of the pyrexia in the morning; but this more remarkably obtains with what has been called the infantile remittent fever, which proceeds from ordinary causes, and which may generally be cured by local bleeding, mild mercurial purges, anodynes, a very spare diet, and the tepid bath.

It seems to be a received opinion by many, that epidemical fevers in particular are not under the same influences as sporadic fevers, and that their cure is involved in much greater obscurity. But do they not, like sporadic fevers, assume the congestive, simple, or inflammatory forms? And under this view, are they not, like them, also reducible to precise rules of practice? Yet it is not meant to insinuate, that all epidemics are essentially the same; for it must be manifest, that a similarity in the aspects of the concomitant pyrexia does not establish a sameness in kind, neither does the existence of a sameness in the incidental symptoms: but the distinguishing, pathognomonic symptoms must all agree in kind, which they do not, to justify the conclusion, that epidemic sought to be classed under one head. Nevertheless, it is in the medical, as in the moral world, similar effects may be produced by different causes; and I do mean distinctly to say, that, beside their peculiarities, epidemics generally have such external phenomena, and generally produce such internal derangements, as to prove them to be attended with a congestive, a simple, or an inflammatory fever, by the character of which the treatment must be mainly regulated, however various their abstract nature or their origin. If an epidemic were to appear one year under a simple form, it would readily yield to the ordinary remedies; but if in another year it appeared under a highly inflammatory or congestive form, those remedies would be found completely inefficient:—yet from such a result, it would be wrong to conclude, that the epidemic observed no certain laws, for in both the cases supposed above, the febrile phenomena would be governed by regular, though somewhat different laws; and the failure in the last mentioned, should be attributed to the practitioner not having marked this discrepancy, which required a correspondent variation in the treatment. The fact is, that in the several varieties of the same epidemic, as different modes of practice are frequently required, as if they were dissimilar diseases, which might be instanced by the histories of the plague, and of several marsh, scarlet, typhous, and other fevers, which have prevailed epidemically under congestive, simple, or inflammatory characters, and in which similar measures have been erroneously extended to all the forms of the same species of fever. Comets were long supposed to differ from other heavenly bodies, in not being regulated by the same fixed laws; and doubtless such a supposition contributed, in part, to prevent that constant and close observation necessary to perceive how any natural phenomena are directed. This conjecture, however, is now totally removed, by the discoveries which have been made in astronomy. And has not the notion that epidemics do not observe the laws of ordinary fevers operated in a similar way, to retard our investigation into the powers which control them? In our successive advances in medical knowledge, we have found the greater part of diseases under the influence of certain modes of action; and our interest in future will be, not in denying that any are altogether or nearly without order, but in diligently inquiring into those laws by which they are governed. As it was by extending the principle of centrifugal, and centripetal forces to the motion of comets, that they were discovered to be regulated by the same fixed laws as other parts of the solar system,—so it would be most pleasing to find, that the doctrine of a congestive, a simple, and an inflammatory variety of fever might be successfully applied to the whole circle of epidemics,—which may almost be considered as *cometary* in relation to other febrile diseases, and which really shed a disastrous influence over the world.

For several years past, considerable attention has been paid to ascertain the accuracy of those distinctions which have been made in regard to the varieties of typhus: and it is confidently believed, that they have their foundation in nature, no less in this than in many other fevers. Systematic writers have disregarded these distinctions, which are constantly to be seen at the bedside, and from the due consideration of which correct and comprehensive modes of cure are principally to be deduced. The characters of particular fevers vary at different seasons as the simple, the inflammatory, or

the congestive happens to predominate; nay, even the character of the same variety of fever varies according to the time of its duration, so that the *methodus medendi* requires changes correspondent to all these circumstances. The most beneficial remedies have been brought into disrepute by having been employed without due regard to the varieties or to the stages of acute diseases; but it is only by marking such minutiæ that we can ascertain the pathology and treatment of fever, which often, like the human character, is best discovered by what at first might seem minor circumstances. Unless medical men do assiduously investigate every thing relating not only to the symptoms, but also to the occasions and consequences of those symptoms, as well as to the acquired and constitutional peculiarities of the sick, their practice will be alike indiscriminate and dangerous, in all those cases at least where nice observation is demanded.

It is one of the great advantages of modern medicine, that pathology has been associated with physiology, that a knowledge of the healthy conditions has been considered essentially necessary, inasmuch as the morbid conditions are merely deviations from these. As all the functions may be justly said to be less or more implicated in the range of fever, its pathology in this work has embraced all the tissues of the body, because disturbance of function itself can only arise from some disturbance in the material organ with which it is connected. In fact every disease is organic when strictly regarded. What is, however, commonly called functional, so far differs from what is commonly called organical disease, that though the tissue affected in the first be disordered in its nervous, vascular, and perhaps chemical laws, yet it has not a certain supernumerary change of structure which attends the last; so that in the one the healthy state may often be readily restored by natural or artificial means, while in the other, unassisted nature has generally little or no power of restoration, and art is frequently quite unavailable. The influence of medicine consists rather in controlling the irregular movements, than in repairing the marked alterations of structure in the animal machine. Disease is demonstrated by some disorder of the functions, and these have been so arbitrarily arranged by authors, that I have chosen to consider them under three classes, namely the vital, the mechanical, and the chemical, this being to my apprehension the order of nature. The vital functions principally belong to the nervous system, the mechanical to the vascular system and the solids, and the chemical to the circulating and secreted fluids: * but though each class of functions has its peculiar laws in health and disease, yet they reciprocally act on each other, as has been shown in considering the conditions of the nervous system, of the heart, and of the fluids in fever. When the progress of knowledge shall have removed much of that obscurity which at present hangs over the vital functions and their relations with the rest, the practice of physic in acute diseases will probably be reduced to great simplicity and perfection; for though the grand effects of these diseases are conspicuous in the vascular system, yet some nervous influence would seem to be frequently behind the scene, upon which those effects may be wholly or partly dependent. Medical practice now is rather palliative than radical, it rather removes effects than causes; but instead of being thus indirect, it will probably become direct in some diseases, when we know more of the nervous system. Perhaps by more minutely noting the various actions of different drugs, particularly of narcotics,† we might at last be led to results, by which many febrile excitements would be reduced with greater certainty and rapidity; for the operation of the Peruvian bark and of arsenic in preventing the return of an intermittent, and the

* In relation to the chemical functions, it has been taken for granted, that all the secretions are diminished in fever, but I believe that this is a complete mistake. The great emaciation of the body under idiopathic fevers, where evacuations had not been induced, and where much of liquid had been taken, has convinced me, that there is some waste by the secretions, which we have not taken into account. An ingenious acquaintance once suggested to me, that the insensible perspiration might possibly be increased in fever, and I am about to institute some experiments in order to ascertain whether or not this be the fact.

† The effects of the narcotic tribe are so infinitely diversified as to form a subject worthy of the closest inquiry. Our knowledge of the *popular state of medicine* is exceedingly limited, but if it were extended through different classes and countries, I am fully persuaded that many highly valuable remedies would be found, which have the sanction of long experience.

power of opium and of colchicum, not to adduce other examples, in controlling some species of pain and irritation, surely warrant us in expecting more important discoveries of this kind. The phenomena, however, of living bodies cannot be referred, like those of inanimate matter to any single law whatsoever, and therefore we must not look to one class of functions only, but endeavour to investigate the separate and united influence of the vital, the mechanical, and the chemical functions as they harmonize in health and are disturbed or disordered in disease; and when we reflect upon the improvements which have recently taken place, and consider the zeal with which medicine is now prosecuted, we cannot but anticipate its future advancement in every department, since the impulse so strongly communicated may not cease to operate, but be productive of continued and greater exertions. The numerous labourers of the present times have contributed to clear away the ruins and the rubbish of past systems, and to lay a deep and a broad foundation; but the ample superstructure of the science is left to be firmly and splendidly reared, by the medical architects of future ages.

In concluding a work which has occupied a large portion of my life, perhaps I may be excused if for once I give way to personal emotions, and express the gratification which the public assurance of its utility has afforded. That my labours should have proved of the least service, is a full compensation for whatever anxieties may have been attendant on the arduous circumstances under which they were prosecuted; and as I value the approbation of the liberal part of my professional countrymen next to my own esteem, so I shall endeavour to deserve it by a still more exclusive devotion to medical science. There cannot be any pursuits more worthy of the employment of our active powers than those which meliorate the condition of our fellow-creatures; and entertaining nothing but feelings of benevolence towards all mankind, I can truly close this volume in the spirit as well as in the letter of Sydenham. Sanè cum supremus vitæ meæ instabit dies, confido mihi adfuturum alacrem in præcordiis testem, me non solum ægrorum omnium, cujuscunque demum sortis, qui sese curæ meæ concrediderant, summa fide ac diligentia salutem

procurasse (quorum interim nemo à me aliàs tractatus est quàm ego memet tractari cuperem, si mihi ex iisdem morbis ægrotare contingeret) verum etiam pro ingenii modulo omnes animi nervos intendisse, ut si quo modo fieri possit, morborum medela post cineres meos majori cum certitudine administraretur.