that the conviction among physicians, respecting its nature or treatment, is by any means either general or satisfactory to themselves. Innumerable cases must have occurred in every physician's experience, where these remedies had never been resorted to, and where the disease had been abandoned as incurable; and, as insinuated in the preface, I could even quote physicians of the highest note, who had submitted to it in their own persons for a long life, even in its most marked and regular form, the tertian, without adopting the obvious plan of cure, and even arguing to the last against the present view of its nature.

If I cannot therefore find that physic has viewed it as a variety of intermittent fever, whatever may have been the opinions of individual physicians, still less do I perceive any inclination to consider it as Neuralgia, and, if situation can, for the present purpose, be allowed to establish a leading distinction, as one of the varieties of the Neuralgia of the face. Such how-

ever is the view that I propose to take of it; while from its greater simplicity and regularity, and its more apparent connexion with simple intermittent, it forms that connecting link between this leading disorder and the more painful Neuralgia, or Tic, which aids in proving the true nature of this formerly obscure affection. And being without that strongly-marked symptom, the excruciating pain, which, by attracting the chief or sole attention of common observers, has misled them so long, it is more likely to be received as a mode of anomalous or local intermittent, and, as such, to command an assent which will probably yet for a long time be withheld as to the Tic douloureux.

As it appears to me that the proofs of this identity, a triple identity, as I may call it, will be developed, partly in the history of this disorder, and partly in the course of a further examination as to all the Neuralgiæ, I shall commence by describing the disorder itself. And this I must do at some length; because it is by attending to varieties and anomalies rather than to pure and well-marked cases, that we discover those evidences of connexion among what have been considered defined and separate disorders, which serve to mark their identity.

The periodical headach may possess any of the types of intermittent; and if I have not myself seen it under every form, I have at least known it as a double quotidian, as a single one, and as a tertian. Whether if it existed as a double tertian, it could be distinguished as such, I cannot foresee; and if it is ever of a quartan type, I cannot at this moment discover that, from any recollections or references. My learned medical readers will probably be able to supply this and many other deficiencies: the produce sometimes of pure ignorance or narrow experience, at others of a desire to avoid tediousness or superfluity.

I have never said that all the disorders which I have here collected under the head of intermittent, do, and must of necessity, arise from Malaria, though I have tried to prove that this poison is often present where it is not suspected. We are certain only that it is by far the most frequent cause of them: yet, if it is possible, it is by no means proved, on the other hand, that simple intermittent can be produced, as a new disease, by any other cause, though, as an habitual one, it is re-excited by many. But when we descend from the simple disease along the scale of varieties, or as the local affections of the nerves begin to predominate far above the general one, I am so far from thinking Malaria essential to the production of intermittent, or, to speak specially of Neuralgia, that I have made a particular division where it is demonstrably produced, as far at least as

we can demonstrate an exclusive cause, even by mechanical injuries.

I must not therefore be here understood to say that periodical headach is necessarily or exclusively the result of Malaria, or that, being a variety of intermittent in its symptoms, and cured by the same remedies, it is invariably produced by the same causes; however frequently this may be the fact, as in Spain, where the *Migrania* is endemic in all marshy situations throughout the country. But were it even demonstrated that it can be produced by other causes, this cannot affect the theory of the diseases, as it concerns their common or generic nature, which I am attempting to establish. The action of Malaria is on the nervous system, on the whole and on the parts: or affecting the whole in a slender manner, it may exert its chief influence on some peculiar nerve or portion of a nerve. And till we know more of their nature and of this action, we cannot pronounce a negative, or say that no cause but Malaria shall produce even a simple intermittent: while, if mechanical injury of a nerve can produce a partial one, there may be many other causes, unknown to us, capable of generating a periodical headach.

Be this as it may, it will be found that this disorder is most common in situations of the unhealthy nature formerly described, and that it is often directly brought on by the causes which produce ordinary intermittent. But what affords a much stronger proof of its identity, is the fact that it occurs frequently, perhaps most frequently, in those who labour under chronic intermittents or remittents, or have formerly suffered from those disorders. Thus it may occupy the whole period of one relapse, as the substitute of what would otherwise have been a common one: as it is even found to do, in frequent interchanges, and through a long life, in those who possess that inveterate habit of intermittent which may almost fairly be esteemed incurable. Still more remarkably, it is sometimes found to interchange by paroxysms with the common intermittent; or the ordinary fever of one day is replaced, on another, by the headach. Thus have I seen the headach and the ague-fit occupying the alternate days, a modification which may be considered as a double tertian, and proceeding thus through a long period; while the same species of combination has also occurred to me under the tertian type. Where the chronic intermittent, however, has been of long duration, it is more common for the periodical headach which is united with it to recur in a very irregular manner, as is true generally of the disorder in all its modes, when of such standing: and it is in these cases especially, that its real nature is so commonly mistaken, as it then wants those

obvious characters which alone would arrest the attention of a superficial observer.

A headach will not therefore be necessarily removed from this division, though it should want its most discriminating characters: though it must be admitted, that where this affection can arise from so many causes, and put on so many different forms, it will often require great attention and acuteness on the part of the physician, to discover that a disorder of this nature belongs to the division under review. On this I shall hereafter have occasion to speak more fully: but I must still add here, that if I have not stated all the causes which may render that which is truly a headach of this nature, not such in appearance, or not easily discernible as such by careless observers or mechanical practitioners, it is because I have, on former occasions, explained the various circumstances under which intermittents, whether simple or anomalous, become obscure, from the irregularity of their periods and paroxysms, and that it would be mere repetition to do this again. And not only here, but hereafter, if I do not explain why the various Neuralgiæ are so often irregular, so irregular as to afford argument to the opponents of these views, it is because I presume that what I have already said in explanation of this fact generally, will be applied, as I intend it should, by those who have attended to the former parts of this essay.

It might now be anticipated that the periodical headach should exist under the acute and chronic form both, or that it may be a new disease or an habitual one. It may be, and is often, a truly new or acute disease, or it is the first effect of its cause; though it will also appear to be such to those who do not know it as a mode of intermittent, when it succeeds, for the first time, to this in its ordinary form. How often it is transitory, or of short duration, whether from a natural cure or from the use of remedies, it is difficult to discover; as it either does not attract much attention, unless peculiarly violent, or is not recorded, unless when it becomes inveterate and chronic. It is in this state that it becomes the especial object of notice; since thus has it frequently been known to last for years, or through life, like the other chronic disorders of this nature: yet not often without those interruptions or substitutions which occur in every habitual intermittent. If however the patients' reports could be trusted, I have known one case where it continued under quotidian type for sixteen years, and another where the tertian form of it lasted upwards of twenty; in both, as I was assured, without even a day's interruption. Nor is there any reason why this should not be true; as the same happens notoriously in simple intermittent. And it is proper to remark here, that as it then becomes difficult of cure, or incurable, like other chronic

intermittents, and particularly, like these, does not yield to the usual tonics, this has been used as an argument against its identity with intermittent; it being forgotten that the simplest form of this disease is equally refractory to this treatment, when of long standing.

To take the most regular form of a paroxysm, as the most proper mode of describing its attack, it will be found that this is as regular in its returns as that of a common intermittent, subject however of course to the analogous anticipations, postponements, or uncertainties; and, as in certain obstinate and long-continued disorders of this character, it will also be found, that the same hour, almost indeed the same minute, is accurately preserved, even through a long life, and though it should have undergone great and frequent interruptions; and that this singular regularity also marks the more slender derangements occasionally substituted for it, which I shall presently notice.

It appears to me, that, as in the violent Neuralgia, and, as I believe indeed, in all the anomalous intermittents where pain is a symptom, the pain appertains to the hot fit of an intermittent paroxysm, and that in most cases, in all well-marked ones, an attentive observer can trace the whole proceeding. The previous cold stage is indicated by the same appearance which I have so recently described, in all respects; and if an absolute general hot-stage does not occur, there is that excitement of the vessels and local heat, often approaching, or even amounting to temporary inflammation, which marks at least a local hot fit; a hot stage as local as the previous cold one commonly is, just as if the whole intermittent paroxysm was limited to one spot, instead of occupying the whole nervous system.

I need scarcely repeat that the pulse undergoes those changes already described; that thirst, and in short every peculiar symptom of an intermittent paroxysm may equally be observed, and with sufficient ease when the disorder is well marked. The characters are, in short, in every manner, those of an ordinary intermittent, with the addition of pain; proving the correctness with which it is arranged as a neuralgic intermittent. And under this view it is, that we so easily explain the other symptoms which so often attend it; such as previous yawning, increased and sudden secretion of urine; spasmodic and hysterical affections, derangements of the mental faculties, and, as I conjecture, vomiting. In this particular disorder, that act generally occupies the same place in the paroxysm which it does in the common intermittent; and though I do not doubt that there is a headach terminating in vomiting, of a different nature, and commonly called the bilious headach, I have had no difficulty in tracing many of the reputed cases of this nature to the disorder which I am now describing.

Variety in the mode and extent of a pain, in the ordinary painful diseases, is a subject beneath scientific notice in physic; but it is here of considerable importance, and requires examination. As always happens when striking symptoms engross the whole notice, it has here given rise to unfounded distinctions, or to a multiplication of imaginary independent diseases; but besides this, which is an error to be rectified, these varieties enable us to trace a connexion or identity among disorders that have been too often supposed different, and, very especially, to prove the identity of the simplest headach of this nature, with the most violent Neuralgia of the face.

And if I may here venture for a moment to anticipate what belongs to the theory of this disease, it is not difficult to see how every variety of pain may here proceed from one cause. If it is an important nerve or a large branch that is disordered, the pain is proportional, as in severe Neuralgia; if that disorder be confined to the minutest ramifications, it is easy to understand how it may be milder and more diffused; while, in every case, it will also occupy an extent corresponding to that of the affected nerves, and appear under a severity which, probably, is proportioned to the degree of this obscure derangement.

In the best defined periodical headach, the pained part is generally small, when it may exist in any spot, including the face; and it is a general rule, though not without its exceptions, that in the chronic cases, whatever spot is once the disordered one, it continues so throughout the whole career of the disease; indicating a permanent morbid condition of some nerve, as in the decided Neuralgia of the face. And thus, as these cases become severe in point of pain, do they approach so gradually to that Neuralgia, that no boundary whatever can be drawn between them; a fact which ought long since to have explained what the Neuralgia (Tic) really was.

Such very local forms of this disease sometimes occupy a point so small, that, as patients express it, they might cover it with the end of the finger; another character in which it agrees with the Tic: and thus it is not uncommon over the eyebrow or on the top of the head, though it would be trifling to point out these variations, interesting as they may appear to the patients themselves. How often *clavus hystericus*, as it is called, may be a different and an original disease, or a symptom in some other nervous affection, I am unable to say: but I have myself met with no case under this name which was not the disease in question, while the hysterical or nervous symptoms that sometimes accompany that pain, are easily explained from the facts that have formerly been detailed.

To pass over the less important varieties, I may next notice

that which occupies one side of the head: even thus, varying in its extent, from the most definite hemicrania, to pains occupying more or less of the head itself, or reaching to the face, or even affecting the face exclusively: passing, in this last case, to what is called rheumatism of the face and toothach; disorders which I must, however unwillingly, separate from this, in conformity to general opinion. In this, as in all cases of greater extent or wider diffusion of the pain, that is commonly more moderate than when it is confined to a smaller spot: and thus the headaches of this nature may vary from a state of great severity to one where positive pain can scarcely be said to be present, and where there is rather a sense of uneasiness, or fulness, or weight, or perhaps of throbbing, or of mere heat, generally however attended with that confusion of thought which is rarely absent during a paroxysm of this disease, and which sometimes is even almost the only thing which a patient can fix on. It is not my business here to inquire from how many other causes hemicrania may arise, nor how often it may be a separate disease or a symptom of some other disorder: it is sufficient that it is one of the modes under which the disease in question appears.

I must now remark that this modification sometimes occurs under a form so slight that it attracts no notice; not at least from a physician, assuredly, and scarcely even from the patient; particularly if accustomed to severer attacks, or engaged in active life. It would be a matter utterly unworthy of notice here, did it not tend to explain some of the circumstances, and some also of the errors, respecting this disease. Thus a paroxysm of it, and even of the most regular and persistent form, may occur as a mere sense of fulness or heat in one side of the face, often attended with a watering, or even a slight redness of the corresponding eye, and with a sense of fulness in the nostril, or even with a temporary catarrh of that nostril alone. Here, even the patient, uninformed as to this, will attribute these feelings, if indeed he should attend to them, to a cold, or to an inflammation or "weakness" of the eye, and the true nature of the disorder is overlooked; though, if it were watched, it would be found that these symptoms were as well marked in point of time and returns, as the most severe periodical headach or common intermittent, and that they were, in fact, regular paroxysms of the habitual disease. Of this species of hemicrania connected with a partial catarrh, I also find a notice in Sauvages, under the term *Migraine*: the hemicrania being periodical, recurring, as he says, once a year, and being attended by a dryness of one nostril, a retraction of one eye, and a considerable lachrymation: while no stronger proof can be given of his utter misapprehen-

sion respecting all these diseases, than to find them scattered over every part of his work, and not seldom repeated under two or three different titles.

It is an incidental remark here, but not without its value, to say, that I have seen cases of this nature where the lacrymation has been attributed to fistula, with consequences which I need not point out. Such deceptive fistula is therefore one of those occurrences which might add to the list of simulations in which Neuralgia, as well as intermittent, abounds: but if in the present division of what I consider Intermittent, I have not thought fit to make so marked and definite a classification of these false or deceptive disorders, I am the more unwilling to do so in such a case as this, where nothing but great neglect can commit the error; while further, respecting many others which I might easily have pointed out more distinctly, I have chosen to trust to the reader's own inductions, which ought assuredly now to be easy, rather than prolong this essay by minuteness, and in some measure also, by repetition.

In speaking of a certain catarrh as being probably connected with intermittent, I alluded to that catarrhal affection of one nostril which I have just pointed out, as offering a kind of confirmation of the possibility of such a disease. And on this I may now further say, that this periodical catarrh sometimes so predominates over the headach, as to appear the sole disease; not unfrequently also being of a severe and durable character, while then also, by what is called sympathy, often affecting the other nostril, and thus entirely deceiving both patient and practitioner into the belief that it is an ordinary catarrh. Such an affection often teases a patient through months, or even years, as do all these diseases: and if I have thus little doubt that many of the habitual catarrhs do belong to this hemicrania, this fact still further confirms what I formerly remarked respecting the catarrh of intermittent, while the order which I was obliged to adopt has forced me to notice this subject in two places. I need not add that this, like the preceding, is a case of simulation, which, but for the same reasons, might have justified an even more pointed notice.

An important observation to be drawn from the former apparently trifling circumstances is, that where paroxysms or periods thus slender are irregularly interposed in any manner among decided ones, a disease which is perfectly regular in its returns may be supposed irregular, or may seem to have disappeared when it is actually existing, or has been continuous; and thus a truly periodical headach, or a most regular intermittent, is mistaken for a common or an occasional one, because the ordinary attention is fixed only by the most obvious symptom. Hence, not only a perpetual source of errors as regards headachs in ge-

neral, but an hostility against this theory; because the practitioner does not see, or possibly has not had the means of seeing, what really exists; though the leading cause is the want of that true theory which would incite to a just observation, and correct erroneous ones.

That the fact as I have now stated it may gain the support which it really can command, it is easy to see that the relation here between such a trivial paroxysm and a decided and painful one, is exactly that which, in the simple chronic intermittent, occurs between those well-marked fits to which the disease is subject, and the very slender ones formerly noticed, which few but the patient himself, accustomed to their indications, would observe; while in both cases, the regularity and the true character of the disease are equally maintained. And if this fact may aid in the proofs respecting the true nature of all these periodical diseases, it is of much more value in relation to the cure; since in pointing out error and conducting to the real cause, it also indicates the proper remedies. Of such importance may observations apparently so trivial, and derangements of health so trifling, be rendered, by a proper induction; as, in all the sciences, there is no fact so minute or neglected, which he who knows how to wield that science, will not know how to turn to account.

I shall offer but one remark more on this modification; and it is to point out that increase of action in the superficial vessels which so often attends it, and which in the nostril and the eye, as I just observed, reaches to temporary, and occasionally, indeed, to more continued inflammation; while further, attacking the membrane of the mouth, it often seems to threaten tooth-ach, or to make the patient doubt whether he is not about to suffer this disorder. As it is a greater degree of that increase of action in the neighbouring vessels which attends all Neuralgiæ, so is it that tendency to the more decided inflammation of the eye and of the membrane of the teeth, commonly called rheumatism, which I shall hereafter attempt to arrange under the same head; forming the connecting link between temporary excitement and permanent inflammation.

I must yet, however, notice one point of resemblance between the common intermittent headach, and the Neuralgia (Tic) of the face. In the former, as in this, there are often two pains, an acute and a general one, at the same time; while the acute pain also is subject to similar intermissions and exacerbations during the paroxysm. And, when the disease is strongly marked, or the pain intense, the confusion of thought formerly noticed frequently amounts to absolute delirium, as the whole disease is commonly attended with those affections of the mind or temper, which were formerly enumerated under simple in-

termittent fever. Thus further does this disorder, as well as the Neuralgia under whatever form, frequently excite the desire for suicide, while the very act itself has been committed; of which I shall hereafter be compelled to notice one peculiar case.

If I have formerly pointed out the occasional effect of intermittent on the intellectual faculties, I must also notice the parallel consequences which occur in the periodical headach; as is no less true of the Neuralgia of the face. In cases of long standing and of a continuous nature, and particularly, I presume, if of great severity, this hebetude, or tendency to fatuity, appears at first only on the days of the paroxysm; but, at least, where bleeding has been erroneously used as a remedy, or any other debilitating system pursued, the faculties become permanently affected; though whether this is common in cases where the disease has not been thus maltreated I know not. In two very marked instances, and in persons of previously strong intellectual faculties kept in constant action, permanent debility of mind was the consequence through life; while in another, where no plan of this nature was followed, where in fact every remedy was refused, the disease, which was of a tertian and regular type, gradually lost its severity through a course of some years, when there as gradually supervened a species of fatuity which maintained as regular a tertian period as the painful state had done before, occurring only on the alternate days, and which continued for many years that this person was in my view; which indeed, I have some reason to think, has at length nearly destroyed the patient's faculties. On the possibility of such an intermittent fatuity, I may quote an analogous case from the Mem. Acad. Sciences, Paris, in which a periodical loss of memory is thus described under the term *Oubli cephalalgique*; being evidently a modified case of the same nature, or perhaps an absolutely similar one, though ill explained, because not rightly understood; as usual.

In treating of the chronic remittent and intermittent, I formerly took occasion to notice that headach seemed sometimes to be the only very decided affection appearing to mark the continuance or the relapses of the disease. Yet, in such cases, there is, and perhaps very generally, a degree of general disorder, or of fever, greater than that which occurs in any of the cases of common periodical headach. I know not, nevertheless, whether it is here worth while to point out a general, and an apparently ordinary headach, as one of the varieties under which the disease under review appears, as it is creating distinctions without a real difference. Yet perhaps it cannot well be avoided; from the order, or rather want of order, which, in submission to popular opinions, I have been obliged to adopt.

Be the propriety or the impropriety what they may, it is certain that the periodical headach sometimes appears as a generally diffused pain, without any such peculiarity of character as might induce us to refer it to the Neuralgiæ; even here, however, under those several modifications as to the quality of the pain, which are far too familiar, in headach in general, to require specification. If such a headach should have periodical returns, or be attended with any of the peculiarities already described, it may be marked as a disease of this nature; while, should it be very irregular, its true nature may even then be discovered, by a careful attention to all the circumstances of such irregularity, to the previous history of the patient, and to such other discriminating points as I need not again repeat.

The judgment is, however, much more difficult in this case than in any of the former; as the most vulgarly discriminating characters, consisting in the mode of the pain, are wanting, and as the popular opinions respecting headach as an original disorder, or as one originating from a variety of causes besides this, tend to mislead the observer and the patient both. It is not for me here to inquire respecting all the causes of headach, endless as they seem to be: nor in truth has physic succeeded particularly well in explaining any one circumstance that belongs to this common disease, or symptom, be it which it may. But if we are still thus ignorant, there is no reason why we should not attempt to separate those cases which come under the variety under review; since, if we do not, even here, know the exact cause, we have at any rate approximated to it, and are in possession of analogies at least which are important to the cure.

And I have reason from observation, (not however so extensive as I could wish, since this disorder seldom comes under the cognizance of physicians,) to think, that if all the cases in which patients are subject to frequent headachs were carefully examined, a considerable proportion of them would be found to originate in this cause, and that this would particularly prove the case in disorders of this nature popularly called nervous headach, generally the torment of a course of years, and sometimes of life itself: a disorder that is often endured, if not without complaint, yet without application to medicine, from the opinion that it is incurable, and as the phrase is, constitutional. I must speak with great caution respecting a disease, of which it is so difficult to gain the management, and which can seldom therefore be properly studied; but it is one which well deserves to be narrowly investigated, under whatever form it may appear, wherever it occurs and admits of such inquiry; since, should it at any time prove to belong to the variety in question, we are at least not absolutely without remedies, however often

they may disappoint us in every intermittent disorder that has been of long standing.

On this point I must yet remark, that after consulting numerous, and even professed and distinct treatises on the headach, I often perceive the most utter neglect with respect to the intermittent or neuralgic variety, even in its best marked forms, long as it has been known to physic and physicians. If bark is recommended, it is not from any definite view of its connexion with intermittent fever, but apparently from some empirical association between the two terms intermittent, and bark, or perhaps arsenic; while the neglect of the other means applicable to intermittent fever, seem to prove that this criticism is justly founded. With respect again to headachs not rigidly periodical and intermittent, I cannot any where trace even a suspicion that they may belong to this disease, though I shall be gladly corrected by any one of more extensive reading on this subject: while I need not say that the greater number of these writers, and the recent ones in particular, are always seeking the cause in derangements of the digestive organs, (the fashionable seat of most chronic disorders,) whether these are present or not; while the remarks formerly made on dyspepsia, show that they must often be present, yet as appendages, not causes of the disease in question.

If I have thus examined with as much detail as appeared useful, the periodical or intermittent headach, there still remains to be noticed, an affection, or a collection out of some of the preceding symptoms, for which I can find no better place. I know not well what to call it, from its half imaginary half mistaken nature; while I should assuredly not have bestowed a paragraph on it, had it not been for the pernicious practice to which it has led, and which, being one among the fashions of the day, seems also to be rapidly increasing. Though it is not a disease, nor even a symptom, nor any thing else that can be defined, consisting as it does in a false and irregular view of many symptoms, what is here meant will be understood, when I repeat the fashionable term by which it is known, namely, "a flow of blood to the head."

I am not under the necessity of inquiring what is meant, physiologically, by the phrase, a flow of blood to the head, while I conjecture that those who use it so readily, would be somewhat troubled to explain their own meaning; nor is it within my compulsory limits to discuss those cases, be they apoplexy, phrenitis, or what they may, in which a derangement of some kind, of the circulation within the brain, does take place. In the cases to which I allude, it has been recently discovered, (for the disorder is of very recent invention,) that the blood flows in some very improper manner to the head, even should the pa-

tient be a delicate and young female, a pallid and enfeebled, night-watching student, a nervous lady of fashion, exhausted by London vigils, or any one else of all those who were once esteemed to suffer from debility and nervous diseases; a tribe too numerous to mention in detail. Who was, or who were, the enlightened discoverers of this new philosophy, may be asked by those who can themselves answer it: a physician must hope, for the honour of his profession, that it was the discovery of the cuppers, and that it has been propagated by the self-empirics who are now fast becoming the rivals of his brethren, in the science, and of the apothecaries, in the art.

It belongs to another subject, and not to mine, to investigate the various disorders, whether of the general system, or of the digestive one, which give rise to those numerous, yet often trifling affections of the head, to which this modern philosophy has been applied; affections formerly esteemed nervous, and, if not exactly explained by the term sympathetic, yet well understood under that received name. That which is here my business, is to say that this kind of derangement, or these symptoms, unquestionably often sufficiently teasing to an irritable constitution, occasionally also in themselves not a little troublesome, but always aggravated in the patient's mind by the species of terror or anxiety to which this false view of their nature gives rise, are very frequently the produce of the intermittent affections of the head which I have been describing, or are actually cases, if sometimes obscure ones, of the periodical headach; disorders of a neuralgic character.

From what I have already said of the modifications of that disorder, it is easy to see how its characteristic and explanatory symptoms might be overlooked, and how the pain itself, under many of its forms, might be conceived, by those who have adopted such a false theory, to indicate even a serious local disease of the brain. But there are other symptoms attendant on this disorder, which tend still more thus to mislead: while, in the minds of those who are ever ready to attribute every affection of the head to "fulness of blood," "flow of blood to the head," and so forth, they have confirmed this false theory, as they continue to furnish arguments for its support. If I already pointed out some of these, I thought it most advantageous to reserve others to this place; and I may now notice the whole together at the hazard of some little repetition. The real, or practical importance of this disorder, if disorder it can be called, though it is of an artificial importance and the produce of erroneous practice, will justify my thus dwelling on what I should otherwise have passed over, and trusted to the reasonings of those who have read the account of this disease just given.

Lest, however, it might be supposed that I am describing

symptoms to which I have myself given a wrong solution or a false colouring, I must premise that I have made use of no case for this purpose in which the real cause or nature had not been ascertained by all the tests which I have invariably applied to every one of these anomalous diseases; and chiefly by their periodical nature, by their occurrence, as a variation, in persons subject to the chronic intermittent under several other anomalous forms, and by the fact of these affections alternating, even as single paroxysms, with paroxysms, either of common intermittent, or of intermittent headach, or of some other irregular form of this Protean disease.

Where a prejudice respecting this "flow of blood to the head," as the necessary cause of all such disorders, is rooted, or among those who, entering on the practice of physic under such opinions received from teachers, are content to proceed, and to believe also, as others do, without inquiring, even common headaches, when inveterate or habitual, are usually attributed to this cause, as are perhaps, even more commonly, those irregular ones which do not put on the highly defined character of a periodical or intermittent disease; while even this very disorder in its most accurate form, is, now, not unfrequently attributed to this cause; such is the power of example, or the influence of fashion.

But if such pains are of the slight, transitory, or irregular character that I have described, they are also frequently neglected, as trifling or unimportant, while the judgment is formed from the accompanying symptoms: and still oftener perhaps will such erroneous judgments be formed, when, as is not unusual, the pains are altogether wanting, or, as also happens, when they occur but occasionally amid the other more constant symptoms.

Of these, I have already noticed a sense of fulness in the head, which, in the hemicrania, is particularly remarkable, from the contrast between the healthy and the ailing division, and which, as I then noticed, may exist without any pain. Now, similarly, where a headach in this disease might have occupied the whole head, as a paroxysm, it may be replaced by this mere sense of fulness; and thus is established the opinion of an excessive and dangerous "flow of blood to the head." Such also is this feeling at times, as to convey the sensation of high tension; while, further, this proceeds so far, occasionally, as to become a sensible throbbing; or the patient can feel the pulses of the heart in every part of his head without even touching it.

It must be admitted that such symptoms carry with them every evidence of an increased action in the vessels of the head, or of a flow of blood to the head; and it is still less surprising

to find prejudiced or inattentive practitioners misled by it, when the action of the carotid arteries is sensibly increased, and when, sometimes, the exterior jugular veins enlarge; both of them symptoms which occur now and then, in violent or particular cases. And there is, in fact, a really increased action, so that, in words, the theory is more or less correct: while the important question still remains, what the nature of that action is, where it lies, and what is its cause: since, on the determination of this, must the practice, for good or evil depend. I hope to produce here, analogies enough to show what the practice at least ought to be, if I cannot explain in what this singular action of the blood-vessels consists.

In the general description of common intermittent, I reserved chiefly to this place, the mention of a peculiar symptom which often attends it, and which, I must also remark, belongs to the hot stage. The fulness of pulse which succeeds to its peculiar condition in the cold stage, is well known, but it is attended, often, with a circumstance which scarcely occurs to the same extent in any disease that I know. This, difficult enough to describe in words, is a sort of bounding of the artery, as if it was displaced by some action of its own, independent of that of the heart, at each pulsation; and, when sought for, it will be found to extend through every artery of the body, so as to render sensible to the touch, numerous minute branches or deep-seated vessels which are never otherwise perceptible. And very often, further, it is so energetic, that the patient himself can, when lying at rest, feel and count the pulsations of such arteries, though nothing should touch them, and this, even in the fingers, to their very extremities, as in numerous other places which I need not suggest to anatomists. That this action also does really belong to the arteries themselves, is plain; because it is not necessarily attended with any such increased action of the heart, though this sometimes also happens, as might be expected.

Now this state of the circulation is but a part of the stage that I have mentioned, and is transitory; subsiding when that is past, and often so suddenly and completely, that we can scarcely believe what we have just witnessed, when the change happens under our hands. Yet it is very often so far mistaken, as to be made the reason for blood-letting and the justification; after which, it of course subsides, affording still further proof to the ignorant or prejudiced, that this was necessary, though it would equally have ceased at its natural period, had nothing been done. Should this practice be repeated on every new occasion of this nature, in a quotidian, or even in a tertian, it is very certain that the patient would not long trouble his surgeon;

while, in fact, it is a mistake perpetually committed, and with consequences which I shall have occasion to point out hereafter.

I have here described an acute intermittent; but the truth is, that the very same symptom often occurs in the chronic disease; and it is far from uncommon to find cases of this nature, in which the only very ostensible symptom of this paroxysm is this temporary and singular state of the arteries, though it is, in reality, always preceded by one of those obscure cold stages, which I have already noticed. And in some of these cases, also, the heart seems more affected than the arteries, or the patient counts the return of his paroxysm by an increased action of that organ, not amounting to palpitation, but obviously connected with it, or being a milder form of that local symptom. If this, and the palpitation also, is a partially increased action in the arterial system, so may that action of the inferior aorta which I formerly mentioned, be viewed in the same manner; and if, when the intermittent is universal, or the whole nervous system affected, the entire arterial system is thus acted on, it is not difficult to admit that a portion of it may be similarly deranged when the intermittent acts, rather partially than universally, on the nerves, as it in reality does in the cases of the heart and of the aorta: when it is of that character which gives us all the local affections, be they Neuralgiæ or what not, which have already been described.

Now it is easy to transfer this reasoning to the diseases of the head under consideration, since the analogy is striking. Here, the local disease prevails over the general one; or the intermittent, instead of occupying the whole system, is limited, or chiefly limited to the head. It is acting on the nerves of the head and face when it produces Neuralgia, a common periodical headach, or the more general "nervous" or "rheumatic" headach: and thus would it be easy to foresee that it should act, or might act, especially on the arteries of the same parts, supplied by these diseased or suffering nerves. It would be a local hot fit with augmented arterial action, just as there is a general hot fit with this symptom; and I have already shown that the painful state of periodical headach or Neuralgia is the hot fit, and that this stage is often, like the cold one, absolutely local and limited.

And if such might be the presumption *a priori*, it is confirmed by other facts. I have elsewhere mentioned partial intermittents affecting a single limb, or more, or less; and, of these, some remarkable cases are mentioned by authors, where the paroxysm has been so complete and so regular, that each of the three stages took place in the part, while the body at large was unaffected. In such cases, it is plain, the arteries of that

part must, during the hot stage, have been in the very condition here described; while it is obvious, that not only the same might take place in the head alone, but that this must be a frequent event, when it is thus proved that hemicrania, or periodical headach under any of its forms is such a partial intermittent: the probability of that disorder being really an intermittent, being further confirmed by the occurrence of these other partial cases.

Moreover, in Neuralgiæ, every where, and in these headaches, there is an increase of the action of the smaller arteries, as I have formerly shown; producing redness, or temporary and transitory inflammation, or else causing actual inflammation, as it does in the "rheumatism of the face:" and further, as I shall show hereafter, giving rise to a peculiar ophthalmia, a neuralgic ophthalmia. Indeed, even in a common headach, where the smaller nerves of the membrane are the seat of the pain, there is increased action, or excitement in the neighbouring arteries, as is well known; extending often even to the larger ones, and even while the heart is unaffected and all the rest of the vascular system tranquil. So certain is it that undue arterial energy can be excited by locally disordered nerves, in a single spot, without fulness of blood, or "flow of blood to the head," or tendency to inflammation or to plethora, and even in subjects labouring under the most opposite conditions of exhaustion and debility. With this indeed, under various modes, physic is far too familiar to render it necessary for me to point out the circumstances under which it happens. Even in these cases, modern fashion is now resorting to this pernicious theory, pernicious in the practice to which it gives rise: when surely no physician really acquainted with disease, would consider that such partial increase of action in the vessels of the head, was a justification for blood-letting on the ground of a dangerous plethora or misdirection of the circulation.

What the exact nature of this increased local energy of the arteries is, any more than what it is when extending over the whole system in the common intermittent, we do not know; so little do we really know of any thing in physiology or pathology. One fact here I may however add; and that is, that in these local cases, it seems often to begin in the extreme vessels, and is from them communicated to the larger ones. But whatever it be, and whether in these particular cases it extends to the brain as it attacks the exterior small arteries, and even, as I remarked, the carotids, there is no evidence of its exciting inflammatory symptoms there; though we can conceive this possible, at least under a certain form, since it produces this effect on the eye and the membranes of the mouth. If it were even thus, it is not a justification for blood-letting, but the reverse, as

it will shortly be proved that all the neuralgic inflammations are aggravated by this treatment, as is the painful part of the disease itself under all its modes, and as is every chronic intermittent, be its form what it may; while further, real diseases of the brain, or injuries to the nervous power, are here produced by blood-letting, as I have often noticed already, and shall have occasion to remark again.

But further, if this increase of action of the vessels of the head is suffered to take its own course, it subsides within a limited time, or with the local hot stage which produced it: maintaining, and proving still more effectually and completely, the analogy which it bears to the parallel symptom in the common intermittent fever. This would not happen in any other case of diseased, inflammatory action, either in the brain or in any other part: and it ought itself to be a proof that blood-letting is here unnecessary, (while it is in fact injurious) and that the common theory of increased action or flow of blood, true as it is in words, is false as it relates to science, in the view commonly taken of it, and pernicious as it relates to the treatment. And as far as it relates to the possible termination of this increase of action in membranous or "rheumatic" inflammation, which is the only kind of inflammation that does follow it, I may observe that this event is very rare, compared to the cases where it does not occur, and therefore diminishes the force of even the false arguments in favour of this practice that might be derived from it: while even that inflammation, where we can really prove its existence, is of a peculiar character, so as, almost universally, to be aggravated by evacuating and debilitating remedies, as I shall have occasion to prove fully hereafter. Such is the view that I have taken of this particular symptom or collection of symptoms, now called the "flow of blood to the head:" and if I have noticed it, as was here my duty, as belonging to the periodical headach or local neuralgic intermittent, it seems to me that nearly the same reasoning, with the same practice, applies to all the cases where these symptoms occur, whatever may be their original causes; since, in all, the pathological condition is similar.

The only other symptom or disease which I think it worth while to notice, is giddiness, vertigo in medical language; not only because of its occurring as a prominent symptom or local intermittent, but from its leading, even more decidedly than the last named, to the same erroneous and pernicious practice. This I may consider as one of those marked simulations which might have demanded for itself a separate division, or which I might have arranged in a distinct class with others which I have similarly but touched on where it seemed convenient; since, in strictness, it does not appertain to the present place. But if,

for want of a better one, I have been obliged to speak of it here, I must observe that it does not necessarily belong to the periodical headach, though often occurring with these; since I have seen it occasionally as a mere variation of the common chronic intermittent; a substitute for ordinary paroxysms or for other anomalous ones, and without pain.

I formerly spoke of the intermittent lethargy or coma, a common source also of erroneous judgment and mischievous practice; but the giddiness in question is unattended with lethargic symptoms, and as far as I have seen, does not even affect the mental faculties. In every thing but this, it resembles the giddiness of intoxication, so that the patient, with all his efforts, cannot walk straight, or, when it is excessive, fancies the neighbouring objects are in motion. It is a symptom well known as occurring from certain poisons, and also in nervous affections; in some of which at least, where recorded, it is not unlikely to have depended on the cause under review.

When it attends the intermittent headach, it either actually accompanies the pain, which is occasionally a mere neuralgic point, or it comes alone alternately with that, or else it will return periodically, for even weeks, by itself; and in this last mode also I have known it replace an ordinary chronic intermittent. If its accuracy of period or duration is subject to the various irregularities which I have formerly pointed out in all these chronic and anomalous intermittents, they can now be easily explained by the reader; while I need not further detail the characteristics by which it is to be distinguished, since it would be to repeat much of what has so recently preceded. But all these facts must be kept in mind; since the prejudices with regard to the value of this symptom, being the same which have just come under review, tend similarly, or perhaps even more, to mislead the practitioner, and indeed the patient also. It requires in fact, no small degree of moral courage in a physician, to resist, or change, the mischievous practice resorted to in these cases; and very particularly, should the patient's age, quality, make, or habits, confirm himself and his friends in the opinion of a threatened apoplexy.

If I need not dwell further on this symptom, since it would be nearly to repeat what I have just said, neither need I add much respecting the practice, since that also would be to repeat the preceding remarks and cautions. The paroxysms disappear of themselves, as do all others; and thus also will the entire course of such a symptom, as so often happens in all these chronic intermittents: and if remedies are to be resorted to, they are those which are applicable to the whole tribe, and which will be examined, as far as they have not yet been so, hereafter. The injurious practice is the same; while, besides blood-letting

and cupping, low diet is also a favourite remedy in this case. Of this, the evil may be conjectured from the former remarks on that subject; and the result of the whole is to produce a vast train of other evils, to which I have already alluded, and even, as I have more than once seen, death. Whether this result, under such treatment, has any peculiar connexion with these local diseases of the head rather than with other forms of intermittent, I cannot conjecture; but I have seen one such case, vertigo, where successive blood-letting and cupping produced, and so gradually that the cause could not be mistaken, a confirmed and very frequent epilepsy, which was nevertheless cured after some years, by a change of practice, together with all the other intermittent diseases which had, from the beginning, been sufficient to prove the true nature of this vertigo.

I may now terminate this account of the intermittent or periodical headach, (the neuralgic intermittent of the head,) and of the disorders or derangements which it was convenient to connect with it; but there remains yet one case which I must place here, because I know of no other so convenient. If but one has occurred in my own experience, and that I am weary of unsuccessfully searching through authors for information, it is not impossible that some of my readers may be able to add to it from their own experience. This was a case of periodical and quotidian deafness, so regular in its attacks that no doubt could be entertained of its real nature; particularly as that was confirmed by the former diseases of the patient and by other alternating symptoms. That such deafness does sometimes occur in the cold fit of an acute intermittent, I have formerly remarked: and since I have also shown that many of these peculiar local affections or anomalies occur equally in the chronic varieties, if under differences already explained, it is easy at least to admit the possibility of such a periodical deafness from chronic intermittent; while it is plain that I might have ranked this case in a former chapter instead of the present one. It has not always been easy to determine on the best place, amid the division which I was compelled to adopt for the Neuralgia.

CHAPTER XII.

Of the Neuralgiæ of other Nerves in various parts of the Body.

THE description which I have given of the Neuralgia (Tic) of the face has been purposely made minute, that I might not again be obliged to enter into such details in describing this disease as it occurs in other parts of the body. And if in treating of the periodical headach, I have entered into similar details, and into reasonings somewhat extended, it was partly also that I might not again be obliged to go over the same ground in what is to follow. Between the two, I have shown that the neuralgic diseases are periodical, and connected with common intermittent, reserving however some further proofs and arguments to a later period of this essay; and in the account of the one or the other, almost every essential circumstance that can occur in the other Neuralgiæ has also been explained. Thus, where a large branch is affected in any other part of the body, the case and the symptoms are referrible to the Neuralgia (Tic) of the face; while the affections of the minute ramifications produce symptoms or disorders analogous to those noticed under periodical headach, but differing in situation. It might be inferred also that the quality of the pain, or the symptoms in general, would be partly regulated by the peculiar nature or offices of the affected nerves: and accordingly such variations will be found to occur.

As long as the unfortunate term *Tic douloureux* continued solely allotted to this disorder, it was scarcely conceived that it could exist any where but in the face; and it is but recently that the existence of other Neuralgiæ has been admitted, while, even now, this belief is very limited, and indeed the fact itself denied or doubted by many. And if we refer to authors, we shall find many cases recorded of painful diseases, (though it is commonly the most remarkable ones that have been selected,) where it is evident that the disorder could have been nothing else: while we also find them sometimes represented as wonderful or mysterious, and not unfrequently are almost inclined to smile at the suppositions produced, or at the *ambages* of the narrators in attempting their explanation.

Within the circle of our own observation, if we meet with the same circumstances, we can more easily perceive the mis-

takes, both in practice and opinions, respecting these cases: mistakes so common, I may almost add so universal, that there is no physician who, if he shall adopt this view and reflect on his own experience, will not be able to recollect endless cases of this nature, and I might almost say, scarcely one in which the true nature of the disorder has been understood. It will naturally be asked, as was formerly remarked of Tic itself, for what they have been, for what they are now mistaken; but the answer would be as long as the places where they may occur are numerous. Rheumatism and gout have perhaps sufficed for the most frequent solutions: the latter having been often called on to countenance or father many more diseases than this. I have already mentioned an instance where the pain was attributed to a diseased bone, and many more such have come under my notice: while scirrhus, strictures, diseased glands, and far more than it is worth while to name, have equally been the excuses for ignorance, where the peculiarity of the situation admitted of such explanations. That also, among these Neuralgiæ, there are at least two which have gained specific names for themselves as if they were independent diseases, I shall hereafter show.

It might have been conjectured long ago, and with no very great effort of ability in the art of generalization, that if a nerve in the face might be thus diseased, so might any other nerve; and it does appear somewhat wonderful that Sciatica had not long ago led physicians to this obvious inference, at least for that particular case, had it done no more. And accordingly, if every individual nerve in the body has not been the seat of Neuralgia, it has occurred in so many, even in my own limited experience, that we have no reason to exclude it from any, but have, on the contrary, reason to expect, that whenever the disease shall become generally acknowledged and observed, there will be produced cases of its occurrence in every part of the body, and that such disorders will also be found not less widely and commonly diffused.

With respect to the evidence that the diseases which I am about to point out are truly Neuralgiæ, I may anticipate the further proofs that will hereafter be given, in a general summary, as also such particular ones as any of the remarkable cases here quoted may require, by saying generally, that they are of the same nature as those which have already been treated of on so many occasions. The quality of the pain is the same as in the one or the other of the analogous disorders occurring in the head; while there is neither organic disease, nor inflammation, nor gout, nor any of the other well known causes of pain present to justify it. It is periodical, or transitory, and recurrent, and through long periods of time, even through life: subject of

course to those irregularities in this respect which belong to all the chronic intermittents; the nature and causes of which have already been explained. Very often we can trace it to the same causes; and while it is cured by the same general remedies as common intermittent, with the addition of such local ones as are found of use in the Neuralgia of the face, it is exasperated or rendered permanent by that which is equally maltreatment in all those diseases: while also the very pointed evil consequences, produced by the evacuant and debilitating practice, are the very same or exactly analogous to what they are in Intermittent and in acknowledged Neuralgia, whatever be the place of the pain. Further, these pains, or painful disorders, be the situations what they may, alternate with common Intermittent, in the several ways already described as occurring in the local anomalies of that disorder, and in Neuralgia and periodical headach; that is, as whole periods, or as mere paroxysms: while, of course, they are also irregularly intermixed with such affections, as happens with respect to the whole of the disorders treated of in this essay, whenever they are of long duration, or have become an inveterate habit.

Thus also, in a patient of this nature, it is not uncommon to find a very great number of all the disorders that have been here enumerated, co-existing or succeeding, and in every possible mode of combination and succession. The same patient, for example, who has suffered common intermittent, will be found to have also experienced more or less, or even the whole of the anomalies enumerated under that disease, together with the Neuralgia of the face, the periodical headach, and a certain number of the neuralgic diseases which I am about to record; all these several affections alternating in different ways among each other, and many being occasionally united; while, what renders the proof of the nature of these last complete, is, that whatever period is the habitual one of the commonest intermittent paroxysm, the same will mark the recurrence of every one of the affections in question. Such a patient, (and I have seen more than one such,) becomes in himself a perfect nosology of this disease, and carries in his own person a demonstration that ought to convince the most incredulous. Lastly, I have never seen a case of these remote and less common Neuralgiæ, where it was not easy to trace that febrile state, which, however slender it may often be in all the local affections, is never absolutely wanting, and ought never to escape the eye of a real physician. The pulse undergoes the same changes, the fit of pain is the hot stage, and the cold stage may be found, at least by means of those delicate tests which I have already pointed out: nor have I ever been introduced to a patient reported as labouring under some unknown and extraordinary painful disorder, that I could

not pronounce at once, from the mere physiognomy, (taking care to be present before, or at the accession,) what the disease was, provided of course that it was really a Neuralgia, as, in truth, has almost invariably proved the fact.

I have only now to add, with respect to the following Neuralgiæ, that as some of the cases were solitary ones, (a circumstance which I must attribute, I presume, to my limited experience,) and others were of a peculiar character, I have found it expedient to depart occasionally from the rules I had laid down, for the more common diseases of this character, and thus to give some cases in a degree of detail that I have elsewhere avoided. I believe, however, that this will have its advantages; as such minuteness and example will serve as a guide to those who have hitherto not attended to these diseases, better than a more general statement would have done. And if I must thus often repeat symptoms and circumstances that have already been discussed, it was a proceeding which, on this plan, could not have been avoided.

OPTIC NERVE.

I can only presume that this was the real place of the disorder, from the position of the pain, which was described by the patient as if a red hot needle had been passed deeply through the centre of the eye. As this disorder accompanied an attack of Neuralgia in the upper jaw, or rather replaced it, appearing at the moment when that ceased, and as it was cured by arsenic, there was no reason to doubt of its nature.

TESTICLE.

Of this I have known, personally, but two cases, while I have reason to suspect that it has occurred frequently, and been mistaken for an incipient scirrhus. In one of the cases to which I allude, this error was in fact committed, and after a long period of suffering, the gland was extirpated in the usual manner. It was found to be sound, and, as generally happens when the division of the nerve has been resorted to in the Neuralgia, it returned in the cord. This case was known to me, only after this last event; and as the patient was an opulent one, there had been no want of advice respecting the disease. It must be hoped that such mistakes will now become less frequent; while I must not even allude to the place where this one was committed.

The other case, under my own care, was immediately cured by arsenic; while its nature was rendered perfectly evident by the slight paroxysm of intermittent which attended it, and by its having alternated with another Neuralgia. As might be supposed, the pain in this case was extremely violent; and it was

described by the patient as rendering him entirely blind (as he expressed it,) to the surrounding objects, as if the whole world had disappeared from his sight, and all recollection was obliterated. Had such a pain continued even for a few minutes, it must have produced delirium.

Not to make a separate division of one, as yet solitary case, and of a case also perhaps not sufficiently marked to satisfy every one, I shall here barely notice that I have met with what I myself believed to be an example of this disorder in the Palus: the mode of the pain and the attack, being precisely that of a Neuralgia, and the patient, a young and otherwise healthy man, assuredly free, during the whole long period of this affection, (which was in the middle of the glands, not at the extremity,) from any affection of either kidneys, bladder, ureters, or urethra.

HAND AND FINGERS.

I have found many cases of this nature, but shall describe only two, on account of the particular circumstance attending those. In one, a patient who had suffered from chronic intermittent and Neuralgia in various forms, the affection was in that small branch of the radial nerve, which runs along the metacarpal bone of the fore finger. The usual symptoms were present, but the peculiarly superficial nature of this nerve, and its place on the bone, enabled me to determine a change of structure in it which can seldom be observed, and which is probably always present, though it has been little suspected. Had it been extirpated, as was wished by a surgeon of high repute, I might have been enabled to ascertain more exactly what the nature of this change was; though it is a piece of pathology on which dissection has not yet thrown any real light, as I shall hereafter show: but I cannot concede that this species of morality is justifiable, not uncommon as it may be.

The pain was limited to a space which a pea would have covered, and in the progress of the disease, which lasted about four months, as no remedies were used, it gradually enlarged so as to form a knot, or swelling of similar dimensions; or, more accurately speaking, about a sixth of an inch in diameter. From the extreme sensibility of this swelling, which could not bear, literally, the touch of a feather without pain, there was no reason to doubt that the nerve itself was the seat of it; while I must further remark, that, even after the Neuralgia had disappeared, the swelling continued, though gradually diminishing, for many years; nor has the nerve, even now after eight years, ceased to be irritated by a touch, for a considerable space above this part; the most gentle pressure producing, throughout it, from the finger's end to a point high up in the arm, the well-

known tingling sensation which always follows the injury of a nerve.

In this case also, it was particularly easy to remark the high increase of sensibility, not only in the nerve itself, but in the surrounding skin, which attended the periodical paroxysm; and further, as indeed happens in many other cases, to trace the gradual progress of a painful state, upwards through the great trunk of the nerve, as the disease gradually increased in severity. And further, I had here also an opportunity, very particularly, of watching the effects of blistering; which were invariably to increase the painful state, and very remarkably to enlarge the circle of that general pain and irritation which so commonly attends Neuralgia: and as the same experiment was repeatedly tried with the patient's consent, the demonstration was highly satisfactory; confirming what I have ever found to be the fact in this disease, and, if I mistake not much, confirmed also by what happens in sciatica, where I at least have always found the effect of blisters mischievous.

If the extreme sensibility of the parts here is at variance with what is familiar respecting pressure in this disease, I believe it all admits of explanation, with a very slight degree of attention. Where a large branch is affected, rude contact or pressure, or should the nerve be superficial, as it was in this case, the slightest touch not only increases the pain, but very often excites a similar pain in some distant nerve, or causes a pain, or a tingling, or shooting, in the remainder of the diseased branch. But when the disease is seated entirely in the minutest cutaneous or membranous ramifications, the pain is often diminished by firm pressure; while it is irritated, as I formerly observed, by a gentle superficial touch, even by drawing a feather along the surface. And further, in these cases, if the leading branches are sound, the pain is diminished by pressure applied to them; cutting off in some measure, we may suppose, the nervous communication. In toothach and headach, this effect is familiar, and well known to practised sufferers; who learn to find out by trial, where the chief branches of the nerves lie. And if it is true that exercise or motion of the parts always increases the painful state of Neuralgia, as is familiar in sciatica, it is easily explained from the disturbance of the disordered nerve produced by the pressure of the muscles, or otherwise.

Having noticed here this peculiar sensibility of the cutaneous ramifications, I may suggest the possibility, (for it is no more) that some of the singular cases recorded, of a morbid and painful increase of sensibility in the skin, may have been of an analogous nature; Neuralgiæ of those nerves. Never having had the fortune to see such a case, I can but offer this as a conjecture, and as a suggestion to be verified or not, by future obser-

vation. No other cause at least has been proposed, and this one is possible; while that possibility is supported by the well-known augmented sensibility, not only in the skin, but in the hearing and in the sense of smell, which so often occur in intermittent, as well as by the facts under review.

It would be useless to detail in the same manner, all the different cases of Neuralgiæ occurring in the fingers, which I have seen: I may confine myself to little more than the bare mention of two or three others, in which there were peculiarities, the indicating of which may prove useful to such of my readers as may not have had much experience in this disorder. The first of these was viewed as a cramp of an inexplicable nature, and had consequently been a cause of long continued suffering, under a trifling practice with antispasmodics. In this, there was a daily contraction, for a few hours, of the middle finger, attended with considerable pain; and there was as little difficulty in ascertaining its real nature, by the physiognomy of the patient, as there proved to be in curing it by a few doses of arsenic.

Another case had been mistaken for gout, the pain being seated in the knuckle joint of the little finger; while what renders this instance remarkable, there seemed no intermission, or thus at least the patient positively asserted, during a month through which it lasted. It was complained of as very severe, and as occupying the space of a pea, while attended with the usual sensibility of the surrounding skin, but without swelling or redness at any time. This ought, negatively, at least, to have indicated its real character, nor shall I be surprised to hear of many more such cases when this subject shall be better understood. In this instance also, I had an opportunity of remarking the evil consequences of blistering; nor could I indeed have avoided that, since the mistake, like the practice, was my own; this somewhat obscure case having occurred in the earlier days of my investigations on this subject, and long before I was aware of its extent, or of the various appearances of Neuralgia. That I did not cure it by my practice, I am bound to add: but having instantly, in a minute in fact, disappeared on the occurrence of a periodical toothach attended by an intermittent, which I doubt not I had previously overlooked, its real nature became evident; while numerous similar terminations since that time, have left no doubt in my mind respecting its real nature. The only other case of the occurrence of Neuralgia in a finger which I think it necessary to point out, was in reality a case in point: since, in this, the pain was suddenly transferred from the finger to the face, producing a regular Tic douloureux, which again ceased, to reappear in its original place.

KNEE.

I think it particularly important to notice the Neuralgia of this joint, because in three of the cases which I have seen of this variety, it was reputed to be of a scrofulous nature, and to threaten what is called a white swelling. In one of the cases, it had lasted five years; and as the pain was very severe, the surprise had long been that no swelling could be discovered by the touch. Had these remote Neuralgiæ been then suspected to exist, or had the disorder at large been understood, as I trust it will now be, it could not have remained a subject of doubt for as many days, since the attack was quotidian and accurate; and it is one, yet but one out of thousands of cases, which shows how necessary it is that the knowledge of this disease should be universally spread among practitioners, since the quantity of human suffering that has already resulted from that ignorance is incalculable. I need scarcely say that, in this case, gout and rheumatism had been resorted to for the solution, when, after some duration, no swelling or disease of the bones could be discovered.

But one further remark on it is worth making. The pain had always been severe; and from that, and its long duration, the constitution of the patient, a female in the better ranks of life, was reported by the attendant practitioner, to be "broken down" by the suffering. A mere glance, however, was sufficient to show, not only that chronic intermittent was present, but that she was labouring under visceral disease, probably in the spleen; and thus it frequently happens in these cases, wherever they occur, that such a state is ignorantly attributed to a "broken-down constitution." It is scarcely worth while perhaps to add, that the pain soon yielded to bark and arsenic, given alternately; but many more months, added to change of air from the unhealthy and marshy situation where this patient resided, were required to quell the simpler intermittent which attended it.

Of two other cases in this part, it is worth while to remark, that the extremely acute pain was situated over the very edge of the head of the tibia, yet between the harder parts and the skin, as the patient determined it; while the affected place was not more than the eighth of an inch in dimensions. As scarcely any accuracy of dissection could produce a visible nerve in this precise spot, it follows that a perfect and intense neuralgic pain may exist in the most minute branches; a fact which has occurred, in my experience, in other parts: so that the want of a demonstrable nerve must not be used as an argument against the existence of the disease generally, any more than it must be

permitted to blind the practitioner as to its possible presence in any individual case of difficulty.

The last of these cases which I think it worth while to notice, was remarkable for its double tertian, or alternating, form; a fact not very unfrequent under different modes, and which I have noticed elsewhere. I think, at least, that the term double tertian may be applied to it, from its resemblance to that mode of the simple intermittent in which the two fits are dissimilar, and from its analogy to those cases, not uncommon, in which a fit of Neuralgia and a paroxysm of common intermittent occur on alternate days. And it belongs to that class of cases in this disorder, which aids in establishing the common generic nature of all these diseases; being one of the links which connects the most simple and regular intermittent at one extremity, with the most obscure Neuralgia at the other.

In this case, there was, on one day, a pain in both the knees, and, on the alternating one, a pain in one arm; and thus had the disorder lasted a long time, to the great discomfiture of the physician by whom I was introduced to it, and who, as might perhaps be conjectured, had considered it as an irregular gout. As I remarked before, it is probable that some analogous painful cases have been noticed by the older authors as coming under the *Quotidiana* or *Tertiana arthritica* of Sauvages: but it is abundantly plain, that this has only happened when a marked intermittent has accompanied them, and that, in other instances, the same difficulty has been found, or the same errors committed, as in our own day. Of this indeed, as to almost every anomalous intermittent, and every Neuralgia which I have enumerated, and even indeed of more, if I am not mistaken, I could produce proofs by extracting cases from authors and accompanying them by an appropriate commentary. Such an addition to this essay might indeed be a useful one; but it is plain that, to its necessary and natural length, the requisite criticism would add so much, as perhaps to cause another volume in a book which is already twice as long as I intended and wished.

TIBIA.

I formerly took occasion to mention an instance of this variety; when I also remarked that it had been attributed to a diseased bone, and that it had been proposed to make an incision upon the part to relieve imaginary matter or caries. This is a supposition, and a proposal also, which I have met with on more occasions than one; as I have further seen such cases treated by mercury and by sarsaparilla, under the notion of a syphilitic disorder. That this disorder also may thus have been cured, I have little doubt, from the occasionally beneficial effects of mer-

cure in Neuralgia; while it is plain how such a cure would confirm, by an additional fallacy, the originally false views of the disease. I know not why a Neuralgia, which, in this case, always appears to the patient seated in the bone, and which, by surgeons, is referred to the periosteum, should occur here above many other places where we might equally or preferably expect it; yet many cases of this nature have fallen under my notice in my own narrow experience. Alternating, in two remarkable instances, with the Neuralgia of the head, and occurring, in two others, in a very marked chronic intermittent, it was a variety that could leave no doubt behind, while the truth of the views was confirmed by the method of cure.

If, however, I have here said that I know not how to account for a kind of preferable occurrence of the Neuralgia in this part of the tibial nerve, its seat being, from the place where I have seen it, in some very minute undemonstrable branch, it is a question which I cannot well pass over without proposing a suspicion for future investigation when this subject shall be better understood. And being a suspicion, I have not chosen to introduce it into the general account of this disorder, that I might, as far as possible, keep all that is fully proved, or what I consider as demonstrated Truth, free from what, being imperfectly proved, might throw a shade of doubt over the surrounding portions. This suspicion is; that to a certain extent, nerves are more subject to Neuralgia as they approach nearer to the surface of the body: and I think that this will appear the fact to him who shall consider the cases as they may be collected, or as they have here been enumerated. With respect to this disease as it occurs in the face, this is very remarkable; and it seems to hold very generally, if with exceptions that will not materially detract from its value as a pathological observation. And if it be so, it is not very difficult of explanation: of that general explanation at least which is as much as can be expected in the present state of our knowledge. It is partly a case depending on the same general fact by which it happens that Neuralgia is the result of positive injury to a nerve, and partly on the other well known fact that it is induced by exposure to cold. Both of these particulars are too obvious to need illustration at present: while this reasoning will aid in confirming the utility of a remedial process derived chiefly from experience, namely, of warm covering or an avoidance of the impression of cold on those nerves which are least protected from it by their situations in the body.

TOES.

In one instance I have met with a highly marked case of this nature in a toe, arising from, or connected with, an obscure intermittent accompanying a morbid spleen; and, in another, I

have seen a similar one, the produce of external injury. The latter, I must reserve to a future place. It is possible, that the recollections of many of my readers may enable them to add similar cases, not only to this one, but to such others among these Neuralgiæ, as, to myself, have been solitary. In the case in question, the pain itself was limited to the very end of the toe; but, after some duration, an uneasy sensation, accompanied by numbness, extended along the branch and trunk, even into the sciatic nerve at the hip; while, even when that extended pain had not come on, the patient felt a similar sensation on my attempting to trace the course of these with my finger, along the surface. The cure of this case proved somewhat difficult, though it was at length removed by the means already mentioned; and while for some time it increased in severity, it at length happened that the uneasiness and numbness, after reaching the hip, reappeared in the shoulder, passing down through the ulnar nerve, and affecting the end of the finger of the same side which corresponded with that toe, or the ring finger.

RECTUM.

Of this, one very well marked case has occurred to me; and it was one that I had an opportunity of studying very minutely, while, for a long time, compelled to maintain my own opinion against the universal one of, I may almost say, an army of medical men, who had, with myself, the opportunity of examining it. No one had supposed such a case possible, as, in truth, scarcely any one would, at that time, believe in any other Neuralgia than that of the face: and thus it is that blind habit and deficiency in philosophical reasoning form the great obstacle to scientific improvement. That the symptoms were attributed to organic disease in the part, is what might have been expected: while gout was a solution that satisfied those who are always glad to find relief in this expedient, and while others, not an uncommon class, attributed the whole to a morbid imagination: a solution which, among medical men, has always been one of the readiest cloaks for imbecility and ignorance. How often this modification has occurred, I cannot pretend to conjecture; but I can point out at least one other very minutely recorded case, quoted in the *Bibliothèque des Sciences Medicales*, tallying very nearly with that which I shall describe.

This case, however, I must remark, is not so viewed by the narrator: being in fact not understood, and being related as a mysterious one, as is so common a practice under similar ignorance. It is not therefore described in the best manner; though, as it is very minutely detailed, any one, now, after the explanations of these disorders which I have given, will be enabled to see his way through it, and to arrive at the same conclusion;

as every one, in fact, ought to have done long before, not less than the narrator himself; had such persons ever reasoned respecting Neuralgia, or been guided by other rules than those of empiricism, whether as to conclusions or practice. And if, well known as this work is, and often read as that case must have been, no one has arrived at this conclusion, it is a sufficient proof, not merely that this particular mode of Neuralgia was not suspected, but that no reasoning has ever yet been exerted on the subject of that disorder, since it could not have failed to attract the attention which I am now directing to it.

I believe that it will be right here so far to depart from my general rule, as to describe the whole progress of this case, yet as briefly as possible, as a guide to practitioners; as I conjecture that it is by no means a very uncommon disease, and as it may, from the intricacy and variety of its symptoms, be really difficult to ascertain in some cases, even by a truly observing physician.

At the first attack, and for some weeks, it consisted in an occasional sensation like a spasm, apparently situated in the urethra, about the prostate gland; recurring three or four times a day, and causing little uneasiness. Gradually, these sensations increased in frequency, and were attended with a general sense of irritation about the neck of the bladder, very much increased by walking, and at length producing spasms in various parts, with a tendency to an hysterical paroxysm. No apparent fever of any kind was at first present; nor any suspicion of its real nature entertained; while the disorder, not yet strictly periodical, was referred to the urethra and bladder. Very shortly, there supervened a debility, with occasional numbness, in one leg; and it was easy to trace, by the tingling sensation formerly described, the course of the fibular nerve. At the same time also, it was perceived that the mere act of bending the neck forwards, brought on the sensation in the perineum, and further, caused the patient to totter on the affected leg; a circumstance to which I shall have occasion to recur hereafter.

After enduring some weeks in this form, there supervened a febrile state, at first very obscure, but which was, after some time, ascertained to be a double quotidian with a nocturnal and diurnal paroxysm. Still, the nature and the real seat of the pain was obscure; nor was the slightest suspicion of Neuralgia entertained by the numerous medical attendants who in succession examined the case. Such however it appeared to me; and after some further progress, every doubt in my mind, if not in that of others, was removed by the increased regularity of the disease, and by the pain in question becoming as regular as the attacks of Neuralgia are when most perfect. In this state, the first of the quotidian paroxysms was simple, and the second was

attended by the Neuralgia, which, now increasing in decision, increased also in severity. In this aggravated state also, it became plain that the primary seat of the pain was in the rectum, the patient describing it as a burning heat, as from a heated solid introduced, which was shortly communicated to the bladder, producing irritation and strangury. When of this severe nature, that irritation extended even round the thighs and over the lumbar region; so that the slightest touch produced great uneasiness, as happens in violent cases of the Neuralgia of the face, and was felt even in the abdomen, as if the whole colon was affected in a similar manner; which was probably the fact.

Further, during the severity of the attack, all the limbs were affected with spasms; and very generally there supervened a regular fit of hysteria, with a great degree of general derangement throughout the whole system, consisting of the usual symptoms of a severe remittent in all their worst forms. Lastly, and not to be unnecessarily minute, as the irritation of the bladder appeared to spread along the ureters to the kidneys, there came on diabetes, the diabetes mellitus; while, when this symptom was peculiarly severe, it was attended with an acute pain in the left, but not in the right kidney, so that possibly this particular symptom was confined to one of the glands only. And respecting this part of the disease, I must further add, that it was rigidly paroxysmal, or that the morbid secretion of sugar commenced with the general fit, and entirely disappeared in the interval.

Had I described this case, as cases are usually described, or with a more minute and regular detail of the symptoms as they actually occurred, it would have appeared infinitely more singular and obscure, as it would also have occupied many more pages; but viewing it as I have done, I have so classed and described the facts, as to render it intelligible, I trust, to any one, even to the most obstinate or sceptical. To a spectator, even to a medical one, it would have appeared still more inexplicable, than in even such a detailed description; from the extreme severity of the case, rarely perhaps exceeded by any disease in point of suffering, and, in particular, from the great distress produced by those collateral symptoms, which, as least essential and explanatory, though all belonging to Neuralgia and intermittent, I have passed slightly over. And thus, in fact, it did appear to all those who saw it with me, and could not contrive to analyze it into the same simple form.

The French case to which I have alluded, is in reality detailed in this very manner; so that while the narrator did not understand it, neither can perhaps his readers in general: as it might have been equally obscure to myself, but for the general views of Neuralgia which I had already formed. This is a circumstance, I may remark, of perpetual occurrence with respect to

recorded cases, and especially when of rare or obscure diseases; proving how often these might be cleared up by a proper description: while in testifying the deficiencies of the recorder, they also show the necessity, not merely of medical knowledge, but of those analytical and logical habits which are best acquired through the study of science in general, both physical and moral, and are scarcely to be acquired by any thing short of a wide range through the whole of those sciences whence alone the only real logic, that which I may venture to call the Logic of Facts, is to be attained. Thus must the philosopher, be he even not a physician, smile at that opinion, universal as it is, which determines that he who cultivates his own profession or science exclusively, is he who will understand it best, or who will alone understand it. As a Science, he will remain ignorant of it to the last hour of his existence: in his art, he will be an empiric or a trader; nor will he be a successful one, unless indeed as to his own ends, since, without the science, the art is helpless. And he will leave the world as others have left it before him, without adding one iota to the sum of knowledge; the useless, and, too generally, the exclusive possessor of facts and opportunities which he has been unable to turn to account: the exception to those different spirits, who, in universal science, have united to bring society out of the animal and savage state to what it now is, and one of the exceptions especially, to which it is owing that medical science is little other, to this hour, than it was in the very infancy of experience.

Now, lest it might be supposed that my own view of the nature of this case was biassed, particularly standing solitary as that did against a host, I may enumerate briefly the proofs, with such further additions as the progress of the case and the history of the patient furnish.

The person in question had been subject to intermittent, and to Neuralgia also, under various forms, habitually, or for a long course of years, and this was one of the relapses; a relapse, however, which was often afterwards repeated. Under those repetitions, further, it continued for many years, but with less severity; and on no occasion did the period of the attack and the continuance of the pain vary, by even half an hour, from those first established. And moreover, during this long progress, it was always attended by its double quotidian fever, and was intermixed with other neuralgic diseases, while further, re-excited by the causes of common intermittent. As to the proofs to be deduced from the history of the case already given, it is scarcely necessary to enforce the regular type of the fever, the regular recurrence and duration of the pain, the determined length of the relapses, always occupying periods of six weeks, the affections of other nerves in various places and under various forms,

and the singular regularity of the diabetes which was produced by it. I may however add, that the cure of those relapses, or the shortening of their duration and the diminution of their severity, was effected by the remedies which succeed in Neuralgia and chronic intermittent, and that the disorder was similarly brought back by every debilitating cause.

From this description, I trust that this particular Neuralgia will be now recognised by any practitioner to whom it may occur; though it is to be expected that it will vary materially in its appearances, as the case in question was probably one of unexampled severity. In every Neuralgia of the simplest character, there are great variations, depending on the severity of the pain or local disease, on the force of the accompanying fever or its apparent absence, on the nature and regularity of the recurrences, and the reverse, and on other particulars which it would be superfluous to point out again. This is remarkably the case in the periodical headach as I have here described it; so much, indeed, that it has been sufficient to prevent practitioners hitherto from seeing that this disease was in reality but a mode of the Neuralgia of the face. It is easy therefore to foresee, that in a part so entangled among others as is the organ in question, so highly and peculiarly sensible, not only abounding in nerves, but those immediately connected with some of the most sensible nerves in the whole body, and, as is well known, peculiarly susceptible of pain, for obvious reasons, the modes and the extent of the pain may be endlessly varied; while the sympathetic affections, or the property which this disease has of temporarily extending itself to a distance from the part really affected may cause appearances or sensations exceeding in variety and intricacy all those which occur in all the other Neuralgiæ united. Thus, as I have seen, it may put on, when slight, the character of a mere tenesmus, and be referred, as I am very confident it has often been, to internal hemorrhoids, or to strictures, leading to the pernicious and much abused practice of the bougie. Thus, too, have I much reason to believe, that such pains have been sometimes, perhaps very often, referred to scirrhus: while the long duration of Neuralgia when a chronic disorder, would still further tend to confirm this erroneous judgment.

How important it therefore is that physicians should keep these facts in their mind in all cases of pains in these parts, it is unnecessary to say; since, while the only method of cure is now neglected, every pernicious kind of mal-practice may be expected: and I have no reason to doubt that when practitioners shall be convinced, by the present remarks, of its existence and nature, it will prove to be not a very uncommon variety of Neuralgia. As to the modes of discriminating it, in any case, whether obscure or not, I could say nothing that would not be a

repetition of what has so often come before the reader as to the whole of the disorders treated in this essay. It will require a discriminating observation; but even that must be preceded by a just theory, by a conviction of the real nature of the several disorders here discussed, and by those habits of analogical reasoning which cannot be too strongly inculcated, since, without them, all physic must ever be empiricism, and can be nothing better.

I have little to add respecting this particular variety, but that its seat appears to be in the minutest ramifications of the nerves, as in the diffused headach; a conclusion drawn from the similarly diffused nature of the pain. That, in the case recorded, it was spread to such distances, may perhaps be attributed to the highly nervous and intricately communicating nature of these parts: and with respect to the affections of the larger branches, there are parallel cases innumerable in other Neuralgiæ, of which I have described one sufficiently remarkable, in the preceding account of this disease in a toe.

THIGH.

The only reason for pointing out this situation is, that I may add to the number of the places or nerves which I have myself known affected by Neuralgia; as, in the cases which I have seen, the disease was remarkably precise with respect to the quality of the pain, and exactly resembling the Neuralgia (Tic) of the face, in severity and manner. Yet these cases allow me to make a remark which was not perhaps sufficiently enforced in treating of the Neuralgia of the face. It is, that in this nerve and its immediate ramifications, in most of the cases which I have seen, there was no permanent or moderate and diffused pain, but that the whole disorder consisted of those shocks which I formerly described, occurring at very irregular intervals throughout the day. Thus the physicians who had examined the cases before me, could not be convinced of their periodical nature, nor believe that they bore any relation to intermittent, or even to Neuralgia. Yet, in all, the patients had suffered from the chronic disease of this nature, while some had also experienced other Neuralgiæ. And further, a careful investigation also showed this fact, though it required much cross-examination to elicit it from the patient; namely, that however irregular the recurrences of the pains were, there was always one portion of the twenty-four hours where they never occurred, and that this healthy period was always the same. Thus, in practice, a patient may feel one, or two, or twenty, or fifty shocks in the day; but, be the number what they may, they belong to a period, which is in reality that of the paroxysm, while at least the physiognomical mark of the cold fit will be found to forerun them, should no other criterion of a fever be easily discernible.

This happens also, in some cases, in the Neuralgia (Tic) of the face; where it has equally led physicians to deny the paroxysmal and periodical nature of the disease: an error too the more obstinate, when, as in all very old and chronic cases, the pains become so irregular as to occupy only one day or two, and then to be absent for a long time. This class of cases has, nevertheless, its perfect resemblance in the commonest chronic intermittent; where, after a long duration, and in a disease which has, in a certain sense, been cured, a single fit will often be brought on by some assignable, or some unobserved, exciting cause, appearing sometimes even in great severity, yet not followed by any others. We must consider all these, in Neuralgia and intermittent fever alike, as cases where the habit alone is no longer a sufficient or an accessory cause, and where also, while the application of a fresh one is required, that has no longer the power to bring on the whole train which it once did, or to re-establish the habit of the disease.

As the initial term which I have adopted for this division is but a popular and lax one, I must now specify anatomically, the real seat of the disorder; and if, throughout this chapter, I have followed the same loose arrangement, it is chiefly because I had not a sufficient number of cases to render it worth my while to make an anatomical one: while, moreover, if it would savour somewhat of pedantry, (a small pedantry far too common, as if any man could not make himself master of the human anatomy in a few weeks, as well as of any other tangible and demonstrable substances;) it would not be a mode of arrangement very easily adhered to; since, where the disorder is seated in the smaller or minuter ramifications, the most pedantic anatomist would be unable to assign its exact claims.

With respect to the exact seat, therefore, in the cases of this variety which I have seen, I must add that it has occurred in different individuals, in the anterior crural nerve; in the trunk, at the exact flexure of the thigh, and in its ramifications, as low as the middle of the limb; in the former case, shooting as sciatica does, and with similar severity, down even to the toe.

In these cases indeed, and in one very remarkably, which, under various recurrences and with some neglect on the part both of patient and practitioner, united to a deep-seated and inveterate constitutional disease, proved extremely obstinate, lasting, under some vacillations, more than a twelvemonth, the disorder was, in every symptom, a sciatica; only, as might be said in vulgar language, in the wrong place. And as the nerve in question, at this point, is of a large size, it is easy to comprehend how the resemblance should have arisen. And in another of these cases, where the disease was similarly at the flexure of the thigh, it proved extremely troublesome: recurring during many

years, sometimes superseding another Neuralgia, at other times accompanying a marked intermittent of no small severity, while removed either by the usual remedies, or by change of place, or by the supervention of some other mode of the disease. In those cases where the pains had occurred at a lower point in the thigh, the quality of the pain varied proportionally; while the accompanying circumstances were similar, and the effects of the remedies also. I have only to add, that while such cases must assuredly have occurred to others as well as myself, I can find no account of them; so that those who have seen them must be at the trouble of recollecting whether they sought for the solution in gout or rheumatism, since they assuredly would not have sought it in sciatica.

KIDNEY.

I have, in another place, described an affection of this gland, of a neuralgic character, attended by diabetes. It is awkward to separate the present variety, but in the arrangement which I have adopted it seemed unavoidable, as it was a case of pure pain, apparently in this organ. I have met but with one instance of this Neuralgia, or at least of such pain in this precise spot, but I shall be surprised if it does not, at some future day, prove sufficiently common; since superficial observers can so easily account for it by gravel, inflammation, or any other convenient term. Nothing could be better marked than this case, in all the accessory symptoms; that it had been mistaken I need scarcely say. I have said, the kidney hesitatingly; because there was no increase of urine; no diabetes, as in the other case hereafter noticed: so that it might possibly have been seated in the trunk of the renal nerve without affecting the secretory branches, or, for aught that can be known, in the ureter, or even in some other nervous branch in this neighbourhood.

CHAPTER XIII.

On Sciatica.

IF I have thus terminated a chapter, the limited extent of which, as to the heads it includes, is most certainly the consequence of my want of further experience, since I cannot but suppose that it will hereafter be far more widely extended, I should

not have ended it without including in it that subject and disease which I have reserved for a separate one, since according to my own views, it is but a variety under this general species, had I not thought it expedient to follow the habitual usages of physic. And it is perhaps best thus; while it is in conformity to what I have done with respect to some other disorders, and adopted for the same reason. It does not appear so utterly to prejudice the question: and moreover, it is perhaps a politic proceeding as to the wished-for effect: since it will make more impression to see sciatica treated with the respect which it has, sometimes at least, received from physic, than to have found it amalgamated with a variety of disorders which have hitherto attracted little or no notice, and which, above all, have not acquired that honour which, in physic, is every thing, the honour of being distinguished by a Name.

It would be superfluous to describe a disorder so well known and so often described as this is; being the Neuralgia, above all others, which has attracted the attention of physic, almost from the earliest periods. Why it should thus have excited attention, may perhaps be explained, from its extreme severity as a painful disease, and from the very remarkable place which it occupies. And why it has not been considered a Neuralgia, a mere variety in an extensive genus of diseases, may perhaps also be, partly at least, explained, by its having, in consequence of this conspicuity, gained a distinct name for itself. Such is the overwhelming influence of terms, in misleading, and in prolonging error; at least among those to whom terms are every thing, the substitutes for ideas, instead of their representatives.

But this is not all; while few disorders afford an ampler proof of the laxity of medical reasoning, or rather of the want of scientific investigation which has so prevailed in physic, from its infancy down to the very hour at which I am writing. This it is that has retarded, or rather, impeded, the progress of that science; in which we trace little but a succession or a mixture of empiricism and hypothesis: while it is with little justice, surely, that physicians exclaim against difficulties, thus attempting to justify the imperfections of which they complain, or thus desiring to excuse their own deficiencies, when they have not applied the instruments and proceedings of science to their art, when, on bad observations or imaginary ones, they have engrafted even worse reasoning; if indeed they can often prove that they have reasoned at all. Universal science might equally have complained of insurmountable difficulties, had its cultivators, in any department, acted as Physicians have done: and this day would now see, in Astronomy and Chemistry, such progress as physic has made since the days of its cradle in the hands of Hippocrates or Galen.

And if I have said that this disease offers an illustration of what the procedures of Physic as a science have been, it is a simple one which all can apprehend, and therefore the more useful: while as far as it may include a satire on that science and its cultivators, the truth is such as to justify these remarks. And if on this one point before us, selected by a mere hazard out of the whole Nosology, the investigation and application of a simple general principle has elucidated in a moment, (as I trust and believe is the fact,) that disorder which has been a standing opprobrium to Physic since observation first commenced, then are there hopes, that, from similar proceedings, in future and better hands, and as to other portions of this mass of present obscurity, other and similar lights will be thrown on other subjects, and that at some future day, Physic will be enabled really to take its rank among the sciences, with consequences as to human happiness which it is easy to anticipate.

To prove that what I have here said is true, I need not surely investigate the past history of opinions as to Sciatica, even down to the days of Cullen (and later I need not note those) since that is well known to all my readers. He, like others, ranks it with Rheumatism; and I select him, not to censure *him*, but because, as a systematic writer, a public teacher, and a recent author, he is the representative of Medical opinions. Why was it ranked with Rheumatism? because it was a painful disorder: such are the reasoning processes of physic, yet it complains of difficulties. And what is Rheumatism? a painful disease also; "a peculiar affection," says Cullen, "of the muscular fibres, with an inflammatory disposition in the system at large."

If by such a road, sciatica was to be investigated, if this is the road by which physic proceeds, as it has proceeded, have we any reason to be surprised that this disease remained unknown, and that physic is what we find it? not merely that Neuralgia remained to be investigated to this hour. It is pardonable to feel indignant when the science to which we have especially attached ourselves is thus treated, and still more, when we reflect on the consequences of such a procedure. And even when the author whom I have cited as the organ of opinions does thus class this disorder, he passes it over as if unworthy of regard, proving further that he looked on it but as a variety; while the universal practice, common to this with all rheumatism, proves that this also was the general opinion, even had that not been otherwise capable of proof.

Yet it was discovered, and long ago, by some observers of more acuteness, that sciatica was seated in the nerve, at least occasionally. This however led to no results, far less to that generalization which it ought long since to have done: and how little it effected, is still proved by the same high authority, when

he treats with neglect the opinion and its author. And still, if that opinion has recently spread, if, as was long ago obvious, as ought always to have been plain, the nerve is always the seat, and the true seat, of this pain, if it is in no sense a rheumatism as that disorder has always been apprehended, (though, if in some measure classed with it under the present views, it is so under entirely new ones,) no general law has been laid down respecting it, nor has it been viewed as what it truly is, the Neuralgia, or, to use this popular term, the *Tic douloureux* in the sciatic nerve. Yet such it is, and such its theory and its place in the system.

Let us now reverse the case, and see how, while its theory has been derived from the Neuralgia of the face, the theory of this, and indeed the whole theory of Neuralgia, ought long since to have been derived from sciatica. Had it been seen, even by Cullen, that it was a disease of the nerve alone, that it was a Neuralgia, and had it been merely inferred or suspected that, if one nerve could be thus diseased so might another, had the very simplest process of reasoning been adopted to conclude that any nerve might be affected as the sciatic nerve is in this case, or had the disorder been made generic instead of special, and had, still further, the term Neuralgia, or any term, been applied to it as a general and generic one, it is scarcely possible but that the whole of the Neuralgiæ should long ere now have taken that place in a nosology which is so amply their due, and which it is so important that they should at length possess.

Or, to make this remark more simply, if sciatica has been ranked as a variety of rheumatism, it is but one instance of many, of that laxity which I have been censuring; influencing, not merely ordinary observers, but nosologists under the professed guidance of philosophy and logic; a laxity which, satisfied with a symptom, neglected to inquire of causes; and to which, even pain, the least characteristic of all symptoms, was evidence enough of similarity or identity. And if it is true that a few better observers had determined that the seat of the pain was, in this case, the nerve itself, and not, as in rheumatism and its analogies, the muscular or membranous parts, that conviction has not been solid, or rather, is not so universally solid and complete as it ought to be, even at this day, while it is not general, in any mode. And if this assertion were doubted, the proof would be found in the nature of the practice in this disorder, and in the complete wavering or laxity by which it is characterized, even in the hands of those who feel a sort of belief, I cannot call it a conviction, that the nerve itself is the real seat of the disease.

Undoubtedly, when I look into ancient and foreign authors, I find occasional notices of sciatica attending intermittent fever or following it, and of the same disease having periodical re-

turns with or without intermittent; as I even find cases, for one of which I may quote Werlhoff, where bark had been administered successfully, and on those very grounds. But I cannot discover that these have been considered as aught but incidental facts; nor, even when the disorder is referred to the nerve itself, that it has been viewed as a real Neuralgia, still less that it has been ever treated, otherwise than experimentally or empirically, by the remedies of that disease. I need scarcely refer to the systematic writers for the proof of this, when Cullen hardly condescends, as I have just remarked, to notice the sciatica, even when he treats of it under rheumatism, and when he almost seems to sneer at Cotunnus for his opinions respecting an *Ischias nervosa*.

But if it is time to terminate a criticism on what is past, I must persist in thinking that such criticism is not only justifiable, but necessary and useful; while it is in reality a criticism on the science itself, or, if on its cultivators, on those as impersonal beings, or philosophical and abstract entities, not as individuals who have lived or may now be alive. Science and its history cannot be examined, for good or evil, without a reference to those agents by whom, for good or evil, it is pursued; but if, when we have to allot praise, we gladly identify the *Ens* with the Titius or Marcus by whom it has been merited, we as gladly suppress, reversely, the names of those by whom it has not been deserved, as far as that can be attained. Unfortunately, however, where no individual is selected for blame, all feel it as if it were directed to themselves; while an unfortunate sensitiveness on the part of those who profess physic, arising obviously from its trading quality, renders this impression much more general, and, as to the critic, much more disagreeable, than it would be in any case where deficiency in science did not also imply a deficiency in the right or claims to profit; or, as it is felt, tend to produce some hazard of failure or diminution in this essential point.

To proceed with the history of the disease as far as I need enter on it: while the characters of sciatica show that it is one of the Neuralgiæ, so does it prove to be the most severe of its tribe. It is in fact so like to the variety last described in particular, even in its situation, that it is a matter of wonder how its real place and nature were not determined from the very commencement; unless indeed the similar affection of that nerve had escaped notice altogether, which is scarcely possible. That its analogy to the Neuralgia of the face, or the analogy, reversely, of that Neuralgia to sciatica, was not long ago seen, can be accounted for, as I have said, only by that oversight or ignorance which could suppose the *place* of a pain sufficient to constitute a disease, and a genus, or species. That the opinion

which I would here confirm, has however been entertained lately by a few individuals, I have already admitted; but as long as the entire theory of Neuralgia remains unknown, while the whole of these diseases are not generalized under one leading principle, so to believe is only to add one empirical fact to another, without making any real progress in knowledge. And moreover, while cases of Neuralgia are often conceived to consist in inflammation of the nerve, using that term in its ordinary sense, the effect is as bad as the theory is unfounded, since it can only lead to wrong practice; while it is sufficient to examine the present practice, even in proceeding on that somewhat improved view, to be convinced that nothing has been gained; as is the inevitable consequence where a theory is imperfect, or, as in this case, still false, inasmuch as it is imperfect.

It is on this view of its nature, that we can explain the peculiar intensity of the pain; a pain, both for quality and violence, bearing no resemblance to that of rheumatism. On this view also, we can explain its confined nature, the absence of inflammation, the state of diffused irritation about the parts which attends the fit of pain, the shocks which accompany it, resembling those of all the Neuralgiæ, and its propagation along the course of the nerve. And if these peculiarities are thus explained, so are they the proofs of its real nature; while similar and further proofs are found in the paralytic affection which so often follows it, and which, as I have already shown and shall more fully show hereafter, is a frequent consequence in all Neuralgiæ, particularly under bad or wrong treatment. If spasms in the adjoining muscles, or throughout the body in general occur in sciatica, so do they in all the Neuralgiæ; and it is further remarkable that it produces, in irritable habits especially, hysterical symptoms, as do the other disorders of this nature, together with a general irritability, both of mind and body, which seems to belong peculiarly to the painful diseases of this nature.

It is further remarked that the pain of sciatica "breaks down the constitution;" or that there is a state of general disorder, in the chronic cases especially, which is scarcely produced by any chronic painful disease, not even by gout and stone. This is the condition or change to which I formerly alluded and shall have occasion to allude again, and the cause of which I then explained; a condition which attends all the Neuralgiæ without exception, when of long continuance. If other proofs of similarity or identity were required, they would be found in its inveterate duration when once established, an inveteracy which has rendered it an incurable disease; in the inutility or the mischievous effects of blood-letting and local applications; in its apparently voluntary cessation on change of place or of habits,

and in other circumstances, attending the remedies for good and evil, which I need not again repeat, often as they have been discussed for the parallel cases.

It will be objected by those who are averse to this view of Sciatica, that it is not so strictly periodical as this theory would demand. I believe that this objection can be satisfactorily answered, on the grounds already so often stated as to all the Neuralgiæ; and further, that whoever shall commence by believing this theory to be true, or even supposing that it is possibly so, will be at no loss in confirming it by observation. Sciatica has not been supposed an intermittent disease, and therefore its paroxysms have not been sought for: while their obscurity, or imperfections, already accounted for in all the Neuralgiæ, have countenanced that prejudice or carelessness which so pervades all practice, in that which is a trade, in reality, much more than it is a Science.

But in fact this regularity is not only a very common occurrence, but as I commenced by remarking, there are many cases of rigidly periodical and intermittent sciatica on record, of which there is at least one familiarly known, in the Edinburgh Medical Essays. And when I further find that even an acute medical friend, residing where this disorder is endemic, now constantly observes this character, which, till it was pointed out to him, he had overlooked, or in fact had never once perceived, when he now seldom fails to discover also the intermittent fever, even regular, when he finds it to connect itself, as to the place of its endemic occurrence, with Neuralgia of the face, sometimes also occurring together with that in the same patient; when further he writes to me, that since he adopted arsenic at my suggestion he seldom fails to cure it, and lastly, when we know that in the ancient cases, change of place or air is the best remedy, I can scarcely believe but that when these opinions shall become more universally spread, I shall see the same testimonies from many other quarters, and that this most painful disorder will no longer be that opprobrium to physic which it so long has been.

In fact, if the absolute paroxysmal and intermittent character of Sciatica is not frequent, it seldom happens that a distinct exacerbation is not to be found; while this is generally overlooked, in consequence of the very vulgar philosophy of the patient's "becoming worse when he is warm in bed." That is to say, this is a nocturnal paroxysm: and when he is not "worse in bed," as happens not less often, the paroxysm is diurnal. But it would be mere repetition to explain all these variations or anomalies; since whatever I have said on that head respecting Neuralgiæ and also intermittent, belongs equally to Sciatica, and can be explained on the very same grounds. And

thus also is it explained, how the disease varies in its mode, appearances, or intensity, as it is recent or habitual, acute or chronic; as we equally explain how it occurs in relapses of a certain duration, with intervals, and how, in old cases, single fits will be brought on by an occasional cause; all of them facts occurring in intermittents and in Neuralgiæ, under the same circumstances.

I know not what fortune others may have had as to this disease, though I am inclined to suspect, that, from being solely occupied by the pain and prepossessed with a wrong notion of its nature, practitioners in general have neglected what I have never failed to find, namely the intermittent febrile paroxysm, under all the characters or variations which attend it in Neuralgia in general. And I believe that this may always be found when it is sought; provided of course that the physician has the means, or makes the opportunity, of watching the disease as it ought to be watched for this purpose.

Thus does it appear to me that the character of sciatica is perfectly established as a Neuralgia, or as coming under the division of local or neuralgic Intermittent; and how important this view is, as to the practice in this disorder, a practice which has hitherto disgraced physic by its failures, I need not say. I do not mean at the same time to assert, what in fact I do not suppose, that it is necessarily the produce of Malaria; because I have already shown that the other Neuralgiæ appear to arise often from simpler causes, and are assuredly the produce of even local injury in some cases. If in attempting to ascertain what the common nature of any diseases may be, or in arranging any number of varieties under one common genus, or even one common proximate cause, we are to be called upon to find a common remote or exciting cause, this is not the only case, by many, in which we should have to dispute our way through nosological arrangements. Even simple intermittent may, for aught that we yet know, have more causes than Malaria, and it is, perhaps, even probable that it has; and thus may the Neuralgiæ, and the sciatica among them, be the produce of mere cold or damp, as the latter disease has been commonly supposed to be.

But let me add a word on this point, since I may as well provide for the criticisms to come, by showing that I know them already, by anticipation, and that, whatever they may be, I have considered their value, and have not written one line without keeping them always in my view. This is at least sufficient to prove that I do not consider them available; and I may as well therefore answer this one now as hereafter. It is said, that, from the habit of contemplating Malaria, I see in it the cause of more diseases than it does or can produce. The answer is, that the evidence is adduced; and upon an investigation

of the value of that evidence must others decide, as I have done. Let them so decide, after proving that the evidence is insufficient; and having thus proved that I am not right, it shall be admitted: but to all conclusions that do not derive from the examination of evidence, he who is accustomed to guide himself by that, turns a deaf ear. When electricity became first known, its early cultivators held it forth as the solution for all physical difficulties, as the cause of all phenomena. This was an induction before evidence, and they were ridiculed. That probably would have happened had there even been evidence, supposing it imperfect. Yet it has now been proved that this power is deeply concerned in chemical composition, in magnetism, in meteorology; and the day is probably not very distant when the anticipations will be fulfilled, and the ridicule become a subject of shame.

But, to return, while a good deal has been proved, I have not the slightest desire to assume more: and the truth is, that if we have much yet to learn on this subject, we must not suffer our ignorance in one or two points to become an excuse for persevering in ignorance or obstinacy as to others, where knowledge, a modified knowledge, which is better than none at all, is attainable. To have ascertained the generic community or analogy between any number of diseases, is useful knowledge; to have ascertained that the proximate cause of these is a common one, is also useful knowledge, though we may not be able to define what that pathological condition is; and if the remoter causes, or the circumstances which induce that pathological condition are but partially known, it is, even then, a step in knowledge: but it would be highly presumptuous to suppose that these were exclusive, greatly ignorant as we are in all the philosophy of this most intricate branch of natural history; nor do I desire to assign to Malaria one title more of power in this respect than it shall be proved to possess.

If it is not my design to pursue further the history of a disorder so well known, when my only object was to produce the proofs of its belonging to the class of diseases under consideration, there is one fact respecting sciatica which seems well ascertained, and which, if it leads to no conclusion now, may become of use hereafter when this class of disorders shall have been better understood and studied. It is observed to be peculiar, in a general way, to certain situations, or to be a sort of endemic, in those, while little known in others; and thus for example, it is extremely common in Cumberland and Westmoreland, among the peasantry. It is a singular analogy to this, that, in a certain district in Wales, the Neuralgia of the face should be the common form of the disease, while the sciatica is, comparatively, little known; but how much further such facts may extend,

we have as yet no information; and for the plain reason, that we have had no observers and no philosophy. I do not pretend even to imagine a cause; but, if it is of any value, or rather if it may be ultimately of any value when our knowledge of these diseases shall become more extensive, there is something similar to this in the common intermittent, as I formerly observed; since there are certain situations which produce quotidian, or tertian, or quartan, in preference, respectively, to the other forms. And if what I have attempted to prove in another place be true, namely that the enlargement of the Thyroid gland is caused especially by the Malaria of alpine valleys, here is another fact and an analogy, seeming to prove that there are distinct modes of Malaria productive of distinct disorders: facts which even insulated and obscure as they may be, we have no right to reject, any more than the limitations of the range of Malaria, merely because we cannot explain them. To make our ignorance the measure of truth, is to establish a philosophy which had it existed at the beginning of the world, would have now found us on a level with the animal men of New Holland. A much larger collection of observations may possibly hereafter throw light, not only on the causes of these variations, but on the nature of Malaria in general: but the subject must be pursued in a far other manner, and I fear, by other persons, than it has yet been.

As to the cure of sciatica, I might here, it is true, discuss the practices recommended in medical books, and consider how far they are useful or mischievous; as I should have done, had this been intended for a full history of a distinct disease. But as the greater part of such an examination must be necessarily entered on in treating of the cure of Neuralgiæ in general, the consequence would be a repetition which ought to be avoided; while it will be easy, should it in reality prove necessary, in this, as in other local cases, to make such particular allusions under the head of the general cure, as each specific variety may demand.

CHAPTER XIV.

On Questionable Neuralgiæ.

I HAVE now gone through all those Neuralgiæ, or affections of nerves, consisting of pure pain without inflammation, and produced without external injury, which have come under my own observations, with the exception of toothach; which I am compelled to defer to a later section, from unwillingness to separate the cases of this nature from those where the cause can be traced to local injury; thus making two divisions of a disease so familiar and so long known by one term.

But I have still to notice some painful affections which may throw light on this disease, or may be assignable to the same cause: while the remarks are offered only as suggestions for future inquiry; being facts which, from their rarity and obscurity, and from their doubtful nature, or from the imperfection of their evidences, I could not place in the former list, and do not choose to pass entirely over. I feel no ambition to overstep, even by a hair's breadth, the bounds of evidence; having never discovered that either pleasure could, or fame ought to accrue from the talent of invention in matters of philosophy, or from applying the imagination to what belongs to the province of cold reason.

I had occasion formerly to suggest that lumbago might often be a neuralgic pain; though perfectly ready to believe that it is also a rheumatic affection, in the usual sense of that term; while I related an instance of its alternating with the common Neuralgia of the face, which could leave no doubt on that subject. There appears no reason to question the possibility at least of this, as a matter of theory; considering the nervous anatomy of that part of the body, and analogous cases in which it has been proved that the pain of Neuralgia exists over a great space, and in a comparatively mild form, from being seated in the minute ramifications of the nerves. But whatever may be judged of this opinion, I have met with cases where it was impossible to entertain a doubt; from its occurring as a transient and periodical, though severe pain, alternating with other neuralgic disorders, and in a patient suffering under habitual intermittent. Whether that pain of the loins occurring in fevers is not an affection of the same nature, is a question formerly noticed, rather of curiosity than use indeed, which may remain for future consideration.

There is a well known pain of the stomach, which has obtained no name as a disease, common as it is, unless the term *Gastrodynia* may suit it: and which therefore I know not how to describe, otherwise than by saying that it resembles the particular pain produced by honey, in those persons with whom this substance disagrees. It is enumerated among the nervous symptoms, in authors who have treated of this subject, and among those of *dyspepsia*; but it is very certain that it often occurs where no *dyspepsia* is present. The most remarkable particular connected with it is, that it is very generally chronic, or that persons once materially subject to it are also subject to recurrences; that it comes on without apparent causes, or at least without the use of improper food; that it is scarcely relieved by any remedies, rather holding on its natural course, and, wherever it is habitual, lasts a definite number of hours. In these particulars, it appears to have an affinity to the *Neuralgiæ*, though I should scarcely have thought of suggesting this possibility, had I not known one case where it did occur in a patient subject to chronic intermittent, and did replace, repeatedly, another decided *Neuralgia*, in alternations more or less regular; while it also maintained the same exact periods of recurrence and duration.

And when, in another case, and that in a young person, I knew it to continue for three years, returning regularly at three o'clock in the morning and lasting two hours, yet, during this long period, occasionally ceasing for a week or two, as chronic intermittent or *Neuralgia* does, while also invariably removed for a time by change of place, and when this patient, before that time, and after it, had suffered from quotidian ague, and from quotidian toothach, also recurring at that same precise hour, I really know not to what other solution I can resort, though I willingly leave that to any one who can give a more rational explanation. But I gladly indeed leave this obscure disorder as a subject for future inquiry; becoming more timid the further I proceed.

I have just read, in a recent foreign journal, (French,) a reported case of inflammation of the spinal marrow. It is very ill reported, as it appears to have been ill observed; and I entertain little doubt that it was a case of *Neuralgia*, under some of those modifications, the nature of which must remain a mystery as long as we continue ignorant of the real, pathological, change which the nerve undergoes in these disorders. To suppose indeed that the whole body of this great nerve could be affected to the degree in which the sciatic nerve is in *sciatica*, would be to suppose a disease which we should probably have little opportunity of studying, and which has, probably also, never occurred. But it is easy to imagine a minor degree of the same disturbance or

derangement, capable of producing all the symptoms described in the case in question; while any misrepresentation, should such exist in that, or in any other cases, would be easily explained by the practitioner's absorbing or fashionable theory respecting inflammation, and still more respecting its remedies, and by his ignorance as to the nature and extent of Neuralgia. And that such a disease actually does exist, is proved by that case of the Neuralgia of the rectum already related; in which the affection of the spinal marrow was unquestionably situated near its origin, or extended so far; while it is quite easy to imagine a greater degree of the same disorder in this primary nerve, and without the presence of such local affection as this. That, in the case in question, this great nerve was really affected in some local manner, and at the point just mentioned, was proved by the consequences produced on bending the neck; of which, the instant result was a sudden irritation in the perineum and bladder, with a loss of power in the legs, and chiefly in the left, (of which one nerve was particularly affected,) so great as to cause the patient to stagger and to be in imminent danger of falling.

Such cases are probably very rare; and yet we can never know what is rare or common, till it has been described: since, through all nature, every thing, every substance, has been once rare, as, once, it was not supposed to exist; while the effect of description is to render it, very generally, common, sometimes even to familiarity. Chemistry and mineralogy abound with proofs of this fact; and I formerly insinuated, that, in the very subject under review, the same has been true of Neuralgia. And in physic generally, it is a mere dogma that the lower classes and the savage or unimproved tribes of mankind are subject to fewer diseases than the reverse divisions; while it has seldom been asked whether, in such instances, there are observers present to note the disorders that do occur. If luxury and physicians are accused of making diseases, it is not for me absolutely to deny the assertion: but the greater truth would be, that the diseases of the opulent and the cultivated seek for attention and find observers.

But to pass from these general remarks, should record, example, fashion, or what not, render a belief in the inflammation of the spinal marrow, described by the French author in question, general, and symptoms occur to justify the presumed presence of such a disease, the facts which I have here stated and the suggestions which I have made, will be of some value; because it is probable that the importance of the affected part would lead to a partially active interference of that system of imagined remedy, evacuation, which, in all these cases, is as fatal as it is active, and which is destructive in proportion to its activity.

Yet I cannot quit this subject without reminding the reader,

that the same theory and the same term have been applied to the ordinary Neuralgia of nerves; guiding also the practice, and, as I have remarked where I noticed that fact hereafter, misguiding it. The one case, as I there observe, illustrates the other: and it is not difficult to see how extensively evil would follow from the adoption of such a general theory, as partial evils inevitably must, whenever a nerve, thus pained or affected, is presumed to be in a state of ordinary inflammation. That the condition of the nerve during the painful stage does resemble that of inflammation, I have fully shown: but it has equally been shown also, that it requires a very different set of remedies from those by which this general affection, in its ordinary sense, is vanquished.

It is rather a matter of curiosity than use, to suggest that the acute, sudden and transitory pains so well known, as occurring in various parts of the body, are Neuralgic, whatever their causes may be. As far as sensation can decide such a question, those who have felt any of the pains of a real Neuralgia, will at least pronounce that such flying pains have the same seat, or are situated in a nerve; and if it can add any thing to this supposition, those pains will be found to occur frequently in persons who have been subject to Neuralgia, particularly when that has affected more nerves than one.

To add to these doubtful or yet unascertained cases, if I have found many more records of painful and unexplained diseases than I choose to quote as probable instances of Neuralgia, there is one that I cannot pass over, though I cannot prove my suspicion to be well founded. This is the ear-ach, or otalgia of systematic writers, abounding in some cases which are marvellous and more which are obscure: while when durable and otherwise inexplicable, they are often attributed to worms or insects in the ear, whether these could be extracted and proved or not; just as the Neuralgiæ of the face have been so often assigned to similar causes in the frontal or other cavities.

I may however terminate these suggestions as to what I have termed questionable Neuralgiæ. If they are of little practical importance, if even, as mere speculations of theory, they should be thought unfounded, they will not be without their use. I wish it to be clearly understood, that I am very far indeed from supposing that I have enumerated all, perhaps not one-tenth, of the nerves or places where even a definite Neuralgia may occur, and far less all the troublesome or obscure forms which these disorders may put on. It was a new subject when I undertook it; and if it is now admitted that Neuralgia is found in many other nerves than those of the face, the perpetual occurrence in authors, of cases of this nature, represented as mysterious or explained on some other grounds, together with the very limited

number of practitioners out of the whole mass who seem to be aware of it, prove that such knowledge, even to this moderate extent, is as yet very little diffused. This investigation therefore, imperfect as it may be, has been a contest with difficulties, and with what is much more painful, opinions, and prejudices. What has been even more productive of obstruction, it has been cramped by limited opportunities of personal observation, and by that perpetual source of vexation to him who is in pursuit of truth, the difficulty of understanding, or of extracting that truth from recorded cases, where the narrator, with even the best faith, has viewed them under a prejudice or a false theory. To have suggested therefore the possible cases of this disorder which I have noticed in this section, will probably lead others to look back on what I may have actually demonstrated, as a mere sketch, a work barely commenced to establish, further, the principles and leading facts in their minds, and keeping them steadily in view, to apply them to the solution of such difficult cases of painful or peculiar diseases as may occur in their practice, or to those disorders where error as to the real nature is possible, and where that error would lead to serious evil consequences.

Of cases which have not occurred to myself, of Neuralgiæ in other parts of the body than the face, I find only the few following noticed by different authors: but I could probably have increased the list, had I chosen to search more widely, or ventured to explain in this manner, peculiar cases of painful diseases which the narrators had not understood. The latter is a hazardous, and not always a very just proceeding: and I know not, that, to have extended the list in this manner, would have been of any advantage, when I have shown that this disease may occur any where, and when I have drawn from my own observations what, I trust, will prove satisfactory on this point. To have introduced disputable cases, might have tended to throw discredit on what is proved.

Dr. Alderson relates a case where one breast (mamma) was so affected; and there is one in Swan, where the disorder is said to have been seated in the second cervical nerve, extending to the ear and face. A case of Dr. Pearson's, where the thumb was affected, scarcely differs from those occurring in my own practice, in the fingers.

Among cases described by authors, similar to those which I have myself observed, I shall be content with naming the following. In the thigh and leg by Hall; in the arm by Pearson and by Swan, in a finger by Abernethy; and in the leg and thigh by Yeatts: while I cannot help remarking that so confined a record of such cases from so many persons in extensive practice, and from others who have written, even exclusively, on this disorder, compared to those which have occurred to myself

in a very confined range, will almost prove that the Neuralgia under these forms has been misunderstood, or mistaken for other disorders, as, from many other cases of peculiar affections, is most evident: and most probably for want of just views respecting the nature of this disease.

Nor ought I to pass from those remarks on the cases which I have thus borrowed, without an observation which, if in some degree made before, is really so important as it concerns the present attempt to establish this disease, Neuralgia, as meriting a distinguished and generic place in nosology, that it requires to be made more pointedly. That it is impossible but that it should have always existed, seems too plain to require proof; while what I have already brought forward in evidence does in reality prove that to have been the case. Yet if we except sciatica, known from the earliest times, the very modern notice of André is the first account of a variety no less conspicuous and painful; while from the moment of its announcement, it has been discovered to be a very common disorder; unknown, or rather, unmarked as it had been before. Still, if we except this particular variety, it is but within a few years that any others have been noticed, or even suspected; while Cullen, though following Sauvages, who had thus far borrowed from André, takes no notice whatever even of that one in his *System of Practice*. And in foreign writings, systematical or otherwise, universally, if we can find cases which may thus be interpreted, we see clearly, that while related as obscure diseases, none but such marked cases have been selected, and so selected because they were obscure; though it is certain that, in particular, in the pestiferous districts of France and Italy, as elsewhere, they must be common: common as in India and Persia, where also they would never have been noticed but for the publications on this disorder of the Face. And what has been true, is still true. The Neuralgia of the face is indeed so far rescued from obscurity; but the work was but commenced, as long as its connexions and nature remained unknown, or while its theory was groundless, false, or obscure. But all else, all that concerns other varieties, remains as obscure as before; and the proof has been just given, as indeed it has appeared throughout: since, had it been otherwise, I should have been able to adduce hundreds of cases in the place of three or four which I have with difficulty found.

What then must have been the mass of suffering? and all for want of a name and a place: for want of the definition and explanation of a common disease, neglected because it was not described, maltreated because not understood. Let others now draw the conclusion which I need not, as to the present attempt; and be convinced, that, in physic as in all else, nothing is known to exist till it has been described and received a name.

I have now a few general remarks to add respecting these painful or proper Neuralgiæ, which could not well find a place sooner in this form, if some of them have been incidentally anticipated.

If I mentioned that this disease might be acute, or transitory, or else chronic, or habitual, it is a fact that requires to be stated somewhat more fully. I do not know from experience that, in a new case, or in a patient who has never suffered before, either from Neuralgia or intermittent, a disease of this nature is ever so transitory as to last but one day, or to form but a single paroxysm. But in the reverse cases, it frequently happens that a complete and severe attack of Neuralgia, in a nerve never before affected, will come on and disappear, perhaps for ever, after one paroxysm; and also without remedies. I believe that this fact has frequently been overlooked, as an accident and not worthy of notice; as every thing is an accident in all science to those who have not the requisite knowledge for generalization. This is a case which has frequently occurred within my own experience, and in many important nerves: as in the maxillary, forming the common Tic, in the sciatic, in the femoral, in the fingers, in the optic nerve, in the testicle, and elsewhere.

Perhaps this may be viewed as the next stage from those flying pains, appearing but once, and for a moment, which I have but just noticed; while, in further stages, the same diseases may last two or three days, or even weeks, still disappearing in the same inexplicable manner. And while I believe that such cases are far more numerous than is commonly imagined, particularly among the lower classes, naturally not so ready as their betters to apply for advice, I also imagine that it is partly owing to our neglect of them that this disease has so long remained unknown or misunderstood.

It is in its chronic or durable state, that, even as the mistaken disease which it is under the name of Tic, it is best known: and, as a chronic disease, there seems no end to its duration, since, like intermittent, it is often the inheritance of life. Yet in these extremely durable cases also, it loses its regularity, often so completely, that no traces of that can be discovered: a further cause, as I formerly observed, of the errors or obstinacy respecting its real nature. And thus chronic, or perpetual, it may become under any one of its forms; as it is vulgarly known to be, not merely in the Tic, but in sciatica.

Lastly, when a patient has suffered completely from chronic intermittent, and has also experienced Neuralgia, particularly should he have had it in more than one nerve, it sometimes happens that he will suffer from it in a great number, or may exhibit the greater proportion of the varieties which have here been enumerated; and, further, those that are to follow: and not only

so, but also the anomalous intermittents described in a former part of this essay. In such cases, it would seem as if the whole Nervous system, or the greater part of it, was affected or deranged; actually diseased in parts, or, from some general obscure condition of irritability unknown to us, rendered highly susceptible of becoming so, and thus of producing a Neuralgia wherever any collateral cause may act at the same time.

CHAPTER XV.

On Neuralgic Affections of the Glands.

I HAVE been able to preserve so little order in this essay, from the plan which I have found it expedient to adopt in conformity to popular opinions, that it is indifferent where I introduce the present section. Nor, in truth, have I any new affections to notice under this head; having already taken occasion to name those which have occurred in my experience. The subject is however an object of scientific interest at least, as it relates to the theory of these disorders; while it is not even impossible that it may prove one of practical utility, as I shall presently show.

I have recently pointed out the flow of tears and the salivation which frequently occur in the Neuralgia of the face; and they are the most common examples of the glandular affections in question. I omitted then to notice also, what may as well take its place here; since much stress has been laid on it where it has occurred, as a wonderful circumstance, though in reality but a mere variety deriving from the principle here alluded to. This is, that in some cases, the Tic or headach has been attended by a transitory, but violent flow of water from the nose; and when I have known this amount to a pint in a very short time, it is perhaps not surprising that it should have excited wonder. If the catarrhal intermittent, for which I have other authority than my own, and which is so intimately allied to this variety, be admitted here, it will form another example of the same nature; as the Intermittent Diarrhœa, which I formerly discussed, claims also a place in this modification of neuralgic affections. I did not formerly notice another case, which, if correctly viewed by the reporter, is also an instance of a similar nature; while its

truth depends on the report of the patient himself, whose word at least I have no reason to doubt, whether his reasoning was correct or not. The effect in this case was a very troublesome increase of secretion from the testicles, accompanying a somewhat slight, though periodical affection in the vicinity, which was clearly referrible to Neuralgia; and attending it also in so exact a manner, while his intervals of freedom from the neuralgic pain were comparatively those of anaphrodisia, that he at least felt no doubt respecting the cause. Nor perhaps was his observation unsound; since this last condition should rather have existed during the period of ill health, as, in a mere intermittent, it assuredly would.

The most pointed case of this nature however that has occurred to me, is that of the diabetes formerly noticed; and the progress of that case was even more remarkable than the commencement, since it showed a neuralgic affection of the kidney existing by itself; a simple disease. It had commenced, as I then showed, apparently as an extension of a similar affection proceeding along the bladder; but, long after that had ceased, the diabetes continued, and as I understand, has not yet, after six years, entirely disappeared, returning, however, like the chronic fever, at longer intervals. The attacks, during this whole period, were, on every occasion, as strictly periodical as they had ever been, though the relapses became gradually irregular in recurrence and duration both, as happens in all the very chronic cases of these disorders. Nor, in any instance, did the commencement of the saccharine secretion differ from what had been the former hour of the attack of the intermittent, or proceed beyond its ancient limits; occupying six hours of the day. In the interval of the paroxysms, the secretion was perfectly natural, as it was in the greater intervals of the relapses; while I must further observe, that if the other marks of a paroxysm of intermittent were sometimes most conspicuously present, amounting indeed often to a troublesome disease in itself, there were some relapses in which nothing but the previous experience and knowledge of this patient would have traced any intermittent and febrile paroxysm, so slender were the symptoms. I need only remark further on this case, that the pain in the left kidney which had formerly attended the disordered secretion, occurred afterwards but rarely, yet was always similarly temporary, and limited to the paroxysmal period; and that the quantity of sugar seemed always proportioned to the severity of the paroxysm or of the relapse, being also very remarkable when the pain was present, and, on one or two occasions where it was extremely severe, being present in greater abundance than I ever remember to have seen it in the common diabetes, often as that disorder has passed through my hands.

As relates to Neuralgia, these occurrences and cases, and the last in particular, show that the neuralgic affection, when extended to the nerves which supply the glands, can influence their secretions; and, as far as we yet see, that this influence is, in general, mere increase of action; the last case offering perhaps the only exception. Nor is the solution difficult: because, as far as we can perceive, a certain degree of the neuralgic disease in the minuter ramifications of the nerves, has the effect of increasing the action of the small arteries, and sometimes to such a degree, as will soon be shown, that a permanent inflammation is the consequence.

If this is another new view, it is but a view, however, from very limited materials; and it is one, consequently, respecting the full value of which we can scarcely conjecture. But if the facts are yet limited, that is no reason for rejecting them: and if we cannot, without an injudicious exertion of the imagination, conjecture how widely they may extend, and what their results as to disease may be in other cases, this must not prevent us from admitting that future philosophers, with the aid of more facts, may be able to draw inferences, the nature of which we cannot perhaps foresee. If the neuralgic action on the nerves, and subsequently on the vessels of the few glands that have been noticed, can produce the effects that we have here seen, and if, further, it can produce those very singular inflammations that will hereafter be pointed out, we have a pathological power, the extent and action of which, as exerted on different parts of the compound animal structure, we can imagine to be both various and considerable; a possible cause of diseases the nature of which is still obscure, and a solution of difficulties, which, if it still stops where all pathological investigations do, advances us yet a certain step in this difficult inquiry.

I have but one suggestion more to offer with respect to this subject, and it is even a more obscure one than the last. I have formerly observed, and shall have to observe again, that the consequences of severe Neuralgia in any nerve, are very often, ultimately, a loss of power: the result, in those cases where that nerve is the servant of a muscle, being palsy, more or less complete. It is possible at least, therefore, to suppose, that where minuter ramifications, not serving muscles, have been affected, these also might ultimately undergo, a loss of power, with results which can be imagined; as it is useless to dwell on that which may not exist. There is an analogy to a certain extent, and that analogy may pervade the whole: whether it does so or not, is the point to be proved, or otherwise, by facts. But nothing will be discovered unless we make such use of these analogies as the rules of philosophy justify; while it is by this proceeding that science has been, in all its departments, advanced, if not

created. But if I do not choose to dwell on this, I will put a problematical or imaginary case, that I may show to what this kind of reasoning tends.

If the Neuralgia of the sciatic nerve produces diminution of power, or palsy in the muscles supplied by that nerve, a similar effect might follow in the nerves of the kidney described in a preceding case; and thus the gland formerly secreting in excess, might, in the result, become comparatively inactive, or cease to secrete at all. Or, let us suppose, (what would far better suit those who delight in medical hypotheses than myself,) that an increased secretion of bile were the produce of a neuralgic derangement of the secretory nerves of the liver, this might be followed by a torpor, or paralytic state of those nerves—and so forth; for I will not produce a specimen of that—reasoning it is called—which constitutes far too much of the mass of medical philosophy.

I must not close this obscure and unsatisfactory section, without suggesting how the case of diabetes which I have recorded may possibly bear on the practice in that disease. It would be very singular if this should be the only instance that ever did or ever will occur; and that is surely an hypothesis which we have no right to adopt. We have no right to act thus as to any disease; and while such a supposition obstructs all progress, it is a truth, as I already stated it, that disorders once thought rare and solitary, become sufficiently common when once they have been carefully described and distinguished. There may be many such cases; but they will never be found if they are not believed in and understood. Nor is the diabetes that rare disease which it has so commonly been supposed; neither is it the inveterate and incurable affection, nor always the persistent or chronic one, which it has been thought. It has occurred to myself, with no great opportunities of observation, very often: and the truth I believe to be this, that medical advice is never or seldom asked for it, unless when severe or inveterate: whence it has acquired, equally, its reputation of rarity and its condemnation as incurable. In my own experience, it has always been either cured, or suspended for long periods, to relapse and be cured again, and without bad results. And further, I have had frequent occasion to observe, that it is sometimes a merely temporary disorder, and also a very slender and contemptible one; while, among such cases, I should not be surprised were some found, originating in the same cause as the case which I have described. This, in fact, I have already suspected in more than one instance that has occurred to me: but in no case have I attained such command of the case and the patient, as to enable me to say, from that evidence without which I have here advanced nothing, that such was the fact.

How far my own experience and suspicions might be supported by the observations of others, I cannot be certain, as this disorder is generally very ill described by authors; but I at least find that Sydenham has remarked a diabetes following intermittent fevers of long duration, which, with the laxity not unusual in the medical reasoning of all days, he attributes to debility and a broken constitution. These are not philosophical causes for a disease of this nature; but while I may conjecture that the cases appertain to the disorder which I have described, I cannot prove it, for want of a more accurate description.

To finish, it will be seen, (if that be held of any moment as to the theory of common diabetes,) that this case settles an idly enough disputed question, namely, whether the saccharine matter is the produce of the stomach or of the kidney. The cause, and the fact, here determine the point in such a manner as scarcely to leave room for controversy, much less for argument.

But I ought not to conclude this very slender section, without noticing a case recorded by Strack; an observer of great acuteness, whose work, to which I have so often had occasion to refer, must, as it seems to me, have been singularly overlooked, while I was, myself, unaware of its nature at least, though not of its existence, till very recently; since, while he has anticipated much which I had imagined my own, on the subject at least of anomalous intermittents, though not of Neuralgia, of the nature of which he appears to have been utterly unaware, a knowledge of what he has written could scarcely have failed to enlighten practitioners on the former subject, and thus to have prevented a long train of error.

In this instance, a salivation followed an intermittent fever, while it is plain that had mercury been used, a physician thus attentive would not have overlooked it. Had there been pain, or Tic, also present, it would as certainly have been mentioned; while the cure of the disease by bark, completes the proof of its dependence on the fever. He makes no further remark; but according to the views which I have here taken, I must consider it as a transference or localization of the intermittent, or, conformably to what I have elsewhere said, a neuralgic condition, or action, though without pain, of the salivary nerves. How it illustrates the preceding case of diabetes from a similar cause, is too obvious to require mention. Such cases of salivation ought not however to be very uncommon, since they occurred frequently in an epidemic at Leipsic, according to Qualmälz; and here therefore at least, there can be no suspicion of their having been produced by mercury, as their dependence on the fever itself is distinctly stated.

CHAPTER XVI.

On Neuralgia from Injuries of Nerves.

THIS is a subject on which, like the last, I have but a very few facts of my own to produce; and yet, few as they are, I consider them of some value, not merely in the theory of the Neuralgiæ, and as they relate to the immediate cause of these diseases, but as they illustrate that Neuralgia which has perhaps of all been the most grievously mistaken and maltreated; the toothach. Hence I have placed this section here; as it will tend to throw light on one division of that disease, and on that one, in particular, respecting which I have hitherto entirely failed in producing conviction, either in the people or in physicians, so powerful are prejudice and habit.

The first case which I shall notice was the most pointed one; and being also the first that had occurred to me, its effect was to turn my attention to this subject. The patient was a young woman, and the injury was simply the prick of a needle in the end of the middle finger; its consequence being a regular periodical Neuralgia in that finger; which also did not occur till a few days after the accident. As some weeks had elapsed before she applied for advice, it was easy to ascertain the fact of the periodical and quotidian regularity; while, at that time, the affection of the nerve extended all the way to the shoulder, exactly in the same manner as it does in sciatica and in other cases of spontaneous Neuralgia. And as, further, some time elapsed before I could effect the cure, I had abundant opportunity of satisfying myself respecting the real nature of the disease. That it was cured by means of arsenic, will perhaps, to many physicians, be an additional proof that I had judged correctly respecting its nature. I shall only add, as to this case, what may be a useful hint to practitioners in such instances, that the patient herself had no suspicion of the regular or paroxysmal nature of the pain at the time of her application; and that as it was from my own previous views that I was led to make the inquiry, so it was not without much cross-examination that I was enabled to get the information which I afterwards confirmed by my own observation. To expect too much from patients, in point of accuracy of observation, is I believe a very common error, and a very common cause of erroneous judgments or oversights in physic;

while he who knows the necessity of careful cross-examination, knows also, as I once before observed, the opposite hazard which he may incur from leading questions.

In the next case, the injury was a blow on the arm, producing a severe bruise, a fact however which was only discovered by cross-examination, as a regular Neuralgia of a quotidian character was established long before I saw the patient, who was also a young woman. In this instance also, I was led to inquire respecting previous injury, from having long suspected that it was not a very unfrequent cause of Neuralgia; and the information was satisfactory, inasmuch as the disorder was distinctly stated to have followed the bruise after two or three days. It was remarkable however that the seat of the neuralgic acute pain, which was in the middle of the radial nerve, and which extended in the usual manner to the shoulder, was not at the place of the injury, but considerably distant from it. While under cure, this case of Neuralgia lasted long enough to enable me to ascertain personally its perfectly regular character, and, as in the preceding case, that cure was effected by arsenic.

The third, and the only other case of a very defined character, and of which I had a perfect knowledge from the beginning to the end, was a case of Neuralgia, quotidian also, in a toe; and it had followed immediately after a blow or bruise produced by slipping against a sharp-pointed rock. The surface injured was so small as scarcely to have been perceived at the time; while the extreme severity and duration of the pain was a cause of great surprise to the patient, as it continued for more than a month before it disappeared, and also because it was not in a joint, but in the very extremity of the little toe. No remedy was resorted to in this case; as the patient having an opinion of his own, from being a medical man, could not be persuaded to view it in the light which I did; but it vanished completely and suddenly, leaving scarcely a recollection behind; though he could not well forget that he had been utterly deprived of the power of walking for all that time, as the attack occupied nearly the whole day, ceasing only in the evening. With respect to the nature of the disease, this natural cure is as satisfactory as the cure by arsenic, since it happens perpetually in Neuralgia: and with regard to this patient, I may add that he had at different times been affected by that disorder in the face, and had also suffered from chronic intermittent; a state of things under which all the Neuralgiæ of remote nerves are most apt to occur.

Another case of what I considered the same disease, and from a similar cause, did not come under my notice till many years after it had been established, and when the recurrences had become as irregular as they always are in Neuralgiæ of long standing. So distant indeed was the time, that the patient, never

having had his attention called to that point before, could only recollect generally, that he had, for a year or two after the injury, been subject to violent pain, which was sometimes described as constant, and sometimes as daily, with all the usual hesitation that attends such distant recollections: though I could extract, by one circumstance, that it was probably a quotidian and temporary pain, because he could not assert that he had ever observed it but during a certain portion of the day, when he was occupied in his counting-house writing; a fact which served to fix it in his memory. When this case first came under my examination, the pain was clearly temporary and quotidian, occurring in distinct relapses for a certain number of days or weeks, and then disappearing: and, fifteen years afterwards, I found that it was so far diminished in frequency, that it occurred, then, no otherwise than from particular changes in the weather, actual or impending. That he thus considered, himself as a perfect barometer, or capable of prognosticating atmospheric changes of consequence, often twelve hours before their occurrence, is a fact which, however inexplicable it may be, or however ridiculed, is unquestionably as established, as, in the case of corns, it is vulgarly proverbial; since it occurs familiarly with respect to amputated limbs and similar injuries, and happens also in many Neuralgiæ of old standing.

In this case, as I saw it, the pain was distinctly that of a Neuralgia; its seat being the injured part, which was a finger in which a fragment of glass had been buried so as to leave a small induration; the usual pain extending upwards to the shoulder, with increase of heat and sensibility in the hand, and particularly about the injured part, during the paroxysm, which was always perfectly definite in duration, though not regular in recurrence, during the many years that I had opportunities of renewing my inquiries. This patient would not use any remedies, having been, originally, long tormented in vain with local applications: nor did I press what, in cases of such long standing, I have most generally found useless. But I must add, as a better reason, that he offered an example, also, like the preceding patient, of that aversion to admit of this view which I have found so general, I will not say universal; of that incapacity for conviction which is most incorrigible in those who, from their education, as it is called, or place in life, imagine that they must be possessed of what is termed reason; a faculty which, with its application, called reasoning, philosophy presumes to be the only true and just foundation for opinions, and on which, nevertheless, not one in ten millions of the opinions existing or formed in society have ever been or ever are founded.

If this case is less defined and satisfactory than the former ones, it is still, if we omit the injury, exactly the description of

a real and spontaneous Neuralgia as this is most generally met with in practice; at least by such physicians as are commonly resorted to when former ones have failed: nor do I hesitate in considering it as a case of this disorder arising from the injury of a nerve. And it is because of its being an obscure case, that I have chosen to be thus minute in detailing it: since it is to mislead readers or students, to cause them to expect in practice that every case of disease shall be a definite and obvious one; as it is to prevent them from acquiring that discernment in obscure and imperfect ones, which, in nine cases of ten throughout the whole Nosology, is that of which they will most stand in need.

If I have no more cases of this nature, of any particular value, to add, I know not that any thing would have been gained by such addition. The evidence is perfect; and I have little doubt that the fact is much more common than it has yet appeared to be, and that, while all the painful affections of the nerves from injuries must be referred to this disorder, so it will be found, now that it is distinctly pointed out, that they are regular or intermittent in as great a proportion as other Neuralgiæ, and that they will probably be cured also in the same proportion, and by the same remedies.

It is thus proved that the mechanical injury of a nerve will produce, not merely the permanent pain which it is known to do, but a Neuralgia as regular as that which arises from Malaria and is connected with intermittent fever, or from those other, unknown causes, under which it occurs as a spontaneous disorder, or a disorder without assignable injury. And, in practice, it is a fact of considerable value; since these cases have been too often considered as incurable, or at least not within the reach of medicines; as the two which I first described had been pronounced by the practitioners from whom I received them. But for the remedy employed, these would probably have become as inveterate as that which I described last; continuing perhaps for life, as is too common with all the Neuralgiæ when suffered to establish themselves.

And though I have had no opportunities of putting this into practice, such is the analogy here, that I should expect to find that the remedies of Neuralgia, bark and arsenic for example, or whatever else it be which succeeds in this disorder, would be found effectual in the pains of the nerves that follow injuries, even if they were not periodical and regular: thus providing us with the means of remedying a species of distress which I imagine must be very familiar to surgeons, and far more common than a physician, rarely consulted in such cases, can even conjecture. If in my own former, military, practice, they have not appeared so to occur, surgeons themselves can easily explain

this: knowing well the different attention which disorders consisting of mere pain or inconvenience experience, in] private practice, and in the army.

And before I terminate this brief section, I must not forget to remark, that I have known sciatica itself produced by a blow on the parts which cover that nerve, in more cases than one; confirming the present views: while I have no doubt that it has occurred to many other physicians. Thus have I seen an analogous disease, in several instances, produced by a blow on the sacrum; a painful disorder which could not be called lumbago, permanent long after the original injury had disappeared, and similarly extending its influence along the remoter nerves; while, in one case, the consequence was, simply, an affection within the rectum, lasting for many weeks, and described by the patient as resembling tenesmus; a disorder which I have little doubt was a Neuralgia of that part, analogous to the spontaneous case which was formerly described. But it is sufficient to have named some of these more marked cases; as I need not encumber this evidence with further details of the same nature.

I was not aware when I made these observations and drew these conclusions as to the painful disorders following injured nerves, that any other physicians had supposed them to appertain to Neuralgia; they having occurred twenty years ago, when I was without access to books, and the subject having, till again very recently, ceased to engage my attention. But on reading now for the purpose of discovering authorities in support of my own opinions, I find a considerable number of instances where, a similar view I should say, rather than the same one, has been taken; though as in all other cases of this disorder, no generalization has been made, nor any consistent and rational mode of practice adopted; the usual mysterious view under which Neuralgia has been considered, having been applied to these cases, even when thus explained, which is far also from being always the fact, and the remedies having, in a similar manner, been empirical and tentative.

If I can therefore bring no proof from the practice of others, that the remedies of intermittent are those of this variety of Neuralgia, as of all others, a notice of some of these cases will still be of value, as proving that this is a very common form of that disorder, or that Neuralgia is the frequent result of injuries, while it will also indicate to practitioners, the necessity of paying a different kind of attention to them from what they have yet done. It is displeasing to feel that this cannot be done without criticising the opinions and the practice of able and attentive men, and sometimes, of personal friends; but such feelings

must not be put into competition with the higher duties which every physician owes to society.

In a case noticed by Sauvages, the disorder was the result of a blow, and was seated in the head and neck; this case corresponding in its cause to that which I have described as occurring in an arm. In one under the management of Wardrop, the cause was a prick in the thumb from a thorn: and while the disease was a plain case of Neuralgia, I can only perceive that it was called an injury of the nerve. The absence of the appropriate term would, it is evident, render this case of little value to those who are governed by terms, even had an efficient and correct practice been adopted.

A more remarkable case is one recorded by Swan, where the Neuralgia followed a cut in the thumb, and lasted seven years. He also calls it an injury of a nerve: and while he does not even rank it with Tic or Neuralgia, his remark is, that no remedies were of any use. That is to say, the remedies which he adopted were of no use, because they were not the proper ones; though the mere duration of this case should have caused a suspicion of its nature, in any one who had ever thought on the subject of Neuralgia. If I am sorry to make such a remark, I may also add my suspicion that the place of this patient and physician, Lincoln, will assist in explaining the duration of this case; and it is not improbable that the endemic of the country was united to, or aiding in it. Two other cases related by the same author, one arising from a blow on the eye, and another from a similar injury on the face, are of no other value than as further showing that this singular disorder can be produced by local causes; though I cannot help entertaining a suspicion that not only in these Lincolnshire cases, but in all others, Neuralgia from injury is most likely to attack those who have a tendency to intermittent fever, or have formerly been subjected to it, or are exposed to its ordinary causes. This conjecture is founded on the facility with which Neuralgia happens from partial exposure to cold, as also from causes less obvious, in those who are thus situated: nor is it difficult to conceive further, how the habit of periods, to use this phrase, should interfere in the case of a direct injury to a nerve, and thus regulate the form of the disease so induced.

If I described a case where Neuralgia of the arm was produced by the prick of a needle in the finger, I might then also have mentioned the cases which have occurred in my own practice, as I doubt not in that of every practitioner, of painful disorders following blood-letting, and apparently from injury of a nerve. But as in none of these the pain had assumed the periodical form, I was unwilling to prejudge the question, or decide

without precise evidence; while I am gratified in finding recorded cases where this was the fact. These are noticed by many authors: but I shall refer only to Sabatier for one, because it lasted six years, and because, in that case, the division of the nerve was recommended, as it has so generally been in ordinary Neuralgia. The long continuance of this case proves, what indeed the history also does, that it was not understood; and similarly, in all the rest, I can find no definite views of the nature of the disorder, nor even a suggestion that it belongs to common Neuralgia, far less to an intermittent type of disease, or that the cure should be attempted by the same remedies. If the actual practice of Swan and some others, in this as in other cases of Neuralgia, has sometimes been good, it has been by chance, and in the course of a rotation of random experiments; while his recommendation in all cases, as far as I can make out, is the division of the nerve, as usual.

Cases from tumours pressing on a nerve have not occurred to myself; but I gladly trace them in authors, because they add to the catalogue of the injuries which are capable of producing this disorder. Thus Swan describes a case of this nature from a popliteal aneurism, the pain being in the leg, and in a regular quotidian form. It was cured by or after the operation; while we may express our surprise, that to a physician who had bestowed so much attention on diseases of the nerves, and to these cases among others, and to whom intermittent must have been equally familiar, the periodical nature of this one did not suggest the true theory, or at least the true remedies. In another analogous case, the tumour which caused the disease was produced by a blow on the thigh.

The last class of injuries producing this effect which has not occurred to myself, but which I also find recorded, consists in ulcers: in ulcerations of such character or permanence as to have corroded, or destroyed, or perhaps merely laid bare a branch of a nerve. They require no particular criticism; but they have a value in the views which I have here given, because they illustrate the case of toothach from a carious tooth, since that is an ulcer similarly affecting a nerve; while it may be thought that whoever had supposed such an affection from an ordinary ulcer to be true Neuralgia, ought to have formed the same universal conclusion as to toothach. That this has never yet been done, assists in proving what I have so often here advanced; that, using this term in its philosophical sense, the procedures of physic have been empirical, from its origin to the present day, that it has never conducted itself by the laws of science, and that while seeming unaware of the powers and utility, as of the necessity, of generalization, it has not even proceeded in a correct manner in the investigation of its facts: thus, if ignorant of the method

of erecting a superstructure, neglecting even the means of laying a true foundation.

If I have remarked the singular effect which changes in the state of the atmosphere produce on nerves affected by Neuralgia from whatever causes, and very strikingly in the case of injury, it is at least interesting to remark that this bears a close analogy to the fact just alluded to; namely, the effects of the same nature, produced from the same cause, in amputated limbs or other ancient and severe wounds; as also in that case, somewhat mean, it must be admitted, already quoted, namely, corns. In the former class of cases, nerves have been injured; and, in the last, we must conceive a persistent injury, pressure, analogous to that described in some of the foregoing ones. The conclusion would not be much overstrained, were we to suppose, that, in such instances, the nerves are in a state at the injured part, similar to their condition in common chronic Neuralgia when dormant, (an unknown one we must regret,) and ready to be excited to pain by the application of an occasional cause. Hereafter, possibly, these considerations and analogies may aid in throwing light on the immediate, or proximate cause of this class of disorders; though I cannot pretend to say that such uncertain Neuralgic pains would, in any case, be remedied by the means which are successful in the more regular and marked diseases of this nature.

But before I part from this branch of the subject, I must remark that Swan and other authors besides myself, have recently begun to consider the pains which are produced in wounds during their healing, whether from ligatures on the nerves, or ulcerations, or the general injury, as analogous to Neuralgia; a fact, of which I never entertained a doubt. How far these may be amenable to the treatment of common Neuralgia, is a trial which I must leave to others, and to surgeons; since I can have, now, no opportunities of putting it in practice. That this has not been yet attempted, as far as I can discover, is only a natural consequence of what I have so often noticed; but the cure of the toothach from caries, in this manner, holds out at least the promise of being able to relieve, in this way, no small mass of distress. And this also suggests a very difficult and delicate question, approaching too nearly to a hypothetical speculation to be hazarded without some repugnance. It relates to tetanus as the result of similar injuries. That this is one of the most obscure diseases in physic, as it is among the most formidable, is a truth too well known; yet there is some analogy, if not very near, between Neuralgia producing convulsions or spasms, and this disorder; while, in some cases, it is preceded or accompanied by pains in the nerve which has received the injury. But I will not pursue what is but a hint towards further inquiries:

only, if it shall prove that there is even an affinity of a remote nature between the two, it may not ultimately prove useless in regulating that practice as to tetanus which is now so vacillating and so undetermined.

Lastly, if I have noticed the subject of corns, it will not be useless to repeat somewhat more distinctly, that even the ordinary pain from this cause, well known to be often very severe, far more so indeed than can well be explained on any other view, and not less well known to be sometimes periodical, may be, or rather probably is, a Neuralgia from injury: and it will be deserving of trial whether such pains may not be removed or abated by the remedies of that disease, in any case often sufficiently severe to justify a proceeding of this nature. Under any view, the analogy is too remarkable to have permitted me to pass over what, if a trifling fact in itself, is not such as it relates to medical philosophy.

Before I conclude this chapter I may add a remark, or rather a conjecture, to be verified, or not, like many more, by future observation. It relates to the chronic, and often very remarkable pains, which follow injuries, such as sprains and bruises, and which are generally referred to rheumatism by physicians, though often vaguely attributed to the original injury, by those who never think of inquiring how that can act at such a distance of time. On some occasions, I have had abundant reason to believe that these belonged to the class of Neuralgiæ from injury: and were they even called rheumatism, it may be questioned whether that rheumatism is not of the same character; while I need not dwell on what was formerly suggested as to rheumatism in all its forms, when I took occasion, in the first volume, to point out its remarkable connexion with intermittent fever.

CHAPTER XVII.

On Toothach.

If the subject of the present chapter may seem to occupy more space and to be treated with much more detail, than so vulgar and apparently so well known a disorder can justify, the more particularly when it has occupied numerous treatises and is conceived to be as thoroughly understood as any thing in phy-

sic can be, the necessity for such detail will soon be apparent: since not only is it closely connected with most of the leading facts belonging to Neuralgia, but it is only by drawing those analogies, somewhat minutely, that I can expect to establish the present views. And since utility, the wish to diminish human misery, is the object of this entire essay, it is not by the intensity, the mortal power, or the popularly terrific character of any particular disease that its value must be measured, or that I have myself measured it, but by the arithmetical quantity of suffering which it produces. The hydrophobia may be an object of interest or of universal alarm: but he who shall discover a sure and rapid remedy for even a common catarrh, would be a greater benefactor to his race than the man who may invent a specific for that celebrated disease.

But whatever arguments or evidences I may produce for the purpose of proving that toothach, in all its modes, is a Neuralgia and nothing more, a variety of the general disease under consideration, however perfectly I may draw the analogies, and thus unite every variety of this disorder under one leading form, while I also connect them with the simple Neuralgia of the same part of the body, I enter upon the subject without the slightest hope of producing the conviction which I feel, which I have felt almost from the first moment that I had entered on the study of physic.

It is not that I expect opposition from arguments, nor from medical facts or principles, assuredly at least, as I hope, not from enlightened and philosophical physicians: the difficulty arises chiefly from moral impediments; and they are such as were never yet surmounted without the aid of patience and time, being the obstacles which have invariably encountered every novel proposition which has tended to overturn a popular and established error or system. It is scarcely in man to admit that a belief which has lasted almost since the beginning of the world is not well founded; that what appears as plain as it is universally received, is not true, that mankind has so long proceeded under error and ignorance, and that a majority comprising every individual in the world from the creation, except one person, is in the wrong; far less to concede that this visible, every-day individual, one of the general mass, is the person capable of overturning the universal belief, and of establishing his own opinions or belief in its place. This is human nature; and it is the history of all attempts of this kind in the "*quidquid agunt homines;*" in every thing at least that is of familiar or universal reception.

Nor do I consider, that, against such a feeling, the most incontrovertible proofs would produce conviction; because I believe that in reality there is no such thing as conviction, except

in the solitary case of mathematical demonstration: where the facility of convincing arises, in a general sense, and with exceptions which it is superfluous to notice, from two causes chiefly, rather than from the purity of proof and the exertion of reasoning powers; and each of these being moral causes, while the first is that which, as the foundation of all opinion, is the very difficulty against which we have always to contend in other cases. The one of these is, a universal *prejudice* or rooted *opinion*, that mathematical science can prove what it undertakes; and the other cause is, that men are perfectly indifferent what it does prove, and would be just as well content were it demonstrated that a triangle comprised ten right angles as two. In every other case, there is habit, passion, prejudice, interest, what not, on the one side, and demonstration, which, to the multitude, is nothing at all, on the other; since to none is that a ground of—belief; as I will not abuse the term conviction by thus applying it.

If there is any one disorder on earth, at least in civilized society, which is universal, it is the toothach; since few, indeed, have passed through life without experiencing it. And while its frequency and familiarity have rendered the entire mass of mankind, almost every individual that ever existed, judges and physicians on this subject, at least in their own estimation, so have that and other circumstances taken its treatment, as well as its theory, almost out of the hands of physic, to lodge it in the hands of those who, on a point of this nature, can scarcely be the best of philosophers.

But among all, among physicians and the multitude alike, the leading cause of the error on this subject, is somewhat similar to what I had occasion to point out before. There is, in the first place, a term, a name as old as physic; and I need not again say that a successful and popular term is, in itself, philosophy; cause, theory, every thing; or that it stands at least in lieu of all reasoning and all investigation. It is the Toothach; that is sufficient: after the philosophy is established, the remedies follow of course, and, in this case, it is extraction, the amputation of the imagined seat of the disease: the remedy of the Dracos in legislation for the extirpation of moral diseases.

As an aid to this reasoning, the very ground-work perhaps of the whole, toothach is pain, pain in a tooth; and thus the entire definition, the whole philosophy and theory, are comprised in this sole feature and term. But when this pain is present, the tooth is frequently unsound, diseased, and carious: and thus is the opinion that the pain proceeds from the visible disease, more firmly fixed, while this leading variety becomes the type and parent of the whole. Thus, if the tooth is not really carious,

it will be so hereafter, or it ought to be so; or it is diseased in some other manner (ingenious men find out that there is an abscess concealed,) or, as even Cullen has determined, "it is always dependent on some immediate application of acrid matter to the nerves of the teeth," or, in short, (for who shall find reasons for those who have none?) it is a diseased tooth in some way, because it gives pain, and therefore it must be extracted: while, at this conclusion does Cullen himself arrive. And if, after all, the disease is not even in the tooth, but in the jaw, then it must be in the roots, or in the antrum maxillare, or somewhere else; and still it is "the toothach," and still the tooth, or all the teeth, as it may happen, must be extracted.

Very seriously, such is the theory of toothach, in the hands of many more than Cullen: and such the leading practice at least; the ultimate remedy. And I believe it further to be true, that if physic and physicians may appear here to be blamed, and also to deserve blame, there are some excuses to lighten their share of the demerit, as to the practice at least; though as far as they have taught what should be concluded and done, they have had ample liberty. If the toothach ever falls within their department, it is, more correctly, the business of surgery, under the views of the fundamental remedy which are entertained; but it is the patient most commonly who is the real physician, and who dictates what is to be done; while the remedy is administered by the druggist, or, if it be extraction, by the apothecary's apprentice, to whom it is the virgin operation of his surgical education. When the barber is the physician in these cases, the philosophy and the practice are not better, and could not be much worse.

And still there is another cause, and that cause is the one which has promoted the barber to the rank of dentist. It is not here my business to inquire into the utility, or rather the inutility, of a dentist and his operations: nor to encounter, unnecessarily, the prejudices respecting the wonderful value of his various arts, which are entwined with the most invincible feelings of our vain nature. Yet I may question whether he who is an ingenious workman in ivory, he who is a vendor of secret powders and washes, he whose strength of hand is not checked by any superfluous refinement of feeling, or he who knows no more of the human anatomy than that some teeth have one root and some three, is exactly the fit person to reason about the diseases of the human constitution or to be intrusted with their cure; and, most of all, where, to blind habit and mechanical practice, there is occasionally added a small bias of self-interest. If this doubt be well founded, let the dentist who is a surgeon, or the surgeon who is a dentist, (for such, fortunately, there also are,)

be the person to be intrusted, at least with the toothach: since should he not know its nature at present, it is he at least who will learn to understand it.

But I must pass from these general remarks, which were really necessary for the purpose of anticipating the objections which I foresee; while if they are taxed with severity, the apology is ready. It is the cause of human nature, of all mankind, against that of a few individuals of that great mass; and the smaller evil is counterbalanced by the general utility.

I shall now proceed to describe this disorder as far as is necessary; but it is here especially requisite to distinguish it into varieties; as on a due division of those, much of the arguments which I have to produce respecting its real nature depend. And, on account of those views, I must be permitted to form my own division, and hence to neglect whatever has been formerly written on this subject. Yet as I shall not attempt to give so full an account of toothach under all its forms and connexions as if I were writing a sole treatise on that subject, I shall still suppose that the reader has studied, or will study, many works where he will find useful information, if generally under a false theory. My object here is, to reduce the disease under such leading forms, that the cases which occur may be referred to the one or to the other; to establish an analogy throughout those, first, and further, between the whole and Neuralgia, by evidence and reasoning; and, finally, to which all this tends, to point out what appears to be the rational method of cure. For this purpose, extreme minuteness and detail are not required; because if the leading objects are attained, the outline can always be filled up by every physician; and the plan followed here is therefore that which has been adopted throughout the whole of this essay.

The heads under which toothach is divided, may, for the present purpose, be conveniently rather than correctly, assumed as the following: but they are very indefinite divisions, as they run into each other, and, as individual cases, present endless modifications.

It may be rigidly periodical: while, in this case, it may be either combined, or not, with chronic intermittent fever: and further, in this case also, a tooth, or teeth may be sound, or carious, this condition being here considered incidental, not essential. Or, it may be irregular in its paroxysms, under all the same variations; and in both of these varieties, it passes into the common Neuralgia of the face; or, cases occur in which either name is equally applicable. This is the periodical toothach so familiar to those who have paid the attention to this subject which it deserves, but which is so very often overlooked, not merely by the physician, but very generally, if somewhat more

remarkably, by the patient; as, by the former, its passage into highly marked Neuralgia seems equally to have been neglected, and most so when a carious tooth is present.

In these forms, it is here considered as spontaneous Neuralgia: while, in the next place, it may occur, either casually, or more regularly, that is, under all the variations of that general disease, and traceable in a marked manner to a carious tooth; the pain being fixed in the nervous branch by which that is supplied, or originating in that and spreading from it. In this form it is here referred to Neuralgia arising from an injury to a nerve.

Further, as happens in cases of common Neuralgia, the excitement of the minuter vessels may be such as to produce temporary and paroxysmal, or, more permanent inflammation in the membranes, or generally about the face; when it becomes rheumatic toothach or rheumatism of the face, (neuralgic inflammation.) The chief varieties here, are produced in the following manner. The general (rheumatic) inflammation may, as I have just suggested, be paroxysmal and periodical, and even regular, or it may be permanent; while it may attend a carious tooth which is pained, or free of pain, or else a sound tooth in a state of pain; and such pains under any mode of regularity or otherwise. It may also be accompanied by a neuralgic pain independent of the general pain of the inflammation, and not in a tooth; in which case, it is plain, it belongs most unquestionably to Neuralgia, though, in the usual practice, ranked with toothach.

Or, lastly, all other pain but that of the inflammation itself may be wanting; when it becomes, most strictly, what is called rheumatism of the face: this state also sometimes occurring, even without the presence of a carious tooth. If this rheumatism of the face with separate neuralgic pain should in correctness have been ranked under common "Tic," the last division, also, in a more scientific arrangement, should have been reserved for a distinct section: but its obvious affinities and the received usage render it convenient to include it in the present one; particularly as its limits with respect to the former varieties are indefinite.

That I have justly referred all these diseases or varieties of disease to Neuralgia, will I think appear in the course of the description: and consequently, that I am justified in considering toothach, universally, as this disorder, or as a species in the leading genus treated in this essay. I shall therefore proceed to describe them as far as is necessary; while I shall in conclusion attempt to sum up the evidences in a condensed form.

The rigidly periodical toothach is by no means an uncommon form of the disease, but it must be sought to be found; its regu-

larity being almost always overlooked, as I have just observed, as well by the patients as by practitioners. In scarcely any one instance out of hundreds that have occurred to me, has this character been observed by the patients till it was suggested; and in many, it has required some argument, added to many days of compulsory self-examination, before the fact was admitted. So strong are prejudices in this case, and especially where there chances to be a carious tooth; so long has it been the habit to consider the pain as produced by this cause, and the disorder as a purely local and independent one: while I may also add, that the suspicion entertained respecting a favourite system on the part of the physician, often increases the opposition to this view, from very obvious and common moral causes. And further, if it is not more frequently observed, the cause lies also in a great measure with the practitioners. Even where these are medical persons, the vulgar conviction that this is a purely local disorder, or the ignorance that it possesses the connexions which I am endeavouring to prove, added to a species of neglect, or a contempt for an ailment which is almost proverbially despised *in another person*, is productive of carelessness, and causes every circumstance but the pain itself to be overlooked; thus perpetuating that ignorance which it is my object to remove. But as, even where physic is resorted to, medical persons are much less consulted than dentists, to whose whole philosophy on this subject I have already alluded, it is much less surprising that so little discrimination is exerted respecting this disorder; while it must further be remembered, that as far as the characters of a disease are to be assigned from general averages or arithmetical numbers, from the multiplicity of cases studied, this is one for which the far greater portion of the people demand no advice from any one, unless perchance from the apothecary's apprentice or the nearest barber.

Any person who chooses to seek for them, will find cases where the periodical return and the paroxysmal duration of toothach are as regular as those of the most regular Neuralgia or Intermittent fever, and under every variation under which these occur. And this is equally true whether there is a carious tooth or not; while, where that is not present, these cases by occupying a particular spot or region, and by the quality of the pain, pass gradually into the common and regular Neuralgia of the face (Tic) by gradations so insensible as to have no defined boundary. And while those who may think fit to pursue this inquiry, and prove the truth of what is here advanced, must conduct their investigations upon this principle, they must not forget that such paroxysms occur very frequently in the night, or at least, on a calculation of chances, as often, of course, as in the day; and that it is in such cases in particular, that it is diffi-

cult to extract the truth from a patient: while there is not one in a thousand who can be persuaded that such a disease is constitutional as well as local, still less, where there is a carious tooth, that the pain can be removed by bark or arsenic, or by internal remedies of any kind.

Whether it is really true that periodical toothach occurs more frequently in the night than in the day, I cannot decide; but so assuredly it has appeared to do in my own experience. If true, it may be thought remarkable, as the paroxysms of intermittent fever are most frequent in the daytime: yet it is not perhaps inexplicable, as it is obviously a disorder easily influenced by occupation or impressions on the mind, while it must be recollected also that every pain appears to a patient most intense in the solitude and silence of the night. Thence the unhappy fate of physicians, perpetually summoned from their beds by the selfish, during the idle alarms of a night watching or nocturnal awakening: alarms which the return of daylight would have removed, which even a candle and a book might have dissipated.

In transient, or acute cases of periodical toothach, it is less easy to perceive that there is any general affection of the system; though a discriminating observer will often find the usual symptoms of obscure intermittent fever, even here. When chronic, or habitual, it is more easy to observe this, as far as my experience goes. In any case, the symptoms are those which I formerly described as attending Neuralgia, and need not repeat; while the painful state is also the hot stage of the paroxysm, or at least is most severe at that time. And if the local action is here considerable, the excitement of the minute vessels often produces a swelling, or rheumatic pain, or tenderness, of the surrounding parts, which is equally paroxysmal and transient.

In such cases, and indeed in almost all instances of long continued or habitual toothach, even if irregular, an acute observer will easily perceive that peculiar physiognomy which I have so often described; and few physicians can be familiar with such cases of toothach, without having noticed the singular complexion often present; transitory at times, but often as fixed as are the visceral diseases so often present in those who are subject to chronic and inveterate toothach. This is a fact which I must, however, notice again, and shall therefore pass over at present.

But further, this regular toothach is very often found in persons who are labouring under chronic intermittent; forming sometimes a kind of appendage to that disorder, at others, replacing a paroxysm or a series of paroxysms. Thus have I seen a case of what must be considered a double tertian, an ague formed in China, of a variety notorious for its inveteracy, where one of the alternate days presented a regular and simple intermittent paroxysm of considerable severity, and the other a tooth-

ach equally regular and severe; the disorder having lasted under this form for nearly a twelvemonth when it came under my notice. Other cases, of a similar nature, but less durable and decided, have also occurred to me; as have more instances than one of a double quotidian with similar alternations. Thus also, in such chronic intermittent, have I seen an entire relapse, consisting of toothach, and alternating, no less than three several times, with relapses of simple intermittent; while, in others, a severe period of toothach, occupying some weeks, has suddenly ceased on the occurrence of a series of simple intermittent paroxysms. And in these cases, let me remark, the same exact period was preserved in both disorders; the toothach, when its relapse was in existence, occurring at the same hour as the fever had done in the other ones.

In an analogous manner, this toothach is found in patients of this description, replacing other neuralgic affections; and thus have I found it to alternate in these several ways; that is, either by paroxysms or relapses, with hemicrania and clavus, or other varieties of periodical headach, with periodical rheumatism in a shoulder, with Neuralgia in the fingers, and with that palpitation of the heart which I consider as a Neuralgia; nor do I doubt that greater experience in a disease which is seldom accessible to physicians, would have given me a far greater command of minute and particular evidences of the same nature.

One, however, I may still notice, for its remarkable combination, while the leading type must be referred to the double quotidian; and it is important to remark that, in this case, the patient had been long subject to double quotidian under many different modes. In this instance, the toothach alternated daily with a headach; while, on both days, after the cessation of the pain, there occurred a regular intermittent paroxysm, being probably the second quotidian fit and not a continuation of the painful one. In this particular patient, under every form of the disorder which he had experienced, there was seldom more than an hour or half an hour of interval between the cessation of the first and the occurrence of the second paroxysm.

If I have thus described a regular periodical toothach, I am perfectly aware that such a disorder has been long known to physicians; but if I am describing an acknowledged disease, I trust that I am also correcting the history of one that has been misapprehended, since, while it has generally been treated of as a mere casual variety deserving of no particular notice, while commonly also overlooked, or confounded with ordinary toothach, I can find no work in which its dependence on intermittent has been pointed out, still less where it has been referred to Neuralgia, or even connected with the periodical headach to which it is so nearly allied. It is, however, evident that it is

the most important variety of this disorder; since it forms a main connecting link between all toothach and the generic disorders to which that is affiliated, as it constitutes also, almost the basis of the whole investigation.

It was here therefore a fundamental necessity, as it was my main object, to point out that connexion which it possesses with intermittent fever and with Neuralgia both, which has never yet been fairly understood or admitted; to show, in fact, that this toothach, be its varieties what they may, is a mode of intermittent fever with local symptoms, or a neuralgic intermittent, and that it forms but a variety in this general division of the leading disorder. Should the febrile symptoms, or the accompanying intermittent, be not present, or difficult to discern, it will still be a regular Neuralgia at least, to those who continue unwilling to admit the connexion between these two forms of disease. If this view is important as it relates to the cure of periodical toothach, so is it with respect to the remedies of that painful disorder under any form; but it is of even more importance in enabling us to establish a just theory of the entire disease; in attempting to prove, as I hope to do, that every toothach is a Neuralgia, be its forms whatever they may.

This is a truth which, when once presented, will strike every patient at least who has experienced common Neuralgia of the face (Tic) and toothach, whether it should convince him or not as to the general truth of the present theory; so exactly similar are, not only the two pains, but the collateral effects, and the general, often indescribable symptoms that attend them; such as irritability, mental affections and constitutional derangement of various kinds, not easily detailed, yet sufficiently noticed in many preceding parts of this essay. But I must trace this connexion more accurately, and it may form the introduction to an account of the less regular varieties of toothach. I shall thus be enabled to connect these with ordinary and irregular Neuralgia, as I have united the most regular form to the equally regular neuralgic intermittent and the common intermittent: and if I have formerly succeeded in proving that every Neuralgia, however irregular, is but a mode of the regular disease, the same conclusion must inevitably be extended to irregular toothach, and the proof of which I am in quest will be complete.

In the common Neuralgia (Tic) of the face, the pain is not always that severe and definite one, limited to a particular nerve, which it was once supposed; and, however physicians might at first have been led to confine that unlucky and mischievous term to this definite form, there are very many at least who are now willing to allow a wider limit to it, and to admit that Tic may exist under at least a few modifications, though this somewhat more correct view of the facts is as yet very much confined.

In reality, and as I have formerly shown, the Neuralgia of the face appears under endless shapes, both as to the place, and the nature or intensity of the pain; and I have, I trust, succeeded in showing, that all the periodical forms of headach are but this disease in fact, and that those pains or headachs may be Neuralgiæ, even when their regular turns have ceased, or where they never existed; just as the admitted Tic may be equally irregular.

Now, if it is easy to establish this connexion, it is even more so to establish that between common Neuralgia, be it as irregular as it may, (Tic) and toothach. Theoretically, and consonant to all the facts formerly stated and the explanations given, they might be expected *a priori* to be the same; since no one point out of all the numerous points of the many nerves which supply the face, can be supposed to possess an exclusive privilege as to this disorder. We should therefore expect to find it every where; and, among other nerves, in those which supply the jaw as leading branches, as also, further, in those, more minute, which furnish each individual tooth.

Or, to state this more particularly. If the inferior maxillary nerve can be affected with Neuralgia in its trunk, that affection is, admittedly, not limited to any one point. Let us pursue that point as a mathematical fluent. It proceeds along the nerve till it arrives at the place where the ramification is given off to a tooth; it proceeds even into the tooth, and the *name* is then changed to toothach. But change of name is not change of disease: or if it be so, let the opposing assertion define the point in this fluxion, where the cessation takes place and a new element of equation must be adopted, or where a new disease commences. To determine thus, is to be guided by terms, not by facts or reasoning: this is the very empiricism of which I have so often had occasion to complain; unworthy of science, as it has been the eternal obstacle to the progress of physic.

And, in practice, the facts coincide with this general proposition. Or, whatever is true of periodical Neuralgia in this respect, is true of the irregular disorder: and, similarly, as the former connects itself with periodical toothach, so does the latter with the irregular and more common forms of this affection. That is, if a periodical Neuralgia is found to occupy different places in the nerve or nerves, from the main branch to its termination in the tooth, if it varies its place similarly, or if it extends its influence, or, be it severe or otherwise, or be the mode or quality of the pain what it may, or let it affect one tooth or more teeth, and let those be sound or carious, every one of these circumstances will be found in the irregular Neuralgia. Or, to conclude, the limits between irregular Neuralgia and irregular toothach are undefinable, as is true with respect to those

two disorders when regular: or, out of four forms of disease, it having been proved that they are identical when taken by pairs in any manner, the whole must constitute but one disease.

Or now, to state the facts in the ordinary language of practice, every part of the face, to any extent, great or small, may suffer this pain, in an irregular as well as a regular manner; and in every one of its modes, from the most severe to the most slender or diffused; and, equally, all these variations of pain may occur in any number of teeth, or in one tooth, and without any regard to these being carious or sound; though I shall hereafter show that there are additional, separate, reasons why a carious tooth should more frequently suffer than a sound one. All these varieties occur daily in practice; and he must be a very inaccurate or unpractised observer, who has not found, in his experience in toothach, almost every form that can be conceived, from the simplest pain of one tooth, to a distinct Neuralgia, and all connected by intermediate links; many more varieties in fact than it could serve any purpose to detail.

Now, had the term Neuralgia been first known, or rather, had such a disease as a painful state of a nerve, generically, without regard to place, been described, ascertained, and admitted, had a just medical philosophy preceded popular opinion, or rather, had physicians generalized where they have been employed in the following petty details, the very term Toothach might never have been admitted, at least as a medical and philosophical one, and the true bearings and nature of that variety of Neuralgia would have been understood from the beginning: or, had the term Toothach not been made generic, or supposed to include and draw a circle round a distinct individual disease, still more, had not that term become so inveterately rooted and so popular, so united also in the minds of the multitude with the false medical opinions which it includes, there would not at this day have been the slightest difficulty in persuading physicians, and the whole world also, to admit that Toothach was Neuralgia, and nothing more; and not only a variety of that painful disorder in the face, called Tic, but of every other analogous pain, even to Sciatica. In every point, except place, they are, all, the same: but rather than detail all these circumstances of resemblance, since that would be to repeat much that has already passed, it will be much briefer and easier to ask the opponents, if such there shall prove, to show where they differ. It will scarcely be argued by any physician or anatomist, that what is one disease in one portion of a given nerve, is another in a different portion, however, it may by the people or the ignorant; seeing that the seat of the disease is the nerve itself, and not the part, the tooth, which it supplies: since this would be to argue indeed like the vulgar, and as if we should suppose,

for example, that aneurism of the aorta was a different disorder from popliteal aneurism, or gout, in the foot different from gout in the hand.

But to pass from this reasoning as to the identity of Toothach and Neuralgia, I shall proceed to point out a few of the peculiar and collateral circumstances in which the irregular forms of toothach coincide with the similarly irregular forms of admitted Neuralgia, that I may draw the resemblance closer, by evidence in support of these arguments. If it is generally the more philosophical proceeding to produce the generalization after having detailed the facts, it is often most convenient to lay down the proposition first and to adduce the evidence afterwards; particularly in cases like the present, where we must adopt a superfluity or variety of evidence, in hopes that where our business is to convince prejudice, not reason, there may prove, in that variety, arguments adapted to the endless varieties of prejudice and temper; since even feeble ones often operate here, where demonstration itself would fail.

It is here indeed that the great opposition lies; for while there are many who may not refuse, now, to believe that the periodical toothach may be a Neuralgia, as it is an intermittent disorder, I have not found one willing to admit that this could be true of the irregular toothach. And if I dwell minutely on this evidence, it is because I think it one of the most important points that can now be established as a new one in physic; if not indeed as concerning human life, yet as affecting at least, and deeply, human comfort; since the present false theory is the cause of an erroneous practice productive of misery and inconvenience, which becomes, by its multiplicity and diffusion, an immense mass of evil.

If it should be asserted that this view has already been taken of toothach, the answer that it has not, is completely proved by the present practice, which is not even incidental, but universal; if it were even not rendered evident by a reference to systematic writers. I do not here distinguish Cullen because I consider him the highest authority in physic, or from the authority of his school having made such an exclusive impression on myself as the first teachers usually do on a young mind; but because his work is considered a high authority, and because, on this disorder, he is, somewhat unusually, clear and decided, while very generally followed. And let me also say, if I have not already explained myself sufficiently, that, in no case, often as I may have selected him as the mark, have I intended any properly personal criticism. But while some name, as the organ of opinions, is necessary, it would even have been disrespectful to have selected a minor one: if also it were not an act of justice, to science as to mankind, to note for pernicious opi-

nious, him, be he who he may, whose authority is likely to render his errors doubly injurious.

The former proof then, in question, is analogous to that which was offered before, relative to the division of the nerve in Neuralgia; and if this particular practice has lately fallen into disuse, not from a better theory of the disease, but from experience of its inefficacy, there is not an instance, (I do not mean as to individual cases, but as to varieties of the disease,) in which the extraction of teeth is not resorted to for the cure of toothach, even where they are sound, and in the hands of physicians and surgeons of the highest reputation; subject of course to exceptions from various causes, but not one of these arising from a just view of the disease. If I could quote a hundred examples of even entire ranges of teeth drawn for this purpose, I need not allude to a stronger proof of the general error than the case of a late esteemed and lamented physician, himself of the highest rank, and surrounded by the whole profession; since, together with a division of the nerve, he submitted to the loss of eight teeth, and yet died, it is said, of a disease which there is every reason to believe might have been cured under juster views, or under which, life at least would not have been sacrificed.

And if it is the contemplation of cases like this, facts in thousands, if not always equally serious and equally vexatious and painful to reflect on, which has made me anxious to enforce my opinions throughout this essay, under that conviction of their truth which I have attempted to produce in others, so must that feeling be the apology, not merely for that anxiety which is perhaps too visible, but for the often unphilosophical superfluity of manner in which I have adduced and urged the evidences, and for a warmth of argument, as for a retrospective criticism, which, on any point of cold and speculative truths, I should have thought unjustifiable. I cannot calmly see that life has been lost and misery produced by want of knowledge, or erroneous views, as in the case in question; nor write without enforcing what I think to be that knowledge, in a far other manner than I should have undertaken the proof of a problem in physics or in the abstract sciences.

Before, however, I proceed to point out certain collateral resemblances between irregular toothach and Neuralgia, I must anticipate the objection which will be again made, as it has been to myself, founded on its irregularity: this being, in fact, the strong hold of the sceptical, and the only objection of apparent strength, feeble as it is in reality, which can be urged.

In treating of common Neuralgia and of intermittent headach, I have already shown how often these affections are irregular, and what the causes of this irregularity are; as I have equally

explained in what they consist, and further shown how often they are considered so, when it only requires a more careful examination and juster views of the disease, to discover a certain regularity under this apparent obscurity. It will be sufficient to request the reader to turn back to that subject; or what is better, to fix in his mind all that has already been said on this fact, irregularity, throughout this essay, as well in treating of intermittent as of the several Neuralgiæ, and to apply the same reasoning to the toothach. It would be mere repetition to traverse all this ground again; nor would it be any compliment to a medical reader, to suppose that he is not himself capable of making the application to the cases in question as they may occur to him. And if he will keep in his mind these several circumstances, I believe, that, with one exception, he will scarcely meet a case of toothach, however irregular, which he will not be able to parallel by a corresponding one of Neuralgia, and also of common intermittent; while, most generally, he will be also able, with due attention, to give reasons for that irregularity. The exception to which I allude is, where a tooth is carious; because there is here engaged a separate cause of irregularity, which I shall have occasion to notice more particularly in treating of that variety of toothach; a variety which I rank with the Neuralgia from injury.

Yet I cannot quite leave this subject thus: because, in toothach there appears to be one, perhaps two sources of irregularity, which are less active in the Neuralgia as it occurs in many other parts of the body.

I have formely shown that in persons susceptible of intermittent fever, or habitually suffering under it, the application of occasional causes, such as cold and moisture, frequently induced returns of single paroxysms or of entire relapses; and this happens in such a manner as often to give the disease a very irregular appearance. The same is true of Neuralgia under the same circumstances; while I have further shown, that, even in those not subject habitually to this disease, a single fit, or a few paroxysms, will sometimes be brought on by such incidental causes; especially by cold, and, as is perhaps especially true, by a partial application of this.

Now the face is particularly subject, from obvious circumstances, to suffer from cold, and from partial cold; while the teeth themselves also suffer separately, from familiar circumstances known to every one. Hence an irregularity in toothach, arising from a greater exposure to incidental causes; while the fact, as such, is too familiar to require further mention. And if derangements of the stomach can act, as is equally familiar, in producing common headaches, a fact apparently depending on that peculiar connexion expressed by the obscure term sympa-

thy, so do they frequently excite the true, and even the regularly periodical neuralgic headach in many persons, whether habitually subject to these diseases or not. Hence, therefore, we may comprehend, how irregularity in common toothach may result also from its being partly under the influence of the stomach; while the truth of this influence is proved by the well known fact that toothach is sometimes actually produced by a deranged stomach, and that it is even cured by emetics, though even in these cases, the real cure may be that of an intermittent, sometimes thus removed; a solution which is in some measure corroborated by the parallel effect of this remedy in the neuralgic ophthalmia hereafter described.

Thus then I have shown that the objection against the present view of toothach which is founded on its irregularity, is of no force; and I may therefore continue the subject which I interrupted for the purpose of this statement in anticipation of such an opposition; that is, the evidence derived from collateral resemblances between Neuralgia and Toothach.

In numerous cases of common toothach, in every well marked and severe one at least that I have ever had proper opportunities of examining, I have never failed to trace one or more of those symptoms which attend simple intermittent; that is, indications, varying in number and degree, of a febrile paroxysm: and while those symptoms have been, in general, particularly discernible in the chronic cases, or where toothach had become an often recurring habit, I have found ample reason to believe, that, wherever the disease has persecuted the patient through a long life, the visceral glands have been affected; or, that however irregular, it has, like the irregular and chronic intermittent, been associated, whether as effect or coincidence I have already declared my uncertainty, with derangements of the liver or spleen, or both, but most frequently of the latter. And in some cases, this connexion has been so obvious, that while the patient was habitually suffering under a palpable or a grievous chronic intermittent, the irregular toothach has been associated with the disease in all the ways in which the periodical one is, or in the exact modes already pointed out as to the several Neuralgiæ.

And I have here a collateral remark, which is of some importance; while I alluded to the same fact as to Neuralgia in general, on a former occasion. It is frequently mentioned in medical writings, that the pain of toothach, when recurring severely for many years, destroys the constitution; and this effect has been attributed to the severity of the pain. The constitutional disease here alluded to, is, doubtless, great; but, as I formerly hinted, it is not produced by other pains, nor is there any thing in pure pain to account for the species of injury in question. This is one of the errors, far too common in physic,

which flow from a minute or petty attention to an obvious symptom, to the neglect of generalization. In these cases, the constitutional disease in question will invariably be found to be a chronic intermittent, sometimes united to visceral affection, and to be thus, rather the cause of the toothach than its effects; the former being, at least the great disorder, of which the pain is but a portion or a symptom. And should the toothach destroy a patient, or shorten his days, as it is said to have done, it is easy to see to what causes such effects are to be attributed; while such erroneous and trifling judgments in cases of such a nature as this, are even more unpardonable. But I must withdraw from a criticism which, did I pursue it, might involve a censure on many to whom I must look with respect on other points, however they may have suffered themselves to be misled on this one, by following, from habit, minds inferior to their own.

The general nervous affections which attend common toothach, are the same as those which occur in all the Neuralgiæ, and, similarly, in all the intermittents, whether simple or anomalous. It is remarked, even to familiarity, that the pain of toothach is peculiarly intolerable, or affects singularly the whole body, and the mind also; while, as far as pains can be measured or compared, it is not equal in quantity to that of wounds, or of various painful diseases, which do not equally affect the system, or are not equally intolerable and not thus productive of irritability and impatience. Under many severe pains, the mind retains its full powers; and when the pain ceases, the inconvenience is over; while the former is rarely the fact in the toothach, and still more rarely so in the habitual one. This is precisely what occurs in every case of Neuralgia, be it wherever it may; and hence do the general sufferings, often undescribable, from periodical headach, Tic, or sciatica, resemble those which occur in severe toothach.

It surely must have been remarked by every one, that the physiognomical expression of a person labouring under toothach is peculiar, and unlike to that which occurs from gout, or the pain of wounds, or almost any other pain. Yet it is the same as that which takes place in Neuralgia, as an artist at least will immediately discover; and what is more, it will be found to resemble, in an air of peculiar anxiety and of melancholy, united or separate, as also at some periods, in a paleness and shrinking, and a peculiar greenish yellow or singularly sallow colour, that expression which characterizes the fit of intermittent, as I have more than once remarked respecting the Neuralgiæ in general. And if the remark be rather curious or amusing than useful or necessary, the character of that physiognomy is well evinced as it is accurately delineated, by that acute observer of expression, Hogarth, in his strolling actors; nor while I point out, in his

Finchley, another expression for another kind of suffering not less correctly represented, need I remind the acuter members of my own profession, how often they can themselves decide on the exact nature of a painful disease, merely by the face of the patient, as I have often decided on the presence of stone, on the first, and even on a distant view of the countenance.

To the peculiar situation of the pain, in the body or substance of a nerve, and communicating with the whole nervous system, we must probably look for these peculiarities, whatever the exact cause may be; and thus the toothach is also often attended by hysteria, even amounting to a fit, by lacrymation, or a tendency to it, and by a species of debility of mind, equally remarkable in every Neuralgia, and, in fact, in all the intermittent diseases under whatever form. Where dyspeptic and hypochondriacal symptoms occur in patients subject to habitual toothach, as is by no means unusual, the explanation becomes thus easy: and thus also we can explain, how it so often happens in females, that this disorder, when frequent and durable, is attended by menstrual derangements. In reality, in every patient subject to frequent and severe toothachs, there is a great deal of general disorder of various kinds; and it can always be traced, with due care, to a separate, if, in a certain sense, connected constitutional disease, which is that variety of remittent or intermittent amply described in former parts of this essay.

There is yet one familiar fact occurring in toothach, which also connects it with Neuralgia and intermittent; and though it may appear trifling as a proof of identity, it is too remarkable to be passed without notice. It is removed by charms, a practice not uncommon in remote parts of the country: and thus it is also that the sight of the operator or of the preparation for extraction, often puts a stop to it, and when not habitual, even permanently. Thus also is it frequently cured by change of place or habits, as it is removed by the occurrence of another disease or pain: remedies, all of them, which occasionally, and perhaps as often, produce the same effects in other Neuralgiæ and in intermittents. That occupation, an intense resolution directed to some other, and exciting object, and other similar mental operations diverting the attention, also dissipate the toothach, is not less familiar as a fact, while it continues the analogous illustration. And if this is fully known to the sufferers under this disorder, while, very commonly, exceedingly conspicuous when we attend to the effects, relatively, of the solitude of night and of the conversation or occupations of the day, it is a remark of positive utility, not only in this disease but in ordinary Neuralgia. And if it is true, simply, that to light a candle in the night will sometimes remove a toothach, as the excitement of sending for an operator will often do, much more

effectually, this is but a small advantage compared to that which may be derived in a manner which I may call a negative one, both in this disease and in Neuralgia. If, in every case, to direct the attention strongly to any important organ, such as the heart or the stomach, will frequently derange its action, very easily so when already deranged, though even acting thus when those organs are in health, and if this is, actually, a not uncommon cause of dyspepsia or indigestion, in those empirical and selfish persons who are perpetually considering about what they eat, or amusing society with their ailments, when at table, so is it true that in all the Neuralgiæ, the pain is materially augmented by attending to it and talking of it, as it is diminished or dissipated by a strong effort of the reverse nature. Hence it is that the feeble-minded and the selfish suffer most from all the diseases of this class, as do those therefore, impliedly, who most torment their physicians; this conduct being quite as much the cause of the severity of the disorder, as it is the effect: and hence also it is, in a great measure, that females suffer most from it, though in them we may also allow somewhat for a nervous system more irritable.

How this may be applied to use, I need not say, and lest I dwell too long on these resemblances, I will now pass to some more local ones; while some of these are of moment, as they relate to the errors which have occurred, and do occur, daily and invariably, respecting this disease.

If, occasionally, the pain is confined rigidly to one tooth, a fact, however, which occurs chiefly where the tooth is carious and the disease is the produce of local injury, it is much more common for it to extend beyond that. Thus, like the Neuralgia elsewhere, the severe pain will be in one point, of greater or less dimensions, while a more moderate pain extends along the courses of the nerves, even to great distances. And in some cases, where the chief pain is not particularly pungent, the secondary one may be such that the patient can scarcely say where it really does lie; while, further, it is subject to wander about the face, or to be most intense at times in one part and at others in another. Thus does common toothach, like Neuralgia, often pass into headach; as, further, the patient may be so equally occupied between headach and toothach, as not to know precisely by what he is most grieved. In such cases as this, nothing but inveterate habit and inattention, added to the weight of a name, to that which is always the most weighty argument to the multitude, could prevent practitioners from referring the disorder to Neuralgia instead of toothach; had they indeed known what Neuralgia itself was.

I was about to say that this diffusion of the pain of toothach was a much more important object of attention than it might ap-

pear at first sight: I should rather say that it would have been one, had Neuralgia itself been better known, and will be one whenever it shall be understood. That importance relates to the treatment; and though I must in some measure infringe on my arrangement by alluding to this part of the subject partially, before I have had an opportunity of treating it generally, it is unavoidable; as with this, is almost the whole question of error as to practice, concerned. And here therefore, I cannot avoid pointing out the whole system of erroneous practice in toothach, as without this, I could not in fact finish the history of this disorder, and as I have completed, as far as I here can, all the remarks which I had to make on the history of simple irregular toothach as connected with Neuralgia of the same character. In this inquiry, I need not separate what belongs to the case of carious teeth, or Neuralgia of a tooth from injury, from those where no such disorder exists; since this would be to incur repetition to little purpose. It is far from agreeable to be forced into a criticism implying a censure so wide; though much less unpleasant to argue against general than individual error; while it requires some effort of resolution to oppose, alone, a universal belief and a practice as universal, and to abide the consequences that must ensue.

It is not uncommon for the disease, the Neuralgia, to be situated in one or more of the leading branches which supply, by their minuter ramifications, a number of teeth. In this case, the pain may actually extend into many teeth, or to one half of a row, in either jaw, or in both jaws, or to the whole row, in either, or even in both jaws; though cases where it occupies more than the whole of one row are rare, while this accident seems to occur more frequently in the upper than in the lower jaw. It may also, in this case, affect but two teeth, or even one; or, in such a case as the last, there may be a neuralgic pain of the cheek or face, with a decided toothach superadded, in a single tooth, which, in the present inquiry, I shall presume to be sound.

In all such cases, varying in many more ways than it is necessary to specify, the greatest severity of the pain may be either in the teeth, or, beyond those, in the jaw; while it will be sympathetic, or exist as an extension of the principal pain, in either of these parts, reversely. But in all cases in practice, the teeth are accused as the seat of the disorder, except where, among surgeons more anatomical and profound, it is referred to a disease in the antrum maxillare, should the seat be the upper jaw. A few, with still more profundity, refer it to an abscess or a series of abscesses at the roots of the teeth; while there may possibly be other still more ingenious modes of accounting for such disorders. Unfortunately, the existence of such a dis-

ease as that of the antrum maxillare, serves to cover and protect one of these theories as to cases of Neuralgia, as there are also rare cases in justification of the other view.

That such a disorder as I have described, so decided as are these varieties, should not be recognised as Neuralgia, might be matter of surprise, considering that its characters and the collateral symptoms are always sufficiently obvious, and, in the severer cases, so marked and prominent, that any one who had ever seen Neuralgia, who had even the idea of such a disorder in his mind, could scarcely mistake it. But the surprise will diminish when we recollect that even Neuralgia itself is not very widely known or recognised as a general disease, or that its nature is not understood and its extent and variations not suspected; that, by many, it is hardly admitted or known to exist under any but its marked and popular form of Tic. We cannot therefore expect a correct judgment respecting even such toothach as I have now described, when there is no general theory, no foundation on which that discrimination can be founded, or no philosophy respecting its seat or nature.

The practice which follows, is that which might be expected; and is that empirical and hereditary practice which, commenced perhaps with physic itself, has been continued without inquiry. It consists in a number of local applications, generally of a stimulant nature; or, if there is a portion of the inflammatory action of the membranes present, it may be extended to other means which I need not now notice. But the great resource, the fundamental remedy, is extraction; and it is now my business to inquire what the effect of this is.

If excision or destruction of the nerve or of its diseased portion had proved on trial to be that remedy for common Neuralgia which was once hoped, we might have given to those who favour or use extraction in the cases under review, the credit of some reasoning, and have supposed that, on a similar principle, it was their intention to destroy the affected nerves in the teeth. But even this much of reasoning cannot be well granted; and the abettors of this practice must be content to reflect that they hope to pull the disease out together with the tooth, on the same principle, if principle that can be called, which exterminates the carious tooth, and its pain together, in the same manner. It is simply the vulgar and mechanical principle of amputation, misapplied; though few perhaps have ever considered the reasons for a clumsy piece of philosophy, adopted before men began to think, and followed because it is established. Assuredly, no physician, no one capable of reasoning, would attempt, on principle, to remove the pain produced by, and in, a diseased branch of a nerve, by removing the teeth which are supplied from its minuter ramifications; since it would be as if he were

to attempt the cure of sciatica by cutting off the toes. If that is now done daily, it is because the nature and seat of the tooth-ach in question have not been understood; and it must therefore be expected that the establishment of a just theory will put an end to a practice as unphilosophical as it is, generally, inefficacious, and in every case inconvenient; mischievous and vexatious in every way, when the teeth are sacrificed and the disorder remains uncured, as is the general event.

And I may add also, that such practices as consist in drawing the tooth and replacing it, so as to separate the nerve for ever from the tooth itself, or in the destruction of the nerve by caustics or cauteries, or in a still more recent invention, which divides the nervous branch and suffers the tooth to remain, are equally founded on false principles, because, like the division of the nerve in ordinary Neuralgia, they cannot prevent the return of the disease, otherwise than as, in the case of a carious tooth, they may, like stuffing or filling the cavity, prevent the future operations of the exciting cause, which, in the case of exposed nerves, so often induces a fit of the disorder.

But it is necessary to examine more particularly what are the consequences, in practice, of this system. If I lately alluded to one case where delicacy forbade me to name the unfortunate individual, I could easily detail twenty, thirty, more, cases, where entire rows of teeth have been sacrificed to this practice, yet without procuring the slightest relief. But there is scarcely a practitioner who has not met with many instances of the same nature; and I need not therefore relate the particulars of any one, since most of my readers could supply as much from their own experience. Even in common life, there are few persons who have not an acquaintance who has thus suffered in a less or greater degree; so common are the disease and the practice both, and such the perseverance, in what is equally useless and injurious, which results from ignorance united to habit.

If I have used the term perseverance, there is nothing perhaps so remarkable in this perseverance in wrong, as when it is exerted on a single case: and that this is done daily, is a sufficient proof of the rooted ignorance on this subject; since I have never yet met an instance where the propriety at least of this expedient was questioned, where it was not held out as the legitimate mode of cure, at least in the last resource. Thus, if it sometimes has happened that four, five, six, or more teeth have been drawn in the course of a few days, the sacrifice has been generally made in a much more gradual manner, and weeks, months, or even years, may pass before it is completed. It might be supposed here, that there would be abundant time for reflection to intervene, and that a practice proved to be unsuccessful on the individual himself, would not be thus persisted

in, even did the practitioner forget that it had rarely succeeded in other cases. But so it is; and they who follow this blind route must explain their own motives as best they can, since they would scarcely thank another for making the attempt.

As I defer the question of carious teeth for the present, the simplest case of this nature is that where there is a pain referred to a single sound tooth; in which, if it does sometimes happen that the pain is thus rigidly limited, it more commonly extends along the cheek or jaw, marking the neuralgic action; while, not unfrequently, the real seat of the pain is there, and the tooth suffers only by extension of it, as in the other cases of Neuralgia formerly described.

When extraction is resorted to for this kind of toothach, there is sometimes a cure, the cause of which I shall hereafter attempt to explain when speaking of carious teeth; and every cure, of course, unfortunately maintains the practice, while it is seldom inquired how often the operation fails. Very commonly, however, it happens, that immediately after extraction, the patient perceives that the pain continues, or is in the next tooth or teeth; in which case the operator is very often unjustly accused of having extracted the wrong one; when a resolute and confiding patient will sometimes submit to a second or a third loss, though even then the pain will continue. It may perhaps continue still in the neighbouring teeth; though more generally, where this pain has been limited as to the teeth themselves, it disappears from the places of those which have been extracted, continuing in the jaw, or in the leading branch of the nerve. The toothach is then sometimes reputed to have been cured; and the pain of the face is attributed to the operation, or to rheumatism, and is expected to subside: but as it would be endless to detail all these events, I shall not dwell on them.

What is more important here, and also frequent, there is perhaps a temporary cure, of greater or less duration: and in a new case of Neuralgia, or toothach, as in all other recent cases of that disease, as of Intermittent, the first cure may really be a permanent one; giving greater encouragement, and productive of more and wider evil for the future. But if the disease has been of any duration, or repeated, if the neuralgic habit is established, or the patient is in that chronic state of subjection to relapses, or of susceptibility, which occurs in all the neuralgic and intermittent disorders, the toothach returns at some other time, more or less distant; while, very generally, the same remedy is repeated, perhaps with success, possibly not, and the more readily if it has succeeded before. Thus, as the Neuralgia continues to return, whether spontaneously, as a disease of habit, or from the application of casual exciting causes, the same operations are repeated in succession, till whole ranges of teeth

disappear before the instrument; until at length perhaps the disorder ceases for life, from those changes in the constitution which so often end the habit of all Neuralgia and of intermittent.

Independently of the pain of these operations, trifling, it must be admitted, when compared to that of the disorder, the inconveniences produced by the loss of teeth need not be pointed out, numerous as they are; to say nothing of the consequent deformity, which, in the case of young or beautiful females especially, is often highly vexatious. And all this is materially increased when, as is most generally the case, the cure is not effected, or is only temporary. And how common both the disease and the practice are, is most palpable; when we scarcely meet an individual in society, who has not suffered the loss of some teeth in this manner, sometimes indeed justified comparatively by previous caries: though I shall hereafter show that the practice is nearly as much misplaced in one case as in the other.

I know no means of explaining why the neuralgic pain in question should be more common in the upper jaw than the lower, nor why it should be most frequent, when it affects the teeth, in the smaller molares than in any other. Such, however, is the fact: and while the foremost of those is the most common place of that pain, from this also it extends successively backwards to the others; but generally stopping short of the last, as it rarely also advances forwards to the canine: it being only in the severest cases that the front ones are affected, and the lower jaw generally suffering much less extensively and much more rarely. It is further remarkable, that the pain often attacks, in succession, the opposite or corresponding small molares first; either terminating with them, or gradually extending backwards during other relapses, along the other ones on each side alternately, and very generally in the upper jaw alone. If the ramifications of the superior maxillary nerves throw a sort of light on this, it does not explain why any branches should be more subject to Neuralgia than others; and we must, for the present, rest content with the fact. Hence it is that we often meet persons in whom each upper small molaris is wanting, as we find others who want two or three more on each side; a cause of considerable deformity in young females, in whom also this kind of Neuralgia or toothach appears to be more frequent than in the other sex. And I believe it is true generally, that females are more subject to the several Neuralgias of the face than males, perhaps indeed to the disorder in general, if we except sciatica, as with them, "nervous" headaches are more frequent: a fact arising probably from that greater sensibility of the nervous system which shows itself in so many different ways.

On this let me make one general observation, which I think is of some importance to all those who are subject to the chronic intermittent and neuralgic diseases under whatever form. It was inadvertently omitted in the former volume, where it would have found an apter place; but it is better that it should appear here than be suppressed altogether.

It is admitted that the irritability (as it is called) of the nervous system is increased or encouraged by a sedentary life, and also by mental rather than bodily occupation. By this also is comparative muscular debility induced or increased; as both these conditions are remedied by exercise or labour, under the usual recommendations as to general health. Hence it is that these diseases, on the average, are more severe among those who live in the former manner; a fact which assists in explaining the greater suffering of females and of the opulent classes: and, what is perhaps of much greater importance than any consideration belonging to Neuralgiæ, such also is very certainly the fact as to chronic remittents and intermittents. Thus it is, that from the habit of labour, and the consequent general strength of the muscles, or perhaps, the irritability also of the nervous system hence maintained, the rural population of the pestilential districts of Europe are enabled to work during the progress of habitual fevers which would utterly disable a sedentary or opulent person; while I have often also had occasion to remark, as a much more striking proof, that in the same individual, subject to chronic intermittent through years, any one attack during the habits of labour or exercise, has produced little disability, while the same occurring during a period of sedentary seclusion, has, as invariably, destroyed all the muscular powers, or produced a state of debility for which no state of the fever itself could produce a justification. The value of this fact in practice, and the practice which ought to be founded on it, I need not point out, as it is abundantly obvious. To return.

The more severe Neuralgia of the upper jaw affecting the teeth, is sometimes considered as a toothach simply, at others ascribed to disease in the antrum maxillare, as I already remarked. That extraction, with perforation if necessary, is the right mode of cure here, presuming this disease actually to be present, is true; but that is a point which might at least be ascertained by the loss of one tooth. Yet even such an experiment is scarcely pardonable; since the characters of Neuralgia, and the collateral symptoms as I have already described them, are so marked, that the practitioner who commits this error is indefensible, though it is made every day. The general practice here, as before, is to extract teeth; and when the pain is sufficiently severe, the patient sufficiently submissive or resolute, and the practitioner sufficiently ignorant, even the whole of the

teeth are sometimes drawn out without mercy or reflection, and not unfrequently without producing the cure that has been so dearly attempted. In other cases, as I have just remarked, the teeth are drawn more gradually, as circumstances happen; the failure producing no warning: and thus have I seen a patient submitting in succession, month after month and year after year, till not one tooth remained; till nothing remained but the pain, and which remains at this hour, because it never was in the teeth. It is far more unpardonable when this practice is adopted in cases where the pain is truly periodical; but so little is the knowledge of even that remarkable variety diffused, and so mechanical the routines of practice, that I have seen at least an equal number of cases, where all this violence has been resorted to, and where the disorder was not merely rigidly periodical, but even attended with marked intermittent fever; when a few days or weeks of arsenic or bark, or of the other remedies of Neuralgia were afterwards sufficient to effect the cure which all this loss of teeth had left untouched.

But I have said enough on the subject of these errors; while I cannot think that I have said too much, considering the vast mass of inconvenience as well as suffering to which they daily give rise, and of the termination of which there are no hopes, unless what I have here said shall in time make an impression. On the average of cases, perhaps there are three fourths where the cure of the pain is not obtained; so that, to the original disease, is added all the artificial evil. And even those who do purchase the loss of pain by the loss of teeth, pay commonly a deep penalty; since, in the same cases, the common remedies of Neuralgia would have removed the disorder and preserved these organs. If the labour which I have bestowed on even the whole of this essay, shall do no more than lead to a reform in this department of practice, it will be well repaid; while the consciousness of having effected good is the only reward which he who does not turn his knowledge to professional purposes can ever receive: and if I cannot help feeling that I shall deserve the thanks, at least of the rising generation of youth and beauty, though not till praise or censure will alike be indifferent, I must, in the hope of that hollow recompense, submit to what every man ought to expect, who, by proposing to change a general belief, is thought to insinuate that he is better informed than the great multitude.

That I may not, however, have to recur to the subject of extraction again, I shall extend these remarks on it, to the case of carious teeth; though the nature of this variety of Neuralgia has not yet been examined.

It may happen that every circumstance of pain, and every variation that I have described in the case of sound teeth, may

occur in that of carious ones; or, under all the foregoing symptoms, a single tooth, or more teeth, may be carious, while the progress and characters of the disease are the same. In reality, the caries must be ranked as an exciting cause, not considered as a disease, or rather, not as *the* disease; a proposition which I shall soon explain.

In these cases, it will sometimes happen that the pain is really limited to the diseased tooth or teeth; but it is also very common for it to extend beyond that, to the neighbouring or to other ones, and also to the nerves of the face, to any extent that it can occur in Neuralgia. Whatever be the circumstances, the disordered tooth is always conceived to be the seat of the disease; and there is here therefore less hesitation in applying the common remedy, while, in reality, these are the cases whence the loss of teeth so general in society chiefly arises, since there are, even professed dentists who, from whatever views, are unwilling now to extract sound teeth.

Now, if the operation often fails in curing the disorder in such cases, it succeeds in many instances; while it is this success, apparently, which has confirmed the practice in question, as it has aided in confirming the erroneous theory of toothach. It will be useful to inquire in what causes success and failure lie; since thus we may approach to a correct view of the utility of the remedy, and of its opposed inutility or disadvantages; though I can only conjecture what these are, or rather, offer a very partial explanation.

As I shall presently show, I consider that the exposure of the sensible interior of the tooth, or of the nerve as it is commonly called, which occurs in a perfectly carious one, is an exciting cause of Neuralgia in that nerve; or rather, that, in this state, the nerve itself is more easily under the influence of injury than in its natural condition; while it may also be positively or permanently diseased at that point, as it is in common Neuralgia, whatever be the nature of that obscure derangement, and thus susceptible of occasional fits of pain, from the same unknown and constitutional causes that excite the pain of common Neuralgia in any part. Some minute portion of the extremity may even be in a state of ulceration, or partake in some manner with the general ulcer; thus bearing an analogy which I already suggested, to a similar occurrence in ordinary ulcers, similarly productive of Neuralgia.

Now, in this case, extraction may cure the disorder in two ways. If the exposure of the nerve is merely an occasional exciting cause, or if the extremity even partakes of the ulcer, and that there is no further disease of the nerve, no fixed disposition to Neuralgia in any other portion of it, or no constitutional tendency, its effect is to secure that part from future in-

jury, by removing that body, the tooth, which maintained it in a state of exposure, and thus allowing it to be secured and buried by the healing process which follows. And this cure is effectual and permanent, whenever these favourable circumstances are present; though it will still be a question whether that cure should not preferably be attempted by the same means which remove other Neuralgiæ, and which rarely fail in new cases, however uncertain their success may be in habitual or chronic ones.

The other mode in which extraction appears at times to cure toothach, is by exciting another pain or temporary disorder, or by the shock which the operation and the alarm together give to the constitution; effects analogous to those which happen in other Neuralgiæ and in intermittent; as I formerly explained. Thus it may, in this way, cure permanently a new disease, or one not become habitual; and, on this principle, it also removes occasionally the toothach where the tooth is not carious; while if, in this case also, the Neuralgia is casual, or not fixed, the cure may be permanent; just as a permanent cure of intermittent is obtained in similar and other modes, when it has not had time to become habitual. But here also, as on the former principle, and whether the tooth be sound or diseased, it is a violent and an inexpedient remedy; since a Neuralgia that can be cured by such a cause, would also be removed by the usual medicines. At any rate, it should be a last resource, even in the case of a carious tooth, and far more in that of a sound one.

On the other hand, where there is a tendency to Neuralgia in the habit, or the disease is habitual or chronic, in the form of toothach or in any other form, it may be the effect of extraction, in either way, to remove the fit of pain, or to cure the particular paroxysm or series of paroxysms, just as we remove the relapses of a chronic intermittent; while the disease returns again, whenever the unknown constitutional causes, or the fresh application of exciting ones, brings it into action. Here it is, that, in the usual inconsiderate practice, the remedy is repeated because it succeeded before; and thus it may be repeated again and again, because always temporarily successful; and hence also it is, that a succession of fits of toothach attended by carious teeth, leads to that succession of operations which this species of success seems, though falsely, to justify as much as does the state of the teeth.

Now, on the contrary, it is here, that better reasoning would show that there was a deeper cause present, and would abandon a method of cure which is temporary and partial while it is severe and inconvenient; and hence we should rather derive a general rule, though there may be exceptions to it, exactly the reverse of the present one. It should be, that wherever, after

one extraction, the disease returns, this plan of cure should be abandoned, and the attempt at a real cure of the original and fixed disease, made by means of the remedies of Neuralgia; while the fits of pain also might be suspended or diverted for a time, as they are well known to be in various ways, by any remedies short of extraction. And there is infinitely less excuse for persevering in this practice in those, very common cases, where the pain continues in spite of extraction; as we may then be quite certain, that, after one failure, it is almost hopeless to have recourse again to this method of cure. Least of all perhaps is there an excuse, when, from the existence of a great number of carious teeth, the whole local evil cannot be extinguished without serious loss and inconvenience, and when, even then, we are by no means certain of effecting a cure; as experience proves every day.

If this reasoning be correct as to carious teeth in common irregular toothach, it is far more unexceptionable in the case of the periodical disease; since the cause is then so much more obvious, and since the remedies of intermittent and Neuralgia are also more efficacious than in the other varieties: as is true of all the modes of those disorders, always most amenable to remedies when most regular. Nor in any case, should extraction be resorted to until the remedies of Neuralgia have been fairly tried; as they never are, since the disorder as yet is not known as such: while of their efficacy in all the varieties, I have experience which cannot deceive me.

It will be plain now, that the extraction of a tooth cannot very often be a justifiable practice on account of pain: while I am fully convinced that were this disorder always treated as a Neuralgia, empirically, and without consideration of causes, or varieties, or aught else, without in short reasoning at all on the subject, (which to the multitude is the most easy and acceptable manner,) thousands, or rather millions of teeth would be saved, and perhaps also thousands of cases of toothach cured, which are now the torment of thousands in spite of extraction. And as it is found that Neuralgia and intermittent are most easily cured, even permanently, when recent, or before habit has rendered them chronic and refractory, so it would be the right policy to commence with this system at once, and on the first appearance of the disease; since we have much less hope of benefit in ancient cases.

It is easy, however, to imagine a case where early extraction might be advisable; and it is perhaps the only one in which it can really be recommended, while it would require some attention to ascertain the propriety. If it should appear that a new case of toothach, and, perhaps especially, in a young person, is produced absolutely from a badly carious tooth, and from its

exposure, it is possible that its frequent recurrence from external exciting causes, might induce the habit of Neuralgia in the constitution, and thus lead to an inveterate disease. Should such a case occur, and prove refractory to the remedies of Neuralgia, or to other local means, it might be prudent to take away the tooth, for the purpose of securing the nerve; and thus, by removing at once the only or chief cause, ensure the avoidance of the evil to be dreaded, and the permanent cure. Such accuracy of views can scarcely, however, be expected while this disease is to be judged of by mechanical dentists; and it would unquestionably be for the interest of the public, to reserve for their medical attendants what belongs to diseases, and confine the mechanics to their own, proper, sphere. At present, no more inquiry or judgment is exerted on a case of toothach than on the cleaning of a tooth; and assuredly, a constitutional disease such as, I trust, I have proved this to be, is not one that is very likely to be understood by the persons thus employed, or, even if they were really better informed, in the way that they are consulted; since that consultation is rarely more than an order for extraction. As to other reasons for extracting carious teeth, it is not my intention to interfere in this department of surgery; however convinced I may feel of the groundless or false reasons so often urged in defence of it.

I have now, from the obvious necessity of inverting the order of this discussion, to save repetition, said so much respecting the toothach as it arises from carious teeth, that I have left little to add on that subject; while that which remains relates chiefly to their mode of action in this case.

I showed in a former part of this essay, that the local injury of a nerve could produce a regular periodical Neuralgia; while I further suggested, what indeed is almost obvious, that the irregular pains produced by such a cause ought also to be considered of the same nature. Now these are cases exactly analogous to the toothach from a carious tooth; and thus we can see, how, from such a cause, even a periodical toothach might be produced. The extremity of the ramification supplying the tooth is, if not an injured nerve, an exposed one, susceptible of occasional injury, and also, it is probable, of inflammation: while it is not very improbable that the exciting disorder in the nerve in every case, the permanent cause which produces occasional fits of pain, is, if not a species of inflammation, something analogous to it. Hence, if the prick of a needle in the finger, or any other injury, can excite true Neuralgia, in the same or in a distant part, as I have shown that it can do, it is easy to imagine how, not only simple toothach of the part but, even Neuralgia in the face, may be produced by a carious tooth. The analogy is perfect, or rather it is an absolute identity: and

it is one, further, which serves to confirm the whole theory of toothach as I have now given it; so far from controverting it, as has been retorted on myself. And in such a case, should any tendency to the disease be present, or should there be a previous habit of Neuralgia in the constitution generally, or in the neighbouring parts, such a cause, permanent at once and occasional, might be the perpetually renovating occasional cause of a serious disorder, of which it would be esteemed the sole one. And the perpetual obstacle to conviction in this case, is nothing but the simplest of all fallacies, a term: or it is the mistaking of one part for another, or the substitution of the visible screen of an object for the object itself which it covers. Let the objector but once persuade himself, or recollect, that a tooth is insensible, that it is nothing, that the nerve is every thing, the seat of life as well as of pain, and he can have no further difficulty; since it must be indifferent where that nerve lies, and since it is the same law, operating on the same thing, but in a different place.

I have but one more remark to add before I pass from a subject, which, if it has occupied much space, must seek its apology in its former obscurity and in its importance. Carious teeth do not invariably produce toothach, far from it; even when we are sure that the sensible parts are equally exposed, and when the proof of this is perfect, from the pain which an injury, or the contact of a stimulating substance produces. So far from that, we find thousands wasting away through years, and with the sensible part exposed the whole time, and yet without exciting pain; while, when excited, even violently, by accident or design, for a few minutes or hours, it terminates, not to recur again but from fresh injury. The most common reasoning should therefore show, that the disease does not essentially consist in such exposure or injury, but that something else is present, and that this is but an occasional cause. That fundamental cause lies in the nerve, or the nervous system, as in all Neuralgiæ: and while this indicates the want of observation under which the disorder has always been considered and treated, it aids in confirming the views which I have held out respecting its nature, its constitutional nature, if I may use that term: as it justifies the mode of treatment by which the cure, in the view that I have taken of it, ought to be attempted. What else relates to that, however, beyond what I have already been compelled to remark, I shall defer till I have considered the last variety, the inflammatory or rheumatic toothach, or the rheumatism of the face.

Yet not without making one remark. Should I propose to treat the toothach from caries by the same remedies which are resorted to for Neuralgias, or for toothach without caries, it is

a very natural objection to ask how a cure can be thus expected when the disease is local, or thus far at least, of a local nature. The answer ought already to be obvious; and it is, that Neuralgiæ arising from an injury to a nerve, in a finger, or elsewhere, is thus as readily cured as any other variety. All that can be admitted, therefore, in this case is, that if the nerve of the tooth is injured or exposed, it may renew the disorder again, after having been removed; as being an exciting cause always ready to act: though it is far from improbable that a permanent cure may be effected by the operation of these remedies on the nervous system at large, since I have just shown that some condition of this must conspire with the local disease in the production of toothach.

I formerly showed that it was a frequent effect of Neuralgiæ to excite an action in the minute arteries, tending in some cases to inflammation, and as I shall hereafter show, sometimes actually producing it. I have further compared, and must for the present purpose compare, again, that action of the arteries in a part, to the effect which takes place, of an analogous nature, in the whole arterial system during the paroxysm of intermittent. I have also shown, that in the Neuralgia of the rectum, and in the periodical headach, the neuralgic pain is confined to the minutest ramifications of the nerves, avoiding the larger branches; and that in this case also, the arteries of the same parts put on an inflammatory or excited action. It has further, and lastly been shown, that in intermittent, periodical and transient rheumatism, or inflammation, can take place in a part, without decided neuralgic pain, as such inflammation may also become permanent; and I have pointed out the general analogy of these inflammations, including those of the stomach and bowels. This I am inclined to distinguish by the term neuralgic inflammation, in all cases; conceiving that, even in the last, mutually connected, and unlimited with respect to each other, as all these are, it is from such an affection of the very minutest ramifications supplying the capillary arteries, that this effect proceeds.

But whether we choose to apply the term neuralgic or not to this species of inflammation, its connexion with intermittent fever has been amply demonstrated; as its similar connexion with Neuralgia will be more fully shown hereafter; while it is also familiarly subject to paroxysms with intervals, as regular and decided as are those of the best marked intermittent fever. But it is sufficient to remind the reader of these facts; while it ought to be superfluous to repeat and array them again, for the purpose of illustrating the parallel disorders under review, or the rheumatic toothach under its several forms.

Not to refine more than is necessary, it will be sufficient to consider the rheumatic disease in question under two varieties;

namely, as connected with a carious tooth, and as independent of that; while, under each, it may be strictly periodical, or irregular, as is the simpler toothach itself.

But as I have already described the various modes under which mere toothach is periodical, as also its irregularities, while I have further detailed the collateral symptoms which attend it and mark its character, and moreover, attempted to explain the causes of such irregularities, it will be unnecessary to go over all this ground again, since the statements then made apply equally to the rheumatic or inflammatory form of the disease, and that, whether there is a carious tooth present or not.

Supposing a carious tooth to be present, there are two modes in which the rheumatic inflammation may occur. If the pain has commenced in the tooth, the inflammation may be determined or produced by that; and we may then conceive it as the produce of the Neuralgia in the main nervous branch supplying the tooth; an excess of that action which so generally occurs in the neighbouring vessels in every Neuralgia. But the rheumatic or inflammatory action may also be the prime or leading disorder, while the pain of the tooth is produced by its extension. In this case we may compare it with the local rheumatisms formerly described as connected with intermittent, of which it is in reality a frequent variety.

If, on the other hand, there is no carious tooth, the rheumatic inflammation in question bears still more strongly the marks of an original disease, while in this case, its characters and origin are those just described. And here, if it is most generally a simple disease, a merely painful state of the membranes of the face, attended with inflammation and swelling, or not, it sometimes also excites a distinct neuralgic pain in addition, or else appears to originate in one; such cases being exact parallels to those just described where a carious tooth is present.

Having made these necessary distinctions, what remains of the description may be considered as appertaining to all these varieties; as it is unnecessary to prolong this account by a further multiplication of variations. Generally, the disease is the same under all its forms; and the important object here, is to establish that generic character, for the sake of the practice depending on it, as well as for the purpose of completing the theory of this branch of the Neuralgia.

In the rheumatism of the face, the inflammatory state is sometimes so imperfect and transitory, that it would rather be considered a painful disease than an inflammatory one; and this is particularly the case where it is periodical, or paroxysmatic, under any form, however irregular. In such cases, it approximates intimately in its character to pure Neuralgia; and may, in fact, be considered as a Neuralgia extending through a great

number of the very minutest and unassignable nerves that supply the membranes. It is, but for its place, a headach, or the theory of the disease, *mutatis mutandis*, is that of the analogous headachs; while, in practice, the two are often so united, or the limits of separation so loosely drawn, that a patient is sometimes at a loss which name to give to his disorder. If these are the cases in which it is most apt to be regularly periodical, they are not the exclusive ones, as I shall presently show.

When the disorder proceeds to actual inflammation, it produces those well-known effects which I need not describe; and in these cases the disease generally lasts a definite time without interruption; though even here it is common to find quotidian exacerbations of the pain, and sometimes also, of the swelling. Yet as I just insinuated, even this disorder is sometimes strictly periodical; as I have known some cases where a distinct swelling occurred daily, subsiding again; in two of which the disorder under this form lasted for some years, but with those intervals which occur in almost all very chronic intermittents. And in both of these, if there were symptoms of an equally regular intermittent fever present, the disease was, in one, not only a marked quotidian, but one of an extremely severe character, enduring, with interruptions, for seven or eight years: while the swelling and pain of the face, equally regular for the most part, often terminated in abscesses in the gums, such as are of familiar occurrence in this disorder. It scarcely, however, requires such cases as this, to prove the neuralgic character of this disorder, and its connexion with intermittent. All the circumstances show that the view here given is a just one; and whoever shall now study the cases that may come under his hands, with this theory, will soon convince himself that it is so.

In the ordinary current of practice, this is the history and explanation of those very common cases, where we find certain persons subject, as it is termed, to swelled faces; and if any physician will register, after careful examination, and afterwards review a certain number of those cases, he will not fail to become convinced of all those peculiarities by which the disease is associated in the manner that I have been here attempting to prove. Let this however be done with the intention of trying the truth of this theory; without which, the characteristic symptoms might be overlooked, as, under habit, they so easily are. And as a proof of this, of the very cause which has so long thrown obscurity over this as over all the Neuralgiæ, I may observe that in the case to which I have just alluded, where the patient was subject to "swelled face" during a period of more than seven years, almost daily, so as to be utterly disabled, the intermittent nature of the disease, and the fever connected with it, had never once been observed; while a mere cross-examination

by means of a letter, was sufficient to detect a truth which was immediately confirmed by the entire cure of the disease through arsenic and bark.

The formation of abscesses is perhaps the most singular circumstance attending this inflammation; while it is one that I do not pretend to account for, occurring as it does when a tooth is not carious, though far from frequent in this case. It is a fact that might be objected against the present view of the disease: but it is plain that it is of no peculiar moment as such, since the same objection would lie on the view of its being a rheumatism, seeing that there is no other proper rheumatism which terminates in this manner. If we cannot exactly account for it, we must suppose that it depends on some peculiarity in the structure or nature of the gums, not yet ascertained; a peculiarity which is evinced by the enormous length of time during which abscesses will continue to form in them, and in one point; a fact to which we have no exact parallel elsewhere, of which I know. On this subject, I may indeed add, that I was long familiar with a case, where an abscess on one point of the gum, not equalling a pea in dimensions, collected and broke, every second or third day, during the space of twenty years. Yet let it be remarked as to this termination of the neuralgic or rheumatic inflammation, that the same event, abscess or suppuration, occurs also in the analogous inflammation of the eye: so that those physicians who consider this a rheumatic disease, will be as much at a loss to explain this peculiarity as myself, when I call it a neuralgic one and associate it with the disorder under review.

I have thus finished all that I think it necessary to say respecting the forms of toothach; and after the details that have been given, it can scarcely be necessary to offer further proofs of the truth of the theory which I have here laid down. The occasionally periodical or intermittent character of the disease in all its forms, has been established, while its actual connexion in some cases, even with intermittent fever, has been shown: nor are there any irregularities in it which are not equally found to occur, in chronic intermittents especially, and particularly in the anomalous varieties, or in those that are attended by local symptoms. On the other hand, its identity with Neuralgia has been similarly and even more clearly proved; while the examination of cases of this disease in other forms, will show that no anomalies or irregularities occur in toothach, that are not similarly found in every Neuralgia; no other at least than those which can be explained by the circumstance of frequent local injury arising from a carious tooth; while this is also countenanced by the parallel cases of Neuralgia in other nerves, arising from similar injuries. But I shall leave these facts and argu-

ments to make such impression as they may; aware that, even should they be successful, it will require a long time to overcome prejudices so firmly rooted, as well in the minds of medical men as in those of the public at large, or to establish this as a branch of a general theory, when the very basis itself labours under the misfortune of novelty, and must also work its own way to acceptance.

Let me now, however, in concluding, sum up the chief arguments as to toothach, in a condensed and somewhat more logical manner, since they will thus be more impressive than under the diffused illustration which I have been obliged to use in explaining the connexions of all the varieties of this disorder. That they involve a series of pure syllogisms, *ought* to render them convincing; that this will do so, is a very different assertion.

Neuralgia is a pain occupying some point in the nerves of the face, among others; and it may occupy any point in any large branch which supplies the teeth, among other nerves of the face. The pain which it produces is the same pain, whatever be the nerve or part of that nerve affected. The pain of toothach is the same pain, and it is seated in an ultimate extremity of the branch which supplies the teeth, or in more. If that pain is not Neuralgia, then it must follow, that although every other point of that nerve, when pained, is suffering from Neuralgia, let that pain exist any where, from the brain even to the extremity, the very last, ultimate, point thus suffering, suffers from a different disease. *Reductio ad absurdum.*

Neuralgia is regularly intermittent and periodical, or it becomes irregular, under various modes, and from causes, of which many are assignable. The same is true of toothach. Neuralgia is often, or perhaps generally, attended by a peculiar constitutional affection, ascertained to be a chronic intermittent, and when highly marked, there is a febrile paroxysm accompanying the pain. All this is true of toothach. Neuralgia alternates with intermittent fever, by relapses; so does toothach: it alternates with it by paroxysms, and toothach does the same. And in both, the types may be quotidian, tertian, and double tertian, or perhaps more; while, in both, the disease may be similarly doubled; or, being a double tertian, may consist of a paroxysm of the pure intermittent on one day, and of the Neuralgia, or of the toothach on another.

Neuralgia is attended by heat, and by excitement of the minute arteries, accompanied by general diffused pain, or irritability, or both; and so is toothach. Neuralgia and toothach are united, or simultaneous; or, the pain, and the place of the pain may be such, that neither the physician nor the patient can determine what the disease ought to be called. Neuralgia passes

into, or produces toothach; and, reversely, toothach passes into, or produces Neuralgia. The two pains alternate, in various modes; or that which was Neuralgia at one period, be that of day, hour, or minute, or even instant, may be toothach in the next; or the reverse.

Neuralgia is produced by the injury of a nerve. So is toothach; and this is the case of a carious tooth. And if toothach from this cause is especially frequent, it is that the caries of a tooth is very common; and that there are not, in external circumstances, or in the body, any frequent means of thus injuring, either through accident or disease, the branch of a nerve elsewhere.

Toothach, when regular, is cured by the same remedies as regular neuralgia. In many instances it is thus cured, even when irregular: and if such cure is not more frequent, it is because physicians have not thus attempted it: not having taken that view of this disease which I have here endeavoured to establish.

I might now treat of the cure of toothach separately, before proceeding to what little remains respecting the diseases of this class. But I have already examined the most generally received remedy, viz. extraction, and attempted to ascertain both its value and its evils: and, as far as this disorder may find a cure from the general remedies of Neuralgia, it will save repetition to defer the question till I treat of this subject generally. As to the ordinary local remedies in common use, I have not much to remark; being willing to admit nearly the whole as occasionally useful, and having little or nothing to say respecting them which is not known to every one. If, however, it may seem incumbent on me to explain why the local application of stimulants should remove a Neuralgia, or the toothach viewed as such, it can apparently be accounted for on the same principle as in intermittent fevers or ordinary Neuralgiæ, where a powerful stimulus to the nervous system, or any strong counter-impression, so often suspends or removes a paroxysm; while, in so doing, it will often stop an entire relapse, or, in a recent case, even cure the disease.

If intermittent and toothach both can be cured or suspended even by charms, there is no difficulty in accounting for the casual success of every remedy that has ever been found to succeed in toothach: while we thus account also for the occasional success of empirical remedies beyond number, and for the reputation which they have hence acquired. I would only remark respecting these local remedies, and of one of the most popular, that as blisters very generally aggravate a Neuralgia, when applied near the affected nerve, thus are they frequently equally pernicious in toothach, as many persons have doubtless experienced; though probably judging them inefficacious rather

than mischievous, and attributing the increase of pain to an increase of the disease. And I believe also it will be found, that they are most injurious in the rheumatic toothach, though frequently resorted to by mechanical practitioners; as the minute vessels are then precisely in that state of action which blistering tends to augment rather than to subdue. And if less injurious, I am inclined to pass the same judgment on the other stimulating applications so commonly adopted; while when warm water is found useful, it is a fact connected with the remedies of all Neuralgia, which I shall hereafter point out.

I need only further add, that of all the local applications used for toothach, though in reality applicable, properly, only in the case of a carious tooth, or at least seldom succeeding in other cases, the most successful are the essential oils, such as those of cloves and cinnamon, applied to the sensible interior; which by exciting a violent opposed sensation in the nerve, frequently remove the neuralgic pain. With respect to the treatment as it may be conducted by the rules for neuralgic cases in general, he who becomes master of this subject will easily judge how they may be applied, and under what exceptions; while I may add, that I have, by means of them, cured innumerable cases, thus preventing further extraction, or saving hundreds of teeth; and very many, where, after the freest and most destructive use of this mistaken and vexatious remedy, the disease still continued unabated. And if this preservation of teeth destined to extraction has been, in my practice, most extensive in young persons, and above all in young females; this is explained by that greater frequency of this disorder in them, already noticed, and by the fact, that in the youthful, the habit of Neuralgia cannot be so firmly established as in the aged. To detail instances of this nature would be abundantly easy; but as it would be only to add the individual evidences to the general one already deduced from those cases, it would scarcely justify the space which it would occupy.

But before I entirely quit this subject, it will not be irrelevant to add, what I have had frequent reason to suspect, that it was not only part of the neuralgic action on the nerves of the face to render the teeth carious, but that this was a common disease in marshy situations. It would not be a very unreasonable conclusion, whether it were absolutely proved or not: since while it is the effect of that action to diminish the energy of nerves, even to the production of palsy, as is also true of intermittent in general, it is not difficult to understand how the entire death of a part possessing naturally a very feeble portion of life, might be the consequence. As is usual, however, in the whole history of these disorders, the past ignorance and inattention deprive me of a sufficient command over special exam-

ples in proof, though I find the broad fact which I have already stated, to be a general remark of many travellers, as I am equally confident of it within my own narrow range of observation. But I cannot help mentioning one very pointed case, observed by Captain Smyth in Sardinia, though I will not pretend to decide on its value. It is, that at Villa Cidro in that island, where the men reside invariably in the mountains, while the females alone descend to the pernicious plain below, which they are exclusively employed in cultivating, all the latter are noted for bad and spoiled teeth, when the men have no marks of the same kind, but, on the contrary, are noticed for good ones. And if it will give any support to the opinion of the at least frequent dependence of toothach on Malaria, I may remark, what I doubt not others will confirm, when they shall carefully review their own experience, that not only does toothach abound most in low and damp situations, but in east winds, or generally, under all the circumstances which produce intermittents, even as it relates to season, and also to geography: and what is equally remarkable, that seasons, or years peculiarly noted for intermittent and remittent, such as have been the immediate years 1826 and 1827, are also peculiarly productive of cases of toothach: just, in fact, as they produce all the Neuralgiæ, and, very remarkably, the Neuralgic Ophthalmia.

CHAPTER XVIII.

On the Rheumatism of the Eye: or the Neuralgic Ophthalmia.

IN conformity to the plan which I have already followed, in making use of such popular names as happen to exist, for the disorders which I have here brought into notice under new views, I have adopted the above term for a species of ophthalmia, which, if not so often discriminated from others as it ought to be, is at least known under that name, and under no other. Were I to propose a term corresponding to my own views of the disorder, I should call it, as I have suggested in this title, the Neuralgic Ophthalmia; as I hope to prove that it is a variety or species under the general disease which I have here treated. And as the opinion that it was such, had been formed from my own observation, as long ago as I had first adopted the whole of the views

in this essay, or almost ever since I knew what physie was, I have had abundant opportunities of studying it on this theory, and of confirming that belief by an ample experience. If others however should doubt that it is so common a disease, I must reply as formerly, that it has not been sought for; or rather, that it has been for ever confounded with common ophthalmias, as it is still, daily: and that as soon as it shall be thoroughly distinguished and understood, and whenever practitioners shall begin to discriminate better, they will find that there is no want of cases. And lest this change of name and change of theory should be supposed a frivolous innovation, I must remark that it is of the highest importance as to the cure of a very common disease, maltreated, now, even under the term rheumatism of the eye, and far more so when confounded with common, or as happens also, with contagious ophthalmia: while, under such erroneous treatment, the loss of sight is by no means uncommon; to say nothing of minor inconveniences, and of some even more serious consequences.

In some places, this ophthalmia is arranged by Sauvages with his Migraine or Hemierania, under the term "*migraine des yeux*," and in others under other titles; proving his want of correct notions respecting it: while Cullen does not take the slightest notice of it in his very meagre and superficial description of the general disorder. The former remarks that it produces inflammation in the globe of the eye, terminating in a confusion of the humours and in suppuration; unaware apparently of the milder cases, yet, in another place, noticing its tendency to return in the second eye after destroying the first. In St. Yves and Maitre Jean, some cases of it are described by the term *amaurosis*; that expression apparently meaning the destruction of the humours: while it is remarked that it endures for months or years, that it is attended by fever, hemierania or clonus, want of sleep, and giddiness, and that it attacks one eye after the other: while the former oculist, adopting the usual resource which ignorance has resorted to in so many more of these disorders, proposes to prevent this second attack by extirpating the first eye. I did not say too much when I said that had the surgical sect believed the sciatica to be Neuralgia, and dared to extirpate the sciatic nerve, they would equally have had recourse to their panacea, the knife.

Among many casual notices of this peculiar ophthalmia, and unsatisfactory as casual, I must, however, distinguish the essay of Wardrop; the first, I believe, through which the attention of physicians was fairly called to it. To praise that essay for the accuracy of its description of a much neglected disease, is but to agree with all who have read it: yet I should be negligent of my duty did I not remark, that however perfectly my able friend

has seen and discriminated this variety, his account is limited to the severer cases, and that he has not appeared to be aware, in his essay, whatever may be the case otherwise, either of the slighter and less marked, or even of the chronic, varieties, or of the extreme prevalence of this peculiar species; and that, in consequence, there is almost as much error prevailing, in practice, respecting it, even under the name which he has adopted, by those who have had the advantage of his experience, as there was before. Thus also I perceive no notice of its properly intermittent and alternating characters; while with respect to other portions of the description, such as the general fever, the bilious symptoms, the decided neuralgic and periodical pain, to which I may also add the utility of bark, I should desire no other evidence to prove that it demands the term which I desire to apply to it, and that it is in reality a mode of Neuralgia. I shall however be able to produce much further evidence of its connexion both with that disease and with intermittent: and if I were inclined to express any surprise that so acute and experienced an observer had not formed the conclusion to the very verge of which he has approached, I should suppress that by recollecting, that in this as in every other disease which I have here described under this leading character, the foundation and cause of all the error must be sought in the want of a correct and broad view of the fundamental disease itself: Neuralgia.

The descriptions to which I have alluded, with others that I need not point out, confined and imperfect as they always are, do not exempt me from the necessity of giving my own view of the disease: since it is only by describing it in the manner which I conceive to be more correct, that I can hope to establish what I consider its true theory: while I must adopt a mode of description which will convey the proofs together with the facts themselves.

I must however further remark, that while my own views of this disease have been derived solely from my own observations, I have recently found, in reading where I had formerly neglected to read, that some writers have noticed a connexion between ophthalmia and intermittent. Among these, I may name Morton, Strack, and Monfalcon; the latter further remarking, that this inflammation is very common in those districts of France where Malaria abounds, and that it is there very apt to terminate in opacities; a fact which I shall also point out hereafter. This last observation confirms, as to this particular affection at least, the opinion here every where stated, that all these local disorders *are* produced by Malaria, whether always so generated or not: but it is important to observe, that while the French writer does not detail the characters of this ophthalmia, nor apparently perceive that it is a localized intermittent, the

German physician and Morton also, as far as I can discover, notice the disorder solely as accompanying severe and marked intermittents, as an occasional symptom or addition; not seeming to be aware of an ophthalmia of this character with little or no distinguishable fever, nor, either here or any where else, taking any notice of the numerous analogous diseases of which I have treated. If in the *Med. Chir. Trans.*, I find a record of cases occurring after delivery, where the confinement of the inflammation to one eye seems to point to the same disease, the whole circumstances are not sufficiently detailed to render such a judgment safe: nor will I venture to comment on such other recorded cases as I may suspect to have belonged to this variety, since I hope that my readers are now fully capable of doing that for themselves.

Like all the neuralgic diseases, this one sometimes occurs under a periodical character, while at others it is irregular. And if it is more frequently of an irregular character, or not distinctly paroxysmatic, it is scarcely more so than its nearest analogy, rheumatism of the face; while there are often symptoms also present, which mark accessions and intervals, even though the inflammation itself should be persistent. I shall, without any formal division, describe it now under these variations; but must first say a word respecting its apparently exciting cause, lest this should be objected to the supposition that it belongs to this class of disorders. The same remarks will apply to the rheumatism of the face; and I reserved them to this place, that I might not have to produce them twice over.

It is observed, and perhaps very commonly with truth, that this ophthalmia is produced by exposure to cold winds, very often by partial cold, and very particularly, as it is thought, by a sudden impulse of the east wind on the eye, or face. The popular term in this case is, a "blight;" while as it is not unusual for the east wind to be especially attended by dust, this is often esteemed the exciting cause, and is as often vainly sought after; the patient being misled by the well-known sensation which follows the enlargement of the small vessels.

Now, so far from this view of the cause being averse to the opinion of its belonging to the class of intermittent and neuralgic disorders, cold so applied is precisely one of the causes which produces these also, just as it excites the rheumatism of the face; adding a proof, such as it may be thought, respecting the true nature of that disease as well as of the ophthalmia in question. An average of cases will show that the rheumatic ophthalmia is much more common in spring and during east winds than at any other time, and the very vulgar themselves are indeed convinced of this as to ophthalmia generally: while it will I believe be found, that nine cases of ten, or indeed far

more, if not even all of the ophthalmias thus occurring, are this very disease. And I formerly showed, while I have attempted to explain the cause, that such east winds, at that season of the year, do produce intermittents as well as Neuralgia; so that as far as cause is concerned, the whole of these disorders unite under one general head, instead of being separated by differences of cause: while it is still easy to see how the local action of cold on the eye or face, might determine the local disease especially; the wind thus acting by a double power.

But if such a local cause may, in spring, especially determine the action of Malaria to this part, acting on the superficial nerves as it does in the case of a carious tooth or of common Tic, the fact really is, that this ophthalmia occurs through the whole season which produces intermittents and remittents, if less conspicuously in the autumn; and also, as I remarked in the last chapter, that it abounds most in those seasons or years in which marsh fever rages most. The recent seasons of highly active Malaria in our own country, will establish this fact to any careful observer.

But it is completely proved by the geographical bearings of this ophthalmia, that Malaria is at least its chief cause, as it is that of all the Neuralgiæ; however ignorant we as yet are of the local causes, or otherwise modifying circumstances, which, in this case as in so many other diseases arising from that poison, determine the particular action. Thus, as I have just remarked from Monfalcon, and as I could confirm through many other written and living testimonies, it abounds in all the pestiferous districts of France: while under the general ignorance of Neuralgia in all its forms, it is no objection that French physicians have not drawn the same conclusion; nor, I might add, Italian ones either, nor, in fact, even our own medical persons conversant in climates of this character, wheresoever situated.

As further facts of this nature, I may also remark, that this ophthalmia, or at least an ophthalmia which, in every case where I could procure an accurate report of the symptoms, possesses this character, is endemic on all the coasts of the Mediterranean where fevers abound; occurring also, very remarkably, at the same season, or in the pestilential months of summer and autumn. Thus, to speak more specifically, it prevails along all the marshy or wet coasts of Barbary, during four months; and at Tripoli in particular, to such an extent, that few escape it. Thus also it is common in Rome, in Naples, where it is falsely attributed to the glare of the sun (a circumstance which may, however, be an assisting cause) and in Florence, which however praised as a climate, cannot be free from Malaria when the Arno in summer exposes little but putrid mud and marshes, as well as in many other parts of Italy: being also the cause of that fre-

quent blindness, among the lower orders especially, which can scarcely fail to have attracted the attention of travellers. That the Lippi of ancient Rome, so often noticed by the classical writers, were so from the same disorder and from the same cause, is also extremely probable. With respect to Spain, I have the most distinct information from the Captain Morillo, inspector of health at Alicante, that this ophthalmia is very common on the maritime coasts which are subject to fevers, being particularly prevalent in Valencia, and at Albatera and Clivillente, and often followed by blindness. This testimony is unquestionable; because while it is described as attacking the eyes alternately, its nature as well as its causes are there mistaken, just as they are with us; the latter being generally sought, by the people, in the handling of pomegranates. This is just what happens among our own vulgar in attributing fevers to autumnal fruits: the season of the disease in Spain being September and October, when Malaria is most active: while this particular limitation of time, as well as of place, the peculiar redness and tumefaction of the eyelids, and the incurable (esteemed) nature of the disease, leave no doubt whatever that it is the ophthalmia in question. I have reason to believe too, from some reports, that this peculiar disorder is found also in the unhealthy tracts of Western Africa: but so much confusion has existed among bad observers between this and the contagious ophthalmia, that I cannot disentangle these reports to my own satisfaction. And let me remark by the way, that this latter observation will probably turn out to be of considerable importance; as I have seen numerous cases of the neuralgic ophthalmia so misnamed in this country, with consequent maltreatment; and have no doubt that it is a far more common error in the climates especially subject to Malaria and fevers. If Wardrop remarks that it is frequently attended by biliary symptoms, (as occurring, I presume, in autumn chiefly) the solution of this fact becomes as obvious, as the fact itself confirms a view on which I think I need not longer dwell.

To proceed to the description of the rheumatic or neuralgic ophthalmia.

There is a peculiarity in the aspect of the inflammation itself, far easier to recognise than to describe, and by which alone it is generally distinguishable, even at a distance, and on a mere glance, to those who have acquired that experience which in other cases is called the *tactus eruditus*. I have sought in vain for expressions to say fully what this is; but I believe it to be as useless as difficult, since, however accurate they might appear to those who already know this inflammation by sight, they would not teach others to know it, inasmuch as no visible object can be justly described to the previously ignorant; while such a description would be useless to those who are already experienced

in this ophthalmia. The more obvious character, however, is a dull, rather than a lively red colour, not unfrequently attended by a tinge of yellow; the cause of which is especially visible in the sound eye when but one is inflamed, and the source of which must now also be obvious, particularly in autumnal cases. This inflammation occupies the whole conjunctiva, even to the verge of the cornea; and while the redness is rather produced by the minutest branches of the arteries than the larger ones, the general aspect is almost that of an additional coat of red cloth in the severer cases, sometimes attaining a higher level than that of the cornea.

In severity, however, it differs exceedingly from a mere general, and somewhat pale redness of the conjunctiva, to that violent inflammation just noticed. Here, it is apt to resemble the celebrated contagious and purulent ophthalmia; but it can nevertheless be distinguished by attending to its progress and to the collateral symptoms, while it never, as far as I know it, suppurates on the surface, like that disease. This is a part of its history, however, on which I must yet speak with some hesitation; as, after many years of observation, whence I concluded that it never did suppurate, my opinions have been recently shaken by one or two cases, though I had not the opportunity that was necessary for satisfying myself as to the real nature of the disease in these. Whenever it shall, as a separate disease, have received from physicians the further attention which it requires, this, and some other circumstances, which I cannot now well elucidate, will be better understood, while I shall gladly avail myself of such information: though it will be necessary that this disorder shall be truly discriminated for this purpose, lest we return into worse confusion than that which I am attempting to rectify.

Such is the general and obvious character; while I shall reserve some rarer particulars for consideration immediately. But there are one or two remarkable circumstances respecting it, too characteristic to be passed over. It is often unattended by any pain in the eye itself; and this seems particularly the fact where it is of long standing, and not very severe; though there are cases also in which it is accompanied by as much pain and irritation as the common, or even the contagious ophthalmia. And in such mild chronic cases also, there is, sometimes, not even irritability to light; so that, with the exception of the occasional feeling of dust or sand, it will often last for many months as a mere deformity; the patient, if in low life especially, not applying for advice. It is also a peculiarly obstinate species of ophthalmia; continuing unchanged, even for months, in spite of every ordinary means of cure, particularly resisting local applications, and, as I shall presently show, very commonly aggra-

vated, and in a very marked manner, by the evacuating system. Wardrop has also remarked that there is, at the commencement, a peculiar sense of dryness in the eye, while that is at length followed by abundant lacrymation. If I cannot say that I have very decidedly noticed the first of these symptoms, it is probably because of a well-known usage, in consequence of which, physicians rarely see the commencement of a disease, as, with respect to the lower orders, is true of almost every member of the profession; but I can bear abundant testimony to the lacrymation, while its exceedingly remarkable nature is explained, to me at least, on those principles already stated in speaking of the neuralgic affections of glands.

When there is no pain in the ball of the eye, it would seem that the conjunctiva alone is affected; while, when irritability to light attends, we must suppose that the neighbouring vessels, and nerves, within the eye are in that state, be it from sympathy or extension, which so often occurs in the rheumatism of the face and in common Neuralgia, where, added to the decided inflammation and pain, there is an excitement, a tenderness, or an irritability in the adjoining parts. It is not necessary that the eyelids should be affected, or that the inflammation of the conjunctiva of the eye should extend over that of the eyelid; though this happens in the severer cases, and, as it would seem, rather in the acute than the chronic ones. It is a fortunate circumstance, that this inflammation is so much and so often resisted by the transparent cornea, as is the fact also in some other ophthalmias; but abundant instances of this do nevertheless occur rigidly speaking, and in the severer cases, the cornea becomes dull; and if this opacity proceeds, it at length forms a cloud or a spot which diffuses itself over the whole eye, while it is more condensed in the centre. Fortunately, even when very considerable, this commonly disappears, under proper treatment of the general disease, and even within a day or two; while I have seen it return many times, under different relapses and in successive seasons, without any more permanent effects. In such cases, also, it will sometimes be found, by means of a lens, that there is an ulterior disorder of the cornea, resembling very superficial ulceration; equally disappearing, and without bad consequences, with the general inflammation. Far more rarely does it affect the iris; but cases even happen, as I shall soon show, where that membrane alone is the seat of the disease; the neuralgic affection producing here a rheumatism of the iris; to adopt the common phraseology.

Supposing that the inflammation, thus complete or severe, has not been cured, or, as is the fact, has been neglected or maltreated, the ulterior unfortunate terminations may be as follows: In the acuter cases, the ulceration of the cornea may increase so

as to perforate it, in which case the eye collapses, commonly for life; though this is sometimes healed, with a partial or perhaps entire restoration of the figure at least of the eye-ball. In still worse cases, matter forms within the globe of the eye, and it bursts; and I much suspect that the cases of single eyes thus lost, which are not uncommon, might all be traced to this particular disease. In what may be considered acute cases also, if less severe, a pustule, or minute abscess, is sometimes formed in the cornea, inducing, of course, blindness; and further, in these, this portion of the eye will become permanently opake, while opacities are the frequent terminations of the chronic cases, misunderstood and maltreated. I shall be much mistaken if the very great majority of cases of opacity in one eye, as well as not a few where both are thus affected, have not arisen from this, the most common assuredly, of all the varieties of ophthalmia, though so little suspected, or rather so nearly unknown: since the essay of Wardrop, correct in the practice which it points out, seems to have produced little effect on the mass of practitioners; while if it had, from not distinguishing the chronic forms, it leaves those persons still in the dark as to the predominant cases of this ophthalmia.

The neuralgic ophthalmia sometimes attacks suddenly, and appears within a few hours, in all the perfection which it is about to preserve; but it is often also preceded by an intermittent or remittent febrile state, sometimes so slight as to be overlooked, not only before the disease, but during its continuance. And, as far as I have observed, some symptoms of this are always present; though it is very seldom that we can ascertain that it has preceded, because the patient has paid no attention to a disorder so slight. On other occasions, it is the sequel of a previous distinct neuralgic pain, which sometimes lasts even a long time before the inflammation comes on. That neuralgic pain is also, as the precursor of this ophthalmia, most commonly seated in the face, and very generally in the eyebrow or the temple, though sometimes even in the lower jaw; being, in many cases, a common hemierania, or a periodical headach of some kind, or a clavus; though I have seen cases also, where it has been situated in even more remote parts, such as the arm. Further, this previous disease will occur as a rheumatism, in perhaps any part, or even as general or diffused rheumatism: the ophthalmia following it, perhaps being continued from it, or else appearing as a replacing disease. All these circumstances mark distinctly its connexion with intermittent and with Neuralgia in general: and when it replaces another rheumatism or another Neuralgia, this is precisely what occurs so often in the anomalous intermittents as they were formerly described. I shall shortly relate one or two cases which illustrate some of these rarer facts.

But I must remark, before proceeding further, what indeed the reader might now almost have inferred for himself, that the characters of this ophthalmia will be very mainly regulated by the fact of its being an acute or a chronic disease. In either occurrence it is analogous to the remittents and intermittents of the same characters, as also to the several anomalous inflammatory varieties of those disorders with which, but for the causes already stated, it should in fact have been ranked. And in either, the proper intermittent fever may be very visible, or may be obscured by the local affection, or may really be obscure, or may be neglected by the physician, or mistaken for the symptomatic fever of inflammation: and in all these particulars also, it resembles the anomalous and simulating marsh fevers formerly described; just as, on the other hand, it resembles the pure Neuralgiæ, in all of them. The distinction between acute and chronic is therefore the primary and important one: while it appears to me that the latter has been especially neglected, and, as far as I can see, not even ranked under the rheumatic Ophthalmia by those who have used this term in describing the acute one: that neglect being also the source of the more numerous evils produced by this disorder.

Supposing the disease to be established, under any of these modes of attack, the following circumstances will, in a greater or less degree, be found to attend it, by a careful observer: while I need scarcely remark again, that they are perpetually overlooked by the mass of practitioners, attentive only to an obvious symptom, in the usual manner, and, very generally, utterly ignorant of the existence of such a disease, or at least of its real nature and theory; or, if now partially informed of it through Wardrop's essay, perhaps refusing to believe on the testimony of others, what they have not observed themselves, because adding prejudice, and sometimes pride, to want of discrimination.

A watchful physician will rarely fail to perceive that physiognomical mark of a cold stage at some period of the day, which I have so often pointed out; as the fever of this disorder is generally, but not invariably a quotidian; while in many cases, that stage, and even a hot fit also, are distinctly marked. This is true even of the slightest varieties, and of the most chronic or most habitual and repeated ones: while in the severer acute disease, the fever is strongly marked as a remitting, or even as a continuous one; as continuous at least as in simple remittent: though, under types more distant than quotidian, I have met few of a severe character; those of a tertian form, which have occurred to me having been most commonly mild, or else chronic cases.

Such a febrile state is often, as usual, paroxysmal, while the

inflammation is permanent; but this is no cause for surprise, as the same happens in the rheumatism of the face, in that of the intercostal muscles, and in other analogous affections, and also not unfrequently in the purer Neuralgiæ, as in sciatica. Supposing this febrile state to be present or not, or to be more or less distinct, there is frequently a separate neuralgic pain accompanying the inflammation, throughout the disease, or, occasionally, for some days only; being the hemicrania, or the pain in the temple, or in the eyebrow, which I formerly noticed as sometimes preceding the attack; and being sometimes an extremely severe Neuralgia. This is the symptom which forms that criterion for the disease which ought never to be mistaken, though in reality rarely attended to; and it is so marked and so discriminating, that, to pass it without notice, or, when present, to treat the disease as common ophthalmia, is unpardonable in even the most mechanical practitioner. I might add to these several collateral symptoms, all of them proving the neuralgic and intermittent nature of this ophthalmia, those other numerous disturbances of the general health which so often occur in intermittents and Neuralgiæ; but this would be merely to repeat that which can scarcely yet be out of the reader's memory. Where bilious affections accompany it, the explanation already suggested becomes still more obvious, as this view equally explains the utility of Emetics.

In this disorder, it may happen that both eyes are affected: but as far as my own experience goes, the affection, in the greater number of cases, is in one eye only, or at least, only in one at one time. This, in itself, is a highly discriminating character; and I much question if there is any other of the ophthalmiæ which determinedly affects but one eye, unless by a mere casualty. It is this neuralgic ophthalmia which ought at least always to be expected and inquired for, wherever one eye alone is found to be affected. And if pain should be present, it will generally be found that it is in the neighbourhood of the diseased eye; while it will often be very marked in such a spot, even when that organ itself is free from pain.

A further character, peculiar, or I believe, exclusive, to the neuralgic ophthalmia, is the transference of the inflammation. I call it transference, from its obvious nature, as well as in conformity to the common notion of metastasis in diseases, but I consider it to be, philosophically, a paroxysmatic state of a truly periodical variety of this disorder under a peculiar type. Both the eyes must, in this case, be considered to be under a morbid state of susceptibility, or of dormant disease, if I may use such a phrase, similar to that which exists in the nerve in Neuralgia when not actually producing pain. And the disorder itself finds its analogy in the double tertian, supposing the disease to alter-

nate daily, as it is not unfrequently found to do: while other parallels are not wanting, should the transference be less regular, or should one eye, long affected, become well, while the other inflames; since similar occurrences are common in all the anomalous or local intermittents; as for example, when the rheumatism of an arm is exchanged for palpitation, or a toothach for common intermittent: cases which, together with other analogous ones, I pointed out formerly.

Where this remarkable symptom occurs, the original inflammation, however previously severe, sometimes disappears entirely, even within a few hours, so that its former existence could not even be suspected; while, in a corresponding manner, the new one attains its utmost violence in a time as short, often to disappear again in the same mysterious manner. It is surprising that a fact so extraordinary as this should not have attracted suspicion long ago; since nothing analogous to it occurs to other parts, if we except gout, and some very rare cases indeed of metastatic diseases, of which even some are probably more intimately connected with intermittent than has ever yet been suspected. It is more surprising that where the quotidian or tertian type has attended these changes, the true nature of the disease should not have been suspected: but perhaps we must be surprised at nothing, when the whole of these disorders have so perseveringly been misapprehended, even when less encumbered and obscured by a local and misleading symptom.

Such is a sufficient description of this disorder in its more general forms; nor, with this, does there seem to me any difficulty in recognising it wherever it occurs. The mention of one or two other circumstances will complete its history, as far as it seems necessary to detail that.

Like other neuralgiæ and intermittents, it may be limited to one attack, or, having occurred, more than once in the same patient, it may put on a tendency to relapse, and thus appear repeatedly. And like all these diseases, it often disappears spontaneously; while the remedies gain a credit that does not belong to them, as the common mode of treatment is very generally either nugatory or mischievous. I must however remark, that the termination of the ophthalmia is not always that of the whole disease as I view it: since a general intermittent, if of a slight or obscure character, frequently remains: a fact equally common in the toothach and the rheumatism in the face, when at all periodical or attended by a marked intermittent; while this, I presume, must chiefly be expected in cases where the intermittent is of a chronic character, or when the patient has suffered from other forms of that disease.

As to the theory of neuralgic ophthalmia, if it is not very evident, it is at least as intelligible as that of any other form of

neuralgic inflammation. Of the true, the ultimate theory, of any inflammation, we know absolutely nothing: since, after all that has been written on this subject, we have but so many words; one term substituted for another. If all that we can know as yet of the cause of neuralgic inflammation is no better, it is at least not worse; while we are in no want of analogies, or the difficulty, such as it is, is countenanced by parallel difficulties.

I formerly showed that the intermittent hemicrania sometimes affected one eye; so as to produce lacrymation, and also a daily habitual inflammatory state of the eye. It is but to suppose this augmented and rendered more permanent, and we have the ophthalmia in question; it is but to suppose the intermittent overlooked, as it most generally is in this state, and the ophthalmia will appear the sole disease, as every Neuralgia does to those who are equally inattentive. And that this is possible, is proved by the rheumatic or neuralgic inflammation of the face or jaws. The disease here may be mere pain, it may be pain with temporary or slender inflammation, or it may become permanent inflammation; and moreover, it may also terminate in an abscess; a fact, further, which occurs, if rarely, in the eye also. The analogy is perfect, as the cause is the same; while we can find remoter, though not less instructive analogies, in the local and periodical rheumatisms of various parts, attending intermittent, where there is equally inflammation; similarly variable in severity and duration, similarly periodical, and similarly transferrible, or interchangeable with other disorders of the same generic nature, or with those which attend anomalous intermittent.

I might now proceed to the treatment of a disease which I have probably described at sufficient length; but it will previously perhaps be useful to describe two or three individual cases of the most remarkable nature, since I observe that such narratives often excite an attention and produce an effect rarely attained through any general description.

In the first case that I shall notice, which was not under my own care, but under that of a medical friend particularly interested in the result, the original disorder or attack was a periodical and daily rheumatism in the neck, remarkably well defined. After this had lasted a week, there occurred suddenly a pain in the eye, with inflammation of a very violent character. I entertain no doubt that the intermittent form remained, either in the febrile symptoms or in the pain about the eye; the violence and acuteness of this being a very discriminating mark, as it does not happen in any other ophthalmia. But as this physician had never considered the rheumatism in question as a disorder belonging to intermittent or neuralgia, he had paid no attention to the symptoms, and was therefore unable to describe the case more minutely. Far less had he ever considered any

ophthalmia to be a disease of this nature; and the patient was therefore treated in the usual manner, with the unfortunate termination in blindness, from the formation of a pustule in the cornea. I have given this case as I received it from the physician himself, so that others may judge; while the suddenness and violence of the attack of inflammation, the accompanying severe pain, and the previous periodical rheumatism, leave no doubt in my own mind respecting the nature of the disease.

If the formation of pustules or opacities has been thought rare in the rheumatic ophthalmia, by those who have known this disease, and distinguished it by this term, it is a question on which I must add a few words; having been unwilling to enter into an argumentative discussion of this point in the general description, on account of the difficulty which I have experienced in convincing those with whom I have argued this subject, that opacities could be the produce of this variety of inflammation. If this opinion shall be confirmed, it will evince more strongly than ever, the necessity there is for reforming the history of ophthalmia, and for establishing that theory of this variety which I believe to be the true one. It is a most important question as relates to the practice: since, at present, the want of success, or rather the consequent evils, are generally the direct produce of maltreatment, or at least, they are very often produced by this, if often also by mere neglect or ignorance of that which is the right method.

It is common, as I remarked already, to find persons who have suffered the opacity of one cornea; and though it is often difficult or impossible to obtain the history of past cases, I have found reason to believe, in the few where I have been able to get information, that the original inflammation had often been of this nature. It is much more easy and safe to form the same conclusion in another class of cases by no means uncommon; nor have I ever been fairly put into possession of one of these, where I have not been able to decide that the opacities in question had been the produce of this very variety of ophthalmia; while the other conclusion was no less obvious, viz. that a mistaken view and a wrong practice had most probably been the causes of the evil. The cases to which I here allude, are those where we find, that, through many years, sometimes through a long portion of life, an inflammation, more frequently of one eye than both, will return at different periods, often without apparent causes; while, from some one of these, there has been produced an opacity more or less extensive, to which other and successive ones form additions; the termination in severe cases, being at length in absolute blindness. If, at the commencement of my investigations into this disease, I was both unwilling to believe this, and afraid of adopting the practice which I have

suggested, a further experience has rendered my mind at ease on this subject: nor, always supposing that a right decision has been made as to the nature of the inflammation, can I doubt of the correctness of the practice, when I have found that yield, and the incipient opacity also, whether the first or an additional one, disappear in a few days under it, and when, in the same patient, every previous attack had lasted for weeks or months, while, in some instances, each severe relapse had extended the opaque spot.

Passing over the question of mere opacity, it might be said, on theoretical views, that suppuration should not happen in such cases; but while we know so little of any inflammation, we cannot say that neuralgic inflammation, and in a membrane, ought not to produce abscess, inasmuch as rheumatism does not; while this is a doubt which I examined formerly: and as this does actually occur in the membranous and equally neuralgic inflammation of the gums, as I then showed, there is a perfect analogy to justify the possibility of its occurrence in the eye. Further than that, I shall lay no stress on this part of the preceding case; leaving it to future observation, whenever this disease shall be admitted and understood as universally as it ought to be.

In proof that this disorder is not so admitted and understood, let me now say that the physician in question was not one of the ordinary mass of routine practitioners, but the most learned and the most attentive of all my personal acquaintances, a man to be admired and esteemed most by those who knew his talents best. I note this, because it argues strongly for the necessity of a new investigation of this disease, when the want of a previous mark on it could so mislead such a man, and in a case also, where he had the deepest possible interest. And that he was so misled, generally, will be further proved by the next case I shall relate, which I have however selected on account of its very definite and remarkable character; since even in this, marked as it was, and which I attended with him, I could not convince him of the existence of such a disease as I have been describing, or that this was an illustrative case of it.

In this instance, and where the personal interest was as great, the patient was suddenly attacked in the evening with an inflammation of one eye, which ceased by the following morning. On the next evening, there was no inflammation; but it returned on the alternate one, and in the other eye, terminating similarly on the following morning. As I chanced to reside in the house, I could perceive and point out the tertian cold stage; this being evidently a tertian intermittent, or rather, that disorder doubled, (not double tertian) inasmuch as the succeeding fits were different. Nothing was done; as it was wished to watch the natural progress of the disorder, which, after lasting thus about ten days,

or displaying six different alternations of this nature, became a decided double tertian; the inflammation returning every evening in the alternate eyes, to terminate in the morning. And in this instance, the neuralgic intermittent pain occurred in each eyebrow alternately, accompanying the inflammation; so as to produce a case as strongly marked as is easily conceived. I shall only add that it was afterwards cured by bark, but that I did not even then succeed in producing a free assent to opinions which, probably, I might even now have kept to myself, for all the impression they are likely to make for these twenty years to come; when those who have been most active in opposition, will be among the first to recollect that all this was long ago their own opinions.

In the last case which I shall notice, the patient had been for some time afflicted with a general or diffused periodical rheumatism, which, at length was followed by inflammation of both eyes, the original disease continuing. I did not see this case till long after its commencement, and when the cure was perhaps hopeless; at which time both the pupils were so contracted, that a pin could with difficulty have passed through one, the other being absolutely closed. By the patient's account, he had been seized with occasional fits of blindness during the progress of the disease, arising doubtless from the contraction of the pupil, while I have as little doubt that the Iris was affected by the neuralgic inflammation. I could not obtain a more minute account of the case, as he was a man in low life, and had no medical attendant; but enough remained to prove that the judgment I had formed was correct. For, at this time, though one eye seemed hopelessly obstructed, the other was occasionally of use; while the patient observed, and without inquiry, or leading question, that whenever the general fits of rheumatism in the limbs came on, the eye became blind, from the closing of the pupil, recovering again when those ceased. I need only add, that as the disease had at this time lasted many years, the fits were no longer as regular as they had originally been, as happens in all chronic intermittent disorders; and as the contraction of the pupil accompanied them then accurately, it is probable this had done so from the commencement, though the exact particulars had been forgotten. I must presume that the disorder which I have thus described, as far as relates to the contraction of the pupil, would find a sort of place under the *myosia* and *metosia* of systematic writers; and while I have sometimes reason to suspect the same cause in some of the recorded cases, I find little satisfaction in reading the confused descriptions of the symptoms, and feel little confidence in deciding on their identity, however I may suspect that the greater number of them belong to the disease in question.

Let those who have more opportunities than myself of seeing this disorder of the Iris, examine such cases on this view, and we shall then know how far this theory applies to them; since, as I have just observed, we can judge little or nothing from former recorded cases, inasmuch as they have been reported without the necessary attention to the marking symptoms. But if it is agreed that the inflammation of the iris is of a "rheumatic" character, it is probable that the present view is the correct one, and that all the cases belong to the neuralgic and periodical diseases under review. And that, at least, it is frequently so, I can confirm from many cases, in which this disease of the iris has either preceded, or followed, or run parallel with the common neuralgic inflammation of the conjunctiva already described, and in which the true nature of that was amply proved by the accompanying symptoms. One, very particularly marked, ought perhaps to be mentioned, because, in this, while the first symptom of all was simple Neuralgia of the face, with a marked intermittent paroxysm, it was succeeded, first, by the contraction of the pupil in the nearest eye, after some time followed by general inflammation of the conjunctiva, and lastly by a universal periodical rheumatism: all of these being connected by one general disease, and all illustrated by the various facts as to anomalous intermittent and Neuralgia already described.

I have yet two suggestions to offer, which I was unwilling to introduce into that more pure history of this disease which I have deduced from unexceptionable and sufficiently numerous cases. I have had reason to suspect, though it is scarcely more than suspicion, that the neuralgic inflammation was capable of reaching or attacking the crystalline lens, as well as the iris, or the other humours, and thus of producing cataract. If indeed Sauvages makes this remark on his "*migraine des yeux*," it is of no value, since the term he applies to the cataract thus insinuated, does not appear to mean an opacity of the lens. Unfortunately for my decision in this case, the practice in all the disorders of the eye has been, in London at least, so entirely taken out of the hands of physicians, as also far too much from those of surgeons in general practice, that I have no opportunities of confirming what the examination of two or three cases had led me to suspect; a fact which, simple as it may appear, tends to illustrate the evils which arise to physic as a science, from the separation to which I have here alluded. In the present state of doubt therefore, I must leave this suggestion to the inquiries of the oculists; though with little hope of light, except from the very few, who, fortunately for medical science, have contrived to retain a share of this department, as surgeons

and physicians engaged in general practice also, in their own hands.

And while to promote the Science has here been my sole object, for the sake of those who, whether as physicians or patients, may profit by the Art, I may be allowed to remark that this is but one case out of hundreds, in which a public, at once ignorant and over-wise, suffers for its own folly: for ever guided by fashion, or considering physic as a mechanical art, best administered, as chairs and tables are made, under division: while from the usual illiberality of feeling which, in a commercial country, can see no motive of action but gain, the physician or surgeon who argues against the system is accused of being himself swayed by motives of self-interest. So little is it considered, that even in this country, but far more in the other parts of Europe, there are thousands who pursue science as well as literature for the sake of science and literature alone, even to the sacrifice of private interest; as there are many more by whom gain is felt as a necessity, not a primary motive, and in whom that necessity is still made secondary to the cultivation of knowledge. Thus also, in this very case, does the multitude which passes this censure, forget that splendid effort of generosity on the part of the medical profession, the introduction of vaccination, and the perseverance with which it pursued this object even against public opinion: an instance of the sacrifice of private advantages to the good of mankind, of which no other profession has ever, or in any age, furnished an example: and a fact which, in particular, presents also, the most absolute contrast to what has ever been the conduct of one of these, The Law.

To return. The other suggestion relates to Amaurosis; and it rests similarly on some partial observations, in the first instance, but is better supported, both by analogy and an examination of recorded histories. The general analogy of all the Neuralgiæ tends to show, in the first place, that such is not an improbable event as the consequence of this disease, whether flowing immediately from improper treatment, or from their general tendency towards palsy. And if it is easy to understand how a paralysis of the retina might follow in any case where, in this ophthalmia, the neighbouring nerves had been affected, it is particularly obvious how it might be the termination of the simple Neuralgia of the optic nerve formerly described.

Again, to derive another analogy from intermittent fever, since the value of those has often been here demonstrated, I formerly noticed from authors, two cases of Amaurosis connected with that disorder; suggesting then a possibility respecting its cause, which I must nevertheless, in some measure repeat here. They are, in any view, valuable as to the history of this hither-

to almost incurable, and much neglected disease: and though to be ranked with the primary palsies arising from Malaria or intermittent, they will at least confirm the possibility of its also arising more indirectly, from the cause which I am here contemplating; since this is, again, one of those involved cases of local and general action which are so difficult to separate, and which never cross me without causing me to regret that I have been here obliged to separate them.

I may here add that Plater also describes a case of amaurosis produced by intermittent; nor, whatever illustration it may afford, whether it should be irrelevant or not, can I avoid here pointing out a very remarkable cause of that disorder, which can scarcely be absolutely unanalogical. This is the amaurosis once so common among the nightmen of Paris, but which has now, I believe, disappeared under better regulations: the blindness being almost instantaneously produced by the impression of the poisonous gas in question. Be its value what it may in this argument, it at least illustrates the operation of Malaria in the production of palsy.

And while I remind the reader of this leading analogy, let me also remark, that while the attack of amaurosis is sometimes sudden, the affection is, in this, not less singular, that there is often no disorder in the head or the intellectual faculties; nothing indicating disease of the brain, but the whole derangement appearing to be one of the retina or the nerve alone. And when I have seen the amaurosis of one eye produced in a day, apparently indeed within an hour or two, during exposure to a cold or moist wind, in a young and healthy man, that exposure also having been in marshy ground, in shooting snipes, and without any other apparent derangement of health, I can as easily understand why the Neuralgia should attack the optic nerve in this form as it does in that of pain, from the same cause or how, if we prefer the other view, the disease should have been a partial or localized intermittent thus produced.

Such are the chief arguments and illustrations as to the possibility of the dependence of amaurosis on the neuralgic inflammation of the eye or on the Neuralgia of the neighbouring parts in any form, since it would be superfluous to make a separate division for this disorder, and it really is unnecessary to separate the cases. And I am further confirmed in this opinion by the remarks of some authors, and especially of Schenkius, on an amaurosis produced, as he says, by spasms of the moving muscles of the eye, acting so as to compress the optic nerve. Thus at least would I analyse a case in which his solution certainly deserves little praise by an anatomist. The accompanying and previous symptom of note, was a violent headach, and I doubt not, a Neuralgia: and if I conjecture that the same explanation

applies to some cases of amaurosis from violent pains in the head, related by Morgagni, Vieussens, and others, I am weary of attempting to extract from confused narratives of disorders falsely viewed and interpreted, such apparent truth as those who are equally ignorant or misled will be delighted to reject whenever that is possible.

Let me yet, however, add, and while this sheet is in the press, that since these remarks were written, I have met with two marked cases of amaurosis of one eye, produced very pointedly, and within a few weeks, by a Neuralgia occupying the external part of the orbit: the gradual paralysis of the nerve, and the total absence of all other affection of the head, or of the corresponding eye, offering evidence as clear as could be desired, of the real source of the disease, and of the truth of the above conjectures.

And if, throughout this essay, I have often been obliged to produce conjectural testimony, from the inattention of physicians to the subjects and views of which it treats, I may here introduce a fact which appears to me to bear on this question, and on the original one, viz. the power in this respect, of the inflammatory diseases; but of the value of which I shall suffer others to judge. This fact is, that in the Mediterranean, and in the same districts where that ophthalmia which I suppose to be the disorder under review is common *nyctalopia*, as it is there improperly called, or in reality, the loss of vision after sunset, is a very common affection: while I need not remark that this is, in fact, a modified amaurosis, or a partially, or moderately paralytic affection of the retina or nerve. To trace any individual cases of this nature to the previous ophthalmia, would complete a piece of evidence which must as yet remain imperfect. I need scarcely now suggest, in concluding these remarks, that should this view of amaurosis prove well founded, even but for a proportion of cases of that wretched disorder, it will lead to valuable revolutions in the present practice, as well in regard to the remedies for good as for evil; while to insist upon that point now, would be utterly superfluous.

I ought now to proceed to the treatment of this disease, which it might be anticipated, would be, on the present views, that of Neuralgia in general. But, as in the case of toothach, it is absolutely necessary to examine the former practice, not merely because it throws light on the very nature of the disorder, inasmuch as the system followed produces exactly the same evil effects which it does in all intermittents and Neuralgias, but because of those very evils themselves, which are often extremely serious, both as positively injurious proceedings, and as diverting the attention from the real remedies. These again, in examining I must criticize; nor, without that, could I possibly

treat of the cure of this disorder. The *lædentia* as well as the *juvantia*, to use medical phraseology, always demand attention from the physician; and if the *lædentia* here are the produce of physic itself, it cannot be my fault if physic suffers from the examination, and physicians also, as far as they administer what is hurtful. Both here and in treating of the toothach, I would more gladly have avoided such criticism, than in any other case that has preceded; because as both diseases have by degrees almost fallen entirely into the hands of separate classes of practitioners, not physicians, and further, too often, not even surgeons, in the proper, practical sense of that word, such remarks will appear the more offensive, involving, as they must appear to do, distinct and small classes of men, than if they had affected the entire multitude of practitioners in all classes. But this I could not avoid with justice to the subject, and must even submit to the chance of being wilfully misapprehended, and the accusation of having written with a sort of general personality which has not once entered my thoughts.

Yet I cannot concede that physic has gained by that somewhat modern fashion which has separated the profession of the oculist from those of the physician and surgeon; making the diseases of the eye a trade rather than a branch of the general science, and reducing it, very nearly, like that of the dentist, to a mechanical art. That physic, altogether, as a science, and even, in many points, as the art of healing, has been injured, or at least retarded, by that greater separation which has been established in it, will scarcely be doubted by any philosopher; however expedient, or rather convenient, that separation may, practically, be to practitioners themselves. In the study of that chaos, English law, from unavoidable circumstances connected with its overwhelming multiplicity, superfluity, and confusion, the effect of this separation is such, that a lawyer, in the proper sense of the term, scarcely exists, while if we look through the general mass, this art and study, science it cannot surely be called, is so divided, that while each has his department, he scarcely knows what is the pursuit or knowledge of his neighbour; so nearly does this also approach to a mechanical empiricism, just as it is almost a pure trade.

Thus must we deprecate that ulterior subdivision of practitioners in physic, to which there is at least a strong tendency, when we daily hear how much one man is expert in one disease, and another in something else; since the event would be to reduce every thing to a pure empiricism. Nor can I doubt, among other points, that while this separation has had a most injurious effect as to the science, in every division of disease where it has yet occurred, it has been perhaps particularly injurious in the case of Mania; though I know very well on what

grounds this opinion will be disputed, while I could not provide an answer for these arguments without infringing on a subject which is not now before me.

And as far as the practice in physic is already thus separated, it is actually such an empirical art, or in imminent danger of becoming so, in every hand by which it is thus partially exercised. If the oculist had no other duty than to operate, we could admit that he would be a better, because a more practised mechanic than the general surgeon from whom he has separated; though even this may be questioned, where there is really nothing so especially difficult in his most delicate operations. But it is not easy to comprehend how any practice, and theory, of physic, can be duly considered by him who has cut off that one branch from the whole body of the science; while it is most certain, in fact, that it never is so understood. In the particular case under review, I have shown that ophthalmia is often, not an independent, or a local disease, or a disorder of itself, but a variety in a series of the most obscure constitutional diseases which exist; requiring great delicacy of discrimination, as well as universality of medical knowledge and of experience: of which it is an ample proof, that it has, like all its congeners, so long been a subject of misapprehension. Were it even otherwise, the constant habit of contemplating one single subject, and that subject as a trade and a branch of mechanism, abstracted from all its connexions, cramps the judgment and obscures the talent for observation, even where these exist or have existed, and even in persons of a real education; while it is easy to conjecture what the consequences must be, where such a department is occupied as a mere art, by those who have not laid the solid foundation of science by means of universal physic and surgery. But I need not extend remarks which, nevertheless, I could not avoid, connected as they are with the knowledge of diseases treated chiefly by oculists; persons also, in whom it will chiefly lie, should the present separation continue fashionable, to administer the cure, after having convinced themselves, if indeed that shall ever happen, that they have been wrong. But it would be highly unjust to blame this department of practice solely, for the past mistakes, since those pervade all practitioners, as I have shown; though it is to be expected that they who are conversant with all these diseases, as physicians, will more easily adopt just views than those who have no such opportunities, and who are long likely to pursue the routine which has been habitual to them.

To proceed to the examination of the usual, and as I consider it erroneous and pernicious practice. As long as this particular inflammation was confounded, and as long as it shall continue to be confounded with common ophthalmia, or with true, simple

inflammation, (if by these terms I may distinguish what all understand and no one can explain,) the practice has been, and will be, that which is applicable to such inflammations in general, namely, evacuation, and principally blood-letting, both general and local, together with purgatives, and further, blisters; a routine practice, in short, which all can conduct without examination or reflection. I need scarcely add to this, what is equally familiar, astringents and stimulants of various kinds, in the form of topical applications; applications that have been multiplied in the shape of lotions, solutions, or ointments, by those, that large mass, who expect to find in variety and multiplicity of substances and medicines, what never yet was found, and who forget that the useful, the only real knowledge, is knowledge of diseases, not of Pharmacopeias. That professed oculists in particular should especially abound in such expedients, was to be expected; since, to the want of general principles, principles which teach how to classify and rescind remedies, instead of multiplying them, as if each metal or each stimulant possessed some specific virtue of its own, is naturally added a kind of necessity, as well as a desire, to appear more refined and more mysterious than physicians and surgeons in general.

The fundamental error then, here, lies in not distinguishing the particular rheumatic or neuralgic inflammation from others, in looking solely at the local disease, and even, at that, carelessly; and in not perceiving the constitutional affection which belongs to every Neuralgia, and which, with varying local tendencies, produces all the disorders enumerated in this essay.

Yet I do not say that the rheumatic inflammation of the eye has always been thus overlooked, having indeed already pointed out a marked exception: since, although it has been mistaken for common ophthalmia, perhaps in ninety-nine cases of a hundred, and is still daily so mistaken; there have been practitioners, among whom I have already named the most discerning, who have seen that it was a different disorder, though still not perceiving its true affinities; and who have consequently attempted to vary the treatment, and successfully. Yet for want of a correct theory, that treatment has not been established on those general principles which would have given it an authority sufficient to produce the requisite effects, by generating an efficacious conviction; while it is chiefly also perhaps for want of this correct theory, that the chronic or milder cases, which form the vast majority and produce the greatest arithmetical quantity of evil, are still confounded with common ophthalmia, and consequently, maltreated. And if even the utility of bark has been shown, that substance has been adopted by those who have followed what was taught, rather empirically, than from any

such views of the disease as I have here attempted to establish. I might, myself, think this remark unjust, as others perhaps may, were it not confirmed by this fact; that even where this remedy has been resorted to, the general principle of aiding its effects by the obvious collateral means, of diet, or whatever else, has not been adopted; while, further, it has been used only at the end of a treatment where all the preceding remedies have been commonly pernicious, inasmuch as proceeding as a view of active and local inflammation, too often to be reduced by evacuations, in spite of the warnings on that head. Thus also has there been adopted a remedy, which, while it evinces an incorrect view of this disease, must be condemned, equally for its apparent severity as its inutility, except in peculiar cases; and therefore, if safe in the discriminating hands by which it was introduced, not to be trifled with by those who adopt, without distinction or discrimination, whatever is recommended and has become a usage. I mean the puncturing of the eye to discharge the vitreous humour; while I trust that I shall not, in thus censuring the general use of this remedy, be supposed to censure the able surgeon to whom we must trace the recent recommendation.

I have already said, on various occasions, that in all intermittent and neuralgic diseases, the evacuating and debilitating system is pernicious, and that among the remedies of this class, the most injurious is blood-letting, both general and local: a subject, however, which I must yet re-examine in inquiring respecting the general cure of Neuralgia at large. I did formerly show, however, that in remittent and intermittent fever, cases did occur, or might be imagined, where not only a moderate use of such means, particularly at the commencement of the disease, might be innocent, but was even occasionally beneficial, and for reasons which were then stated.

Thus it is in this ophthalmia, when violent, and particularly on the first attack; since the effect may often be to reduce the local disease which threatens local injury; while, though that remedy be really pernicious as it regards the constitutional affection, inasmuch as it commonly renders that more obstinate, the evil from this cause would be as nothing compared to the possibly impending local evil. It is plain therefore that I do not absolutely exclude blood-letting, both general and local, in this ophthalmia, at least when recent and severe; yet I think it highly essential that the reasons for permitting its use should be duly understood, as I trust they will now be by reverting to what was formerly said on this subject; since, thus to understand the theory of their application, is the only security that exists against their abuse or misapplication. The disease must not be considered as a common inflammation of a local nature, reducible, from its com-

mencement to its termination, by the usual local and general remedies of these generic affections, but as a peculiar disorder connected with, and dependent on, a constitutional disease in which the evacuating system is pernicious, but in which that is permitted rather than ordered, under peculiar and accidental circumstances in the local affection, and as a purely local and temporizing remedy.

Hence it is plain that the use of this remedy calls for nice discernment on the part of the practitioner, though it is impossible to give more minute directions. As in every thing else in physic, that which is necessary, and which in reality is the only useful, is to master the general principles; not only to understand clearly the general theory, but to study to apply it to each case; for, throughout this science and art, every case is a special case under some one general head, each example requiring its own treatment, yet every treatment bottomed on a leading principle; while he alone is the physician who can thus see each case as an individual fact in philosophy, diverging from a more leading one; since he alone will know how to apply his remedies, in all cases and under all circumstances. To that rare being, the philosophical practitioner, I have already said enough, and more than is necessary; but I must proceed.

Supposing this ophthalmia to have become established, or else chronic, the employment of evacuants becomes, not only useless but pernicious; and the pernicious consequences are often most serious. They are generally also pernicious when repeated after the urgent and first necessity, should that have existed, is past; as their tendency is to confirm and aggravate what they cannot cure. In practice, in reality, it will rarely happen that any evacuants are useful, or necessary; as a very large proportion of the cases of neuralgic ophthalmia are so slight, however apparently severe to those who view them as common inflammation, that no local injurious consequences can be apprehended. And further, it generally happens that applications for relief are not made till the disorder has been so long established that the originally active state which might have justified blood-letting is past: so that if the empirical rule were universal for empirical practitioners, namely, to exclude the use of these remedies from every case whatever, the average results would produce a very small proportion of evil.

The simplest bad effect of these remedies, is, a negative one; or it is, that they do not cure the disease, and that it becomes inveterate or chronic, for want of the remedies that would remove it; possessing that tendency in common with all the neuralgic diseases. It is a worse event, when this inflammation seizes on the cornea or the iris; since while those remedies fail or aggravate the disorder, the consequences may be-

come those which have already been described; blindness, under two modes, or at least serious injury to the sight. And what I have said of blood-letting, applies, similarly, to systems of purging, particularly with the neutral salts; while this does not exclude a rational use of those remedies, and perhaps, above all, of calomel; a remedy, of which the necessity will be particularly seen in the autumnal cases attended with biliary derangements, already noticed. On this however I need not dwell further.

But if, under the system of blood-letting, local or general, or of evacuation, under whatever mode, the neuralgic ophthalmia often lasts for many months, or even for years, sometimes continuing thus without interruption, it more generally subsides to recur again, as happens in all these disorders when established or chronic. And further, it will often happen, as every practitioner might see did he but look for it, that there is a positive aggravation of the disease produced, and sometimes very pointedly, by each successive application or remedy of this nature: a fact which might be supposed to open the eyes of the practitioners, if we did not know the power of habit in preventing observation, and how impossible it is that observation, can exist without reasoning. But that the disease is also at times cured under this treatment, while it appears falsely to be cured by it, I am not about to deny; while I trust I have already amply shown that such cures, and in spite of pernicious treatment, occur in all the Neuralgiae. These are the spontaneous cessations of that disease which form so remarkable a part of its character, as they do of intermittent in the chronic state; depending sometimes on constitutional changes of which we are ignorant and at others, probably, brought about by those unobserved circumstances which so often terminate Neuralgia and intermittent such as change of place and habits, mental affections, the occurrence of other diseases, and so forth.

And lastly I should here remark that such spontaneous cures of the neuralgic ophthalmia, all of them misleading the practitioner so as to make him persist in a wrong system of practice, often occur from a change in the place or action of the constitutional disease of the Neuralgia. Thus have I seen this inflammation cease in a single day, on the occurrence of a relapse of common intermittent, and that also repeatedly; as it is similarly replaced by common rheumatism in a limb, by that of the intercostal muscles, by toothach, by intermittent headaches, or by simple Neuralgia of the face; while the practitioner, unaware of this connexion, imagines that he has cured the one disease by his remedies, and that the patient has fallen under an entirely new one.

I believe that there are some local evils arising from the use

of leeches in the ophthalmia, which are more frequent in this variety than any other, such as erysipelatous inflammation and abscesses in the loose skin of the eyelids; but as they are of no great moment, I need not dwell on them. As to scarification of the vessels of the eye, it is a useless practice, since it produces no effect in the disease; while it does not probably lead to any direct injury, and might even, in the same cases where blood-letting is allowable, be useful. With respect to blisters, they might, *a priori* be judged pernicious, inasmuch as they aggravate all the neuralgiæ and neuralgic inflammations, when placed on or near the diseased part. Such they in fact prove; and if less hurtful at a distance, no great benefit can be expected from them towards removing what, in reality, is a disease of the whole system.

But if I have now finished the examination of these injurious remedies, or *lædientia*, among which I must also include low diet and abstinence from wine, on the principles so often explained, I must observe that their pernicious effects are not limited to the eye alone, or to the mere local disorder. There are wider ones produced on the constitution, and these remain to be examined. They, however, are such as this mistaken system produces in all Neuralgiæ, of whatever character: and they are of such a nature, so exactly those which take place in all the disorders of this class, and in the intermittents also, under that pernicious treatment, that they tend strongly to confirm that view of the character of this ophthalmia which I have here given. But as the more proper place for detailing them will be when I consider the cure of Neuralgia in general, I must defer their consideration, and refer the reader to that place; though I will here give a sketch of a single case illustrating the evil progress of this ophthalmia under that treatment. And if I thus detail it, it is not because it is a marvellous or an uncommon one, but partly because it unites in itself all the proceedings and consequences which I must otherwise have illustrated by detailing three or four instances of a parallel nature, and partly because, from my peculiar situation with respect to the patient, I had the opportunity of watching, almost daily, and for a twelve-month, the progress of the disease and the effects of the remedies, while, very naturally, and in a certain sense, properly, not permitted to interfere in that which was under the charge of a regular oculist; since it is no novelty, that as soon as a single branch of physic becomes thus separated, those who used formerly to be intrusted with its care, are supposed on a sudden to lose all their previous knowledge. I need only add, that I could easily quote other cases, illustrating and confirming the present one, where all the effects in question were produced, though not all to the same extent, nor all in the same patient.

The person in question, an artisan under the patronage and care of an opulent family delighting in physie, was seized with the common neuralgia of the face, occasionally in its more ordinary form, and at other times under that of toothach. I was permitted to cure this by means of arsenic; but after a short time it returned in the temple, and was then followed by a tolerably severe ophthalmia, affecting the conjunctiva of the neighbouring eye, and also attacking the iris. Nothing could be better marked than the disorder; as it was attended with a distinct intermittent and quotidian cold stage, and as the neuralgia of the temple was equally regular; while the contraction of the iris was also as periodical, occurring once a day, and lasting a determinate number of hours.

I attempted of course to explain my views of the character of the disease, while I proposed the method of cure; and with exactly the same success which I have generally had, as well with patients as with my brethren of the profession, for these twenty years and much more; at the manner of which I can now but smile, while I regret the price at which the unfortunate patients have so often purchased this imaginary triumph.

The patient was therefore sent to an oculist, at that time of high reputation; it having been concluded, as it is still, that neither physician nor surgeon could possibly understand a disease of the eye like the man of experience; such are the ideas attached by the vulgar to a word, which, if their meaning was the true definition of that term, would make the oldest nurse, or the empiric who sees a hundred patients in a day, the best physician; just as he who has manufactured the most tons of Glauber salt and calomel in his life-time, is the most philosophical chemist.

If, out of humanity to the unfortunate patient, I attempted to explain the case to the oculist, the suggestion was received just as I expected; and, from that time, I could but watch, for instruction, the progress of the case. The first effect of local blood-letting, blistering, and topical applications, was a great increase of the inflammation; and as the same means were continued and repeated, the disorder became daily more severe; while, the Neuralgia also increasing in severity and extent, and the intermittent becoming much more strongly marked, it was declared that there was a flow of blood to the head, and so forth. General blood-letting from a vein, together with that from the temporal artery, was therefore adopted and repeated; while after a certain progress in this practice, aided by more topical remedies, more purging, and more low diet, the patient became so ill that he could no longer attend the oculist, and was therefore sent to a hospital. These operations occupied about two months; and if I was, after this, cut off from as frequent a sight of the

patient as formerly, I was easily able to ascertain, before this imprisonment, that he was labouring under an inveterate quotidian intermittent, with a neuralgia that scarcely left any repose, extreme debility with various nervous affections, and a partial fatuity; all of them the effects which I had gradually foretold to his patrons, as any one may foretel them under such practice; while the inflammation was such as apparently to extend to the bottom of the eye, from the excessive and constant pain, and while total blindness on that side had also resulted from the complete closing of the iris.

In the hospital, all this, in the usual way justified more bleeding and more of every thing which had already proved so injurious; while the disease persevered without a single feature of alteration, except for the worse, during nearly three months, when the gradually increasing fatuity became a mania, and the patient attempted to destroy himself by cutting his throat. The attempt was however unsuccessful; and after the wound was healed, he was sent home, to be transferred to a lunatic asylum, during which interval, I was enabled, for a week or more, to see him daily. He was then in a state of melancholy fatuity, rather than of proper mania; while the inflammation continued, but in a comparatively mild state, with occasional headach, of apparently great severity, and still periodical, though the state of the intellect prevented any very accurate examination. What was done in the lunatic hospital, I could never discover; but in about two months he died, and, as I understood through his wife, with the eye still in the same condition.

If this is the report of a case of unusual severity, it is still a highly instructive one; since every symptom, as well as the general progress, was that which occurs in a greater or less degree, not only in this ophthalmia, but in every anomalous intermittent and Neuralgia, wherever the evacuant practice has been pursued: while the symptoms are severe and numerous, in proportion to the activity, generally, with which the remedies have been applied; it also possibly depending in some measure on the patient's constitution, and on the quantity or severity of the general neuralgic tendency or affection. Increase of severity, and increased persistence of the local disease, form the one general feature which takes place in all the Neuralgiæ from the pernicious practice in question; as, in this case, it was increased severity, extent, and obstinacy in the ophthalmia; while the increase of the neuralgic pain, the general constitutional derangement, the nervous symptoms, and the fatuity which followed, are consequences already pointed out in chronic intermittents with anomalous symptoms, as well as in Neuralgiæ in general, under the same treatment. If the mania is more rare, it is evidently but a further progress of the fatuity, or an aggravated

effect of that state of the nervous system which produces this; while other examples of mania from maltreated Neuralgia, or from that disorder generally, as well as from intermittent, are not wanting, as I have elsewhere shown. And if this case is a very perfect one, or almost a caricatura, as it may be called, while it is minutely true, it will perhaps seldom happen in practice, that a patient is so situated as to be subjected to so persistent and overcharged a maltreatment.

Further, which is not the least important remark to make on it, there cannot easily or often be a medical spectator to watch the progress of such a case as a mere witness; while, if the treatment is as little suspected to be the cause of these evils as the disorder itself is misunderstood, it is very plain that hundreds of such cases may occur, or may be occurring every day, in some degree or other, totally unsuspected; that nature, or disease, will be accused of what is the physician's own work, as happens throughout all medicine, and still more, that as no ophthalmia is suspected of such connexions or consequences, the accusation will fall on diseases of the brain; on disorganization of some kind, or on the extension of inflammation through the optic nerve, as has in fact been said, or lastly perhaps, on an original and independent tendency to Mania.

This remark is not trivial: it is, on the contrary, a most important one, while it applies to every evil event or bad termination in the whole of these affiliated diseases, whether ranking under Neuralgia or Intermittent, and while a long inspection of practice has proved to me that such events, so misapprehended as to their cause, are numerous and common. It applies indeed to much more in physic; since it must do so to every case, of which the nature is not understood, and where the bad result, while it is the consequence of ignorance, acting negatively or positively, can never be so considered, because of that very ignorance; which, as it originally caused the wrong, must for ever prevent such wrong from being discerned, and also from being rectified in future. Prescience is knowledge: among mortals there can be no other ground of it; or, in action, knowledge is prescience: and it is only he, in those cases, who could foresee the whole train of events, who ever can know, retrospectively, what has been wrong; while it is evident, that not to be capable of discerning this, is an assurance for the continuation of such error; as it equally follows, that in the hands of him who possesses this prescience, such events can never occur. Thus it is that he who produces wrong, justifies himself on the plea of fatality or necessity, and persists, through all the conduct of life, as in physic; while such evil can never occur to him who, in foreseeing, prevents; and to him, therefore, it will always be supposed that such evil consequences were not allotted in the order of things.

If right conduct is thus, in the ordinary affairs of life, called good fortune, as, reversely, wrong conduct through ignorance is considered evil fortune, so it happens in physic, that no approbation attends him who has seen and prevented, since the conduct which did prevent is unknown and unseen; as the event that would otherwise have followed is equally unforeseen, and from the same ignorance: while excuse at least is ready for him who, suffering evil to happen, or causing it, has, under the same ignorance, been thought merely unfortunate. And thus also does it happen that the greater fame follows him under whom a disease has been most severe: as this ignorance knows not that he has been the cause of the severity, and equally treats with contempt the physician of a slight case, not knowing that it was his discernment that rendered it such. Under such inverseness of conclusion must the sound physician, however, submit to discharge his conscience; while it must be hoped that he will feel that his sufficient reward, since it is the only one that he is likely to inherit.

It is plain now, to return, on merely moral considerations, that if this instance, as an entire case, is solitary, it could not possibly be otherwise, unless a similar witness had watched such another, since assuredly he could not suffer it under his own management; and further, that it will and must be solitary, till the present views of this disease begin to be established, since, let it occur ever so often, it will never be suspected to have been thus caused: while, further, still, whenever such views shall become universal, it can occur no more, as no practitioner would suffer a disorder, the cure of which he understood, to proceed to such extremity, and could scarcely thus watch it in the hands of another, without an interference which would then be easy, as it is, assuredly, far otherwise at present.

Such are the explanations which I have thought it necessary to give respecting a case which might be supposed useless, as being either solitary or accidental, or else ill explained; and I shall be much surprised if, when those who really can review their own experience (a talent not the lot of all) shall review it, they do not find facts to illustrate what I have said, and to confirm, even perhaps by cases absolutely parallel, that which I have here narrated.

I can indeed conceive that the production of Mania in this case will, by those who are yet ignorant of the real nature of Neuralgia, be attributed to hereditary disease or to other causes; or at least that those who are yet unconvinced respecting the real nature of the ophthalmia, will deny that it could have been the effect of the evacuations. But while it is not the only case of mania which I have seen thus produced in Neuralgia, though fatuity is the more common result, and while the probability is

confirmed by what I have said respecting mania from these causes in another place, Sauvages has described a case where the evacuation of the aqueous humour (the process recommended by Wardrop,) was followed by mania. Not that I conceive this operation to have been the cause, since, on the contrary, from his erroneous views respecting the disease, there can be no doubt that it had been treated, altogether, like my own case, by the usual system against active inflammation.

But it will not be useless to notice another case, though of a very different character; because it is of that kind which is most common, and which, in fact, is perpetually occurring in practice. And I have the same opportunity of describing it; that which cannot very often happen to any one; namely, that I knew the patient intimately through the whole period, but was not consulted, very properly, as not engaged in the practice of physic or surgery. In the family to which this individual belonged, all the members, with one exception, suffered an intermittent, from a temporary residence in a pestiferous part of England, which eventually proved incurable, destroying also two of the patients; this person alone having the disease in an almost undiscernible form, but being affected with the characteristic inflammation of one eye; a further instance, were one necessary, how one malaria will produce different diseases in different persons, as it is a proof that it will produce this particular disorder. The oculist, of course, was referred to, in spite of such explanations and remonstrances as were practicable, and the usual practice was followed and persisted in. The consequence, as might be expected, was a general loss of health, which was not restored till some years after this operator had been dismissed: at the same time, the sight was destroyed, through an increase of inflammation that seemed to occupy the whole organ, finally reducing it to half its size; and at this moment, after nineteen years, it continues inflamed, though occasionally becoming pale, or entirely losing its redness. Such, but in very different degrees, is a very common result of the original maltreatment of this inflammation: and of this character, we may be almost sure, is every instance where habitual ophthalmia occurs in any individual.

Respecting the cure of this ophthalmia, I have left little to say, after thus examining the wrong and common system of treatment; while though the general cure of Neuralgia is reserved for a separate place, I cannot well avoid pointing out what is further requisite in this disorder, as I was compelled to do in the instance of toothach.

How far, general, and even topical bleeding, is admissible, rather than valuable or useful, I need not now repeat. It will not cure the disease, under any form, is always pernicious if

persisted in, in the acute cases, and invariably so in the chronic ones. With respect to emetics, purgatives, and sudorifics, their utility and value are to be understood from what has been said of them in treating of the marsh fevers; for the constitutional disease is the same, and the same must the treatment be. And thus also we can see in what manner undue purging must be mischievous; in acute cases as well as in chronic ones; and how, especially in the latter, it may bring on relapses; as these also will be produced, just as they are in chronic intermittents, by any debilitating causes.

Of the topical applications I must observe, that there are, even acute cases of this disorder, sufficiently teasing to the patient, and even alarming to timid ones, where the mere local use of stimulants does alone remove the disorder; the constitutional affection in such instances being perhaps trifling, or even, it may be supposed, nothing; or else disappearing spontaneously, or from slender changes of circumstances, as intermittents themselves, equally slight, so often do. In such cases, I know not that any thing is more efficacious than hot water, as hot as it can be endured; while in the chronic relapsing attacks it is often sufficient alone to the cure. In all these cases, acute as well as chronic, persistence is most necessary: but in saying this, I must also remark on a mistaken and injurious practice, not very rare, namely, that of applying ice; while I ought to say, generally, that cold washes of all kinds are either useless or mischievous. In the chronic cases also, especially, very strong metallic solutions, such for example as sulphate of zinc, in the proportion of ten grains to the ounce of water, often remove the inflammation; while this particular class of remedies also dissipates the opacities of the cornea, unless caused by pustule or ulceration, or unless very dense, from repeated attacks. No incurable opacity from mere inflammation in this disease, ought in fact to exist: and when it is not prevented or cured, there has been neglect somewhere. Of other applications, opium, both within and without the eye, is often also useful: but let me remark here, that its chief, or almost sole value, is when applied on the subsiding of the paroxysm, or during that remission which can always, with care, be discovered: diminishing thus, as in all the neuralgic affections of tender parts, that soreness, or pain, or uneasiness, which persists after the proper paroxysmatic attack has passed away. Thus is also the internal use of opium useful in the same circumstances. As far as this substance is of use as an application in the chronic cases, it must, I think, be classed with the stimulant remedies already mentioned.

Lastly, in all the modes of this disease, that is, in the chronic ones at all times, and in the acute, whenever the febrile state permits, or when such evacuation as may be judged necessary

has been premised, the remedies are those of intermittents and neuralgia; namely, Bark, and the tonics, under all those regulations which I need not again discuss; though I ought to remark, that in numerous cases of the long continued and relapsing disease, and in many indeed of the acuter or more severe ones, and even when of some standing, I have found both arsenic and bark eminently successful without any other aids, while rarely failing to cure a new case within even a few days. As usual in all other cases of Neuralgia under every variety, the inflammation has been more tantalizing, and the remedies less actively efficacious, as it has been of longer standing and more subjected to a previous course of maltreatment; though I can scarcely, with any effort, recall a case to mind, of whatever character, which was not cured, when the patient's confidence corresponded to my own. These, in reality, are the true remedies of this ophthalmia: a fact which if it had been always known, would have saved thousands from blindness as from suffering; and not only so, but from broken constitutions or even worse evils; since the long persistence of this disorder produces the same effects as the similar duration of any intermittent or any Neuralgia. And in the inveterately chronic cases, if these fail, we have little resource but in that change of air and habits which, as to intermittent, has already been examined. I need not add the use of a good diet and of wine: having even cured some cases by those means alone, where the disorder appeared to have been protracted by the opposite system. But I must regret, in terminating this brief sketch of the treatment, that I have never had any opportunity of attempting to suspend or stop the disorder by that stimulant treatment which so often cures the ordinary intermittent: partly from the difficulty of obtaining a case at the commencement, and partly from the prejudices of patients. That it does deserve a trial, I must, however, think; and shall be glad to find that others have attempted it, and, as I cannot help anticipating, with success.

For a minuter examination of these remedies, I must refer to the general discussion on the treatment of Neuralgia hereafter; but I cannot terminate this chapter without a criticism far different from those which I have so often been compelled to make: as grateful as those have been painful. If I have not adopted Mr. Wardrop's recommendation of evacuating the aqueous humour, it is because I hope that the necessity for this will never again occur; but it is pleasing to observe how a man of acuteness and talent will discover a right system of cure from his own unassisted observations, and even under the difficulty of contending with an imperfect or a wrong theory. I need not point out how nearly my own mode of treatment corresponds with his, while each has been formed independently, and on different

grounds; nor what confidence is due to this treatment, when the one had arrived at it through a theory, and the other through the road of mere experience, without one.

And I should not do justice to the value of theoretical or scientific proceedings in physic, did I not also point out this as an instance of the utility to be derived from generalization, when the analogies are justly drawn and the induction legitimate; since, whatever doubts may continue to be entertained respecting the truth of the views contained in this essay, as to toothach or aught else, that truth is, in this case, proved by this important and unexpected coincidence, and by the success of the practice. I may well, therefore, esteem the Essay on Rheumatic Ophthalmia to which I allude; since, independently of its intrinsic utility, it is, to me, especially of importance; while I even hope that the description of this peculiar affection, as here given and thus supported, may go far towards gaining credit for the whole theory of Neuralgia.

I indeed trust that the value of applying to physic the usual philosophical processes which have so eminently succeeded in the other sciences, has long ere this been apparent; since, if any useful truths have been established, it is entirely owing to that most simple and obvious mode of proceeding, as I was in possession of no facts that were not common to all physicians from all times. It is a machinery which all can equally command if they please; and which, if it has not been used as largely in the science before us as it ought, has apparently been neglected from a sort of tacit concession, or belief, that physic was not yet in a state, as to facts, thus to profit; from forgetting that what has been often, and justly, called the New Philosophy, was applicable, here, as to all the sciences; and from proceeding on a basis derived from the infancy of physic exclusively, not from the maturity of science at large.

CHAPTER XIX.

General Remarks on the Connexion between Neuralgia and Intermittent.

I HAVE now completed the account of all the diseases which I had proposed to rank under the general heads of Intermittent and Neuralgia, as far as my own observation has furnished me

with evidence to this purpose. The list is a long one, and has probably proved a very unexpected one to my readers; and yet I am far from believing that I have exhausted the subject, or that further observation will not discover that there are other disorders which may with equal justice take rank under this general head. But this I must leave to future observers; having determined not to overstep the evidence, since I know of no philosophy that is not founded on facts. I will not even venture to suggest what I think possible, or likely, from general induction redirected to particulars: as, esteeming Theory with every one who understands the real meaning of that term, I consider that it has no greater enemy than hypothesis; eternally as those two most opposed terms are confounded by the vulgar of all ranks.

As to the proofs by which I would establish a community, in the first place, and a generic one, between Intermittent and Neuralgia, and in the next, among the subsidiary local diseases under Neuralgia, they have been so necessarily given during the preceding descriptions, or have so arisen out of the very accounts of symptoms and treatment, that, to go over them all, again, would be to produce either a meagre abstract or a tiresome repetition. Yet, perhaps, this hazard must be incurred to a certain extent, for the sake of those who may not have carried the arguments along in their own minds; while I have also a few facts to add on this subject, which could not, hitherto, easily have found their places any where, without producing digressions, or interrupting the order which I thought it necessary to adopt in conformity to the existing opinions and prejudices. These I shall state first; selecting, however, but a few of the most conspicuous from a considerable number, as examples of the whole.

If I have shown that all the diseases treated of in this essay do arise from Malaria, while at the same time I have not excluded the simple action of cold as a cause, while I have shown that local injuries will produce Neuralgiæ, and while also I do not deny that there may be yet other causes, unknown to us, it will be a strong proof of a community in the nature of these disorders, to find that the same decided and ascertained cause, Malaria, applied, in the same place or places, to many different persons, produces the whole of them. It would be tedious to enumerate all the cases of this nature which have occurred to me, as it would require a considerable number to embrace all the disorders here described; but I will quote one as an example of my meaning on this subject, chiefly because it is a very extensive one, and that my means of ascertaining the facts were perfect.

In this case, the situation was so decidedly subject to Malaria, that scarcely an individual, out of many different

families which had resided in it, had escaped intermittent at some period of their stay. In one season, and in one family consisting of twelve or fourteen persons, the following were the effects in as many individuals. One tertian; one double quotidian headach; another tertian; one diseased spleen; in one individual, aged only eighteen, a temporary hemiplegia with obscure quotidian; a second case of palsy in one leg in a person of twenty, with obscure quotidian and symptoms of diseased spleen: a regular Neuralgia of the face, of double tertian type. In a following, distant, season, and in some of the same persons, there occurred; palsy of the face with imperfect speech, an attack lasting beyond a week, and replaced by quotidian neuralgia (Tic;) a double tertian, common intermittent, terminating in a quotidian, or double tertian, neuralgia; a quotidian with neuralgia in the shin bone; the same patient having had, in a preceding season, a common tertian so obscurely marked, that he was ordered to Italy for a consumption, (a consumption which was cured by two ounces of bark and a change of place to ten miles' distance,) and in a following one, having been attacked again with a double tertian, of which one fit was attended by the neuralgia of the shin and the other by a headach.

This particular instance, it will be seen, embraces a considerable number of varieties under the two heads of Intermittent and Neuralgia; while I might even have extended it, by adding what occurred in other seasons, in the same place; among which I might have enumerated an irregular intermittent with neuralgic palpitation of the heart; an acute hepatitis (probably dependent on the same cause;) two instances of diseased spleen; one of Neuralgia, with obscure intermittent, in the foot; one of periodical toothach with double quotidian; one of periodical quotidian rheumatism in the arm: one of quotidian with irritability of the bladder: a second, of very severe neuralgia of the heart, replaced and cured by a common quotidian; and one of a periodical general chronic rheumatism, of a most defined type and quotidian character.

This is an example, altogether, of the species of evidence to which I here allude; nor can there be a rational doubt that the same cause, acting on different persons, produced all these disorders, particularly as, in some of the individuals, a different season produced a different one from what a preceding had done. I cannot, it is true, adduce another case so extensively inclusive; though I have little doubt that analogous or similar ones will be found by those who shall seek for them. And if, by going through my experience, I could find analogous examples, cases where common intermittent and one or more of its anomalous varieties, as well as of Neuralgia, had occurred in different individuals,—simultaneously, in one house or situa-

tion, so as gradually to embrace every disease that I have here treated of, the enumeration would be tedious, while it could scarcely add to the conviction of those who agree with me, and would assuredly make no impression on those who refuse the evidence which I have already produced.

On this class of evidence I must however make the following remark. If I think that it can easily be verified in the unhealthy districts of England now that the facts and the theory are pointed out, and if I also think that it will be so confirmed, it is even more probable that this will be effected, with even greater ease and in a greater mass, in the pestiferous districts of France and Italy. It is true, as I formerly observed, that the physicians in those countries have overlooked Neuralgia altogether, even in its best marked and simplest form; as they have not produced one general conclusion such as I have here drawn, respecting any disease which was not pure and perfect fever, though casually noticing some of those. But it seems to me so impossible that the class of facts which I have just brought in evidence should not exist in those countries, that I shall scarcely hesitate in saying, that while I rely on their being so confirmed, if ever these opinions should reach so far, I am content to rest the whole question on that issue.

To this general species of evidence respecting the community of all these disorders, as far as that can be proved by community of cause, I may next add, that which consists in the fact of all or a great number of these diseases, from common remittent and intermittent through all their anomalies, down to Neuralgia in all its modes and forms appearing in one individual: alternately replacing each other or succeeding irregularly, or else variously combined. I formerly noticed this fact; but it is sufficiently important to be again pointed out under this head of general evidence.

Here, as in the former case, I could, and without difficulty, produce instances enough to prove, from different individuals, the mutual connexion and community of every disease that I have described; by showing that, in some one person, two, or three, or four, or five, or even more forms, have been united, or have succeeded to each other in such a manner that the new disease formed the cure of the preceding, or the substitute for it. But this would be, again, to produce a tedious list of cases; while, as before, I could not expect to gain converts among those who will not be convinced by a single case, and while I consider such accumulation of evidence superfluous to those who will feel the value of one, selected from the whole, as the former has been on account of its extensively inclusive nature. And I may add, as to the case which I have selected, that my habits of intimacy with the individual during a long course of

years, enabled me to verify the fact in the most satisfactory manner. It is the history indeed, as to this point, of nearly thirty years; since thus long was this person the victim of the diseases of chronic intermittent, or of this disease in its simple form as well as its anomalous and more purely localized ones.

In mere fever, this patient experienced various remittents, together with tertian, double tertian, quotidian, and double quotidian, in different years; and, in the anomalous varieties, what may perhaps be referred to the *Asthmatica*, and to the *Stranguriosa*, and also what may possibly be the *Nephralgica* of Sauvages; together with the *Emetica*, the *Hysterica*, and the *Soporosa*, of the same arrangement. These intermittents also, at different times, were united with, or succeeded to, or were replaced by, periodical and marked general chronic rheumatism, periodical local rheumatism in a limb, and rheumatism of the face, with repeated slight attacks of the ophthalmia of one eye, attended by hemicrania. In simple Neuralgia, this patient also experienced that of the face, repeatedly, long relapses of pure hemicrania, clavus, that of the eye, or optic nerve, sciatica, and a similar affection in one radial nerve and in the anterior crural; as, on different occasions, he suffered quotidian intermittent toothach, and the most severe neuralgia of the heart which I have ever witnessed, recurring annually for many years, replacing, once, a local periodical rheumatism, and more than once replaced and cured by a quotidian simple intermittent.

This is probably a rare case of severity and multiplicity, as the case itself was remarkable for its inveterate duration; but I doubt not that it can be paralleled, if not equalled, by the experience of others. But it is plain that it can be so paralleled, only by taking the same views of these diseases as myself; since, under the present opinions, most of those would have been considered as independent disorders, accidentally meeting in a single subject. There will, also, always be a difficulty in studying such extreme and durable cases; as no one patient would probably so long persevere with a physician, since he would naturally attribute incapacity to him, finding no cure: and it is this, (very natural surely,) versatility of patients, which will always form a check to the study of cases of this nature. But as far as relates to this one, or to such minor instances of the same kind as I have declined recording, that I may not prolong this branch of evidence, there seems as perfect a demonstration as physic can ever be expected to produce, that all the diseases enumerated arose from one leading cause, or were, all, the distinct demonstrations of a general disorder, or habit, rooted in the constitution.

To these two general branches of evidence, consisting in community of cause, and in coexistence and interchangeableness, I

may now add a third, founded on the effects, whether for good or evil, for cure or aggravation, produced by remedies or modes of treatment as to all these disorders. Throughout the whole catalogue, it is to the same class or system of remedies that we must look for the cure; while it is further remarkable that these are all remedies acting on the constitution. Whether it be a general disease or a local one, let it be even as purely local as possible, and let it be mere pain, or else inflammation, and in whatever part of the body, we derive no advantages, or very slender and partial ones, from local remedies; while we must cure the disease, if we do cure it, by those general ones which are equally the remedies of an intermittent occupying the whole body and without any local tendency or symptom. And if remedies that are not medicines, such as change of air and habits, such as mental impressions, such as are even charms, act in removing simple intermittent, thus do they act similarly in removing the local diseases in question, even down to a common toothach. If we had no other proofs that all these disorders, that even a disease so apparently simple and purely local as a toothach, were truly constitutional, this would be proof enough; as, in no other mode than as affecting a constitutional derangement, could a few doses of bark remove a disorder of this nature.

Certainly, that many diseases are cured by one remedy, is not, by itself, a proof that all those diseases are of the same nature; but in the present case, and combined with the former evidences, the fact in question adds a strong confirmation to the present views; which are also further confirmed by observing, that the same system of treatment which is injurious in any one of these diseases, is injurious in all the rest. And this is true, whether they be local or general: or, the treatment which is pernicious in simple intermittent, is pernicious in all the anomalous and local diseases alike, and in the Neuralgiæ as in all else; while, very remarkably, where those improper remedies are the remedies of inflammation in general, they are injurious in the particular inflammations that appertain to this set of diseases.

It is still more remarkable, that the evil effects produced by such wrong treatment are the same, or similar, whatever may be the particular form, or disease, out of this entire catalogue, for which it is administered. Whether it be an intermittent of the most ordinary character, whether it be an anomalous one, or should it be any of all the neuralgic diseases, however apparently local and simple, it is the constitution, or the system at large, which suffers from that improper treatment, and in the same manner; while as far as the local, or even the general disease may suffer, it is, in all, also, in the same manner; namely, that they become confirmed or aggravated, or acquire a tendency to

recur when they would otherwise have terminated. No greater proof could easily be offered that these diseases were essentially constitutional, in all their forms, and dependent on a radical, concealed, general cause, or morbid condition: or, at any rate, this fact confirms strongly all the other proofs already offered in support of that view.

What these effects of improper treatment are, and what the treatment itself to which I here allude, is, have been pointed out in various places. But to complete this part of the general evidence, I may repeat generally, that the injurious treatment consists in the debilitating system, or in low diet and evacuates, among which blood-letting holds the place supereminently mischievous. And be the disease what it may, be it general, local, or even inflammatory, the effect of such treatment is to produce or aggravate general debility, to induce a variety of nervous symptoms, which I need not enumerate particularly, and, in proportion as it is perseveringly or violently pursued, to bring on paralytic affections, fatuity, even mania, with irreparable bad health, and unquestionably, if in extreme excess, death.

If, with all this in addition to what has preceded on the same subject throughout the whole of this essay, I conceive that I have made out my case, by evidence even to superfluity, I must still perform my promise by a brief extract from the whole. And this is perhaps necessary; because I must not forget that an individual without name and without authority, unknown as a medical teacher or writer, not even engaged in practice, places himself in a difficult and hazardous situation, when he doubts or condemns what has been, and is believed and practised by the thousands, his predecessors and contemporaries, of name and reputation to which he has no pretensions. But, at every hazard, he who conceives himself right, is bound to declare what he thinks to be supported by evidence; particularly where so deep and wide an interest as that which concerns the health or suffering of mankind at large is at stake. It is a case where silence would be deeply criminal; while, if he is right, all will gain, whereas, if wrong, he will be the only sufferer. And should he prove, in the end, to be right, all that will follow as to the past, is, what has been, through every thing, the history of the world; that the force of habit and example, while it forms the whole philosophy and the sole rule of vulgar minds, is such as to influence even the most powerful ones, and that, from whatever cause, persons are not often found who will discard all that they have been taught, to form new opinions; still less, who will venture to declare their opposition to opinions and practices long received.

Yet in all that appertains to human life, not merely to science, such a lot must be that of some one. There must be an indivi-

dual, in every thing, who will doubt or disbelieve what he has been taught, and what others believe; who will form conclusions and opinions for himself out of the facts around him, and by his own reasoning; discarding those of his predecessors and contemporaries. Were it not so, had every man believed what he had been taught, the world would now be what it was in its childhood: but as he who ventures on a new path must oppose all, it is his necessary fate to be too often opposed by all, and to find but hostility when he hoped for support.

The abstract in question is therefore the following, passing over the community of remittent and intermittent fevers, as an admitted fact. Intermittent fevers arise from Malaria, certainly, as principally, and from mere cold possibly; but are renewable by mere cold, when once they have existed.

They are often attended by peculiar local symptoms producing the anomalous varieties, while, when the febrile state is slight or obscure, these local disorders appear to be the chief disease.

Such local disorders are either affections of the nervous system, or of an inflammatory character, and they have been fully described.

The same intermittent fevers, more or less distinct, are accompanied by all the Neuralgiæ that have been described, whether these consist of simple pain, or are attended by inflammation; and when the febrile state is slight or obscure, those local affections appear to form the chief disease.

If intermittent fevers alternate with all the anomalous local symptoms or diseases, so do they with all the neuralgic diseases: and in such cases, the supervention of one is the removal of the other.

Thus also, all those local diseases, including all the Neuralgiæ, alternate with each other; or the appearance of one form is the cure of a preceding one.

Many of the Neuralgiæ will exist almost simultaneously, or else in alternating paroxysms; these having any of the types of intermittent.

They also exist in alternating paroxysms with simple intermittent: or a particular doubled type will consist alternately of a paroxysm of pure fever and a paroxysm of Neuralgia.

The same individual under a persevering intermittent, will experience many of the anomalous forms of that disease, and also many of the neuralgic diseases, in alternation or succession; or else in union; and, in such cases, the type, and the hour of recurrence, will be the same for all the forms, even through a long course of years.

Malaria will produce the neuralgic diseases directly, as probably, will mere cold; but they are renewable by mere cold when once they have existed; and in these cases, though the in-

termittent fever is probably always present, it may be so slight as to be overlooked. In this, the first cause, Neuralgia, in all its forms, resembles intermittent: but it differs, inasmuch as it can be excited by direct injury of a nerve; a difference, however, which is of no moment as to the general identity, because we know of no means of thus injuring the entire nervous system so as to produce general intermittent.

The same Malaria, in the same spot, acting on different individuals at the same time, will produce either intermittent or Neuralgia, and every form of each.

Intermittent and Neuralgia, in all their forms, are cured by the same remedies, and injured by the same wrong treatment; and those remedies are constitutional ones, whether the diseases be local or general; while, very particularly, the local and the general diseases both, are cured by operations on the imagination.

The conspicuously wrong treatment for all of these diseases, whether Neuralgiæ or intermittents, consists in the debilitating practice, as the right treatment is found in what is esteemed the reverse; and whatever be the disease, be it local or general, when that practice is pushed so far as to become injurious, the injury is always of the same character, affecting the entire nervous system.

Such is the summary view of the evidence; and I must now proceed to some circumstances belonging to these diseases, which may, in one sense, be looked on as consequences, in another, as modes, of them.

CHAPTER XX.

On certain Consequences of Intermittent or Marsh Fever and Neuralgia.

IF I have placed here, as consequences, some symptoms or diseases which belong to the subjects treated in this essay, it is not, as I just insinuated, that I am quite satisfied with viewing them in this manner. Yet they could not well have found a place as mere modes of Neuralgia, since they are generally the sequels of a previous painful state. But when I have been unable to venture any where on the order that I should have ap-

proved, I must be content to suffer this additional irregularity, in the hopes that, at some future time, I may be allowed to adopt a more consistent view of the whole subject. What I have to say, however, is little more than a repetition of some circumstances already noticed in the former description; though it was not the less necessary to allot them a distinct place.

I formerly showed that intermittent fever sometimes attacked, directly and primarily, in the form of apoplexy, and further, in that of palsy, affecting different parts, and being more or less extensive. Further, in the progress of such a disease, there occur paralytic attacks, either sudden or gradual; being, in the latter case, generally incomplete. Hence therefore the palsy may be considered both as a sequel and a mode; being the consequence, in one case, of the gradual action of the fever in a local direction, and, in the other, being a local disease or symptom, attached to the general one, analogous to what happens in other cases with anomalous and special symptoms.

Now both these events also happen in simple Neuralgia; though as far as I have seen, it is rare for the paralytic symptoms to precede the painful ones. But when this does happen, the primary attack is a numbness, or a more complete palsy, in the nerve which is about to undergo the pain; and this follows after some time, either relieving the palsy, or being accompanied by a certain degree of it. Hence, I presume, we must consider the palsy as a mode of the neuralgic disease; a partial affection, analogous to the apoplexy or greater palsy which commences the attack of common intermittent. And if, as I formerly suggested, amaurosis should or does occur from cold or Malaria, yet without a marked intermittent fever, this would be an example of that nature, of a perfect and simple kind.

But in the case of Neuralgia, it is far more common for the palsy to be a sequel of the painful state; and if it is rare in cases of short duration, it is by no means uncommon in those of long standing. In such instances, it is commonly gradual, commencing with a numbness; though occasionally also it is sudden; while in both cases, the pain generally ceases, perhaps to return no more; sometimes, however, alternating, or occurring occasionally. Further, such palsies are generally confined rigidly to the parts which receive their nerves from the affected trunk or branch beneath the diseased or pained point; a circumstance sufficiently familiar in sciatica; though it also happens, especially under wrong treatment, that it extends so as, from a palsy in the cheek, to become one, perhaps in the whole arm; or even an entire hemiplegia. Lastly, should a palsy of this nature be extensive or durable, and particularly should it have been extended or produced by blood-letting and the remainder of this

treatment, it is very commonly attended with diminution of the intellectual powers, or with modified fatuity, or even, as I shall immediately indicate more fully, with absolute loss of intellect.

But if fatuity follows palsy in these cases, so is it produced, simply, or without previous paralytic consequences, in all the Neuralgiæ; whether from the action of the general disease itself on the system, or from that aggravation of debility in the brain, or general nervous system, which is the effect of improper treatment. The cases of this nature are, in fact, precisely similar to those which occur in intermittent, as might now indeed have been anticipated; adding proof upon proof respecting the radical and essential similarity between these two classes of disease, and strengthening every analogy in every light in which these can be examined. Such cases surely must have occurred to practitioners familiar with Neuralgia; though not improbably so far mistaken or overlooked, as to have been attributed to some other and accidental cause; while I need not again urge, as I suggested formerly respecting the effects of blood-letting, that while they would naturally escape notice among the common people, there must always be numerous instances also among the better ranks, in practice, where the physician's want of intimacy with the patient's intellectual character and pursuits, still more the general inattention and the not very overpowering discernment of the great mass of ordinary practitioners, would prevent them from discovering the fact; while where there was but a small portion of this faculty previously present, the diminution of that little would be scarcely an appreciable accident; so very little intellect is sufficient to carry the majority of mankind through their ordinary duties in the world.

Nor is it difficult to comprehend, at least in a broad view, why fatuity should be a consequence in these disorders, of whatever nature: since there cannot fail to be an analogy between the loss or diminution of the nervous power as that is employed in maintaining the communication between the mind as a metaphysical *Ens* and the instruments of sense and motion, and that diminution as it relates to the action of the mind respecting those impressions, or respecting its application of them. And the very fact itself is amply proved by the fatuity, in various degrees, which does actually accompany palsies; on the whole of which question I shall have occasion to make further remarks hereafter.

And before I quit this branch of the subject, let me introduce a fact or two relating to the general affection of the nervous system in Neuralgia, which did not occur to me where it might perhaps have found a more appropriate place: it is too important to be omitted. It is the effect which this disorder has in destroying the energy of the mind, and extinguishing the cou-

rage even of those habitually brave and reckless. This is a confession which I have received from many persons, but from no one so strikingly as a Spanish officer of high rank, who had been engaged in the most perilous situations during the long war in that country, and who acknowledged that he had immediately become an absolute coward, while fully aware of the cause, from an attack of the Neuralgia of the face. The disease in this case also lasted long, while this ardent spirit had become almost a woman, shedding tears on every, the slightest occasion. The same effect in reality follows all the intermittent diseases when become chronic; while if the political consequences are often curious and important subjects of speculation, as they relate to nations, I must reserve them for some proposed additions to the essay on Malaria, should an opportunity occur. How these chronic fevers may affect individuals, there are thousands who can acknowledge; if there are not many who are as yet aware of the cause which has so changed their characters, and who are therefore anxious to conceal from others, and desirous too to shut out from their own reflections, what they feel to be true, and fear to be a purely moral fault.

And further, they who will attend to the diseases which are the subject of this essay, not in the usual manner, but in the spirit of philosophical generalization, will also often be able to perceive, in the general derangements of the constitution, or in that anomalous ill health where the term debility serves as an excuse and an escape for the general ignorance or the indolence of the practitioner as to its nature, abundant proofs of what ought to be considered a universal paralysis of the nervous system. I use the term paralysis rather than debility, because the analogy lies here: it is that loss of energy in all the nerves, possibly sometimes in the brain alone, which, in a higher degree, and more limited, produces absolute palsy; and which in so general an affection as I choose to select for illustration, would probably, in its extreme, be death. Nor is this general case, to which I here allude, uncommon, if it is sometimes slight, and from that cause therefore, among others, overlooked. It continues often, even for weeks or months, after an acute attack of remittent or intermittent, or perhaps follows even a durable condition of the chronic variety, being frequently also attended by obscure symptoms of this fever itself. In such cases there is ordinary muscular debility, while every muscle of the body, even to the fingers, including also the diaphragm itself, is affected. From this last cause it is that the respiration becomes so peculiarly affected, as we often find it in these cases: while in addition to all this, the heart and the arteries act feebly and slowly, there is no appetite, the bowels become peculiarly torpid, and the senses of taste, smell, hearing, sight, and even of touch, are

most perceptibly impaired; the insensibility of the eye being peculiarly remarked by those who have naturally perfect eyes and acute sight, and who were in the previous habit of making accurate use of them. If the mental faculties are then also frequently impaired, it is but a consequence that would be expected: and from a few cases (not however sufficient) which I have seen, I am inclined to believe that when this latter effect occurs as the striking symptom, the others would be frequently found if sought for.

And if I have thus shown that paralytic affections, local or general, as also idiotism or debility of intellect, are both brought on by intermittent diseases, whether fever or Neuralgia, and that it is the effect of evacuations to aggravate or determine both, the action, as I shall hereafter suggest more distinctly, being exerted on different portions of the nervous system, and if also cold, apparently pure cold, can induce palsy, so does it operate on the intellectual faculties, producing the analogous effects, debility of mind, fatuity, and even mania. The analogy is valuable, as illustrating the effect of debilitating remedies in producing fatuity and also mania: and while the general fact seems to have been proved on a very large scale during Napoleon's Russian campaign, as it is otherwise known to have happened elsewhere in similar circumstances, there is one very pointed case in Bartholinus, where three young women, from long exposure to cold in an open carriage, became fatuous, and did not recover during a fortnight.

But leaving this analogy to make such impression respecting the subjects under discussion as it may appear to justify, I may proceed to remark, that if palsy and fatuity are produced by intermittents, as I have formerly shown to be the fact, and also by neuralgia, as I have now indicated, while they are similarly produced by cold, and also by many poisons acting on the system, and while also they are the not unfrequent consequences of the depressing passions, all of these coincide to prove that diminution, exhaustion, or partial destruction of the mysterious nervous power, is a direct effect of intermittent and of neuralgia, or of the causes of these. I may now further show, that mania is equally, and not very rarely, the effect also of the neuralgic diseases; particularly, it would seem from experience, when the affected nerves are seated near the brain, or in the external parts of the head. It requires but this to complete the entire analogy as to the corresponding action of neuralgia in producing disorder in the nervous system, and perhaps, correctly speaking, in the brain alone; since I have just said that mania takes place from cold, and have formerly shown, fully, that it is also a consequence of intermittents or of their cause.

This fact has been already partially stated in a former chap-

ter; and although the mania was, in one case at least, the apparently decided effect of improper evacuations, it does not alter the argument; since, in all the analogous cases, this appears to coincide in power with what we must consider the fundamental cause, in aggravating or determining the effect. And if it is a common remark, though I know not how strictly true, that courses of Cheltenham waters, or of purging, have actually produced Mania, I should not be surprised, were these cases to have been examples of some of the chronic diseases in question, mistaken for some of the disorders already pointed out.

But independently of that, cases of Mania from hemicrania, clavus, headaches, all evidently neuralgiæ, are also recorded by many authors; while, when these effects are attributed by the narrators to the violence of the pain, it is evident in some of the instances, that the degree of this was not sufficient to justify that consequence; while, under any view, an alienation of mind arising from mere pain, is but a temporary delirium. On the principles here laid down, the explanation becomes easy; while the facts in question confirm those very views which make the mania, not a consequence of the pain, or of the mere suffering, but an independent and associated effect of the general neuralgic disease. I have here referred to the cases of authors, all of whom I have often had occasion to quote; and I could add particulars, whether from such books or from living authorities, to a considerable extent: while from those which I know or understand best, I must determine without hesitation, that the disorder was proper and true mania, and not delirium.

Thus then the entire analogy is rendered complete as to all these associated consequences; whether produced from or by all these disorders, or whether as arising from the other causes just alluded to; while it is almost as unnecessary to insist on the analogy between mania and fatuity, as on that between this state of the nervous system and palsy; the transition of the one into the other being familiar, and there being other connexions, associated with the other causes of both or the whole of these diseases, on which it would be beyond the present investigation to dwell in more detail. In this essay, limited as are its objects, I dare proceed no further in this question; but as I hinted when speaking formerly, of the mania of intermittent, it will be for physicians to inquire whether they have not too much entirely, I might almost say, neglected one general source of Mania, and whether, in looking too often for organic derangements, they have not even committed a leading error as to the total causes of this disease. With respect to the occurrence of mania under these circumstances, or to its connexion here with fatuity, as far as that relates to the proximate cause of either, it is not difficult to form some broad and general conceptions to justify the pos-

sibility *a priori*; but nothing special can be said, or even conceived, on that subject, while we continue in ignorance of the nature of the nervous system and the nervous power; while whatever else I have to offer on that subject, vague as it must be, will find a better place in the last chapter of this work.

Such is a sufficient description of these affections and their modes; while in the preceding descriptions, will be found some examples of cases to which I could, if necessary, have added others. Nor will the mere formal separation of these particular diseases be without its use, if it shall excite such an increased attention to paralytic diseases in general, as to lead to the discrimination of these particular cases and causes; since it is most certain that while they are often directly produced by the debilitating practice in intermittent and neuralgic diseases, they are invariably aggravated by it. If, for example, a patient labouring under the apoplectic attack of intermittent be largely bled, as I formerly showed, he will probably either die or become paralytic permanently, or else he may be thrown into a state of fatuity; while if the paralytic attack of intermittent be treated in the same manner, that which would have been a temporary disease, passing away entirely in a day or two, or declining gradually, will become a rooted and incurable palsy. In the other case, should palsy supervene on neuralgia, want of knowledge or observation may lead to its being considered as a separate disease, and with the same results; since the practice in question is too often employed without reflection, mechanically, in all these cases, and rarely indeed omitted when the affection is extensive.

Hence the value of these remarks and these distinctions; while a long experience, or rather observation of the practice of others, has convinced me that such cases are not uncommon, and that a great number of the paralytic diseases daily met with, have been the direct produce of the erroneous practice in question. How often a palsy may be the actual result of Malaria rather than of cold, I am not prepared even to conjecture; but when, among six persons, attacked within the same season, in the same spot, by intermittent, two were attacks of palsy, I am inclined to imagine that even this cause is a much more frequent one than it has ever yet been supposed.

Of the cure in such cases, what I have to suggest, directly, may be contained in a few words; while the great caution is, to avoid the usual debilitating system. Nor while I offer a few hints on this subject, can I extend those beyond the case of paralysis. If it must be always difficult to gain experience as to cases of fatuity, from the general conviction that they are incurable and causeless visitations, such experience as to Mania is unattainable, by an ordinary physician, from the received di-

vision of labour in this disease; while this is a case also on which it may be doubted whether that division is a valuable invention. I have therefore no experience as to these particular diseases; though ready to believe that whatever may prove beneficial in the paralytic ones would also be profitable here. To these last I must therefore limit the very few remarks which I have to offer.

Wherever the system to which I have just alluded has been followed, I have invariably seen the cases terminate ill, while in every one that I have seen where nothing at all was done, they have recovered spontaneously; every case that I have myself treated (and they have been numerous) having been cured, even though the intermittent remained or reappeared. I might therefore say that no remedies were necessary; or that, when intermittent was present, we should simply attend to that disease; though I think it expedient that purgatives, but not the highly debilitating ones, should be used; imagining, that, under a moderate practice of this kind, at least at the commencement, the disorder has, in my experience, terminated more rapidly. As far as local remedies, short of cupping or leeches, can serve to amuse the patient and give the appearance of acting, they are, of course, admissible; and thus also may we have recourse to those internal stimulants habitually used in ancient palsies, since these coincide with the general system of cure in all the diseases under consideration.

Now, under the obscurity which attends all cases of direct and primary palsy, without previous apoplexy, and particularly as occurring in young subjects, I cannot avoid extending these remarks somewhat further, that I may be sure of embracing the cases for which I cannot, with certainty, assign the cause.

If Intermittent is produced by cold as well as by Malaria, if Neuralgia under its many forms is much more satisfactorily proved to be produced in the same manner, and if Intermittent and Neuralgia, both, can produce palsy or be accompanied by it, all of these being facts proved, there may be a much more intimate connexion between direct primary palsy and Neuralgia than we are yet aware of, or the actual condition of the nerves under the former disease may bear some resemblance or analogy to that which exists in the latter. And the exciting cause also may often truly be the same, though acting here in a manner somewhat more rare than it does in general; while, as to the proximate cause, in any case, we are as yet most profoundly ignorant. That the former is so in the instances of palsy following cold, is plain; and, here, it becomes truly probable that the proximate cause, or the morbid condition of the nerves is also, in the direct palsy of this nature, what it is in the palsy accompanying or following intermittent and Neuralgia.

These are but analogical arguments, I am aware; but none better founded can be produced until we become acquainted with the real condition of the nerves under these diseases, or have mastered the proximate cause. Yet they involve a high degree of probability as to the real resemblance among these apparently different palsies; and if that probability can be rendered a certainty, this should become a guide to the practice; since that which has been found injurious in the palsy of neuralgia and intermittent, should also be injurious in every primary palsy, or the reverse. And further, if a careful observation of the actual practice and its results, shall confirm this view, then have we all the evidence which we have in so much more that belongs to physic, and at least sufficient to form the basis of a rule of practice, until we have arrived at a more profound knowledge of the pathology of the nerves.

I cannot here venture to treat the whole subject of palsy, as it would form an unjustifiable digression from the main subject: but I am backed by a great weight of authority from the most ancient times of physic, when I declare my belief that the treatment of simple palsy by the evacuant system is pernicious, and my further conviction that it is actually, and at the present day, the cause of the diseases which it undertakes to cure: that it not merely aggravates and renders permanent, attacks of palsy which would otherwise be transitory, but that it induces on those a variety of accessory evils; and further, that, in itself, it produces cases of palsy that would never have occurred; and all this without regard to the cause, or without my supposing it necessary that this should have been Malaria, or that the disease should in any way have been connected with Neuralgia or Intermittent.

Were I here justified in going more deeply into this question, I might easily extend these arguments much further; and embrace also the whole as it concerns apoplexy no less than palsy. I am as little entitled to this now, as I am unwilling to enter upon a criticism which would then become unavoidable, upon the many very loose writings, comprising even very recent ones, which have appeared on this subject: but I will refer to the opinions and experiments of Serres for some particulars, which, in spite of the opposition they have experienced, are of more real value on this question than any thing which has yet been written respecting it.

If it is said that no competent physician would confound a palsy really requiring blood-letting with one demanding the opposite treatment, this is not the question in hand, but what the practice actually is, when we take the entire mass of cases and the entire mass of practitioners. And if this be done, I believe it will be safe to say, that in ninety-nine cases of a hundred of recent palsy, blood-letting is used as the first remedy, without

inquiry as to the cause, or without regard to the state of the patient, or to any one circumstance; while if the least justification can be found for repeating and renewing it, though that be a mistaken one, and often without any justification at all, it is repeated, together with the rest of the system, till the patient's state becomes hopeless or he is despatched to his grave. Most generally also, this is a merely empirical practice, mechanically followed, like so much more in physic; while if there be a theory, it is the sweeping, and most often false one, that the disease is in the brain, and consists of effusion, or excess of action, or aught else which may appear to justify such practice; while it seems also to be forgotten that a portion of the nervous system can and does suffer, not only loss of power, but other diseases, independently of the brain, or independently of excess of action in the circulating system: as happens in paraplegia from partial cold, from poisons, local or otherwise, such as in the case of lead in both modes, or from intermittent, or as the consequence of Neuralgia.

But I dare not pursue much further a subject which would lead me beyond my proper limits, while I must, however, point out one fact, in medical arithmetic, which seems strongly to confirm what I have here said respecting the erroneous treatment of palsy. Its recent increase, in point of numbers, is matter of familiar observation; and it will be found to have commenced and kept pace, as nearly as that can be estimated, with the enormous recent increase in the frequency and severity of the evacuant and debilitating system; while the study of individual cases can leave little doubt, that the latter is the cause, when it appears a necessary consequence to vulgar observers, and to those who, following an imaginary system of cure, do not perceive that they are themselves the causes of the diseases which they erroneously strive to remedy.

If I could fill pages with cases illustrative of this assertion, I must be content with much less; because I dare not enlarge further on a subject that falls somewhat beyond my own boundary line, and because I have already pointed out instances, within that limit, where the bad effects in question have followed from that practice, in cases decidedly connected with intermittent.

In one of those, the subject, a slender and delicate man of middle age, had been exposed to cold, while in a state of inaction, for so many hours, that on attempting to move, he was thoroughly benumbed and partially insensible. A surgeon, who chanced unfortunately to be present, conceived that he was about to suffer apoplexy, (it would be difficult to conjecture why,) and immediately proceeded to perform venesection. This was followed directly, by an imperfect hemiplegia, or an increase of the numbness and insensibility on one side; and as palsy

must necessarily justify bleeding, the operation was repeated, together with all the other aids, till a complete hemiplegia was the consequence. More blood-letting, more cupping, and more of all the usual remedies of this class, brought on at length, and gradually, but not under a twelvemonth, epilepsy, fatuity, and death; each addition of the artificial debility aggravating the disease, while each aggravation, attributed as usual to the disease, and not to the remedy, was followed by the more vigorous use of this.

But this, in some form, is of every day occurrence: and I may now give a case of the reverse treatment. Under the very same circumstances, another person was seized with a similar attack, in the same manner, and in the same place, while the effect of cold had proceeded so much further, that the power of speech was nearly gone, as were the intellectual faculties. The same theory was offered, and the same proposal made; but the practitioner chanced to take a different view of the cause and case, and this patient, by the aid of heat, and of wine given liberally, was perfectly restored to health within twelve hours. That the event would have been what it was in the former case, had the treatment been the same, is most undoubted; but few, unfortunately, whether patients or ordinary practitioners, view events in this manner; the former, as I once before remarked, giving the discerning and successful physician no credit for the prevention of a disease, while they reserve all the praise for him whose malpractice has produced or aggravated one, but whom kind nature has opposed in the production of absolute death; while the blind practitioner goes on as usual, unable to anticipate what might have happened, but has not, because he can see nothing but what is before his eyes, and is incapable of reasoning, inasmuch as he has no grounds and no philosophy. Thus is it the daily fate of him who can foresee events because he knows their causes, to prophesy, like Cassandra, and, like Cassandra, not be credited; and, thus, in other cases, does he deprive himself of all his rewards, of profit and praise alike, because, foreseeing, he has also prevented. Hence also does fame follow, as it precedes, the Sangrados: since, under the same discerning philosophy, it is to him of most deaths that the most difficult cases have fallen, while, for them, he has of course exhausted all the skill of all physic. "All that could be done has been done:" but the angel of death is he who knows where was his best ally.

To conclude, if throughout this work, I have thought it a duty to draw all my inferences from my own observations, considering that thus only I could avoid being misled, or prejudiced, or thus at least avoid adding one more copy or compilation to the heap in which physic abounds, and if every authority which I

have here introduced was not sought for until the entire work was written, I am the more pleased that I can find authorities on any point, to confirm what had occurred to myself; while such a concurrence of views between different persons, all equally unbiassed by each other, ought, to the reader, to be an additional warranty for their truth.

Thus, on the subject of the connexion of palsy with Neuralgia, I find numerous cases, of which, however, I need notice but two, as I consider it a point established. It is from Cooke that I quote a case of C. Bell's, where palsy with great debility followed what he calls an inflammation of a nerve. And in this case, the ulnar and fibular nerves were affected, and as it appears from the sketch, for two years; the nerves being tender, or suffering from a slight pressure, while the pains were periodical; alternating, further, between the feet and the hands. It is impossible to find a better marked case of the regular intermittent Neuralgia, even to the tenderness as I have here described it: while in addition to the fact of the paralytic consequences, for which I have chiefly quoted it, it is plain that it was not so considered, at least by the author from whom I borrow it: besides which, the having called it inflammation of a nerve, while it proves that its nature was not understood, is a circumstance which tends to confirm the criticism which I have here made on a reputed inflammation of the spinal marrow.

In a case of Pearson's, where the Neuralgia was in the thumb, there was a partial palsy of the brachial muscles, with pain and debility of the lower extremities, attended by nearly an utter inability in walking. These are, all of them, symptoms which have been here pointed out on several occasions, as occurring where there was much general disease besides the local one, nor have I any doubt that the usual symptoms of chronic intermittent were present in this case, or that there had existed a previous disorder of this kind; while it is plain, from the mode of practice adopted, namely, by excoriation, although it proved successful, that a correct view of its nature had not been formed.

These two cases may suffice: and I have more than once said what I am here desirous of repeating, that while I regret the necessity of such criticism, I consider it most necessary; and the more necessary, the higher are the authorities by which such incorrect views have been entertained and such inefficient or pernicious practices recommended. It is true, that to explain any physician's case otherwise than as he has explained it himself, can scarcely fail to be offensive, while it must needs be often hazardous; but while, without this, I could not possibly enforce what I have here held out, to those who have not as yet made up their minds as to these diseases, or who have yet to learn, it is also important that obscure cases should, as far as

possible, be removed from the class of mysteries, and reduced under the principles to which they belong.

This explanation will, I trust, be received as an apology by those whom it may interest; and I therefore shall not scruple to add, that when, by one writer of note, blisters and vesicating liniments are recommended in these cases, the disease has not been understood; and that when another of no less name recommends leeches, cathartics, the local application of laudanum, opium, and colchicum, going a round of experimental remedies, it is a proof that he had formed, not simply an incorrect opinion, but no definite opinion at all of the nature of this peculiar variety, nor, I may add, of Neuralgia in any form. And whatever exceptions there may be, unknown to me, this criticism, as far as I do read or converse, includes the profession at large; while, when I perceive in Swan, Heberden, and others, occasional instances of a correct treatment, it is still without corresponding views, as is proved by the vacillation of the practice: by changing from the useful remedies to those of a directly opposite nature, or, not unfrequently, by a general traversing of the whole pharmacopœia. If Hill has used arsenic, as others have recommended iron, it is just as Heberden included bark among his attempts on this disease.

And let me remark in justification of this criticism, that while I have here proved these remedies to have been used empirically, no confidence can ever be reposed as to the adoption and application of any empirical remedy, though it should even be a proper one, until the principles to which it should be affiliated have been explained. It is the fate of such expedients to be abandoned as they have been adopted, under casual disappointment: and it is therefore only when we know what their principles of action really are, that we are induced seriously to trust to them, to persevere in them, to modify their application, or, after failures which we can often thus learn to explain, to return to them again. It is true that we do not know how the tonic remedies, as they are called, act, even in the case of intermittent: but we have learned by experience that they are the remedies, and we have also learned how to apply them and modify their use, which is nearly all that we know of any remedies in any disease. The object is therefore attained as far as it can be, when Neuralgia has, on this ground, been associated to intermittent: and thus, even had the true remedies been always adopted in an empirical manner, which is far indeed from having been the fact, a great gain would have been effected by removing them and associating them in the manner I have here attempted.

Such is the criticism which I considered an inevitable duty; and I have purposely avoided naming individual authors as far as this could be done. I will not therefore quote further cases

or further opinions; that I may as far as possible escape this disagreeable task; but shall refer those who desire to see what has been done and thought on this entire subject of Neuralgia, to Heberden, Pujol, Sauvages, Fothergill, Hutchinson, Bew, Lizzars, Carlisle, Ash, Hill, as to others whom I have been obliged to quote more pointedly, and to many more whom I need not here name.

CHAPTER XXI.

On the Cure of Neuralgia in general.

IF I am right in my theory of Neuralgia, if it is a disease, under whatever form it occurs, depending on a constitutional cause or derangement, though the prominent symptoms are local, and if it be a mode of intermittent fever, or, fundamentally of the same nature, it might have been anticipated that I should have recommended the same system of cure, even had I not already been compelled, in treating some of its varieties, to enter partially on that subject. On this view, in fact, was founded, far more than twenty years ago, the system of practice which I applied to these disorders; or it was a theoretical mode of cure, derived from that theory of the disease in general which I then thought the true one, and which a continuous observation, ever since that time, has tended to confirm. And if the theory has been thus confirmed, so have the correctness and utility of the practice; as it has never failed me in any case of recent origin or moderate duration, as it has even succeeded in numerous instances of very long standing, and in many at the same time, which I had received from other practitioners as incurable diseases; failing only in those inveterately chronic cases, analogous to the simple intermittents of this same character in which the same remedies equally fail; and further, being chiefly unsuccessful, possibly, when the visceral glands have been hopelessly diseased.

Though I cannot well avoid detailing the modes of cure in this separate section, since the omission would leave a blank to many medical, and to all popular readers, should such there be, it is plain that I must do it under considerable repetition; since much of the detail must resemble what has already been said on that subject in the case of intermittent. And also, as under

some of the varieties that have been described, I could not avoid entering partially on the subject of the cure, on account of certain peculiarities attending those, and because a general account of the mode of cure would have been confused by those particular details, I must claim the indulgence of the reader for what must be considered a blemish in every composition pretending to philosophy. It must form my apology for this, as for all defects of arrangement and all prolongation, that my task was a very complicated one; since it has not consisted in a mere description of acknowledged diseases, but in a complicated attempt to establish, to prove, and to describe, and further, to pull down, not one building but a variety of old ones, and on their ruins and from their materials, to erect a totally new structure, and one as single and simple as it is new.

In treating of this subject, I must equally, as on former occasions, take notice of what I consider to be wrong in the past and the present practice, while I describe what I conceive to be right; becoming thus again a compelled critic, as must be every one who, in attempting reform, must oppose prevailing or general opinion. And if it is always necessary to combat most strongly where the opposed authority is the most powerful, no where can this be more necessary than where that authority consists in universal opinion. It is, still, an odious office; but I know not who ever succeeded in steering exactly between that criticism of imputed error which the opposed party brands with the term acrimony or worse, and that timidity of over caution which defeats the object in view; leaving the truth, if truth it be, to quail and fly before the enemy to which it shows a misplaced tenderness. Where no offence is intended, it is a weak timidity that fears lest it should be taken; as it is a vicious one which suppresses what it deems useful, from personal apprehension or a cowardly love of peace.

The first remark which I must here make respecting the Cure of all the Neuralgiæ, though already made more than once, is that they often disappear without medicines, and even without apparent remedies of any kind, by a spontaneous action of the constitution; while they are also truly cured by circumstances that are not noticed, and to which the credit is not given. And it is an important remark; because it often explains the reputation which has been gained by particular modes of cure, which have been, in reality, either nugatory or injurious in themselves. And thus it is that improper practices are persevered in from mistaken observation: a conclusion which I might apply in great detail to every mode of Neuralgia, and also, as I have in fact, already done, to Intermittent.

If these spontaneous cures are most frequent in a recent disease, they are not uncommon even in the most confirmed ones;

and they seem, in these latter cases, connected with that entire change in the constitution, at some age, often vulgarly called climacteric, which is marked by many other well known circumstances, and, in females, by one too familiar to name. Thus it is that in this sex, very remarkably, the nervous diseases of many previous years vanish at this time; as, under this particular head, the toothach will very generally be found to do; as well as that tendency to the frequent petty or nervous fevers which belong to remittent or intermittent, and much more that I need not detail.

In both forms, whether recent or chronic, neuralgiæ of all kinds cease also on the occurrence of some other principal disease, as equally happens in intermittent: though perhaps the most frequent of the real, but little observed causes of a cure, will be found in change of air, as it is called, or a general change of habits. And, this, in fact, is a direct remedy of great power; while it is amusing to remark how often it is actually used, when the practitioner himself has not so intended it, when he has applied to it from despair or weariness, or that he might rid himself of a patient's reproaches, or when, mistaking the nature of the disease, he has resorted, either blindly, or for some other purpose, to such an expedient.

Thus also are all the neuralgiæ, and the recent ones in particular, occasionally cured by mental impressions, as I have shown with respect to intermittent generally; and numerous and powerful as these are, peculiarly extensive as they sometimes prove in our own country, from well-known causes depending on the condition of England, they must be considered as amongst the most frequent of the unobserved modes of cure, causing a great extent of error with respect to the operation of presumed remedies. And amongst these, if apparently trivial, must be ranked a cause often no less efficacious than it has been made a subject of ridicule, namely a change of physicians, or the acquisition of a new and strong confidence in a new and reputed person. Hence an actual benefit often derived from empirical remedies and empirics, or from physicians of popular, if false reputation, or of peculiar, perhaps insolent or coarse manners: an influence extending widely over all the nervous disorders, of which so many occur from the general cause of disease which includes the subjects of this essay.

This in reality is the cure by charms; but in the present state of society there is little chance of benefit by direct methods of this kind. Physic however does furnish even these means; as there is scarcely an individual existing, even of the most enlightened mind and liberal education, who can view medicines as acting according to scientific and rational principles, and who does not, in reality, place that kind of confidence in their pow-

ers which marks the belief of the early and uncivilized stages of society; viewing them as mysterious agents, almost as incantations, however he may disclaim the opinion when thus dissected and presented to him. Hence that universal confidence in substances and formulæ and numbers and quantity, and hence especially that enormous consumption of Empirical remedies; compounds found in every pharmacopœia, but divested of all their virtues under this form, because separated from the mystery and the incantation. The physician who attempts to reason with his patient on the effects and utility of his remedies, pays a most unmerited compliment to human reason: and while he will fail to influence, he will not be very long in discovering that he will shortly have no patients to enlighten or to cure. With the loss of the mystery, the merit is at an end: and he who proves himself to be the true philosopher and physician, is precisely the man who will never be trusted.

If medicines, even be they bread pills duly concealed, form a mode of cure in the Neuralgia, as charms, the same effects are produced by any other folly or superstition to which fashion may have given its sanction among the foolish and the superstitious. Hence the real, not fictitious effects of animal magnetism, metallic tractors, and the like; and thus it is, that an appended magnet does truly cure the toothach; this being the Neuralgia of all others which is subject to be transitory, or not firmly fixed in the habit; just as it is frequently removed by the sight of the instrument or the operator, as I formerly remarked. And how efficacious a system of charming, when believed in, is, I once witnessed amply, in an old woman who had this reputation, and whose success among the lower orders was very great; while I was induced by curiosity to send her a case of Neuralgia (Tic) which I had, for some length of time, treated in vain with arsenic, and which ceased immediately after the application of the charm, consisting in some gibberish.

How far such modes of cure can be adopted and rendered applicable to patients, must be left to the ingenuity and observation of practitioners. If of little real value, it was not the less necessary to point them out, as explaining in a great degree the false reputation acquired by many medicines.

As happens in intermitten, a fit of Neuralgia is often prevented by stimulants and narcotics given before the paroxysm: and, on the same principle that the disease itself is cured in the former cases, that is, by breaking the habit of recurrence, may the entire Neuralgia also be removed. I need not specify, either the substances or the mode of administration, since this was sufficiently explained in treating of the cure of Intermittent on this principle: but it is an auxiliary at least, if no more, that ought not to be neglected wherever a reasonable prospect of uti-

lity appears. This partly explains the effect of Intoxication in removing such disorders: though as that will act advantageously at whatever time it happens to be adopted, it is probable that it operates by exciting another action, or a temporary artificial disease, in the system.

I conjecture that we must thus also explain the action of the narcotics, which have been so strongly recommended in Neuralgia, and administered in such an outrageous manner. They are not, however, the real remedies of this disease in any of its forms; while, as administered to diminish the pain, they are of very small value. Whoever has trusted to them much, will know from his own experience that I advance here nothing but the truth; while I have myself received from other practitioners, many cases where they had been pushed to even a dangerous extent, without the slightest advantage, and where the disease was speedily cured afterwards by a proper administration of bark. It is abundantly obvious that they have been recommended and adopted without a correct view, or any view at all, of the theory or nature of this class of diseases: empirical remedies against a symptom, according to the usual mechanical practice of physic; means of quelling pain, without inquiring from what that pain proceeded.

And on the same empirical system, the whole army of these poisons has been mustered, from opium to belladonna; while an occasional success, from some of the causes already stated, has been made the ground of a general recommendation. I am even suspicious that they have done harm; having seen one case of mania immediately following their extravagant use in the Tic, and in a patient who could not have been suspected in the most remote degree, of such a previous tendency; while the entire freedom from that disease for thirty years, through the whole of life in fact, after a duration of two months, confirmed this opinion. Nevertheless, that the narcotics were the exciting cause, is little more than a suspicion; inasmuch as mania is the produce of the disease itself, though probably not unless aided by improper treatment, and particularly by the evacuant system.

But the chief and the most energetic remedies in Neuralgia, be the form what it may, are the tonics; and of these, as in intermittent, the most efficacious are bark and arsenic. Each, in its class, may stand at the head of a list which it is fruitless to enumerate, since it is so well known to even every druggist; nor need I repeat what relates to the mode of using these, since it is precisely the same as in intermittent fever. That there is any one vegetable tonic more efficacious than bark, or differing in the mode of action, as far as we now know these remedies and their powers, I am inclined to doubt, but not to deny that such

do exist, since I consider that we are very far from having exhausted the medicines of the vegetable kingdom; so far indeed, as rather to be in an absolute infancy of knowledge on this subject.

If modern physic has done wisely in rejecting the endless and useless list of the plants found in ancient pharmacopœias, it has shown very little wisdom in resting nearly content with what it has retained; particularly in an age when the great extension of experimental and accurate philosophy, and the absolute creation, we may almost call it of a new chemistry, added to which, I might say, the almost further creation of a particular branch of this as to vegetables, have furnished means of accurate investigation, formerly unknown as unsuspected. The very fact that a plant so void of obviously sensible qualities as *Digitalis*, should possess the extraordinary, if yet almost useless powers which it does, ought to be in itself a sufficient stimulus to investigations of this nature; a temptation too, much increased by the recent facts which chemistry has proved and is daily augmenting, respecting the infinite variety of radical or essential compounds or bases.

To return; while, with bark as the type, the physician may command the whole range of astringents, aromatics, and bitters, he is also bound to try one where another fails; since thus may it possibly be discovered, even that what is most efficacious in common intermittent may not be most so in the *Neuralgiæ*, differing as they do in respect to the local action in the latter. But as I can, on this, say nothing of any great value from my own experience, I must be satisfied with having pointed out the leading principle and the road to be followed; as I need also do no more than suggest those combinations, whether of these vegetable substances themselves, or of the same with narcotics, the occasionally superior value of which in intermittent is well known.

If arsenic be admitted as the type of the metallic remedies, it is equally easy for the physician to command the whole range of these: so well known, that I could add nothing respecting their powers; while I much suspect that very fanciful values have often been attached to some of them, from that common mechanical system which looks more to variety of medicines than to a knowledge of diseases. Much has indeed been lately said respecting the especial value of the carbonate of iron (as it is generally called) in the common *Neuralgia* (*Tic*;) while in reality it has been administered as a merely empirical remedy, and without system. In my own experience, I had resorted to it long before these recommendations, both in intermittent and *Neuralgia*; but without discovering that it possessed any collateral merit above arsenic, while far less generally efficacious as

a remedy. But, on all these remedies, I shall be very glad to hear of the experience of others, since I have wanted both temptation and opportunity to do them justice. As to the value of arsenic compared to bark, I can only repeat what I said formerly, that I have found it more generally efficacious in Neuralgia, while it has appeared less so in intermittent: often acting almost like a charm on the pain, and even in cases of many years' duration. But on this also I am ready to be corrected; as I am satisfied that the experience of no one individual, even were it far greater than mine has been, is sufficient to decide on subjects of this nature.

If I have thus said all that appears necessary on what I consider the essential or fundamental remedies of Neuralgia, I must also add that I make no distinction as to the forms of the disease; except that I must hesitate as to sciatica, from want of sufficient experience in that variety. I should here however repeat, what I ought not to omit in this place, that from a medical friend residing in a district where this disease is common, or endemic, to whom I had recommended this plan, I have received the strongest testimony, (added to thanks,) of the value of arsenic. In every other form, the success has been similar, and, in every case of moderate duration, satisfactory; though less so, as I shall presently show, in ancient cases. Thus, whether it be the Tic, or the similar neuralgic pain of other distant nerves, or the hemicrania, or the toothach, or the rheumatism of the face, or the rheumatic ophthalmia, the use and efficacy of these remedies is the same, with such additions respecting particular cases, as I have already passed under review in their proper places. And it is also the same, as I formerly remarked, even when the Neuralgia is the produce of local injury.

But I must now remark, that there are two leading circumstances under which they very often disappoint us, and where, unfortunately, as in the case of intermittent similarly modified, physic has as yet discovered no expedient to supply their place, while I have none to offer.

This happens, first, when the attacks of the disease are very irregular, and secondly, when the disorder is of very long standing; while, in exact correspondence to intermittent, these two states are very commonly united. But if we often fail in such cases, we are not absolutely without some means of attempting relief, and those attempts are often also successful.

In irregular or ill marked intermittent, when recent, or not of very long standing, and particularly if other circumstances justify it, a single blood-letting will sometimes render the type regular, as I formerly remarked; and thus, though I have no experience to prove it, I should not hesitate to make the same attempt in a Neuralgia, under the same circumstances, though con-

vinced of the infinite evil of this system when persisted in. The same effect will sometimes also be produced by an emetic, but perhaps much more frequently and advantageously by purgatives, and especially by calomel; while, as a mere speculation, it is always advisable to have recourse to such medicines, as a preliminary to the administration of arsenic or bark.

Thus also does mercury, given so as to affect the constitution, in Neuralgia or in intermittent, sometimes cause these tonic remedies, to be efficacious when they have failed before; while it is also, in itself, an occasional cure. It is possible, that, in this last case, its useful action may resemble that of the other metallic substances, whatever that action, called tonic be; while, apparently, also, it acts here as in intermittent, in exciting another disease, or a new action in the system. Whether, in the former case, or in the latter, it acts by affecting advantageously diseased visceral glands, is a question which I cannot answer; while if I do not disbelieve it, neither am I willing to believe what has not been demonstrated, and which is not proved because it is popularly believed, like much more in the lax philosophy of physic. But be the theory what it may, a judicious physician will, without further detail, see in what cases, in what mode, and to what extent he may resort to mercury in the Neuralgiæ, and in what manner he may unite its use to that of the essential remedies.

But it is in the Neuralgia when inveterately chronic that we are most often foiled; and as, unfortunately, the greater number of cases which apply for relief must now be of this nature, from that want of success hitherto, arising from a deficient method of cure, which has rendered the majority of cases chronic ones, and perhaps still more from a pernicious system of treatment which has confirmed many so as to render them truly incurable, the consequence has been to throw a doubt on the value of the remedies here recommended. It is plain therefore, that, if we take cases arithmetically, these remedies cannot have a fair trial; nor will this happen until many years have passed; until the incurable, long standing cases have died away, and a new generation of the same diseases shall arise under a new practice. I shall be much mistaken, though I shall not live to see it, if Neuralgia will not then be found a tractable disease compared to what it has hitherto been; or even than it would be now, were the most correct imaginable practice adopted to-morrow; that it will at least produce no greater average of rebellious cases than Intermittent, though, even then, the world at large will be deeply indebted to him who shall discover the means of alleviating these curses, or rather, these varieties of one wide and deep curse.

But there is yet another reason, which, while it tends greatly

to render Neuralgia chronic and incurable, will long be an obstruction to a fair judgment on the value of these remedies; as long at least as till they shall become universally empirical, like medicine in general; if indeed we can ever look with satisfaction to empirical medicine. This is the changeableness, or the caprice, of patients, or their impatience. Anxious, very naturally, for a speedy cure, but without discernment to choose, and without reason to be convinced, led away in succession by name after name and recommendation after recommendation, the result is that no steady system is pursued, that the work, perhaps half done by one, is reversed by the next; and that even he who could effect the object, were he granted time and confidence in what demands both, is foiled, and perhaps even induced to doubt the value of the means which he has not been allowed fairly to use. It is the chronic disease especially, be it this or any other, which, above all, demands one continuous physician and system; while, by an unlucky perversion of reasoning, unlucky however for themselves alone, since to the profession at large it is a profitable one, it is exactly the situation in which the sick forget their own interests, to change from physician to physician.

To proceed. In such inveterate cases especially, but in all, in fact, the first fundamental proceeding should be to examine the habitation or situation of the patient, and to remove him from the causes, if causes be present. Here it is, that a critical knowledge of the laws of Malaria, and a nice discernment as to ground, or soils, becomes of the highest importance; and here then we see, as in Intermittent, how a careful study and an accurate knowledge of what forms the first part of this Essay, is indispensable to every practitioner in medicine; while patients at least may grieve to reflect how utterly the fact is otherwise.

Without such removal from the exciting causes, a permanent cure in such cases is almost hopeless; while he who knows how to perform his duty and does perform it, will equally take care to explain to the patient what he is to avoid in a new residence or in travel: labouring to impress him, if I may use a term almost ludicrous, with an absolute hydrophobia.

This alone may be the cure; while it is also plain that as far as change of air or habits is a remedy, it will operate in two ways. And therefore, in any case, though the actual situation be free of suspicion, it is to such change of place or air that we must trust as the leading remedy; a remedy in reality which succeeds often, after every thing else has failed, here and in the chronic intermittent equally. And as far as there is a choice of air or place, that change should evidently be to a dry soil and a free air; yet not to a cold one, since cold is in itself a renewing cause. Hence the obvious additional caution respecting expo-

sure to cold, especially to night air, dews, east winds, and so forth; while I have no doubt, and from sufficient experience, that the far greater number of the habitual cases of Neuralgia are rendered such by the continued application or frequent repetition of the original causes; each attack being a new disease, in a certain sense, in a susceptible habit: facts which show most strongly the necessity of a correct theory, as they bespeak past inattention and ignorance. On the necessity of warm clothing in aid of this, it would be superfluous to dwell.

Before I quit this subject, change of air, I must introduce a fact of some importance, although somewhat out of place, since it relates to fever and not to Neuralgia: the apology being that I was not in possession of the information when that volume was printed. From the judgment which I am compelled to form on the materials furnished, the case of Alicante, in 1811 and 1812, offers an example of peculiar value as to the advantages of removal in the case of such endemics; whenever at least, a government possesses sufficient powers in sanitary police. In this case indeed, the proceeding was itself founded in error, as the fever was judged contagious; but I cannot yield my opinion even to that of the Physician Lanuza, any more than to the popular one. The error is too general to be remarkable: but the facts furnished me by the inspector of health, Morillo, himself employed in the cordon of exclusion, are unanswerable. It is true that the fever ceased on removing the sick to the country; but not one instance occurred of the disorder having been communicated personally, while this much-discussed fever was then limited, and always has been so, to one portion of the sea coast, and while further it has always occurred in the season, as well as in the place, of remittent fevers, and in no other. The contagious imported fever of Gibraltar, joined to vulgar opinion, appears to have misled the public at large on this subject; but if my own opinion be correct, as I esteem it, it is peculiarly important to remark that an endemic remittent may exist within a town in such a manner as to deceive, from the numbers affected and other causes, just as it has so often produced similar deceptions in ships, and that in such cases it will be as effectually checked by removal to a salubrious spot as if it had been a contagious one, though on different principles. To return from this slight, and not absolute digression.

Supposing all these preliminary cautions taken, the rational object, as to medicines, is, to attempt the cure of the attack by all the means already described, as soon as it appears, and as often as it returns. Like intermittent, it is a disease of habit: and by a perpetual interruption of that habit, it must be met. And here it is, that the interest of the patient is also especially concerned in placing his confidence in some one individual;

giving him the charge with the means, and not arguing, as usual, that the disorder returns because he knows not how to cure it.

What remains as to the general treatment, relates to diet. As in intermittent, whether recent or chronic, I have no hesitation in saying that the usual full diet of persons in health, with a rational use of wine, forms an essential aid to the cure; and that it has often proved a cure in itself, when used as replacing the opposite and pernicious system. But I shall not enlarge on this; as the evils arising from low diet are involved in those belonging to the debilitating practice on which, even after all that I have said, I must offer some additional remarks hereafter.

It still remains to notice the local remedies which have been thought of use in the Neuralgiæ; though in speaking of these, I may now omit what concerns this ophthalmia, and the toothach in its several forms.

Attempts, proceeding as usual on no principle but the vague one of relieving pain, have been made to remove that of Neuralgia, whenever occurring, by the application of stimulant and narcotic substances: a long list too well known to require enumeration. As resorted to for headachs and rheumatism of the face, the use of camphor, opium, alcohol, ether, essential oils, and so forth, are peculiarly familiar; and similar practices are scarcely less so in sciatica. In the slenderer cases or attacks, this kind of practice does occasionally give temporary relief, but without doing more; but it is fruitless to expect advantages from it in decided cases, or severe affections of this nature, be they what they may; while, to hope for a permanent cure in this manner, otherwise than casually, and through the influence of the imagination, is little less than childish. Nevertheless, as no inconvenience can arise from these remedies, beyond the trouble and expense, and as they serve for occupation both to physician and patient, they may be permitted to take their turn as usual, provided they do not supersede what is more essential.

As I formerly observed, however, I cannot speak in the same accommodating language respecting blisters, though distinctions are here necessary. I have never yet seen a case where, if the blister was applied near to the disordered nerve, the pain was not aggravated: at least this happens remarkably with regard to the general pain which appears to have its seat in the ultimate ramifications, and, consequently, to be in the skin. Such also, I have since found, was the experience of Heberden: though whatever may be the merit of his essay, it is plain, as I formerly remarked, that he had formed no theory of the disease, and that his practice, even when he succeeded in curing it by bark, was purely tentative and empirical. And very often, where that particular pain was not present before, it is induced by those applications; while, in the other cases, the extent, as

well as the severity, is often increased in an extraordinary manner, particularly should the application be extensive or persisted in. What is called a perpetual blister, is almost always a positive aggravation, not only of the local disease itself, but of the general irritability and disorder of the system, which are often sufficiently severe in themselves. But I can understand how blistering, particularly if severe, applied to a somewhat distant part, may sometimes relieve the Neuralgia, on the principles already laid down of exciting a counter impression, or a new disease: an effect indeed that may even follow where this remedy has been applied on the part itself. Such is the explanation of Pearson's case, where a severe disease of this nature was cured, yet, not till after much time and very violent treatment, by the use of rubefacient, or rather excoriating applications; while I may remark on this case, as I have done respecting Heberden, that the practice was similarly tentative, and that no theory of the disease had been formed. Such seems the method of analyzing and estimating the use and action of this class of applications; and it will remain for physicians to judge how far they will continue to make use of it in particular cases, as an aid however, rather than as a means of cure.

What I have said on this subject is equally applicable to issues and setons, with such modification as the obvious differences may here render necessary. It will be easy to see where the local disease thus artificially produced, will increase the local evil: while it will be not less so to judge of the bad effects of setons, particularly if active, on that principle already laid down, which condemns, in all these disorders, the adoption of evacuating and debilitating proceedings. On this and the last subject, I might have made the application particularly to sciatica; but having less experience in this particular modification than I think necessary to allow me to speak respecting its peculiarities, I shall only request of physicians that they will review their own experience and practice in it; taking care that they do not mislead themselves respecting the imaginary effects of their remedies; so common a source of error in all the Neuralgiæ. The great points to be kept in view respecting all these local applications, are these; that the disease is a general or constitutional one fundamentally, not purely a local one, and that the local affection is not one of the circulating system, to be eradicated, as certain inflammations are, by a counteraction, or by exciting a diverting action in the neighbouring vessels. To act here on this principle, is to pursue that mechanical and unreflecting system of practice which I have so often condemned.

Hopes have been entertained respecting the utility of electricity and galvanism; not unnaturally, however empirical the views. It might indeed, even on a more correct theory of the

disorder, be almost expected that the electric shock at least, acting so distinctly on a nerve, and capable of being directed very near to a diseased one, if not exactly through it, might have the power of really changing its disordered action; but while my own attempts, pursued on a very great scale for very many years in a military hospital, and for the direct purpose of ascertaining the value of this remedy, have had no success whatever, I cannot find that others have been more fortunate; though I can easily imagine that such a disease might thus be cured through the influence of the imagination. As to the Galvanic electricity, the impression is comparatively too trifling to permit us to believe that it can be of any value; and the same remark applies to the gentler electrical operations.

The only local remedy from which I have really seen such advantageous effects as to induce me to recommend it, is the application of steam directed by the usual means of a pipe, to the affected part; while of course, the same reasoning applies, if in a minor degree, to fomentations and hot water. The value of these latter applications, indeed, in rheumatism of the face, in the rheumatic or neuralgic ophthalmia, and in sciatica, has long been known; if, from their too great simplicity, and their not being "made up in the apothecary's shop," they are less valued than they deserve. But while I consider the blast of steam as the most effective of all the modifications of this practice, I have often succeeded by means of it, in removing, almost instantaneously, a paroxysm of the severest Neuralgia of the face, and, occasionally, so as to put a stop, in the chronic disease, to an entire relapse, which, from all the patient's past experience, was expected to last some weeks. Should this success be confirmed by the trials of others, it will therefore become an auxiliary at least of some value; while I have already attempted to impress on my readers the necessity of meeting the attacks on all occasions, for the purpose of breaking through the habit in that which, like chronic intermittent, is often a disease of pure habit.

But even where this application does not remove the proper neuralgic pain, it is still a valuable auxiliary; and as far as the particular purpose here in view is to be served, I know not that it has ever failed me. In many cases, as I have often already remarked, there is a diffused and general pain, distinct from that of the nerve itself, arising from an affection of the minute ramifications, as there are pains also propagated, at times, along the communicating greater branches. And further, in very severe fits of Neuralgia, it almost always happens that a general soreness, or tenderness, or even pain of the neighbouring parts, remains long after the greater pain has ceased; considerably distressing, and particularly to those whose entire system has be-

come irritable from a long continued or a severe disease. Here the utility of warm water or steam, as circumstances may dictate or allow, is considerable; generally removing all these subsequent pains in a short time, and bringing on a general tranquillity of the system. Thus should I expect that this remedy alone would remove those slighter cases, or fits, which I have described in treating of these disorders formerly, in which no important nerve is acutely pained; but in these I have, however, little experience, since a physician, especially, is generally deprived, in consequence of the present division of practice, of the power of studying, or prescribing for, diseases of a slight character.

I need not apply this reasoning to particular cases, such as headaches, sciatica, or what not; as this would be to treat my readers like empirics, who must have a specific direction for every symptom of every disorder. He who understands the general theory of the disease, and of the remedies also, can never be at a loss; and this, in truth, while it is the only real knowledge, is all that a writer can well attempt to inculcate. I may however go on to observe, as it may make more impression here, and as I did not dwell on it formerly, that the same practice, extending of course to the entire warm bath where that may be necessary, is valuable in all the intermittents with anomalous symptoms, though I need not now enter into more minute particulars. And here also, I may point out or repeat the necessity of keeping warm and well clothed, the particular part affected with Neuralgia; not merely as a relief to the pain when present, but to guard against the local impression of cold, which not only aggravates it, but tends to bring on new attacks. On this subject I may further remark, as I suggested under ophthalmia, that while ice has been recommended for diminishing the pains of Neuralgia, I have invariably seen that its first effect was followed by a considerable aggravation of the pain, and that I consider cold, in this or in any other form to be decidedly injurious; though it is easy to understand how, like any other application producing a sudden and powerful impression, it might remove a fit.

Though I have already spoken of the use of narcotics, this is a more convenient place to point out one advantage to be derived from them; a fact which I purposely postponed, on account of its connexion with the useful effects of hot water and steam. As a means of diminishing pain during the painful state, they are nearly useless, unless pushed to such an excess as to stupify the patient; in which case, it is probable, as I already insinuated, that their effects are injurious, while it is easy to comprehend how they ought to be so, by inducing, indirectly, that debility which so prolongs and aggravates all the Neuralgiæ.

But when the acute state is past, they become useful, as tending to remove that soreness which remains after the chief pain has ceased, and also by reducing the general irritation which has been excited by it. Thus also they sometimes act usefully, even as local applications, at least to sensible parts; and it is probably on this principle chiefly, that they are of advantage in the neuralgic inflammation of the eye.

This comprises all that I had to say respecting the useful remedies in Neuralgia; and I must now proceed to inquire of those practices which I consider to be injurious, as far at least as I have not already done so, and which, if I am right, is most necessary to explain, that they may if possible be abolished and cease.

I do not know if any one still continues to recommend the division of the nerve in the Neuralgia (Tic) of the face; but if so, it is at least not very long since it has been abandoned. I have quoted this operation already, as a proof of the utter ignorance respecting the nature of this particular variety; as I have given proofs enough of the same ignorance respecting almost every variety of this disease at large. Surely, had it even been imagined that there was a resemblance between that particular neuralgia and sciatica, such a project would scarcely have been adopted as a means of cure; as no man would have dreamed of curing sciatica by the division of the nerve, even had the peculiar nature of this nerve admitted of such an expedient without another obvious evil consequence. And while we must blame surgery rather than physic for this invention, the consequence of a habit not unnatural, acquired from familiarity with the knife, or with mechanical methods of cure, it would be somewhat difficult to explain upon what precise views a cure was expected from such an operation; unless perhaps, where, by removing the whole of the painful portion, it might have been imagined that the very disease itself was cut out and carried away.

But I formerly criticized perhaps even too strongly, what I trust is abandoned for ever; while also I need not say that the proposed remedy has failed, since the disease has very generally returned as before, after the separation of the nerve. That an additional evil, that, namely, of a partial palsy, should follow such an operation, was to be expected; adding aggravation to what it could not cure: yet perhaps it would be unjust to attribute such palsy, in all cases, to the operation, since I have already shown that it is a frequent effect of the disease itself. It was to be expected, however, that the Neuralgia should sometimes be removed, at least for a time, by such an operation; as, even that toothach which is not accompanied or excited by a carious tooth, is often thus removed by extraction; the causes of

which I have repeatedly explained. But it is also probable that, in these cases, the result would have been just the same had the operation been limited to a mere incision of the skin, and had the nerve been allowed to remain as before; while no one will now, I trust, again recommend even such an experiment as this, though we were not in possession of general and fundamental remedies, and further, even of local ones likely to be quite as effectual and much less grievous. As to those who have recommended such operations, I should be sorry to excite or renew their self-reproaches; but it would have been a false tenderness to have avoided the subject, while there remains, as I know there does, even a hankering after this painful and useless remedy; and, among some persons, a strong desire to prove that the principle, at least, was or is a correct one; a feeling which might easily lead to a renewal of the practice.

With respect to the history of this practice, it seems to have originated with André, already named; or at least I cannot trace it beyond him: while it cannot be denied that he may be proud of the influence of his name in the numbers of his followers, if that can afford any consolation for the quantity of misery which he has produced. If his practice with the cautery has not equally spread, it is probably not so much the fault of the surgeons as of the patients, at least in our own country, to whom this expedient has, fortunately, always been one of insurmountable horror. In this the French surgeon and his followers appear to have had in view the eighty-fifth aphorism of Hippocrates, which, after enumerating the climax of remedies, in medicines, cutting, and burning, concludes by determining that if the last does not succeed there is no hope. Certainly, there has been no want of perseverance in the use of the knife, on the part of those with whom this is a favourite remedy for all and more than it can cure, and even in spite of almost perpetual failures; but that it may be understood, once for all, how far such perseverance can reach, I shall only refer to a case described by Lizars, which, for many reasons, I must decline quoting.

Of general, not local, injurious practices or false remedies, it is the simplest evil, while it is a negative one, that they not merely tend to exclude what is useful, but, by suffering the disease to gain time upon us, serve to establish it and render it more difficult of cure. On that, however, I need not dwell; but shall content myself with examining what, while it is common, is directly pernicious.

It must already be obvious that what I have here to say respecting all the Neuralgiæ or any Neuralgia, can be little else than a repetition of what I have urged on different occasions in treating of intermittents, particularly in their anomalous forms; while as relates to the neuralgic ophthalmia in particular, I have

also been compelled to make similar remarks when speaking of the means of cure. These observations relate to the evacuant and debilitating system in all its modes, including low diet and abstinence from wine, purging, chiefly by means of salts, and blood-letting, both general and local.

It is not, however, in the marked Neuralgia (Tic) of the face, (that almost only acknowledged mode of this leading disease,) that these remedies are likely to be abused; as there is nothing here which can well lead even the most unobserving practitioner to confound it with inflammatory diseases, or with a flow of blood to the head;" while its own, separate, marking, name affords the usual empirical security against such abuses. And since, as far as this system is misapplied in neuralgic ophthalmia, I have already had occasion to point out the evils, I may here restrain myself to the few other cases where this abuse is likely to take place, or rather where it takes place every day.

I ought, however, to remark previously, as concerning the whole, that the fashionable and frequent use of purgatives or systems of purgatives, and chiefly of salts and mineral waters, tends to aggravate all the Neuralgiæ, even to the Tic; causing them to recur or relapse, as it does the several forms of intermittent; and further, rendering them habitual, or incurable, by perpetuating that general debility and irritability of the nervous system, which is so fundamental a character in every disease whatever of this nature, local or general, that it must be intimately connected with the proximate cause; however impossible it yet is to explain the nature of that. And if such systems of purgatives are not absolutely prescribed by practitioners, directly, as remedies of common and obvious Neuralgiæ, they are so prescribed for numerous affections and symptoms dependent on these diseases or on their cause, but not suspected of such connexions; while the almost universal fashion of self-empiricism adds a vast mass of the same pernicious practice, exclusive of the direct errors of physic itself. And thus, unwarily, are these disorders aggravated, perhaps, even to a certain degree produced; while the practitioner who may chance to be consulted, is himself unaware of the cause, not merely because he may be ignorant of the nature of the diseases, but, even should he be fully informed of that, because he is not made acquainted with the nature or extent of the patient's own private practice against himself.

I have already made so many remarks on the abuse of blood-letting in the intermittent, and especially in its anomalous varieties, as well as on the utterly mistaken views under which it is adopted for diseases of the head of the character under review, under the false hypothesis of fulness of blood and flow of blood to the head, while I have also been similarly obliged to point out

its pernicious activity in the production of paralytic disorders, that I could add little at present which would not be in some manner a repetition of what is past. Yet so important and so sweeping an error do I consider it, and so widely devastatory in its consequences, at present, being, as it is, a somewhat recently revived practice, (revived, that is, as a fashion,) while it is one also that seems to be increasing in vigour rapidly, not only in England but in France, that I scarcely know how to pass it by in silence; though I at the same time feel that I am not justified in speaking of it further than as it concerns my own subject, far less in entering on it to the extent that would be necessary, had I treated of it on general views as it relates to physic at large.

With respect to Parisian practice, including, as it dictates, the fashion, or gives the tone, to that of France in general, no one can be familiar with it without witnessing the pernicious effects of this system; while, renewed with a suddenness and an ardour, the causes of which it would not be very difficult to trace, did I here dare to enlarge so far, it is a revival, and in the same vigour, of that literally Sangrado system which was the subject of well known satire to professed satirists whom I need not name, and of remarks, even more instructive, from persons of a very different class; than which I could quote none more pointed than those of Madame de Sevigné. May I give a single case in illustration, treated from the beginning to the end before my own eyes? and I may venture, because it is a case strictly belonging to my own subject.

This unfortunate philosopher had been long subject to the usual dyspeptic and nervous symptoms of studious men, and was of a sallow and emaciated complexion; appearing, in familiar language, to be far more in want of additional blood than of its abstraction, while his disorder was continuously aggravated by a system of low diet, adopted on the same mistaken views. Passing every day with him, in company with an English physician, it was easy to watch that over which he had no control; as there would also have been no propriety in attempting to oppose "the best advice in Paris." Headach was, as usual, one of the occasional symptoms; and on one unfortunate day he was induced to send for his surgical friend, by whom he was immediately bled. The headach, on the following day, continued, or rather returned, as it had formerly done, but with increased confusion of thought; the pulse and all else indicating, to the English physicians in question, increase of general debility, and compelling us at length to offer advice, which was, however, opposed by the usual arguments. A second blood-letting of course took place; and the consequence was that he became, but only in the night, partially delirious; a result easily explained, in its very limitation. It was then determined in

full consultation, that there was inflammation of the brain, to the exceeding surprise, not without remonstrances, of the two English physicians; and, consequently, with the addition of blisters, shaving the head, and ice, another blood-letting was ordered and practised. The delirium then increased, while the pulse became feeble enough, as might have been supposed, to have made any man reflect; but as this did not happen, or rather as the reflections took the opposite course, the practice was persevered in, and on the following day the patient died: leaving the physicians, doubtless, convinced, as usual, that he had not lost blood enough. Such is a French case; but it would be easy to give no small number of parallels from English practice; and should it make no impression at present, the day will come round again when its value as well as its nature will be understood.

Did I dare to proceed, as to this practice in general and its present revived fashion, through all cases of its misapplication, I should far transcend my bounds, both as to space and subject; while it offers matter, in itself, for almost a treatise. It would be not less curious and interesting to trace the causes of its recent revival in such power, and of its rapid progress as a fashion; but from this also I must abstain. Yet a remark or two will not be irrelevant, even to the subject which is my own.

If I must not examine all the causes, inflammation has become a fashionable term of fear, scarcely less than fulness of blood, and determination, "flow of blood to the head," while, to one or other of such imaginary causes, real enough however to cover a vast mass of imagination, it is sufficiently easy, with a proper quantity of inattention, ignorance, and confusion of thought, as of the indolence of some, and the hurry and want of time for thinking, of others, to refer to such causes more than half the diseases current in society. Thus the term inflammation having been but breathed or thought of, the imagination reverts instantly to bleeding, blistering, and purging; and the practice being as easy and obvious as the theory, there is no further occasion for study or reflection. The work of thinking is thus ready, the theory established before investigation; and as the lancet is always at hand, easy of application, and carrying with it the appearance of activity, the consequences are obvious. It is a universal saving of thought; and as a French provincial critic of this very day remarks, forgetting, perhaps, that Le Sage had made nearly the same observation before he was born, it is sufficient that any young gentleman has been six months at Paris, has acquired the term *Gastro Enteritis*, and the use of the lancet and the leeches, "to return into the provinces an accomplished physician, the aid-de-camp of sextons and undertakers." And thus it is also that, in Scotland, from the popular use of the term *Brain-fever*, and the natural confusion of thought thus pro-

duced as to inflammation of the brain, a similar practice is, in the country at least, almost universal, in the worst cases of remittent, or even of typhus, with symptoms of debility, not of inflammation: the delirium maintaining the error. Such is the dangerous nature of terms.

If any secular reader (presuming this essay may have such readers) should hesitate in believing that a science like physic and men like physicians should be governed by fashions, should he treat the satire of Moliere and Le Sage and Sevigné as pure and groundless satire, he will find proofs of another kind in the history of the sect called Hemophilites in Italy about the year 1795; the period of a contest not less acrimonious than that of the Guelphs and Chibellines, excited by means of two words, the invention of a man, a Scot, whose disreputable influence over the science by means so worthless, will not soon be forgotten. It was then computed that in various towns of Lombardy, in which the population reached from fifty to sixty thousand, the average people lost, each, from two to three pounds of blood per annum; this calculation having been verified by careful approximations: while for those, of course, who were so fortunate as to escape the physicians altogether, the others must necessarily have compensated by a heavier tax on their own arteries.

And if I have quoted some authorities against the practice of blood-letting in the disorders of this class, when treating of fevers, in the first volume, I may here add one of no small weight then omitted, namely, that of Amati of Naples, who, very unceremoniously, pronounces it to be *Death*. That it is the very frequent cause of death, even in our own country, while the disease obtains the blame which should fall on the physician, every year's additional observation convinces me; and not one more than the summer (1827) which has intervened between the printing of the first and second volumes of this work; a season perhaps even more noted than any of the immediately preceding mortal ones, for the ravages of Marsh fever under all its forms. Yet it is a season which, aided by the propagation of the present opinions on Malaria, through that essay which was the precursor of these volumes, has, I am pleased to see, made a formidable inroad on the vulgar opinions as to the common existence of Typhus, as it has justified those remarks on the whole of this subject which commenced in being ill enough received: at length seriously turning the attention of English practitioners to the entire subject of Marsh fever, and with the prospect of consequences that cannot fail to be beneficial to a wide extent.

But if, to say how fashions originate, and are established and propagated, would require rather the pen of the moralist than the physician; there is one cause which, trifling as its powers might be esteemed on a superficial view, is far more active than

superficial thinkers would imagine; while it is in truth the history of every fashion, springing often as they do, out of the most contemptible accidents, or from the most contemptible, and often absurd individuals, and propagated by that great sweeping principle of imitation or habit by which mankind is governed, sometimes even against common sense, as cattle obey some noisy gibberish of their driver. In this case, some professor in a fashionable school of physic, from personal opinions perhaps respecting his own constitution, or from the necessity of saying something different from his predecessor in the same chair (a necessity well understood) or from any other cause, commences by persuading himself, first, that wine is pernicious, or abstinence useful, or that he himself or some one else contains too much blood; while, accustomed to repeat this annually, he gradually increases in violence, learns to see all diseases through a false medium, and becomes the founder of a fashion; a fashion propagated and multiplied in a sort of geometrical ratio by the herd of his hearers, who, naturally and innocently enough, trusting to high authority, cease to think for themselves, or rather, never acquire that art; remaining, to the last, the sectaries of a system founded by their "magnus Apollo." But I have said as much as I dare to borrow space for, and as much indeed as is necessary, since far more would be equally useless: while I should think it on the contrary, far too little, if, by writing, I could induce the sectaries of this fashion, as far as it is a fashion, to review their practice, and to restrain their hands and their lancets to the cases, numerous enough, in which this is the real remedy; cases where, perhaps, from habit, often from that of trifling with it, they too often fall as far short of the necessary activity and vigour in the use of this great and valuable remedy, as they misapply it in others.

But whatever may be the evils as to the diseases which belong to Neuralgia, that arise from general blood-letting, I suspect that they are much exceeded, arithmetically, or as to patients or cases, by those which flow from cupping; a practice, also, which we must view as one of the fashions of the day, originating in the various false theories already pointed out. And as I took no notice, or an insufficient one, of this practice in my former remarks on the maltreatment of these disorders, it will be necessary to do so before I bid adieu to this subject.

It cannot be unknown to any one, that while the practice of cupping was formerly a branch of the barber's occupation, it has lately, almost recently, gained in dignity as in extent; the number of those who profess it as a distinct trade having much increased, though at the same time the persons who conduct this art have not gained in point of intellect and attainments on their more multifarious predecessors; while, consonant to the laws of political economy, the price of their commodity has been mate-

rially enhanced, rendering them in fact the rivals of physicians themselves.

As a law in that science, a trade may be thought not to be established, or a commodity manufactured, till after the demand has arisen; while, in proportion to the demand, is the commodity, as are also its venders, multiplied. But if this be true, there is also such a thing as a forced market, or an artificial one; when the mere exposure of a fanciful commodity, or the knowledge that such a one exists, creates purchasers; leading to fanciful or artificial wants, before dormant or unfelt. This is precisely what has happened respecting cupping: it is talked of, and therefore it is wanted; there is a cupper in every street, and it becomes necessary to employ him.

Nor is this a caricature of the truth, even as it relates to practitioners in physic; to whom it has become a more ready and acceptable expedient than when the office fell on themselves, generally little able to perform it or to give up the requisite time to the operation; while, with regard to patients, self empirics or otherwise, it is a fact known to all, and to which, many will, I believe, plead guilty, or at least conscious. But it is necessary to inquire more particularly into the economical details of this practice, as well as its medical application and consequences.

In those nervous affections which I formerly described, and in the more decided neuralgic headaches, there are many cases which, though still viewed under the false system of "fulness" and "flow of blood to the head," are not thought to justify general blood-letting, as there are many more where this expedient is not hazarded above once, or perhaps twice; possibly however oftener. Here, cupping becomes the substitute; since, of leeches, less in fashion in England, though peculiarly so in France, I need say nothing, inasmuch as the same reasoning applies to both, with some slight modification. In whichever mode this expedient has gained a footing, it continues to be resorted to on every return of the same symptoms; being similarly and equally abused in palsies, whenever the imagination of the patient or the practitioner can find a reason for it, and with the same ruinous consequences. Thus, in the neuralgic disorders, as in all the nervous affections from whatever cause, that aggravation in all its modes is at length produced, which I have so frequently pointed out as following the evacuating system: and the final destruction of the patient's health, often of the patient himself, becomes a consequence from which it will require good fortune to escape; good fortune added also, often to youth and resistance.

But whatever blame may fall on physic for the invention, or rather the misapplication of this practice, though all the contemplated evils might have been produced by practitioners,

they are not so in reality; since, in perhaps a large proportion of cases, the patient becomes his own physician. Economy, weariness, any other cause, operating with a prolonged and chronic case, induces the patient to pursue, from his own motion, that which has once been pointed out to him as the remedy for his disease; and thus the cupper, whose whole circle of knowledge is comprised within the circle of his glass, and whose interest it is to operate as often as possible, becomes the joint physician in the case. And thus do others, even without medical advice, labouring under sensations which themselves pronounce to be a "flow of blood to the head," and knowing that their neighbours have received such advice in similar cases, commence and pursue the same system of practice; while the operator, even were it not his interest, contemplating this one subject, and no other, through a whole life, becomes also the adviser or abettor: and, possibly, conscientiously enough, as far as his capacity for acquiring what is commonly called conscience extends, convinces himself that the blood of all mankind flows to the head, and that there is no salvation for human nature out of the precincts of the cupping-glass.

An unfortunate belief has much added to the extent of this persevering system of blind suicide; and that is, an opinion that it is a very innocent practice, that "it can do no harm if it does no good," and such other philosophy as is current with the vulgar intruders into physic. Hence it becomes almost an amusement; persons talk of going to be cupped as they might of dressing or shaving, or there is established a day for cupping, as, in the former times of physic, blood-letting was to be performed under the directions of the moon and the almanac. And how frequent this practice is, how frequent rather it has become, we may convince ourselves, even as spectators in general society, by the sight of marks as conspicuous as they are frequent in females, and especially in youthful ones; since we may look in vain for the same records of abuse in the grandmothers of all this youth and beauty. So much has the blood altered the directions of its flow, even since the days of our immediate ancestors.

But to pass from what, if it be satire, is rigid truth, while it is a satire of which I shall not repent if any good shall arise from it, let us see what are the actual consequences of this practice, particularly when persisted in, or become habitual.

Physicians need not be told, that whether blood is abstracted in this mode, or by the lancet, periodically, or frequently, there is a tendency produced to replace or restore it, and that what was once under command, frequently becomes a dangerous necessity. Yet in cases where this practice is misapplied, that restoration does not remedy the evil effects, which go on progressively, though probably much more slowly than they would have

done, were it not for this expedient which Nature has provided as a remedy for losses of blood. There is a gradual accumulation of the debility, the irritability, or the nervous diseases, be those what they may: while, in this progress, fresh symptoms appear, or the former ones are aggravated, so as to induce, still further, a temptation to the repetition of the remedy at first adopted under false views. And where the diseases in question are decided cases of the Neuralgia, under any form, all those effects take place which I have so often described; while each new application of the remedy, resorted to for fresh relief or fresh symptoms, tends to confirm and aggravate the disease, and, very generally, to induce new ones; even to those heavier consequences, epilepsy, palsy, fatuity, and mania, which I have already pointed out.

As on other occasions, I may here notice a case or two of this nature, with the hope of producing a stronger impression, at least on ordinary readers, than any general statements can be expected to do.

A middle-aged man, previously vigorous and healthy, to whom I had the access of a friend, was seized suddenly, and from exposure to Malaria, with the Neuralgia in a most regular periodical form, attended by much derangement of his general health, including what is called dyspepsia. Being opulent, he of course consulted the physicians and surgeons most in vogue; going the round of a tolerably wide circle. As the pain was not in the cheek, but on the back of the head, it was not perceived, or not admitted, to be Neuralgia; and as no one sought for the intermittent fever, it was agreed that this was a "break up of the constitution:" and dyspepsia, and nerves, and bile, served to explain what was not a "flow of blood to the head," and a threatening of apoplexy, and of palsy, and what not.

Blood-letting was of course adopted, but without producing a cure: on the contrary, the patient became worse, and then cupping was resorted to, while at every cupping he became gradually worse: till at last the pain ceased suddenly, and the faculties became impaired, and there at length supervened epileptic fits. These results required about six months of vigorous practice to produce, the patient being himself vigorous. Of course, the epileptic fits proved that there was congestion in the brain, or an abscess, or a tumour, or an ossification, or something else, and that the original (neuralgic) pain had been an inflammation in the pia mater, or in the dura mater, or elsewhere. Therefore the cupping was to be persevered in, and it was persevered in; and, at length, the epileptic fits began to occur many times in a day, and it was pronounced that death must follow. But the patient was not very easily caused to die: an accident compelled him to leave home, physicians, cuppers, and all; he found something else to do, became a little better, began to for-

get the necessity of cupping, recovered in spite of the abscess of the brain, and enjoyed his former health for many years.

Patients, however, are not always so fortunate in these cases. Almost at the same time, in the same place, his friend, a mutual friend, was attacked in the same manner, and put under the same treatment, in the same hands. This person had the disadvantage of being twenty years older, followed the same course, in the disease as in the remedies, became fatuous, and died:—whether of the cupping or not, the reader must judge for himself.

These are but specimens: I could fill pages with parallel ones, under endless variations, but I need not; knowing well that they who have treated such cases and reasoned on them in the manner that I have condemned, will not yet learn to distinguish between the diseases which nature gives us and those which they produce themselves. It is fully as easy indeed to retort on my explanation, that it is wrong, as it was to proceed on the opposite views originally: as it must ever be where opinion, commonly called conviction, is made the test of right and the substitute for argument and proof. It is my own hope that I have produced both proof and argument, in all that has preceded; nor without such, should I, or indeed could I, have formed the opinions in question; since there was nothing to generate them but evidence, and since it was the difficult office of that evidence to change all the previous *conviction*, or opinions, that had been instilled into myself, in common with others, by authority, reading, and example.

Let me yet be permitted to make one general remark of the same critical nature, on a situation of things as to the popular health, which cannot fail to be known to the people at large as well as to physicians, if it has not led, in their minds, to the same conclusions. I cannot say that I have exactly witnessed the rise of it; but I have no hesitation whatever in saying that I have seen its rapid increase, and that wherever I do trace it, it is in situations where fashion, habit, or what not, have rendered physie more of a necessary of life, or a luxury, than it is in other places; or in families, as families there are, which, from various causes, rely much on physie and physicians, or, from whatever reason, act as if life could not go on in its ordinary course without the aid of medicines.

The general fact in question is, that in such cases, we often find young persons, and chiefly, as might be anticipated, young females, always also, of course, in the opulent or easy classes of society, labouring under chronic disease, frequently during a long period of years, and to such an extent as to be disabled from all exertion; often, confined to their bed-chambers, and, as might be expected, with minds as much subverted as their bodies are deranged. And while such persons are under the almost daily discipline of physie in some shape, we see nothing

in their appearance, and find nothing in their descent or constitution, to justify such a state of things; while, further, no name can be given to a disorder, of which indeed we can scarcely define any one symptom in a satisfactory manner; unless the term nervous, or flow of blood to the head, or dyspepsia, or liver complaint, or some such convenient and fashionable phraseology should be resorted to in explanation.

Now, if we except consumption (and really there is little else to be excepted, while I need not say to physicians what those disorders may be,) the nosology possesses no chronic disease which can thus occupy the youthful years of such unfortunate persons: since we can scarcely avoid smiling to hear of liver complaint, lasting for years, in a young person, in our climate; continuing in a young lady, perhaps with the complexion of alabaster, often even with a frequent if not a constant mixture of the ruddiness of health, from seventeen to thirty or more, and where not the slightest real evidence of a diseased liver can be produced. There are no diseases in the catalogue for such youth, such habits, and such constitutions, to justify such a state of things; but, nevertheless, there are not wanting causes enough for all that is obvious; for nervous affections, deranged digestion, with their trains of headaches, debility, mental feebleness, and much more.

And these causes will be found in the abuse of physic. We can trace it all to purgatives, to cupping, to blood-letting, to one or all of these; aided by confinement, restrictions, diet, and aided also by the aberrations of mind partly consequent on such treatment, and partly the result of moral causes often sufficiently obvious. This is the disease of physic, though not always the produce of Physicians; abundant enough at all places and times, in the same situations, and from the same causes, if in minor degrees; the frequent jest of the satirists of all days, when slight, as it is the torment at once and the harvest of physic. And, as such, it may often, in reality, be matter of contempt; as it also is a business or an amusement, or the basis of a luxury, to those who have no other occupation. But, pursued to this excess, rendering the days of youth useless, destroying the mind with the body, and nursing up a morbid imagination with a disordered body to endure that length of life which it does not easily succeed in shortening, it is a fashion at which we can no longer smile, but which would, on the contrary, deserve the severest reprobation, if we could hope, by censure and exposure, to produce that reform which will take place ultimately, only in the same manner as the evil arose; from change of fashion.

And it would scarcely exceed the truth to say, that in any chronic complaint, in any person, and especially in any female under thirty, or even far beyond, if we except some rare cases of

Hydrocephalus, it is impossible that cupping, or blood-letting, can ever be necessary, under the presumption of disease of the head, and very rare that this can be required for any acute one; that where it is practised it is generally injurious, and, if frequently adopted, highly so; while when we perceive the visible testimonies of this practice in such persons, we may almost decide on two things; first, that the practitioner has been ignorant, as well as culpably violent, and, secondly, that he himself is the sole cause of the ill health. To judge where he has been the cause of death itself under such proceedings, is not more difficult.

It were well indeed if not only ruined constitutions, but even death itself, were not the frequent, the almost daily result of physic thus misapplied in all the analogous and parallel cases, as also in some others: the produce of a combination of system, fashion, and ignorance, which renders Physicians and physic the just terror at present of all those who can see and distinguish. It is difficult to speak without high indignation as well as horror, of what we thus daily witness: to suppress the former is impossible, when our own, perhaps dearest friends, have thus been destroyed: and well now, perhaps, will he decide, who, like Napoleon, resolves to exclude this art and its professors entirely; for, on the arithmetical average, he will assuredly be far on the side of security. It is but to open our eyes to see the truth of this every day; while if it is over the ruined health, or the life, of females that we shall most often have occasion to grieve, from the obvious reason that in them the nervous affections thus mistaken and maltreated, chiefly abound, or are chiefly brought before physicians, so has there been a rapid increase of the evil, from the numbers who, returning from a continental residence with the consequences of marsh fever which I have so often described, have been subjected to this, truly mortal as well as mistaken treatment. Nor do I overstate the facts, when, out of innumerable cases of a parallel or analogous nature which I might quote, I have seen dropsy produced by perseverance in violent blood-letting, in a healthy female of seventeen, of a peculiarly sound constitution: her sole disorder, as the event proved, being an intermittent headach, of little moment, following a common remittent fever; and this gross and almost mortal, not error, but systematic wrong, the produce of a late, unhappily celebrated, professor formerly alluded to, for whose aberrations of mind on this point, and for whose violence, there are thousands on thousands alive to lament, besides the thousands long past regret or suffering; since, in such a case as this, it is not to the mere personal wrong that the evil is confined. Such a system, promulgated by the authority of a Chair, necessarily propagates itself almost in a geometrical ratio; influencing to similar and widely spreading wrong, the thousands

who have no other guide but authority; imitators, mimics, the slaves of opinions, and schools, and fashions, and teachers. If deeply have such Teachers especially to answer, deeply also has physic in general to repent of all this destruction: how those may feel who, hereafter perhaps discovering that they were wrong, may also bethink themselves that want of knowledge, proceeding from want of exertion and study, is no excuse for misconduct, still less that arrogance, or the pride of place or system, can never become him to whose charge are committed human life and happiness, it will be for them to answer when the time of reviewing the good and evil which they have done in the world shall arrive.

I must not, however, terminate these remarks, without making one observation on the subject of cupping, which applies equally to blood-letting, and which I reserved to this place. It is a remark of importance, as it tends to controvert, I hope to demolish, one argument in favour of this practice, and which, appearing to be founded on experience, is the most mischievous one with which the present views have to contend.

It is said, and indeed it is matter of daily experience, that in all such cases, immediate relief is procured by blood-letting in either of these forms; and as the same relief is similarly produced in cases of decided inflammation, as in others in which it is an acknowledged remedy, the analogy seems sufficiently perfect to form a justifiable argument. Unfortunately, still more unfortunately, patients themselves become so convinced; so conscious in fact of this relief, that they are always ready to demand it, and, still more, to resort to it without advice, or against that, on their own notions and opinions.

Physicians surely know full well that there are numerous cases of daily occurrence, in many diseases, even in inflammation, where though such immediate relief is procured, they refuse to adopt the remedy, from experience of its ultimate evil consequences. Such is the result in all the cases under review; for, be the immediate relief what it may, the disease is ultimately aggravated; whether or not we can clearly explain the source of that temporary abatement of disease, or rather, what is the real fact, the temporary abatement of suffering. If, in inflammation of the lungs, after a certain stage, there is scarcely an instance where such relief would not be obtained, while at the same time the physician knows full well the danger of seeking it in this manner, that also is, generally, true of fevers; producing the same caution in the hands of judicious practitioners, but, among others, leading to the abuse of blood-letting; to that abuse which has recently spread in so remarkable a manner.

At another extreme, if we take a case of decided nervous disease attended with the greatest possible feebleness, irritability, emaciation, with every thing, in fact, which proves, or at least

did prove some years ago, to the satisfaction of all physic, a case requiring the exactly opposite mode of treatment, and if, in such a case, there is any local painful symptom, or any peculiar local inconvenience, the effect of blood-letting is a sudden relief to that symptom; and sometimes also, one, as sudden, but equally temporary, to the whole train of inconveniences. Here then is a temptation, but it is one which every judicious physician resists, or which at least was resisted, not very many years since, without hesitation; it being then well known that the radical disorder was thus increased.

The effect is precisely the same in even the purest Neuralgia; in the Tic; or the pain is removed at once by a sufficient blood-letting; while I hope that every one will now be agreed in believing, that this pain is not the result of inflammation, or even of an inflammatory tendency, in the system, and while, in reality, that remedy is scarcely ever adopted at present, notwithstanding the opinions of a few, and of no small reputation formerly alluded to, who conceive such diseases, in certain cases at least, to be inflammations of the nerves. I do not pretend accurately to explain the cause of this relief; but can conceive it to arise from that diminished sensibility which is immediately produced by loss of blood; an effect which, when in excess, constitutes fainting: from a very obvious cause, the diminution of nervous energy.

Hence, if I am right, it is easy to see how, in every case of nervous disease and debility, with local symptoms, or with suffering of any kind, the same effects will follow, as they also do so often in fevers, and in exhausted inflammations; while it is further easy to understand how such relief will be most sudden and complete in those whose nervous system is in the greatest state of debility, exhaustion, irritability, or by whatever term we choose to suggest what we as yet know not how to define. And, in proportion to this previous debility of the nervous system, is the relief produced by inducing additional debility in this, sudden and effective; whence the very singular and well-known effects produced by even the most minute loss of blood in such cases. And this increases the temptation, to the injudicious, to those who do not reason; not only in the nervous and neuralgic cases, under review, but even, as I before insinuated, in fevers and exhausted inflammations; confirming them in a practice founded, as they believe, on that, most abused of terms, experience, but, in reality, on that mistaken experience which is truly the "*experientia fallax*" of physic, as it is the equally fallacious experience by which the mass of mankind, through all their relations, are misled. I might illustrate this view still further, by the effects of excessive blood-letting in hydrophobia, I think also in tetanus, and, assuredly in hysteria, where it has often been grossly abused: but I feel that it would lead me into

a discussion which I have no right here to enter on; into one of those inquiries which have so often been forced on me from the necessity of illustrating the proper subject in hand, and which I have striven to quit at the moment they have begun to lead me from the main object, whatever important views they might open as to other departments of the practice of physic; as the present one assuredly does.

To proceed, while such relief is caused by a temporary and sudden diminution of the nervous energy, producing temporary insensibility as an immediate consequence, it is plain, that, if a diminished nervous energy, or a peculiar state of debility and irritability (since I must use these received terms for want of better) is either the cause of these diseases or at least an essential condition to their existence, the general, perhaps slow, result, must be to augment that morbid condition, and thus to aggravate the disorder. And this general reasoning agrees precisely with the evidences that have been brought forward throughout the whole of this essay; in which it has been proved that the neuralgic diseases are dependent on, or connected with, such a state of the nervous system, and that all debilitating proceedings tend to aggravate them, and to render them more difficult of cure, or incurable. Thus do general reasonings, derived in different ways and through different analogies, coincide, with the observation on the real remedies and their effects, and also with the deductions drawn from the evil effects of erroneous remedies, to establish and to confirm, in a variety of modes, the truth of the views which I have held out through the whole of this essay, and respecting all the diseases united under its comprehensive plan.

On the subject of the cure of this disease, I have long hesitated whether I should add a remark, respecting the general truth of which I have not fully satisfied myself, and which I have at length with difficulty resolved to add before it is too late, and while this page is approaching to the press. Yet if eventually found to prove less just than I imagine it to be, it can, with this provision, lead to no erroneous conclusion, as it is incapable of doing harm. It is this; that while Neuralgia is, always I believe, very generally it is certain, accompanied by an intermittent febrile condition, it is possible to cure the former, and very often, while the latter continues uncured. I *think* that I am certain of the fact, as to a great number of cases; of a certain proportion, I can have no doubt: but while I have, throughout this essay, been cautious of advancing any thing as truth, unless the evidence was uncontrovertible, from being sufficient and pure, I will not run the hazard of bringing discredit on the whole, by ranking with it what is less decidedly or generally proved. Others must inquire for themselves; while I think that various circumstances which I need not now

recall to the reader, in the history of this disorder, render it probable that this can be the case, and that what is a symptom, and not the entire disease, can be detached, or cured, while the radical disorder remains; an occurrence, I need not say, to which physic, in many cases, presents sufficient analogies.

And the remark is an important one: because, however the Neuralgia itself may be removed, the disorder cannot be considered cured while the febrile disposition remains; or it is necessary to extirpate the chronic intermittent also, lest, at any future time, under its influence, or protection, the painful disease should recur in this part, or possibly in some other one. And this fact being ultimately proved true, or rather, a frequent truth, as I think it will be, we see an additional value derived from that theory which considers Neuralgia as a symptom or a mode of intermittent; though even without this, there is no want of valuable practical results to be derived from that theory. It is also evident that if, under this case, I refer to the entire cure of the whole disease or disposition to intermittent, for ever, so this reasoning applies to the cases of single attacks or relapses; since the fact, as I view it, is also this; that in what may be a six weeks' relapse, for example, of the intermittent with the Neuralgia, this latter portion, the pain, may be removed within a few days, while the febrile state will run its full time if the medicines should then be abandoned. Such a cure therefore would be less perfect than we might, possibly, render it: so that the Neuralgia might return again even within this assumed period, or recur at a future time with the return of the chronic intermittent.

I have no more to add respecting the cure of Neuralgia; while I regret that the necessity of dividing my subject in conformity to established opinions, and of combining a train of evidences and arguments, respecting almost every disorder here treated, with the description of these disorders and the modes of treatment, both correct and erroneous, should have led to a dismemberment and a repetition, which, should I ever be able to renew this essay, with the support of the medical profession instead of its expected dissent, I shall be, myself, the first to rectify, and to replace by a far different order and arrangement; an order which, if already arranged in my own mind, I must at present contemplate in hopeless silence.

CHAPTER XXII.

Conjectures respecting the Condition of the Nerves and Nervous System in the Intermittent and Neuralgic Diseases.

I CONSIDER the essay which I undertook, to be now finished; as every essay of such a nature, resting on evidence, induction, and experience, ought to be completed when evidence is exhausted and induction carried as far as it can safely go; and when, from both, confirmed by experience, a method of cure, as far as one has been ascertained, has been laid down. Yet, if there could be discovered or proved a proximate cause, an investigation of that subject would not only be essential to such an essay, but would be productive of decided advantages, by uniting, under one leading principle, phenomena, diseases, which notwithstanding the several analogies by which they have been connected, still present too many differences, while they want that great link which is indispensable in every philosophical view of phenomena.

This, however, I have already disclaimed; since, unable to form ideas on this subject, I will not follow the too common practice in physic, of deceiving the reader with empty words. Our ignorance of the nervous system, in its whole, in its details, in every thing but its visible distribution, is radical and complete: it is entire, absolute ignorance, in spite even of recent attempts to elucidate it, and of a few scattered facts of small value; and till all shall be done, in a pursuit where there is scarcely even a commencement, it will probably be vain to attempt the explanations desired; while, of that, we can at present see no prospect, scarcely even conjecture by what road we are to make the attempt.

Still, I may venture to make a few remarks on circumstances connected with these diseases and with the condition of the nerves in them, for which no convenient opportunity has offered before; and I am indeed bound to this by the promise made in the chapter on anomalous intermittents: while, had such opportunity happened sooner, these observations would scarcely have been intelligible till all the facts with which they must be connected had been detailed. It is a task nevertheless that I would have avoided, had I dared; sensible that it must be unsatisfactory, and that even had I any peculiar ingenuity to exert

upon it, the best result may prove, perhaps, some approbation from the youthful practitioner who sees all physie as we perhaps all saw it in the days of our debating societies, and the silent doubts of the rational and philosophical physician.

Though what I have to remark is but brief, and as far as appears to myself, of very little real importance, I cannot even say that little, without observing on one difficulty, singularly irrelevant, in reality, but not the less vexatious, which *in limine*, tends to obstruct or encumber all inquiries into the pathology of the nerves or of nervous diseases. It is founded on the abuse of a term long popular, and on a perverted view, in the public mind, of the meaning of the terms nervous, and nerves, as applied to disease or to health. Nor is physie itself here innocent; since, while it may in a great measure be accused of being the founder of this perverted acceptation, the opinions of the value and meaning of these words are little different in the minds of the mass of practitioners from what they are in those of the public at large.

It is almost superfluous to say what the popular, or, in reality, the only existing meaning of these terms is, in the minds of both parties; while it may be considered a singular instance of the power of terms, and of the habit of thinking vaguely, or of not thinking at all, of using words without meaning, or under false meanings, that even anatomists, physiologists, physicians, often seem to forget what they know or knew; forget what the nerves are, and what offices they really perform in the body, and follow the herd of the ignorant and thoughtless, not only in this lax manner of speaking, but of thinking, if thinking it can be called. If, by the multitude, too generally by both multitudes, the nerves are spoken of, even in more serious views of disease, as a kind of metaphysical entities, or rather non-entities, it is as if they were air, spirit, an idea without prototype, nothing; while the word nervous, as applied to disease, is equally understood to mean something unappreciable by human investigation; the misfortune of a feeble body or a feeble mind; a term to be applied only to weak women or more cowardly men, a property of the valetudinary or the hypochondriacal, a "permission of the will," an imagination. To possess weak nerves, or bad nerves, or, reversely, to be without nerves at all, such language and more is not purely phraseology, but is, in reality, an abstract of the popular philosophy on this subject; and the philosophy of physie in general is, here, far too much like that of the people. They may not indeed know it, but anatomy cannot easily forget that the nervous system forms a bulky, weighty, portion of the body, capable of being dissected and traced, equalling in extent, in intricacy, in distribution, the more favoured circulating system, though not yielding blood to a sabre-cut or a lancet, and therefore somewhat less

vulgarly obvious. Nor can physiology and physic well forget their offices: forget that it is not the circulating system, that system which has almost drawn all favour and attention to itself, even in their minds, (as, to the vulgar, it bleeds, and bleeds the man to death,) but the nervous system, which is the prime mover; the cause even of all circulation, of all motion, of life itself; that it is *The Life*: that the Nerves are *The Man*, the *Animal*: and that every thing else, the whole animal structure, in all its parts, is a mere machine, and a chemical laboratory, as purely subservient to the nervous system, as is a steam-engine to the intelligence of man. Without a nervous system, there is no animal; there can be none: without a circulating one, there are myriads.

The "nerves" are in truth, the very animal itself; and yet while the vulgar, pardonably enough, forget this or know it not, physic abets, and has abetted them from its earliest infancy: searching all the remainder of the body, every subordinate, for diseases and their causes, yet scarcely casting a retrospect to that which is the basis and fountain of all disease, as of all health; except perhaps, occasionally, as under the banner of Hoffmann, to produce some fanciful and sectarian theory of spasm, and, even then, recurring to its favourite circulating system, while forgetting the prime mover: just as if he who would correct the faults, or study the motions of a clock, should agree with himself to omit the pendulum or the weight.

If the nerves must thus be the prime seat of all disease, and the animal structure, its mechanism apart, is a chemical laboratory, yet, trifling as chemistry trifled in its early days, this was forgotten, and has hardly yet been understood, except by the few, I scarcely know whom to name, who are chemists in a very different sense from the popular and received one: chemists in even somewhat more than iodine and potash and equivalents. And when I say this, I do not forget that there has been what was called a humoral pathology; since I surely will not insult chemistry by ranking such empty speculation as this produced, under so respected a term: and as little think it needful to examine that system which sought for the causes of disease, or for disease, in the philosophy of mechanics, in the solution of insoluble hydraulic problems, or in a system of dynamics attempting to operate without the very elements of calculation, and not only thus, but forgetting the very moving force, the nervous system, neglected by the humoral and mechanical philosophy alike. And it is the immediate, the prime, the chief office of this system to maintain in action, the chemistry of this structure; since, without that chemistry, the mechanism of the animal falls to pieces and disappears; ceasing to act long before that ultimate event. Where then should disease be sought? chemical laws are invariable: chemical actions must proceed by

those rules which have been imposed on matter, and through the agents, yet unappreciable, which govern them. These actions, subordinate, consequential as they are, cannot cease, alter, vary, or go wrong of themselves: they must follow as they are ruled or directed, as much as must the operations of chemistry follow the master hand of him, the Berzelius, who directs them. They follow, they do not lead; they maintain the visibly acting machine; as it is formed through chemical affinity, and disposed by mechanical laws: but they maintain it under the immediate direction of the nervous system, the agent of Life; as, by that power which first disposed the whole, they were placed in immediate subordination to it. And even when chemical and foreign agents interfere with the usual chemical actions of this laboratory, it is on and through this system that they must and do act. They derange it; and it causes, or suffers the chemical actions which it used to regulate to right, to go wrong. Thus it produces disease, even when we assume from partial evidence, that the seat and pure cause of such disease is elsewhere, in the machine, or in the laboratory, while, thus, much more, does it produce that in other cases. The Directing Power or force is deranged or disturbed; the chemical actions are deranged; the machine is deranged. This is the train; and invert it as we may, by commencing from either secondary consequence, still we must revert to the prime mover, and recommence the train in its due order, or view the nervous system as the fundamental seat of disease; the cause of wrong actions in its subordinates.

Let those who can and will meditate on this subject, consider it; I dare not here go deeper into that which is a question for physiology at large. But let him who will thus meditate on this, and will also ask himself what he has hitherto considered the animal living machine to be, learn to think of chemistry also far otherwise than he has ever yet done; far otherwise than as Physic knows that science or thinks of it; while I shall not assert what is not true, when I say that whatever the ostensible fact or the belief may be, this does not form a real branch of medical education: being not merely unknown or neglected as a philosophical science, as the Great Science, but unknown by the great body of medical practitioners, I might almost say, by the general body, even in its most ordinary and almost empirical details. Had it been otherwise at present, had it ever been otherwise since the very commencement of physie, we might not indeed have been now really acquainted with physiology, but we should at least have avoided the endless chaos of clumsy hypothesis and wordy nonsense with which physie has overwhelmed the world.

And let him who thinks of chemistry, contemplate it as the science of that power by which, not only the animal machine is

formed, and preserved, and acts, but of that power which formed the very world itself, which preserves, as it formed, all that the universe contains, animate and inanimate, which is the cause of all action, the agent and first mover—under that Higher Power which direct the Universe—of every action, every motion, every change, every destruction and every renewal, which takes place on and in the globe which we inhabit. This is chemistry: it is the Great Secondary cause, the right hand of The Divinity on Earth, the unseen agent by which His laws or ordinances are carried into execution, and, to our apprehension, appearing to partake of a spiritual essence, to be the immediate emanation of the Soul of the Universe, of the Deity. And thus is the animal machine under its laws; while these are here directed by that ulterior structure, the nervous system, to which the Deity has attached the principle of Life, and through which the Soul of man is enabled to act on matter and to be affected by it.

We are ignorant indeed how the nerves are constructed, and how they act in performing their almost miraculous offices; we therefore shut our eyes to them, as if to avoid our own reproaches: we do not know consequently in what way they can be diseased; and, not knowing this, not knowing how to examine their pathology, any more than their physiology, by dissection, nor how to reason respecting it from physiological principles and analogies, physic seems almost to have agreed in believing that they were not subject to disease or derangement, of their own, independently; and to have contented itself with labouring at what was least apparently difficult; wasting its centuries in making just the progress that might have been expected from such a mode of investigation.

This cannot be the right road: yet if we are still ignorant of the structure of the nerves, and of the mode in which they execute their functions, it surely has at least been demonstrated that they are subject to diseases purely their own; derangement of structure or of function; derangement in some mode, productive of peculiar symptoms and peculiar diseases. This is what the subjects of the preceding essay have demonstrated, almost as nearly as any thing is demonstrated in physic; though, still, the pathological condition, the proximate cause, is inaccessible. Neuralgia at least demonstrates, if intermittent does not so perfectly, that the nerves, or a nerve, can be deranged, and can produce a peculiar disease; and that this disease is as far independent of the rest of the body, and of the circulating and glandular system, or of the obviously chemical department of the animal structure, as aught can be in a structure so complicated and mutually dependent; while, when that appears to be engaged, it is engaged as a collateral effect, not as a cause, though as an effect capable, probably, of becoming a cause of the second order in the production of further diseases.

Thus must I view Neuralgia at least, and probably intermittent also, as a disease of the nerves or of the nervous system; and in spite of the popular and false meaning of those terms, thus must I continue to speak of them as far as I have any remarks to offer; while still convinced that whatever I say will not produce the effect which I desire, against the weight and influence of those perverted terms; and that, moreover, and as an accessory consequence, in the popular feeling, the more completely I may succeed in proving intermittent and neuralgic diseases to be nervous, so much the more certainly will contempt be thrown on them and on those who labour under their visitations.

Let it now be admitted that the nerves themselves can be diseased, originally, in their own structure and functions, and we may then examine, if still very partially, how these several diseases are produced and related. Did we know what that derangement was, we should be possessed of the proximate cause, and the whole task might be easily completed. They who are satisfied with hypothesis would be at no loss in contriving a term, or might perhaps borrow spasm or inflammation, since these form the great "open sesames" of all physic: an algebraist would substitute the unknown quantity x , and reason on it as far as his materials would lead him: and this is the rational and philosophical mode.

Yet the materials themselves are very limited; I must make the best use of them that I can. And to avoid circumlocutions, since either I must do this, or coin new terms, or adopt old ones, misleading certainly by means of the last, and probably producing confusion and error by either expedient, let me be permitted, like the algebraist, to take x as the condition of the nervous system in intermittent, and y as the local affection of a nerve in Neuralgia; to which I shall also have occasion to add z , as representing the equally unknown condition which produces palsy; and hereafter also, as I conceive unavoidable, w , as the symbol of that inflammation, connected with Neuralgia and intermittent, which must differ from phlegmasia or common inflammation, and which I trust I have already proved to be essentially different in pathological character, however similar to the senses. The reason for adopting such a symbol here, is perhaps even more important; as I hope soon to show.

This is not a piece of algebraic affectation; since it is impossible to reason without a symbol of some kind, and we cannot apply terms expressive of ideas, before we are possessed of the ideas themselves. When the value of x , y , and z , and of w also, though a remoter condition, or more properly an effect than a cause, shall hereafter be discovered by physiologists, it will be easy to give a better form to these remarks, and to do much more as to the whole of this subject than I can at present even conjecture.

To take the simplest Neuralgia, and it may be that of the face; the Tic. In this, a certain portion of a nerve is in that condition which is here termed *y*, and which is ascertained to be brought on by Malaria acting on the body, or by the local application of cold, apparently, or lastly and more rarely, by injuries, even by those of a distant portion of the same nerve. That the disease belongs to the body of the nerve itself, seems proved by this latter fact, as it is, further, by the symptoms themselves; since the effects do not necessarily extend beyond it. And the obvious consequences, or sensible effects, are, in the purer cases, pain, simply, in what must be supposed the especially diseased part; regulated, very mysteriously, in its returns, by a period of twelve hours, or by its multiples, or sub-multiples, while there is an interval without obvious disease.

It is probable, however, that the condition *y* is a permanent one, however subject to intervals of ease, among paroxysms producing pain: a conclusion derived from the fact of the regular return of the pain to that exact part, even through the years of a long life, and confirmed, in some cases, by tangible disorganization. But here are we stopped; or we have not yet discovered what is the pathological condition to which the term *y* is annexed. The dissections that have been made have thrown no real light on it, if we except that thickening of the coat or connecting medium of the proper nervous fibres which produces the tumour described in a former account of the disease; while we cannot suppose the proper disorder to lie in that which appears to be merely an appendage to the sensible part.

And as far as dissections can deserve credit, these deserve it; since they have been performed by the most able anatomists, among whom I need only name Bichat and Charles Bell; while that they have thrown no light on the subject, is testified by the reporters themselves. The former, in a tumour of this nature, found varicose veins leading into the sciatic nerve; the latter, and many besides him, nothing but that coagulated lymph or almost inorganic matter which belongs, as a diseased state, to the interstitial membrane; the best marked swellings having the same appearance which occurs in the ends of nerves that have suffered in amputation.

This condition of the nerve under Neuralgia has been called a state of inflammation; but while that is a favourite term, applied to solve far more than it can explain, we cannot understand an inflammation, or a phlegmasia, alternately active and dormant, and through such a length of time; and can with difficulty believe that to be a state of true inflammation, at any time, which is not relieved by local or general blood-letting, which, on the contrary, is aggravated by those proceedings, and which, when it is cured, is removed by a system of remedies admitted to be injurious in inflammation.

If, however, there is a real inflammation present at times, or in certain cases, as indeed cannot fail to be the fact from the production of this effused and coagulated lymph, we can easily explain that on the principles formerly brought forward. In various modes of the disease, there is inflammatory action or absolute inflammation produced, as a secondary effect, in the adjoining parts, as, very notably, in the toothach and the ophthalmia: and while it is easy to understand how this should also happen in the membranes which include the nerve, it becomes more obvious than before, that this is but an accessory effect, and not the disease itself; and that they, consequently, who have considered and treated Neuralgia, in any case, as the inflammation of a nerve, have committed a radical, if an easy error. And this inflammation, it is plain, may be permanent, just as the ophthalmia or the rheumatism of the face is, while the condition of the nerve giving rise to it is periodical and transitory. Admitting, consequently, that the nerve is inflamed in Neuralgia, there is a cause beyond that, or a prior morbid state, which is the cause or condition y , sought.

Let us now inquire what happens in cases less simple; while it is indeed uncertain whether, except in the instance of local injury, there is such an abstract case as that which I have, for the sake of simplicity, stated; or whether the local condition y is not almost necessarily connected with a general disease of the nervous system, here to be distinguished, for want of knowing its nature, by the symbol x .

The condition y being present, it is attended by a febrile state, generally paroxysmal, accompanying the painful stage of y , ceasing similarly, and similarly regulated in its returns by the period of twelve hours or its multiples. This is intermittent fever; the symbol x representing the unknown state of the nervous system in this disorder. How far that state extends, primarily, through this system, we cannot certainly know; but that the brain itself is in that condition, is proved by all the phenomena of these diseases; while the general system of the nerves beyond that, (always excepting the one in the condition y) may be affected inasmuch as they are so, only through the influence of the brain.

Practically then, in Neuralgia, we must consider the condition to be, generally, $x+y$; or there is a permanent disease present in the nervous system or in the Brain, subject to alternate activity and rest, or of action and inaction, as far as our senses can discover, united to a similarly intermitting but permanent disease in an individual nerve. It appears therefore that while the condition x may, and very often does, exist without y , the latter cannot so well exist without the former; or the general state producing intermittent fever may or may not be united to the local one producing Neuralgia, while it is less common, reverse-

ly, to find y unconnected with x , or Neuralgia independent of intermittent.

I am far from deciding, however, how this fact absolutely stands: though, if I have not seen such a state of things, I can conceive a periodical Neuralgia existing without an accompanying periodical fever. I mean here, of course, on the supposition that the disease has been produced by general causes acting on the system, and not by local injury. In this latter case, we can at least easily suppose that y exists alone, whether this shall prove the fact or not. But it is a point that I cannot determine, for want of sufficient experience, or for want of facts, and which must be left for future examination: while, in the mean time, it is rather indifferent as to the present investigation, how it shall be finally determined.

Further, while the same cause produces both x and y , or $x+y$, there are other connexions between these two conditions, to be considered, respectively, general and local, which deserve a briefer analysis under this formula than I could bestow on them in the former and descriptive portion of this essay. The active state of the condition x is found to alternate with that of $x+y$, under the usual law of twelve and its multiples: or the condition x , after some duration, is converted into $x+y$, or, reverse-ly, $x+y$ is converted into x , or the two alternate, by relapses or periods, in various modes: while, further, y appears sometimes to become the substitute of x to a considerable extent, or perhaps entirely; or, as the local disease gains in intensity, the general one diminishes, or else the latter may be exchanged for the former.

And in any case of the problem, or equation, $x+y$ producing Neuralgia, x may be a variable quantity while y is a constant one; or it is an exhaustible term in this equation. In strictness therefore, under this symbolical form, a different mode of algebraic expression would have been necessary: but while this would really give an air of affectation to the whole, it must be remembered that such formulæ are not intelligible to those who will find no difficulty in following this reasoning under a simpler mode of expression. And it is sufficient that the reader has, once for all, been reminded of it.

All these circumstances argue, if not a similarity, a strong analogy or intimate connexion between the two conditions x , y , or between the general disease of the brain and the local one of the nerve; while that similarity is strengthened by the fact, that the same remote or original causes produce both diseases, and that both are cured by the same remedies, and aggravated by the same maltreatment. To use a common lax phrase in physic, we might conceive that while x , or the proximate cause of Intermittent fever, was a general disease of the nervous system, $x+y$ was the same disease with a local determination: as we

might suppose that where y is present, and x not assignable, the case was in the same order of analogy as that of a local phlegmasia produced by unassignable inflammatory diathesis; to use the same current phraseology.

From these considerations we might conclude, notwithstanding our ignorance of the proximate cause, or of the values of x and y , that the Intermittent fever was a disease of the Nervous system, or of the Brain, essentially, and that whatever symptoms, collateral or essential, occurred in it, were secondary effects, as were all the anomalous diseases which I have pointed out under this general head. And therefore also, that as far as the circulating system was affected, all its affections were of a secondary nature; a conclusion of great importance as to the practice, since the original cause x ought here to be the chief object of our attention. And as, from the symptoms, from the nature of the useful remedies and the effects of the injurious ones, as well as from the nature of these last, the state x appears to be connected with all those symptoms or consequences which mark what is esteemed debility in the system, while there are other inflammatory conditions or diseases, which indicate, in all the same modes, a state exactly the reverse, the distinction in question becomes most important; while it points out, in a general way, the reason, or rather confirms the reality, of what has long been admitted from practical observation; the existence of two inflammations at least, of extremely opposed characters.

I must now pursue the connexion between x and y further, so as to examine into this particular consequence, Inflammation; the inflammation of Intermittent and Neuralgia. The general facts relating to it have preceded, as have the proofs: but while the distinction between what I here represent by the symbol w , and inflammation in its ordinary sense, is most important in practice, so is it necessary that the general reasoning should be brought together in that narrow manner which was not formerly practicable. Yet it will be remembered that w stands, or may stand, in somewhat a different relation to x than does y ; since if it is a dependence of x , directly, so is it a dependence of y , even in those cases where y might be conceived to follow x , as well as where it may be imagined primary; being therefore, if this be the fact, at times the third effect, or the effect of an effect. And I may here take y simply as the symbol, instead of $x+y$, that being no further necessary: and, since the former is an unequal or varying quantity or force, becoming evanescent, as I just remarked, while the other remains, the compound symbol, thus simply stated to prevent the necessity of adopting a much less generally intelligible algebraical expression, might tend to mislead.

The condition y , therefore, possesses the power of inducing, apparently through the minuter ramifications of the affected

nerve, an excited circulation, or an inflammatory tendency, in the neighbouring vessels, with increase of sensibility; and this, in some instances, proceeds to a species of apparently active and permanent inflammation. Or, let it be supposed that it is the condition x which produces this local effect, as it produces y , the conclusions to follow will not vary essentially.

In the condition x , or, intermittent fever being present, we find that while any one principal nerve may suffer the state y , so do there arise diseases without pungent or proper neuralgic pain; being among the anomalous symptoms or cases of intermittent which I have described as far as I am acquainted with them. Now the reason for supposing that these depend on the condition y in the nerves supplying these parts, will be immediately given; and if they be admitted, then we must, theoretically, look on all these as secondary diseases or symptoms of intermittent. Or otherwise, if they depend on x , as y does, being either conditions or modes of y , or else are thus produced through the intervention of y , so, further, the condition y being probably at times, sole, or independent of x , may they be modes of y in the same independence, or else effects of that state as existing in an independent manner, the produce of the exciting cause. Or, in terms, the inflammation in question, here called w , may depend on pure intermittent alone, or on neuralgic intermittent, or on pure Neuralgia; the intermediate case being that already alluded to where w may be a third concatenated effect.

And in these cases, the diseases which are consequential, or the effects, will vary according to the nature and offices of the affected parts: so that w being the fundamental effect, or the peculiar inflammation, there may be produced pleurisy, rheumatism, gastritis, ophthalmia, or whatever else; simulating, in certain cases, the disorders of the same visible aspect or general symptoms which arise from another, and apparently very opposed cause. Such is a theoretical and abstract view of a generic disease: and if it is the general expression of what has preceded on this particular subject, it is confirmed by the various facts found in the preceding description of these disorders, on which it has been founded, or from which it is generalized. To proceed to the promised illustrations and reasons.

If the sciatic nerve be the seat of y , the pain is highly marked, as it is when any other principal nerve is similarly affected. In the lumbago of the same character, the disease being apparently seated in the smaller ramifications of the cauda equina, the pain is more general and less acute; and it is still more mild and more diffused in hemicrania, in the similar affections of the rectum and bladder, and in the rheumatic pain of the face without fixed inflammation. There is a gradation therefore in the quality of the pain, proportioned to the sizes, and

numbers also, of the nerves affected y ; and that, in these cases, this is the affection, is proved by the same facts which prove it in the simplest Neuralgia with which I commenced this examination.

This is the first gradation; while in it I might perhaps have included the palpitation of the heart; an affection of its motive nerves, incapable of producing pain, inasmuch probably as that organ possesses few or no nerves of mere sensation, and exerting itself in another manner.

This is the basis, or the first step, in the chain of the argument. The smaller nerves may be excited to action, or may be, in whatever manner, in the state y : and that state does not produce proper neuralgic pain, either because it is moderate in degree, or because the affected branches may be minute; while, when existing, it is diffused, as occupying many nerves instead of one point.

The second step is no less plain, and no less proved. The nerves, thus in the state y , may be the secretory nerves of glandular vessels. The consequence which would be inferred does occur. It is a state, in these vessels, of activity; and the result is increase of secretion. It may be thus, simply: it may be attended with pain; and that pain may either be neuralgic, or it may be the pain of temporary, and modified, or imperfect inflammation: of an action in the secretory arteries, greater in degree, or, possibly, of an analogous action in non-secreting arteries. Here then is y , not properly painful, or seldom so, but exciting undue action in the minute vessels.

The next or third stage, bringing us a degree nearer to simple inflammation, is that state of increased sensibility, proceeding gradually to turgescence or enlargement, and to redness, which happens in a fit of common Neuralgia: the y of the nerve here producing, probably through its influence on the minuter branches, and by means of them on the minute arteries, an increase of action tending towards inflammation, but which ceases with the cessation of the active state of y .

The fourth step occurs, demonstrably, in rheumatic affections of the face or other parts, with Neuralgia or intermittent; with either x , or y , or $x+y$, and in cases where the disorder is transitory or periodical. The condition of action in the minute vessels has increased: there is impending inflammation, or an approximation to it: x or y are about to produce w . Or there is an actual w , which ceases with the action of that mysterious cause, in x or y , by which they are under the periodical law of twelve hours. In the external parts, those inflammations w are visible and indisputable: they are inferred of the internal ones, in sundry cases to which I have formerly referred. When y is present, alone, or otherwise, the dependence is proved by their coexistence; as it is inferred that w is the dependent, from what

has preceded. When x alone is present, it is inferred to be the cause, from the similarly periodical and consequential nature of the w , and from the effects of remedies, for good and evil.

The last stage is the point to be proved. The inflammation is perfect: but it is a perfect w , as in the ophthalmia of y and x . In this particular case, it is visible and indisputable: it must be, and can be, inferred from symptoms, when it is not to be seen from the invisibility of its place; as it is also from dissection. And it is still w : because, if it were not, at what point does the character change to the reverse one? because, even then, its y will accompany, in regulated periods or otherwise; as will its x , or both: because, even then, it is subjected to periods during one portion of its progress, while permanent, or irregular, in another; because, the same remedies, for good and evil, continue to produce the same effects as they did in every link of this chain from the purest y or x to the most inveterate and decided w . And if all this is the same when the inflammation is not visible, as it is in the ophthalmia y and x , but must be inferred from symptoms, then is it a just inference that all such inflammation is w , depending on x or on y ; while the dependences on x are the inflammations of Marsh fever, so much misapprehended, but, still, through experience, better treated than they are understood.

Thus have I traced an argument, to which I cannot see an answer: drawing the connexion as close as it can, now at least, be drawn between intermittent or Neuralgia, and inflammation. It is an analysis of the principal facts as well as arguments which have been already used in different parts of this essay, for establishing this important point; namely, the true nature of this particular inflammation. And as far as relates to x , it is the basis of the theory of anomalous and simulating fevers of an inflammatory character, every one of these being a w of some particular part; as the other, the nervous disorders, with similar connexion or dependance, will find their analyses, as far as those are now attainable, under y , and z .

True, it is deficient, inasmuch as we do not know what the condition w , physiologically, or pathologically is; or the real proximate cause of this particular inflammation. But it is only deficient as are x , y , and z , a deficiency which does not destroy its utility. Nor is it further deficient than is the theory of the reverse inflammation, or of true phlegmasia. In this, as in the other, all that we can see is an effect, not a cause; enlargement of the minute vessels, or, if this term is more pleasing, increase of action. This is but an effect; yet physic goes on forgetting that, when it calls the proximate cause of inflammation increase of action, it is but substituting one term for another, and that term the name of an effect, not of a cause. Increase of action is inflammation, and inflammation is increase of action; yet

thus does physic write—not reason—through volumes in thousands, and flatters itself that it is making progress in philosophy. That two opposed conditions or causes will produce increase of action in the minute vessels, and that this action is inflammation, has been proved: but, to precede and immediately produce that, there must be some immediately previous cause in those vessels, and intermediate between that effect and the remoter cause which lies in the nervous system. This is the real proximate cause, and this it is which is unknown in both inflammations; while, in each, it must be different. We have not discovered its nature, it is true; but there is a step made at least, when it has been shown that there is such a state yet to be investigated, and when the attention has been directed to the right point, and to facts instead of words.

Inasmuch as there may be more leading causes than two, of this effect, inflammation, and consequently, more than two properly proximate ones, it was not my business to enter on that question, and I have gladly avoided it that I might not encumber further the present argument.

I have perhaps stated all this too briefly and too abstractedly. It will probably be a cause of greater hesitation than any thing which I have attempted thus generally to deduce; and particularly because of the practical questions which it involves, and because of the extreme difficulty of overcoming the habits of thinking implicated in the term inflammation. Let me attempt to illustrate it further, since there cannot well be a more important question, from the deep share which it takes in the most difficult portions of this entire essay, and especially in the most intricate varieties of marsh fever. It involves the entire question of the difficult cases of remittent fever attended by inflammatory affections, and of the intermittents of similar character. It involves also the inflammatory varieties of simulating and deceptive marsh fever, whether acute or chronic; those cases, perhaps the most important of all, from their peculiarly deceptive character, where the fever or the x is little, and the inflammation, or the w , is chief, or all. Thus does it also involve the neuralgic inflammation, such as the ophthalmia, when the Neuralgia is overlooked still more; where it is either unapparent or is really absent as a visible disease. In the former cases, it is what I have sometimes called, misdirections of the disease, of the x , or localizations; and its extreme importance may therefore justify some further illustration, even to the hazard of repetition. It is the inflammatory misdirection or localization, as the other cases are the nervous ones: and perhaps, in practice, the errors of confounding the w of x with ordinary inflammation, are even greater than those which follow from confounding z with palsy and apoplexy from other causes.

If I have succeeded in proving that the rheumatism of the

face and that of the eye, are neuralgic inflammations, excited essentially by the unknown peculiar state of the nerves here called *y*, while I have also shown that similar ones, as in the local intermitting rheumatism of a limb, can be produced by the condition *x*; and that, in every case, this inflammation is not cured by evacuations, or debilitating means, but on the contrary, aggravated by them, I may safely conclude that there is an inflammation which is not a phlegmasia in the proper sense of that term, and I may be allowed to designate it, as I have done, by the symbol *w*; because, as occurring from mere intermittent, I could not with so much propriety here call it the neuralgic inflammation, as I did formerly in specific cases.

Now I have proved, that in a great number of cases besides these, *w* is a diseased state essentially different from phlegmasia, however resembling it to the eye, or in the symptoms of pain, turgescence of vessels and redness: that difference being evinced to us by the effects of remedies, as I have just said of the others, and that proof being ample; while we cannot well command any other equally universal, though it would also appear that there is often an essential difference in the terminations of the visible disorder. And the state *w*, occurring from *x* and from *y*, is also acute, or violent and transitory, or else chronic, or mild and durable: while further, it has been proved, that whether arising from *x* or from *y*, from intermittent or from Neuralgia, it is, when chronic, always aggravated by debilitating remedies and cured by the reverse; just as it also is when acute. Or, in this latter mode, when it occurs in an external part that we can see, as in the eye, however acute it may be, or however energetic both itself and the febrile state, or the *x* to which it appertains may appear, it is, similarly and equally aggravated or cured, by the same relative practices; being, in this case also, an unquestionable *w*, and not a phlegmasia, however resembling one.

The great question remains: whether we ought not to form the same conclusion as to every inflammatory affection occurring under *x*, and under all conditions of that, acute as well as chronic, even when these are internal and invisible, characterized therefore by pain alone, or by such other well-known symptoms as it is unnecessary to enumerate. Thus, if this analogy and this reasoning be allowed as valid, the gastro-enteritis, in all its forms, of French physis, will be *w*, not phlegmasia; just as I have already suggested that it ought to be considered an effect, not a cause of marsh fever, as it is supposed by that system. The same reasoning will also apply to the inflammations of the brain, the pleura, the lungs, the bronchial membrane, and so forth, and even, probably, to the acute hepatitis of India: or these will be all *w*, not phlegmasia, or conditions of inflammation resembling that of the neuralgic ophthalmia, or, if this term be preferred, rheumatic inflammations.

How important this view is, as to the practice, I need not now suggest; since on its truth or falsehood must the balance of this hang, for good or evil. And if it is supported by the analogies already pointed out, and the various views formerly stated at length, so is it borne out, I need scarcely say, by numerous observations on actual past practice in various hands, and if I mistake not, by the treatment of the hepatitis in India, founded on ample experience and against theory; the theory of phlegmasia.

This is an argument on which I already laid stress in the case of the ophthalmia, and on a comparison of Wardrop's practice, derived from experience, against the ordinary theory and practice also, with my own, deduced from theory. And while I cannot help regarding it, as in all philosophical proceedings, to be a weighty argument, I need not remind the reader of the innumerable instances in the inflammatory marsh fevers, where the practice of acute and experienced physicians has thus, and in the same manner, against supposed analogy or theory, and practice also, deviated from the received usages and opinions; adopting that which I should, in the same cases, have adopted from my theory. I had occasion to point out these facts formerly in several instances; and very particularly to show, how, even the French physicians, while in the act of declaring the existence of inflammation of the stomach and bowels as the very cause of fever had pronounced in favour of such a practice as my theory directs: proving the presence of *w*, where they decide, in words, on that of phlegmasia.

Nor would it be difficult to point out many other facts respecting all the inflammations occurring under *x*, as under *y*, in support of the same views; among which none are more remarkable than their cessation and reproduction, often strictly periodical, in the highly severe epidemic intermittent of hot climates possessing inflammatory symptoms of various kinds: a fact never occurring in proper and simple phlegmasia, if we except gout perhaps, and ranking these with that ophthalmia which I have shown to be not a phlegmasia, but a *w*. But I will not dwell on these further proofs, as every physician can now add them for himself; though I ought also to point out many appearances on dissection; and among others, as a very remarkable fact, the frequent want or absence of the traces of an inflammation which must have existed, and often, not long before death.

On that point, however, let me remark, what is of great importance as to the purity of this evidence for opinions, and for opinions, themselves most important when erroneous; and it is, that inflammation is frequently said to have been present on dissection, when that is not the fact. This is but a branch in a wide mass of error in the same proceedings, and particularly

as to effusions; and as to the state of the brain; errors reflecting high discredit on anatomists, from their frequency, and from the pernicious opinions to which they have given rise, or which they have confirmed. The appearances, so often mistaken for inflammation, as well as for living effusion, are appearances which may occur after death, and do so occur: often sufficiently deceptive, it cannot be denied, and yet, I believe, always to be distinguished by a degree of care not often bestowed on an investigation too generally conducted in a careless manner, or conducted by persons willing to find what they think they have found, or even, under prejudice and system, concurring to their own errors.

I will now terminate this particular abstract: suggesting only, that if what I have attempted to prove shall be admitted or established, it would be most useful to substitute some term for the symbol w , and to discard the words phlegmasia and inflammation in these cases: above all, in the latter, since it is most certain that as long as they shall continue to be thus misapplied, no reasoning nor experience will succeed in establishing a better practice among the multitude, guided as it ever is and will be, by terms, habits, and associations.

Yet as a species of further corollary, I ought to enforce a suggestion which seems especially to demand attention, because of its great importance as it relates to the practice in fevers of this nature, and not improbably indeed in fevers, from whatever cause.

It is proved that x can produce inflammation, through a modified y , or otherwise; that such a disease is aggravated by the treatment of common active inflammation, and that the means of cure must be directed to x . Now the intermittent, and the remittent, are often attended, among other inflammations, by such or similar affections of the brain, particularly, though these last are often also suspected where they probably do not exist. The important question is, whether these are not always of the same class of inflammations, w inflammations produced by x ; while I cannot help expecting that when the present fashion of considering the great mass of inflammatory affections to be of the same nature as those, the ordinary ones, of the pleura and bowels, or true phlegmasiæ, has subsided, or when the habit of viewing inflammation, as of one character only, shall be calmly reviewed together with what has been stated in these pages, physicians will find it necessary to review their practice in the cases to which I allude, and in these very particularly. And before I terminate this branch of the present general view, let me make one remark, which ought to have been more urged in the preceding part of this work than it was. This relates to what is popularly called a *Coup de Soliel*. How often the action of the sun on the head may produce real inflammation of the brain,

or true phrenitis, I cannot, for want of the requisite experience in hot climates, decide; yet this I can say without hesitation, that out of numerous carefully reported histories of that supposed disease, I have found none which was not, simply, the remittent fever of those climates, excited by the ordinary causes; while a casual exposure to a high sun, or the mere popular opinion and theory, had been the ground-work of the false judgment. I need not again remark how symptoms may appear to justify that, nor how important the truth is as it relates to the practice.

To return to pure intermittent, for the purpose of examining the condition z . If what I have said tends to prove that this disease is an original derangement of the nervous system at large, or possibly of the brain alone, that it is a state x of that system, this is confirmed, in the mode of dilemma, by the very fact of its connexion, of the very singular connexion which I have shown, with the state y ; as we can conceive no other mode of influence which can thus be exerted on a distant nerve. This view is further aided by the very singular influence which intermittent exerts on the nervous system at large, and on nerves individually, independently of the state y , or of the inflammation which is dependent on it. As to the general nervous symptoms, the state of the mind, and so forth, I need only recall them to the reader's memory, while I must dwell somewhat more particularly on those of a more active and permanent character.

These are the paralytic consequences. I surely need not say that a nerve may lose its power, partially or generally, from a mere local action, entirely independent of any affection of the circulation, or even of the brain; since this is a common consequence of the application of lead. And thus, poisons and cold act more extensively, even so as to affect the entire system, or the brain. Now this condition of the nerves is, pathologically, as utterly unknown as are the conditions x and y , while for that reason, I must distinguish it by the symbol z .

Supposing the cause Malaria to be applied to the body under certain modifications, under that of great energy probably, the first consequence to the brain is apoplexy, or what is in reality the correct term, a general palsy; or as I have also shown, it is sometimes a partial palsy. The former is the condition z in its most extensive form, and when it is perfect, the consequence is death: an event which I have formerly shown to occur in this manner. It is probably analogous to the effect of poisons; and it bears some resemblance to that state which follows concussion, since it is aggravated by the evacuant and debilitating system; so aggravated often, as to terminate in a permanent z , more or less general, when that would otherwise have been transitory, and extending even to death.

All that we can say of this state is, that it is a loss of power; since, not knowing the cause, we must use the effect as a term; or it may be called, in the usual lax phraseology of physic, a debility of the nervous system, or of a portion of that. And supposing it to cease, or that the apoplexy, or general palsy, undergoes a natural cure, it is often succeeded by the intermittent; or, the state z terminates in that x .

Here then is a remarkable connexion between x and z , or between intermittent and palsy, but it is far from being the whole. I have formerly shown that intermittent produces palsies, in separate nerves, and in every possible gradation of energy, extending even to hemiplegia. Thus it is a tendency of the state x to proceed to the state z by aggravation, as, reversely, an original attack z subsides into x by alleviation. Thus, were it aught else than the obscure animal structure and functions which we were examining, we might almost conclude that x and z were but different degrees of one affection, or that the radical derangement of the nerves, the proximate cause, was, in both, the same, differing only in degree. And it is here also remarkable, that if the vague term debility be substituted for z , it is the result of evacuates, of all causes which are supposed to diminish the nervous power, to convert x into z ; as if, by aggravating a moderate debility, it converted that into an entire one.

Further, in this case, if a nerve be long affected with the condition y , this state frequently terminates, in that part, or in all that lies beyond it, in z ; or an inveterate Neuralgia is gradually converted into a palsy, as far as the influence which we may suppose to be that of its deranged part, extends. And further still, it is the effect of the evacuant system, to determine, aggravate, or accelerate, this effect, as also to render permanent that which would have been transitory. In all these consequences, there is a very striking analogy between the proceedings of intermittent and Neuralgia, or between x and y , separately, as related to z ; confirming still further what has been said respecting the analogous conditions of the nerves in both cases, or of the dependence, in some manner, of y upon x , and of z upon both. I have stated all this, on account of these analogies and of the singular connexion between intermittent and palsy; but if I have used the term debility, it is merely out of convenience, and for illustration; as it would be to adopt a very bad logic, though it is the too common logic of physic, to suppose that any light was to be thrown on an inquiry by using an effect as a cause. Debility of a nerve is palsy, and palsy is an effect; but thus it is that medical reasonings commonly wander round in circles, ever discussing and concluding nothing.

If all these facts bring us back to the same conclusion, viz. that intermittent is a disease radically and essentially seated in the brain or nervous system, it is an opinion supported further

by the effect of mental operations in its cure; which, however, cannot be discussed to any purpose as long as we are entirely ignorant of the nature of the connexion between the brain as an organic structure and the mind as a metaphysical entity.

But there are also some other facts which deserve here to be recalled to the reader's recollection: since if they do not produce any very accurate illustrations, they tend to some connexions which further discoveries may render of importance.

I have shown that fatuity, or diminution of the intellectual faculties, and that even mania, are the produce of intermittent, and equally of Neuralgia; though it is here scarcely necessary to distinguish these two cases, if what I have already proved respecting their community is admitted, as it now can scarcely fail to be. And further, that when this would not probably naturally follow, it is caused directly by the evacuant system. Or, that state of x which under similar circumstances, might terminate in z , producing common palsy, resolves itself, or is aggravated, into an affection which may be considered perhaps as a palsy in the brain itself, rather than in the nerves of motion and sensation; or a z of some, or all, of those parts of the brain which are the organs of the metaphysical mind. Here, fatuity, and also mania, is the produce of some state which, again, may be called a debility, or diminution, of the nervous energy, as it is produced by debilitating causes acting on the previous condition x ; that debility, however, being seated in a different portion of the nervous system from what it is in palsy.

Those who are inclined to speculate on the division of the mental functions of the brain, might also, if they pleased, here suppose, that in the separate production of fatuity and mania, the local affections varied, as well in place and in extent as in intensity, just as they do in palsies of the limbs; thus accounting for these separate and varying effects. And how far the noted hypochondriasis of intermittent, and its delirium, must be connected with these circumstances, it is superfluous to insinuate; since, on that subject, I could but vary terms without adding information. Others also may, if they please, trace such analogies as they can find, (and they are tolerably obvious,) between these mental affections and their causes, in this case, and those instances of fatuity, mania, or whatever else of an analogous nature, which are produced by various causes, called debilitating; as they may also speculate respecting the evil effects of remedies of this character in ordinary mania arising from causes yet unknown to us.

I might indeed pursue the whole subject much further; since, according to the usual manner of medical discussions, there is here matter for a treatise; but having drawn all the inferences which the facts seem to warrant, as far as they are connected with the case which I have undertaken to illustrate, I gladly

quit it, leaving it to those who may find more pleasure, or fancy more advantages than myself, in speculation and phraseology. Whether dissection and experiment, investigations anatomical and physiological, will ever assign the values of x , y , and z , or discover what the condition of the brain and the nerves is in intermittent, in Neuralgia, and in palsy, I cannot foresee, far as we are at present from even the most superficial knowledge of those organs and their functions, beyond their mere distribution and forms; but even without this, without even the slightest conjecture respecting the proximate cause, the preceding investigation will not be useless.

There is however yet one remark that I must make, or rather renew in a condensed form, in this place, respecting the condition z , in the nerves, or that derangement which is the cause of palsy. It may become important as far as the practice in this disease, from whatever cause arising, is concerned. It has been shown that this state may occur in a single nerve, or in a greater number, to the extent of paraplegia or hemiplegia, and further, that these conditions may extend so much wider as to affect the brain, producing epilepsy, producing fatuity more or less perfect, and producing mania. It has also been shown, that entire apoplexy, or rather universal, if temporary palsy, may occur from causes of the same nature, or under the same circumstances; as also that epilepsy, fatuity in various degrees, and mania, may be produced, in these circumstances and from these causes, without accompanying palsy. That is, the condition z may occur in one nerve of sensation or of motion, or of both, or in a greater number, to the extent of one half of these; or else affecting these, it may also involve the brain as far as this is the organ of mind; or lastly, it may occur in the brain alone where it is the organ of the mind, affecting its powers or faculties generally, by reduction of their energy, or partially, by destroying the usual and sound balance of those powers.

Now, in every one of these cases, we trace an intimate connexion between the condition z , and that condition x , or between all these enumerated disorders and the condition productive of intermittent fever; further proving, that whatever the condition y , or the derangement of one nerve, can effect by aggravation or consequence, is also produced by x as to any or all the nerves, or the brain itself. But it is also proved that every one of these disorders is produced without any previous necessary affection of the circulating system, without any derangement of the circulation, as that affects the head, and by the direct action of a cause productive of intermittent fever, namely, Malaria, and also by mere cold, if, as to some of the effects, more rarely; sometimes without the intervention of that disease, most commonly through it, and by aggravation or consequence. And further, it is most amply proved that while intermittent fe-

ver marks in numerous ways, its connexion with a state of the nervous system or the body, which is commonly expressed by the term debility, it is the effect of blood-letting especially, and of all other causes of debility generally, to induce the state z , or to aggravate it, or to convert x into z ; in other words, to bring on palsy, fatuity, and so forth, by acting in co-operation with intermittent fever.

If it be therefore the effect of blood-letting, as it is supposed, to diminish the nervous power or energy, it is, in the first place probable, that such diminution is an essential part of the disease x , while the other conclusion is even more important, inasmuch as it is a practical one. It regards the extreme hazard, in the first place, of adopting the evacuant system in palsies, supposing their causes to be unknown, or it not having been ascertained that there is pressure on the brain, from previous apoplexy; still further, the more than hazard, the certainty of injury or destruction, whenever the causes of palsy are those already stated: while wherever palsy is a simple original disease, without previous apoplexy, the further probability is, that this state always arises from the condition z in the nerves, however induced, and that nothing but evil can arise from the evacuant system.

Nor is the affection of the brain or intellect any proof, in these cases, that this organ is diseased in consequence of a wrong action in the circulating system, requiring blood-letting; since that effect equally takes place in the palsy of intermittent fever, or in the z of x , as it does, notably, from narcotic poisons and other causes acting immediately and solely on the nerves themselves. The general caution, if no more can be remembered, should be this, namely, to consider the nerves as organs of prime, fundamental, importance, capable of diseases of their own, original, and utterly independent of the circulating system; and to recollect further, that as far as they are known to suffer original disease, that disease is x , y , or z , intimately connected; the last being an aggravated state of the two first, and each of these separately, or any two or more of them united, being a condition which is invariably aggravated, and often produced by loss of blood; or, generally, by debilitating remedies: in brief, that as far, hitherto, as we can prove that the nervous system or a nerve is originally diseased, that disease is a state in which the system of evacuation and debility is injurious or ruinous.

I must not however be understood to say that the nerves are not, or cannot be subject to other diseases, or even to one the very reverse, and demanding the very remedies which I here condemn. On the contrary, it is highly probable that the fact is so; and that increase of power or energy in nerves, or in the entire system, is actually a leading cause of diseases, requiring the opposite remedies. If it shall ever hereafter be proved that

this system, or its separate portions, can in reality undergo a primary diseased condition, the reverse of that which I have here been attempting to demonstrate, we may thus acquire a new mode of viewing a great portion of the diseases of the system; though it is plain that until we shall arrive at a knowledge of the nature of that condition, or the true proximate cause, we are still a long way from a just theory of physic; even should a view thus broad and vague not be without its value in practice, as forming a species of classifications for use. It is easy to retort that such a view is only another mode of expressing a certain well-known general medical theory: but I trust that the connexions here traced as to one portion of it, and indeed the entire discussion, are of a nature to rescue it from this censure, since they involve facts and are not mere words; words to which even the inventor certainly attached no definite meaning, and which no one, as far as I know, has ever attempted to explain.

A considerable number of phenomena belonging to disease, and belonging to different diseases, belonging also to diseases that have been considered of different and discordant characters, and to arise from separate exciting causes, and also to depend on different and often opposed proximate causes or conditions, have been collected, displayed, and balanced. Throughout these there has been traced, however unexpectedly to physicians, one great and general exciting cause, while some other such causes have been inferred, or admitted under want of proof, and for the whole equally. All these diseases have been shown to pass into each other, to alternate with each other, or apparently to produce and yield to each other. All of them have been proved to be attended by a diminution of nervous power, from their phenomena, or effects: and in this there is a process of enlargement or extension, from a minute part to the whole, as there has also been shown a climax, from simple debility, through various analogous and increasing affections of the nervous system, upwards to Death. In all the application of powers which we know to be debilitating ones, aggravates, and tends to carry them, locally, from a part through the whole, as also to extend them, in point of injurious power, through the Climax to its ultimate limit. And in all, the reverse powers are remedies. The conclusion follows: a diminution of nervous energy or power, the cause of disease is established. That this leading cause further produces *w*, or inflammation which is not phlegmasia, has also been proved: though here the greater obscurity lies, because an effect, similar to all our senses, is produced by a condition which must be of an opposed nature, as far as we can judge from the effects of remedies.

I do not pretend to inquire what that reverse state is, not even to say that there is such a reverse condition of the nervous power, and that it is the cause of this inflammation, or even a

leading cause of disease. The whole is left for the future inquiries of physic; as it is left to inquire what further fundamental or proximate causes of disease there may be. But what I have here said in this summing up, will at least show that the theory, as far as it has ventured to go, is not an *a priori* hypothesis, and that it was not derived from a term once in vogue; but that it is a deduction, be it wrong or right, attained in a very different way; gradually brought out, through the legitimate road of facts, and by attempting to trace those facts to the nervous system. My line of investigation has however led me to examine that one condition only, its want of energy or its debility: and it is in attempting to prove that the loss of obvious power was the loss of concealed or unknown causes of power, and that, to diminish this still further, was injurious, that I have come to a conclusion which is, however, but a suggestion, and offered as such; open to any evidence and argument that can be opposed to it; while, considering nothing worthy of pursuit but Truth, I am indifferent whence or from whom that shall come.

There is yet a circumstance, however, if I am not much mistaken, connected with this subject, which I cannot pass without notice, as it seems to me to present some illustration, however slender, of the condition of the nerves in these cases; possibly to give ground to some conjectures, though vague enough, as to the nature of their disordered action. I must regret that the observations to which I have alluded are confined; but had they even been less numerous, it would have been my duty to point out the fact, as a subject of future inquiry to those who may have the means of examination into what, at the very least, is an object of physiological curiosity.

It is familiar to every one, that by pressing on the course of a nerve, the parts which it supplies are benumbed; the sensibility is diminished for a time, and the power of the muscles weakened or entirely suspended. It would be, as it has been, a natural conclusion, that they did transmit a fluid, like blood-vessels, and that its flow had been thus interrupted; but unfortunately this supposition is not borne out by any other facts, as they are not tubes, and do not contain a fluid, as far as we can discover. If the pressure has been slight, the power is soon recovered, yet not without an effort productive of very well known painful sensations: if very considerable or long continued, it has occasionally happened that a palsy has been produced, of considerable duration, and in some cases permanent.

Whatever be the central force in this case, we may at least conclude without hazard, that there is such a force, and that it is by means of its action above the deranged conductor, that the temporary obstruction is overcome. And thus, also, we might infer *a priori*, that the facility with which that is overcome, and the power restored, will, in any case, and supposing the

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quantity of injury or obstruction given, depend on the power or activity of that central force, or in a similar energy in the conductor itself, or on both united. This, it must be admitted, is but vague language, yet it is the best that we can command, in the present state of our knowledge of this obscure subject, the nervous power and system: and still, vague as it is, while I must use it in drawing the comparison which I have here in view, it is a general expression which may hereafter become of some importance, like the algebraic symbols here adopted, when the value of those symbols shall be assigned; if indeed that shall ever happen.

Now the fact in question is this; that in subjects, or patients where the nervous system has suffered severely from the persistence or repetition of long continued intermittents, a slender or moderate pressure on any of the usually accessible nerves, or on those most likely, in our common actions, to suffer this obstruction, produces the numbness or temporary paralysis in question, with a facility unknown to those whose nervous system is in a sound state, or has not been thus affected; and also, that in such subjects, from any given pressure, the ensuing numbness is much more severe and durable than in a healthy person. Or, to state the fact in the general terms just enunciated, the power of the central force, or possibly of the conductor itself, or of both united, is affected in a subject whose nervous system has been subjected to long-continued intermittent; or it acts with less energy in removing such injury, or in restoring, (if I may adopt a term which I use as a metaphorical one,) the circulation through the obstructed vessels. It is, to use this illustration again, as if we were to compare the efforts of the heart in a vigorous and in a debilitated subject, towards the restoration of the natural heat in a chilled limb, or the recalling of life after fainting.

As to the fact itself, it is a natural objection that it cannot be very easy to observe; nor should I have ventured to state it, had it not often come before me, and, in some cases, in a very marked manner; while from having forced itself on my observation as a naked and a mere fact, long before I had thought of associating it with any of the analogous ones which I have detailed in this essay, or of referring these diseases to a pure affection of the nervous system, I feel the more confidence in its truth. It was unbiassed by any previous views or reasonings, and was not recollected for use until long after the opinions which prevail throughout this essay had been arranged, and the very essay itself completed. And while I have observed it in various degrees in different subjects, the patients themselves having pointed it out as an object of complaint, and without previous suggestion, I may also name one case of a severe chronic intermittent, in which this tendency, or this debility of the nervous energy, as I may, without proposing any

hypothesis, consider it, was so great and so extensive, that the patient could scarcely discover any sitting posture without suffering from it; while for many weeks during his confinement to bed, he could only avoid the hazard, or rather the certainty, of this accident in his legs and arms, but more particularly in the latter, by lying and sleeping on his back, with all his limbs extended widely. And in a similar case, there is a patient now before me, a long sufferer from relapsing intermittents, who, though long since freed from that disease, is unable to lie on his sides, or never, at least, without some peculiar contrivances in the arrangement of his bed, from the certainty of producing the numbness of the arm beneath, even where the actual pressure seems nothing, and in positions where a healthy person would suffer no inconvenience. Similarly, in another such patient, whose occupation leads to the necessary use of scissors, it requires great care to avoid the pressure of the bow on the nerves of the fingers employed; a casual and careless effort of this kind having frequently produced a tingling and numbness at the extremity of the injured member, not subsiding for many weeks after.

If this consequence occurs, during or after intermittents where no particular local affection or tendency has existed, it is probably much more frequent, and certainly much more easy to observe, in the neuralgic cases. In many instances of this nature, as well after the entire cure of the disease as during its existence, I have found that the deranged nerve continued thus enfeebled, if I may use this term, and even through its whole accessible extent; though, as is the case in this disorder, the pained part had been very minute, and situated also at its remote extremity. Thus for example, where the Neuralgia is seated in a finger or has formerly existed there, I have found, that, even for many years after a complete cure, a slight pressure on the trunks of the nerves, even as high as the armpit, was sufficient to benumb the limb; an effect which, from such a cause, would not have taken place in a healthy subject.

As I commenced by remarking, therefore, it would seem as if in the intermittent, under any of its modes, whether general or local, the nervous energy was diminished; or that if we conceive the power of the brain as to sensation and effort, to resemble that of the heart as to circulation, it was an effect, or a cause—a condition is the safer term to use—in this disease, that the vigour of the central force or original power should be diminished; or possibly that the power of the conductors alone, if indeed they are merely conductors, should be enfeebled; though we may equally suppose that both circumstances are united and coexistent. The facts that I have related seem to offer a species of proof on this point, which may be considered mechanical, or viewed as experimental: as if we could take possession of a

single nerve, and by a regulated application of compressing force, ascertain the strength of the resistance or of the opposed action in surmounting opposition.

I need scarcely now suggest how this view of facts connects itself with the condition of actual palsy following or accompanying intermittent, or of similar paralytic affections following locally the local affections of Neuralgia. This condition is the entire or completed loss of the nervous or central energy as to the part affected, or else of the conducting, or perhaps of the active and delegated power in the nerve itself; since we know not yet what the relative or actual powers of either are, or whether, or how far, the nerves act originally by powers of their own, or merely dispense or circulate a force generated in a central and remote part. In this state of things we must conceive that the loss of power originating in the cause of the disease is complete, or approaches to that state; or it is the actual condition z ; in the case of numbness produced by a pressure slighter than that which would act in a healthy subject, we must suppose that there is merely a moderate state of z , or a condition approximating to it; a diminution of energy which a slight addition of debilitating or injurious force is capable of converting into a perfect z .

Every thing in short confirms the general theory here laid down, that the state of the nervous system in intermittent, or in the whole class of diseases produced by Malaria, is one of diminished power; whether that loss of energy be the direct cause, and the sole one, of these diseases or not, or whether it is only an accessory effect, the cause of other derangement, and the proximate one of palsy. But where every thing confirms this view of the enfeebled state of that power, not only in these diseases but after them, we derive from it the conclusion, not less derived from practice, thus reaching the same point by two separate roads, that it ought to be our business to avoid all causes or actions which may be supposed to act in a similar manner on the nervous system, as far as we can ascertain or conjecture what those are, and further exert ourselves, directly, in making use of all those means which may be supposed or have been found to add strength to its energies. What these are, on both sides, for good and evil, I need not repeat; though I may be allowed to remark, that by whatever road this subject has been here examined, whether through a general, if indefinite, theory derived from different sets of phenomena, or through practical experiments, or through consequences, and the effects of medicine, the same conclusions invariably follow; all agreeing in the hazard or injury which flows from proceedings that induce or aggravate debility.

I ought not, I presume, to terminate this chapter without in-

quiring into the cause of the intermittent character of these diseases, as well as of their very mysterious submission to the law of twelve hours already noticed. I fear that both are truly mysteries, and so separated from all analogies of any real value, that it is thoroughly fruitless, almost to bestow a thought on the subject. Habit is a term that has been used, and it explains just what other vague terms always do. The revolution belonging to sleep has been named as an analogy; but I truly cannot see how it bears on the question, as long as it cannot explain the recurrence of tertian and quartan. We can scarcely conjecture what the nature of the mere intermission and exacerbation can be, independently of all periods; how a permanent disease can be so interrupted, how a derangement of such exceeding violence as a severe fit of intermittent or Neuralgia can subside and leave the body in perfect health; still less, perhaps, believe that this is but a succession of diseases, and that the apparent health is real, or that the state *x* is not a permanent derangement of the nervous system.

I willingly leave to others what appears to me a profundity of darkness: or rather I leave to posterity what I hope posterity will discover, what at least, it will pursue, and through the road of philosophy, not words. Yet there is another doubt to be stated as to the periods of the compound intermittents, while I scarcely know what opinions have been formed respecting it, or whether we can dare to hazard one. I have already stated the forms of the double tertian, and need not repeat how this disease is distinguished from the quotidian; though I may remind the reader of the singular cases where one paroxysm is a common intermittent and the other a mere Neuralgia. The question is, whether this is one disease, or whether there are two distinct intermittents in the same person, acquired at different times, and proceeding conjointly; and the same question may be asked as to the complications of type. I know not if any one is prepared to answer it; and if I fancy that I have traced the distinct origin of two several intermittents, from two distinct exposures to Malaria, in one person, at different and even distant times, afterwards proceeding conjointly as a double type, I cannot pretend to have convinced myself of the fact, and am far less desirous of attempting to convince others. And if, on the same ground, I have been familiar with one case, including two double quotidians, or a type where, while the first quotidian of each day was different from the succeeding, and while the two quotidians of the following were also different from each other and from both the preceding; and while I further knew that this patient commenced with a single quotidian and gradually accumulated all the others, including among them a Neuralgia, I am ready to believe whatever shall hereafter be

determined on this subject; still looking to posterity, for the complete elucidation of a set of diseases, or of a disease, which I have but sketched, and very imperfectly; while I demand the indulgence which may fairly be claimed for a first attempt to extricate a long train of difficulties from their former confusion, and from the prejudices or ignorance under which they have hitherto been contemplated.

Nor do I despair of posterity, nor that physic will yet, at some future day, become a far other science than it is; if much should still remain unattainable, to prevent it from ranking among the accurate sciences. It may be a just enough censure which ridicules its past philosophy or smiles at its present pretensions, equalled only by its imperfections. But to prophesy that this is to be its continuous and eternal fate, is as little prudent as it argues want of reflection. We have no reason to be surprised at the little progress which it made for centuries, when we consider what those centuries were, and examine what then was the state of philosophy, and the methods of pursuing science at large.

Not to enter on an examination of the history of the sciences, or of the progress of the human mind from a not very distant period to our own day, it must be evident to every one who has at all considered this subject, that, if some time has passed since the true path of philosophy was pointed out, it long remained an almost untrodden one, and that a very few years have witnessed greater strides taken, and more solid steps assured, than almost a whole preceding century could have numbered. The natural history of the human body in health and disease, we may admit, is as yet almost nothing in real value: it wants even the skeleton on which a science could be engrafted: it possesses hardly a fundamental step to that end. But surely a subject so deeply interesting cannot for ever be neglected; it will even draw the attention of cultivators, from the mere necessity of action, and as other subjects shall approach to exhaustion or lose the interest of novelty. It will attract the attention of genius striving to open for itself new paths to fame, and, in truth, it is, even now, attracting new talent and new industry.

And the success will be more rapid and certain than it could ever yet have been, because of the increased attention bestowed on the accurate sciences, or rather, on all the sciences. Independently of all the aids which it must receive from increase of knowledge and accuracy in those, since no science can stand on its own independent investigations or its own separate basis, it promises to be pursued by minds, not only informed in those sciences, in science at large, but trained in the habits of philosophical investigation and in the sound logic of things. This is a philosophy which will not be cheated by the empty phra-

seology of physic, but which will define its terms and adhere to them, will cease to be satisfied with words and will demand ideas, will search for evidence and compare analogies, will form solid inductions, and re-extend its generalizations backwards to new inquiries and new facts.

These are the minds to which physic must look; and we are very far indeed, I hope, from being wanting in them, if, as yet, their labours are diverted by other subjects; prejudiced, too often, it may be, respecting what has been too long regarded as hopeless, while it is now too much also avoided, or excluded, as professional. Professional, it may be; but assuredly it is a science of as universal concernment as any which philosophy is now cultivating; as deeply interesting to every man, it will not be doubted, as chemistry, astronomy, or mechanics, matter of the most intimate personal interest, as it is of rational curiosity. But to throw it back as a duty or a right into the hands of that profession to which it is a trade, will not prove the road to its effectual cultivation: while it is an unfortunate truth, on the contrary, but too well known to every candid and educated physician, that no readier means of obstructing its progress as a science could well be invented; as this has already operated, and daily operates, in forming obstacles to its progress.

The utmost candour and mildness of judgment cannot deny that such is the fact, and that it cannot be otherwise. To thousands, to the vast majority, it is a mere trade, followed as a routine; and, to not one among thousands, is it an object of science; to no one, perhaps, of merely scientific pursuit. And while this vast majority does nothing towards its improvement, the bad effects are not merely negative; as the mystery and the error are fortified by the sanction of those thousands, and as those who, from education, from acquaintance with general science and habits of accurate investigation, would be competent to the inquiries under discussion, are excluded from the means of inquiry. How very few persons of the requisite education there are, engaged in physic itself, compared to the multitude, is too well known, to those at least who are capable of the needful discernment: while, by a singular perversion of reasoning, it is the settled prejudice of the public, to reject, as physicians, those who have given the greatest proofs of possessing extensive general knowledge and powerful minds; thus depriving them of the means of investigation, with consequences to themselves, as to the science, which must be too obvious to name, and which that science must deplore.

But it would be too easy to prolong these remarks beyond due bounds; and I must therefore conclude; adding to a mere wish as to the fact itself, a wish to believe that the day is not very far distant, when the science of physic will become a sharer in

that philosophical attention which it has scarcely or scantily yet received, from minds competent to pursue it as a science, and anxious as competent; expressing my further hope that, at some future day, the art of healing will become an art in the hands of philosophers, and not the trade of empirics; that while philosophy is labouring to inspire its principles into every artisan, this will not be the only department which it is content to view as a mechanical art, to be conducted mechanically, by artisans. And that it is thus viewed by the entire public, that it is considered, even by the educated public, by what are called rank and talents, universally, as a mere art and a mystery, and not a branch of science, is sufficiently proved, not merely by the facts, that neither abilities nor education are judged necessary for those who practise physic, but that every one considers himself competent to conduct and understand it; that equal value, or often greater is attached to the trader in secrets, who does not even pretend to medical knowledge, to him who, often, it is well known, can scarcely read or write, to the utterly ignorant and base, to the unseen and unknown, and even to the long dead and buried empiric, who cures diseases which he has not examined, and patients whom he never saw and can never see, by remedies of which he knows nothing; and that the stamped box or bottle can supersede all knowledge and all examination of the patient or his disease.

I have fully stated in the course of this essay, the reasons which compelled me to adopt an order (I should call it a disorder,) in treating of the diseases which it includes, of which I did not approve: and I then expressed a hope that I might be able to sketch the form of some better arrangement. I have considered how this could be done, yet with not much satisfaction from any attempt that I have been able to make. The subject is both intricate and deficient: the boundaries of what may be considered diseases and what may be viewed as mere symptoms, are very indefinite; and while, further, many of them run into each other so as to defy a correct division, there are numerous probable blanks which, for want of sufficient experience, I cannot supply. But almost any arrangement is preferable to none, or to that disorder under which I have already considered the diseases in question; and I shall therefore, without further apology, submit the following tabular view, as a basis or sketch for future amendment or alteration, should the subject, as I have treated it, meet with that approbation from the profession, of which my hopes are indeed but slender.

TABULAR VIEW.

Of the Diseases appertaining to Marsh Fever and Neuralgia.

MARSH FEVER.

CONTINUOUS }
REMITTENT }

Ephemera }
Synocha }
Synochus }

SINGLE OR TERMINATING

CHRONIC OR RELAPSING

ANOMALOUS AND SIMULATING: *vide* Intermittent.

INTERMITTENT

QUOTIDIAN

———— Double

TERTIAN

———— Double

QUARTAN

———— Double

———— Triple

QUINTAN, &c.

SINGLE OR TERMINATING

CHRONIC OR RELAPSING

ANOMALOUS AND SIMULATING. With local symptoms often more conspicuous than febrile ones; and chiefly so when chronic. Often deceptive in these cases, or mistaken for original or separate diseases.

Terms from
Authorities.

PARALYTIC.

carotica	{	Apoplexy—primary: repeated
soporosa	{	Lethargy ——— periodical
comatosa		Coma ——— periodical
		Universal palsy—permanent
Hemiplegica		Hemiplegia
		Paraplegia
		Local palsies
		} permanent: periodical

SPASMODIC.

Epileptica	{	Epilepsy	{	irregular: periodical
		Convulsions		
Cataleptica		Catalepsy: periodical		
Hysterica		Hysteria: irregular: periodical		
Pertussis		Spasmodic cough: periodical		
Asthmatica		Asthma, Dyspnœa: periodical		
Stranguriosa		Irritability of bladder and strangury: periodical		
		Palpitation of heart		

NERVOUS MISCELLANEOUS.

Amens. Amentia quartana..	Mania } permanent: periodical
Hypochondriaca	Fatuity } permanent: periodical
	Hypochondriasis, permanent: periodical
	Vertigo, periodical: transitory
Cephalalgica	Headachs, irregular: periodical
	Dyspepsia, irregular: periodical
	Deafness, periodical
	Amaurosis, periodical: durable
	Nervous disorders: undefinable
	Chlorosis
Morbus Pannonicus	Debility
	Atrophy
Emetica	Vomiting, periodical, chronic: acute irregular
	Diarrhœa: periodical: permanent
	Menorrhagia, Amenorrhœa, Dysmenorrhœa
	Diabetes

INFLAMMATORY.

Pleuritica	Pleurisy, permanent: periodical
.....	Hepatitis?
.....	Rheumatism
	general
	local
	acute
	chronic
Arthritica	of joints
	of intercostal muscles: false pleurisy
Nephralgica	Nephralgia
	Catarrh: permanent acute: periodical, chronic
Ischiatica	Sciatica, periodical: permanent. ? Neuralgia
	Phthisis
	Hectic, false
Urticata	unknown to me, and not intelligible, or doubtful.

DYSENTERY,

Acute
Chronic.

CHOLERA,

Indian Cholera; if different
Common Cholera.

SUPPLEMENT.

ENDEMICS SAID TO BE PRODUCED BY MALARIA.

(MONFALCON AND OTHERS.)

Scurvy
Pellagra
Bronchocele
Ulcers
Rickets
Cretinage
Hernia
Varix
Elephantiasis
Asthma
Angina
Oedema of the lungs
Visceral obstructions: and dropsy, as consequences
Scrofula
Phthisis

NEURALGIA.

*Intermittent febrile Symptoms marked, obscure, or undiscoverable,
or possibly not existing.*

PAINFUL.

OF ASSIGNABLE NERVES. Pain acute: periodical or irregular.

Spinal Marrow. As yet little known or observed.

Nerves of face. Tic douloureux, in any part of the head as well as of the face.

Optic nerve.

— Of teeth. Toothach without caries.

* Sciatic nerve. Sciatica.

Anterior crural, in various parts, with various Neuralgiæ.

Spermatic nerve.

Radial. In various parts, with various Neuralgiæ.

— Of fingers.

— Of toes.

&c. &c. &c. Blanks to be filled: records not yet found.

OF UNASSIGNABLE NERVES. Pain commonly less acute, or dull, or none: periodical or irregular: very acute however in some cases.

* Headach

Common, confined to parts, or general.

Intermitting.

Hemicrania.

Clavus.

Wandering or unfixed toothach; or face-ach.

* Palpitation of heart. No pain.

Palpitation of aorta. No pain.

Palpitation of cœliac artery?

Stomach pains?

Colic ———?

* Kidney and ureter. Decided Neuralgia: nephralgic pains.

Bladder and neck. Irritability: stranguary; no pain.

Rectum.

Testicle. Acute pain.

Palus.

Cauda equina. Lumbago.

Dr. Alderson Mamma. Acute pain.

Knee. Pain various.

Shin bone. Anterior tibial? considerable pain.

INFLAMMATORY, with neuralgic pains of assignable or unassignable nerves:
acute or dull: irregular or periodical.

* LOCAL RHEUMATISM OF LIMBS.

in muscles.

in joints.

RHEUMATISM OF HEAD.

in face. Rheumatic (inflammatory) headach.

in jaw. Rheumatic toothach.

OPHTHALMIA. Fixed or intermitting.

Acute.

— suppurating.

— Inflammation of Iris.

Chronic.

Transferable.

FROM INJURY. With inflammation, or not.

from wounds or punctures of nerves: any where.

— from blood-letting.

— from amputation.

from blows: any where.

from ulcers: any where.

— from caries of teeth: carious toothach.

from tumours, aneurisms, &c.

from corns.

NEURALGIC AFFECTIONS OF GLANDS. Irregular, or periodical.

* Diabetes: periodical.

Lacrymation: general: occasional, or periodical.

— Of one eye: false fistula. Periodical: irregular

* Salivation.

* Diarrhœa. Uncertain: periodical:

— tertian:

— quotidian.

Semi catarrh. Irregular: periodical.

CONSEQUENCES OF NEURALGIA: during, or subsequent to the painful state.

GENERAL,

* Mania. Irregular: periodical.

— tertian:

— quotidian.

* Fatuity. Permanent: periodical.

— tertian.

* Hemiplegia.

* Nervous diseases. Undefinable in variety and number.

PARTIAL. Local paralytic affections.

numbness: any where.

tingling: sensibility: facility of being affected
by pressure,

* Amaurosis. Permanent: periodical.

Contraction of Iris. Permanent: periodical.

Opacity of cornea.

Cataract?

Caries of teeth?

Gum boils and abscesses. Irregular: periodical.

N. B. As in the first division of this table, it is supposed that there are blanks yet to be filled in the whole. It cannot be given as a perfect enumeration; being founded solely on the author's own narrow experience.

The affections marked with * have been unavoidably also enumerated under intermittent, since they occur in both; or else the exact character of the disease is, under the present separation, unassignable.



