The simple treatment of disease deduced from the methods of expectancy and revulsion / [James Manby Gully].

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THE SIMPLE TREATMENT OF DISEASE

DEDUCED FROM

THE METHODS OF EXPECTANCY AND REVULSION.

BY

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Μέγα βίβλιον μέγα κακὸν.

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TO

SIR BENJAMIN COLLINS BRODIE, BART.,

VICE-PRESIDENT OF THE ROYAL SOCIETY, &c. &c.

THIS TREATISE

IS, WITH KIND PERMISSION,

DEDICATED,

BY HIS OBEDIENT SERVANT,

THE AUTHOR.

PREFACE.

ALMOST all physicians of lengthened experience and observation come to the conclusion that the most simple practice in disease is the best. They express such an opinion, but very often do not act upon it. And why? The reasons will be found in the following Treatise.

Very often, also, principle in treatment is only another name for routine; and both refer more to the physic than to the body into which it is to enter. Any disease whatever being named and its treatment demanded, a consultation equally brief with that in Molière's comedy leads to the same routine advice:

Clysterium donare,
Postea seignare,
Ensuita purgare.

In the following Treatise I have endeavoured to advocate a system which requires more laborious attention to, and thought for, the sick body, and more numerous considerations regarding the consequences of disease.

No novelty is proposed in this attempt. The system is known, and by some few practically followed. It appeared possible to add to the number by an exposition of the principles and details it includes, spite of the motives that are opposed to it.

For this purpose a lengthened work was not necessary; and an excuse for the brevity of this one will be found in the motto on the title-page. The diseases I have most dwelt upon are those in which it appears more especially necessary to simplify the mode of treatment—I allude to general febrile conditions.

The historical sketches of medical opinions are useful as exhibiting the folly of exclusiveness in what concerns the phænomena of the human frame, and the necessity of extracting the germ of truth that is to be found even in the most opposite theories and modes of practice.

The word "revulsive" is employed through-

out the work: it is a coinage, and appeared to me more expressive of my meaning than "revellent," which is usually applied only to express counter-irritative action on the skin.

J. M. G.

22, Park-square, Regent's-park,
20th May, 1842.

INTRODUCTION.

PHYSICAL science, like every other process comprised within the circle of the human intellect, has ever been the subject of great and, not unfrequently, sudden changes. Opinion, so often linked more closely with the imagination than the reason, again and again decrees that to be folly which had been deemed wisdom, awed by the magnitude of a name, or swayed by the wind of interested prejudice, or over-weening vanity. To question the moral influence of the stars as a part of the science of astronomy, has been, ere now, a madness: to assert that the earth revolves around the sun has been stamped and punished as a heresy; and there was a period when the "philosopher's stone" was held a legitimate and attainable aim of chemistry.

If, however, revolutions of opinion take place in regard to the laws and quality of individual portions of the macrocosm, if astronomy and chemistry have had their varied applications founded on the varied ideas concerning their laws, much more may be said in the same strain of the science which proposes to investigate the operations of the microcosm of the human frame in health and disease, and of the art which pretends to maintain it in the one state and redeem it from the other. For, whilst gravitation and chemical affinity are ascertained powers, in the developement of whose laws the progress of astronomy and chemistry consists, the investigators of physiological and medical science are not yet agreed, nor are they ever likely to be agreed, as to the property by virtue of which a human body "lives, and moves, and has its being;" whether Life be an essence superadded to, or synonymous with, the material organism whose acts it is their province to elucidate.

In Physiology this outsetting difficulty is farther enhanced by the consideration of the myriad agencies, material and spiritual, which play their part in the production of the processes of the vitally-endowed machine:—the minute shades

of electric influence, of light and heat, of air and aliment, of sound and objects of sight, of smell and subjects of touch, and, "last not least," of the mind, at once the despot and the slave of it's crumbling envelop, the body. Nothing but that divine spark within us, which kindles the desire of knowledge, and lightens the oftentimes darkened path of the student of physical science, could ever afford the necessary courage to face the array of obstacles in the way of his attainment of that portion of it which includes the phænomena of vitality, if his aim is to seek the truth, and not the corroboration of speculative opinions. That these last have always abounded in Physiology, is not therefore so much to be wondered at. The constantly broken chain of facts made similar breaks in that of causality, and loose analogies or imperfect inductions were too tempting, in the dearth of stronger concatenations, not to be seized upon, and erected into irrefragable dogmas. From Hermes Trismegistus, and his idea of the nature of Life, down to the end of the seventeenth century, when Whytt and the Vitalists flourished, we accordingly find all kinds of speculations, advanced as inevitable truths, touching the

functions of the living body, some of them ingenious, most of them extravagant, and none of them deduced from experiments.

But, if out of the difficulties of the subject hypotheses spring, the case will not be altered for the better, when the cause of disease is proposed for inquiry, in addition to that of health. To reason on the state constituting the former, it is necessary to have some previously settled notions as to the latter: and between the two there is amply sufficient stimulus for the exercise of the imagination. This faculty, however, has been still more largely drawn upon in the explanation of disease than in that of health. And it is lamentable to consider how much ingenuity of mind has been expended in the complication of a science, wherein the facts are so numerous, and the inferences so few, and wherein, therefore, the indications are so simple, when, as an art, it is applied to the prevention and cure of disease. Not that the propounders of pathological doctrines have always employed a treatment consistent with them, though such has been the fact in the majority of instances; but the few who have failed to do so are the more flagrant examples of the irresistible tendency

towards hypothesis, which has been the besetting evil of medical science in all periods of its history. In this respect the Empirical Sect of old are amenable to the same remark as the Dogmatists: each had their speculations on the causes of disease, though the Dogmatists alone attempted to theorize on the *modus operandi* of their remedies. This obtains equally among those in modern times who profess to be guided by theory, and those who arrogate to themselves the title of "practical men." To determine on the relative merits of the numerous doctrines that have been held concerning these causes would be a wasteful expenditure of time and space. But to give a sketch of the most prominent pathological theories that have brought about revolutions of medical opinion may be useful, if only to contrast them with the few and simple notions that now guide many judicious practitioners in their treatment, and which it is the object of these pages to enforce. Moreover, in perusing the brief account that will be given in the body of this treatise, of the diverse modes of practice, reference may be made to the theoretical notions of those who adopted them, and the whole

subject be so far more fully elucidated. Still, as the advocacy of an eclectic manner of treating disease constitutes the genuine object of the publication, the sketch spoken of can only be viewed as preliminary, and given in the form of an introduction.

The theory of HIPPOCRATES (the first whose systematized ideas we are in possession of) concerning the causes of disease may be thus stated. The four *elements* of all bodies are fire, water, air, and earth : and their *qualities* are heat, cold, humidity, and dryness. The combination of these produced the four *Humours* to be presently mentioned; and these again produced four *Temperaments*. In the human body, there are three principal agencies, "the containing, the contained, and the moving;"* represented by the Solids, the Fluids, and the Spirits. The Solids are readily known, and need not be enumerated. The Fluids are *blood*, *pituita* or *phlegm*, *yellow bile*, and *black bile*. So long as these humours remain in their natural condition, and in due proportions with reference to their quantity, their qualities and intermixture,

* τὰ ἴσχοντα, τα ἐνισχόμενα, και τα ορμῶντα. Epidem. lib. vi. sect. 8.

health is the result. On the other hand, disease supervenes whenever any of them is diminished or augmented in quantity, or when it is separated from the others in a portion of the body; and whenever they are all at fault in quality, and are not properly mixed together. This is the only definition of disease given by HIPPOCRATES, if we except the too general one, when he says, that "whatever distresses a man" is disease. In another place,* however, he speaks of the Spirits as the actual causes of disease, and of the humours as only aiding in its production: on which he doubtlessly bases the synonym of the Spirits, ενορμωντα, or moving powers. He gave full credit to external agents also,—to air, food, and so forth. The solids are with him only secondarily affected. "When,"† says he, "any one of the humours separates from the others, the part which it has left must of necessity be attacked by disease: and likewise the part to which it has flowed too copiously will be pained and diseased." Regarding the different diseases, he only says, "The differences of diseases depend on the

* De Flatibus, sect. 6.

† Liber de Natura Hominis, sect. 6.

food, the spirits, heat, blood, pituita, and all the humours; as also on the flesh, the fat, vein, artery, nerve, muscle, membrane, bone, brain, spinal marrow, the mouth, tongue, stomach, intestines, &c. &c."*

A disease having commenced, HIPPOCRATES led another agent into the arena, his φυσις or nature; an agent whose office it was to bring the humours back to their pristine state of health by several means, but more especially by their concoction (πεψις.) Arrived at this condition, the humours either spontaneously give out whatever is superfluous and deleterious, or they are readily purged of such by remedial means. In either case, a *crisis*, marked by an evacuation of blood, by a diarrhœa, vomiting, sweating, by abscesses, pustules, &c., is affected; after which, supposing the crisis to be complete, nature soon reduces the peccant fluids to healthful order.

This very brief outline of the leading pathological doctrine of the reputed "Father of Medicine" will suffice for the purposes to which it is applicable in the present essay. A man of most acute observation and clear judgment, he

* Liber de Alimento, sect. 5.

has in the farther details of disease left behind him a mass of information and an example as to the mode of attaining it, to which medical practitioners, at this remote period, find they cannot do better than refer. Yet how gratuitous is the whole of this doctrine of disease, the phænomena of which he so well and methodically described!

Descending from HIPPOCRATES through several direct generations, who all practised the medical art, the opinions of that great man remained unimpaired and unimproved. And even they who, not belonging to the family of the ASCLEPIADÆ, were thereby less bounden to the tenets of its chief ornament, only ventured to differ on points of practice. The first innovator on the *doctrines* in question appeared in Rome about a century before the Christian era, and is known as ASCLEPIADES of Bithynia. Pliny says* that "antiquity held its ground until ASCLEPIADES reduced it to a system of conjectures." His pathological conjectures were extensions of those which he held concerning the nature of

* Lib. xxvi. cap. 3. "Durabat tamen antiquitas firma, magnasque confessæ rei vindicabat reliquias, donec Asclepiades Medicinam ad causam revocando conjecturam fecit."

things in general; and they were borrowed from the doctrines of DEMOCRITUS, EPICURUS, and LUCRETIUS; his *corpuscules* and *pores* having prototypes in the *atoms* and *vacuum* of those philosophers. His application of these to medicine was made by supposing the body to be composed of corpuscules and pores, the former being various in size, from those of the blood, which are the largest, to those of the spirits or heat, which are the smallest. So long as the pores are situated so as to allow the free passage of the corpuscules, that is, so long as there is a just proportion between the two, health is said to obtain: a disproportion between them, on the other hand, constitutes disease. In the latter case, the most frequent accident is the accumulation of corpuscules in the pores, whereby obstruction (ἔνστασις) takes place. But a not unfrequent state is also an indisposition on the part of the pores to receive the varied materials of the corpuscules, or, on the contrary, an extreme relaxation, causing their rapid transition. Among the diseases produced by the voluntary sojourn of the corpuscules in the passages, ASCLEPIADES ranks Phrensy, Lethargy, Pleurisy, Inflamma-

tory Fever, and, above all, pains in any shape, which he attributed to the retention of the largest bodies, viz. those of the blood. The morbid disposition of the pores gives rise to Faintings, Atrophy, and Dropsy; which last is owing to their great relaxation. Appetite, and especially that called canine, is caused by the opening of the large pores of the stomach; and thirst, by that of the small pores. Further, as a general rule, acute disease is produced whenever the bodies obstruct the pores; and chronic disease, when the passages are relaxed.

Upon this fanciful hypothesis, ASCLEPIADES founded a totally novel practice, and upon both he raised a reputation which rendered him one of the most celebrated of his day, in Rome, and the originator of a tolerably large sect in medicine.

One of the pupils of the last-named physician was THEMISON, the founder of the Methodic sect, so called from their attempt to reduce medical science and art to a simple method in the teaching and practice. In establishing this method, THEMISON had in view to reconcile the conflicting statements of Dogmatism and Empiricism. Passing over the causes of diseases

as unnecessary to be known, provided that reference was had to what was relative and common between the latter, he reduced all diseases into three principal genera. The first consisted in *constriction;* the second in *relaxation;* and the third was *mixed*, or compounded of both the former—a manifest absurdity. Though he did not recognize the corpuscules and pores of his teacher, because they were not evident, yet it is not difficult to trace this hypothesis of contraction and relaxation up to that of ASCLEPIADES. But the originality of THEMISON's views will most appear, if we look to the fact, that he was the first who gave to the solids a part in the production of disease, in opposition to the long-established assertions of the Humoral Pathology. He did not, however, consider the solids as the primarily-affected parts in disease.

Fifty years after THEMISON, and in the reign of NERO, appeared another innovator, but still of the Methodic sect. This was THESSALUS, of whose eccentric bearing and intolerable conceit, PLINY* has left some notice. After adopt-

* Lib. xxix. cap. 1. He tells us that he styled himself the "Conqueror of Physicians," (ἰατρονικης,) and so he was named on his tomb in the Appian Road.

ing the hypotheses of ASCLEPIADES and THEMISON, with regard to the pores and the constriction and relaxation, this physician, moreover, maintained, that as disease consists in the derangement of the said pores, it was necessary, in order to the restoration of health, to effect a total change in the condition of the body, or any part of it, which change he designated *metasyncrisis*, but which GALEN* renders by the word *metaporopoiesis*, as significant of the alteration of the pores. This addition to medical hypothesis is worthy of record, as it contains the same element of conjecture that is involved in the modern creed concerning a "change of action" in a part or the totality of the system.

The writings of SORANUS, who lived in the reigns of TRAJAN and HADRIAN, and of CŒLIUS AURELIANUS, his translator and commentator, (for the original works of SORANUS are lost,) only contain, as regards the theory of disease, some small refinements on that of THEMISON, and some differences from this last author in the arrangement of certain diseases under the seve-

* Methodus Medendi, lib. iv. cap. 4.

ral categories of constriction and relaxation and of acute and chronic.

Of the subsections of the Methodics, who were styled the Episynthetics and Eclectics, nothing can be said, since no recorded evidence exists of any peculiarity in their medical theory. Judging of this from their denominations, it would appear probable that the Episynthetics (from ἐπισύνθεσις) accumulated and admitted the doctrines of all the sects: and that the Eclectics (εκλεκτικοι) chose what seemed most worthy of credit in all.

Another offshoot of the Methodics were the Pneumatics, who made the Spirits the efficient cause of disease—the fluids and solids having already been tried in that capacity. What they understood by the Spirits is very far from being obvious. From the mention made by GALEN* of the opinions of one of this sect, ATHENÆUS, and from the writings of ARETÆUS, who also belonged to it, the spirits would appear at one time to be some material *aura*, at another approaching to a metaphysical agent: the last-named writer, for instance, frequently speaking

* De different. puls lib. 4. cap. 4.

of *qualities* which originate matter.* In this πνευμα, however, one cannot but see prefigured the Archæus of Van Helmont, the Anima of Stahl, or the nervous influence of later days.

The name of Galen marks a new era in the history of medical hypothesis; not so much from novelty in the basis of his doctrines, as from the refinements he made on those of Hippocrates. To him is due the revival of the name, opinions, and practice of the Greek physician, with whose simplicity of recital, however, the abstruse speculations of Galen stand in extraordinary contrast. Whilst he adopted the four elements, the four qualities, and the four humours of Hippocrates, and founded on their deficiency, superfluity, or malposition the general conditions of disease, he brought to the subject an amount of erudition and subtlety of division and arrangement, that for

* "If the heat," he says, "is fatigued in carrying on the ordinary functions, it becomes changed into the acrid and igneous, and all the humidities are turned into bile." Again: "Asthma is caused by the coldness and humidity of the spirit, which begets thick matters." De Causis et Notis Diuturn. cap. 15.

many centuries caused him to be received as the perfector of medical science. Into his speculations and sub-divisions it is impossible here to enter: the leading idea contained in them is, as before stated, derived from HIPPOCRATES.

The Greek and Roman writers on medicine, down to the sixth century of the Christian era, including the names of AETIUS, ALEXANDER TRALLIANUS, and PAUL of Ægina: as well as the Arabian authors from the seventh to the eleventh century, including AHRUN, SERAPION, RHAZES, ALI-ABBAS, AVICENNA, AVENZOAR, and AVERROES, — were only translators and commentators of the opinions of GALEN. From the 12th to the 15th century, the monks, in whose hands alone the practice of medicine remained, held to the same opinions;—deteriorated, however, by a mass of gross superstitions.

In the 15th century the sect of Chemical Physicians originated with the renowned PARACELSUS. This man was more occupied in making onslaughts on the long-received doctrines of GALEN than in rendering into an intelligible form his own extravagant hypotheses, which,

based upon the idea that the human frame is subject to the same chemical laws as inanimate matter, and that all the vital acts are explicable by these laws, comprehended also a quantity of astrology, alchemy, and cabalistical nonsense that is perfectly astounding, and altogether out of the range of this essay to detail, or the intellect to comprehend when detailed. Suffice it to say, that in one disease the blood was said to be effervescing, in another too acid, again too alkaline, fermenting, putrescent, sulphurous, &c. These doctrines continued to flourish, with variations and improvements, until late into the seventeenth century, and are graced by the names of SYLVIUS, WILLIS, and SYDENHAM.

The *mathematical* doctrines succeeded to these. They commenced with BORELLI, and were continued by BELLINI of Pisa, who maintained that gravitation and mechanical agencies are fully capable of explaining all the phænomena of health and disease: that the body is a machine composed of tubes and pores, and fluids traversing them: that the amount of friction of the latter in passing along produced an amount of retardation, obstruction, and so forth, that

constituted the particular degree and species of disorder. Of this hypothesis we find adherents in the respectable names of PITCAIRNE, KEILL, MEAD, and FREIND.

With VAN HELMONT (1620) commenced the sect of *Vitalists*. Educated in the chemical school, this writer could not divest himself entirely of the doctrines he had thus imbibed. But he was too observant not to recognise the essential difference between the chemistry of the living body and that of inanimate matter. Over that process, therefore, he imposed a despot, a regulating power, which he denominated *Archeus*, and sometimes the soul, and whose chief abode was in the upper orifice of the stomach. In every circumstance of health or disease, he had recourse to the Archeus for an explanation: so that, beyond the fact of calling attention to the much-neglected vital power of the body, no great amount of ingenuity or observation can be attributed to VAN HELMONT.

The *Anima* of STAHL (1694) was a refinement on the Archeus. A Cartesian in philosophy, matter was, in his idea, inert, and required an animating immaterial principle to bring it into action. Not that his *Anima* was synonymous

with the soul of man: for whilst by it the body is first formed, its functions carried on, its injuries repaired, morbid causes combated and morbid states removed, yet we are not conscious of its existence; neither, whilst it manifests the attributes of reason and design, does it really possess these qualities, being a necessary and unintelligent agent. The efforts of this power, therefore, were displayed in combating causes of disease, and in guiding the body through the latter to health; such efforts being rarely injurious. With all its defects of obscurity, the doctrine of STAHL must be considered as a step in the right direction.

Another step was taken by a contemporary writer, FREDERIC HOFFMANN. Imbued partially with mathematical and chemical ideas, he nevertheless attributed paramount influence to the operations of the nervous system, which he supposed to play in some instances the same part in the economy as STAHL's *Anima*. Allowing disease to exist primarily, in a few cases, in the fluids, he maintained that it originates much more frequently in a condition of the solids that consists sometimes in an excess of tone or spasm of the moving fibre, at others in an atony

of the same: both states being regulated by the nervous influence. In this localisation of disease in the solids, he had been shortly anticipated by BAGLIVI, who was the first to oppose *toto cœlo* the humoral pathology that had prevailed since the time of HIPPOCRATES, and to assert the secondary affection of the fluids. This modern doctrine of solidism, on the verge of which THEMISON stood (see p. 12) so many centuries previously, was, strangely enough, ushered in with the same leading idea as to constriction and relaxation that had marked the hypothesis of the Greek physician. So also in the theory of BOERHAAVE, which followed closely on that of HOFFMANN, something of the corpuscules and pores of ASCLEPIADES is detectable. Admitting vessels of various calibre, adapted for the reception of blood-globules of proportionate dimensions, BOERHAAVE makes disease to consist in the erroneous distribution of the latter into the former. And this is effected partly by the self-movement of the globules and partly by the impulsion of the solids: thus combining the opposite systems of Humoralism and Solidism.

The "spasm and atony" of HOFFMANN were

made to appear in an original form, so much were they improved by the ingenious and discriminating mind of CULLEN. Instead of the indefinite "moving fibre," he localised all disease in the irritable capillary arteries, the "spastic stricture" and "atonic relaxation" of which alternately produce the morbid phænomena. Whatever there may be defective in the pathological theory of CULLEN, this indication towards the capillary system acting under the influence of an inherent vitality, must be considered an invaluable hint in the progress of theoretical medicine.

The theory of BROWN, the contemporary and rival of CULLEN, once so popular, is as follows. Everything acts on the excitability of the body and produces excitement, which, if excessive, wastes the excitability and thus induces *direct debility* or *asthenia*. On the other hand, if the excitement be deficient, the excitability accumulates, and *indirect debility* or *sthenia* is the result. All diseases are, therefore, divided into sthenic and asthenic, the former including the inflammatory, the latter the typhoid species. The Brownonian theory is now disregarded, though the "direct debility" is retained; and

the sthenia appears as "the debility of oppression."

In the "Elements of Pathology and Therapeutics," of Dr. Parry, published in 1815, a simplification of doctrine regarding disease was attempted, and, as far as it went, was deservedly well received. He held all disease to be primarily local, and, in this character, to consist in an augmented determination or momentum of blood towards the seat of the proximate cause; such determination being effected, when the disease remained a local one, by the contractility of the arteries in the immediate vicinity of the disordered capillaries, and by the increased contractions of the heart, when it leads to general disease. Further, although he recognised an increased quantity of blood in a part, he did not suppose it to be stagnant or congested there, but to pass on with increased velocity, in consequence of the arterial or cardiac *vis a tergo* referred to. The agency by which this determination was established and the mode in which it became a source of general malady, were in a great measure slurred over by Parry, as might be expected from the small esteem in which he held the operations of the

nervous system in the production and maintenance of morbid conditions. This renders his theory defective; in which, notwithstanding, it is impossible to mistake the indications of an observant and original mind.

About the same time that PARRY made known his pathological ideas in England, BROUSSAIS commenced the development of his in France. The basis of these was also the local origin of all diseases. Supposing all internal and relative agents to produce their results by rousing the excitability of the tissues, one degree of excitement will constitute healthy life, a further degree will constitute *irritation*, which may be extended in various periods into *inflammation* and *disorganization*. But the action of excitants is in the first place on the nervous tissue, and chiefly on the visceral portion of it, which more immediately regulates the blood-circulation. So that when *irritation* is produced, both the nervous and arterial textures are in a state answering to the sthenic inflammation of BROWN, and which BROUSSAIS often terms *erection vitale morbide*.* This irritation is extended in many instances to the brain, and thence pro-

* Irritation et Folie, passim.

pagated by its nerves to most of the organs of the body, inducing the phœnomena of general disease. At other times, irritation is conveyed only to more or fewer of the other organs than the brain, which only becomes affected at a very late period, or when disorganization commences. But in all cases the nervous system, as well as the circulation, is strongly implicated, and nervous power as well as blood accumulated.

As all disease is primarily local, the most frequent localities would be those which are exposed to the greatest number of excitants and possess the greater amount of excitability. These will be found in the skin or external mucous membrane, the internal mucous membranes and the brain through the medium of the senses. And accordingly the local origin of all diseases is to be found in one or other of these points—the two latter especially. If irritation originates in the brain, it is speedily and inevitably propagated to the mucous surfaces. Commencing in the latter, it is neither so rapidly nor so invariably passed on to the brain.

These leading features of the Broussaian pathology are sufficient to mention in this place.

But it would be unjust to dismiss the subject, even for the present, without testifying to the acuteness and originality of the great man whose name the doctrines in question bear. It is astonishing how few English physicians have studied his writings, and yet how many of them denounce him as "a theorist." In the decline of his peculiar opinions among his own countrymen, it is possible to trace not a little to the exertion of personal feeling and an impatience of *following* in the footsteps of any one. It is also possible to find just grounds of exception to parts of his doctrines, as where he asserts *all* irritation and inflammation to be of a tonic character. But it cannot be denied that he, of all in modern times, has pointed out the true landmarks in the progress of pathological investigation by substituting actions for entities, drawing attention to the propagation of morbid sympathies, and thus bringing to light a host of disorders that had hitherto been unintelligible. In this last particular his work on the "Phlegmasies Chroniques" excels anything that has yet appeared; they who sneer at his *theories* would do well to read this repertory of *facts*.

It would be useless here to do more than allude to the latest medical hypothesis of disease which has been advanced, that of HAHNEMANN. It is of all others the most gratuitous, consisting in the broad assertion that all diseases are referable to the existence of the poison of syphilis or of the itch in the body. How he arrives at this conclusion the father of Homœopathy deigns not to say: nor need any one puzzle himself to conjecture.

In the above imperfect sketch of the variations of opinions concerning the nature of disease, the mind instinctively reverts to those which contain the most simple deductions from the most numerous and complex facts. That this obtains more especially in the theories of PARRY and BROUSSAIS will be clear to all medical practitioners who have the power of observation and of deduction combined. In saying this, I do not put myself forward as a sectarian of either of those writers: the invariable "momentum" of the one and the invariable tonic "irritation" of the other being neither of them, in my opinion, clearly established. But I scruple not to say, that the germs of the best pathology

we are likely to arrive at in our present ignorance of the nature of life, are to be found in the ideas of disease which they promulgated, supported as they are by a long array of facts.

CHAPTER I.

EXPECTANT TREATMENT.

Differences of opinion regarding medical treatment—Definition of expectancy—General illustration of it—Particular examples in acute and chronic diseases—Reasons for its unpopularity — Practised by Hippocrates — Chrysippus, Erasistratus, Asclepiades, Thessalus, (the metasyncrisis,) the Methodic Sect—Celsus—Galen—Modern expectant physicians from Stahl and the Vitalists to Broussais.

In all periods of the history of the art of medicine, as of the science, we find abundant discrepancies of opinion regarding the general plan to be pursued and the particular means of carrying out such plan. These differences have been both individual and sectarian; but the former of these having more especial reference to the remedies to be employed than to the general idea to be acted upon, it can scarcely be anticipated that they should be dis-

cussed in this place. With regard to the sectarian varieties of practice, some of them are based upon a preconceived theory of disease, others appear to have no connexion with the theories severally held, and others again have been maintained and carried out by those who professed to repudiate all pathological theory whatever.

Throughout the numerous shades of discrepancy, however, we are enabled to discern two well-defined traits of practice, whether theoretical opinions are concerned or not. To one of these the term Expectant has been of late years applied. The epithet Revulsion, attached to the other, is traceable to a very early date of time.

Expectancy in the treatment of disease is based on the candid acknowledgment of ignorance of its immediate cause: an ignorance that forces into the strict observation of the stages of morbid action, and of the rhythm which they keep in their progress. This has been well announced by one of the most learned and practical writers of the day in the following manner.* "If in all instances the pathological

* Elements of the Practice of Physic, by David Craigie, M.D. Introduction, p. 26.

cause or causes were perfectly known, and if at the same time we were perfectly acquainted with agents which could operate on these causes directly and efficiently, and remove them entirely, the principles of therapeutics would rest on a sure and immutable foundation. This perfection, however, pathology has not yet acquired; and the principal lesson which it has taught, is that what is named *cure*, consists not in the positive removal or extinction of a morbid process by direct means, but in the gradual subsidence of the morbid action under a favourable combination of circumstances, and the restoration of the action of health. When healthy properties are impaired, we know no agent by which they can be directly restored; when vital action is perverted or deranged, we possess no means of immediately rectifying it, but must be satisfied with using those means under which it is most likely to rectify itself; and when morbid processes are established, they pursue a certain course and tend to a particular termination; and all that the physician can do, is to moderate and restrain the violence of the process so much as to prevent it from injuring important and essential organs."

The expectant plan of treatment, strictly speaking, involves the necessity of awaiting the operations of nature alone in the cure of disease. A more extended meaning includes the addition of artificial means, only as auxiliary to the efforts of nature, those efforts being the sole guide of the practitioner. It is in this latter sense that Expectant Medicine is to be understood.

A physician, therefore, who professes to act upon Expectant notions of treatment, takes it for granted that the constant tendency of the diseased body is towards cure, and this, for the most part, by the erection of certain modes of vital action in other parts of the frame than that which is morbid, and by the elimination of certain matters from the different emunctories. Thus, he observes, that the appearance of an eruption on the skin is simultaneous with the removal of some internal disorder: and that a fever usually declines just as the kidneys, the lower bowel, or the skin, pour out their respective excretions copiously. Acting on the hint thus afforded by the system, he waits for the commencement of any of these signals of relief, and then urges his remedies in the same

direction that nature takes; not purging if the kidneys are dissipating the fever, nor giving diuretics when the skin is bathed in sweat for a similar kind of purpose. This is the leading idea in his treatment.

In the details, he follows it out by giving diluents plentifully, because nature craves for them, and forbids strong food, because nature loathes it; orders the recumbent posture, because the frame inclines to it; commands the withdrawal from noise and light, because they are painful; and recommends abstraction of the mind from thoughts that require exertion, since he knows that nature is not capable of a genuine effort at such a time, but inclines rather to languor. He further regulates the temperature of the chamber with great precision: looks to the bedding and the positions in the bed of his patient: in short, gives particular attention to the physical comforts that may add to the ease of the frame. Moreover, he has reference to the age, sex, temperament, and other circumstances of the individual; varies his means with the different periods of the disorder; assists the imperfect crisis of it, &c.

Thus, an enlightened system of expectancy

does not signify an indolent awaiting of the event of the disease, leaving that event to the chances of the corporeal powers. It supposes a very precise knowledge of the history, particular characteristics, and progress of diseases; a close observation of their different periods, and the directions into which their crises may flow; and a very nice attention to the physical and moral regimen of the patient.

In cases of local acute inflammation, an expectant is regulated by the intensity of the disorder and the organs affected, as to the extent of his divarication from the purely expectant treatment. Where parts are vehemently inflamed that compromise the existence of the individual in a few hours or days, he is induced, by the urgency of the symptoms, to have recourse to some revulsive remedies, and more especially to the abstraction of blood. This he does for the most part topically, by cupping or leeches, until the immediate danger is passed; when he returns to the natural indications. He would, for instance, leech or cup in a *very intense* inflammation of the lungs. But in the ordinary cases of that disease he would employ expectant remedies alone.

In like manner, when the great nervous centre, the brain, becomes oppressed by effused blood in apoplexy, he is compelled to operate a diversion in its favour by blood-letting. In apoplexy, from exhaustion of the brain—nervous apoplexy, as it is called—he supplies the deficient energy by stimulant applications to the periphery of the cerebral nervous system, and the great centre of the sympathetic system found in the stomach.

In the eruptive fevers he endeavours to moderate the amount of eruption by the application of well-tempered air to the external surface, and by the limitation of the irritation on the internal surface, by which the external is in great part regulated. To this end he gives cool drinks to dilute any morbid secretions within, and administers mild lavements to remove what, if allowed to remain, would prove a source of irritation. Further to diminish the visceral disorder, which is the starting point of the malady, he uses fomentations of various kinds over the bowels; and, if measles be the disease, over the chest also; if scarlet fever, over the throat. And in this way he awaits the termination of the disorder, without those fears

of the sequents that so often ensue upon a violent plan of treatment.

Fevers of a simple inflammatory type he treats much after the same system, removing the exciting causes, as well as those secondary influences that react upon the excited organs, bad secretions, &c., but never with the view of augmenting the quantity of the secretions or excretions, until, as before stated, nature has indicated the particular one by which relief is to be brought. He is not, meantime, debarred from the employment of those mild remedies which go under the name of refrigerants, nor from that of certain opiates when the symptoms pressingly demand them. Neither, when the fever is of the typhoid character, and the vital powers exhibit an insufficient energy to carry on the processes of life, does the expectant treatment exclude the medicinal use of wine and other stimulants to rouse the organs to a last effort for the maintenance of their functions. He is not expectant of nature's death, but of her curative faculties.

Observing that rheumatic and gouty attacks are always preceded by, and accompanied with, disordered conditions of the stomach and liver,

he applies himself to remedy these, partly by positive and partly by negative means; the former consisting in mild laxatives and alkalis, (for there is in these complaints acidity of all the fluids;) the latter in the cessation of the digestive functions from all labour, save that of absorbing mild liquids. Moreover, he is at liberty to employ local frictions. He is, above all, careful to maintain an equable and somewhat high degree of warmth on the surface of the body.

In diseases of a chronic character, which only involve the functions of a part, he attaches importance to negative rather than positive means; these consisting in the quiescence of the organs affected. He holds that if this be strictly enforced, the natural powers will always restore the healthy condition; and that, on the other hand, if these powers be taxed to carry on their morbid function in addition to the restorative process; or, further, if they be interrupted by imagined auxiliaries, in the shape of medicines, such condition is postponed or hurried into the contrary extreme of organic disorder.

These brief instances will give some correct idea of what is to be understood of the expectant

treatment of disease. Even in these I have spoken only of the more purely medicinal part of the plan; for to enter upon the hygienic and dietetic portions of it would be impossible—*they* are things that are neither to be taught nor learned in books, so nice are the shades of disorder by which their use is regulated. For, much as "inert practice"—such is the phrase—is decried in this country, it is that to learn which requires infinitely the greater amount of acute observation and learned tact. But it is too true that the majority of those who denounce it are better acquainted with what it is *not* than in what it consists. The long training in the habit of violent medication closes the mental eyes to the perception, still more to the appreciation, of any other mode; and it is not, perhaps, to be wondered at, that he who usually reduces the pain of an inflamed joint in a few hours, by huge doses of calomel, should see no virtue in the plan of another who pretends to work no such miracle, but *does* pretend to save his patient from the risks of typhoid fever, prolonged convalescence, and unceasing sensitiveness both of joints and stomach. The temptations to miracle-working are too great to be re-

sisted by the mass of those who practise, as well as those who are practised upon: the indolence or vanity of the former come in aid of the ignorance of the latter, with regard to the consequences. Indeed, for both parties, the expectant plan is less attractive, because more troublesome in the *present;* it is much easier to swallow a dose of physic than to abstain from swallowing a dose of food; and for the *future*, for the after-claps—they are either not thought of, or hoped against.

Remarks like these will occur when the fact obtrudes itself upon us, that the renowned Father of Medicine, HIPPOCRATES, is also the originator of this much-abused expectancy in medicine. He it was who said, that "it is dangerous to deplete or to fill up suddenly or largely, to heat or to cool rapidly or greatly, all excess being inimical to nature."* He it was who counselled "to do nothing rashly: sometimes to stop and do nothing at all; for thus, if you do the patient no good, you at least do him no harm." And it was his first maxim of treatment that "nature alone cures diseases." He it was who in simple-continued fever deemed it

* Aphorism 51, sect. 2.

unnecessary to bleed or purge, or do anything except strictly adhere to the diet and regimen he indicates.* Even in inflammations of the lungs, where the pain is not excessive, he relied rather on fomentations than on bleeding, particularly during the early days of the complaint.† Neither did he employ purgatives or emetics in acute diseases of any kind, until the first violence of the symptoms had subsided.‡ It is true, that in the latter periods of these diseases, and in chronic disorders, he employed revulsive remedies, but only as aids to the natural efforts; of which mention will be made hereafter.

Pursuing the subject historically, we find PLATO, according to ELIAN,§ giving his opinion of medical treatment, and observing that, as there is a fixed progression for every complaint, we should rather undertake to render smooth their course by strict rules regarding eating, and drinking, and exercise, than interfere with it by the employment of medicines,

* De Diæta in Acutis, sect. i.

† Epidemic, lib. vi. sect. 3. De Structura Hominis, sect. 9.

‡ De Morbis, lib iii. sect. 22.

§ Variar. Hist., lib. ix. cap. 15, 19, and 22.

and especially of purgatives, which should only be used in very urgent cases; otherwise a trifling disease may become a serious one, and a single one bring on many.

The Asclepiadæ, with Diocles of Carystus, and Praxagoras of Cos, the greatest names in medicine for some time after Hippocrates, followed his mode of practice in almost all particulars.

A more decided advocate of expectant medicine appeared in Chrysippus of Cnidus, who, according to Galen,* was utterly opposed to bleeding in any cases; nor did he admit the use of any purgative properly so called, although he occasionally employed emetics and clysters.

From Galen we also learn that Erasistratus, a pupil of Chrysippus, pursued the same exclusiveness with regard to bleeding and purging, and that one of his disciples, named Straton, praised him for having treated without bleeding, all the diseases in which previous physicians had been in the habit of employing that remedy.† The reasons given for abstaining from venæsection, are feeble enough, being founded

* De venæ sect. advers. Erasistratum.

† Ibidem, cap. 2.

on the imperfect anatomical and physiological doctrines of the time. With regard to purgation he alleges, that the humours brought away by purgatives are not such as they were in the body, but are changed into the bad condition we behold by the action of the medicines,—a remark than which there is no truer, in the great majority of instances. In lieu of these modes of depletion,—for ERASISTRATUS held that most diseases depend on plenitude of the veins,—he proposed only abstinence, emetics, clysters, and exercise. His abstinence consisted in the withdrawal of animal food, and the substitution of vegetable decoctions, of chicory particularly. His emetics were given rather to promote perspiration than gastric depletion. He objected to the acrid clysters of HIPPOCRATES, and preferred those composed of oil and water. And he only used exercise in disorders of repletion. Besides these means he largely employed external applications, fomentations, poultices, frictions with ointment, and the like. For the rest, he opined that the simple medicines were the best. He denounced all the villanous compounds that were in vogue, in his time, as antidotes; — "mixtures," he says, "drawn from

minerals, plants, and animals, from all that the sea and all that the earth produces. Better to trust to ptisan, lemonade, and hydrelæum" *— meaning thereby, diluents, fomentations, and lavements, the hydrelæum being a mixture of oil and water, used for both the latter purposes.

As ERASISTRATUS was a disciple of CHRYSIPPUS, whose works are lost, we may infer that these opinions were derived from his tutor, who may therefore be regarded as the first physician who practised the medicine of expectancy, almost exclusively, not permitting revulsive remedies in any of the periods of disease.

SERAPION, the founder of the Empirical sect of physicians, though differing from HIPPOCRATES regarding the manner of investigating disease, does not appear to have departed from his system of treating them. But the leading axiom of the Empirics, that it is useless to reason on the causes and nature of disease and on the powers of the economy, assuredly opens the door to the experiment of every remedy, revulsive or expectant, that chance or the ingenuity and vanity of man may induce him to put forward, without re-

* Plutarch, Symposiac. Decad. 4.

ference to its *secondary* effects on the system. And as the revulsive are for several reasons more attractive, the experiments would rather incline towards them; of which fact not a few modern as well as ancient instances might be cited.

The practice of Asclepiades the Bithynian was a strange compound of opposites. For several days of fever he did not permit his patients to take anything, not even water; neither would he allow them to sleep, maintaining that fever should be cured by fever. At the end of four or five days he gave them wine, food, and whatever delicacy they fancied. He never drew blood unless there was decided and great pain. In pleurisy, for instance, but not in inflammation of the substance of the lungs; neither in continued fever. He bled in epilepsy and convulsions, but not in inflammation of the brain.* Purgatives he abhorred, trusting to clysters. Emetics he occasionally employed. He had great faith in external frictions—a faith based on some peculiar doctrines touching the nature of disease—the doctrine of atoms and passages. Altogether he appears to have been a kind of

* Cælius Aurelianus. Morb. Acut., lib. ii. cap. 38.

fashionable physician of that day in Rome, more intent upon gratifying the tastes of his patients, than anxious about the means of curing their complaints. His treatment had all the worst part of the revulsive, and the least effectual part of the expectant methods. Withal he was a man of learning and eloquence, the friend and physician of CICERO.* who bears witness to this last quality.

THEMISON, the pupil of ASCLEPIADES, and the founder of the Methodic sect, chiefly adapted his treatment to the hypothesis, which his master had hinted, and used remedies according as the diseases came under the category of constriction or relaxation. He was very old when he undertook to found the sect in question; and does not appear to have been its leader in practice quite so much as in theory. As much of his treatment was revulsive I shall mention it hereafter. Meantime it should be stated here, that he repudiated general bleeding, and preferred topical, being

* De Oratore, lib. i. Neque vero Asclepiades is, quo nos Medico amicoque usi sumus, tum cùm eloquentiâ vincebat cœteros Medicos, in eo ipso quòd ornate dicebat, Medicinæ facultate utebatur, non eloquentiæ.

the first on record who employed leeches for the latter purpose.

Half a century after THEMISON, THESSALUS undertook to perfect the methodic system, the groundwork of which had been laid by his predecessor. He commenced the treatment of all diseases by an abstinence of three days, a practice that procured the epithet of *Diatritarii* to the sect to which he belonged. Like ASCLEPIADES, he rejected purgatives as harmful; arguing, as ERASISTRATUS had done, that, as those medicines when given to a man in perfect health, cause the evacuation of "corrupted" matters, it follows that the latter are the product of the former, and thus generate disease when it had not previously existed."* In the next paragraph I shall have to mention more particularly the treatment of the Methodics. In the meantime allusion should be made to the *metasyncrisis* and the *metasyncretic* remedies of which THESSALUS was the originator. This term is rendered by CÆLIUS AURELIANUS, himself of the Methodic sect, by the word "recorporatio:" a "renewed arrangement" of

* Galen. Contra ea à Juliano contra aphorism. Hippocratis dicta sunt, cap. 8.

the body, which was considered absolutely necessary to the cure of disease. This "recorporation" appears, from the remedies called metasyncretic, to have been the first direct allusion to the states of counter-irritation, and what is called in modern medical language "change of action." The remedies in question were such as reddened the skin or caused it to itch, as, mustard and thapsia, (the poisonous carrot.) "The juice and root of thapsia," says DIOSCORIDES,* "are the most powerful of the metasyncretic medicines, either for drawing from the internal parts of the body, or changing the condition of the pores." If this be the true meaning of the metasyncretic remedies, they would rather come under the head of revulsive means.

The works of SORANUS, the most skilful, it is said, of the Methodics, are lost, but appear in a copied form, in those to which the name of CÆLIUS AURELIANUS is appended, and which contain the most full account of the methodical treatment. A leading practical maxim of this author is that "we should endeavour to cure diseases by the most simple means, and those which we use in health, such as the air we

* Lib. iv. cap. 157.

breathe, the food we take, &c."* According to him, the Methodics used frictions with oil, with the leaves of the vine, pomegranate, myrtle, willow, and pine. They sprinkled the patient with cold or warm water; they fanned him; they were nice as to the manner in which he was laid in bed; in what kind of bed, whether of straw or feathers; as to the size of the bed; how the light came upon it; and many other points that were passed over by those who were not of the sect. They disbelieved in all specifics. They avoided purgatives as hurtful to the stomach and irritating to the nerves; except in dropsy, where Cælius Aurelianus recommended the *euphorbium*. The same exception is made in favour of diuretics. They used clysters of water and oil, or of linseed tea and honey; rejecting acrid ingredients. On the other hand, they bled pretty freely, both from the arm, and by cupping; they were fond of dry cupping also.† On the whole, the treatment of the Methodics, who were the most influential physicians of their day, was of the expectant

* Morb. tardar., lib. ii. cap. 2.

† Cucurbitæ arentes et siccatæ. Morb. acutor., lib. i. cap. 11.

character; though it leaned to the revulsive, in some diseases.

Celsus departed from the Hippocratean practice in abstaining from all violent purgation. He says, that black hellebore, and the irritating lavements, are not proper in diseases accompanied with fever, but may be employed in the atrabilious and insane; in fevers it is better to give articles of diet that nourish and relax the bowels at the same time.* A maxim of his, was that the matter which produces fever will dissipate of itself, if nothing be given to the patient that causes a new accumulation of it. Hence it is very rarely necessary to administer purgatives or lavements to evacuate it. "Aliment," he says, "given in the proper place, is the best of remedies."† He employed frictions, fomentations, and baths very extensively. He also cupped frequently, but makes no mention of leeches. For the rest, his medicines for internal complaints were few; those for external maladies numerous.

Galen followed the practice of Hippocrates,

* Lib. ii. cap. 12.

† Optimum medicamentum est opportunè cibus datus.

in the revulsive portion of it, but without displaying the same discretion, as will be stated in the next chapter. But as the treatment of the last was founded in great measure upon observation, whilst that of GALEN was drawn entirely from his own previous complicated theory of disease, we find in it such a tissue of absurdities about remedies being hot, cold, dry, and moist in several degrees, some hot *actually*, others hot *in power*, others again hot *in their entire substance*, that even an outline of his practice is impossible in a much more ambitious work than the present. His theories, however, were so imposing from their apparent completeness in all parts, that the treatment based on them commanded an equal respect for many centuries of the dark ages and even long after the revival of learning in Europe.

This deference was especially shown by the Arabian medical writers between the eighth and fifteenth centuries, who, nevertheless, ventured to modify the treatment of the Greek physicians in regard to bleeding and purging, carrying neither of these to the extent these last had done. In purgation they had the further

advantage of employing milder agents, such as manna, cassia, rhubarb, and tamarinds, which they were the first to introduce into medicine. In other respects their pharmacy was complicated to the most outrageous extent, their mixtures containing the most opposite physiological and chemical properties that can be imagined, and rendered still more unintelligible by astrological and cabalistical accompaniments.

As the Galenical physicians fell before the reiterated attacks of the Chemical in the fifteenth and sixteenth centuries, so did the latter succumb to the Mathematical, and these again to the Vitalists in the seventeenth and eighteenth centuries. Of these sects the latter only come to be mentioned in this place; for they were the authors of modern expectant medicine.

We must except, however, from among the chemical sect, the deservedly-esteemed SYDENHAM, who, notwithstanding his doctrinal ideas of disease, is fairly to be ranked as an advocate of the Hippocratean plan of expectancy. Believing that diseased action consists essentially in an effort of nature to remove some noxious

cause, he considered the great object of the practitioner to be to assist in bringing about the proper crisis, and to regulate the actions of the system so as to prevent either their excess or defect; and his practice was, accordingly, what, in these days, would be termed inert.

To return to the Vitalists. STAHL's theory of the anima, or superintending soul, left to the physician only the duty of watching the actions of the system, co-operating with its efforts towards the restoration of health, which was generally the case, or counteracting them if they were irregular, which was supposed to be of rare occurrence. For this anima was a metaphysical agent of far greater power over the body than the "Nature" of Hippocrates, whose actions might be beneficial or otherwise in its operations, according to circumstances; whereas STAHL'S anima tended constantly to preserve the functions in a perfect condition. In defence of expectancy in medical treatment, STAHL wrote a treatise,* in answer to a satirical attack on that method, published some time before by

* Ars sanandi cum expectatione, 8vo. 1730.

an English physician, one GIDEON HARVEY.* The respectable names of JUNCKER and ALBERTI, followers of STAHL, also appear among modern expectant practitioners, the latter being a voluminous writer on the subject.†

From this date, down to the period when CULLEN began to sway the medical world, the practice was of a mixed character, being adapted to the mingled theories of the mechanical and old humoral schools, with a tinge of the Vitalist opinions; an amalgamation, attempted by the elder BOERHAAVE, and sustained in Germany and Holland by his nephew KAUW, by VAN SWIETEN, GAUBIUS, and GORTER. They nevertheless were, on the whole, more active than expectant in their treatment. In France, on the other hand, SAUVAGES, LIEUTAUD, BORDEU, BARTHEZ, and ASTRUC, inclined rather to the latter. There too this plan has been generally acted upon, from the rising of PINEL to the

* Art of Curing Diseases by Expectation, 8vo. London, 1693.

† The following are the titles of his writings:—De Curâ per Expectationem, 4to. 1718; De Induciis Medicis, 4to. 1736; De Medicinâ moratoriâ, 4to. 1743; Dissertatio inauguralis medica sistens *noli me tangere* medicum, sive morbos quos tangere non licet, 4to. 1751.

setting of Broussais, since which time the fashion of revulsive medication has rather been in the ascendant among our neighbours.

This imperfect historical sketch will suffice for its intended purpose; which is to show that the expectant treatment, though it be stigmatised as inert and useless, has, nevertheless, found advocates and practitioners of no mean reputation in all periods of the history of medicine; men who had the patience and the tact to watch and second the operations of the organism, and who were unwilling to experiment on the delicate vital machinery for the sake of the passing eclat that might attend the attempt. For it might also be historically proved that the rise of pretenders to extraordinary power in the curative art, has almost invariably been signalised by the promulgation of a practice in which violent medication was the leading feature; whilst ever and anon, as the scales fell from the eyes of prejudiced sectarians, the Hippocratean system of expectant observation has reappeared in all the light of truth and simplicity. Meanwhile, as it is not the aim of this treatise to advocate exclusiveness of practice on either side of inertness or action, it will

be well to enter upon the subject of revulsive treatment, previously to developing the cases in which each may be advantageously employed.

CHAPTER II.

REVULSIVE TREATMENT.

Origin of the term Revulsion—Ideas attached to it—Revulsive agents, bloodletting, purging, emetics, &c.—External revulsion—Illustrations of revulsive treatment in fevers, rheumatism, acute diseases of the viscera, &c.—In chronic disorders of the stomach, liver, and bowels—Revulsive practice of Hippocrates, Praxagoras, Herophilus, Themison, Aretæus, Celsus, and Galen—Of the Chemical and Mathematical sects—Of Cullen and Brown—Reasons for the prevalence of revulsive treatment.

One of the general maxims of Hippocrates, with regard to treatment, is, that "the course of the humours should be watched, so that when they incline where they ought not, a derivation may be made in another direction; or an attempt should be made to bring them back, repelling upwards those which tend downwards,

and *vice versâ*." The practice of this maxim commonly passed among the humoral pathologists for the act of Revulsion, and the term was rife among them. It may be questioned, therefore, how far such an epithet can be applicable in the present day, to any system of practice that may obtain, the solids having taken the place of the fluids in the opinions concerning the agency of diseased actions.

But although the solids and the nervous influence are recognised as primary in the origination of morbid phænomena, we cannot get over the fact that the latter are ultimately attributable to the changes produced in the distribution of the fluids by the solids. In vain would a cause of disease play upon the solids, did not the perverted action of these induce an unnatural state as to quantity or quality of the fluids. The humoral pathologists beheld only the effect, yet called it a cause; but we having attained a further link in the chain of causality, have seen reason to denominate their cause only an effect. There is the same transposition of fluids; but we are also aware that, previous to this, there is an alteration of nervous action likewise. Revulsion therefore becomes an

equally applicable name, whether it be used to express the changed direction of the blood, or of the moving powers of the blood, the consequent phænomena being the same.

Revulsion then, in modern meaning, may be defined to be that process by which the vital condition of a part of the body is changed, either by exciting a new action in itself, or in some other part. In the former case, a changed degree of vitality and amount of blood is supposed in the part itself; in the latter, the same effect is produced by setting up a counteracting degree of vitality in some more or less distant portion of the system. Further, although nature sometimes effects a revulsive action for her own salutary purposes, the awaiting of which constitutes the expectancy of medical treatment, the object of the treatment by revulsion is to anticipate, nay, oftimes to thwart, the natural progress of the diseased symptoms,—to force, as it were, nature into the channel of relief which art shall dictate. Thus, the practice in question necessarily implies the employment of artificial means; it necessitates action in lieu of expectancy, and hence has been called by the French "la médecine agissante," in opposition to the plan treated of in the last

chapter; it leaves nothing to the powers of the economy, but trusts entirely to the efficacy of remedial agents; and it supposes the natural tendency of all disease to be towards the extinction of the individual.

From this *résumé* of the ideas attached to revulsive treatment, it will be gathered that the means used to carry them out are of the most vigorous character. Let us inquire into the principal of these.

Bloodletting, particularly in the shape of venæsection, is a remedy much relied upon in revulsive medicine, and is usually the first put into operation, as it is said to render the system more impressable to subsequent medication. The effect of drawing blood from a vein is, in the first place, on the heart, whose action it diminishes, decreasing the amount of blood sent to that organ. A secondary effect is the abstraction of blood from—or rather a diminished amount of that fluid going to—the nervous centre, the brain. The general result is a revulsive shock to the system, which is encouraged by the practice of the maxim to "make a large opening in the vein, and draw the blood as quickly as possible." Cupping is also, as usu-

ally practised, a remedy of the character under discussion; producing, as it does, a rapid change in the state of the affected organs. Leeching comes less decidedly under the same category; though here too the irritation of the bites is *pro tanto* a revulsive irritation.

Purging stands the next in reputed efficacy. And by purging we are not to understand the removal of the excrementitious matters already deposited in the digestive canal, but an augmented secretion of all the fluids of that canal, an increased activity in its nervous and circulating apparatus; and this speedily effected, or continued for days, weeks, and sometimes months. It would appear that some purgative medicines act more especially on the stomach, others on the small bowels, and others again on the lower bowel. Further, mercurials are said to have a specific power of purging the liver. If so, this power is certainly shared by ipecacuanha and tartar emetic. But whatever the medicine employed, purgation is practised either to cause a new action in the disordered alimentary canal itself, or, through this last, as a means of withdrawing from some other organ, the head especially. For the former purpose, remedies be-

lieved to act upon the liver and the small bowels are generally in usage. For the latter, those which purge the stomach and lower bowels are most esteemed. It may be here stated that purgation is allowable in most of the periods of disease, according to the revulsive treatment; and, as a general rule, should be persevered in.

Vomiting is a favourite mode of revulsion, formerly more commonly used than in these days: possibly from the experience of some dangers that attend it, for its agency is most powerful, the revulsion being caused by an organ so generally and actively sympathising with the whole frame as does the stomach. It is however still frequently employed; and the operation of several remedies, that do not bear the generic name of emetic, is sometimes held to be unfinished so long as the stomach does not regorge them; colchicum, for instance, is administered in articular rheumatism until it produces copious vomiting as well as purging. Occasionally it is used for its mechanical effects only, as when accumulated secretions in the air-tubes of the lungs are to be expectorated. It should be remembered, however, that the stomach is a highly sentient part, and does not

fall into the rage of vomiting until it has been irritated to a very great extent.

Sweating produced by internal applications is usually the result of small doses of emetics. The skin therefore can only be considered as secondary in the revulsive act, which consists in the condition of the stomach that is consequent on the ingestion of the medicine. Thus excited, sweating is most practised where the lining membranes of the air passages are acutely disordered. It is one of the natural terminations of simple continued fever, which the revulsive treatment strives to anticipate by medicinal agents,—rarely with benefit, generally with decided injury. Produced by means applied to the external surface it does not form part of the treatment in question.

The revulsion brought about by *diuresis* is affected either directly by remedies having a specific action on the kidneys, or indirectly by those which, through the stomach, excite the secretions and excretions of the body generally, that of the kidney among the rest. Of the former, viz. specific diuretics, some have emetic properties, and the revulsion is in part operated in the stomach. Mercury stands alone in the double

capacity of general stimulant and specific diuretic. As in the instance of sweating, diuresis is attempted and persevered in throughout the course of fever and most febrile complaints.

It were tedious to pass in review the long array of all the remedies whose effect is revulsive; comprising as it does medicines that are astringent; that are said to alter the condition of the system generally or of any particular part thereof (alteratives); that remove obstructions (deobstruents); that remove spasm, debility, and flatulence (antispasmodics, stimulants, and carminatives); that promote expectoration (expectorants); and so forth. Suffice it to say, that all these have their primary effect upon the stomach into which they are received, and that, whether for good or evil, that organ is allowed a very small amount of rest during the progress of treatment according to the revulsive method. Diseased itself, it is tried by more or fewer of these remedies; and it is likewise the scape-goat when other parts of the system are diseased.

Revulsion is also practised on the external surface of the body, and this may be properly called an efficacious and safe manner of inducing it. The agents in its production need only be

enumerated. They consist of whatever causes an accumulation of blood and an increase of vital action in the skin, from the actual cautery and burning moxa to a simple rubefacient liniment, including blisters, sinapisms, irritating poultices, and juices of plants, and ice-cold applications; all which are employed locally. I place the last-named in this category, because they will, if their cold be sufficiently intense, produce as much rubefaction as hartshorn, or even blister like cantharides. Fomentations also with very hot water have some degree of revulsive action, and still more so if combined with stimulating liniments. Poultices and fomentations of moderate heat seem only to increase the amount of the natural transpiration of the part to which they are used; they do not augment the circulating and nervous powers so much as to entitle them to be classed among the remedies of which we are now speaking. On the same ground general warm-baths must be excluded.

Thus there are two localities for the creation of revulsive action; the internal organs, and of these chiefly the viscera of the abdomen; and the skin. The former are the most generally

in use, as being connected by more striking sympathies with the system at large; the latter are mostly considered as accessary only, and both are not unfrequently practised simultaneously.

A physician acting on this treatment, in a case of simple fever, would, in the first place, attempt "to cut it short," as it is termed, by a copious bleeding from the arm, and, immediately on the limb being bound up, by an emetic. If this does not dispose of the fever in a few hours, he administers repeated doses of calomel, opium, and antimonial powder, with some powerful cathartics, in which he persists, in the expectation of causing healthy evacuations. In the meanwhile time is found for the administration of a mixture of sudorifics and diuretics. So things go on for six or seven days, the patient being told, as regards diet, that he can take "any little thing that he fancies,"—but not beef-steak or mutton-chop. At length the brain gives symptoms of being affected — delirium supervenes. Then begins the array of revulsives on the external surface; the head is shaved, ice is applied at the back and front, and a blister on the top of it. The

delirium passing from the furious to the muttering kind, the tongue becoming dry and brown, the limbs utterly powerless,—in short, all the signs of a typhoid state appearing, the stomach is once more tried with wine and other stimulants, the feet are blistered, and exhausted nature sinks; or if, in spite of all, the jaws of death are escaped, the body drained of its blood, worn out after the enormous stimulation, and utterly thrown out of the rhythm of its sympathies and functions, drags through a prolonged convalescence, with a tardy recruiting of the quantity, and still more slow restoration of the quality, of the vital fluid that it had lost, and of the nervous energy it had previously possessed. Even in this state a little revulsion is essayed in the form of bitter tonics, carminatives, antispasmodics, &c., and sometimes a relapse into another species of fever called nervous, is thereby brought about.

Such is the general history of the treatment. But as it is one of activity, no passing symptom is allowed to go unnoticed, and the patient, ready to sink through the bed with feebleness, is made to gargle for a sore throat, is rubbed with liniment for some sympathetic pain, has a

linctus for his parched mouth or for his gums made tender by mercury, a collyrium for his suffused eyes, and perhaps a lotion for his heated temples.

I have instanced a case of simple inflammatory fever supposed to occur in an individual of good constitution—one, in fact, who has not previously undergone revulsive treatment,—because such an one affords the best subject for it. But it is practised also in enfeebled persons and in those fevers that are denominated low, nervous, adynamic, or typhoid. True, in these, bleeding is not so generally practised, nor is the quantity drawn so great: still amid the mingled irritability and collapsed powers attendant on the diseases in question, the same combinations and alternations of purgatives, emetics, sudorifics, diuretics, and stimulants, and the same tedious pharmaceutical opposition to individual symptoms, prevail; pill and potion come with hourly regularity to interfere with the operations of nature, and often with the sleep of the patient.

Let us take next a case of acute articular rheumatism. As in the last instance, bleeding takes the lead; then come catharto-emetic doses

of colchicum until the patient can scarcely speak, so weak is he; but that matters nothing —the pain has been relieved in twenty-four hours. The revulsion on the alimentary canal has set the limbs free, but has established a fever of a bad and intractable character. Moreover, these irritated viscera, after the immediate revulsion has been effected, keep alive a sensitiveness of the skin to external impressions that almost ensures relapse into a chronic state of rheumatism, and the impatience of the first pain originates the patience with which the subsequent one *must* be suffered. If, notwithstanding the purging and vomiting, some pain of an acute kind remains, another revulsive, calomel, is tried, combined with opium, which masks the disorder; and, although the tongue is thickly covered with fur, these are continued until salivation is produced. This also often relieves the limbs; but at the expense of what? I will not here say more on this point. Neither will I dwell on the local treatment by external revulsives, liniments, sinapisms, and blisters, which, if not very efficacious, is at least harmless.

Revulsion is most extensively employed in

the acute inflammations of the viscera, and of these, particularly the brain, the heart, and the lungs. Venæsection is successfully practised in acute inflammation of the membranes of the brain, where, as well as in the same disease of the membranes of the heart, it can be carried to the greatest extent with the smallest amount of injury. Powerful purgation also is beneficially used in brain inflammation; but less so in inflamed heart. Vomiting is seldom ventured upon in either; though nausea is kept up for some time in the last-named disorder. In both, too, external revulsion is commonly and well practised.

But the method in question is much employed in the acute inflammations of the abdominal viscera, whether it be seated in their mucous lining or serous covering. Inflamed liver is treated by general bleeding, calomel, and opium, saline purgatives, and blisters. Inflamed stomach is treated by purgatives, mercurial, saline, and vegetable; by blisters; and if the appetite does not return after pain has ceased, by vegetable tonics, by iron, bismuth, and so forth. Inflammation of the small bowels—such as exists in infantile remittent fever, for instance,—is treated

with calomel and rhubarb, nauseating doses of emetics, and with tonics. Inflammation of the lower bowel—as in dysentery—is met by mercury in various forms, purgatives of various kinds, and emetic and opiate remedies. The diarrhœa of simple cholera is also treated with mercury and opiates, gummy fluids and antacids.

Allusion has here been made only to the leading remedial means employed by revulsive practitioners in the class of diseases under consideration, because it is on those that reliance is alone placed. A warm bath may be directed in dysentery, or a lavement in cholera, but are esteemed only subsidiary to the really active measures just mentioned; and no one would think of attributing alleviation or cure to those if these were in process at the same time. For a like reason an extraordinary laxity with regard to diet and regimen pervades the revulsive management of these complaints, and often leads to unfortunate relapses.

Chronic inflammations of the abdominal viscera are a glorious arena for the display of revulsive treatment. They are, as it were, 'dodged" and driven from one viscus or portion

of one to another viscus or portion, and in this way lead to the establishment of a permanent neuropathic condition. The train of dyspeptic symptoms originating in chronic inflammation of the stomach and duodenum, is visited with every species of active remedies, from "blue pill and black draught" to croton oil among purgatives, and from chamomile tea to arsenic among tonics, with interventions or accompaniments of antispasmodics, carminatives, (cayenne pepper among them!) antacids, and emetics. Rest of the affected organ seems never to be thought of; and it is either being stimulated to fictitious appetite by physic, or labouring through a bad digestion of food, during the whole period of treatment. At length the constant excitation of the abdominal nervous system establishes a condition of the brain which constitutes incurable hypochondria or the commencement of insanity.* Many are the instances of insanity that might have been prevented had the stomach been permitted to attempt its own deliverance from chronic inflammation!

* See my "Exposition of the Symptoms, Essential Nature, and Treatment of Nervousness," p. 105, et seq.

So also when this state obtains in the liver, that organ is stimulated by mercurials and purgatives to the transitory performance of its function; only to relapse into a more deplorable state of disorder; until the waxy complexion announces the total depravation of the digestive and sanguifying processes, or dropsy shows the functional to have passed into the irremediable organic disease of the liver. It is not the tropical sun alone that sends gentlemen to Europe with bilious faces and livers that fill the abdomen, or, in the other extreme, that are the size of a walnut.

That state of the small bowels, lacteal ducts, and mesenteric glands, which exists in scrofulous children, and is known by their hard, tumid and hot abdomens, their spare limbs, their fiery red tongues, capricious appetite, and unceasing thirst, varying condition of bowels but unvarying badness of excretions, and which is essentially a state of chronic inflammation, passes through the same ordeal of alternate revulsion by mercurials, purgatives, and tonics, as does the like condition of the stomach. Concomitant with such medicinal treatment the diet is of a

highly stimulating kind, consisting of concentrated soups, eggs, &c.

Sufficient illustration of the general plan of treatment by revulsion will be found in the above instances of disease. To have entered into further details would have been to stray from my object, which is to deduce general rules for the management of morbid states, from the best parts of the two modes of expectancy and revulsion. Hence it will be understood that notwithstanding the passing animadversions on the last of these, I am by no means inclined to deny its appropriateness and superior utility in certain complaints, or at certain periods of them. Indeed, to do so, would be to deny the evidence of the senses in observation, and the experience of not a few and not mediocre names in medical history. The weight of these names I shall proceed to throw into the scale of revulsion, as, in the former chapter, has been done with regard to expectancy.

Hippocrates, as I have before mentioned, acted on the expectant plan up to a certain period of disease, which period was, generally speaking, the fourth day,* when, as he thought,

* Liber de Victu Acutorum.

the humours were concocted. He then, if there was *great* pain attending acute inflammation of the* internal parts, bled the patient until he fainted. The disease in which he pushed this most was quinsy, where he would bleed from both arms at once. On the other hand he did not often draw blood in pleurisy; nor in spitting of blood from the lungs.† In all cases he had especial care to the intensity of the inflammation and to the strength and age of his patient; abstaining from bleeding children, old persons, and pregnant women. In short, he practised this mode of revulsion with admirable judgment. When the disorder was situated above the liver he opened a vein in the arm, the forehead, behind the ear, under the tongue, or on the nose; when it was underneath the liver, he bled from a vein in the ham, the ancle, or the foot.

Until the fourth day he also abstained from purging; which he practised with great caution in acute diseases, although he employed it much more commonly in the chronic. In fact, the cases of acute disease in which he adminis-

* Liber de Victu Acutorum, Sect. 7.

† Epidemic. Lib. 6, Sect. 3.

tered purgatives are sufficiently rare; and in one place he states that in many such he had given them with decidedly mischievous consequences.* Previous to the use of purgatives he always judged it necessary to dilute copiously, being of opinion that the humours are then more readily evacuated.† He was not so much guided by the quantity as the quality of the excreted matters; and were they ever so plentiful, he persisted in purgation until the patient felt better; if he felt worse, the requisite fluid—bile, pituita, or water—had not been evacuated, and the purging must still be continued. He never purged pregnant women, children, and old people. Neither would he prescribe cathartics during the dog days: probably on account of the irritable state of the alimentary canal at that period. His medicines of this kind were exceedingly harsh: black and white hellebore, thapsia (poisonous carrot), peplium (devils milk), chamelæa (spurge-laurel), buckthorn, elaterium (wild cucumber juice), colocynth, and scammony.

* The case of Scomphus affected with pleurisy, and others, in his work on Epidemics, Book 5.

† Aphorism. 9, Sect. 2.

HIPPOCRATES also practised revulsion by emetics of a violent kind, his favourite ones being white hellebore,* which he, and indeed most of the ancients, so invariably gave in melancholy and insanity, as to render the expression "to need some hellebore" proverbial for a man that had lost his senses. In dyspeptic headache, in pulmonary consumption, in dropsy and other chronic disorders, he also employed vomiting: but he never recommends it in any diseases of an acute kind. He always prescribed emetics to be taken after a meal—generally supper—in order that their acrimony might be qualified by admixture with the food.

The diuretics employed by HIPPOCRATES were simple articles of food, wine, onions, cucumber, melon, celery and fennel; if these did not succeed, he gave cantharides (the wings and legs of which had been torn off) in wine and honey.

To cause sweating he sometimes poured warm water on the head, administered wine, covered the patient with clothes and kept him perfectly quiet. But he gave no sudorifics internally. In fact he never urged diuresis or

* De Diœta. Lib. 1, Sect. 36.

sweating in acute, and, but seldom in chronic maladies.

PRAXAGORAS of Cos, according to CÆLIUS AURELIANUS,* who has preserved some specimens of his practice, appears to have been a most daring employer of the revulsive action of emetics, which he administered in all kinds of diseases. Even in the iliac passion he gave them until the fæces were rejected from the mouth, thus anticipating what takes place in a late period of the complaint. But this will scarcely afford surprise when we are also told that after all remedies had failed in this same disorder, he recommends that the bowels be cut down upon and opened, and the fæces extracted.

HEROPHILUS appears to have been one of the most active practitioners of ancient times. According to CELSUS,† he was the first of the old Dogmatic sect who made constant use of medicines both simple and compound, neither he nor his disciples undertaking to treat any disease without them,—a remark implying that preceding physicians were frequently in the

* Morb. Acutor. Lib. 3, Cap. 17.

† Lib. 5. præfat.

habit of dispensing with them. HEROPHILUS had moreover a saying, that "medicines are nothings, or the hands of Gods, according to the knowledge with which they are employed."* He was particularly fond of prescribing the white hellebore, which he compared to a valiant captain who is the first to sally from a city after having animated and put in movement those who are to follow him:†—herein alluding to its action on the humours. We have no other indications of the particular practice of this physician.

In the former chapter it was mentioned that the practice of THEMISON the Methodic, was of a mixed character and differed in this from the majority of the followers who adopted his theoretical views and formed his sect. In fact THEMISON purged freely in many diseases; in asthma, for instance, when he gave scammony; and in lethargy, with aloes dissolved in water, to which, as well as to several other cathartics, he usually joined some castoreum. He is the author of the celebrated *hiera picra*, or holy bitter, so well known by that name to the vulgar

* Galen. De compos. Medicament. local. Lib. 6. Cap. 3.

† Pliny. Lib. 25. Sect. 23.

even now, though its composition has been modified. It is a stomachic purgative. This physician made considerable use of cupping, both dry and sanguinary. For the rest, I know not how far his practice was successful, nor how much credit is to be attached to the satirist JUVENAL who says of him,

——————————— circumsilit agmine facto
Morborum omne genus, quorum si nomina quæras,
Promptius expediam quot amaverit Hippia mæchos,
*Quot Themison ægros autumno occiderit uno.**

ARETÆUS the Cappadocian, who belonged to the Pneumatic sect, followed the practical rules of the Methodics in several particulars; but departed from them in several others. Thus, he used purgatives largely, and administered acrid and irritating clysters—remedies repudiated by the Methodics. He also drew blood freely. In quinsy he allowed the blood to flow until the patient fainted. In inflammatory fever, apoplexy and spitting of blood, on the other hand, he repeated small bleedings. In inflammation of the kidneys and in elephantiasis he bled to a great extent. He gave emetics frequently, among which he preferred white hellebore. By him cantharides were first used for the purpose

* Satire 10th 219 et seq.

of blistering the surface; he rubbed them on the head in epilepsy and headaches. Many other external remedies were employed by ARETÆUS, but of a milder kind, such as fomentations and poultices.

We have seen how CELSUS differed from HIPPOCRATES in his employment of purgatives. In venæsection he departed still further from him; for he drew blood from children, from the old and from pregnant women. He bled in fever "when the veins were full;" in pleurisy in its commencement and when the pain is great — not otherwise; in inflammation of the substance of the lungs, provided the patient is strong, otherwise cupping only is allowable; in palsy, convulsions, apoplexy; in ruptures, in internal contusions accompanied with spitting of blood. In fact, he bled in all acute disorders, when he thought the patient had plenty of blood; and in cachectic cases as well, because he held that the veins were full of vitiated blood. Venæsection, however, seems to have been the only revulsive remedy employed by CELSUS.

GALEN, too, practised venæsection frequently, and principally in the commencement of inflammations and fevers. In one place he speaks

of having drawn from a woman a pound and a half of blood, on the following day a pound, and on the third eight ounces!* Generally he preferred repeated bleedings to one large amount; and not unfrequently bled twice in one day. Patients under fourteen years of age he abstained from bleeding. Old age, however, was no obstacle to the operation: neither was a cachectic state of body, for he then both purged and drew blood. His aim in venæsection was, as he says, to cause "revulsion of blood."

Purgatives he used less sparingly than HIPPOCRATES, whose general rules regarding the period for their administration he nevertheless followed. Emetics also he employed in the same cases. He very seldom used sudorifics internally; but warm baths and friction he constantly ordered for the purpose of procuring sweat, and very frequently had recourse to no other remedies for the cure of simple fever arising from cold.

With the Chemical Physicians of the 16th

* De curatione per sang. mission. Cap. 12. This is the first instance we have of the blood drawn being measured: Hippocrates, Celsus, Cælius Aurelianus, and Aretæus, making no mention of the quantity taken.

century the administration of revulsive remedies drawn from the earths and metals commenced: an important innovation, from which the major part of the modern practice of revulsion dates. The introduction of antimony, lead, silver and mercury, in addition to the means already derived from the vegetable kingdom, tended materially to render more striking the immediate results of that mode of treatment; and accordingly the Chemists succeeded in overthrowing the long-established notions of the Galenists, many of whose pharmaceutical articles they rejected to make way for their own more violent preparations.

The mathematical theory of disease led to an activity of treatment at least equal to that of the Chemists, with whose mineral pharmacopœia they conjoined the copious bleeding and purgation of the old Galenists. Their ideas concerning the friction of the fluids in the vessels, and their doctrines of lentor, obstruction, derivation and resolution, caused them to employ the lancet in the great majority of cases. Borelli, Bellini, and Guglielmini, in Italy, and Keill, Pitcairne, Charleton, Jurin, and Mead, in this country, are the most respect-

able names in the list of mathematical practitioners.

The treatment generally adopted by CULLEN and his followers is too familiar to most medical readers to require more than a bare mention of it. Bleeding, purgatives, antimonial medicines, and tonics, are the remedial means which enter most commonly into its details, the aim of which is to reduce the spasm of the extreme arteries. CULLEN, however, held that when the morbid irregularity is not excessive, the *vis medicatrix naturæ* is in itself sufficient to restore the system to its healthy condition:—an admission of considerable importance, but to which very many of his followers paid little attention. Still the basis of the practice recommended by him is revulsion.

Nor need BROWN's treatment be dwelt upon save but to stigmatize it as the maddest that ever entered into the mind of man. Stimulants to rouse the directly debilitated powers, and stimulants to waste the accumulated excitability of indirect debility, were the daring and sole remedies he proposed for disease in all its multiform shapes.

The indiscriminate and excessive employment of revulsive medication which has pervaded the treatment of disease in this country during the last fifty years is in a great degree traceable to the writings of physicians who practised in tropical climates, where febrile disorders put on a most intense character, and were, in their opinion, to be met by the most violent remedies.* That these succeeded in many instances is clear from the testimony of the authors in question. But that a great mortality also accompanied their employment, and that no other and less active treatment was essayed, appears to be equally certain. Still as recovery from the extreme fevers of the West Indies *had*

* A lately-published work entitled "A Clinical Treatise on the Endemic Fevers of the West Indies," by Dr. W. J. Evans, goes far to invalidate the violent treatment advocated by previous writers on the subject, and to establish a more rational and more successful management of those formidable maladies. With fomentation of the abdomen, castor oil, minute doses of ipecacuanha, and quinia, Dr. Evans appears to have effected a greater number of cures than are recorded by Chisholm and others with their excessive use of mercury; and the young physician who, previous to his establishment in practice in tropical climates, reads the recorded experience of older practitioners, would do well to study the contents of this clinical treatise.

taken place under large bleedings and enormous doses of calomel, it was inferred that these would be as effectual in the milder fevers of Great Britain; a most fallacious *non sequitur*, but which has, notwithstanding, been extensively acted upon.

Another cause of the prevalence of such treatment in fever is to be found in the desire to "cut short" the disease, which so strongly took possession of the medical world at the latter end of the last, and the beginning of the present, century. Bark and wine was for a period the fashionable curtailer; to which succeeded cold affusion, which gave place to bleeding and mercury. The latter still keep their ground with very many practitioners, who conceive the end of all medical art to be to drain the body of its blood and to make the mouth sore. Meantime fever is *not* cut short by any such means. And as regards other diseases it would be well to try whether their immediate cure could not be rendered compatible with a smaller amount of subsequent infirmity and sensitiveness than that which ensues upon the rigorous employment of revulsive means.

The vast number of new and powerfully-acting

medicines which have of late years emanated from the chemist's laboratory, have also tended to foster the spirit of active medication and of interference with the natural curative process. The easily-earned reputation flowing from a very few instances in which a novel remedy has been luckily employed is too tempting to be overlooked in these days of professional scrambling. But let this system be called as it may, essentially it is charlatanism. He who professes to cure any class of disorders by astounding doses of one medicine, or any doses of another, because it has never been administered before, is as worthy the name of charlatan, as the respectable fraternity of which Morison and Holloway are distinguished members. Of patient observation such practitioners have none; in recklessness they abound: and if they are themselves deceived, they exhibit wonderful acuteness in turning their credulity to profitable account. Fortunately for the dignity of the medical profession, reputations of this character, so rapidly obtained, are for the most part as speedily lost; the same *gobemoucherie* which raised quackery of one kind, readily transferring its sustaining influence to another

more new, and because more new, more promising. The system of charlatanism flourishes because fools exist in legions; but individual practisers of the art fail in establishing themselves in the confidence of those they treat, because none but fools are their patients.

CHAPTER III.

SIMPLE TREATMENT.

Physiological Preliminaries—Origin of disease in the organs of vegetative and animal life—Organic sympathies—Deduction regarding the viscera—How affected by Expectancy and Revulsion—Illustrations of simple treatment—Acute and chronic Indigestion—Inflammatory—Typhoid—Rheumatic Fevers—Infantile remittent—Eruptive Fevers—Sequelæ of eruptive fevers—Teething fever—Rationale of simple treatment in these cases—Treatment of chest diseases—General basis—Particular means in acute diseases—In chronic disorders—Heart disease—Brain disease acute and chronic—General Conclusions regarding simple treatment.

If it were the purpose of this treatise to advocate either of the systems of practice which form the subject of the preceding chapter, it would be now necessary to place them in a comparative juxtaposition, and choose between. But as, in my opinion, a choice is to be made from, rather than between, both, the comparison can only be established with reference to their propriety in the individual diseases of the body. This implies the statement of certain peculiarities in the

vital actions, and of the relative importance of the various series of organs which minister to those actions in health and disease. Further, it will be requisite to enumerate some generally-received propositions regarding the sympathies by virtue of which disease is propagated from one organ or series to other organs. After which it will not be difficult to point out the instances in which expectant and revulsive medication are respectively applicable.

The two modes of life that obtain in the body are the vegetative and the animal. The vegetative is that which is exhibited in digestion, blood-making, respiration, circulation, and calorification. Its organs are the viscera of the abdomen, the stomach, liver, bowels, &c.; and those of the chest, the heart, and lungs. These have a system of nerves peculiar to themselves; and are independent of the will in their actions; the lungs excepted, which, up to a certain point, may be regulated by the voluntary power. As they are without the reach of this last, so do they afford no appreciable perceptions to the mind, in a state of health. Nevertheless it is ascertained from numerous sources that the processes of digestion, &c. have a constant influence on the

condition of the mind's physical organs, the brain and spinal cord. In disease this influence is shown by decided perceptions, from a small amount of pain up to the height of frenzy or stupor. Irritation of the stomach, for instance, begets what is called sick headache: or it may go to the extent of producing delirium, as in a certain stage of simple inflammatory fever: or if it be still more intense, the brain falls into a state of stupor, as we see when the same fever has become typhoid in character. Again, irritated liver causes pain under the right shoulder-blade: the irritated lower bowel causes spasm and pain down the back of the leg, as in cholera and dysentery, &c.

Physiological inquiries, moreover, show that by the medium of nerves the viscera of vegetative life are connected with and influence the vital action of every portion of the human body; a connection and influence which, as in the instance of the brain, disease considerably developes. Thus the obstruction of the circulation through the heart produces coldness and blueness of the extremities, lips, and eyelids: so does the impervious state of the lungs to air in certain inflammations and congestions of their substance,

together with an anxious expression of countenance. On the same influence is founded the gouty inflammation of the toes and fingers, preceded and accompanied by a dyspeptic state of the digestive organs; the increased or diminished irritation of a sore on the limbs, according to the state of the same organs; the great heat of the skin in irritative and inflammatory states of any of the viscera, as in fever; and so forth.

Further, the organs of vegetative life have extensive and acute sympathies with each other. In disease these are exhibited when the morbid heart begets inflammation of the air tubes of the lungs: when disordered stomach begets cough with expectoration or sore throat: when the same causes secretion of bad bile or bad urine: when the disordered liver induces costiveness: when the latter again destroys appetite and causes loathing, &c. But the most notable of these inter-visceral sympathies is that between all the internal organs on one side and the heart on the other. Upon the heart's organic condition they one and all have a marked influence, from the costive bowel which slightly increases the pulse, to the worst stage of pleurisy when the pulse cannot be counted: the smallest deviation of any of them from health is recognised by

the heart. Meanwhile it must be borne in mind that these organic sympathies are carried on in health, and may be even in disease, to a considerable extent, without the presence of animal pain, the absence of which is compatible with a great amount of internal irritation.

Thus the radiations of morbid sympathy in vegetative life are—

From any internal organs towards others, and from all of them especially towards the heart.

From the same towards the brain and spinal cord.

From the same towards the external surface.

It has been stated above that the function of respiration differed from the other vegetative functions, in being more connected with the animal exercise of the will, by which it is to a certain extent controlled. In fact, any diseased state of the lungs, in which they are deprived of the due quantity of air for the purpose of effecting the necessary changes of the blood circulating in them, is attended with great, and, in some instances, rapid and fatal consequences to animal life. Intense inflammation of their substance, pulmonary apoplexy, spasmodic croup, and acute inflammation of the larynx, are instances of such a state; which may suspend or destroy anima-

tion in a few minutes or hours. Sudden effects of this character are not observed in the disorders of the other viscera of vegetative life, unless there has been previous, and generally long-continued derangement of their function, against which treatment should have been applied. It is important to bear in mind this peculiarity regarding the office of respiration, and its influence on the organs of animal life.

The organs of animal life are the brain, spinal cord, and the nerves that proceed from them. These not being essential to the condition of life, properly so called, (since numerous tribes of animated beings exist without them,) the radiation of sympathies from the brain and spinal cord towards the viscera of vegetative life, is only chiefly perceptible when morbid states of an extensive or sudden kind occur in them. Violent mental shocks, as of the passions,—or violent physical shocks, as in contusions of the head, and apoplexy, produce striking effects on the vegetative functions, which may be thereby even arrested. Acute and chronic inflammations of the brain also produce morbid results in the same functions. But while this fact is undoubted, it is equally certain that disease much

more generally begins in the vegetative, and is propagated to the animal organs, than the contrary. Commence where it may, however, the ultimate aim of medical treatment is to preserve the life of the *animal*.

That life is assailed in various ways.

The morbid sympathies between the organs of vegetative life may go on until the mischief reaches the organs of animal life, and first deteriorates and then destroys their functions. This occurs in the various kinds of fever (wherein, whether as a cause or consequence of the disease, the vegetative organs suffer,) and the chronic forms of abdominal and pulmonary disease. For a longer or shorter period, the phænomena of disease in these cases are almost entirely confined to the vegetative viscera, which are mutually affected, the heart, as indicated by the pulse, especially: and to the external surface, whose increase of temperature and sensitiveness announces the influence of the internal parts upon it, and, to some extent, upon the brain. An unequivocal sign of bad augury, is the propagation of these phænomena to the brain, as shown by the supervention of delirium; and of involuntary startings or convulsions, which indicate the deterioration

of the spinal cord. Such, in fact, is the process when inflammations of the viscera, and general fever involving them, terminate fatally. On the other hand, so long as the irritation or inflammation of the organs of vegetative life does not pass a certain degree of intensity, which lights up a similar amount of disorder in the organs of animal life, the chances are in favour of the restoration of the former of these to their healthy condition. Inflammations of the lungs, of the heart, of the bowels and their coverings, have their termination in death always preceded by delirium or stupor, involuntary twitchings, partial loss of sight, squinting, or some other equally sure sign of the invasion of animal life.

When the external surface of the body is the starting point of disorder, the brain may still be assailed in its integrity, but through the medium of the viscera of the abdomen and chest. Indeed it may generally be asserted that the amount and character of disease of the external surface, are closely regulated by the previous state of the said viscera. Take, for instance, an inflammation of the skin,—an erisypelas. In the first place, its appearance is accompanied with more or less of stomach or bowel derangement, even

in the most favourable cases. Again, if the internal organs, from long-continued ill-usage or congenital causes, are feeble and lack re-active power, the erisypelas is of a bad kind. In either case the brain becomes affected if the state of the abdominal and thoracic viscera be not accurately watched: in the last one more speedily, of course, than in the first. Rheumatism is similarly situated with regard to the state of these viscera.

This applies to the numerous forms of inflammation which the skin is capable of taking on: to the itching as to the ulcerative irritation. An ulcer of long standing is sometimes observed to "dry up" rapidly, and giddiness or even apoplectic seizure of the brain to supervene. In this case it should always be remembered that some deranged state of the digestive organs precedes, and indeed causes the desiccation of the ulcer; and that the same state predisposes the brain to fall into disorder on the sudden cessation of an old irritation on the surface. So also in that worst of all ulcers called after Pott, a great, and, unfortunately, irremediable derangement of the organs of vegetative life is known to precede and accompany its progress, the final

stage of which exhibits the extension of the mischief to the brain, in delirium and stupor. Every one knows how much the healthy appearance of the stump of a limb after amputation depends on the state of the patient's digestive apparatus previous to it: and how, when the case ends badly, it is for want of stamina in that apparatus.

In certain other instances, wherein the centre of animal life is assailed from the external surface, the attack would appear to be more direct. I allude to spasmodic and convulsive phænomena, following on wounds and fractures of the limbs, and on teething. Yet here, too, we may trace a condition of the vegetative viscera which renders the brain morbidly susceptible of the irritation of these accidents. For the phænomena in question only result when circumstances of original or acquired constitution and climate have inflicted a highly-irritable and weak system of internal organs on the patient. Such a system obtains in the nervous and scrofulous, and in those who have trifled with their inner parts by early or continued excitement: the child, in the former of these states, being the most subject to convulsive fits from teething: and the adult, in both states, being the most liable to lock-jaw

and other nervous conditions of the worst kind, from wounds and fractures of the limbs. Warm climates, also, where the greater susceptibility of the vegetative viscera is well ascertained, favour the attacks of disease, commencing in the external parts, upon the organs of animal life.

Whether, therefore, disease commences in the viscera of the abdomen and chest, or in the external surface, the great aim in treatment is to maintain the former of these in such a state as to prevent the extension of the mischief to the brain. Their state of health it is which regulates the amount and character of external disease; according to their previous order is the intensity of their own diseases: and if in either instance the brain is invaded, it is because the irritation in them has passed a certain limit.

Turning to the instances in which disease commences in the organs of animal life, we find, as might be expected from the preceding details, indications of much more pressing and immediate mischief. For in this case the citadel of man's sentient and percipient being is attacked directly, and, if it be vehemently assaulted, crushes his vegetative nature in its fall. A strong apoplectic seizure, the effusion of serous

fluid on the brain as a consequence of its acute inflammation, the inflammation itself, the concussion of the brain substance by violence or its sudden compression by fracture of the skull, may any of them in a very brief space extinguish both animal and vegetative life. The chronic forms of brain disease tend to the same end, if means are not taken to arrest them: and softening of the cerebral substance, gradual accumulation of fluid, serum, or pus, on its surface or in its cavities, effect as certainly what the acute morbid states above mentioned do with greater rapidity.

Yet between the acute and chronic disorders of the organs of animal life, it is requisite to mention a distinction with reference to their connexion with the vegetative viscera. It is certain that very many of the acute complaints of the brain may be traced to previous derangement of those viscera; apoplexy, for instance, which gastric inflammation so often precedes; and acute dropsy of the brain, whereunto the same or the presence of worms in the bowels have been antecedent. But we are to suppose the brain already and vehemently affected, itself oppressed in its own function, and threatening speedily to anni-

hilate that of the vegetative organs. The same connexion obtains in the chronic diseases of the brain. But here the annihilating process is much more prolonged, the morbid sympathies established between the brain and lower viscera have somewhat more of an equal and reciprocal character, each maintaining the other in a disorganising irritation. On this distinction it is necessary to dwell in the choice of treatment for the two classes of disease originating in the cerebral organs. In the acute, attention is exclusively due to the overwhelming symptoms in the brain: in the chronic, that attention must be, in a degree to be determined by considerable tact, divided with the vegetative viscera.

Reference has been made in a former part of this chapter (page 92) to the more immediate connexion of the viscera situated in the chest on the organs of animal life, than the abdominal viscera. The suspension and derangement of the functions of these last are for a comparatively long period compatible with the continuance of those of the brain. Not so certain diseases of the chest already mentioned:—intense inflammation of the substance and coverings of the lungs, pulmonary apoplexy, spasmodic croup, and acute

inflammation of the larynx: to which may be added rheumatic or gouty inflammation of the heart and its coverings. In any of these instances of disease the centre of animal life is in imminent danger of speedy annihilation of function, either from the withdrawal of that most important pabulum of the blood, atmospheric air, from the retention of black blood in the brain, which acts as a poison to its substance, or from the violence with which the heart projects the blood into that substance. These are cases in which the practitioner has not any considerable time given him to balance between the *preservation* of the animal, and the *deterioration* of the vegetative, being.

From the facts and remarks now advanced one great truth is deducible, namely, that *no one sinks under disease until it has invaded the viscera of vegetative and animal life.* Palpable as this truth may appear, and trite though it be pronounced, the frequency with which it is placed out of view in the treatment of disease, is for that very reason the more astounding. It matters little to a vast number of practitioners where disorder commences, these same viscera, on whose integrity life depends, are made, in

every case, the battle-field for the operations of powerful and conflicting agents. Take first the cases of disease wherein the sympathies between the external surface and the contents of the abdomen, and between the latter, are morbidly excited.

Individuals receive wounds on, or are attacked by inflammations of, the limbs, and are said to die of them; the efficient cause of death, meantime, being the extension of irritative action from the surface to the vegetative viscera, and thence to the brain. Is this fact, constantly and clearly before the mental vision of him who by harsh medication—by large doses of mercurials, drastic purgatives, and stimulants—actually predisposes the viscera to receive the irritation from without? Does it occur to him that the fever which supervenes on some, it may be, slight wound, is in great part attributable to the artificial irritation which his applications to the sentient and highly-sympathising stomach and bowels have produced?

After a longer or shorter period of malaise, a general fever breaks out in an individual, and all the symptoms announce an irritated condition of the vegetative viscera, the tongue, stomach,

bowels, kidneys, heart and lungs, being all disordered in function. When to these organs thus situated the same harsh medication is applied, can it be said that the fact that *death comes by the viscera* is duly appreciated? And when, in spite of, or rather in consequence of, such treatment, the brain becomes affected with delirium and then stupor, can any one, having that fact before him, fail to perceive the consequence alluded to?

In truth, the viscera are too often reputed only as vehicles for the reception of medicines and as localities for the erection of revulsive action. Nor is this latter use always an abuse, as I shall have occasion presently to show. But I maintain that in the instances just referred to, and indeed in all cases wherein the sympathies between the external surface and the viscera of vegetative life, and those between these last, are for the time alone involved, the plain and positive indications of nature are in direct opposition to the establishment of any irritation by medicinal means in those viscera. These are already in a state of derangement, and should be exempted from agents which further perturb their functions.

It has been alleged that a "new action" is set up in the disordered viscera by the agents in question. But it may be very properly doubted how far this is desirable, when it is found to be only another degree of that which already existed. Thus an acute inflammation of the mucous membrane of the stomach is changed by a mercurial, followed by a saline purgative, into another grade of inflammation, accompanied with increased secretion. Thus, too, a chronic inflammation of the same membrane (constituting a very common form of dyspepsia) is changed into a more exalted form of vital action by the combined operation of a purgative and a stimulating tonic. What follows? In both cases, the stimulus of the medicine being over, the mucous membrane sinks into a more intractable state of inflammation than before, and the "new action" is again set up—and again, until the morbid sympathies of the stomach involve other organs in similar disorder, and a simple disease becomes a complicated one, whilst the primarily affected part, the stomach, passes from a functional into structural and hopeless derangement. *That*, assuredly, is a "change of action;" yet such is too frequently the history of attacks of acute

indigestion: by medicinal interference they are made to merge at length into a chronic form, which, exasperated continually by the same kind of meddling, passes into disorganisation of one or more portions of the digestive apparatus.

But this is not all. If the subject of such attacks and such treatment happens to be in the age between forty-five and sixty years, he runs considerable risk of having the digestive irritation extended to the brain, and suffering an apoplectic seizure, and paralysis of more or fewer of the voluntary organs; for these complaints acknowledge no more common cause than gastric disease exasperated by food and physic. Or if the indigestion be so treated in one between thirty and forty-five years of age, another degree of cerebral excitement is generated, which condemns the patient to the depressing horrors of that most intractable of all maladies, hypochondriasis. Or, finally, if the sufferer be a female, the stomach draws the womb into the circle of its morbid sympathies, and an hysterical sensitiveness ensues and persists for years, perhaps through a life, of nervous misery.

Treatment of Acute Indigestion.

What, then, is the simple, the natural treatment in such cases? In consequence of excess in diet, bad food, or mental affections, the stomach loses its appetite; its secretions, as well as those of the liver and bowels, become depraved or diminished; thirst becomes pressing; dull ache of the forehead, general malaise, and more or less lassitude of limbs supervene;—acute indigestion, in short, is the disease. In all these signs we cannot help hearing the call for rest—rest of the abdominal viscera and of the brain; and dilution of the contents of the stomach. These are the natural indications: and if they be acted upon, if the patient remain in the recumbent posture, be withdrawn from light and noise, and drink abundantly of cold water, he will recover in two or three days, without being liable to relapse with the first meal he takes subsequently. This purely expectant management is sufficient in the great majority of instances; for, the rest and dilution restore the healthy action of the digestive canal, and the liver and the lower bowel return to their offices when thus left to themselves. This is no random

assertion, but one based upon scores of cases. But if there be impatience on the subject of the bowels, revulsion may be practised on the lower intestine by means of mild lavements, inasmuch as that portion of the canal is not so intimately connected by sympathy with the brain as the upper portions. Besides this, flannels wrung from very hot water and applied over the pit of the stomach for two or three hours, assist considerably in allaying the thirst, headache, and malaise, and inducing quietude and sleep of the brain: the bowels, too, will act under the operation of this remedy.

Medicine by the mouth is worse than useless in such cases as these: it is positively hurtful. It *relieves* in half the time the above simple treatment requires. The difference is, that the latter *cures*, allows the patient to rise up well, eat his ordinary food, and pursue his ordinary avocations, without the immediate distress, without the certain relapse and consequent necessity for recurrence to the "blue pill and black draught," which attend the treatment by drugs. The greatest loss of time in the outset is the greatest gain in the long run: and three days in bed at the first often saves as many weeks

therein at last. Let this be more especially kept in mind, in connexion with the fact that these half-cured attacks of acute indigestion terminate in one of the ways already mentioned, or fall into a chronic condition,—a permanent plague to body and mind. Indeed such is the constant origin of chronic dyspepsia, the treatment of which is now to be mentioned in its general outlines.

Treatment of Chronic Indigestion.

A general and sufficiently well-grounded belief regarding the intimate condition of chronic disease is, that it differs from the acute form in the morbid organs having lost to a greater extent their power of vital reaction: the blood-vessels and their contained blood approach nearer to a state of disorganisation, their nervous and nutritive powers are more completely deranged, their secretions are more unnatural, &c. This belief has been very commonly illustrated in the practice applied to chronic irritation or indigestion, which mostly consists in internal stimulation, in alternative purging, to wash away bad secretions frequently by worse, and mineral and vegetable tonics, to rouse the deficient energy of the

stomach. Of this plan and its results an opinion has already been offered. As regards that which the symptoms indicate, it will be found similar to the treatment of acute indigestion on the score of rest to the stomach. What do the pain, the fidgetty state of mind and body, the lassitude, the flatulence, the acidity, the nausea and thirst, that follow upon a meal, in this complaint, signify, if it be not that the stomach is oppressed by food, and labours through a bad digestion? Comparative rest of the stomach, then, is the first part of treatment. I say "comparative," because some amount of exercise of limb is sometimes requisite in this form of indigestion, and this cannot safely be taken with a long-fasting stomach. But the aliment should be of a character that includes nutriment in a small space, and digestibility without stimulus, and this is possessed by farinaceous food. Of this only very small quantities should be taken at once: only sufficient to maintain the status of the body: for, a certain way to emaciate a dyspeptic, is to attempt to fatten him with large masses of aliment. Small but frequent draughts of cold water are also highly beneficial, and conjoined with revulsion on the skin of the abdomen,

will generally supersede the use of cathartics. Rest of limb is likewise imperative in the majority of cases of this sort, and exertion is found to be very distressing. The sinking and gnawing of the stomach, so usually mistaken for appetite, and appeased by food, will invariably disappear in the recumbent posture, and after a draught of cold water. On the other hand, it comes on when the limbs are employed, especially when the stomach is empty. When, however, the diseased stomach has involved the liver in mischief, and the symptoms denote congestion of that organ, it becomes necessary to expedite the circulation there. This is vulgarly done by mercurials: but a much safer mode is to employ counter-irritating frictions over the region of the liver, and carefully (with reference to the sympathies between the stomach and the seat of voluntary power, the brain and spinal cord) apportion exercise of the muscles in riding or walking.

Then with regard to the condition of the bowels: the lower one should be cleansed out daily by an enema of warm water, holding aloes, or some purgative salt in solution; whilst the upper portion of the canal, wherein more or less

morbid secretion is reasonably supposed to exist, should be gently acted upon every second night, with a teaspoonful of castor oil, four or five grains of rhubarb, or some similar laxative that suffices to rid the intestines of their contents, but not to augment their quantity.

Revulsion on the surface is of the first consequence in chronic dyspepsia, and should be excited by dry frictions, frictions with stimulating liniments, with oil, hot fomentations, and sometimes, if some accident lights up an acute state of gastric inflammation, with blisters.

The mind, in indigestion, keenly reciprocates with the viscera of the abdomen. If it be the exciting cause, all the medical attendant can do is to back his advice as a friend by his reasons as a physician: and these are particularly demanded when such simple and unobtrusive practice as the above is recommended, the results of which, though more sure, are more slow than that of violent medication. The latter, indeed, by its temporary relief,

> "Keeps the word of promise to the ear,
> But breaks it to the hope;"

whilst the former, assisting the diseased viscera in their efforts towards restoration, more gradually

dispels the clouds that envelop the mind of the unlucky dyspeptic, and gives him the mental sunshine, which, whether moral causes are in operation or not, it is impossible to attain and hold, so long as the digestive organs are in a morbid state.

There are various other conditions of the alimentary canal and its appendages, of which chronic inflammatory action is the basis, and in which the simple treatment by rest, dilution, the gentlest relaxation of the intestines, with revulsion on the surface, leads to the best and most permanent results. Persons called, or calling themselves, bilious, those of confined bowels, accompanied with heat of mouth, tainted breath, frequent and, to them, inexplicable headaches, having cold feet, occasional lassitude of limbs, and almost constant irresolution of mind, although constitutionally otherwise endowed; who go about their business and into society, but have not much pleasure in either;—these will be found to carry about them the germs of that visceral condition which, upon some accidental cause, breaks out in acute indigestion, bilious,

rheumatic, or even typhoid fever: but which, by timely rest of the digestive organs and those of animal life, without the interference of medicine, might have been easily eradicated. Instead of this they drug themselves, are relieved, again feel ill, repeat the dose; eating, drinking, dancing, and bargaining, meantime, with all possible avidity, until outraged Nature forces them to halt, by a complete paroxysm of sickness, and thus saves those who would not save themselves.

Observations such as these are the more appropriate in this place, as I am about to speak of the treatment of several kinds of fever, which are almost invariably preceded by the sub-febrile state alluded to. Were non-professional persons better acquainted with this fact, and did they, knowing its occurrence in themselves, abandon the treatment to Nature instead of trusting to a worn-out prescription, they would avoid attacks for which they would gladly compound by a few days withdrawal from all business and all pleasure. Capable of moving about, yet doing so with early fatigue, they imagine their complaint to be weakness, and stimulate the digestive organs to overcome it; or, coming nearer to

the truth, they suppose themselves bilious, and take physic and devour bacon at breakfast. At length, on a certain day, after a mental shock, great exertion, a cold air in a passage or through a window, wet feet, some change of clothing, or a crowning excess of diet, shiverings seize the patient; and, according to constitutional and accidental circumstances, the symptomatic array of rheumatic, inflammatory, or typhoid fever, is in a few hours established. That such is the process—that visceral derangement precedes by some time the feverish outbreaking—I have verified in hundreds of instances: and that the fever is fully developed when the irritation, in whatever viscus it may be, has become sufficiently intense to link together more or fewer organs in its morbid sympathies, those of animal life included, is, in my belief, sufficiently clear. It is not that the exciting cause—cold, for instance—has driven the blood inwards upon the viscera, as is commonly asserted; but the latter have for some time previously maintained a morbid sympathy with the surface, which rendered it unable to re-act upon the cause in question as it would do in the health of the internal parts. Upon these, then, as the strongholds of life, the office

of re-action devolves: and hence fever has been not unaptly denominated an effort of Nature to bring a morbid process to a crisis; a crisis that varies in period and character with the vital energy of the patient, with the length of time during which he has neglected or exasperated the previous symptomatic warnings, and, last not least, with the amount of interference with the morbid viscera before and after the full development of the fever.

With this view of the febrile condition, (and it is one for the reasonableness of which eminent names in medicine might be cited,) the propriety of violent revulsion practised on the organs of vegetative life is, at least, very problematical. These last are labouring to effect relief for themselves by transferring the irritative action to one of the great emunctories, the lower bowel, the kidneys, or the skin,—to the latter in the great majority of cases. How is this to be done whilst means are taken to retain the irritative action in themselves? whilst calomel and antimony are exciting the stomach, and senna, scammony, and other strong purgatives, are drawing blood to the whole canal to supply the enormous excretions they produce? whilst, as if to *force* all the

emunctories together, a conflict of diuretics and sudorifics comes to aid the mercurials and purgatives in making "confusion worse confounded" in the already oppressed and irritated internal organs? It is such treatment as this that justifies the jest passed on medicine in the definition of a physician as one who, armed with certain weapons, lays about him in all directions, with at least an equal chance of extinguishing the patient as the disease. For, although the patient may recover, notwithstanding the tumult into which the viscera have been thrown, the chance is considerably in favour of this tumult being extended to the great viscus of animal life, the brain, whose function is first deteriorated and then destroyed.

But in the event of recovery, what do we behold? A body drained of its blood, (for copious bleeding is with many the first step in treatment,) exhausted in its nervous energies, with viscera that have been subjected to every phase of irritative action, and now in the extremity of consequent collapse, — dragging its enfeebled organs through a long convalescence, one function and then another stumbling on the road, and falling back into the old disorder, without

the rhythm, the combination of all of them moving onwards towards health, which should mark the restoration of calm to the system. The convalescence itself is a veritable disease, a train of disorders. There is the nightly sweating, indicative of the terrible exhaustion of the frame, for which acids are given; the inappetized stomach, for which tonics are ordered: these, again, aid in constipating the bowels, already deficient in activity after the vehement efforts of secretion to which they have been stimulated: there is the flying spasm of the abdomen, now in the stomach and then in the lower bowel, for which carminatives are administered. Then, as regards animal life, there is the sleepless brain nightly stupefied with narcotics; there is the tremor of limb and lip, that often continues for months: the hysterical condition of mind: the tendency to fainting in even a moderate degree of warmth: the nervous headache, that frequently from this date takes up its abode in the system for the remainder of life. Withal, there is a general sensitiveness to causes of disease, that persists for a considerable time, and, coupled with the active medication still in progress, enhances the risk of fresh febrile attacks before the body

shall have acquired the stamina to re-act against them.

Such is the sketchy history of fever treated according to the method which makes the internal parts the subjects of revulsive action: a method which increases the dangerous risks during the malady, causes the infliction of prolonged convalescence, and by this last fact exposes the frame disadvantageously to renewed disorder. And all these results flow from a neglect of the maxim, that *death comes only by the viscera*, and that too much care cannot therefore be observed in the treatment of them, when they are the seats of disorder. In acting upon this maxim, in the treatment of fever, it matters little whether inflammation of the abdominal viscera be considered the proximate cause of the disease, or as only occurring during its progress; a sneer at BROUSSAIS will scarcely arrest that progress when the parts in question have reached a certain degree of nervous and circulatory derangement; nor will it avail against the truth, that according to such derangement is the measure of danger or hope that attends the malady.

Whatever theoretical ideas I may hold con-

cerning the essential nature of fever, these statements and remarks are in no way linked with them: but are based on the actual observation of results in treatment. That similar observation has led not a few of the best of our British physicians to a much less active practice in fever is some confirmation of the truth of this assurance. Still, this activity is maintained by the greater number of practitioners in this country; whilst many of those who repudiate it, do so insufficiently, with a reservation that medicine must be given in smaller doses, though quite as frequently, and with the still besetting fear of being considered "inert" in their treatment. Such fear need not attach itself to the simple management of fever, which requires activity, although of a kind that is not mischievous, and which taxes the attendants of the patient rather than his own inner man: saving the latter at the expense of the former.

Amid the numerous shades of febrile action, it is only necessary, in this short treatise, to speak of the management of those which are of the most common occurrence, and are designated from some prominent symptoms, or series of symptoms. These will include the common in-

flammatory fever, the fever with adynamic symptoms, (typhus,) the fever with rheumatic pains, and the fever with remission, of children. The most intelligible manner of describing the treatment will be by the relation of cases, of which I have many recorded.

Treatment of Inflammatory Fever.

A gentleman, twenty-nine years of age, after much dining out and attendance at balls, was seized in June of last year with severe shiverings. Upon questioning him closely, he recalled the occurrence of frequent transitory sensations of cold flying about him, for a week or ten days previously. He also acknowledged, that latterly he had felt the want of the stimulus of wine more frequently, but that a small quantity sufficed to flush his face and fever his whole body. His sleep, also, had been less refreshing than formerly; and in the day there was considerable languor and distaste for exertion. These indications of disordered nerves and circulating function were converted into actual fever by exposure to the cool morning air on his way home from a ball, which he had quitted in a state of profuse perspiration.

In this case there were the usual signs of inflammatory fever: headache, suffused eyes, dry tongue, excessive thirst, hard, rapid pulse, torpid bowels, scanty urine, dry, hot skin, prostration of strength though the body was restless, sleeplessness, &c. The abdomen was sensitive on pressure, although to no great extent.

The patient being in bed, the room rendered obscure, and a portion of the windows opened to admit air; an enema of castor-oil and warm gruel was administered which caused an evacuation of hard and somewhat dark-coloured fæces. For the double purpose of quenching thirst, and acting upon the upper portion of the canal, small and frequently-repeated doses of carbonate of potass, with citric acid taken in an effervescing state, were given. As soon, however, as the enema had operated, and after two or three doses of the effervescing medicine, fomentation of the abdomen with flannels wrung out of boiling-water, and changed every five minutes, was assiduously practised during three hours. Two hours after this had been suspended the saline acted rather freely, and was discontinued for a few hours. Meanwhile, cold water and soda-water were permitted in quanti-

ties of two wine-glasses at once, and at intervals of twenty minutes or half an hour. The forehead and temples were wetted with Cologne-water, the evaporation of which was constantly encouraged by fanning. The face, hands, and feet, were sponged with tepid-water and carefully wiped, every two or three hours. As far as it was practicable, all noise was withdrawn, and the visits and conversation of friends forbidden. In the evening, when, as is usual, the febrile heat and restlessness somewhat augmented, the fomentation and saline draughts were recommenced, the former continued for three hours again, and the latter during the greater portion of the night. Almost before the fomentation was finished, the patient fell into a light sleep of between two and three hours, accompanied with some startings and other involuntary movements. During the rest of the night he only slept for short periods of ten minutes at once. There was no delirium, nor was the headache so intense as it had been on the previous morning. Before I saw him on the following day, the fomentation had, according to order, been again used, and the bowels and bladder been slightly relieved after it.

When I visited him on the second day, he was more quiet, but weaker: the tongue was a little more moist, but there was still great thirst: the pulse was softer, but still very rapid. I directed an enema to be given in the evening, when also the fomentation was to be repeated; cold drink to be given, with the same precautions; the saline now and then, as the patient might desire; and the directions touching the sponging of the extremities, face, and throat, to be followed. In taking drink, and in evacuating the contents of the bowels and bladder, I directed that he should be, as far as possible, passive: that he should not raise his head nor move a limb for any purpose.

Under this treatment, which was continued for eight days, with some slight variations as to time and mode of evacuating the bowels, as to the length of the fomentations, which sometimes induced fatigue, and were then immediately discontinued, and as to the fluids to be taken, which consisted sometimes of rice-water, barley-water, and occasionally of lemonade;—under this treatment the patient became daily more weak in his muscular power. But as this sign of diminished animal energy was conco-

mitant with others indicative of diminished excitement in the organs of vegetative life, and was, moreover, accompanied with less of restlessness and more of sleep, it became no subject for alarm or uneasiness. Occasionally, too, during the seventh and eighth day, patches of perspiration were observed on the forehead and chest after sleep. At the same time, the bowels acted so freely with the enema that it was directed to be made of warm gruel alone. Under these circumstances, on the ninth day I gave him minute doses of nitre with a few drops of ipecacuanha-wine, which soon began to act upon the skin and urine, augmenting the secretion of both. As thirst had almost entirely disappeared, and the tongue was much more clean, thin water-arrowroot was given in quantities of half a teacup-full every two or three hours, by which the action of the skin was maintained and its exhausting effects qualified. The fomentations were discontinued, the pulse, tongue, and bowels giving evidence of the cessation of irritative action in the viscera of the abdomen and chest. At this period, however, and for two days, the secretions from the bowels were more fœtid than they had been all through the

disease—an occurrence frequent enough in this kind of fever, but of good augury, as it is accompanied with a total clearing of the tongue and commencement of appetite for food. So rapidly did this last come on after the eleventh day from the attack, that as much watching and injunction was necessary during convalescence as during the fever. Small and frequently-repeated meals of milk-and-water arrowroot with toasted bread, then of chicken-broth thickened with rice, and subsequently of boiled chicken, enabled this patient to walk about his room in twenty days after the commencement of as severe an attack of inflammatory fever occurring in a young and full-blooded man as I remember to have seen. And why? His abdominal viscera were not damaged by medication; his animal nervous system was carefully withdrawn from irritation; both had as perfect rest as could be obtained; and thus they worked their own recovery.

Treatment of Typhoid Fever.

The subject of the case which I have chosen from many others was the manager of a wine

and spirit business, and, in that capacity, exposed to the temptations incident to such an avocation. In fact, his nerves, organic and cerebral, were maintained in a constant state of unnatural excitement by the stimulants in which he traded. It would be vain to endeavour to trace his symptoms immediately preceding the attack; during the space of nearly three years the sensations of sinking and depression consequent on previous stimulation were obviated by the renewal of the latter. In this state of combined irritation and exhaustion of the viscera of vegetative and animal life inevitable by one perpetrating such folly, the exciting causes of febrile disease were pretty certain to act with most vehement effect. Accordingly, after being prevented, by accidental circumstances, from getting to his bed one night, and being exposed on the top of a coach to the rawness of an early October morning last year, he was, with scarcely any preliminary shivering, struck down, as it were, by disease. Giddiness of head, prostration of strength, drowsiness, moist, flabby tongue, with fœtid breath, small and rapid pulse, intense heat without turgidity of the surface, left no room to doubt the disorganising

character of the fever with which he was seized.

Employing the same precautions with regard to light and air as in the last case, I directed the abdomen to be fomented continuously for five or six hours with two gallons of hot water containing four table-spoons of mustard-flour; and when the fomentation was finished, a linen rag soaked in a stimulating liniment to be kept applied on the abdomen. As these applications caused considerable redness of the skin, after the interval of a few hours a hot poultice of linseed-meal was placed over the whole body, in lieu of further fomentation, and was changed every three hours. The face, hands, and feet, were frequently sponged with warm water holding a small quantity of Cologne-water. Such was the external treatment during the first twenty-four hours of the fever. Meantime he had taken internally a laxative composed of infusion of rhubarb, infusion of cinnamon and manna; for in this species of fever the secretions of the digestive canal are highly disordered from the outset, and are to be removed regularly, but by the least irritating and exhausting means. This the above mild medicine, aided

by the fomentation, effected, so as to preclude the necessity for an enema, the administration of which is often fatiguing to a typhoid patient, but should nevertheless be used in preference to powerful purgatives by the mouth, should the bowels be obstinate—a circumstance, however, of rare occurrence. The other internal remedy directed was water containing ice, and given in small quantities as often as the patient required it. Frequently, in lieu of the water he took a lump of ice, and the gusto with which he crushed it between his teeth was highly illustrative of the intense fever of the stomach. In all that he did and took, his own powers were spared as much as possible. There is no more dangerous experiment in fever of this type than the attempt to sit in bed or on the chair, or sometimes even to raise the head. I have known two typhoid patients to die on the chair.

This treatment was persisted in for six days, with slight variation. If the skin of the abdomen was sore from the mustard fomentation one morning, simple water was used on the next morning. Each night the hot poultices were applied. And the dose of the laxative was regulated by the quantity of the excretion from

the bowels. During the second, third, and fourth nights, there was delirium, but not of a persistent kind; on those nights a poultice made of equal parts of mustard and wheaten-flour was applied to the nape of the neck and sides of the throat alternately. Throughout these six days it was necessary to urge the patient to the evacuation of small quantities of fœtid urine. No sordes collected on the gums and lips; and the tongue, though thickly covered with a brown, slimy mucus, remained tolerably moist. The pulse was fuller and slower during the fomentation, but became smaller again after the evacuation of the bowels.

On the seventh day, after a quiet night, the matter from the bowels assumed a much more healthy character and was somewhat too copious, producing considerable exhaustion. At the same time thin saliva was freely secreted; and some sweat, almost cold and rather glutinous, bedewed the surface. The pulse, too, was very feeble, though not excessively rapid. The brain, however, was clear, and the only complaint made by the patient was regarding his extreme weakness. Judging from all these signs that the system required aid in its efforts,

and that the debility present was direct, I prescribed a wine-glass of unboiled arrowroot,* containing a tea-spoonful of port-wine, to be taken every two hours. Six or seven doses of this had the effect of converting the cold and glutinous into warm and thin perspiration; the pulse took on some degree of power; and a sense of general comfort succeeded to the malaise and distressing sinking that had been complained of twelve hours previously. The bowels still tended to relaxation, but I deemed it better to support the system in the manner stated, than to check their action suddenly by opiates, which might cause dryness of tongue, and probably of the skin too. The fomentations, meanwhile, were discontinued, as was the laxative. The remainder of the treatment consisted in the careful administration of diet, sponging of the body with warm water daily, the free admission of light and air, and the continued rest of the limbs. It was not found necessary to give wine for more than forty-eight hours; after which the aliment rose gradually from liquid to

* When this article of diet is made by pouring hot water on the arrowroot, it is demulcent and astringent; made by actual boiling with the water, it is much less so.

solid farinaceous, and from these to animal. Although the fever, in this case, may be said to have terminated on the tenth or eleventh day, five weeks elapsed from the date of seizure before the patient was able to sit up for an hour or two at one time in bed, so disorganising is the process of typhus both to the solids and fluids of the body, especially when it takes place, as it most commonly does, in systems that have been deteriorated by mental distress, by continued excesses in any of the appetites, or, on the other hand, by deficient or bad food. For the rest, the convalescence in this case was steady, and except some tendency to constipation, which was obviated by a tea-spoonful of castor-oil, nothing presented to warrant interference.

Treatment of Fever with Rheumatic Pain.

A lady of forty years of age, whose appetite led her to eschew wholesome joints and to eat largely of stews and other dishes in which fatty matters and pepper were constant ingredients, and who under the operation of this diet became very stout, very bilious, and very irascible, was

seized, in the spring of last year, with severe rheumatic fever. I could never obtain any history that showed the exciting cause: the most usual one, as is well known, is the combination of cold and damp. To the ordinary signs of inflammatory fever were added, in this case, the symptoms of considerable disorder of the biliary organ: yellowness of the eyes, great bitterness of mouth, with a fevered and fiery-tipped tongue, yellow turbid urine, &c. There was also much tenderness over the region of the liver and pit of the stomach, and some nausea. The rheumatism was of the kind called "articular," and was more intense in the hands than feet.

The symptoms indicating acute inflammatory action in the stomach and liver, I first directed the application of eighteen leeches to the pit of the stomach, and then a poultice over the bites. A powerful enema of aloes dissolved in warm water, with an ounce of castor-oil, was next administered, and produced a copious purging of the lower bowel. The hands and feet meanwhile were wrapped in oil silk, and over that, with flannel. A small fire was kept in the room to render the temperature steady at about

65.° Cold water and soda-water were given frequently for beverage. Immediately after the leeching and enema I commenced giving her pills composed of rhubarb with minute doses of ipecacuanha, a combination that will be found to act upon the secretion of the liver quite as effectually as mercurials, and with less general irritation. Together with these, a mixture of solution of potass and camphor-julep was prescribed; for in this species of fever the perspiration, urine, and saliva, will be found invariably acid, and the use of alkalis beneficial after such indications.* All these means were put into practice in the first twenty-four hours, with slight alleviation of pain. The latter, however, being still severe on the second day, and the evidences of considerable visceral irritation persisting, the abdomen was fomented with mustard and water, as in the last case, for several hours: the purgative enema again used, and the other remedies continued. In the intervals of the fomentations a poultice of linseed-meal mixed

* This employment of alkalis, and the observation upon which it is founded, I derived a long time since from my learned and excellent friend, Dr. James Copland, whose name is sufficient guarantee for the correctness of both.

with laudanum and hot water was applied over the whole abdomen. Gradually the pulse gave way in strength, and as this proceeded, the articular pains began to relax in intensity, leaving one hand or foot for twelve or eighteen hours, and then returning with diminished amount, some other limb being then relieved. All this time the pained parts were maintained in a steady and high temperature by the oil-silk covering. The whole body perspired profusely; but this seldom brings substantial relief in rheumatic fever, in which the bowels or kidneys appear to be the chosen critical emunctories. This was exemplified in the present instance: for on the ninth day of the disease, the bowels pouring out large quantities of almost pure bile, the limbs were released from pain, as if the pressure of a tight hand had been removed from them, and the stiffness and numbness consequent on such constriction only left. In the meanwhile the acid character of the sweat and urine, of the former especially, had considerably altered. The urine was more copious, but still high-coloured and turbid. Short sleeps had been procured, probably by the endermic use of laudanum. The pulse, as well as the animal

power, was immensely reduced; for the whole nutriment during the time consisted in rice and barley-water. And, as the diarrhœa came on, the amount of perspiration diminished. I need not add, that on the appearance of diarrhœa all medicine was discontinued. Although the tongue had become much cleaner, no small degree of morbid redness pervaded it. When this is the case, craving for food often seizes the patient, and if it be gratified with strong aliment, relapse into pain is almost sure to follow. Mindful of this, I kept the patient an entire fortnight on liquid farinaceous diet. The limbs were rubbed with a flesh-brush twice a day and still detained in flannel covers, until the use of them was fully recovered; and the temperature of the room was regulated night and day. More or less gastric irritation continued for three weeks after the cessation of the rheumatism, and required constant care in regard to diet. There was also extension of this action to the mucous surface of the air-tubes—a frequent occurrence in rheumatic fever—and a loose cough troubled the patient for ten days. But as the stomach was more able to take animal food, and the general strength increased, this

diminished. The subject of this case has had no further attacks of the kind; but she has taken especial care of her digestive organs since the last one.

Treatment of the Remittent Fever of Children.

My patient in this troublesome complaint was a little girl of scrofulous diathesis, in her seventh year. As is usually the case, she seemed to slide into the disease, no one could tell how. She was an excellent subject for the simplest treatment, for no earthly power could induce her to swallow a particle of physic, save a certain syrup of senna and cinnamon, that is sold by some chemist in London, whose name I forget. Accordingly, when precautions regarding the rest of the body, the withdrawal of excitants from the external senses, and the temperature of the room had been adopted, it only remained to employ external remedies. An account of the treatment is, therefore, imperatively brief, although the disorder is, in most instances, a tediously prolonged one.

Fomentations of the abdomen with hot water for two or three hours night and morning were

practised. Sometimes, when there appeared more than ordinary depression and restlessness, decoction of poppyheads was substituted for water. And if extreme sense of fatigue was complained of, hot poultices were applied over the bowels in place of either, so as to avoid the slightest exertion.

The face, chest, hands, and feet, were gently washed with warm water night and morning. During the first week she took nothing but cold toast-water; after that, to avoid disgust, the beverage was changed frequently, and consisted of rice or barley-water, apple-tea, thin lemonade, tamarind-water, raspberry-vinegar and water, &c. The bowels during the first three weeks were torpid; to remedy which the only resource was in the syrup of senna alluded to, of which she took a teaspoonful in warm water every night or second night, as the case might be. Subsequently, they acted freely without urging, and even showed inclination to diarrhœa, towards the close of the disease.

Nothing else than the above was done during the five weeks of the malady. In the fourth week a troublesome cough, with expectoration, announced the extension of the mischief to the

bronchial membrane of the lungs. There was also occasional profuse perspiration. At this time the food was improved in quality, some chicken-broth being attempted; but within six hours after it was taken, the abdominal symptoms and burning fever returned, and warned us from hurrying matters. This partial relapse subsiding after a day or two, all treatment was abandoned except in the article of diet, which was carefully rendered more nutritious. The appetite was tolerably good, but nausea and restlessness ensued on taking more than a very small quantity at one time. All fever being dissipated, I hoped that as the system gained power from food the expectoration, which from its first appearance continued to augment in quantity, would diminish. This, however, did not take place; and, therefore, the patient, moreover, being a scrofulous subject, I advised a residence near the sea for a month or six weeks, by which time she had regained her usual health.

I have treated a great many cases of infantile remittent fever after the above plan, with the exception that instead of so irritating a laxative as senna, (which I was compelled to give in the above instance,) I have generally relieved the

lower bowel daily with an enema, and prescribed a tea-spoonful of castor-oil every second night. Where cough and expectoration are not added to the symptoms, I have generally directed minute quantities of wine in arrowroot to be given exactly at the point of time when the signs of direct debility indicative of the cessation of visceral inflammation, replace those of oppression concomitant with the latter state. For the rest, this kind of fever is, perhaps, of all that are known, the most prejudiced by the administration of active internal remedies: the rather as the viscera implicated are the irritable, delicate organs of very young persons.

Fever with Eruption, &c.

It would be useless to multiply the instances in illustration of the practice here advocated. The above will sufficiently demonstrate its chief features, in those febrile complaints wherein irritative and inflammatory action of the abdominal viscera, whether as a cause or concomitant, is present. When inflammation occurs in the enveloping membrane of those viscera, (peritonitis,) the simple treatment is equally

stringent regarding revulsion on the internal organs by medicine, but allows of great activity on the external surface, in the shape of extensive leeching and as much counteraction as can be produced. For the treatment of the nervous condition of the viscera in question, the reader is referred to my work on Nervousness hereinbefore alluded to.

The details into which I have entered in the relation of cases of fever render unnecessary any prolonged account of the application of simple treatment to those instances in which an eruption of the surface accompanies fever. In all these the great aim is the same—to spare the viscera. Variety in the type and intensity of the fever will, of course, regulate the remedial means; confluent small-pox, with low fever, demanding some difference of management from the distinct small-pox with inflammatory symptoms; scarlet fever, with one or other of these types of fever, requiring modifications of treatment accordingly; and so forth. According, also, to the viscera most palpably implicated there will be necessity for directing our applications. In scarlet fever, for instance, leeches, hot fomentations, poultices, and liniments to the

throat are more or less requisite. In measles, where the mucous lining of the pulmonary air-tubes is inflamed, similar remedies over the chest are indicated, together with the inspiration of moderately warm air. Whilst in small-pox, which presents the most vehement irritation of the internal and external mucous surfaces simultaneously, cold liquids to the former and cool air to the latter are most grateful to the patient and most applicable to his disease. As, however, this double and excessive irritation maintains the brain in a state of sleeplessness, opiate poultices to the pit of the stomach, or narcotic vapours applied to the nostrils, are generally required; and I have on several occasions found these beneficial, when the internal administration of opium has increased the febrile thirst and produced delirium rather than sleep. In other particulars, in the cleansing of the bowels, rather than the purging of them, and in the avoidance of the farrago of drugs that interfere with the natural progress of the disorder, under the plea of cooling, sweating, acting on the kidneys, altering the secretions, reducing the pulse, &c., the precepts of simple treatment are the same in these eruptive as in the ordinary fevers.

The judicious character of these precepts is more especially remarkable when the question of the sequelæ of eruptive fevers is presented. These sequelæ are the transferred irritations of the skin to some important viscus, or to the subcutaneous tissue. Reasoning *à priori*, it would be difficult to avoid the conclusion that viscera which have been made the field of artificial excitation during the concurrence of the external and internal irritation, should, upon the naturally fixed termination of the former, be in a less fit condition to resist, and even in a more likely state to receive, the transferred irritation in question. But experience will convince any one who is willing to observe, that the converse is the fact when the simple plan of treatment now recommended is put into practice. It would be alike foolish and dishonest to maintain that such transfer may not take place under *any* management; persons predisposed by feeble organization of the lungs may have tubercles developed therein after measles, however the disease be treated; and children with large, scrofulous brains may also be seized with dropsy of that organ after scarlet fever. Observing, however, the relative proportions of

these casualties under all circumstances of predisposition, and under the treatments of comparative expectancy and active medication, the result, in my experience, is decidedly favourable to the plan which interferes the least with the internal operations of the system.

As regards the dropsy of the subcutaneous tissue that occurs after scarlet fever, it is of minor consequence, and either dissipates with the advancing strength of the body, or is assisted in its dispersion by sponging with cool water, alternating with gentle, dry friction of the surface. A loose condition of the lower bowel, kept up for a few days by saline purgative enemas, also aids in the removal of this sequent of scarlet fever.

Teething Fever.

In this place may be mentioned the treatment of one of the visceral effects of which the process of teething is the cause. I allude to an inflammatory state of the digestive mucous membrane, unaccompanied with diarrhœa on one hand, and during which the brain is only

acted upon to the extent of producing great peevishness and restlessness, on the other. The natural heat is increased upon the whole, but varies; the pulse continues small, hard, and rapid; the thirst is insatiable; the tongue very red, but not much coated; there is more or less of thrush on it and on the lips; and the nutrition of the body seems to be arrested, for the child emaciates rapidly.

These symptoms sometimes remain after the gums have been relieved by scarification: as effects will not unfrequently do, even when their exciting cause has been removed. Certain it is that in the instance before us, it is necessary to treat the child so affected in the same manner as in the infantile fever with remission, with the addition of more frequent enemas of warm gruel and castor-oil, to cause revulsion from the head upon the lower bowel. The clay-coloured evacuations that accompany the teething fever present a great temptation to administer calomel or some other mercurial, and the temptation is too frequently yielded to, and the general irritation considerably increased. Remove that irritation from the internal organs by the means

before detailed, (not forgetting the restriction to bland liquids,) and the liver soon adds its bile to the excrementitious matters.

It is of the more consequence to deal speedily yet carefully with the disease before us, as, if it be allowed to persist for any length of time, or be exasperated by treatment, it terminates in a rickety condition of the skeleton, the first signs of which is the swelling of the joints and yielding of their ligaments; or lays the foundation of tubercular disease, to be afterwards fully developed after some eruptive disorder, or at the period of puberty.

Enough has been said to afford a general idea of the simple treatment applicable to cases in which the organs of vegetative life are principally concerned, and bound together by morbid sympathies. It will be perceived that the point constantly insisted on is the withdrawal of irritation from those organs, and the consequently diminished probability of its extension to the central organs of animal life. In fact, there is in them a power of self-restoration,

in aiding which the essence of rational and successful practice consists. Such aid is, in my opinion, to be afforded by the practice of revulsion upon the surface, by the careful but continuous removal of morbid secretions from the internal surface, and by the most complete state of quiescence that can be obtained for the organs of vegetative and animal life. The result of this treatment is to reduce the activity of those organs considerably below the standard of vitality they exhibited previous to and during disorder, which beginning with the debility of oppression, terminates with actual and direct weakness. And for the appreciation of the point where one ends and the other begins much and close observation is required. In typhoid fever, for instance, great tact is requisite in regulating the time for giving and the quantity to be given of stimulus, which, administered malopportunely or too freely, brings back the old symptoms of internal oppression. The same applies to the infantile remittent fever, where, as in typhoid fever, some greater stimulus than that of food is often required in the latter stages. It does not not so much apply to the other forms of fever treated of above, where the first oppres-

sion not being so great, the subsequent exhaustion is not so alarming.

The power of self-restoration alluded to is, as I have said, eminently possessed by the organs that minister to the digestion of food. This is evidenced daily in those who commit frequent excesses of diet that deprive them for a time of appetite, and engender febrile thirst; they eat nothing on the following day, dilute copiously, and are better. But should they attempt to force the stomach to digestion by stimulants, both these and the food they take prevent the action of the self-restorative power; and a repetition of this process at length causes active disease. Success with treatment of this kind is also due to the power in question: the stomach rights itself in spite of the additional irritation, but, as may be readily conceived, the greater and longer the effort to do so.

Still, neither the power can be denied, nor its exercise under the most unfavourable circumstances. Doubtlessly it is in great measure owing to the fact that the digestive organs are withdrawn from the influence of the cerebro-spinal system more than other viscera of the same order. A greater curse than the sensation and

knowledge of the operations going on therein could scarcely have been imagined; nor could the latter be properly effected once in a hundred times, were the mind capable of active and constant interference—a fact but too well known to the wretched hypochondriac whose thoughts are ever bent upon the acts of his digestive organs. Moreover, as the office of the organs of animal life is periodically suspended in sleep, it was necessary for the maintenance of the individual that some portion of the organism should be endowed with the faculty of unceasing sensation and action. Such faculty, which implies also the power of self-restoration, is possessed by the nervous system of vegetative life, and, as I have already said, eminently so by the digestive apparatus. Hence the rationality of the practice, which consists in the removal of irritation from these, and the abandonment of the restorative process to their own inherent faculties.

These observations, which flow from the subject of disease wherein the morbid symptoms of the abdominal viscera are the prominent indications for treatment, also lead to the subject of disease wherein the other organs of vegetative life, those of the chest, afford similar indications.

And I accordingly proceed to mention the general features in the treatment of diseases of the thoracic viscera.

Treatment of Diseases of the Chest.

In the earlier part of the present chapter it was stated that the respiratory function of the lungs differed from that of the other organs of vegetative life in being, to a certain degree, subjected to the influence of the will. This physiological fact is explained by the anatomical one of the more direct and frequent communication of the lungs with the brain and spinal cord by means of nerves proceeding from the latter parts. Upon this are also founded the modifications of respiration that are effected by mental affections—the laughter of joy and the sigh of grief.

But besides the muscular act of respiration, the lungs own to the important function of sanguification—a function which constitutes a veritable digestion of the inspired atmospheric air, without the due performance of which the other offices of the body speedily suffer. This is more

particularly the case with regard to the brain, which very quickly recognizes any impediment to the proper access of air to the pulmonary substance. Hence the instinctive and violent efforts that are made to overcome such impediment, either by quickening the respiration, as in inflammatory affections of the lungs, or by deepening it, as in some of their spasmodic diseases. Add to this the anxiety of countenance and restlessness of the trunk and limbs that accompany the pulmonary condition in question, and we cannot fail to acknowledge the very close sympathy between the lungs and brain.

In fact, the continuance of animal life is at stake. If the black blood coming to the lungs be not changed into scarlet blood, adapted for vivifying the substance of the brain and spinal cord, their functions cease, the animal dies; and the vegetative being soon follows. In some diseases of the lungs this happens so speedily as to preclude all treatment—in excessive pulmonary hæmorrhage, for instance. In other cases, as in inflammatory croup, in acute inflammation of the larynx, or of the spongy tissue of the lungs, a few hours only are sometimes given in

which to act, the air-tubes or the air-cells being in that time impervious to the atmosphere.

Now, as the preservation of animal life is the object of medical treatment, it clearly appears that in many pulmonary complaints, particularly those of an acute character, the expectant plan is utterly inapplicable. More directly and closely connected with the brain, the lungs do not possess, to the same amount, that faculty of self-restoration which has been observed to exist in the abdominal viscera, and which is due to their comparative isolation. On the other hand, any treatment which excessively reduces the muscular power may be so far prejudicial as to diminish the capability of the muscles of respiration to perform those extraordinary movements that are often demanded to compensate for the pulmonary impediment to the access of air. Meanwhile, the direct application of remedies to the lungs is impracticable, save in the shape of vapours, the inhalation of which is generally more fatiguing than beneficial to them. So that revulsion on other internal organs, or on the external surface, is the only treatment that can be acted upon in the great majority of lung diseases.

Yet although revulsive treatment is necessary, the maxim of sparing the viscera should still be in the mind. Whilst to ward off the imminent danger of animal life, we operate on internal parts which do not so immediately compromise existence, some reference should be had to the future condition of those parts. And whilst, for a similar purpose, we draw blood from the system, some consideration should be bestowed on the consequent dilapidation and means of restoration of that system. In short, we should have judgment in our activity, nor hold, that because a thing is good, its abuse is right.

To enter into some details. Bloodletting from the arm is the revulsive measure first employed in acute pulmonary disease. In this, as in many other cases in which it is practised, it should be remembered that to relieve a local disorder we are draining the entire system: in attacking that disorder, we are giving a shock to the whole organism. It should further be held in mind, that in a system so drained, an extreme degree of organic sensitiveness to, and feebleness in resisting, morbid causes, is generated, and lays the patient open to the chances of

relapse. Lastly, it should not be forgotten that muscular power is required in the morbid respiratory efforts attendant on lung disease, for which a certain amount of blood in the system is demanded. These considerations, as well as those of age and sex, should always accompany the determination to draw blood generally, in the diseases now under review. To them may be added a general rule, that venæsection is more adapted to the acute inflammations of the coverings than to that of the lining membrane of the lungs—to pleurisy, than to pneumonia—and to the latter more than to bronchial inflammation. In acute inflammation of the larynx, and in croup, it is hurtful by the diminution of power it causes. In chronic pulmonary disease it is also wholly inapplicable.

Revulsion practised in the stomach is the next remedy in these disorders. The agents used for this purpose are emetic medicines, which of late years have been given very largely in inflammation both of the substance and the air-tubes of the lungs. They are, in fact, counter-irritants, subduing the inflammatory state of the lungs by exciting a similar state in the stomach. That some discretion in this process

is requisite must be allowed, when we recal that a new disease is thus artificially raised in an important organ, and remains for subsequent treatment, when the immediate danger to animal life is past. Indeed, the practice is only legitimate on the ground that the abdominal organs do not so speedily involve that life, and have in themselves more of the self-restorative faculty than the lungs. Hence it should only be employed when these last are acutely diseased; and then also with a reference to the ensuing muscular debility. The contrary is too often the case; we even see vomiting excited for no other purpose than to hasten expectoration, when there is already sufficient muscular power to effect it less speedily; and we see it used for the same purpose even in chronic bronchial inflammation. This is, to say the least of it, unnecessary.

Venæsection and emetics having succeeded in reducing the acute inflammatory process, a congestive state ofttimes persists, accompanied with enormous secretion in the air-tubes. To arrest this, another phase of irritation is set up in the stomach by calomel, and is frequently successful to the end proposed. The bronchial

inflammation of the aged is thus treated. I confess to have seen equal benefit derived from the stimulation of the stomach by certain remedies of a less objectionable character than calomel, and among these I would more particularly recommend the Senega root.

But so far as my observation goes, these remedies of blood-letting and vomiting are too indiscriminately employed, both as to the extent to which they are pushed and the cases to which they are applied. The expression, "inflammation of the lungs," appears to be inseparably connected with excessive bleedings and long-continued nausea and emesis. This prestige seems to exclude the considerations that have been recited in the preceding paragraphs; and the consequences are frequently the congestive state with exhausting expectoration, the annihilation of muscular power, a more or less tedious gastric irritation, and an extreme sensitiveness of the lungs and the entire system connected with this triple result of violent treatment. It is a repetition of the error that was signalised with regard to fever with rheumatic pain; organic results of a tedious and somewhat permanent character are the

sacrifice paid for a few hours less of animal pain—a sacrifice that speaks not in favour of the philosophy either of the patient or the physician.

Very much of this may be avoided by a better regulated and more determined plan of external revulsion. Blistering, I am aware, is invariably practised; but it is not invariably desirable. The pain it causes when the ribs are expanded in inspiration forces many patients, children especially, instinctively to curtail the already shortened breathing, and thus to increase the congestion of the lungs and the mischief arising from the imperfect exposure of the blood to the atmospheric air. For this practice should be substituted a copious bleeding of the chest by leeches, applied, according to circumstances of age and intensity, in numbers from two to three or four dozen. To these should succeed fomentation of the chest with flannels wrung out of a boiling decoction of poppy-heads, and persevered in for many hours together. After this, flannels well sprinkled with hot stimulating liniment should be assiduously kept to the front and sides of the chest; and then alternated with the fomentation; so that a

a constant revulsion on the surface may be maintained. On this plan I have treated many cases of pleurisy and inflammation of the lungs successfully, without an attempt to draw blood from a vein. It is true that emetic remedies were given at the same time, and, I doubt not, were eminently useful; but they who are in the habit of administering ten-grain doses of tartar-emetic in these complaints will be astonished to learn that, with these outward means perseveringly applied, the frequent repetition of a quarter of a grain answers an equally good end. At the same time, also, every care was taken regarding the temperature of the room, the position of the patient, the use of the lungs in talking, and so forth. Dilution with bland, warm fluids was prescribed, and the bowels were relieved by castor-oil when required; although, in most instances, the emetic medicines sufficiently perform that office. It will be fonnd, in this instance, as in most others of simple treatment, that it is not "inert;" they who so term it must be hard to please on the score of activity.

If it be doubted whether it is safe to dispense with venæsection in these inflammations, let it

be remembered how seldom it is practised on infants, in whom their progress is generally so alarmingly rapid, and who, notwithstanding, recover in proportions not less great than adults. Nevertheless, I am not prepared to assert its inutility in these last: I only maintain that it is not invariably necessary; that on the mention of these complaints it is not always necessary to whip out a lancet, and that when it is so, various considerations beyond the mere abstraction of blood should be attached to it, and regulate its employment.

In inflammatory croup and acute inflammation of the larynx, the revulsion on the stomach by means of emetics and mercurials is admissible, the diseases placing animal life in great and imminent danger. Topical bleedings and stimulating fomentations incessantly applied over the windpipe and chest (for bronchial inflammation usually accompanies the maladies in question) should be added. Venæsection, as already stated, is not safe, inasmuch as it lowers the muscular power. Blisters over the throat are seldom of any use. The inspired air should be cool rather than warm; and rest of body should be observed as much as possible.

Spitting of blood, and its most violent form, denominated by LAENNEC pulmonary apoplexy, pre-suppose inflammation and induration of a portion of the lungs, the presence of tubercles, or diseased heart,—substantial causes developing a symptom that may be fatal in a few minutes, hours, or days. Activity of practice here becomes imperative, and venæsection is found to operate the most effectual revulsion; although large and suddenly-abstracted quantities of blood do not prove so successful as small and frequently-repeated bleedings. This practice, revived of late years by DR. CHEYNE,* originated with ARETÆUS. (See p. 79.) Vomiting is to be deprecated, and the minute doses of tartar-emetic recommended for inflamed lungs are more effectual and less dangerous. To these, external irritants should be added. But all these means are of small avail if the most complete rest of limbs and of the organs of respiration and speech be not maintained. The patient should be enjoined not to raise his head, use his arms, or turn in bed, without assistance; he should not speak, even in a whisper, beyond the monosyllabical reply to questions concerning

* Dublin Hospital Reports, vol. v. p. 351. Dublin, 1830.

his wants. The air of the room should be kept at a cool temperature. Cold drinks in small quantities should be given; and if the nauseating remedies do not relax the bowels, saline medicines may be given for the purpose; but strong purgation, necessitating frequent movement of the body, is hurtful. In short, rest of all the muscles and of the diseased organs, with revulsion from them on the external surface and to some extent on the digestive surface, constitute the simple treatment, in contradistinction to the series of astringent and styptic agents that form the staple of so many prescriptions for this malady, and are deemed sufficient without the aid of regimen.

Chronic disorders of the lungs are connected with pathological states far too numerous to be mentioned in this treatise. In the treatment of all of them, however, there are leading rules which tend towards simple practice.

The first is quietude of the morbid organs and of the general muscular system: a contrary condition quickening the action of the heart and increasing the congestion of the lungs. This applies whether the air-tubes or the air-cells be in fault, whether the disorder is con-

nected with tubercular deposit or heart disease, whether it be an extension of mischief from the digestive surfaces, or a lapse from an acute inflammatory state of the lungs themselves.

The next rule refers to the kind of air to be applied to the lungs. Air of a warm degree of temperature is most beneficial in the majority of instances where the lungs are alone involved; for then it is desirable to reduce their blood-making function to the smallest amount of exertion compatible with the healthy office of the brain. But where their morbid state is allied with that of other viscera, with the stomach and brain, for instance, after fevers and in asthma, a nervous condition obtains in them which demands the tonic stimulus of cool or even cold air. After the exhausting effects of febrile complaints, this would seem to be connected with the wants of the system with regard to the renovation of the blood: the appetite of the lungs working with that of the stomach towards this end. In these cases change of temperature is also frequently useful: in the former cases steadiness of temperature is more generally to be desired. In both, observation must determine the nice shades of disorder to be treated, and

some of the acumen so lavishly bestowed on the invention of medicinal remedies would be well expended on this hygienic point.

The third rule is to keep the skin in a state of activity both as regards its secretion of cuticle and its excretion of the matters of transpiration. Attention to appropriate clothing, the employment of dry friction over the whole body, and of rubefacients over the chest, are included in this rule.

The fourth rule is to withdraw other viscera, the stomach and brain especially, from causes of irritation. The lungs being the weak point, this irritation plays most upon them. Improper or excessive food and strong drinks exasperate the chronic disorder in them. Hence, also, emetic medicines do more harm than good in this state; and whilst the regular removal of matters from the bowels is required by this rule, any purgation beyond that is contra-indicated. Passions of the mind, or the prolonged labour of its intellectual faculties, affect the lungs both directly and by the intermedium of the heart and stomach, and should therefore be avoided as much as possible.

The fifth rule is to avoid general bloodletting,

than which there is no more disastrous practice in the purely chronic diseases of the lungs. It is true that in the progress of some of them it is sometimes useful, but this is only when an acute inflammation of a limited character is excited by accidental circumstances, and, occurring in a part strongly predisposed, requires rapid derivation.

The sixth rule refers to the administration of opiate remedies. These should, in the first place, be applied in the form of liniment rubbed on the front, sides, and back of the chest, or of vapour inhaled, and thus applied directly to the irritated parts. It is generally well to combine these modes of administration; for, when chronic disease takes possession of the lungs, a state of irritability is generated in the external respiratory nerves, which assists in maintaining the internal mischief. Slight infusions of henbane, hemlock, or belladonna, are the best materials for inhalation: opium tending to cause exhausting sweating. If these fail to reduce the cough, it only remains to give narcotics by the stomach, which, however, should never be done in the first place, as they destroy appetite and add gastric disorder to that of the chest.

To obviate this as much as may be, they should be given with some light stimulant, such as the nitrous ether, or with effervescing salines. In any case or mode of application, opiates should only be considered as auxiliaries, which stupify the nervous irritation, but cannot remove the circulatory disorder.

These rules include the outline of simple treatment, which, it will be observed, excludes the endless cough mixtures, pills, and electuaries, that every old woman (*of either sex*) has in abundance for the benefit of friends and patients. No person can have chronic pulmonary disorder for any length of time without the supervention of some derangement of the stomach—a derangement that is assured and hastened by the opiate, emetic, acid, saccharine and oily matters, that constitute the greater number of the cough remedies alluded to. Proper aliment to the stomach, appropriately-tempered air to the lungs, and revulsion on the external surface, may safely be substituted for these devices of the pharmacopolist.

Disease of the heart, the other thoracic viscus, is either functional or structural. The *cure* of the latter is, in the great majority of instances,

impracticable; and its palliation is only to be expected from a treatment purely negative, as regards the viscera of vegetative and animal life, and by revulsion on the skin. It is true that, in dilatation of the heart, stimulation by animal food is indicated; but this pre-supposes appetite of the stomach, which, if it exist, renders such stimulation innocuous, and not liable to the definition of revulsion, since the stomach is only performing its usual office of digestion. But if there be no appetite, and the attempt is made to generate it by tonics and stimulants, the artificial and temporary vigour imparted to the heart will scarcely be found to compensate for the exhaustion that follows and the curative effort that is postponed, in the stomach. In this, as well as other structural morbid states of the heart, perfect rest of the body, and as far as practicable, of the mind, is the great indispensable; with it the fearful symptoms may be in some degree modified; without it the art of man is utterly powerless.

Not less stringent is the rule regarding quietude of animal life in the functional disorders of the heart and its appendages, whether these be symptomatic of derangement in the brain or ali-

mentary canal, or be dated from the affected organs themselves. The most ordinary form of symptomatic heart disease is *palpitation*, which is, for a length of time after its appearance, immediately due to the augmented stimulus applied to the cardiac nerves. Such stimulus proceeds from the brain, whose function is deranged by distressing trains of thought or frequently and inordinately excited passions, against which moral regimen can alone avail. Slow, and in some instances, intermittent irritation in the stomach, is the next most common cause of palpitation, the seat of the mischief being usually the left or the great sac of the organ. And here we often find complication with brain disorder, the process being much as follows:—Mental distress (that which attends family discord, has been statistically shown to be the most general form) operating in a sinister manner upon the whole apparatus of vegetative life, acts most vehemently on the stomach and heart, about which the largest amount of nervous matter is accumulated. Dyspepsia, with loss of appetite, soon ensues, to remedy which stimulants are taken both in the shape of aliment and medicine, the rather as the brain

obtains temporary relief from their action. The heart, meanwhile, sympathising originally with the brain, receives another amount of morbid stimulus from the stomach; and thus, placed as it were "between two fires," falls into a condition of tedious and sometimes irremediable nervousness. After a varying period of this, the circulatory and nutritive function of its substance becomes disordered: too much or too little muscular tissue is deposited, constituting active and passive enlargement; ossific matter is deposited in some of its outlets and valves, or its coverings pour out an unnatural quantity of liquid; organic disease and dropsy of the heart have succeeded to mere nervousness. I enter into these particulars in this place in order to insist upon the danger of tampering with the stomach by temporary expedients for relief in the early periods of dyspepsia and palpitation connected with mental causes. If these causes are not removable, it certainly cannot better the chances of the heart to maintain excitement in the stomach by artificial means; if they are removable, the physician would be much better employed in aiding their removal

by the recommendation of hygienic means applicable to the functions of the brain.

But if not connected with mental causes, but with dyspepsia alone, palpitation of the heart is most safely treated by diet of a nutritious character, but small in bulk, by the avoidance of stimulating liquids or large quantities of any kind, by laxative enemas, and by revulsion on the surface generally, and over the stomach and heart particularly. I have frequently seen benefit derived from the application of a single leech over the region of the heart two or three times a week, and the daily employment of stimulating liniment on the same part.

Nervous palpitation also acknowledges for causes constipation of the bowels, the presence of worms therein, and obstructed function of the womb. Experience shows that in all these cases the most simple is the most effectual treatment; and this consists in the administration of cathartic enemas, of a more powerful character than are commonly given: consisting of solution of aloes, infusions of senna and jalap with turpentine, and so forth. If it is accompanied with excessive menstruation, opiate lini-

ments over the region of the womb, cold drinks, and the recumbent posture, are indicated.

During the rapid growth of the body, and its transition from childhood to puberty, nervous palpitation is very usual. Against this there is no remedy but rest of limb, whenever it supervenes. In fact, as regards the treatment of palpitation from many causes, but with an exception as regards its connexion with chronic irritation of the stomach, the observation of HEBERDEN in his Commentaries is peculiarly applicable: "Aut nullam medicinam postulat, aut omnem vincit."

Inflammation of the coverings of the heart is a formidable malady, against which extreme remedies are demanded, speedily involving, as it does, the apparatus of animal life in danger. Accordingly, revulsion by copious blood-letting from the arm is practised with the best hope of success. In this practice the principle of "sparing the viscera" is shown to be eminently judicious; for the blood drawn from the arm would have gone onward to stimulate and maintain the morbid function of the diseased heart, to which the loss of the blood ensures, *pro tanto*, a state of rest. This is more especially the case

when the disease is idiopathic, and when it is a transferred rheumatic inflammation. In gouty inflammation there is a mixture of nervous and circulating disorder that does not allow of such copious general blood-letting as in the former instances, but requires immediate and extreme revulsion on the region of the heart in the shape of cupping, and counter-irritation with ammonia and other quickly-acting stimulants. In any of these cases, however, revulsion on the surface over the heart is strongly indicated, and, in gout, to the previously-diseased joints as well.*

* Much has been said, of late years, of the transfer of rheumatic inflammation of the limbs to the fibrous membranes of the heart and brain. Like all occurrences that are lengthily insisted upon in voluminous works written for the purpose of proving them, it is highly probable that the metastasis in point is less frequent than is supposed. I am led to make this remark from the fact that out of a vast number of cases of rheumatism of the limbs which I have treated and seen treated, I can only testify to seven or eight in which there was actual and indisputable ground for asserting such transfer, for which, meanwhile, I was looking, and against which I was, in my own practice, prepared to act. An instance of the transfer to the heart was shown to me a few months back by a brother practitioner. There certainly was pain, palpitation, &c., of the heart; but as the patient had been and was then taking large doses of mercury and colchicum, I ventured to suggest

Treatment of Brain Disease.

The character of this treatise precludes the possibility of entering, otherwise than in the most general manner, into the very serious and complicated subject of cerebral disorder and its treatment. It is serious, inasmuch as animal life is immediately assailed; and complicated, inasmuch as by the wide-spreading and acute sympathies of the affected organ, the viscera of vegetative life are more or less involved in, and, in some instances, maintain, its disease. Reference to these sympathies thus becomes necessary, and a few words in elucidation of them may render the process of treatment more clear in individual cases.

The brain is connected with the other viscera by the nervous matter of vegetative life and by

the cessation of these and the application of mustard fomentation over the pit of the stomach, whereby the heart was soon freed from pain, though it continued to be very irritable. The medicines, in fact, had produced sympathetic irritation of the heart; and this I believe to be often the only transfer that occurs. It may, however, predispose the heart to the actual metastasis; and in such case, presents another practical argument against violent medication of the viscera in rheumatism.

its own nerves. The former of these is held to be present, and to regulate the circulation of blood in every part of the system. In this view the circulation going on in the organs of the chest and abdomen sympathises with that in the brain, and *vice versâ*. It is an organic sympathy, and continues when the phænomena of animal life are suspended in sleep, as well as in waking hours: for circulation of blood in the brain goes on in both states. By virtue of this sympathy it is that the function of the brain is modified by the ingestion of aliment, and that the functions of the stomach are modified by the circulatory condition of the brain. The same applies to all the viscera of vegetative life, though in degrees of activity varying with the concentration of nervous matter in their tissue.

As, however, the brain is the agent of all animal movements, and in this capacity stands between the viscera of vegetative life and the voluntary muscles, another mode of sympathetic union exists for the purpose. This is effected by the nervous branches composed of matter similar to that of the brain substance, and proceeding thence to the organs of the chest and abdomen. Through the medium of these nerves

certain conditions of the last-named parts are made appreciable to the brain, and thereby induce certain voluntary movements. In this manner the presence of black blood in the lungs begets the act of inspiration which changes it: hunger in the stomach is made known to the brain, and leads to its gratification; the presence of excrementitious matter in the bowels excites the brain to acts that evacuate it, and so forth. On the other hand, the various operations of the mind, and more especially the passions and instincts, communicate their stimulus to the vegetative functions through the medium of the same nerves. This may be termed an animal sympathy, since it is exercised for the purpose of generating animal acts, on one side, and communicating the stimulus of animal sensations, on the other.

But as we know of no modification of function without modification of the blood circulation, so in both these modes of sympathetic communication reference is to be made to the state of the circulation in the brain and in the viscera of vegetative life. During the process of healthy digestion of moderate food, and for some time afterwards, the circulation in the

stomach is of a character which only maintains the organic sympathy between itself and that of the brain; no animal sensation is aroused, and the nerves of vegetative life are alone in play. But when the circulation in the stomach becomes of a kind coincident with great hunger, it begets an animal sensation; and the nerves of animal life convey the impression from the stomach to the brain. The same applies whenever liquid stimulants, improper or exceeding food, or impeded digestion, are felt—whenever, in short, an irritation is present in the stomach. And the like may be said of the other vegetative viscera, although they are not so closely allied with, nor so much affect, the brain, as the last-named organ. Disease of the brain may be only an extension of the disorder in more or fewer of them. In this manner the constant stream of unusual stimulus from the irritated viscus, the stomach especially, towards the brain, causes an afflux of blood towards the latter, which, according to circumstances of age, sex, temperament, &c., is evinced in acute or chronic inflammation, atonic congestion, apoplectic fulness, hypochondriasis, or insanity.

When the mischief begins in the brain itself,

it fails not to use the same sympathies in making an impression upon the organs of vegetative life. And this is done with various degrees of rapidity and intensity, from the apoplectic seizure which

> "The knot intrinsecate
> Of life at once unties,"—

annihilating every vital phænomenon in half an hour, to the slowly disorganising action which paralyses one limb after another, and at last, the muscles of respiration. Either of these results, however, is connected with a chronic inflammation of the brain substance. But besides this, acute and chronic inflammation of its membranes may take a beginning in the head, in consequence of excess of mental action, of insolation, or physical violence.

Thus, brain disease may be the extension of mischief from the vegetative viscera, or it may commence within the skull, and sympathetically affect the last; it may be in the membranes or substance; and it may be acute or chronic. Further, it may be stated as a general rule that the acute inflammation is of the membranes, begins in the brain, and terminates in effusion on

that organ, and stupor. The chronic inflammation is generally in the substance of the brain, is the result of digestive derangement, and terminates in disorganisation of the brain, effusion of blood in its substance, and stupor. Both of these rules, however, have their exceptions: for instance, chronic inflammation of the membranes is found in water in the head; and apoplectic stupor sometimes results from suddenly-impeded circulation in the brain substance, without any effusion of blood into it.

The great questions as regards the treatment of brain disease are, whether it is acute or chronic, whether it originated from causes applied to the brain, or is consequent on other visceral disorder, and how far the sympathy between the brain and the vegetative viscera is excited?

In acute inflammation taking its origin in the membranes of the brain, the indications of the sympathy in question are shown by vomiting, great thirst, constipation, very rapid and hard pulse, &c., whilst the signs of any considerable lesion there are wanting. Moreover, it is almost invariably accompanied with general sanguineous fulness and vigour. Under these circum-

stances, and taking into account that, if left to itself, the inflammation will terminate in effusion, revulsion in every shape is allowable in this formidable state of the brain. But it is not well to trust to copious general bleeding, which acts by diminishing the quantity of blood sent to the head, but does not withdraw that already congested in the membranes. Its effect should be aided by local derivation, by leeching, cupping, blistering, ice-cold applications, &c., which, as is well known in children, are often found to be sufficient. Purgation of the alimentary canal is also called for, and should be effected by substances that cause a copious flow of mucus from its surface. Whilst this depletion is going on, the irritating stimulus of mercury is often applied beneficially to aid the congested vessels in ridding themselves of their load of blood; although this is not unfrequently done as a matter of course, and without sufficient inquiry into the necessity of the case. For though the gastric irritation thus excited is a matter of secondary consideration when the brain is acutely inflamed, it is not the part of a physician any more than of a logician to prove too much. I have seen *excessive* gastric irritation caused by

mercury keep up a chronic irritation of the cerebral membranes after the various means employed had prevented effusion in the acute stage. Very small and often-repeated doses of mercury, the effect of which should be frequently looked into by the attendant, constitute the best mode of exciting the counteraction in the stomach and bowels that is to assist the depletory means alluded to. Revulsion on the limbs is much practised and cannot harm: but it is not to be trusted so much as that on the throat and scalp, after sanguineous depletion.

When the signs that effusion has taken place are present, the revulsion on the stomach and bowels can scarcely be pushed too far, so imminent is the danger of the palsy of the animal nervous system extending to that of vegetative life. Antispasmodic stimulants are joined with irritating purgatives for the purpose of maintaining the functions of respiration and circulation, of stimulating the gorged vessels of the cerebral membranes, and of thus affording some time and opportunity for the absorption of the effused fluid, or the adaptation of the brain substance to its presence.

This adaptation of the brain to the presence

of fluid on its surfaces is well exemplified in the chronic form of inflamed cerebral membranes with effusion—chronic water in the head, as it is named. The power of adaptation is limited by the quantity of the fluid and the suddenness of its effusion: a large and very rapid secretion being liable to extinguish life. In chronic water in the head, however, an enormous quantity may accumulate slowly, with only now and then a passing convulsion or temporary stupor indicative of a fresh outpouring from the membranes. At such periods it is of course necessary to use depletory measures and to produce revulsion on the digestive canal to an amount to be regulated by the urgency of the brain symptoms. But when the brain has recovered itself, it appears to sympathise with the vegetative viscera in a normal manner, for these perform their functions with tolerable regularity, the bowels excepted, which are torpid, perhaps as much in consequence of the necessary inaction of the whole frame as from any morbid influence derived from the brain. Hence very great activity of treatment is as likely to do harm as good, the rather as the disease usually occurs in children of feeble, scrofulous organization. The chief point

is to withdraw the brain as much as possible from external and internal irritations, these consisting in improper diet and those in excitants applied to the external senses and the mind.

The chronic form of inflammation of the cerebral membranes in adults, signalised by sleeplessness, more or less confusion of thought, irregular action of the heart, lungs, and digestive organs, alternate cold and heat of the skin, &c., is most efficaciously treated by repeated cupping at the nape of the neck, cold to the scalp, and continuous relaxation of the bowels. Mercury is more likely to induce acute inflammation than to relieve the congestive state of the membranes which constitutes the pathological essence of this malady. Revulsion on the internal and external surfaces, practised steadily but not urged to excess, is the plan indicated by all the symptoms.

Disease of the brain substance is most commonly seen in a chronic character, either inflammatory or only congestive. Chronic inflammation of the substance of the brain is attended with considerable functional disorder of the viscera of vegetative life, which re-act upon the brain and render the treatment com-

plicated. Not only this: too rapid or too great withdrawal of blood is apt in such cases to hasten one of the terminations of the malady, namely, apoplectic seizure. Very close observation added to natural tact can alone determine the time for the employment of revulsion on the abdominal viscera, and in the shape of blood-letting, in individual cases. But as general rules, the following will, I believe, be found correct in practice.

In drawing blood, leeching is preferable to cupping, and this to venæsection; and it is better to bleed frequently than largely. Purging should be effected by remedies which act upon the lower and small bowels, such as aloes and scammony: saline purgatives are not desirable. Counteraction on the skin should be practised about the throat, and over the abdomen also, particularly the pit of the stomach. Small and frequently repeated blisters behind the ears and on the nape of the neck, and frequent mustard poultices or ammoniacal liniments to the pit of the stomach, are the means to this end. Rest of the brain, as far as is practicable, is essential. How far rest of the stomach may be carried is a very nice point

to settle in this malady; over-stimulated, it ensures a further influx of blood to the head; deprived of food, when there is appetite, it becomes irritable, and in this state morbid sympathy with the brain is increased. Vegetable diet is perhaps the best middle path to choose, if the stomach craves for food, as it often does in this disease, to a very distressing degree.

In the course of this chronic inflammation of the brain substance, it sometimes happens that some temporary impediment to the free return of blood from the head induces immediate compression and apoplectic seizure without the outpouring of blood. If very sudden and considerable, this pressure annihilates the functions of vegetative life. At other times, the inflammation has caused disorganization at some particular spot in the brain where the blood-vessels break down and pour out their contents more or less suddenly, causing total apoplexy or palsy of a portion of the body. This may happen several times, the brain recovering from the pressure altogether, or this last leaving its mark in the shape of paralysis, until one effusion, more extensive than the former, or because it occurs in a previously assaulted organ,

stops at once the phænomena of animal and vegetative life. In all these instances revulsion is necessary, but the amount and species of it, how and in what quantity blood should be drawn, whether some stimulation of the stomach is not demanded, are measures of detail which the individual case, with its numerous considerations of age, temperament, exciting cause, &c., can alone determine. These should be attended to; for it is not always necessary to open a vein, or sometimes even to draw blood at all, whenever we behold a person lying on his back, insensible, breathing deeply, and so forth. An organic state, and not a name, is to be treated.

Among the phases of congestion of the brain substance a not unfrequent one is that to which the epithet "atonic" has been attached by Mr. WADE,* in a paper entitled "Observations on Atonic Congestion of the Brain." After a concise account of the symptoms indicative of this diseased condition, he, under the head of treatment, makes the following remarks, which are well worthy of repetition, and applicable to similar states of other organs, the lungs and serous membranes especially.

* Edinburgh Medical and Surgical Journal, vol. xliii. p. 332.

"I believe that many cases of atonic congestion of the brain are caused by profuse blood-letting, employed for the relief of inflammation of that organ. Before carrying venæsection to any great extent in the treatment of *phrenitis*, it would be well for us to consider whether temporary relief may not be procured at the expense of subsequent mischief. If blood-letting be carried to the production of syncope or faintness, it often happens that the pain attendant upon inflammation will be completely relieved for a short time; yet it will most probably return after the restoration of the heart's action, the essential part of the disease, the morbid sensibility, remaining, unless, indeed, the mischief be completely subdued at its commencement. Are we then again and again to resort to the same remedial means, until the vital source becomes so drained that to abstract a few ounces more blood might prove fatal? I doubt whether any degree of inflammation, in whatever organ it may occur, will justify such extreme depletion. It should be borne in mind that the capillaries of an inflamed part must soon become weakened by over-distension, and that congestion may intervene. To diminish

the morbid sensibility of an inflamed part is surely as much an object as to lessen the *vis a tergo* upon the distended capillaries. Although blood-letting, when judiciously employed for the cure of inflammation, is a powerful agent in allaying the excited state of the nervous system, yet, when used to excess, a general morbid susceptibility is induced, extremely favourable to the continuance of the disease in a low form, terminating most probably in effusion and congestion."

These judicious observations carry with them a moral that tells in the direction of acute inflammation of the brain, as well as the purely congestive state. They show that whilst reckless blood-letting from the system is by no means a certain cure for the former, it is likely to prove a cause of the latter, for which, therefore, it is inadmissible as a remedy. Revulsion on the nape of the neck by burning moxa is the treatment recommended by the author of the above extract. I have treated many such cases in young and middle-aged persons by mustard poultices on either side of the throat alternately. At the same time generous diet was prescribed, and above all, rest of the limbs, the exertion of

which increases the headache tenfold. Relaxation of the bowels is not generally required; but if it be, a combination of a tonic and gentle aperient is the safest dose: violent purgation exasperating the distress in the head.

Under the head of Cerebral Congestion may be mentioned the treatment of Drunkard's Brain Fever, of which I speak with considerable confidence, having had very numerous opportunities, from local circumstances, of testing various modes of managing it. It appears to me to be a state of congestion as regards the brain, and of excessive nervous irritation, with some mucous inflammation, as regards the organs of vegetative life, the morbid sympathies between both preventing the sleep of the brain, on the one hand, and deteriorating the secretory action of the abdominal viscera, and the muscular action of the heart, on the other. In treating the disease, I first administer a tolerably brisk cathartic combined with a stimulant in pill, the stomach nauseating and sometimes rejecting all liquids. Whilst this is *in transitu*, hot fomentations of mustard and water are applied over the abdomen for two or three hours, and repeated after intervals of the same time. After

the free action of the bowels, pills composed of opium and camphor, or, if the stomach is quiet, doses of laudanum with spirits of nitrous ether, are almost always certain to procure sleep after twelve or eighteen hours. During the period of taking these opiates the abdomen is fomented with hot water alone. I have never practised venæsection in this disease, being scared therefrom by the invariable mischief that attended its employment in the practice of a surgeon now no more, who obstinately adhered to it, notwithstanding the proportion of nine deaths out of ten cases it was his fortune to have. Sometimes I have found blistering the nape of the neck assist in procuring sleep. But the removal of irritation from the abdominal viscera is a most essential part of the treatment. This premised, comparatively small doses of opiates suffice; otherwise, enormous quantities are requisite, and stupor, with apoplectic fulness, constipated bowels, and dyspepsia, are found after the delirium has been dissipated by sleep.

The above constitute the principal conditions of the brain that accompany its functional disorders,—at least, that portion of them in which

symptoms are traceable to ascertained causes in the circulating apparatus. With regard to the functional nervous disorders which go by the names of Hysteria, Epilepsy, Catalepsy, Hydrophobia, &c., the organic states of the nervous system with which they coincide, are either so utterly unknown as to necessitate purely empirical practice, or consist in structural disease which cannot be removed, practise as we may, that the detail of the means which have been used against them would be a mere repetition of a large section of the medicines composing the Materia Medica—a design of which the readers of this book will readily acquit me. Neither can the extensive subject of Insanity be mooted in these contracted pages, except it be to allude to the infinitely more simple treatment applied to it in these days than obtained for so many preceding ages: a simplicity, meanwhile, that requires activity of mind and profundity of views, compared with which the former ideas on the subject were dark as the dungeons to which the patients were confined, and coarse as the medicinal treatment to which they were subjected.

General Conclusions regarding Simple Treatment.

The epithet "simple," which has been applied to the treatment of disease advocated in the preceding pages, has reference both to its details and the principles on which it is founded.

These principles are drawn from the human frame in the states of health and disease, are few and simple, yet are variously applicable.

The details deserve the epithet in question, because they flow from principles of the character indicated, because they are opposite to the system of complex medication, and because they follow in the wake of natural signals given by the diseased body.

With regard to the principles of practice, the following paragraphs contain a *resumé* of what has gone before.

Disease commences on the external surface, or skin; the internal surface, or viscera of vegetative life; or in the brain and spinal cord, the viscera of animal life.

Commencing on the external surface, it is

propagated to the internal and to the brain. Commencing in the internal surface, it is propagated to the external and to the brain. Or in the brain, to the viscera of vegetative life and the skin.

So long as disease commencing in the skin is not propagated beyond a certain degree to the viscera, life is not compromised.

So long as disease commencing in the viscera of the abdomen and chest is not propagated beyond a certain degree to the brain, life is not compromised.

So long as disease commencing in, or propagated to, the brain, does not re-act on the other viscera beyond a certain degree, life is not compromised.

Hence the axiom that "death comes only by the viscera."

The great aim of treatment, therefore, is to withdraw irritations from the viscera, and to save animal life.

The dependence of the abdominal viscera upon, and their connexion with, the brain, is not so great and immediate as those of the chest.

General febrile states, whether owing to in-

flammation or irritation of the abdominal mucous lining or not, certainly begin and disappear with them. The same applies to chronic diseases of that membrane. In preventing the propagation of these to the brain, the expectant treatment is applicable, for the reason given in the last paragraph. In the acute disorders of the coverings of the abdominal viscera, the propagation to the brain being more speedy, revulsion is more demanded.

The dependence of the thoracic viscera upon, and their connexion with, the brain, is more immediate than those of the abdomen. Revulsion on the latter is therefore necessary and proper in acute diseases of the chest. In its chronic disorder, revulsion on the external surface is more decidedly indicated.

Disease of the brain invariably operates on the viscera of the abdomen and chest. If acute, it requires active revulsion both on the internal and external surfaces. If chronic, the viscera of vegetative life becoming deeply affected and reacting upon the brain, revulsion on them is not so applicable as on the external surface.

In all disease, the end of treatment is to spare the viscera. When the abdominal viscera are

prominently disordered, they should be spared at the expense of the skin. When the viscera of the chest and the brain are the seats of disorder, they should be spared at the expense of the digestive organs and the skin.

These general principles may be met, I am well aware, by individual cases of disease to which they do not accurately apply in all particulars. But let me ask what rules of practice do so apply? The most that can be done in this respect is to combine the greatest simplicity with the most extensive applicability, to lay down rules which shall include the necessities of the morbid body and the safest mode of answering them by remedial means. And although these should fail to comprehend all possible instances, it is better far to be led by an imperfect code than to wander about carelessly, armed with, and eager to employ, the dangerous weapons which are to be found in the storehouse of medical remedies.

As regards the details of the simple treatment, it may be remarked that they all tend to relieve diseased organs by means of other and less immediately important parts.

Of the various modes of exciting the activity

of the skin, those which augment the transpiration of its fluids are most applicable to the acute disorders of the viscera of the abdomen and chest. In these, fomentations with hot water or opiate decoctions cannot be too much recommended. No anodyne whatever equals the soothing effects of fomentation of the abdomen in the various kinds of fever. Children almost always fall asleep during its employment, and adults acknowledge its power to subdue the restlessness that is so intolerable in some febrile cases. When the animal nervous system is considerably affected, as in typhoid fever, the quantity of blood drawn to the skin should be further increased by the addition of stimulating matters to the water for fomentation. The difficulty is to persuade the patient's attendants to persevere sufficiently in the use of this simple remedy;—it is too simple for the majority of nurses, and, moreover, renders their office somewhat more onerous.

Excitation of the skin by means of rubefacients, dry heat, and dry frictions, is more adapted to chronic disorders of the abdominal and thoracic viscera than are fomentations with hot fluids.

Powerful rubefacients, such as mustard plaster, and strong ammonia, and blisters, are more applicable to disorder of the head than of the vegetative viscera.

Simple treatment also lays considerable stress on the agreeable sensations of the skin, which are best attained by regulation of atmospheric temperature, sponging, washing, &c.

Cleansing of the bowels by lavements and very mild laxatives is demanded in the general febrile state and acute and chronic disease of the digestive canal. Drastic purging is requisite only in acute and pressing disorder of the head.

Emetic remedies to the amount of producing nausea are required in acute affections of the lungs, and in some, to the amount of causing vomiting. The purging that attends the use of emetics in lung disease is generally sufficient for the occasion.

Venæsection is appropriate in acute disorders of the heart, lungs, and head, but should always be practised with various considerations for the future as well as the present condition. It is inapplicable in chronic diseases.

Blood-letting by leeches is the best mode of

sanguineous depletion in acute disorders of the abdominal viscera, and may often be substituted for general bleeding in some pulmonary inflammations. Minute quantities of blood are beneficially abstracted by leeches in chronic inflammations of all the viscera, both of vegetative and animal life. Cupping is best employed against disorders of the head of an acute character, or when chronic disease there has produced effusion of blood and compression.

Of opiates the best are those which act by removing the cause of irritation, not masking it, and they will be found in some of the preceding means. Direct anodynes, internally administered, are only proper when the symptoms of nervous excitement at least equal those of the circulatory—a state that is most frequently seen in some chronic disorders of the lungs.

Quietude of the deranged viscus is requisite in all special diseases. And as in general febrile states all the viscera are more or less involved, this rule implies rest of the entire organism in fever.

Quietude of the muscular system is indispensable in all functional disorders of all the viscera, save the chronic dyspepsia which depends

on nervous more than circulatory derangement, such as that attendant on certain forms of hypochondriasis.

Stimulation is allowed only when, after a prolonged or severe febrile effort, the organic powers give indications of incapability to renew the rhythm of healthy function. It requires much care to appreciate these signs, and measure the amount of stimulus required. The necessity for stimulus depends materially on the previous treatment: the close observation of the two preceding rules obviating to a great extent the necessity in question.

The mind should be maintained as nearly as possible in a state of monotony in all acute complaints, and be diverted as much as possible from the contemplation of all chronic disorders of the body. To enable the patient to effect these, the reasoning rather than the prescribing powers of the physician are demanded.

Lastly, whatever the disease, the remedies are to be addressed to the pathological state which produces it—a morbid condition, and not a name, is to be treated.

Thus, although based on simple rules, and consisting chiefly of simple remedial means, the

treatment advanced in this work is not the result of superficial views. It congregates the facts of disease, and deals with them *en masse:* differing in this from the complex treatment which takes the facts in their isolated condition, and treats them *seriatim* as they appear—a process that requires but small ingenuity and no great degree of observation. This is a complex practice, preceded and accompanied by no complicated mental effort—it is the practice of mere routine. But simple treatment, flowing from a mental review of all the facts of disease, is not a process that can be effected in a slovenly manner: it calls the attention to every the most minute particular referring to the patient: it demands the exercise of tact in rendering the details of treatment, simple as they are, subservient to the unravelling of the knot of morbid signs; and especially does it suppose the exertion of the reasoning power upon, and that of obtaining the confidence of, the patient, when, according to its dictates, remedies that have no mysterious air and apparently insignificant, are relied on for the cure of severe disease. Simple treatment, in short, although easier to the patient, is the most laborious to the practi-

tioner: the latter must give all his energy of thought and attention, must sacrifice all the eclat which surrounds the multifarious prescriber of drugs in the eyes of the uninstructed, to the means by which the former may be most easily rescued from the present malady, and most certainly protected from its devastating consequences.

THE END.

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