

An essay on the medicinal efficacy and employment of the Bath waters illustrated by remarks on the physiology and pathology of the animal frame with reference to the treatment of gout, rheumatism, palsy and eruptive diseases / [Edward Barlow].

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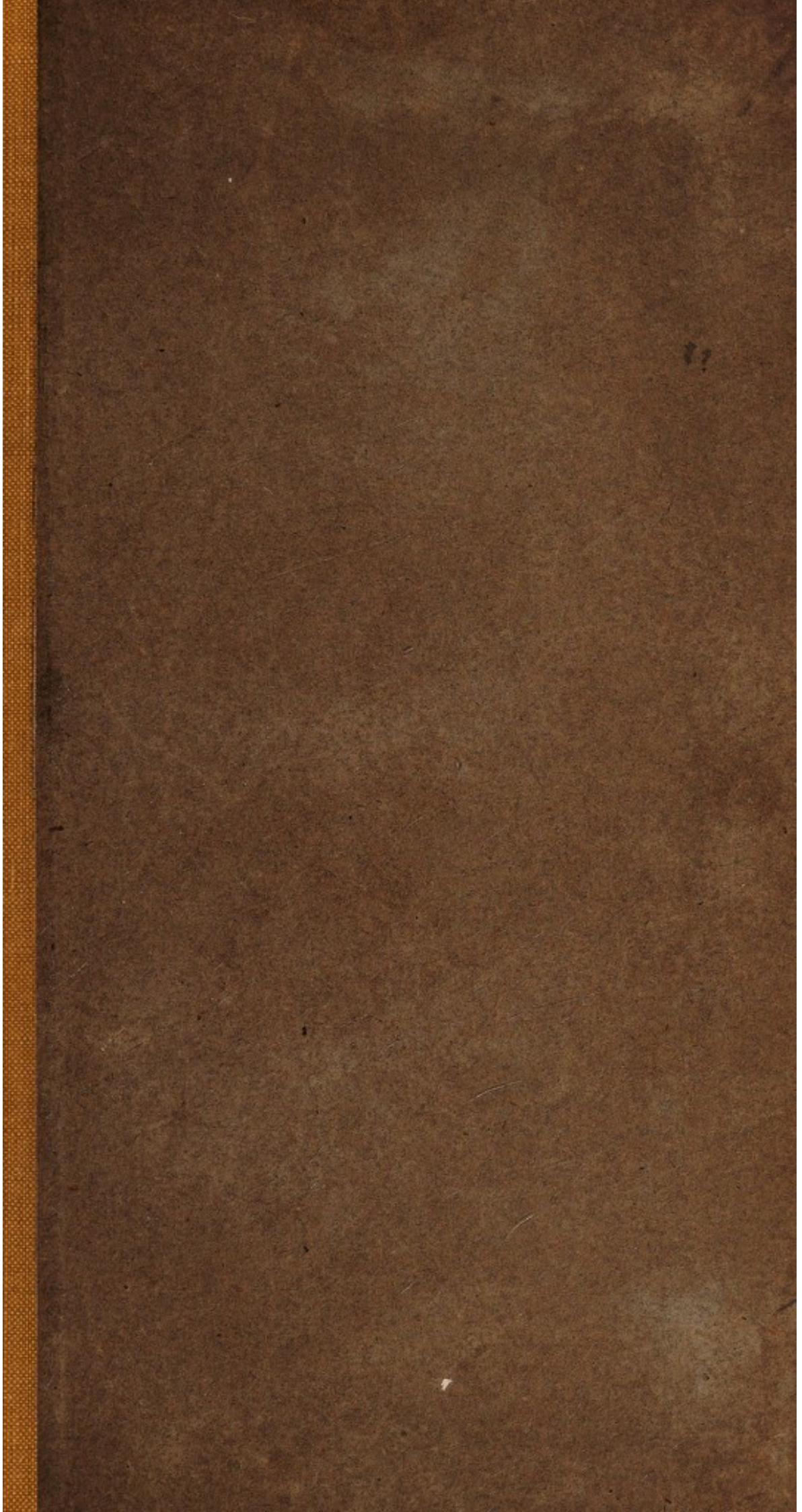
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AN ESSAY
ON THE
MEDICINAL EFFICACY AND EMPLOYMENT
OF THE
BATH WATERS,

Illustrated by Remarks

ON THE PHYSIOLOGY AND PATHOLOGY OF THE
ANIMAL FRAME,

WITH

REFERENCE TO THE TREATMENT OF

GOUT, RHEUMATISM, PALSY,

and

ERUPTIVE DISEASES.

BY

EDWARD BARLOW, M.D.

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CITY INFIRMARY AND DISPENSARY;

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RELIEF OF LYING-IN WOMEN.

Bath:

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1822.

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AN ESSAY

MEDICINAL EFFICACY AND EMPLOYMENT

BATH WATERS,

ON THE PHYSIOLOGY AND PATHOLOGY OF THE
ANIMAL FRAME,

GOUT, RHEUMATISM, PALSY,

ERUPTIVE DISEASES,

BY
EDWARD BAYLON, M.D.

LECTURER OF THE UNIVERSITY OF LONDON;
MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON;
AND OF THE PHYSICIAN OF THE BATH HOSPITAL, AND OF THE BATH
AND GENERAL AND DISPENSARY;
AND MEMBER OF THE LONDON SOCIETY FOR THE
RELIEF OF SICKING WOMEN.

Wood and Co. Printers, Bath.



TO
ANDREW DUNCAN, Jun. M.D.

PROFESSOR OF MATERIA MEDICA IN THE UNIVERSITY OF EDINBURGH;

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS, AND
FELLOW OF THE ROYAL SOCIETY OF EDINBURGH;

MEMBER OF THE MEDICO-CHIRURGICAL SOCIETIES OF LONDON
AND EDINBURGH, AND OF THE ROYAL MEDICAL
SOCIETY OF COPENHAGEN;

&c. &c. &c.

Dear Sir,

My warmest wish is gratified by your kind permission to inscribe to you the following pages. Aided as my medical researches have been through life by those sound principles which all your writings inculcate, I should be deficient both in gratitude and propriety were I to dedicate to any other a work that is indebted for whatever merit it may possess to your enlightened guidance and friendly encouragement. In the sincere hope that you may long adorn the celebrated University, of which you are so bright an ornament,

I remain, dear Sir,

Your obliged and faithful friend,

EDWARD BARLOW.

Bath, Nov. 1822.

ANDREW DUNCAN, M.D.

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EDWARD BAYLON

PREFACE.

THE following work was commenced with the design of merely recalling towards the Bath Waters that attention to which the Author conceives them entitled, but which has, of late years, been sensibly weakened or withdrawn. He soon found, however, that their full efficacy could not be adequately illustrated without direct reference to the pathology of those diseases in which they are beneficial; and he was thus led into an exposition of pathological doctrines which has expanded so as to form a large portion of the present volume. Faithfully believing the principles advanced to be founded in truth, the Author is happy in thus submitting them to the judgment of his professional brethren, from whom he has no doubt of experiencing candour and impartiality.

More solicitous for the discovery of truth, than for methodising his observations so as to fit them for communication, he had not thought of the arrangements requisite for rendering intelligible the pathology which he maintains, until the design of writing the present work had been formed. The division of plethora adopted by him is therefore possibly not the best, and he is well aware that, like all artificial distinctions, it has defects. Correctly speaking, the first and second conditions are but modifications of the same state, the third being essentially different. Still, as the first and third are never united, while the second and third are combined in all conceivable proportions, a distinction between the first and second became necessary, which it was thought better to express by the simple arrangement adopted, than to complicate the subject by dividing plethora into nutritive and excrementitious, and then subdividing the former, though this would undoubtedly be more accurate. If the division adopted ensures but perspicuity, that first requisite of didactic composition, the Author's object is attained.

It was chiefly in compliance with the wishes of friends, on whose judgment the Author relies, that cases are given. Being little in the habit of depending on reported cases for regulating his own practice, and having ever found well-established principles the only sure guides, he would willingly have referred practitioners to their own daily experience for illustrations of the doctrines advanced; for if not supplied abundantly from such a source, the doctrines themselves could be little worth, and scarcely suited for general adoption. The cases, however, may perhaps assist in conveying more distinct notions of the practice recommended, and thus be of use. Had their production been earlier contemplated, others stronger and more impressive might have been supplied; but the lateness of determination to introduce them, left no time for close research, and those given were in consequence taken chiefly and almost indiscriminately from the Author's Hospital Reports.

In his advocacy of the Bath Waters he has contented himself with stating explicitly what he knows to be true, and has purposely ab-

stained from all comment on some modern writers, who, in utter ignorance or wilful disregard of facts long established by extensive and unquestionable evidences, have taken upon themselves to pronounce these Waters inert and valueless; representing them as capable of being equalled in their effects by any common water of the same temperature! To expose the futility of such idle assertions would be no difficult task; but controversy, where unfounded affirmation is to be met by flat contradiction, must ever be hazardous, as leading too closely to personal animadversion. Though well aware, then, of the authority attached to great names, some of whom are directly chargeable with misrepresenting these Waters, the Author has nevertheless passed them unnoticed, being content to rest the character of this excellent remedy on the direct testimony of fact and experience, confirmed by thousands of cases diffused over the kingdom, in which the Bath Waters have proved of signal efficacy.

AN ESSAY, &c.

PRELIMINARY OBSERVATIONS.

A Treatise on Mineral Waters by a physician practising at their source, is very generally regarded either as an attempt on the part of the individual to write himself into notice, or, at best, as an endeavour to entice visitors by exaggerated representations of medicinal efficacy; a species of delusion which may well rank with the basest arts of open quackery. While I admit that such treatises have not unfrequently originated in both motives, I am equally persuaded that the apprehension of unworthy imputation has oftentimes been the means of preventing men of liberal minds and high attainments from giving to the public much useful information. This backwardness to support the cause of truth and sound observation, however amiable the feeling in which it originates, seems to me to call for censure, rather than approval, as

public good is thereby sacrificed to an overstrained delicacy.

May we not trace to omissions of this kind much of that decline in public estimation which the Bath Waters have of late years experienced? for though in an interesting paper on this subject that appeared in the 13th vol. of the Journal of the Royal Institution, the writer adduces several causes which he considers instrumental in effecting this decline, I yet cannot think that all these causes united could have had the effect of misleading the public, if the real virtues of the Bath Waters in the cure of diseases had been adequately illustrated and maintained by those whose established character and opportunities of acquiring accurate knowledge would give weight to their opinions, and place their testimony above suspicion. I mean not by these remarks to undervalue, in the slightest degree, the various treatises on the Bath Waters that have heretofore appeared, but only to express my regret that such treatises have not been more frequently renewed, and that the illustrations of the virtues and administration of these Waters which daily experience supplies, have not been given to the public, so as to keep pace

in some degree with the progressive improvements manifested in every branch of medical science.

In coming forward at this time to support the character of the Bath Waters, I beg that I may be considered as entering on the task with great humility, and under the full conviction that many of my professional cotemporaries could execute it more ably. In the absence of their endeavours, however, and feeling, as I do, how much the cause of truth suffers from the efficacy of these Waters not being adequately asserted, I deem it incumbent on me as a practitioner of some standing in this city, and as connected with two of its principal hospitals, to render what assistance I can towards restoring to the Waters of Bath the reputation which they so long and so universally enjoyed, and which they never deservedly forfeited.

It is not my intention to go over the beaten ground of minute analysis, or to descant on the well-known general properties of these Waters. My object in the present work shall be rather to shew that their administration in several diseases is consistent with the best-established principles of pathology, and not incompatible

even with those peculiar doctrines which have been considered as chiefly influential in bringing them into disuse; and also to demonstrate, by appeals to actual experience, the advantages derivable from a steady employment of them, even in cases where the presence of inflammatory symptoms would appear to contraindicate their use. The course of inquiry here sketched will require some notice to be taken of the physiology of the animal frame, and also of those morbid changes by which disease is ordinarily induced; for it is only by connecting medicinal agency with those internal operations by which life is continued, and health maintained, that we can hope to acquire clear ideas of the efficacy of medical treatment, or to give consistency and steadiness to those principles by which the rational practice of physic should ever be directed. If I can illustrate these principles so far as to shew that they do not, even theoretically, oppose that employment of the Bath Waters which was wont to benefit so essentially the numbers who formerly frequented these springs; and still further, if I can manifest by actual experience that great good does result from their use, even where a febrile state would appear to

render questionable the employment of a remedy so directly stimulant, I trust that I shall perform an acceptable service both to those medical men who, from honest but mistaken views, have been in the habit of resisting the wish of their patients to make trial of the Bath Waters in cases where they would prove signally beneficial; to the remote practitioners whose objects in sending their patients to Bath have, of late years, been so often defeated; and to the patients themselves, who, in being allowed a liberal but qualified use of the Waters, will find in their salutary effects the same restoration of health and vigour which their forefathers were wont to derive from them, and which acquired for these Waters a reputation not inferior to that of any other medicinal spring with which we are acquainted.

Mineral waters, like all other medicinal articles, derive their efficacy from the powers which they possess of calling into action the inherent energies of the animal frame. In ordinary language, a remedy is frequently said to cure a disease; and for general purposes the expression may perhaps be sufficiently correct. But there is reason to apprehend that the prevalence of

such language, by leaving out of sight the living processes by which the cure is effected, leads oftentimes to injurious misconceptions, and to false views, if not a total disregard of the agency by which the end is really accomplished. It is true, that in our best endeavours to trace out and develop those processes by which the animal frame is enabled to rectify its several derangements, we see but in part; and that, notwithstanding the lights which the laborious and successful investigation of animal physiology has shed on this subject, we are greatly defective in our knowledge both of the intimate nature of diseases, and of the operation of remedies. Still science and industry have done much to elucidate the various processes by which animal life is supported, and the mode in which remedies act in the removal of disease; and it will not be questioned that the perfection of medical science must consist in the completeness with which we connect the operation of remedies with those animal processes which are the more immediate agents in curing disease. Perfect accuracy in this respect is a point to which, in all probability, we are destined never to arrive; but it is that to which our efforts should unremittingly

tend; for as the contemplation of perfect virtue has a powerful influence in promoting moral excellence, so must that of perfect science have a beneficial tendency in exciting our endeavours to approach what we yet know can never be attained.

If these observations be correct, it follows that our use of Mineral Waters must be salutary in proportion to the accuracy with which we employ them in producing and regulating those peculiar excitements of the animal frame by which it is enabled to rectify its own derangements. The modification of such excitements, both in kind and degree, is a most important part of medical practice, on which much of its success depends, and a knowledge of which can only be eminently acquired by long experience and close observation. So faint are the shades, so minute the differences, which oftentimes influence the individual practitioner in the choice and adaptation of his remedies, that much of his most valuable experience is actually incommunicable. He can report faithfully the remedies employed, and the effects resulting; but he continually fails in his attempts to display fully those minute circumstances upon which

his judgment in the selection of remedies was founded, or the exact mode in which they were administered. Were he even enabled to embody his conceptions, so as to convey them by correct and significant expressions, there is yet great doubt that he would be generally comprehended; for all minds are not capable of giving admission to such knowledge. In reference to such difficulties, an elegant writer* has well remarked, "I do not indeed expect to be fully understood, except by minds that have been in some measure awakened to analogous trains of thought; for of knowledge language is but the medium, as light is of vision, the rays of which produce correspondent images only when reflected by mirrors of similar structure and form." Every practical physician knows well that it is not the remedy so much as the mode of its exhibition on which the success of medical practice depends. And this, I apprehend, has prevented many men, who were eminent in their day as successful practitioners, from recording the results of their experience, or communicating to the public the measures by which their success

* *Bionomia*, by A. P. Buchan, M.D.—Preface, p. vii.

was attained. Hence has arisen much of that uncertainty for which the practice of physic has been so often, and apparently so justly, reproached. As this source of unsteadiness is in fact identical with those natural differences of individual capacity that must ever prevail among men, it can never be wholly removed, and can only be provided against by such improvements in pathology and therapeutics as will furnish more bright and steady lights for the guidance of that ordinary capacity by which medical practice must ever be principally administered. Every effort, therefore, to elucidate the physiology of the animal frame, to discriminate more accurately the phenomena by which morbid actions are manifested, and to introduce greater precision into the selection and adaptation of remedies, merits indulgence, at least, as directly tending to the attainment of the highest perfection of which the medical art is capable.


These views of the objects of medical science lead me to premise to those practical remarks on the medicinal use of the Bath Waters which form the more immediate subject of the present work, a few general observations on the physiology and pathology of the animal frame. In

so doing, I mean not to involve my readers in any abstruse or elaborate speculations, but to confine myself to such general facts as none will dispute, and to observations the truth of which I hope fully to demonstrate.

A more copious and detailed account of the general principles which I maintain was published some years ago in an essay that appeared in the 9th and 10th vols. of the Edinburgh Medical and Surgical Journal; respecting which, I have only to remark that my subsequent experience, founded on a tolerably extensive practice both in acute and chronic diseases, has daily confirmed my conviction of the soundness of those principles, both pathological and practical, which it was the object of that essay to illustrate and enforce. To repeat what was there minutely and circumstantially detailed would, perhaps, be unsuited to the present work. While I refer my medical readers, therefore, to an essay that has been before the profession several years for illustrations which that essay copiously presents, I shall, on the present occasion, state more comprehensively the same principles, with a view to illustrate by their means the more extended use of the Bath Waters, which I believe to be eminently salutary in the cure of diseases.

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GENERAL PATHOLOGY.



THE first main fact in animal physiology of which every ordinary observer can take cognizance is, that the animal frame from the period of birth to that of dissolution is in a constant state of decay and renovation, or rather of waste and repair. The constant and unremitting exercise of those functions, the aggregate of which constitutes all that we know or can conceive of life, is attended with a physical expenditure which our daily nutrition supplies. The nutritive matter taken into the stomach, which forms the chief support of animal life, undergoes several successive changes in its passage through the body, is digested, assimilated to the animal juices, deposited in the several structures for their appropriate nutrition, and, finally, when no longer fitted for supporting their healthy actions, is taken up by the absorbents and carried out of the system by the appropriate excretories.

The various excretions are liable to considerable variations; so also is the quantity of

food which any individual consumes; and still more the assimilating processes by which that which is taken into the stomach is animalised and fitted for repairing the waste of the system. If more food be assimilated than the ordinary waste of the body requires for its repair, a state of repletion must be the natural and inevitable result. But repletion may also take place under a moderate, and even abstemious, supply of food, when from a sedentary life, inactive habits, or any defect in the functions of the several emunctories, the necessary excretions are inadequately performed.

As repletion, then, may take place under very different circumstances, so is its presence marked by very different phenomena. Whenever it arises one of two consequences is sure to result: either it excites the several functions, if sufficiently healthy and vigorous, to increased actions tending to its speedy appropriation and removal, or if these functions be weakly and unable at the moment to institute and support those depuratory processes by which the animal frame is enabled to throw off noxious or redundant matter, then the functions of life, oppressed by a task to which they are unequal, manifest a

decline of ordinary power, and all the outward phenomena of debility are displayed. To discriminate this state from one of real debility, as arising from exhaustion of animal power, or defect of nutriment, is a matter of practical importance, not inferior to any which medical science may be engaged in illustrating.

To render this subject clear and explicit, it is necessary to discuss it more in detail. When redundancy of nutriment takes place in a healthy constitution, its earliest effects manifest rather what may be termed an exuberance of health than a state of disease: the several functions of the body are more vigorously performed, the nutrition of its several structures is more abundant, and it acquires increase of bulk, especially if the habits of life are not of an activity capable of increasing excretion to a degree proportionate to the nutriment inordinately supplied. And if the excess be casual or inconsiderable, the self-adjusting powers of the body are amply sufficient to dispose of it so as to prevent the accession of what may be termed disease. If from extent or continuance the excess be such as to urge these powers beyond a certain point, then their sanative exertions fail, and irregular

actions of various kinds take place, laying the foundation of a large proportion of the specific diseases to which human nature is liable.

The general character of diseases so occurring is inflammatory: they are marked by a quickened circulation, increased heat, and a disordered state of the several functions. According to the predisposition of the system, hereditary or acquired, to the accidental weakness of particular parts, or the casual excitements to which the body may be subjected, is the specific form of the ensuing disease determined. The appropriate relief of this diseased condition is afforded by depletion to remove the original cause of distemper, and abstinence to prevent its recurrence.

When repletion occurs in a habit of less natural vigour, the self-adjusting powers are not so successful in effecting early restoration, and inflammatory actions are more tardy in their accession. The interval which precedes the occurrence of these increased actions is one of peculiar interest, because its phenomena are of an equivocal character, resembling, in many respects, those which belong to a very different state of the system, and hence liable to be mis-

understood; and more especially because they have hitherto been very imperfectly investigated, for the period of disease to which they in their simplest form belong, is seldom brought under medical observation; the attendance of the physician being rarely required until this incipient derangement has passed into some more distinct form of specific disease: on which account I shall in the present work enter more fully into the consideration of this peculiar state of indisposition, its phenomena, and appropriate treatment, than would be necessary in discussing other more familiar forms of disease.

The last state of repletion which I have to notice is, that which takes place under moderate nutrition, with defective excretion, in which the system is oppressed, not by the quantity of nutriment, or the labour of disposing of it, but by the load of excrementitious matter undischarged. The phenomena and treatment of this condition of the body are also of high interest, and deserving the most attentive and mature consideration; for unless its nature be clearly understood, the treatment must be purely empirical, and its success in the highest degree precarious and uncertain. On each of these

morbid conditions I shall now give a brief, but I trust comprehensive, discussion; in the course of which I hope to succeed in reconciling several apparent anomalies and inconsistencies with which the course of medical practice is continually charged.

Previously to entering on it, however, I am desirous of offering a few remarks on that combination of rational and empirical practice which every judicious physician is obliged to employ in the treatment of diseases; for medical practice must ever be successful in proportion as the practitioner's views are directed by sound science, and his efforts seconded by the unquestionable though unexplained powers which several specific remedies supply. To trust solely to the latter would be wilfully to close our eyes to that light which should guide our steps; while to renounce their aid merely because we cannot comprehend the mode of their operation, would be a culpable abandonment of that duty which requires us to leave no means untried by which health may be restored or life prolonged. The terms rational and empirical, as applied to medical practice, have been so loosely employed that it becomes necessary to define what is

meant by them respectively, in order to proceed on our inquiry with clear ideas.

From the annals of physic we learn that at a remote period, nearly 300 years before the Christian æra, the whole medical world was divided into two sects, the dogmatists and the empirics: the former abiding, perhaps too rigidly, by the scholastic philosophy of the times; the latter contemning the reasoning, and deriding the practice, of their rivals, while they disregarded all authority but that of experience. It would be useless to revert to the disputations of that period, or to shew how much the controversies which then agitated the medical world were employed about mere words. My present object is merely to state what these terms are meant to express at the present day.

On very little reflection, it must appear that the distinction was founded on a mere difference of degree; for the dogmatists certainly used many remedies of whose mode of operation they could render no account; while the empirics as clearly must have employed some reasoning in discriminating the diseases for which their nostrums were prescribed, and

adapting their practice to the various forms in which disease presented itself. But in modern use, we may consider the terms "rational practice" as signifying that mode which employs remedies in consequence of their known properties of affecting certain functions of the animal frame, through whose instrumentality the removal of disease is accomplished; and "empirical practice," that which adapts the remedy to the disease, without regarding the animal processes immediately excited and called into action. Were the science of physic perfect, we ought in every instance to abide rigidly by the former method; but the acknowledged imperfection of the art compels us continually to resort to remedies of whose mode of operation we know nothing. This imperfection, however, while it renders our systematic knowledge incomplete, does not by any means set it aside as valueless; and the method pursued by the judicious physician should ever be, to rectify the general derangements of the system by his knowledge of its several functions, and of the remedies which act on them; and having done so to the utmost of his ability, then to call in the

aid of those specific remedies which he must be satisfied to employ without understanding their mode of operation.

I proceed now to reconsider the three several conditions of plethora which have been lately noticed.

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satisfied to employ without understanding their
mode of operation.

**CONSIDERATION OF THE SEVERAL CONDITIONS
OF PLETHORA.**

I proceed now to reconsider the three sever-
al conditions of plethora which have been
lately noticed.

TO the first of these conditions, or that arising from excess of nutrition in a healthy and vigorous frame, belong all the cases of pure inflammation which we daily witness. It is customary to refer these, when they occur, almost exclusively to the exciting cause that may have immediately produced them. But the fallacy of this reasoning must appear, when we reflect that of any given number of individuals exposed to an ordinary exciting cause, scarcely two will be affected alike. From exposure to cold, for instance, one will be attacked with catarrh, another with inflammation of the lungs, a third with rheumatism, a fourth with sore throat, while by far the greater number will escape altogether. Were the exciting cause solely chargeable with these several effects, they would unquestionably be marked by greater uniformity. The truth is, that the exciting cause produces

its effect because the body exposed to it is prone to be morbidly affected in consequence of its own previous derangement; and the specific form of the disease arises partly from the operation of the exciting cause, but chiefly from the predisposition of the parts affected to undergo those morbid actions to which the general indisposition of the system renders them exposed.

To distinguish, by its appropriate phenomena, that condition of an apparently healthy body which subjects it to be affected by slight exciting causes, must be an important part of medical knowledge. This state, and these phenomena, I have endeavoured to explain and illustrate at some length in the pathological and practical observations formerly published. It would spare me some labour, and perhaps conduce not a little to a clear understanding of this subject, if I were to republish on the present occasion a considerable portion of that essay; especially as my subsequent experience has presented me nothing in contradiction to what I there advanced. As the essay itself, however, is open to those medical readers who may feel any inclination to consult it, and as a more brief and comprehensive representation may suffice

for such general readers as may honour these pages with a perusal, I shall content myself with stating the results of that more elaborate investigation which my former essay contains.

I have there shewn that previously to the occurrence of febrile or inflammatory action in the heart and arteries, there is a sensible interval of disease marked by evidences of inadequate power in the arterial system to carry on the circulation with its wonted vigour, and of oppressed and irregular actions therein variously modified. When, from the increase or continuance of a state of plethora, the powers of the constitution fail to dispose of the excessive nutriment by applying it to a more abundant nutrition of the several structures of the body, the increased efforts subside for a time, and a state of incipient debility ensues: the pulse becomes low, oppressed, irregular. If this state be relieved by adequate evacuations and a reduced diet, the plethora is removed, and health is restored; no specific disease ensuing. But if neglected, it either passes, sooner or later, into a state of permanently increased action amounting to fever or inflammation, and some specific disease is induced according as the constitution is predis-

posed to any particular malady ; or else, if the constitution be, from natural delicacy, or the extent of labour to be performed, unequal to the effort necessary to generate a state of fever or inflammation, the general health progressively declines, the powers of life become enfeebled, and the constitution sinks under some of the complicated forms of chronic disease. When febrile or inflammatory disease becomes thus formed, it is speedily subjected to medical treatment ; and as opinions vary but little respecting the measures to be pursued, and the violence of disease in general requires them to be employed with proportionate vigour, it seldom happens that this stage of disease is improperly treated. When, for instance, a patient, prepared for the accession of an acute attack, is, from some casual excitement, seized with inflammation of the lungs, or of some organ essential to life, such is the urgency of symptoms, and the obvious danger of the malady, that the most timid practitioner will not hesitate to bleed freely ; nor will any prejudices on the part of relatives or friends be suffered to impede the full exercise of his judgment. Yet, previously to the acute attack, a deviation from a state of health might have

been detected, which as clearly indicated the propriety of some depletion, though it might not demand it so imperatively, or require it to the same extent, as when the acute attack had supervened: and if this state were relieved by adequate depletion, and other suitable means for reducing a state of plethora, I have no doubt that the ensuing attack of acute disease might in every instance be wholly averted, or at least so greatly mitigated as to be free from all danger.

As diseases of this character, when they occur in healthy and vigorous constitutions, either destroy life speedily, or are effectually relieved by the treatment usually employed, they seldom admit or require any aid from such a remedy as the Bath Waters. I shall proceed, therefore, to consider the second state of plethora, or that in which repletion takes place in a constitution deficient in natural vigour, or impaired by predisposition to disease.

In this state, the earlier deviations from a healthy condition take place so gradually, that they are for a long time nearly unnoticed: there is occasional languor and disinclination to the customary exertions; irregular distri-

bution of blood as marked by coldness of feet and variable countenance, the bowels are irregular, the appetite is capricious, or fails; and both flesh and strength decline. At the earlier periods of this state, the pulse will be found weak, often irregular. Sooner or later a febrile or inflammatory state ensues, marked by a quickened circulation, some increase of temperature, and a white or furred tongue. This state may continue for an indefinite period, and be subject to frequent variations. Most frequently in course of time some local ailment supervenes, which engrosses the attention, and to which, when discovered, the constitutional indisposition is not unfrequently ascribed.

In order to form a clear conception of the phenomena which characterise this state of plethora, it is necessary to give particular attention to the successive changes which the pulse undergoes. I have already remarked, when treating of the first condition of plethora, that previously to the occurrence of febrile or inflammatory action in the heart and arteries, the pulse is low, oppressed, irregular; and that with respect to the order of succession in which these several states of arterial action occur, the first

stage is that of feebleness, the second of irregularity, and the third of permanently increased action.

As the incipient lowness of pulse is that symptom which so generally misleads, suggesting the employment of tonic and stimulant remedies, it is highly necessary to distinguish it from a pulse of pure debility: and this I apprehend may be done by conducting the examination with suitable accuracy; for, as I stated in my former essay, "if firm pressure be made on the artery, it will be found to resist this, and on gradually withdrawing the pressure, to rebound against the finger with a force much more considerable than a casual examination would lead one to expect." With respect to the irregularity of the pulse, I also noticed that this could be observed as occurring both in its force and frequency, and that the irregularity of force, or that in which the artery makes a few strong pulsations as if by a sudden effort, and again relapses into a state of diminished and oppressed action, indicates a nearer approach to the period of actual fever or inflammation than the irregularity of frequency only. Indeed it seems to be the connecting link between the stages of feebleness

and of permanently increased action, and to consist essentially in the desultory and imperfect efforts of the vascular system to form this latter stage; for when the febrile or inflammatory stage is fully formed, the irregularity, for the most part, disappears.

As the succession of these several stages may be observed taking place naturally, so may the changes be accelerated and displayed by means of medical treatment; for if the constitution be much oppressed during the stages of feebleness and irregularity, moderate depletion has the effect, as I formerly illustrated, of relieving the vital powers, so as to bring on the period of increased action much sooner than would otherwise occur.

The several changes are strikingly exemplified by Dr. Watt, in his valuable work on Diabetes. That they are as well marked in cases where no diabetes, nor any other specific disease exists, I have satisfactorily shewn in my former essay; and though more than nine years have now elapsed since its publication, during which time I have had ample opportunity of proving the truth of the statements contained in it, and of bringing the practical precepts which it incul-

cates to the test of additional experience, I can faithfully declare that this experience has only served fully to confirm the principles which I then advanced, and to give increased confidence in the practice which these principles enjoin. When I come hereafter to consider more at length the practical treatment which these several states of plethora or repletion respectively require, I shall have occasion to explain and illustrate each state more copiously. At present I must pass on to the consideration of the last state of plethora, or that in which the repletion arises, not from excessive nutrition, but from defective excretion, and consequent accumulation of that excrementitious matter which the health of the body requires to be fully and regularly expelled.

In this state the deviation from health takes place still more gradually than in the preceding. With reference to it, I formerly remarked, that as exercise is the principal stimulant for exciting the various excretories to a due performance of their functions, this state of repletion may be considered to exist more peculiarly among the sedentary and the indolent. It is characterised by great sallowness of aspect, and duskiness of

skin; the pulse is low and compressible; the surface is in general harsh, dry, and deficient in natural transpiration; the tongue, for the most part, moist and clean; the appetite capricious, often craving and voracious; the alvine evacuations perseveringly foul, and exhibiting no traces of healthy secretion; the urine high coloured, and often extremely fetid: even the perspiration has frequently an offensive odour, and gives a dusky tinge to the linen which absorbs it.

I know of no symptom which so strikingly marks this state as the obstinate foulness of bowels, which no employment of purgatives seems to correct. If the use of purgatives happily give such relief to the system as to enable it to make an effort towards forming a febrile or inflammatory stage, if the pulse become quicker and firmer, the tongue white and loaded, with such evidences of increased activity of circulation as to warrant the use of small blood-lettings, these, if employed with sound discretion, and adapted to the powers of the constitution, will do more to correct the morbid condition of the bowels, and bring back healthy evacuations, than any use of purgatives, however judiciously managed, or perseveringly employed. This fact

I have so frequently witnessed, that whenever this state of bowels is found to resist purgative treatment, I can confidently recommend the moderate use of the lancet, as the most effectual auxiliary that can be employed.

Blood-letting, however, in this morbid condition of the system, requires considerable caution, and a clear conception of the principles on which it is founded; for if resorted to at too early a period, while the powers of life are still torpid and oppressed, or if pushed even a little beyond what these powers are able to bear, great mischief and irremediable exhaustion may result. It shall be my care, before I close the present tract, to point out from experience both the circumstances which call for its use, and the mode and extent of its salutary employment.

I shall now resume the consideration of each condition separately, and direct the practical treatment applicable, together with the modifications required by the supervention of those specific diseases to which they are severally liable; and under each head shall point out how far the use of the Bath Waters may be rendered conducive to that re-establishment of health and strength which is the end of all medical treatment.

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MEDICAL TREATMENT OF THE FIRST CONDITION
OF PLETHORA.

IN this condition we must distinguish three several stages: first, that which precedes the period of febrile or inflammatory excitement; secondly, that wherein the febrile excitement is unaccompanied by any local affection; and thirdly, that in which some local inflammation, or other partial derangement, is superadded. As this division has been the result of long and close investigation of the morbid phenomena to which it relates, I trust it will not be pronounced as unnecessarily minute or frivolous.

I have already noticed the phenomena by which this condition is characterised, and remarked that the proper treatment consists in depletion to remove the plethora, and abstinence to prevent its recurrence. As it occurs for the most part in those who are considered as enjoying perfect health, it may perhaps be deemed

useless to lay down rules of treatment to which so few will be likely to resort. And, indeed, I should be sorry to lay stress on it, if the only object were to bring under medical discipline those who perhaps exult in the consciousness of not requiring its unenviable interference. Even if I were able, therefore, to arouse every such individual to a full sense of his own situation, and to the dangers that await him, I should hesitate to give rise to such incalculable misery as a perpetual watchfulness over the feelings of health could not fail to occasion; for though some few might probably, by timely precaution, avert diseases that would otherwise be inevitable, the constant anxiety to which numbers would be unnecessarily consigned, by the prevalence of such notions, would greatly counter-balance any good which could possibly result.

It is of consequence, however, that medical men should be able to form a just conception of this state, when subjected to their cognizance; and it is of the highest importance in the relapses of acute and dangerous diseases to be aware of the premonitory signs that mark the approaching accession, so as to employ the necessary means of averting the recurrence of disease.

To precautions of this kind am I indebted for my own preservation ; and, indeed, it was chiefly by observing in my own person the progressive advances of the several stages of this state of plethora, that I was first enabled to discriminate them, and trace their succession. The particulars of the long and tedious indisposition to which I allude are given in my former essay, and need not be here repeated. Suffice it to say, that by carefully noting those morbid changes which announced the increase of plethora, and the supervention of fever or inflammation, I was repeatedly enabled to anticipate the latter, and by timely recourse to suitable regimen, to prevent both suffering and danger. By persevering in such precautionary measures, I at length succeeded in subduing even the tendency to inflammatory complaints, which clung to me for a long period ; and have not for years had occasion to subject myself to any medical discipline whatever. The particulars of this case, as reported in my former essay, are highly illustrative of the stage of disease of which I am treating, and well worthy the attentive consideration of my medical readers.

The treatment required for this stage is sim-

ple in the extreme, and consists solely in moderate blood-letting, occasional purging, and a reduced diet. By these means alone, pursued without any sensible impression on the general strength, interruption of ordinary occupations, or even confinement, may this stage be effectually relieved, and the dangers to which it leads successfully averted.

It may conduce, perhaps, to accuracy of practice, to explain here what I mean by moderate blood-letting. In general, it will suffice for the relief of this stage to abstract 12 or 16 ounces of blood at a time, and repeat the evacuation as circumstances require. The amount of depletion will be influenced much by the peculiar constitution of the individual. In my own person much larger was required; and I have often lost on such occasions from 20 to 30 ozs. without feeling the evacuation, otherwise than by the relief which it afforded. If I postponed the necessary relief, so as to approach the period of active fever, the depletion required to be more considerable. At such period there was generally some uneasy sensation, produced by a tendency to local determination of blood, to which I had long been subject; and the depletion was usually

continued until the uneasiness subsided. If I stopped short of this, the relief afforded was incomplete, and I was certain of requiring a speedy repetition, and to a greater extent. By observing this rule I am quite satisfied more effectual relief was obtained, and that morbid actions were restrained with less ultimate loss of blood, and less prostration of general power, than if blood had in the first instance been sparingly taken; for then more frequent repetition of blood-letting would have been required.

The principle of carrying blood-letting to the point of making impression on the constitution, and thus arresting the progress of morbid action, I shall have to consider fully when I come to treat of its employment in relieving local inflammations. I may here, however, cursorily remark, that when morbid actions of an inflammatory kind have commenced, requiring direct depletion by blood-letting, it is the last portions of blood taken that afford the effectual relief; for under high and active inflammation, 20, 30, 40 ozs. of blood, or more, may be taken without making any impression on disease, when the loss of a few additional ounces will, at length, by inducing a disposition to syncope, completely

arrest the inflammatory action, and subdue effectually the violence of disease.

In such case, if the depletion be regulated by regard to the quantity of blood taken, rather than the effects resulting, and if, under the apprehension of a larger depletion, it stop short of that relief which ought alone to set limits to it, the morbid action is left unsubdued, and much greater loss of blood will eventually be required to allay it, with the great risk of failing altogether in accomplishing this end; for it should ever be borne in mind, that in proportion to the time which morbid action of this kind has been suffered to continue unrestrained, will be the final difficulty of arresting it.

From a full conviction of the correctness of these views, founded on much experience, I have long been assured that when active disease occurs in a robust and vigorous frame, copious depletion in the earlier stages is the surest means of saving animal power, and of accelerating the final recovery.

When from continued or increasing plethora, the second stage, or that of febrile action, ensues, then the principle which I have just noticed becomes more applicable. When the oppressed

pulse passes into a state of irregularity, and thence into one of permanently increased action, as manifested by a quickened circulation, hot skin, and white tongue, active depletion becomes more necessary, and requires the aid of other means suited for correcting the morbid condition of the system. Of these, purging is the most powerful; and saline purges which produce copious watery discharges from the bowels are the most effectual. Several neutral salts and antimonial preparations are also valuable auxiliaries; and by the judicious employment of these several remedies, in conjunction with low diet, may this stage, in general, be effectually relieved. The mode of employing them is so familiarly known to medical practitioners, that it would be useless to enter into further details.

Should local inflammation be superadded to the febrile excitement, we have then to consider, not only the general plethora and febrile condition of the system, but also the diseased state of the organ locally affected. If it be an organ essential to life, then the utmost activity of practice will be required, to guard against the danger resulting from its functions being suspended or impeded, and

from the disorganization of structure which continued inflammation always induces. It would be vain here to notice every local inflammation to which the body is liable, I shall therefore confine my remarks to one or two of the most urgent, and, by particularizing the treatment which they require, establish the principles of practice so clearly as to render them applicable to every other case of local inflammation that can arise. For this purpose I select two organs of primary importance, the lungs and the brain.

When active inflammation occurs in either of them, the same constitutional symptoms present themselves; there is a hard and frequent pulse, hot skin, and furred tongue. If the brain be the part affected, there is pain of head, vertigo, throbbing of the temples, a sense of fullness and aching in the eye-balls, the pupils either dilated or preternaturally contracted; and very generally a peculiar painful sensation in the neck or throat referred to the seat of the carotid and vertebral arteries, and caused, no doubt, by the increased force and difficult transmission of the blood through these vessels. I have myself, when suffering from determination of blood to the

brain, occasionally felt this painful affection of the carotids, the most distressing symptom which I experienced, and have found it so sensibly give way, as the blood yet flowed from the arm, that I can entertain no doubt of the cause in which it originates.

If the lungs be the seat of inflammation, to the symptoms of high constitutional fever are superadded pains of chest, more or less acute, and increased by any attempt at taking a full inspiration, difficult respiration, and cough. As it is not my object to write a perfect treatise on either complaint, I shall wave all description of the variations which occur in their respective symptoms, and confine myself to those more prominent affections by which they are characterized. When inflammation of either organ is fully manifested by its appropriate signs, the necessary treatment must be promptly and vigorously resorted to; for, as I have already remarked, the obstinacy and danger of the disease will be proportionate to the delay of the necessary depletion, and the insufficiency of its early employment.

When active inflammation prevails in either organ, if blood-letting be not early and vigorously employed, such derangement of structure may

speedily ensue as to destroy life, or permanently incapacitate such organ for the discharge of its healthy functions. The effect of blood-letting in such case is two-fold: by the quantity of blood abstracted, it diminishes plethora; and by its influence on the moving powers, moderates or subdues that arterial action which is the essence of inflammation. As inflammatory action cannot in such cases be too speedily arrested, and as the suddenness of depletion greatly promotes its speedy effect on the moving powers, the blood should be taken from a large orifice, in a full stream, and with the body in a sitting or erect posture. To be effectual, the depletion should be carried to the extent of making sensible impression on the local symptoms of either head or chest; and if faintness or actual syncope take place, the relief of both local and constitutional disease will be far more decisive than if such effect were not produced. When under the evacuation the pulse falters, the lips become pale, and the face studded with drops of perspiration, the effect of such blood-letting may be relied on for yielding all the relief that this powerful remedy is capable of affording.

The quantity necessary to produce this effect

is exceedingly various. I have myself lost 40 ozs. at one bleeding, and have nevertheless required a repetition, to a smaller amount, within a few hours. I have known much larger blood-lettings employed, in relieving urgent disease, with only salutary effect, and without a single bad consequence resulting. As cases of extreme violence are those in which inadequate depletion would prove most fatal, it becomes necessary to notice the extent to which blood-letting may, under urgent necessity, be safely carried. Happily such extreme cases are not of frequent occurrence; and in the ordinary instances that present themselves, much more moderate evacuations will suffice. When by one or two blood-lettings, conducted so as to make an impression on the moving powers, the more urgent symptoms are alleviated, the repetition may then be regulated so as never to exceed the necessity of the case. If the plethora be considerable, and the fever continue high, after the local complaints have been relieved, blood-letting must still be employed until the circulation be brought back to a healthy state, and the several symptoms of excitement decline. By such means, combined with the auxiliary remedies already

noticed, and assisted by those topical applications which are appropriate to the local disease, a state of imminent danger may be speedily changed to one of perfect safety.

The practice here inculcated may to many appear bold; but I can confidently appeal to the experience of those who have had the most ample opportunities for treating cases of active inflammation, for the soundness of the principles which I advance, and the perfect safety of the proceedings enjoined. I again repeat, that the ordinary course of medical practice may be successfully carried on by much milder treatment, and that I here display the urgent and extreme cases, merely to shew more clearly and forcibly the principles upon which the treatment is to be conducted. As the symptoms of each case will always announce the degree of violence to be expected, and thus guide the practitioner in the use of his remedies, there can be no danger of the representations which I have now made misleading any reflecting mind into an excessive use of blood-letting.

I should, perhaps, act more prudently, if, keeping these principles out of view, I contented myself with prescribing the less effectual treat-

ment so often trusted to. But such wary policy is little to my taste; and neither my judgment nor principles will suffer me to become the advocate of inadequate measures; for though so generally popular, from coinciding with the prejudices of the ignorant, and the fears of the timid, they yet compromise, in every instance, the patients' safety, and are the cause of destruction to thousands. Besides, the language of truth should not be suppressed; I believe faithfully that it has been used on the present occasion; and I rely on the best experience of the profession fully to sanction the practical precepts which I have inculcated.

It must be recollected, that in the remarks now made, I have had in view inflammatory complaints only as they occur in the first condition of plethora, consequently in their most active and violent degree. In this state they require large depletion, and there is always ample power to sustain it. Diseases of the same species, however, happen in every condition of the system; and according as they occur in more feeble constitutions, and are marked by less violence of symptoms, so may measures of less energy be trusted to for their relief.

It is by not sufficiently noting the differences of constitution, or the degree of general plethora present under attacks of local inflammation, that so much diversity of opinion has prevailed among practitioners, respecting the extent of direct depletion required for their relief. From local peculiarities, some practitioners are so circumstanced as never to encounter diseases of this violence. They accordingly find that copious depletion may be dispensed with; that if employed, it sinks the powers of life, or lessens the chance of recovery; and they therefore sometimes hastily conclude that the active practice employed by others is rash and unnecessary. Diseases of this languid description may be expected to occur in large and crowded cities, where the habits of life are sedentary and luxurious, and where inflammatory complaints are rarely connected with what I have distinguished as the first condition of plethora, but chiefly with the second and third. Perhaps London may be taken as the best exemplification of this remark; and it is well known that there the corresponding diseases will not bear that activity of treatment which provincial practitioners find indispensable.

Both parties in consequence continually misconceive each other; the London practitioners charging their country brethren with unnecessary vigour, while the latter as frequently consider London practice feeble and inert. The effects of this discrepancy of opinion are at times sufficiently perplexing; for the London practice being deemed of highest authority, is assumed as the standard of right, and thus frequently impedes the provincial practitioner in the free exercise of his judgment. I trust that the present work will go some way towards reconciling all differences of this kind, by discriminating more accurately than has hitherto been done, the several conditions of the body under which local inflammations occur, and the modifications of treatment which they respectively require.

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**MEDICAL TREATMENT OF THE SECOND CONDITION
OF PLETHORA.**

THE second condition of plethora occurring oftener than that which I have described as the first, and having a greater number of diseases connected with it, is consequently of greater importance, and requires closer attention. Here also, the progress of morbid action is more gradual, and the constitutional efforts to rectify existing derangements more varied and general. Hence, the character of the diseases produced by, or incidental to, this condition, is complicated, and their elucidation difficult. As the earlier phenomena are not so conspicuous, they attract less attention, and being liable to misconception, from the equivocal character which they frequently present, it becomes important to illustrate clearly the real nature of this state, to exhibit distinctly the phenomena which characterize it, and to prescribe accurately the practical treatment required to

relieve it, in order to prevent the highly injurious practical errors to which misconception, in this respect, continually gives rise.

It will be readily understood that the division of plethora which I adopt, is one of convenience, and that no specific distinction is intended. More consistent would it be with physical truth, to represent the first and second conditions, or those of nutritive plethora, as a regular gradation, that of excrementitious repletion being essentially different. But I consider it more convenient for the purposes of adequate illustration to adopt the artificial division, in which each condition is sufficiently marked by certain general characteristics, although no exact line between the first and second can be drawn.

In the second condition, as in the former, the earliest deviation from health is marked by evidences of declining power in the general circulation. The pulse becomes low and oppressed, and the general powers enfeebled. When, from a naturally feeble constitution, or the absence of excitement, the stage of feebleness is prolonged for any time, the defective exercise of the several excretory functions gives rise to more or less excrementitious accumulation, and a combination

of the second and third conditions of plethora results. More frequently, however, this feebleness is superseded by increased action, and some congestion, inflammation, or other local malady, becomes superadded. A hard and frequent pulse, increased heat of skin, and whiteness of tongue, mark the formation of the second stage; and if unexasperated by stimulant regimen, this may, in a constitution not predisposed to any particular malady, continue for months, or even years, without specific disease ensuing. I have so repeatedly witnessed this, that I have long been in the habit of distinguishing this state by the term "constitutional inflammation;" meaning thereby to designate, general inflammatory action in the system, unattended by local inflammation.

All the phenomena which belong to this stage are of an inflammatory character: blood drawn, frequently exhibits a thick buffy coat, cupped, and with contracted edges; and the treatment of inflammation is that only which affords effectual relief. If taken at an early period, moderate depletion, and antiphlogistic regimen, will speedily relieve it; but if neglected, or improperly treated by tonics and stimulants

for any length of time, it becomes more difficult to remove, acquiring obstinacy from its continuance, and laying the foundation of various specific diseases of the worst kind. The treatment of the several stages will require to be discussed at some length, and copiously illustrated.

Nutritive plethora in its simplest form, and earliest stage, may be relieved by artificial means, without any excitement of the system being necessary to co-operate in the restoration of health. This I have unequivocally experienced in my own person, and have thus been enabled to satisfy myself of a fact which there can be few opportunities of witnessing. Popular practices are always deserving some attention, and it may, perhaps, be a confirmation of the principles which I advance, that periodic blood-letting has been at various times and places a popular remedy, and in many districts continues so to the present day. In early life, I have often been required to take blood at *spring* and *fall*, as it was termed, when no disease existed, and where the preservation of general health alone was contemplated. In the luxurious habits of modern times, so conducive to plethora, a discri-

minating use of this practice might perhaps be beneficially revived.

Under the second condition of plethora, I conceive that the congestions, and other derangements of minute structure and functions, are not to be removed without some effort of the constitution, and that febrile excitement is a valuable auxiliary in effecting recovery. These observations lead at once to the practice suited to its several stages. Should the earlier one, by reason of the morbid condition to which its long continuance gives rise, come under medical cognizance, sparing depletion to lessen the redundancy, with moderate excitement to promote the occurrence of febrile action, will be the most judicious and suitable treatment. Under extreme feebleness of pulse, and muscular debility, it may be prudent to commence by gentle excitement, watching carefully the time when increased action in the pulse manifests that renewed energy which will both justify and bear direct depletion.

I am certain, from my own observation, that when the pulse becomes irregular, blood may be taken, not only with safety, but advantage; and that the relief afforded will be speedily mani-

fested by the increased frequency and tone which the pulse acquires. For this purpose the earlier blood-lettings must be small: from four to six ounces is the quantity I usually direct. Its repetition will, of course, depend on the effects; and there can be no more interesting subject in pathology than to mark in the extreme cases of such condition how progressively, under repeated venesection, the pulse rises, and the buffy coat is displayed on the blood. Some striking instances of this kind I have recorded in my former essay. In one, an enfeebled and emaciated boy, labouring under diabetes, lost 209 ozs. of blood in twelve successive blood-lettings; the blood becoming changed from a dark grumous coagulum of loose texture, to the thickest and firmest buff; and the strength of the body increased from feebleness, hardly admitting of an erect posture, to a degree of vigour enabling him to hold the plough for several hours a-day. In another, a weakly and delicate female, without any local disease, save alternating pains of head and chest, 106 ozs. were taken in seven blood-lettings, with similar changes in the blood, and as well marked improvement of general strength. This

person is alive at the present day, an example of the efficacy of her former discipline; and, excepting a local malady, wholly unconnected with her former disease, is in robust health. Such instances must be deemed conclusive of the soundness of the pathology which I inculcate. Their early symptoms were those of seeming debility; yet if this had been real, life must inevitably have been destroyed by the means employed to preserve it. If, then, there are states of disease marked by considerable debility, in which the constitution not only bears depletion without sinking, but, on the contrary, acquires very considerable accession of strength from copious evacuations, it surely is of the first importance to medical science that such diseases should be scrutinized, and more adequately illustrated than they have hitherto been.

When, by the judicious combination of small blood-lettings and moderate excitement, the system is aroused to a state of general inflammatory action, the treatment of this state must be conducted on principles with which all medical practitioners are familiar. In judging of its approach, I am influenced more by the state of the tongue, than that of the pulse. When the consti-

tution is assuming a disposition to febrile excitement, ere it is announced by the pulse still feeble and compressible, the tongue presents a peculiar whiteness, strongly characteristic and expressive, being distinct from any obvious morbid secretion, and seemingly belonging to the substance of the tongue itself. It seems in proof of this whiteness not arising from morbid secretion, that I have repeatedly seen it disappear immediately after a full blood-letting. I know not any stronger or surer evidence of inflammatory action than this appearance of the tongue; and I consider that whenever it is present, blood-letting may be had recourse to with little hesitation.

As in this state of plethora, excitement is required in aid of early depletion, to accelerate febrile action, so, in a large proportion of such cases, will a continuance of moderate excitement be necessary, to support the constitution under the efforts which it is called on to make, as well as when these efforts are on the decline. For this purpose, I know of no remedy so suitable or beneficial as the Bath Waters. It is in the various modifications of this constitutional derangement that these Waters are so eminently beneficial; and if when low inflammatory action

is present their use be combined with suitable evacuations, the best assistance which art can afford will thus be administered.

My practice in the Bath Hospital has afforded ample opportunity of bringing these principles to the sure test of experience. Notwithstanding the care which has customarily been taken to guard against inflammatory cases being sent for admission, patients continually arrive exhibiting symptoms of the second condition of plethora in all its several stages. When constitutional inflammation is present, and still more when local inflammation is superadded, I have for years been in the habit of bleeding, according to the exigences of each case, without finding it requisite to suspend the use of the Waters beyond the day on which the blood is taken. In aid of such depletion the medicine usually administered is, a solution of Epsom salt and tartar emetic, given, in divided doses, as an ordinary saline. By the united employment of this remedy and blood-letting, are patients enabled to continue the use of the Waters with safety and advantage under every stage of constitutional inflammation, as marked by a quickened circulation, increased heat of skin, and

white tongue, who, if depletions were not conjoined, would be obliged to relinquish the use of the Waters for long intervals, and thus be deprived of much of the benefit which the diseases admitted into this Hospital so signally experience.

It appears, then, that blood-letting is a remedy suited to each stage of this condition of plethora. In the stage of feebleness, when long protracted, small evacuations of blood relieve the oppressed constitution, and enable it to form that stage of inflammatory excitement which seems so necessary an agent in correcting the several derangements of the system. When used for this purpose, the early depletions should never exceed a few ounces, from four to six being a full blood-letting. According as the stage of excitement advances, more copious depletion will be not only borne but required. The object of the incipient bleedings is, not to make that impression on the moving powers which is necessary for the abatement of inflammatory action, but merely to abstract a portion of the circulating fluid, and thus lessen the plethora by which the system is oppressed. The blood may, therefore, be taken from a small orifice, and in a recumbent posture. According as the

period of excitement approaches, the effect of depletion in hastening its advancement becomes more manifest; and indeed it is a matter of familiar observation to surgeons, that even while the blood yet flows from the vein, the arterial powers so sensibly increase, that the tardy and sluggish stream, which at first only trickled down the arm, becomes converted to a full and vigorous jet, by which the blood is oftentimes propelled to a distance of several feet. When this degree of increased action is displayed, blood may be more freely taken, and antiphlogistic regimen more rigorously pursued.

During the second stage, the object of venesection is both to abstract blood, and moderate inflammatory action by the effects which this remedy has on the arterial system. Wholly or suddenly to subdue this action is not intended, and, therefore, moderate blood-lettings are most suitable. Eight or ten ounces will often suffice, and from twelve to sixteen will very frequently be well borne.

When local inflammation is superadded, then the extent and frequency of depletion must depend on the urgency of symptoms present, the importance of the organ affected, and the dan-

ger of its sustaining such injury as may be either immediately fatal to life, or ultimately subversive of health and vigour.

Purging is the evacuation next in power to blood-letting, and requires to be employed with much discrimination, if the full benefit of it is to be obtained. Simple as the process seems to be, by which the bowels are evacuated, or stools procured, I hardly know a term in medicine more vaguely employed than that of purging. It is continually used to express processes essentially different, and which require to be accurately distinguished from each other. The subject was fully discussed in my former essay, and as I have since been more and more convinced of the correctness of the opinions there stated, I shall recapitulate briefly my former observations.

By observing closely the effects of different purgatives, and the nature of the evacuations produced by them, we can perceive some well-marked differences in their mode of operation. One class simply evacuate the feculent contents of the bowels; another excite the exhalent arteries, producing copious watery stools; and a third stimulate the mucous follicles which so abundantly line the intestines, causing them to

expel the mucous matter which they so copiously secrete. When the bowels are merely inactive, their secretions healthy, and no constitutional disease present, the simple aperients of the first class suffice to obviate costiveness, and prevent feculent accumulation. Medicines of the second class are indicated when, besides unloading the intestines, it is expedient to abate arterial action, or allay fever by abstracting fluids from the system. Those of the third require to be employed either when the mucous secretions are so morbid as to excite or aggravate disease, or when they are too copiously generated in consequence of increased actions in the vascular system. The particular medicines in each class will readily present themselves to every practitioner; nor is it important to distinguish them by any very accurate arrangement. The same medicine will act differently on different habits, and under different circumstances; and it is the effect, not the medicine producing it, that is the chief object of consideration.

On the simple aperients, I have little to remark; they form a most useful class of remedies, and may be combined with medicines of the second and third classes, so as to assist in

producing every species of alvine discharge. The several aperient neutral salts are well known as the principal purgatives for procuring watery stools. When increased secretions from the mucous membrane are required, our chief reliance is on calomel, and some preparations of antimony.

The stomach forming a part of the alimentary canal, requires itself to be occasionally unloaded, which is accomplished by the use of emetics. And here too we must distinguish between those emetics which simply evacuate the floating contents of the stomach, and those which cause it to throw off increased mucous secretions. Even though vomiting be not resorted to, still the mucous secretions of the stomach may be discharged, by combining with purgatives such antimonial preparations as have an emetic operation.

Consistently with these views, it would appear that the most perfect evacuation of the whole canal must be that procured by combining medicines of each class; and we accordingly find the purgatives in most general use so constituted. When full purging is required, to allay fever, or lessen arterial action, no

practice is more common than to give at night a suitable dose of the extract of aloes or colocynth, which are simple aperients, combined with calomel, or calomel and antimony, medicines that produce mucous secretions, and followed next morning with a saline purgative, which, while it accelerates the operation of the previous dose, produces also copious watery stools. When these are not required, but yet a state of disordered intestinal secretion is manifested, it is often expedient to correct this latter gradually, the nature and activity of the cathartic employed being suited to the particular design; and whether it consist of colocynth, calomel, and antimony, or rhubarb, blue pill, and ipecacuan, the same principles regulate its administration, and similar effects are produced, differing in degree only.

With these principles to guide us in the use of purgative remedies, they may be so employed as to be most powerful auxiliaries of blood-letting, for relieving the second condition of plethora in its several stages. In the earlier stage, simple aperients, combined with mercurial and antimonial preparations, in moderate doses, are the most suitable. Accordingly as the febrile stage succeeds, saline purges may be more freely em-

ployed; and when local inflammations arise, these latter are indispensable.

A consideration of the several changes that take place in the body under febrile excitement, and a more minute observation of the immediate effects produced by increased arterial action on the several secretory and excretory organs, will shew the value and importance of purgatives in a still clearer point of view, and lead to a more discriminative employment of them. As a certain degree of arterial action is necessary to the healthy discharge of the secretory and excretory functions, it might be reasonably supposed that increase of such action would lead to a more energetic performance of these functions, and increased formation of what they respectively secrete; a supposition which the evidence of facts amply confirms, one of the earliest effects occurring in a state of febrile excitement being, an increased secretion of the natural mucus which lines the stomach and intestines.

Of the existence of such superabundant mucus during inflammatory complaints, sufficient proof will be afforded by inspecting the discharges brought off by particular evacuants, or occasionally by the natural efforts. With re-

spect to the stomach, the examination, if superficial, may mislead; for the mucus when recently secreted, being clear and colourless, is not readily distinguished from the surrounding fluid. Its tenacity, however, affords a ready means of detecting and demonstrating it; for if a rod or wire of any kind be passed through it, and elevated, it will raise from the watery fluid discharged by vomiting, the mucus existing therein, and sufficiently display its dense and viscid nature.

Similar secretions go forward at the same time through the whole intestinal canal, as evinced by the quantity of mucus which a dose of calomel, or calomel and antimony, administered under these circumstances, uniformly expels. And to the power of these medicines in dislodging such secretions, is owing much of the superior efficacy so long and so justly attributed to them in the cure of diseases. The increased secretions proceed immediately from the greater activity of the discerning vessels. These again are excited by the greater abundance and richer quality of the blood conveyed to them, by acting on which, they correct or moderate its exciting properties, and thus indirectly contribute to allay their own inordinate actions. Hence the

relief of the constitution, by means of the improved quality of the blood, may be fairly considered the final cause for which such increased secretions take place. In this view, we can perceive the importance of purgatives, not only as general evacuants, but as specially promoting those curative efforts by which the powers of nature endeavour to afford relief.

The want of sufficient attention being given to the peculiar effects produced by different purgatives, may account for much of the uncertainty and indecision that have prevailed in the employment of them. This part of medical practice has, indeed, been much improved by the labours of several modern writers, of whom Dr. Hamilton and Mr. Abernethy are pre-eminently distinguished. Still much remains to be learned respecting it. If the mucous matter be recently formed, and in no great quantity, a common purgative, of the drastic kind, will suffice to remove it, together with all such feculant lodgments as the bowels may contain. A source of injurious irritation is thus removed, the various secretory and excretory vessels are left free to perform their natural functions, or renew their increased efforts, and the progress of nature, in her endeavours to

restore health, goes uninterruptedly forward. If the mucous secretions are of older formation, consequently more viscid, more tenacious, and less easily expelled, the common purgative fails to give relief, and a doubt may thence arise on the propriety of purgative treatment. The error, however, here is, in employing a purgative inadequate to producing the effect required; for if a competent dose of calomel and antimony be combined with the simpler cathartic, to supply its deficiencies, the result will rarely occasion disappointment. If saline purgatives be given with the intention of cleansing the intestines when loaded with mucous secretions, they will very imperfectly answer such purpose; while if persevered in, when constitutional evacuations are no longer required, they wantonly exhaust strength, and do sensible injury. Even the powerful remedy which a combination of calomel and antimony with drastic purgatives affords, may be misapplied; and if given when the bowels are irritable, with little mucus present, they may cause much distress or injury, and an useful remedy thus fall into unmerited disrepute. In fine, by neglecting to ascertain the precise nature of the evacuation required, and to apply with

accuracy the proper remedy, we must ever run considerable risk of disappointment in the effects expected from purgatives, and of so misapplying them as really to do injury, even in the cases where purging judiciously regulated is the best, perhaps only, cure for the disease.

The quantity of mucus secreted in the stomach and intestines under increased vascular action, is often considerable. It lines the whole canal, and when accumulated (and more especially when condensed by long retention) is the cause of many powerful medicines passing through without producing their ordinary effects; for in consequence of the interposed mucus, the medicines come imperfectly, or not at all, in contact with the living fibre, on which alone they can produce effect. They pass, therefore, as if either the living fibre were torpid, or the medicine inert, when neither supposition is correct. In my former essay, I have adduced many facts in proof of this circumstance, and have drawn some important practical conclusions. My object in dwelling on it here is, to enforce the expediency of judging, not from the quantity of medicine administered, but from the effects produced; and above all from a constant inspection

of the evacuations, without which it is impossible to form an accurate judgment either of the propriety of purging, the extent to which it should be carried, or the period for which it should be continued.

The preliminary remarks, which I have now completed, on the subjects of blood-letting and purging, will enable me to pursue with clearness and advantage the investigation of the specific diseases to which the second stage of plethora is liable. When it is considered that these remedies are by far the most powerful means we possess of acting on the human constitution, that they are the direct agents for correcting those constitutional derangements in which a large proportion of human maladies have their origin, and that all other remedies are but subsidiary, I trust that the discussion given to them will be deemed only commensurate to their importance.

It is not my intention, nor would it be consistent with the purposes of this tract, to give minute treatises on every disease to which nosologists have assigned a specific character. I wish to supply principles rather than rules, and shall therefore confine my future remarks to

those diseases which are peculiarly calculated to illustrate the principles I inculcate; are of interest from their frequency, and the sufferings they occasion; or are suited to receive essential benefit from the use of the Bath Waters.

CONSIDERATION OF GOUT.

NO disease can answer the foregoing characters more completely than gout: invariably connected with a plethoric state of the system, its frequency, and the sufferings which it inflicts, entitle it to particular attention; and it admits of signal relief by the judicious use of the Bath Waters, notwithstanding what some eminent writers have hastily, and with very defective knowledge of the subject, alleged in depreciation of their efficacy. A tolerably full elucidation of this disease, therefore, is peculiarly suited to the purposes for which the present work has been undertaken, and will, I trust, not be unacceptable.

The phenomena of gout are so familiarly known, that a minute history of its multiform symptoms would be superfluous and unprofitable. It is characterized by a state of vague indisposition, succeeded by local inflammation of a peculiar kind, on the occurrence of which the

previous derangements become sensibly relieved, and on the inflammation subsiding the general health is restored, some degree of weakness alone remaining in the joints affected. At first, the paroxysms are of short duration, and recur only at considerable intervals, leaving but few traces of their visitation behind. In time, they become more frequent, affect a greater number of joints, continue longer, and produce more or less of organic change in the affected parts. At length, by progressive increase of duration and severity, the intervals are inconsiderable, the several joints become enlarged, stiffened, contracted, calcareous depositions take place, ulcerations follow, and the extreme of gouty decrepitude is the lamentable result. This catastrophe is not unfrequently anticipated by the occurrence of apoplexy, palsy, or epilepsy; by inflammation of the lungs, liver, bowels, or brain; by stone, gravel, jaundice, dropsy, and several other fatal maladies, the very least of which may destroy life.

Thus the sufferer has not only his own peculiar malady to contend with, but has also a morbid liability entailed on him by his gouty habit, which, if not corrected by suitable regimen,

conducted under a clear conception of the nature of his distemper, is pretty sure to render him the victim of some irresistible disease. Even if he should be so fortunate as to escape these several contingent ailments, still the miseries consequent on the uninterrupted progress of his peculiar malady are such as to make every rational attempt to bring the disease under medical control, so as to mitigate its violence, shorten its duration, avert its recurrence, and lessen the ravages which it makes on the frame, entitled to the most serious attention. That this can be done I am convinced from experience, and though I do not hope to be more successful in making proselytes than many able writers who have maintained similar doctrines, I shall yet feel justified in thus announcing my opinions, if I succeed in guiding aright even a small portion of those who have discernment to perceive the truth, and firmness to obey its dictates.

The complicated histories of gout, with which medical writings abound, are only the endless modifications of the foregoing more simple series of morbid phenomena, to which the differences of age, temperament, modes of life, and other influential accompaniments give rise.

Viewed either abstractedly or in the aggregate, they exhibit essentially only a plethoric state of constitution passing into one of febrile excitement, and ending in specific partial inflammation. The local consequences of such inflammation are but of secondary importance, for if by judicious medical discipline the constitutional plethora be corrected, so as to avert or mitigate the ensuing inflammation, and if this, when it occurs, receive the decided relief which medical treatment is capable of affording, these consequences will either be wholly prevented, or rendered so trifling as to cause little injury. When it is considered that gout may arise under every state of plethora described in the early part of this essay, and that its natural progress has been disturbed, and rendered intricate by greater diversity of treatment than most other diseases have experienced, there will be no difficulty in comprehending how its pathology has been rendered complex and obscure, and its treatment unsteady, contradictory, and unsuccessful.

In gout, as in many other diseases, mankind seem to have been at all times deluded with the vain hope of discovering a specific. Irrational as any such expectation must ever be, it yet pos-

sesses too many charms not to captivate and mislead numbers whose judgments on subjects more within their comprehension would be sound and unerring. That it should beguile the weak or the sensual, can occasion no surprise. Such ever shrink from any view of the disease that requires an abandonment of luxurious indulgence; and are consequently disposed to regard with peculiar complacency each idle proposition that affects to cure them by means compatible with a continuance of their gratifications. The consequences of this fostered hallucination have been eminently injurious, not only by diverting attention from that inductive investigation of the disease which could alone explore its real nature, and devise its proper treatment, but also whenever any remedy of unusual efficacy was happily discovered, by causing such indiscriminate application as to render it extensively injurious, and ultimately destroy its reputation.

If a juster philosophy prevailed with regard to gout, such senseless errors could no longer be committed; medicines of peculiar or appropriate efficacy would be adapted with discriminating care to those states of the disease only which they were competent to relieve, and every

such remedy would prove a real acquisition. If I can succeed in making even an approach to a sounder pathology, one capable of leading to more certain and successful practice in the various forms of this hitherto refractory malady, my labours will not be in vain.

The treatment of gout must be considered in its respective connexion with the three conditions of plethora already noticed; and as every form of this disease will come under one or other of these heads, it is clear that a view thus comprehensive must include all that it can be necessary to represent concerning it. Ere I proceed, however, to the separate consideration of each form, some remarks on the hereditary dispositions common to all becomes necessary.

That gout is hereditary, is a truth too well established to admit of dispute. I mean not by this to assert, as has been advanced by some writers, that gout never occurs except from hereditary taint; for cases continually present themselves in which no such connexion can be traced. Dr. Scudamore, in some interesting tables, has shewn, that of a given number, the larger proportion acknowledged no hereditary disease. The fact of hereditary taint, however, is not thus set

aside, and has been too strikingly exemplified in numberless instances to be easily shaken; but having little influence on either the pathology or treatment, it is a point of little real importance. The only consequence seems to be, that when it exists, gout will take place under circumstances which, independently of this tendency, would not have power to originate it; and hence this salutary caution is suggested to those who are aware of such hereditary claim: to guard, with particular care, against the several exciting causes by which a gouty disposition may be called into action. The distinction which assigns a hereditary character, not to the disease, but to the disposition for acquiring it, and which even subdivides this tendency into disposition and predisposition, may be just, but is too subtle for any purpose of practical utility.

When gout arises, for the first time, in a constitution otherwise healthy and vigorous, consequently under what I have described as the first condition of plethora, there can be no reason for not employing the same constitutional treatment that would be resorted to under any other active inflammation. The plethora and inflammatory action are abundantly demon-

strated by the attendant symptoms; there is a full strong bounding pulse, a hot skin, and white tongue, with all the concomitants of active fever. The local inflammation, so far from militating against the employment of active practice, affords a strong reason for promptly resorting to it; for if not speedily allayed by suitable depletion, severe pain is unnecessarily prolonged, disorganization is hazarded, and greater debility of the parts affected ensues. On the first occurrence, therefore, of a gouty paroxysm in an otherwise healthy subject, a full blood-letting should be employed, and the bowels should be freely purged with a competent dose of calomel and antimony, followed by a saline cathartic. If these means succeed in making impression on the system, so as to reduce the pulse nearly to the healthy standard, the general fever should be treated by salines, antimonials, and aperients, administered as in any other febrile excitement. If the pulse again rise in frequency, strength, or hardness, with increased heat of skin, and renewed whiteness of tongue, a repetition of blood-letting and purging will be required.

The only distinction I would make between such an attack and any of the simple phlegmasiæ

would be in the topical treatment; for I would not abstract blood locally under such circumstances, nor by any direct repellents interfere with the process instituted by nature, further than the urgency of suffering might demand; which, however, will seldom be extreme, if the constitutional treatment be carried to the necessary extent. That the final cause of a gouty paroxysm is the relief of the system, and that it accomplishes this purpose to a certain extent, are truths sufficiently established; and if the relief thus given were complete, the interference of art would be superfluous. But there is strong reason for believing that the paroxysm does not effectually relieve the surcharged system, and hence the assistance of art becomes necessary in aid of the operations of nature. So much, however, is accomplished by the gouty effort, whatever its intimate nature may be, that it should not be arrested suddenly by local depletion or repellent applications. The proper indications are to relieve the constitution, and moderate the local inflammation, so as to prevent the disorganization of structure to which it would otherwise lead. This is best accomplished by the constitutional treatment already directed. The

converse of this practice, or that which, disregarding the constitutional derangement, directs its efforts chiefly to subduing the local inflammation, has been recommended at different times, and revived of late years, but no practice can be more hazardous, or more at variance with sound pathology.

By promptly relieving the paroxysm, through the means of constitutional treatment, suffering is abridged, danger averted, convalescence accelerated, the recurrence of disease rendered more distant, and, what is of no small importance, the confirmation of the gouty diathesis, which the duration and repetition of paroxysms invariably strengthen, is checked and restrained. Were incipient gout always treated on these principles, and the premonitory signs which mark its return detected in sufficient time to employ the depletion necessary for averting the approaching paroxysm, we should have few victims of reiterated gout, and this disease would soon cease to be the opprobium medicorum which it has been so long considered.

This last remark may seem rather at variance with the previous observation, which assigns so much importance to the curative efficacy of

the gouty paroxysm. But there is in reality no contradiction; for though I conceive it injudicious wholly to suspend the natural effort when it has taken place, or to interfere with it otherwise than through the medium of the constitution, I see no objection, theoretical or practical, to rendering such effort unnecessary by adequately relieving that state of constitution which gives rise to it. This condition is unequivocally plethoric, and by the simple treatment formerly prescribed for relieving the first condition of plethora, the constitution may be so effectually unburdened as to supersede altogether the gouty effort with perfect safety, and incalculable benefit.

The premonitory symptoms which mark the renewal of plethora, have been already described with sufficient distinctness. In gouty habits other well known derangements, chiefly of the stomach, are additional harbingers of a morbid crisis, assist in calling attention to its advancement, and afford ample indications for anticipating it. If closely watched, and judiciously treated by adequate depletion, with persevering care afterwards to adopt the proper regimen for preventing a recurrence of plethora, I little doubt the perfect practicability of anticipating

every threatened attack, and of finally extinguishing the disposition to gouty action, by rendering the constitution independent of it.

It must be remembered that these several remarks apply to gout as occurring in the simplest form, and in an otherwise sound constitution. When it arises in habits of inferior vigour, vitiated by other diseases, or broken by the repeated accession of gout itself, the treatment, though similar in principle, must yet be greatly modified; and on the accuracy with which the necessary measures of relief are adapted to the existing powers, and suited to the concomitant derangements of structure or functions, will the ultimate success certainly depend.

Before dismissing this part of the subject, I wish to discuss the merits, and point out the proper application, of colchicum, one of the most powerful auxiliaries in the treatment of gout with which I am acquainted. A full dose of this medicine purges copiously, allays pain, and lowers the pulse. These effects are produced with greater certainty if the fulness of circulation be previously reduced by blood-letting, and the mucous secretions of the intestines evacuated. When inflammation is high, as marked by a

strong bounding pulse, hot skin, and loaded tongue, blood-letting should always precede the use of colchicum. But in cases where arterial action is more moderate, and direct depletion from any cause questionable, this medicine may be resorted to with peculiar propriety, and eminent advantage. Its operation seems to combine the several advantages of bleeding, purging, and sedatives; and is, therefore, particularly adapted to those cases where active depletion is inexpedient. In treating hereafter of the several modifications of gout, in so many of which venesection must be sparingly employed, or wholly withheld, I shall have occasion to recommend the free employment of this valuable remedy. And as the forms in which this medicine is given, with the modes of administering it, are of much importance, I shall fully explain my own practice in both respects, without presuming, however, to limit the application to those methods which I have been led to prefer. Various preparations, and different modes of exhibition, may, in the hands of other practitioners, be quite as salutary as those which I employ; for, as I observed on another occasion, the effect, not the form of prescription, deserves regard.

The preparations which I have tried are, the vinous tincture of the root, the vinous and spirituous tinctures of the seeds, and the powdered seeds. Of these, I decidedly prefer the tinctures of the seeds, as being more uniform in their strength, and more certain in their operation. It might reasonably be expected, from the virtues of colchicum being found to reside in the seeds, as well as in the root, that the former would yield a medicine of greater uniformity, being in a state of more perfect and determinable maturity, requiring less care in the collection and preservation, and being less liable to have their powers impaired. My experience of the several preparations fully confirms this supposition.

It has been already remarked that colchicum purges, abates pain, and lowers the pulse. Its sedative powers, though sensibly connected with its evacuant, are not, however, wholly dependant on them. The motions produced are copious, frequent, and watery; and the operation seems more analogous to that of the saline purgatives than of any other cathartic. The number of motions is sometimes considerable, without any proportionate depression of strength ensuing. I have known even twenty motions occasioned by

a dose of colchicum ; the patient not complaining of the least debility. These circumstances will guide our employment of this medicine as a remedy for gout.

Where the plethora is considerable, undoubtedly blood-letting should precede its use ; for colchicum seems to remove the more fluid parts of the blood only, and these being quickly renewed, the relief obtained by this medicine alone cannot be so perfect or permanent as when blood-letting is also employed. Though the sedative powers of colchicum are valuable assistants to blood-letting in abating arterial action, they are yet no perfect substitute for this remedy in cases of high inflammation ; neither are its evacuant qualities capable of superseding those cathartics which expel mucous secretions. In cases, then, of active gout occurring in a full habit, I would invariably bleed, and purge with calomel and antimony, before having recourse to colchicum. It is possible that colchicum might occasionally diminish pain, and abate inflammation, more speedily if administered earlier. But it should never be forgotten, that in the treatment of this, and all other diseases, the important object is, not to allay

pain, or combat symptoms, but to restore general health, with the least possible injury to the structure or functions of particular parts. In this respect the physician's province seems precisely analogous to that of the Roman Dictators, who were appointed not to combat an enemy, nor quell an insurrection, but to take care that the Commonwealth received no injury. In like manner the physician should provide, not for the relief of a mere transient or other incidental ailment, but should so conduct the disease to its termination, that no permanent injury be inflicted on the constitution. Unhappily, far from being left to the uncontrolled exercise of his judgment in accomplishing this end, he is too often compelled by prejudice and caprice, to adapt his practical treatment, not to the real nature of the disease, but to the preconceived notions, impatience, and ignorance of those by whom he is surrounded.

When colchicum is to be employed, it may be given either in full doses, so as to purge actively, or in divided doses frequently repeated. A dram, dram and a half, or two drams of the tincture of the seeds should be administered at night, and repeated, if necessary, next morning. This quantity will generally purge briskly; but

if it fail, a third dose the following night will pretty generally succeed ; at least I have seldom found it necessary to exceed these quantities. The full operation being thus obtained, I usually continue its use in smaller doses, ordering twenty drops or minims three times a-day in any of the common saline mixtures. Even this dose will occasionally purge so actively as in a short time to require its discontinuance ; in which case, the antimonial salines should be given without it, as long as febrile symptoms render necessary.

By means of the treatment now prescribed, a paroxysm of gout is capable of being effectually relieved, the constitution re-established, the powers of the affected limb preserved, and the gouty disposition diminished. The value of such practice is most conspicuously displayed when contrasted with the negative treatment so generally resorted to, by which the paroxysm is greatly prolonged, the constitution very imperfectly relieved, the structure of the joints sooner or later utterly disorganized, and the gouty diathesis confirmed, and rendered inveterate. If gout were always of an active character, and confined to constitutions naturally vigorous, it is highly probable that the medical treatment would never

have been perverted so egregiously as it has been. But this disorder occurs under every condition of plethora, and in all degrees of animal power, from the highest vigour to that helpless debility which can scarcely generate a paroxysm. Cases of this latter description will not bear active discipline; if employed, the patient must rapidly sink under it; and the danger arising from such maltreatment has, no doubt, often been the means of exciting an alarm well calculated to make a deep impression on those who are more peculiarly liable to this disease.

The too frequent error, also, of prescribing for the name of a disease, rather than its peculiar condition, may have oftentimes caused extensive injury to result from ill-judged activity of practice, and thus have contributed to bring this method of treating gout into disrepute. Be the causes what they may that have so often occasioned active practice in gout to be resorted to, and again abandoned, it must be evident that if this disease in its simplest form, and highest degree, is so essentially benefited by the measures here prescribed, a modification of the same practice must, upon every principle of sound reasoning, be applicable to all inferior degrees of the

same malady. Nor need this consideration alarm the most timid; for as the circumstances of each case sufficiently indicate when evacuations may be safely employed, and the extent to which they may be carried, no rational practitioner can ever be tempted by the doctrines here maintained, to carry them beyond the point of salutary endurance. Indeed, he has many strong inducements to keep far within it; and provided these principles of treatment be not compromised, from vain apprehension, or too great pliancy of disposition, I should not be anxious, in a great number of cases, for the practice to be carried to the utmost limit of even safe and salutary employment; for as medical aid must necessarily be administered by men of various capacities, all of whom may not be equally qualified nicely to adapt the principles of medical science in the details of practice, it will be the safer plan to fall short somewhat of that activity which would most effectually relieve the disease, rather than run any risk of exceeding it.

These prudential considerations will have their full influence on every practitioner, however enlightened. The more experienced and intelligent will, of course, feel most confidence in their own powers of accurate discrimination,

and will pursue proper measures with greater energy and less hesitation. All, however, must yield occasionally to prejudices long established, and to fears which the sensitiveness of friends cannot always either relinquish or control. But the practitioner will give way to such impediments with greater safety to his patients, and satisfaction to his own feelings, by keeping steadily in view the principles here inculcated, and regulating his practice in modified obedience to them.

To this class of gouty patients there is little room for prescribing the Bath Waters; and indeed they are seldom resorted to under such circumstances. The attack in these cases is not preceded by indisposition sufficiently severe or protracted, to call for the peculiar powers attributed to these waters of accelerating the paroxysm; and neither the tediousness of convalescence, nor the impaired powers of the gouty limbs, are such as to render a journey to Bath necessary.

The true principles for the treatment of gout being thus laid down, and the application of the most essential remedies prescribed, it remains only to consider the several modifications of the disease which arise from its connexion with the

second and third conditions of plethora. As these conditions pass insensibly into each other, and coexist in every conceivable proportion, I shall consider the remaining varieties of gout, not as distinguished into classes, but as forming a descending series from that in which considerable nutritive plethora exists with little excrementitious repletion, to that where the latter condition so predominates as to render any intermixture of nutritive plethora scarcely discernible.

This, then, is the proper place for considering the general nature of the third condition of plethora, and prescribing the appropriate treatment. As this condition has never, to my knowledge, been made the subject of pathological discussion, or been expressly noticed by medical writers, it will be necessary to state the grounds on which I represent such a condition to have any existence. The speculative grounds I have already adduced in my former essay, an extract from which will be found in an appendix to the present work. A careful observation, pursued for many years, of several morbid phenomena, which admit no other rational explanation, has sufficed to satisfy me of the truth and accuracy of my former observations.

MEDICAL TREATMENT OF THE THIRD CONDITION
OF PLETHORA.



THE general phenomena which denote this condition, I have already cursorily noticed. A sallow aspect and dusky skin; the pulse low, soft, and compressible; the surface of the body, for the most part, harsh, dry, and obviously deficient in natural transpiration; the tongue moist, clean, red; the appetite capricious, often craving and voracious, with an endless train of dyspeptic ailments; the alvine discharges perseveringly foul, dark, slimy, pitch-like, and exhibiting no traces of healthy fæces; the urine high coloured, depositing more or less of dark, often fœtid sediment: these, with decline of flesh and strength, are the general characteristics of this state. The condition itself, I believe to arise from the imperfect discharge of excrementitious matter; and the depraved state of the several excretions I regard as resulting

from the laboured, though ineffectual, efforts of the constitution to accomplish its own purification.

It may afford a clearer conception of this condition, and its attendant phenomena, to contrast them with what occurs under the increased excitement of nutritive plethora. In the latter, the general aspect is more full and florid; the surface hot and dry, or inclining to moisture; the pulse hard and frequent, or full, strong, and bounding; the tongue white and furred; the stomach inclined to nausea, with thirst; the stools feculent, though foul, and charged with mucus.

In specifying the symptoms of excrementitious repletion, it may be imagined that I have included several which belong to the different forms of hepatic disease. That they are frequently regarded as evidences of diseased liver, and treated accordingly, I am well aware; but that they are certainly to be met with where there is no organic derangement of this viscus, I am fully convinced. It is true that the functions of the liver, in common with the whole alimentary canal, are greatly depraved; but they are so, not from any primary defect or disturbance of their own powers, but from being required to act in-

ordinately on a vitiated mass which nature is sedulous to purify.

Accordingly as more or less of nutritive plethora becomes combined with this condition, the constitutional efforts increase, and various degrees of febrile and inflammatory excitement ensue. In proportion as this excitement is energetic, and as measures of suitable activity are employed for its relief, so is the vitiated state of the blood corrected, the secretions and excretions improved, while general health and strength amend. The increased secretions from the bowels seem to be the natural discharge by which nature aims at getting rid of such impurities. To promote them, therefore, by suitable purgatives, at the same time supporting strength with a lightly nutritive diet, is the first indication.

When relief to a certain extent is thus afforded, the powers of the constitution rally, and a febrile effort is made to assist in expediting the work of purification. As this advances, depletion should be more active, and the diet less stimulating. When sufficient excitement exists to warrant the employment of blood-letting, we may then consider the curative process in the most favourable train. Perhaps the powers

of the constitution are hardly adequate to rectify any high degree of this peculiar derangement without the extraordinary efforts which a state of febrile excitement supplies; and hence we see experienced practitioners often hail the appearance of febrile symptoms, in chronic complaints, as announcing a more remediable form of disease.

During the early languor of this condition, various tonics and stimulants are found highly beneficial; and it is to the various degrees of this state, especially when it becomes combined with more or less of nutritive plethora, that the peculiar treatment so successfully employed, and ably advocated by Mr. Abernethy, is applicable. From the explanations here given, there can be no difficulty, either in understanding the nature of the symptoms which he describes, or the *modus operandi* of his remedies.

Perhaps there is no auxiliary remedy more salutary, or better suited to afford valuable relief under these circumstances, than the Bath Waters. By their external use they purify the skin, and thus tend to restore one most important excretory to a state of greater efficiency; while by their tonic and stimulant properties, so grateful to the stomach, and invigorating to the

whole frame, they support it under those curative efforts which medical skill ought to foster and promote.

In every view that can be taken of this condition, it must be considered as intimately connected with the state of cuticular excretion, from the defect of which it is more likely to arise than from any other cause. When we reflect on the large amount discharged by this excretory under a healthy state of the system, that, according to accurate experiments, more than one half the entire ingesta is carried off by transpiration, it will be readily conceived that great excrementitious accumulation must result from impeded cuticular excretion. A constitution naturally feeble sends the blood to the surface too languidly for the exhalent vessels to act with full power, whence excrementitious accumulation commences; and as the effect of this is directly debilitating, it serves to aggravate the cause; and thus the foundation is laid for a broken constitution, and many inveterate chronic diseases. The systematic bathing to which patients resort on visiting Bath, is well calculated to restore the weakened functions of the skin, and, by diffusing circulation through every part of

the system, to call into action more extensive powers of restoration. It is possible that methods still more effectual than simple bathing might be employed for improving the skin, by detaching the quantities of dry and hardened cuticle with which it is so often encased; and when I have seen large portions of the body harsh, dry, and nearly impenetrable to exhalation of any kind, I have often wished for access to some effective process for getting rid of the dense and hardened cuticle, such as is described to take place in the vapour baths common in Russia and the north of Europe. The establishment of similar baths in this country, I should consider as greatly increasing our powers to restore health and combat diseases.

Something similar may, perhaps, be effected by the vapour bath ingeniously contrived by Mr. Wallace, of Dublin, and applied by him, with much success, to the treatment of cutaneous diseases, and several other maladies. In any disease in which the surface of the body was hard and arid, I should consider the use of this bath likely to be of eminent service. And though not capable of supplying the place of the Bath Waters in relieving the condition of the system

now under consideration, it might, no doubt, be beneficially employed in aid of them. The great superiority which the Bath Waters must ever have over this, and every remedy of mere external application, consists in the peculiar tonic and stimulating properties which they possess when internally administered. In the extreme cases of this condition, the greatest failure of power that occurs is in the stomach and digestive functions, in improving which the Bath Waters are of very remarkable efficacy. They also promote diuresis, and thus call into increased activity another excretory for depurating the mass of circulating fluid, while, by exciting the whole vascular system, they powerfully assist the efforts of nature in forming the stage of mild febrile excitement, which, as has been already observed, forwards more rapidly the work of purification.

By means of these combined effects, the Bath Waters, judiciously administered and assisted by suitable medical treatment, are capable of relieving this condition to an extent which the whole materia medica, without such aid, would often fail to attain. From the foregoing pages it may be collected, that I do not consider the benefits of these waters confined to cases void of

inflammatory character. On the contrary, I believe that the cases most benefited are those where the constitution has already commenced a curative process by forming a state of inflammatory excitement. Under high and active fever or inflammation they are certainly unsuitable; but in the low inflammatory state of constitution which so often accompanies chronic diseases, they may always be beneficially employed, when conjoined with suitable evacuations.

From the descriptions given of the several conditions of plethora, the peculiar phenomena of each may be readily distinguished in those complex cases where the second and third are so constantly and so variously combined. Accordingly as the third condition predominates will purging, nutritive diet, and moderate stimulation be requisite. When the second prevails, direct depletion by blood-letting is necessary, and a more cooling regimen should be enjoined, but not the full antiphlogistic discipline so indispensable in cases of high inflammatory action.

The combination of stimulant remedies with depletion is a part of medical practice that seems never to have been properly discussed, though frequently noticed incidentally by practical wri-

ters, and often conspicuous in the popular and empirical treatment of diseases. It is assuredly one of the utmost importance, and will, I trust, receive some illustration from the present work. I am the more anxious to bring this matter under consideration, because a misapprehension respecting it seems of late years to have had considerable influence in causing the Bath Waters to be withheld from patients manifesting any slight febrile symptoms, who might nevertheless have used them with the utmost advantage. This error appears to have arisen from trusting too much to speculative reasoning, without sufficiently regarding the evidence in favour of the salutary administration of these Waters which experience had so copiously supplied. Considerable light having been thrown on several diseases of excitement, formerly misconceived as cases of pure debility, in which course of enquiry the late lamented Dr. Parry, of this city, stands pre-eminently distinguished, it has been somewhat hastily inferred, that in all such cases, stimulants of every kind were improper; and the Bath Waters being of acknowledged stimulant properties, it was concluded that in such complaints they could be no longer admissible.

I trust, that in the foregoing pages I have afforded good grounds for questioning the correctness of this reasoning, and for believing that both the febrile nature of such diseases, and the stimulant qualities of these Waters, may be admitted, without justifying the conclusion drawn from them. If the pathology which I have endeavoured to illustrate be not utterly groundless, and the facts which support it not wholly visionary, then, though diseases possess a character of vascular excitement, and the Waters are stimulant, still may the latter, under judicious management, be highly salutary.

CONSIDERATION OF GOUT, CONTINUED.

AFTER thus briefly considering the third condition of repletion, and its manifold combinations with the second, I shall now resume the consideration of gout. It is not my intention, by any means, to attempt a complete history of this complex and variable malady. I consider its numerous and diversified species only modifications of the simpler phenomena already noticed as constituting gout, combined occasionally with peculiarities arising from accidental events. Minute description of complicated symptoms would, therefore, but incumber a volume intended for far different purposes; and, indeed, be wholly unnecessary, having so lately been copiously and ably recorded by Dr. Scudamore, in his valuable treatise; and before him by many other eminent writers. My object is not to supply a manual of practice in gout, but to afford some lights capable of guiding the prac-

titioner in understanding its nature and character, and in directing its treatment. From what has been written, it may be clearly inferred, that the treatment prescribed for gout, as it occurs under the first condition of plethora, will not be required to the same extent in inferior degrees of bodily vigour and arterial excitement. I lay it down as a general position, that the activity of practice should be in direct proportion to the natural strength of constitution, and the degree of nutritive plethora existing.

Accordingly as the natural vigour is less, and especially when it is further reduced by different degrees of excrementitious repletion, must direct depletion be used with proportionate caution; for no promptitude of relief would justify the hazard incurred by even an approach to excessive evacuation. So far am I from inculcating an indiscriminate use of the lancet in gout, that I would employ it with the utmost caution, and never but under those circumstances in which repeated experience had established both its safety and efficacy. With a full hard pulse, hot skin, and loaded tongue, I would not hesitate to bleed, purge, and administer colchicum; and this treatment has been had recourse to in my

own practice with perfect success in abridging the paroxysm, hastening convalescence, restoring the affected limbs speedily to their wonted power, and greatly protracting the interval of exemption; and this even in cases of long continuance where the previous severity of disease had consigned the patients to a state of helplessness and decrepitude, which confined them to the couch for two thirds of every year.

As the present subject is one on which unfounded alarm is easily excited, and misrepresentations readily circulate, I am rather anxious not to be misunderstood; nor do I think that any one who gives these pages an attentive perusal, will so far misconceive my meaning as to suppose I am advocating a rash or thoughtless use of the lancet. The vigour of constitution being the standard by which depletion should be regulated, it follows, that when such vigour is deficient, measures of the same activity ought not to be employed as are necessary when the habit is robust. In extreme cases, where the natural languor and debility are confirmed or increased by being combined with a high degree of excrementitious repletion; when muscular debility is excessive; the pulse soft, low, faltering; the

tongue moist, of a bright red colour, or scarcely whitened; the bowels perseveringly foul; and the gouty effort feeble and imperfect; in such cases wine, stimulants, and invigorating treatment, must supersede every evacuation except purging. In such I would hardly resort even to colchicum, lest, by abating the gouty action, it should throw back on the constitution what the gouty effort was endeavouring to expel. The object in such case should clearly be, to renovate the general health by improving the state of the bowels, and giving strength and tone to the whole system. When, by the effect of such treatment, the gouty effort should become more vigorous, and marked by clear evidences of renovated power in the general constitution, then might an approach be made to that effectual treatment by which active gout is so eminently relieved.

It would be impossible, perhaps, here, to follow up these views in their application to all the varieties of this disease that are constantly met with; and the attempt, far from practically elucidating the subject, would tend, I fear, to complicate and obscure it. If I have succeeded in conveying to my readers the impressions of my own mind, they will be at no loss in applying

the foregoing principles to whatever form of disease may present itself.

With respect to the subsidiary means of allaying pain, and combating casual symptoms, I can add nothing to what has been so copiously and minutely detailed by practical writers on this subject. Generally speaking, I consider local applications hazardous and injurious. If they succeed in suspending the local inflammation, they either injure the constitution, by interrupting a process of nature which is in itself of salutary tendency, while they fail to supersede the necessity, as is done by constitutional treatment, or, as the lesser evil, they cause a migration of disease to some other joint. Should the translation be to the stomach, lungs, or brain, the patient will have no reason to congratulate himself on the transient and valueless abatement of local suffering thus dearly purchased. And here I may cursorily remark, as convincing evidence for the correctness of the principles maintained in this work, that whenever gouty inflammation is so transferred, the most timid practitioners are compelled to resort to the fullest activity of depleting treatment, in order to avert the imminent dan-

ger; and without which the patient would inevitably die. It is not easily to be comprehended why such occurrence should give to the disease a character not previously possessed, nor why that depletion which so essentially benefits the lungs and the brain, when assailed by gouty inflammation, should not be of proportionate advantage while the disease was confined to the extremities.

Provided the constitutional treatment be conducted on right principles, I have no objection to abate suffering by such local remedies as incur no risk of repelling or causing a translation of the inflammation. Of these, the evaporating lotion recommended by Dr. Scudamore is a safe and useful application, which I have ordered with sensible relief, and without any injury appearing to result. The various dyspeptic ailments that occur in gout, must be met by the appropriate remedies with which all practitioners are familiar. For permanently restoring the stomach, the best means are those aperients, formerly noticed, that cause both stomach and bowels to evacuate their mucous secretions, such as combinations of colocynth, calomel, and antimony, or rhubarb, blue pill, and ipeca-

cuan. When these prove inadequate, minute doses of Epsom salt, given at intervals, in infusion of cascarilla, with some bitter or cordial tincture, are of signal benefit. As a general tonic both to the stomach and the whole system, I can recommend no remedy equal in efficacy to the Bath Waters.

Ere the subject of gout is finally dismissed, I wish to offer a few remarks on the effects of mercury in this disease. It is a well known fact that mercury, taken to the extent of affecting the system, will, in gouty habits, bring on a paroxysm; and the fit thus excited is generally severe. This circumstance seems to have created a strong distrust of mercury, as a remedy in this complaint; and one of our latest writers expresses himself in strong terms respecting the hazard attending its use. My own experience confirms the facts, both of mercury exciting gout, and of the ensuing paroxysm being unusually violent: but it has led me to draw from them a very different conclusion; for I am confident that if such paroxysms are treated on the principles laid down in this work, the recovery, far from being protracted, will be as speedy as under any other circumstances; and that subsequently the consti-

tution will be much more relieved than by a spontaneous paroxysm, though if such attack be consigned to the ordinary course of negative treatment, considerable ravages and a tedious recovery may undoubtedly be expected.

The fact appears to me valuable from evincing a power in mercury of exciting gouty action, such as may, on suitable occasions, be beneficially employed. Its indiscriminate use would, of course, be as unwise as abstaining wholly from its employment, merely because under improper management injury had arisen. The case of Germain, hereafter given, affords an instance of gout excited by the full action of mercury. This man had sublimate administered for a troublesome chronic eruption. In a week he had swelled face and copious salivation; a severe and general paroxysm of gout immediately ensued; yet by moderate blood-letting, and other suitable treatment, he was completely relieved within ten days, and his general health has since been considerably improved.

This effect of mercury I can only regard as analogous to the power it possesses of exciting the constitution in any other disease; and I should not hesitate to avail myself of this medi-

cine in any case where it was deemed desirable to expedite gouty action. I should, of course, not recommend such a measure, unless under great general indisposition, such as admitted of relief from gouty effort only, or where the strength of constitution was such as to justify the employment of active means on the paroxysm being excited. This view of the subject is in perfect conformity with the doctrines maintained throughout the present work, and is so fully supported by all that has fallen under my own observation as to leave no doubt in my mind of its correctness.

CASES OF GOUT.

TWO highly illustrative cases are reported in my former essay. The few following are taken from the journals of the Bath Hospital.

CASE I.

HENRY SOUTHERN, a publican, aged 43, was admitted a patient of the Bath Hospital, Dec. 27, 1821. For twelve years he had been a sufferer from gout, which confined him for several months every year. Latterly he was scarcely free from the disease four months out of twelve; the paroxysms having been long, and recovery slow. The last fit had occurred about two months previously to admission, and from it he was but just recovering, his ancles being

still very weak. Aperients and the bath were prescribed.

In the middle of January he complained of pain and stiffness of the right ankle, knee, and hip. Colchicum, which I was only then beginning to employ, was given him in full doses. It required six to purge moderately, which afforded some relief. On the 5th of February he had a severe general attack of gout; the pulse 96, tongue very white. Eight ounces of blood were taken, and colchicum was again administered. The blood was much buffed; two doses of colchicum purged copiously; and the gout rapidly declined. On the 18th, all swelling was removed, the skin cool, tongue clean, pulse soft and natural; no complaint remaining except weakness of ankles, to which he had long been subject, and which was afterwards benefited by blistering. No other attack occurred, and he was discharged on the 22d of May, improved in every respect, having recovered and enjoyed the use of his limbs during his residence in the Hospital to an extent to which he had long been a stranger.

CASE II.

JOHN GLESON, aged 46, full and corpulent, became a patient of the Hospital July 19, 1822. He had suffered much from gout for six years. On the night of admission he had an attack in the hand and elbow; his pulse 96, full, and strong; skin hot; tongue much loaded. Twelve ounces of blood were ordered to be taken from the arm, a calomel pill given at bed-time, and a purging draught next morning; afterwards a saline antimonial mixture with colchicum. The blood was much buffed, and he was considerably relieved. So deeply was he impressed with the advantage he had derived, that on the next visiting-day he expressed a strong wish again to lose blood; and as the pulse was still 96 and full, twelve ounces more were directed to be taken. This exhibited a slight buff, and the fit rapidly declined, leaving him greatly better than he had been after any former one. On the 12th he had a very general attack in almost every limb; the pulse 96, full, and strong; skin hot; and tongue loaded. Twelve ounces of blood were ordered to be taken, and full doses of colchicum prescribed. The blood was much buffed. One dose of colchicum produced three

copious stools, and he experienced great relief. Some heart-burn and acidity were relieved by magnesia and rhubarb; and he felt so recovered, that he expressed a desire of returning to his employment, which required his presence. On the 30th he had a slight attack, with a pulse at 80, which was soon removed by colchicum. On the 2d of Sept. he felt himself quite equal to return to his business, and was discharged.

CASE III.

HENRY GERMAIN, aged 40; admitted June 27, 1822. Subject to gout four years; the attacks severe, and disabling him for months together. On the 19th July small doses of sublimate were ordered, on account of a troublesome chronic eruption, which salivated him on the 26th, and ushered in an attack of gout severe and general. The skin was hot; the pulse 120, and hard. Venesection was ordered to twelve ounces, and a purging draught; afterwards the saline mixture with colchicum. The blood exhibited much buff; great and speedy relief ensued. On the 5th of August his pulse was 84, and he was quite free from gout.

CASE IV.

EDWARD MEDCRAFT, aged 41; admitted 28th June, 1822. Had been subject to gout fourteen years; the attack occurring every winter. He presented a sallow sickly aspect, with blanched lips, and every appearance of extensive constitutional disease. On the 9th August he was attacked with gout in his hands, knees, and ancles; pulse 90; tongue white. V. S. ad unc. xii, pil. calomel, & haust. cath. postea mist. salin. antimon. cum colchico.

On the 12th, quite free from pain, no buff; recovery was speedy, and his general health and appearance were considerably improved.

CASE V.

JOHN KENNEY, aged 47; admitted 25th April, 1821. Subject to gout fifteen years. For the first twelve he had regular fits twice a-year, increasing progressively in severity and duration. For the last three he was scarcely ever free. There was considerable constitutional derange-

ment, and his loco-motive powers were so much impaired, that he had not been able to walk for 14 months. Pulse was 100 and soft; tongue clean. The bath was prescribed, with the mist. salin. antimon. cum colchico.

On the 30th there was slight increase of local pains. Full doses of colchicum were directed. Two, of a dram and a half each, purged freely with considerable relief; and he continued well till the 11th of June, when a mild attack took place in both feet. Colchicum was again given in full doses. Several were taken; free purging was produced; and the paroxysm speedily and completely relieved. In August he had some giddiness relieved by leeches. No further attack of gout occurred, and he was discharged on the 22d, greatly improved, and able to walk short distances. He was so sensible of the benefit which he had derived from colchicum under the paroxysm, that he solicited copies of his prescriptions, in order to resort to them under any future attack.

CASE VI.

THOMAS WATTS, aged 39, plumber and glazier; admitted March 1, 1822, for palsy of

his hands from poison of lead. Blue pill having been given, his mouth became sore, and on the 19th of April he had an attack of gout in the left hand. Colchicum was given with speedy relief. No return took place, and he was discharged cured on the 31st July.

CASE VII.

DANIEL PERRIN, aged 28; admitted Dec. 12, 1821, for palsy of hands from poison of lead.

On the 14th of January was seized with gout in the right foot. He took colchicum; was well purged with great relief; and on the 18th had only slight stiffness remaining. He was discharged cured on the 15th of April.


CASE VIII.

WM. TARBUCK, aged 34; re-admitted April 30, 1822, for palsy of hands from poison of lead.

Blue pill was given; his mouth became sore on the 7th of June, and on the 17th he had slight erratic gout, which gradually declined under the use of the Waters alone.

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CONSIDERATION OF RHEUMATISM.



THE next disease which I shall consider, both as serving to illustrate the foregoing pathological principles, and deriving essential benefit from the use of the Bath Waters, is rheumatism. The general history of this disease is too familiarly known to need here a laboured description. High inflammatory fever, with painful swelling of the joints, more fixed than that of gout, yet like it occasionally shifting, with relief to the parts first affected, constitutes the more acute form of the disease, or what has been emphatically denominated rheumatic fever. Local pains, with or without swelling, and accompanied, for the most part, with some degree of febrile excitement, form what is usually termed the chronic state.

The division into acute and chronic is convenient, although indicating only different degrees of the same malady. The more acute disease

is sufficiently distinguished from the milder form by its severity, and the active practice required for its relief, to entitle it to an appropriate designation. If the term chronic, however, be considered to imply exclusively a total absence of febrile action, it will rarely be applicable to cases of rheumatism. A better practical distinction is to consider rheumatism as it occurs under the different states of constitution described in this essay, and to regard the chronic form only as a modification, or more advanced stage of the same complaint. To found specific distinctions on accidental variation serves but to encumber nosology, and cannot promote the real objects of medical science. I shall consider this disease, then, first under its highest degree of violence, and afterwards under the several modifications met with in ordinary practice.

Acute rheumatism presents as highly inflammatory a disease as any we are acquainted with. In no other complaint will the same degree of inflammatory action continue so long without destroying life. When the violence of disease is not abated by adequate means, the joints become disorganized and the general health broken, but life rarely sinks under such imme-

diate attack. The consequences of severe rheumatism, however, are sufficiently formidable to make it most important to establish both its true pathology, and the treatment adequate to its relief. For this our means are powerful, and when eagerly and judiciously employed, they will seldom disappoint our just expectations. Few diseases require more prompt and vigorous measures to subdue them ; for if the inflammatory action remain unrestrained, or inadequately relieved, it acquires a force and obstinacy from its very continuance which, independently of the disorganization and decrepitude occasioned by it, will often, in unavailing efforts to subdue it, exhaust the patience of the physician, and the constitution of the sufferer.

Acute rheumatism in its highest degree, and under the first condition of plethora, requires the early employment both of full blood-letting and active purging, together with the united powers of colchicum and antimony, to lower the circulation and place the patient in safety. The early depletion should be carried to the extent of making due impression on the constitution, with little regard to quantity. By this means only can blood be ultimately saved ; for a single evacuation early

in the disease, carried to thirty or forty ounces, and producing syncope, will act more powerfully in subduing inflammation, than one dozen bleedings drained away in small and inadequate quantities. If, at the onset of disease, impression be made by the depletion here recommended, followed up by suitable purging, conducted on the principles formerly laid down, and by other auxiliary remedies, the disease will, in most cases, be speedily brought under perfect control, and one or two small additional bleedings will complete the cure. On the contrary, by trusting to trifling blood-lettings in the beginning, the inflammation is unrestrained, disorganization goes forward, the general powers sink, and the patient is consigned for life to irremediable decrepitude, if not cut off by a metastasis of inflammation to some vital part. Here again I must remark, that such active practice is only applicable in those extreme cases which will not yield to milder measures ; and it is absolutely necessary, that as such cases do occur in practice, their nature and treatment should be clearly and thoroughly understood. Besides, if they were not included, the history of the disease would be incomplete.

In by far the larger proportion of cases much milder means will suffice; and if the principles inculcated throughout this work be borne in mind, and the rules for limiting depletion attended to, there can be no danger of any practitioner employing excessive evacuation. These rules are still more copiously and circumstantially given in my former essay; and as the *Edinburgh Medical Journal* is in the hands of most medical men, I refer to it, being reluctant to expand unnecessarily the present work.

In ordinary cases, I consider from sixteen to twenty ounces a full blood-letting; and in many which occur in the different degrees of the second condition of plethora, twelve ounces will frequently suffice: when carried to the extent of inducing syncope, occasioning perspiration to break forth, or causing the pulse sensibly to falter, a sufficient effect may be considered produced. Soon afterwards a full dose of calomel and antimony should be given, and in due time a purging draught. If the violence of attack or intensity of suffering demand it, the calomel should be administered immediately after the venesection, and a purging draught in three or four hours; but if there be room for

slight delay, I consider it peculiarly advantageous for several reasons, readily recognised by the experienced practitioner, to give the calomel at night and the draught next morning.

The term full dose, when applied to calomel, is, perhaps, too indefinite; the practice of warm climates having of late years rendered scruple or half-dram doses quite familiar to the ear. Such quantities, however, are very rarely required in this country, and I seldom find occasion to prescribe more than five grains at once, though much larger quantities may, no doubt, be given with perfect safety. This quantity, conjoined with three or five grains of antimonial powder, or a grain of emetic tartar, is abundantly active for all ordinary purposes, and when followed by a suitable cathartic draught, will seldom fail to purge both stomach and bowels effectually.

The latter being thus thoroughly cleared, colchicum may be freely employed when purging is again required, and in the mean time it should be exhibited in smaller quantities, conjoined with any ordinary saline febrifuge. I have elsewhere remarked, that I consider from one dram to two of the wine or tincture of the seeds a full dose, and twenty minims a divided

one. It acts in smaller quantity, and with more effect, when the bowels have been previously unloaded of their mucous secretions by calomel and antimony.

Constitutional inflammation being thus subdued, the local swellings subside, and convalescence ensues, as after other diseases. It too often happens, however, that either from excessive plethora, or delay in resorting to effectual treatment, the disease is not so easily arrested, inflammatory fever continues, and the local inflammation shifts or extends, attacking the several joints in succession, and recurring in each a second or even a third time. The proper means of treating this disease, under such circumstances, demands serious attention; for by confining the treatment to simple antiphlogistic regimen, however active, disappointment often arises, and recovery becomes tedious. How far the powers of colchicum, which are considerable in assuaging pain, and lowering the pulse, will supply the deficiency of bleeding and purging, I have not experience enough of its efficacy in this respect absolutely to pronounce; but, from what I have witnessed, I believe it capable of accomplishing much. Prior to colchicum acquiring

its present well-deserved reputation, my chief reliance in such obstinate rheumatism as I have just described, was on calomel and opium, employed in the manner prescribed about sixty years ago by Dr. Robt. Hamilton, of Lynn-Regis, and lately noticed with so much approbation by Dr. John Armstrong, in his truly valuable work on typhus fever. By means of calomel, conjoined with opium, given in divided doses, and continued at suitable intervals until the gums become tender, the progress of rheumatic inflammation is arrested, and the disease brought to a termination relatively speedy. My experience of this treatment leads me to recommend it with much confidence, not only in rheumatism, but in any other inflammation, local or general, which resists the ordinary treatment. In acute rheumatism, I would commence with bleeding, purging, and the general antiphlogistic regimen; and if under the active use of these remedies, conjoined with colchicum, impression were not speedily made on the disease, so as to arrest the successive transitions of inflammation, I would not hesitate to bring the constitution under the influence of mercury, by means of calomel and opium. The advantage of conjoining the latter

with calomel is two-fold, it acting as a sedative in allaying pain, and by its astringency restraining the purgative effects of calomel, of which the more certain and speedy absorption is thus ensured.

As in the higher degrees of gout, so in acute rheumatism, there is little room for the employment of the Bath Waters. Such active inflammation stands not in need of that exciting power which renders these Waters so salutary in the various congestive forms of disease; and if the malady be promptly subdued, as little are their restorative properties required. When local inflammation, however, leaves the joints stiff and enfeebled, these Waters are eminently serviceable in recruiting their strength, and restoring their pliancy.

In the various forms and degrees of chronic rheumatism, an essential object is to have a clear conception of the accompanying constitution; for without first rectifying its derangements, we shall in vain endeavour to cure those local ailments which form the most painful and troublesome part of this tormenting malady. In this disease there is not only plethora to diminish, but much vascular congestion to remove, which latter can only be accomplished by those inhe-

rent powers that are called forth under febrile excitement. To relieve plethora, excite the constitutional powers to the necessary extent when deficient, or moderate them if in excess, are the great objects to be accomplished. For removing plethora, blood-letting is the direct and speedy remedy; deficient powers are beneficially excited by mercury and the Bath Waters; and excessive actions are moderated by evacuations, and the whole antiphlogistic regimen.

According to the extent of plethora, and the degree of inflammatory action, must blood-letting be regulated; and as there is always under this form of the disease more or less of vascular congestion present, so is it very generally requisite to excite and support the sanative efforts of the system by mercury and the Bath Waters, which may be employed not only with perfect propriety, but with signal benefit, even when direct blood-letting is required to reduce plethora, and keep the increased actions of the system within due bounds. To the combination of depletion and stimulant treatment I have already directed attention; and in no disease is it more necessary to bear in mind their compatibility. So perfectly consistent have I found them, that in the

numerous cases of rheumatism under my care in the Bath Hospital, I constantly prescribe blood-letting, without deeming it at all necessary to suspend the use of the Waters: and by the combined employment of these remedies, aided by purgatives, colchicum, antimonials, and mercury, the most essential benefit is, in a number of instances, obtained.

In proportion as inflammation is active and the constitution vigorous, must direct depletion be practised. When the system is feeble, and the febrile effort imperfect, this must be excited by the appropriate powers of mercury and the Bath Waters, until the inflammatory symptoms become sufficient to justify a more liberal use of the lancet. Notwithstanding the extensive muscular debility that so often attends this complaint, blood-letting will always be borne with signal advantage if there be any febrile excitement, however slight. By adapting the amount of depletion to the existing powers, blood may be always taken under such circumstances with the certainty of relieving the constitution, and abating local distress. Those who have not witnessed such practice in the disease, or who contemplate blood-letting as a remedy suited

only to the robust and vigorous, would be surprised to see the improvement produced in such cases by small bleedings, not exceeding four or six ounces. Blood thus taken is almost invariably buffed, and the relief that ensues, both constitutional and local, fully justifies its removal. So far is it from producing weakness, that I know of no treatment by which strength is so much improved. Under such depletion the constitution manifests increased energy, the pulse becomes fuller and slower, and the local affections decline, even where considerable disorganization had already taken place.

These cases display conspicuously the benefits arising from a judicious combination of evacuant and stimulating treatment. If the Bath Waters alone were trusted to, so much inflammation would most probably be excited as to exasperate every symptom, and speedily require their discontinuance. On the contrary, if depletion alone were employed, the constitution would not support it to the extent necessary for affording effectual relief. By their united agency, the morbid condition of the system is eventually corrected, and its strength supported under the curative process. A quick hard pulse, and

white tongue, are still the evidences which denote the existence of febrile excitement, and indicate the propriety of depletion. If these be overlooked and depletion withheld, the local diseases remain unabated, constitutional fever continues its ineffectual and disorganizing efforts, until an exhausted frame and total decrepitude become the melancholy, the irremediable consequences. But if depletion be judiciously practised, assisted by the several remedies already specified, I know of few diseases that can afford more satisfactory results. It is true, that where disorganization has already taken place to a considerable extent, a perfect restoration of power will not, and cannot ensue. But the progress of constitutional malady will be stayed, disorganization arrested, and the injured parts placed in circumstances the most favourable for the success of such local treatment as may be suited to their relief.

The foregoing views will fully explain the contradictory experience that has led to so much discordant practice in this disease. Depletion and stimulants have each had their advocates, who have supported their respective opinions by well-authenticated cases. Both, however, have

failed in establishing a universal practice for rheumatism. It is a common remark, that blood may be interminably taken in rheumatism without getting rid of the buffy coat, whence its unsuitableness has been inferred; while the victims of stimulant practice are both too numerous and too conspicuous, from their sufferings and decrepitude, to leave a doubt of its inefficacy. It is only by understanding the true value and adaptation of each species of remedy, and by employing them in such proportions as each individual case may require, that a rational and successful practice in this disease can be established.

Cases of chronic diseases are ill suited for minute detail. Much better is the experience which they afford displayed by general representations; and therefore, although the journals of the Bath Hospital furnish ample evidences of the truth of the foregoing remarks, and the success of the practice inculcated, I shall not encumber my work with particular cases of this form of the disease, but state generally, though explicitly, that practice which experience has taught me to rely on for its relief.

When patients are admitted under chronic

rheumatism, if no prominent distress present itself, nor any high degree of inflammation prevail, the bowels are opened, and the bath is prescribed. Should whiteness of tongue and a quick pulse exist, a solution of Epsom salt and tartar emetic is given as an ordinary saline. This gentle aperient abates fever, lowers the pulse, cleanses the tongue, and enables the patient to bear the stimulant effects of the Waters. Under this treatment, essential relief is often obtained. Should local suffering, however, not be abated by these means, if the pulse rise, the skin become hot, and the tongue whiter and more furred, some blood is taken, a dose of calomel and a purging draught are prescribed, followed by a saline mixture with colchicum. The quantity of blood taken is influenced by the patient's strength and the degree of inflammatory action, and is generally from four to twelve ounces. Should the constitutional disease still resist, mercury is resorted to, and either a blue pill is given every night, a Plummer's pill night and morning; or, if more active measures be required, the patient is confined to bed, and small doses of calomel and antimony are administered at intervals until the gums become

tender. The mercurial effect is kept up for a short time, after which free purging is employed, the bathing renewed, and either bark conjoined with nitre, or decoction of bark with colchicum, completes the cure.

When the constitutional disease is subdued, local derangements become much more manageable, and will now readily yield, as far as their nature permits, to applications that would previously have proved ineffectual, if not actually injurious. For the stiffness and enlargement of joints that often ensue, no remedy is so effectual as repeated blistering, which may be resorted to with advantage even while there is still some local inflammation. I have in such cases endeavoured, by leeches and cooling lotions, to remove heat and redness, but without success, where by blistering these symptoms have rapidly given way.

In various cases, friction, with tartar emetic ointment, pursued so as to excite copious pustular eruptions, will be of essential benefit. Mercurial frictions occasionally assist in reducing thickened membranes, but are much less efficacious than might on conjectural grounds be supposed. I have found them far inferior to blistering, either for this purpose, for dispersing

the effusions of the bursæ mucosæ, or otherwise restoring joints to their pristine activity.

Where a thickened state of membranes alone remains, I believe absorption may be beneficially promoted by mechanical excitement, and that the Indian practice of champooing, or the course of friction employed by Mr. Grosvenor, of Oxford, are remedies of considerable efficacy. Unfortunately this art, simple as it may be, is not sufficiently understood by provincial nurses to afford an opportunity of fairly appreciating its merits, or of employing it so frequently as could be wished in cases where I conceive it would prove eminently useful.

CASES OF RHEUMATISM.

The following Case exhibits an instance of severe Rheumatism successfully treated by Blood-letting and general Antiphlogistic Regimen.

P. B., a military gentleman, about 40 years old, and of robust constitution, was seized on the evening of the 9th January, 1811, with severe pains of right shoulder, extending down the side, and particularly affecting the neck. He passed a restless night, with rigors and dry skin.

10th. The pain more concentrated in the shoulder; skin rather hot; pulse 92, soft; tongue moist; stomach sick, with inclination to vomit. An antimonial emetic was administered; pills of calomel, colocynth, and antimony, directed at bed-time; a purging draught next morning, and afterwards saline draughts with antimony.

11th. Having a strong inclination to use the warm bath, from a belief that it would

speedily remove all pain, he was allowed to make trial of it, but experienced no relief. In the evening, pain much increased, with hot and dry skin; pulse 96. Twenty ounces of blood were drawn from the arm: he felt relief while the blood was flowing, became faint, and on the arm being tied up, was covered with copious perspiration.

12th. Blood thickly buffed; a restless night; pains not abating, he was bled to 12 ounces; this blood was also buffed, and, as pain still continued, he was again bled in the evening to 8 ounces: pills of calomel, colocynth, and antimony were repeated, and next morning a purging draught.

13th. In the evening of this day the pains were easier; the skin cool; pulse 90, soft; tongue moist and cleaner.

14th. About midnight pains recurred; skin hot and dry; pulse full and hard; tongue dry; 24 ounces of blood were drawn, and the saline antimonial draughts continued. The blood all coated with a thick buff, and deeply cupped. Passed a better day, with temperate skin, moist tongue, open bowels, and pulse 96. Pills of calomel, James's powder, digitalis, and hyosciamus were given at bed-time.

15th. No sleep, but less pain; skin cool; pulse 82; tongue moist at edges, furred and dry in centre; bowels open. Draughts continued. At night, pills of colocynth, James's powder, and carbonate of ammonia, with an antimonial anodyne draught.

16th. Had but little sleep; dozed nearly all night, and feels languid and stupid. Pulse 84; tongue moist; skin warm and moist; much thirst. Saline effervescing draughts were prescribed; and there being no stool, an aperient mixture was directed next morning.

17th. Had but little sleep; did not suffer much pain, and, on the whole, feels better than he has yet been. Bowels open; pulse 84; skin cool; tongue moist and clean. Being anxious to try the warm bath again, he was indulged, but experienced no relief: afraid too of being weakened by his low living, he took some broth and table beer. Pulse 86.

18th. Was hot and restless during the night, with much deep-seated pain of hip. Skin hot; tongue more dry. Took some Cheltenham salt, which opened his bowels, and in the evening felt better again.

19th. No sleep. Chief pain is in the upper

part of right thigh; severe, on motion. In the evening, pain greatly increased; pulse 84, full, and hard. 35 ozs. of blood taken: pulse did not yield till last cup. Pills of calomel, colocynth, and James's powder at bed-time. Cheltenham salt next morning.

20th. All the blood buffy, deeply cupped, and with puckered edges. A better night and not much pain; felt tolerably well during the day; towards evening had some increase of pain; skin hotter; pulse 90, full, and strong. 16 ozs. of blood taken.

21st. Blood buffy and cupped. A bad night from fever, but not from pain. Skin hot; pulse 96; no stools. *Mistura aperiens ad effectum.*

21st. Several stools during the day, with great relief. In the evening had but little fever; skin cool; tongue moist; pulse 90, soft; mind cheerful. Pills of calomel and James's powder at night, and aperient mixture next morning.

22d. No rest. Return of pain, but not of fever. Pulse 88, full; bowels open. In the evening, increase of pain; pulse 96, full, and strong; skin hot; 32 ozs. of blood taken. Pills of calomel, colocynth, and James's powder at night, and aperient mixture next morning.

23d. Blood buffy, some cups not concave; pulse 96, soft; a better night, some sleep. In the evening tolerably free from pain; some increase of fever about 5 o'clock, which did not long continue; skin cool and moist; pulse 90; urine, for the first time, turbid on standing. Calomel and digitalis at bed-time.

24th. Some increase of fever in the night, but not of pain; skin temperate; tongue moist; pulse 88. In the evening a disposition to return both of pain and fever; pulse full and strong. A consultation being held, it was agreed to use the lancet again, and 26 ozs. of blood were taken. Pills of calomel, James's powders, and digitalis were ordered with his saline draught every three hours.

25th. The blood buffy and cupped: no exacerbation of pain or fever; pulse 96, softer; urine turbid; bowels open; some perspiration; tongue moist and whitish. The pills continued with nitrous draughts.

From this time improvement was progressive, and on the 2d of February he was convalescent.

This case affords a fair specimen of severe inflammatory rheumatism, and shews clearly the advantages of that active depletion to which

there can be no hesitation in ascribing the recovery. A revision of the case gives rise to some reflections. The lapse of time which preceded the first blood-letting was injurious, and one cause, most probably, of the subsequent obstinacy. The early use of the warm bath was also objectionable. The animal diet taken on the 17th was clearly prejudicial. Earlier blood-letting, with the use of colchicum, would afford more effectual relief in a similar case. The employment of calomel and opium, pushed to salivation, would also, in all probability, have subdued the disease more speedily.

It may be interesting to present the frequency and amount of blood-lettings in tabular form.

Jan. 11 20 ozs.

12 12

— 8

14 24

19 35

20 16

22 32

24 26

Total 173

THE following cases are all taken from the journals of the Bath City Infirmary and Dispensary.

A mild Case of acute Rheumatism, treated by Blood-letting and general Antiphlogistic Regimen.

ANNE MATTHEWS, aged 18; generally healthy, though of rather delicate constitution. After several days' indisposition, was seized on Saturday, April 24, 1819, with acute pain of both ankles, accompanied with swelling and general fever. On Sunday the knees were similarly attacked, and on Monday the left wrist. On Tuesday she was admitted a patient of the Infirmary.

28th. Pulse 100; skin cool; tongue moist; bowels open by purgative medicine; wrist hot and painful. Pil. antimonial. et haust. salin. 4is horis; lotio evaporans carpo.

29th. Skin hot; face flushed; pulse 100; feels better. V.S. ad unc. xii.; pil. calomel. et haust. cath.; postea contin. pil. antimon. et haust. salin.

30th. Blood thickly buffed; right wrist inflamed. Con. pil. et haust.

1st May. Better. Right wrist still hot and painful. Pil. calomel, et haust. cath.; postea pil. antimon. et haust. salin.

2d. Wrist better; pains in head and neck; face flushed; tongue white and furred; pulse 100, stronger. V.S. ad unc xii. Mist. aperiens antimon. alternis horis, donec vomitum vel purgationem cieat; postea contin. mistura 4is vel 6is horis.

3d. Soon after the blood-letting, seized with pain and swelling of the arm, from which blood was taken. Pulse 100; tongue furred; skin hot. Con. mist.

4th. Right wrist better; left arm and right shoulder swelled and painful. Cont. mist. cum tinct. digitalis.

5th. Some rest; bowels well opened; tongue more moist; left arm better; right wrist and shoulder affected; pains also in knees and ancles. Con. mist. augendo antimon.

6th. Much better; chief affection is in right wrist. Knees and ancles stiff, hot, not swelled; skin cool; tongue moist and clean; pulse 84, soft; bowels open. Vomited about half an hour after her morning dose of mixture.

7th. Made sick by mixture. Left wrist relieved; right again affected.

8th. Better; chief complaint is in left arm; pulse 84; tongue clean; skin hot; sick by mixture. Con. mist. diminuendo antimon.

9th. Right arm better. No further transition of inflammation. Pulse 100; skin hot; tongue cleaner; sick by mixture. Mist. sal. ant. lenior.

10th. No increase of complaint.

11th. Better; right wrist better. No fresh attack, pulse 96; tongue rather dry.

12th. No renewal of swelling; still erratic pains. Pulv. cinchon. et nitri.

13th. Much better; free from fever; pulse 84; tongue moist and clean.

14th. Convalescent.

The following Case occurred soon after the preceding, and was treated by Calomel and Opium, with a view to prevent such Transition of local Inflammation as had harassed the former Patient.

ELIZABETH HAYWARD, aged 26; admitted Friday, 7th May, 1819. Ill since Tuesday; general pains; has been bled. Pulse soft;

tongue white and furred; bowels costive. **Mist.**
aper. antimon. alternis horis usquedum vomitum
vel purgationem cieat; postea con. mist. 4is. vel
6is. horis.

8th. Skin hot; pulse 100; tongue less furred
and moist; pains continue, but less severe; has
pains of legs, knees, and ancles, but without
redness or swelling; pain of right shoulder;
slight redness and swelling of left thumb.
Vomited and freely purged. Con. mist.; calomel.
gr. vi. opii. gr. i. h. s.

9th. Redness and swelling of right hand;
pain of wrist, shoulder, and both ancles; feels
better, and had some sleep; bowels open; pulse
108; skin hot; tongue white and moist. Con.
mist. hodie et repetant. pil. h. s. postea cap.
calomel. gr. iii. et opii gr. $\frac{1}{4}$, 6is. horis incipiens
cras mane.

10th. Bowels open. Pergat.

11th. Much better; right wrist swelled and
red; pulse 96; tongue cleaner and moister;
bowels open. Pergat.

12th. Pulse 100; bowels open; mouth not
affected. Pergat.

13th. Pains better; swellings abated; pulse

85; tongue cleaner; gums slightly spongy, and breath rather fetid. Con. pil. bis die.

14th. Pulse 82; no fresh attack.

15th. Gums sore; slight salivation. Intermitt. pil.

16th. Pulse 88; tongue moist; bowels open.

17th. No renewal of swelling; some erratic pains; pulse 84. Pulv. cinchon. et nitri.

From this period recovery was rapid, and she was discharged cured on the 27th.

On comparing this case with the preceding, the advantage seems to be on the side of calomel and opium, for it appears that no fresh inflammation occurred after the mouth became affected. Disease was sooner and more effectually subdued, convalescence was also more rapid, and the general powers were much less weakened than in the former case. Notwithstanding those advantages I have not had occasion to resort to this remedy since the introduction of colchicum. How much benefit may be derived from this latter medicine, in the treatment of rheumatism, will be collected from the several cases following.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

SARAH ANGELL, aged 21; admitted Saturday, Jan. 13th, 1821. Ill since Monday; acute rheumatism in all her joints; was bled freely on Thursday; pulse 120, hard; tongue dry and loaded. V.S. ad unc. xiv.; pil. calomel et haust. cath.; postea mist. salin. antimonialis.

14th. Blood thickly buffed; pulse 106; well purged; much better. Con. mist.

15th. Attack in left hand; other parts better; pulse 112, very hard. Con. mist. Haust. colchici h. s. et iterum cras mane si opus sit.

16th. One draught; two free stools; pulse 100, much softer; no fresh attack; rested much better. Con. mist.; rep. haust. colchici.

17th. Well purged yesterday, and had no draught; pulse 90, soft.

18th. No renewal of inflammation; pulse 94, perfectly soft; skin cool. Con. mist. et rep. haust.

19th. One draught; 3 stools; pulse 86; skin cool; tongue clean. Con. mist. Pulv. ipecac. comp. gr. x. h. s.

20th. A good night; pulse 84; bowels open.
Con. mist. et pulv.

21st. Pulse 84; sitting up; skin cool; tongue clean; bowels open; limbs much better. Pulv. cinchon et nitri. Rep. pulv. ipecac. comp.

22d. Not so well; joints stiff; pulse natural; skin cool; tongue clean; bowels open. Intermitt. pulv. cinchon: cap. decoct. cinchon. cum colchico.

23d. Much better again; slept well. Pergat.

24th. Rested well; continues improving.

25th. Convalescent.

28th. Free from complaint: to have some meat.

3d Feb. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

WM. JENKINS, admitted Sunday, 18th Feb. 1821. Ill since Monday; acute rheumatism; bled last night; blood buffed; pulse 92, soft; purged to day. Mist. sal. camphorat.; haust. colchici.

19th. One draught; not purged; much pain;

skin hot. Con. mist. ; haust. colchic. h. s. et iterum, cras mane, si opus.

20th. One draught ; one copious stool ; much better ; pulse 80, soft, and full ; tongue cleaner. Mist. sal. ant. c. colchico ; pulv. ipecac. c. gr. x. h. s.

21st. Better. Pergat.

22d. By mistake, powder omitted ; did not rest so well ; pulse 80, full, and soft ; skin hot and dry. Con. mist. et pulv.

23d. A better night ; pulse soft and full, but rebounding ; skin hot ; tongue white. V.S. ad unc. viii. Con. mist. et pulv.

24th. Blood thickly buffed ; much relieved ; pulse soft, but without the rebounding feel ; bowels not freely open. Con. mist. Haust. colchici.

25th. One draught ; purged ; is better. Con. mist. Rep. pulv.

28th. Convalescent.

1st March. To have some meat.

3d. Pulv. cinchon et nitri.

9th. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

HANNA AMOS, aged 18; admitted Saturday, Jan. 5, 1822. Ill five days; general pains, now chiefly severe in legs. Pulse 120; tongue loaded. V.S. ad unc. xvi. Pil. calomel. et haust. cath.; postea mist. sal. camph. cum colchico.

6th. Thick buff; better. Con. mist.

7th. Increase of pain; tongue more dry; stomach sick by mixture. V.S. ad unc. xvi. Haust. efferves. 4is horis; haust. colchic. h. s.

8th. Blood drawn to 20 ozs.; much buff; speedy relief; skin cool; tongue moist and cleaner; one draught; freely purged. Con. haust. efferv. Pulv. ipecacu. c. h. s.

9th. Con. haust. tertiis horis, et cap. alternis dosibus pil. ex pulv. semin. colchic. gr. ii.

10th. Three pills; purged copiously; skin cool; pulse 96; tongue moist and cleaner. Con. haust. efferv.

11th. Bowels loose; sore throat, and slight cough; pulse 100. Con. haust. addend. singulis rad. scill. recent gr. v.; gargarismus astringens.

12th. Slight inflammation of one ankle; pulse 90. Con. haust. et rep. pil. colchici.

13th. One pill; purged; pulse 84; nearly free from complaint.

14th. Con. haust.; pulv. ipecac. c. h. s.

15th. Pain and swelling of left wrist. Rep. pil. colchici.; con. haust. et pulv.

16th. Two pills; purged; wrist not relieved. Con. haust. et pulv.

17th. Wrist better; pain and stiffness of left hip. Mist. cinchon. cum colchico; co. pulv.

18th. Pain and stiffness of right arm; bowels not open. Pergat. Pil. cath. h. s. si opus.

21st. Nearly free from complaint.

22d. Stiffness of head and neck. Pergat. Haust. colch.

23d. Two draughts; one free stool; much relieved. Con. mist. et pulv.

24th. Convalescent.

29th. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

THE following case exhibits the efficacy of active treatment in protracted disease, where

contraction of limbs, extreme weakness, and decrepitude were the only results of a temporising diaphoretic discipline.

ELIZABETH MARCHANT, aged 24; admitted Monday, April 2d, 1821. Ill a long time with acute rheumatism, severe pains, and contraction of right leg, totally incapacitating her from motion, and confining her to her bed. Has undergone much medical treatment, and been latterly kept in a state of continual diaphoresis, which has reduced her strength without alleviating her disease. Mist. sal. ant. cum colchico. Pulv. ipecac. c. h. s.

3d. Much pain; pulse 90; tongue clean. Con. mist.; pil. calomel gr. iii. h. s. liniment. opii ad artus dolent. fricend.

4th. Much pain; pulse 80; tongue white; made sick by mixture. V.S. ad unc. vi. Mist. sal. ant. lenior.

5th. Blood buffy and cupped; much relieved; can move the contracted leg freely. Pil calomel. et haust. cath.; pil. antimon. gr. iii. 4is horis cum mistura.

6th. Limb quite extended; skin hot; pulse 120; stomach sick. V.S. ad unc. vi. Intermitt. pil. et mist.; haust. sal. effervescent.

7th. Blood buffed and cupped ; skin cooler ; sickness relieved. Pil. cath. ii. h. s.

8th. Well purged. Con. haust.

9th. Pergat. Pil. cath. ii.

10th. Mist. sal. camphor. bal. tep.

11th. Attack of cynanche tonsillaris. Pil. cath. et haust. cath. ; liniment. ammon. ; con. haust.

12th. Much better. Pergat.

13th. Con. mist. et balneum.

14th. Pergat. Full diet.

15th. Daily improvement. Mist. sal. cum colchico.

16th. Mist. cinchonæ cum colchico.

24th. Nearly free from complaint ; discharged, a further continuance in the Hospital being unadvisable.

Rheumatism treated by Blood-letting and Colchicum.

RICHARD JONES, aged 64 ; admitted Saturday, March 9th, 1822. Taken ill this morning ; general pains ; pulse 96 ; skin hot ; thirst ; V.S. ad unc. x. Pil. calomel. et haust. cath. ; mistur. salin. camphor. cum colchico.

10th. Slight buff. Con. mist.

12th. Con. mist.; pulv. ipecac. c. h. s.

13th. Much better; costive. Haust. cath.;
con. mist. et pulv.

14th. Con. mist.; pil. et haust. cath.

18th. Con. mist.; bal. tep.

5th April. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

MARY BARTLETT, aged 22; admitted Wednesday, Sept. 5th, 1821. Ill a month; general pains; pulse 90; tongue whitish. Pil. cath. ii. h. s.; mist. sal. camph. cum colchico.

6th. Much better. Pergat.

7th. Purged. Intermitt. mist.; pulv. ipecac. c. h. s.

8th. Increase of pain; pulse soft; tongue much loaded. V.S. ad unc. x. Haust. colchici.

9th. Blood thickly buffed; felt relief from the blood-letting; pains have recurred; pulse soft and natural; tongue less furred; two draughts; one stool. Pil. calomel. et haust. cath.; mist. sal. camph.

14th. Much better: to have some meat.

25th. Discharged cured.

*Rheumatism treated by Blood-letting and
Colchicum.*

SARAH BOND, aged 28; admitted Saturday, 3d March, 1821. Ill a month; general pains; pulse 120; tongue white and furred. V.S. ad unc. x. Pil. calomel. et haust cathart.

4th. Blood buffed and cupped; pulse 90, soft. Mist. sal. ant. cum colchico.

5th. Much better; pulse 90, soft; tongue dry; bowels open. Pergat.

6th. Nearly free from pain; pulse 80; tongue still white and dry.

9th. Convalescent.

13th. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

MARY SHEPHERD, aged 17; admitted Saturday, 3d September, 1821. Ill a week; rheumatic fever; whole body affected; pulse 120; skin hot. V.S. ad unc. xv. Pil. calomel. et antim. et haust. cath.; mist. sal. ant. cum colchico.

4th. Thick buff; much relieved; pulse 120; skin hot; well purged. Con. mist.; haust. colchici.

5th. Not purged; pulse 120; skin hot; feels better. Haust. colchici.

6th. Draught not required. Con. mist.; pulv. ipecac. c.

7th. Pulse 112; skin cooler; bowels open; much better.

9th. Pulse 112; skin still hot. Haust. colchici.

11th. Skin cool; pulse 96. Pulv. cinchon. et nitri; haust. anodyn. antimon. h. s.

14th. To have some meat.

16th. Convalescent.

20th. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

RACHAEL HODGES, aged 22; admitted Wednesday, September 5, 1821. Acute rheumatism; ill a fortnight; bled twice; pulse 104; skin hot; tongue furred. V.S. ad unc. xii. Haust. colchici.

6th. Buff; one draught; well purged. Pulv. ipecac. c. h. s.

7th. Mist. sal. camph. colchico; con. pulv.

14th. Convalescent: to have some meat.

21st. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Pulv. Colchici.*

WM. RAFFLE, aged 21; admitted 31st Oct. 1821. Ill a fortnight: general pains; pulse 96; tongue moist. Pulv. colchic. gr. v; potass. sulph. dr. i.; ter die sumend.

1st Nov. Not purged; much pain of head; pulse 84, soft; face flushed. V.S. ad unc. xii. Pil. calomel. et haust. cath.; mist. sal. camph.

2d. No buff; well purged; much relieved; pulse soft and natural; tongue moist; complains chiefly of general soreness. Con. mist.; bal. tep.; pulv. ipecac. c.

3d. Nearly free from complaint. Pergat.

4th. Discharged cured.

*Acute Rheumatism treated by Blood-letting
and Colchicum.*

JOHN ADAMS, aged 38; admitted Wednesday, 25th July, 1821. Ill a week; general pains, chiefly severe in feet and left arm; pulse 108. V.S. ad unc. x. Pil. calomel. et haust. cath.; mist. sal. ant. cum. colchico.

26th. Blood thickly buffed; pulse 108; wrist much swelled and very painful; tongue moister. Haust. colchic.; con mist.

27th. One draught; freely purged; pains less; pulse 92. Con. mist.; pulv. ipecac. c. h. s.

28th. Much pain; pulse 90; made sick by mixture. Haust. sal. efferves. cum. vin. semin. colch. m. xv. in sing.

29th. Considerably relieved. Pergat.

30th. Pulse 80; tongue moist.

31st. Out of bed. Pergat.

1st August. Mist. cinch. cum colchico.

3d. Pergat. Bal. tep.

6th. To have some meat.

9th. Pain of side. Ves. lateri.

22d. Convalescent.

25th. Discharged cured.

*Rheumatism treated by Blood-letting and
Colchicum.*

MARY ANNE DAVEY, aged 25; admitted 18th August, 1821. Ill eight months; rheumatism, chiefly seated at present in left hand; pulse 130; tongue furred. V.S. ad unc. vi. Pil. calomel. et haust. cath.; mist. sal. camph. c. colchico.

19th. Blood thickly buffed; pulse 112; better. Con. mist.

21st. Bowels loose. Con. mist.; pulv. Ipecac. c. h. s.

22d. Better. Pergat.

25th. Pergat.; bal. tep.

7th September. Discharged cured.

Rheumatism treated by Colchicum.

JOSEPH POW, aged 45; admitted February 28, 1821; subject to rheumatism with swelling of joints; last attack occurred a fortnight ago; pulse 90; tongue whitish. Haust. colchici.

1st March. Two doses; purged; pulse 60, soft, and full. Mist. sal. ant. cum colchico; pulv. ipecac. c.

3d. Convalescent. Pergat.

6th. Mist. cinchon. cum colchico; con. pulv.

9th. Discharged cured.

The following Case is interesting as connected with Abscesses and Purpura.

JOHN BRENNAN, aged 36; admitted Wednesday, July 11, 1821; ill two years; general pains; pulse 100; skin hot; tongue white. V.S. ad unc. x. Pil. calomel. et haust. cath.: mist. sal. ant. cum colchico.

12th. Thick buff; pulse 80; feels better. Con. mist.

13th. Skin cool; pulse 72. Con. mist.; pulv. ipecac. c.

15th. Much better. Pergat. To have some meat.

16th. Made sick by mixture. Decoct. cinchon. cum colchico; con. pulv.

18th. Much better. Pergat.

20th. Free from pain; skin cool; tongue clean. Pergat.

22d. Pergat. Bal. tep.

August 3d. Sickness and vomiting; no pain. Intermitt. med. Haust. sal. efferves.

4th. General pains; pains of head; pulse 96; tongue furred; skin hot. V.S. ad unc. x. Pil. calomel: et haust. cath.; con. haust. sal. efferves.

5th. Blood thickly buffed; a tumour in right groin, with redness and tenderness along the lymphatics to the knee. Hirudines x tumori; postea cataplasma emolliens; con. haust.

9th. Abscess has broken. Pergat.

10th. Redness of several knuckles, with pain. Con. haust. c. vin. sem. colchic. m. xx. in singul.

18th. Pains of belly. Intermit. colchicum; con. haust.

21st. Mist. cinchon. cum colchico.

22d. Much better; another abscess about to form in the thigh. Pergat. Cataplasma tumori.

25th. Second abscess broke.

29th. Pulv. cinchonæ et nitri.

4th Sept. Severe pain of right shoulder and side. Haust. colchic.

5th. Not purged; skin hot. V.S. ad unc. vi. Rep. haust.

6th. Blood buffed; bowels open; much relieved. Mist. sal. camp. cum. colchico.

17th. Bal. tep.

18th. Purging, and sick stomach; has had a rhubarb draught. Haust. sal. efferves.

22d. Better.

29th. Considerable purpura of right leg and foot. Infus. rosæ cum magnes. sulphat.

5th Oct. Purpura declines. Pergat.

9th. Purpura still appears. Pergat. V.S. ad unc. iv.

10th. Blood much buffed. Con. mist.

12th. Pulv. jalap. cum calomel. Con. mist.

13th. Purpura much diminished. Con. mist.

16th. Rep. pulv. et con. mist.

18th. Rep. pulv. et con. mist.

21st. Much better. Discharged.

CONSIDERATION OF PALSY.

ANOTHER disease signally benefited by the use of the Bath Waters is palsy; for which, however, a brief discussion will suffice. With the exception of some few instances, where partial paralysis arises from the injury sustained by particular nerves in parts exterior to the head, the origin of palsy is either in the brain or in the medulla spinalis. The most frequent cause is, effusion of blood from some ruptured vessel, and deposition of a coagulum within the substance of the brain. In cases immediately fatal, this coagulum is frequently demonstrated by dissection; and the cells from which coagula had been absorbed are oftentimes discovered in the brains of persons who had long suffered from attacks of this disease. So generally established is this fact, that such cells are denominated "apoplectic."

Although diseases of the brain are still involved in much obscurity, little doubt prevails respecting the pathology of palsy. The injury sustained by the brain from such rupture being almost always permanent, perfect recovery can only be looked for in very slight cases. Much, however, may be done towards improving muscular power; in which respect the Bath Waters are proved by ample experience to accomplish more than any other remedy.

In the treatment of palsy there are two objects: the first, to avert the repetition of paralytic seizure, from which the previous attack evidently affords no security; the second, to relieve the consequences already incurred. It must be obvious that the former is by far the most important, although the latter is what is always most ardently desired, and anxiously sought by paralytic sufferers. With minds weakened by the afflicting consciousness of impaired energy, and ignorant equally of the causes which produced the injury, and of the liability to a renewal of attack, they pursue with avidity any treatment that promises to restore their lost powers. Though sympathy is always due to such feeling, yet the sound practitioner will never compromise

his patient's welfare, through injudicious impatience to increase those powers.

The remote cause of apoplexy and palsy is a plethoric state of the system, absolute or relative; which, when neither removed by evacuations, nor corrected by temperance, and the sanative efforts which the constitution so frequently makes for its relief, leads to congestion, and to the rupture of some overcharged vessel within the brain. When the latter takes place, it happens that, either from some unexplained effect of this occurrence, or from the depletion so generally resorted to, the general constitution is relieved, and no renewal of hæmorrhagic effort takes place for some time. The tendency to it, however, is not annihilated; and though the debility which accompanies palsy may, to superficial observers, seem to call for increased nutrition, and for that support which vinous liquors appear to afford, yet both full living and cordial remedies should ever be regarded with extreme distrust, and never hazarded, unless a subdued pulse, cool skin, clean tongue, and the absence of all febrile or inflammatory excitement, prove the safety of such indulgence. Even when the absence of inflamma-

tory indications would appear to vouch for the general safety in this respect, still must every thing tending to regenerate a state of plethora be watched with great circumspection ; for the hæmorrhagic effort that leads to palsy may occur without any febrile excitement preceding it. Indeed it often takes place because the plethoric state had not been relieved by constitutional fever.

Though apoplexy or palsy, then, may occur under a state of febrile excitement, yet as they often arise where no such constitutional derangement is displayed, the danger is great of being misled, by the absence of fever, into a belief of actual safety. Temperate living, suitable evacuations, and sedulous care to guard against repletion, afford the only security to the victims of palsy. When by such means the recurrence of attack is effectually averted, then the specific powers of the Bath Waters will produce their full effect in restoring the parts previously paralyzed. If such precaution be neglected, a renewal of apoplexy and increase of palsy will too probably be the penalty of such ignorance, wilfulness, or neglect.

When paralytic patients are admitted into the Bath Hospital, my first care is to provide against a renewal of attack, by reducing plethora, and moderating febrile excitement, if manifested by their appropriate indications. A quick and hard pulse, hot skin, and white tongue, call invariably for active depletion. Blood is therefore taken, the bowels are purged, and salines, antimonials, and colchicum administered. When the congestive or inflammatory state is thus reduced, then, but not till then, are the Waters permitted to be used. If febrile excitement is found to continue after such treatment, adequately pursued, small doses of mercury are employed, to assist the constitutional efforts, while blood-letting and purging are renewed as increase of vascular action requires.

The derangements of the constitution being corrected by such means, the paralytic debility next engages its necessary portion of attention; and so powerful are the Bath Waters in relieving it, that to doubt their efficacy would be blindly and wilfully to disregard the host of evidence which the practice of the Bath Hospital daily supplies. This brief discussion may suffice to

explain the nature and treatment of palsy; and as the general principles of pathology have already been amply illustrated, it seems needless to pursue the subject into further detail, or to report cases which display little variety, and with the general character of which medical practitioners are sufficiently acquainted.

CONSIDERATION OF ERUPTIVE DISEASES.



ERUPTIVE diseases are among those admitted into the Bath Hospital which conspicuously display the salutary operation of the Waters. Like the several preceding complaints, they should be considered chiefly with reference to the state of constitution that accompanies them. Much pains have been bestowed on discriminating the several species of eruptions, and great learning and ingenuity displayed in their classification. To those eminent men who have so laboured every commendation is due; and to withhold from such authors as Willan, Bateman, Plenck, and Alibert, the praise so justly merited for their researches and industry, merely because their labours do not appear to have proportionably improved the treatment of these complaints, would be a culpable perversion both of judgment and feeling. Still it must be confessed that the distinctions so minutely drawn

by these distinguished nosologists have done but little to improve our practice in these diseases; and, as far as regards the great proportion of chronic eruptions, the simple distinction of indolent and irritable seems to be that by which the practical treatment is most beneficially influenced.

So long as the general constitution is deranged, it will be vain to attempt the cure of chronic eruptions; for if removed by the peculiar powers of any specific remedy, they quickly return. Indeed, when connected with disordered constitution, to remove them by any means but those which have a constitutional operation, is not always safe; for, by repelling them, we suspend what is oftentimes a salutary agency, and thus indirectly create some more formidable malady. The first object, then, in all such diseases is to improve the general constitution; and this being accomplished, on the principles inculcated in the foregoing pages, the local disease will, for the most part, readily yield. It is true, that several chronic eruptions are so inveterate as frequently to resist our best efforts, both constitutional and local; but even these will yield the more easily when there is only the local malady to contend with.

Conformably with these views, whenever eruptive cases come under my care, I invariably proceed to amend the general health ere I resort to any specific local treatment, the Bath Waters alone excepted. If a quick pulse and white tongue denote febrile excitement, I direct bleeding, purging, and febrifuge remedies, in conjunction with the bath. When by such means plethora is removed and febrile action abated, I then avail myself of such local treatment as is best suited to each specific malady. In these diseases, mercury, administered either alone or combined with antimony, is peculiarly serviceable. Warm bathing is of considerable efficacy; and I have little doubt that still higher advantages would result if we possessed a course of bathing discipline corresponding to the Russian vapour-bath, and capable of dislodging from the surface the load of dry and hardened cuticle by which transpiration is so greatly impeded. A valuable addition seems to be made to our remedies for cutaneous complaints, in the vapour-bath of Mr. Wallace, of Dublin, which I formerly noticed.

CONSIDERATION OF DROPSY.



ALTHOUGH dropsy is not a disease for which the Bath Waters are applicable, still, as the treatment of it serves to illustrate the pathology inculcated, even more signally than most other maladies, I must not omit some notice of it here. It is a truth which every day's experience serves but to confirm, that serous effusion is only one of those manifold efforts by which an overloaded system seeks to become free from the burden that oppresses it. This species of effort serves always to indicate some natural defect of vigour, and therefore dropsies may be considered as belonging exclusively to the second and third conditions of plethora. In constitutions naturally strong, but which, from some unexplained cause, affect this mode of relief instead of the more ordinary inflammations, the phenomena of dropsy display a character as clearly inflammatory as any of the phlegmasiæ.

I have repeatedly met with extensive œdema, a complaint which arises from serous effusion into the subcutaneous cellular membrane, in which a hot skin, quick pulse, and furred tongue have clearly announced that inflammatory character which called for the lancet, where the blood drawn was marked by every evidence of high inflammation, and where under the most active depletion the disease rapidly declined. There is little reason to doubt that in minor degrees of the same malady occurring in habits of inferior vigour, or vitiated by co-existing excrementitious repletion, the nature of the disease is precisely similar, and its treatment to be conducted on the same principles: and as the degree of bodily vigour must ever be the standard by which depletion should be regulated, there can be no danger of any judicious practitioner, who weighs well the principles on which he acts, ever carrying such depletion to excess.

I may here mention a simple fact, though I know not of any inference to which it leads, that the inflammatory blood drawn in cases of confirmed dropsy presents a turbid serum, and a buffy coat of peculiar whiteness, such as I have not seen in any other disease. Accordingly as

the dropsical affections give way, these appearances decline, and are succeeded by a more healthy condition both of serum and crassamentum. So fully has the subject of dropsy been discussed by Dr. Blackhall, in his valuable treatise, that I shall not pursue it further, contenting myself with remarking, that the success of our practice, in all cases which do not immediately arise from visceral disorganization, will be commensurate with the activity of depleting treatment which the attendant inflammatory symptoms justify our employing.

which were relieved by blisters to the chest, small, subcutaneous of potass and purgatives producing variable effects; and on the 18th of

CASES OF DROPSY AND INFLAMMATORY ŒDEMA.

the 24th, swellings returned, the face was considerably puffed, and the eyelids closed, with headache and general indisposition. More ac-



THE following cases are taken from the journals of the Bath City Infirmary and Dispensary.

Case of Dropsy treated by Blood-letting.

MARY ANNE COOK, a servant, 26 years of age, was admitted a patient of the Infirmary January 24, 1817, with extensive anasarca and tumid abdomen. She had been suffering from general indisposition for several months, but was dropsical only for three weeks, during which she had undergone much medical treatment.

Purgatives and diuretics were given, with sensible relief; the pulse at first small and creeping, becoming occasionally fuller and stronger, the urine more copious, and the swellings declining. On the 29th, she complained of pains of head and chest, with slight intolerance of light,

which were relieved by blisters to the chest, squill, supertartrate of potass, and purgatives, producing variable effects; and on the 18th of February all the symptoms were abated. On the 24th, swellings returned, the face was considerably puffed, and the eyelids closed, with headache and general indisposition. More active purgatives were given, yet next day she was no better. Headache at times very severe; had slight epistaxis during the night; pulse 100, small; urine scanty. Six ounces of blood were taken from the neck by cupping, with some relief to the head; and next day, on consultation with one of the physicians of the Infirmary, infusion of digitalis was prescribed. This produced no beneficial effect, and on the 3d March was relinquished, from the sickness which it occasioned. As the disease was not yielding to this treatment, and being satisfied, under all the circumstances of the case, that nothing but blood-letting could give effectual relief, I directed six ounces to be taken from the arm. The blood exhibited a thick and firm buff, though it did not flow freely. She felt greatly relieved in every respect; urine increased from a quart to three pints in the 24 hours, and the swellings abated more than

in an equal portion of time at any former period. On the 7th swellings diminished; some oppression of chest.

8th. V.S. ad unc. vi. The blood was taken in two cups, the first exhibiting a thick firm buff, remarkably white; urine increased.

18th. Much improved; some pains of head. V.S. ad unc. vi. Blood coated with a thick firm buff and cupped; quantity drawn weighed 7 ounces; greatly improved.

21st. Improvement continued; swellings nearly gone.

25th. Pain of head, and some swelling of face; in all other respects much better; belly less swelled; legs greatly reduced; urine two quarts a-day. V.S. ad unc. vi.

26th. Blood thickly buffed, deeply cupped with puckered edges; swelling of face removed, and headache greatly relieved.

On the 4th April was free from all complaint. Discharged.

This patient has remained free from dropsy, and is now (September, 1822) in perfect health.

*Case of Inflammatory Œdema treated by
Blood-letting.*

JANE BALL, aged 40; admitted Nov. 15, 1817. Ill above a week; pyrexia; legs much swelled; pulse 120; tongue furred. V.S. ad unc. xii. Pil. cathart. et haust. cath.; mist. sal. antimon.

16th. Blood thickly buffed and cupped; much relieved; pulse 100.

17th. Swellings considerably reduced; in all respects better; pulse 96; tongue clean; skin warm and moist. Pergat. Haust. cath. cras mane.

18th. Much better. Pil. calomel. antimon. et opii h. s.; con. mist.

Improved progressively. On the 24th, no complaint but of weakness. Pulv. cinchon. et nitri.

28th. Discharged cured.

*Case of Inflammatory Œdema treated by
Blood-letting.*

ROBERT BELTON, aged 38; admitted Nov. 16th, 1819. Ill six weeks; œdema of legs,

thighs, and scrotum; pulse 100, hard, and bounding; tongue clean. V.S. ad unc. x. Pulv. jalap. et nitri.; mist. potass. acetat.

17th. Blood thrown away by mistake, and not examined; swellings much diminished; urine increased; well purged. Con. mist.

18th. Swellings less; pulse softer; urine copious; bowels not open. Rep. pulvis; con. mist.

Improved so much as to be allowed full diet on the 26th; and discharged cured on the 18th December.

*Case of Inflammatory Œdema treated by
Blood-letting.*

MARY MILLARD, aged 25; admitted Tuesday, Sept. 5th, 1820. Ill since Saturday; seized with pains of lower limbs, followed by considerable swelling; pains of head also; right leg and thigh most swelled; swelling warm, hard, and pitting on firm pressure; pulse 120, full, and strong; tongue red. V.S. ad unc. xii. Pil. calomel. antimon. et opii h. s.; pulv. jalap. et nitri cras mane; mist. potass. acetat.

6th. Blood buffy; a restless night; no stool; pulse 120; tongue red. Haust. cathart. quamprimum; con. mist.; haust. anodyn. antimon. h. s.

7th. A good night; feels better; pulse 120; the skin extremely foul. Con. mist. et haust.; utat. balneo tepido.

8th. Abdomen very tender. Hirud. xii. abdomini, postea bene fovendo. Con. mist. et haust.

9th. Abdomen relieved; chief pain is now in right knee, which is much swelled; pulse 120; skin hot; tongue less red; bowels open. Hirud. x. genu affecto; con. mist. et haust.

10th. Greatly relieved; is now free from pain; pulse 112; skin not yet cleansed. Con. mist. et haust.; rep bal.

11th. Improving. Adsunt catamenia; con. mist.

She continued to improve, and on the 21st was transferred to the surgeon for a fixed pain in the knee, which was the only remaining complaint, the œdema, and all her other ailments, being entirely removed.

*Case of Inflammatory Œdema treated by
Blood-letting.*

CHARLES TOP, aged 25; admitted 13th January, 1821. Ill a week; general pains, chiefly of limbs; two days ago began to swell; considerable œdema of hands and legs; pulse 120, hard, and bounding; skin hot; tongue white and furred; purged to day. V.S. ad unc. xvi. Pil. calomel. gr.v. et haust. cath.; mist. sal. antimon.

14th. Blood thickly buffed; well purged; much better; pulse 108; skin warm and moist. Con. mist.

15th. Still better; swellings much less; pulse 114, hard. Con. mist.; haust. colchici. h. s. et iterum cras mane si opus sit.

16th. Two draughts; purged once; pulse 100, soft; skin warm and moist; tongue cleaner; pains much relieved, and swellings subsided; rested much better. Con. mist.; rep. haust. colchici.

17th. Two draughts; freely purged; pulse 100; improving in every respect.

18th. Much improved; pulse 100; tongue white. Con. mist. et rep. haust.

19th. One draught; two stools; pulse 96, much softer; swelling of legs gone, very little in hands; tongue clean; skin warm and moist. Con. mist.; pulv. ipecac. c. h. s.

20th. Pulse 112; skin hot. V.S. ad unc. x. Rep. haust. colchic.

21st. Blood thickly buffed and cupped; one draught; no stool; pulse 112; skin hot; feels better; slept well. Haust. colchic. ad tincturæ drachmam cum semisse. h. s. et iterum cras mane si opus.

22d. One dose; two free stools. Con. mist. et pulv.

23d. Much better in every respect.

24th. Out of bed, and much better.

25th. Slight return of pain. Haust. colchic.

26th. One draught; not purged. Rep. haust.

27th. One dose freely purged. Much better.

28th. Free from complaint.

3d February. Discharged cured.

*Case of Inflammatory Œdema treated by
Blood-letting.*

JOSEPH SMITH, aged 36; admitted 3d March, 1821. Ill six months; swellings of legs,

greatest in right; swelling of scrotum occasionally; urine scanty; pulse 90; bowels costive. Pulv. jalap. et nitri; mist. potass. acetat.

5th. Pains of head; tongue whitish; pulse 74, full, and strong; urine scanty. V.S. ad unc. x. Rep. pulv.; con. mist.

6th. Blood not buffed; pulse 72; legs much reduced; one stool only. Haust. cath. quam-primum; con. mist.

7th. Legs rather more swelled; pains of head; skin hot. Cucurbitulæ nuchæ ad sanguin. detract. unc. viii.; rep. pulv. augendo jalap.; con. mist.

8th. Head not relieved. Con. mist.

9th. Legs less; still pains of head. Ves. nuchæ; rep. pulv.; con. mist.

10th. Head better; pulse 80, soft.

11th. Con. mist.; haust. colchic. h. s. et iterum cras mane si opus.

12th. One draught; three stools.

13th. Pain of head not abated. Con. mist. et rep. pulv.

14th. Pil. hydrarg. et scill.

Gradually recovered, and was discharged cured on the 4th April.

*Case of Inflammatory Œdema treated by
Blood-letting.*

SUSANNA PONTING, aged 36; admitted 7th February, 1821. Ill a month; cough; dyspnoea; great swelling of legs and thighs; urine copious; pulse 90; subject for years to complaints of chest. Pulv. jalap et nitri.; mist. potass. acetat.

8th. Well purged; pulse 90, full, and strong; bounding in the carotids; urine copious; countenance dark; legs less; some pain of chest. V.S. ad unc. viii. Con. mist.; Vespere; no buff; breathing relieved: slight pain of chest on inspiration, but much less than before the venesection. Con. mist.; ves. lateri.

9th. Much better; countenance less dark; Con. mist.; pulv. jalap. et nitri.

10th. Much relieved. Con. mist.; pulv. ipecac. c. h. s.

11th. Much better in every respect. Pergat. Pulv. jalap. et. nitri. cras mane.

12th. Swellings nearly gone. Con. mist. et pulv.


13th. Swellings removed. Con. mist. et pulv. ipecac. c.; pulv. jalap. et nitri. cras mane.

14th. Convalescent.

20th. Discharged cured.

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CONCLUDING REMARKS.



I have now completed the expositions of pathology which my present purpose required, and shall conclude this work with a few comments on their practical application. It must be allowed, that if these principles be correct, they cannot be safely disregarded in the treatment of diseases. Where a loaded constitution labours by some appropriate, though perhaps ineffectual, effort to relieve itself from the source of oppression, it is in vain that we direct our attention to the local malady thus induced, while we neglect to remove or correct the primary cause of such distemper. Even if the constitutional disturbance be perceived and prescribed for, still the measures adopted, and the mode of employing them, must, for their success, depend greatly on the practitioner's views, whether he regards the constitutional disease as contingent and incidental to the local, or considers this latter as resulting from the constitutional derangement. I

think I have adduced some convincing facts in favour of this latter conclusion ; and I have little doubt that the more the subject is scrutinized, and morbid phenomena are accurately observed, the more firmly will the pathology become established.

One obvious advantage of these principles (which forms also a strong presumption of their truth) is, the clear explanation they afford of several discrepancies that have ever been a source of perplexity to medical observers, and have oftentimes caused those of opposite opinions to question each others' veracity in their respective reports of diseases. When it is seen that the same end is capable of being attained either by inciting the constitutional powers to accomplish their own relief, or by employing depletion to remove the primary cause of disease, so as to supersede the necessity of such effort, or moderate its intenseness, the alleged discordancy of facts at least must disappear, however practitioners may differ in their choice of the course to be pursued. It has been seen in the foregoing pages that my judgment decidedly inclines to remove or diminish, by the assistance of art, the cause of distemper, so as either to supersede the

necessity of any constitutional effort, or at least moderate its violence by diminishing the labour to be performed. An impartial view of medical practice cannot fail to justify this preference; for by adopting and acting on it diseases are brought to a speedier termination, danger is lessened, suffering greatly abated, and, finally, the constitution preserved from those destructive ravages which continually result from morbid action when long continued or unrestrained.

Let us trace this principle in its application to particular diseases. In gout, for instance, a paroxysm may, by suitable depletion, be effectually relieved in a few days, which, if consigned to the natural efforts, and still more certainly if excited by cordials and stimulants, on the plea of assisting the constitutional powers, would confine the sufferer for weeks, if not months, to pain and immobility; would disorganise his joints, debilitate his frame, and increase tenfold his liability to a recurrence of disease. It is true that cases continually occur where it is highly necessary to support the vital powers; but no one who has carefully perused the foregoing pages, and who weighs well the precepts which they inculcate, can fail to discriminate

such cases, or to apply proper treatment. And, once for all, I here protest against that perversion of those doctrines which would apply depleting practice to every case of gout indiscriminately, or without special reference both to the bodily powers and the constitutional derangement subsisting. In proportion as these powers are feeble, and the chronic derangements of frame considerable, must depletion be cautiously employed, although the principles which enjoin it are neither to be reversed nor abandoned.

When determination of blood to the head threatens phrenitis or apoplexy, timely depletion, with suitable regimen, will speedily avert all such attack, and restore the party to perfect health. But if the symptoms denoting such determination be overlooked or mistaken, then inflammation, either of the brain or its investing membranes, arises with imminent danger to life; or apoplexy ensues, terminating either in death or incurable palsy.

The principle may be extended to all other diseases which have a constitutional origin; and as the results are in every instance corresponding, it is quite unnecessary to pursue the argument further. In no disease is it more neces-

sary to bear these principles in mind than in the incipient stages of dropsy, in which, if moderate depletion be early employed, effusion is prevented or removed, and health restored; while by misconceiving the nature of the disease, and prescribing for the attendant debility only, the malady becomes eventually aggravated, sinking the vital powers and rendering recovery hopeless.

Another incalculable advantage resulting from the establishment of these principles consists in the light which they shed on the nature and treatment of chronic diseases. It is highly probable that the division of diseases into acute and chronic has had an influence on medical practice, such as the original distinction was never intended to exert, and that the antithesis of denomination has not unfrequently led to the systematic employment of opposite practice. Modern experience has done much to detect the acute tendencies of several chronic complaints, and one highly gifted writer* has not only prepared the way for a more perfect elucidation of their nature and character, but has given us reason to hope that he will himself pursue the inves-

* Dr. John Armstrong.—Practical Illustrations of Typhus.

tigation in a separate treatise. Should the promised work be completed, and evince the same resplendent talent that characterizes all his other productions, this author's fame may well vie with the most distinguished characters of medical literature. To establish a unity of origin between acute and chronic diseases will indeed prove a truly valuable revolution in medical science.

APPENDIX.

MY former essay has been so often referred to in the foregoing pages, that it may not be unacceptable to transcribe a small portion of it, in which the several observations and principles are condensed in a series of distinct propositions, conveying a full and correct view of all the essential matter which that essay embraced, and serving to connect the physiology and pathology more completely than has been attempted in the present work.

“THE animal frame, while endued with life, is constantly undergoing processes within it tending directly both to its decay and reproduction, or rather to its waste and repair.

“Its continual waste is regularly replaced by depositions from the blood, assimilated to the nature of each structure by the agency of appropriate organs.

“As the blood supplies to each part the elements of nutrition, so does it receive back the effete particles of matter into which they become converted, which are returned into it for the purpose of expulsion.

“Thus the blood, even in its most healthy state, consists of many heterogeneous components, some of which are nutritive, others excrementitious.

“The nutritive particles are supplied to it from the aliment digested in the stomach, and absorbed by the lacteals; the excrementitious are furnished from all the various structures of the body, whence they are taken up, and carried back into the circulation by the lymphatic absorbents.

“The former are applied to the purposes of the animal economy by means of the nutrient arteries and other secreting organs; the latter are separated and expelled, according to their respective natures, by the several excretories, namely, the cuticular, renal, hepatic, and intestinal.

“From these well established facts it follows, that the proportions of both must be liable to material diversity, according as nutriment is

sparingly or excessively supplied, and as excrementitious matter is imperfectly discharged.

“The powers of digestion, though limited, are yet capable of supplying a much greater quantity of nutriment than the wants of the system require; their powers may also be so impaired, or their operation otherwise so obstructed, as to leave the necessary nutrition incomplete.

“From the view of the animal economy formerly given, it appears, that the occurrence of excessive nutrition is frequent, that of deficient, very rare.

“When nutrition is excessive, a state of fullness of blood-vessels is induced, or rather an altered condition of the blood itself; which for a time is relieved by means of the increased energy with which both secretion and excretion are in consequence performed, but which at length gives rise to many diseases.

“More especially, however, to diseases characterized in their progress by increased action of the arteries, accompanied by a well known train of attendant symptoms, which, collectively, are designated as a state of fever or inflammation.

“It is a well known fact, that the degree of nutriment afforded to the body, depends more

on the quality of the aliment subjected to the process of digestion, than to its quantity; and that animal food is more eminently nutritive than vegetable.

“ It appears also, from much experience, that it is this peculiar diet which more particularly induces a state of plethora in the habit, and which, if ignorantly or wilfully persevered in, aggravates both this and the several febrile and inflammatory complaints to which it ultimately gives rise.

“ When such state of inflammation arises, some organ is in general more particularly affected; and as this speedily becomes the chief source of distress, it naturally engrosses much of the attention of both patient and practitioner. To its diseased condition the whole train of symptoms is for the most part referred, and from this, though only a single feature of the complaint, and that not of primary existence, a name is affixed, and a character impressed upon the whole assemblage of morbid appearances, which are thenceforward embodied into an individual disease, and assigned an appropriate place in the system of nosology which may chance to be in highest estimation. Both the good and evil re-

sulting from such systems seems at the present day to be very generally admitted, and clearly understood.

“These diseases are for the most part sudden in their attack; that is, the prominent symptom which characterizes and gives name to the combination of morbid actions is in general more or less suddenly rendered sensible to the patient, who naturally dates his complaints from the period when such symptom is first perceived by him.

“It is clear, however, that the moment when sensibility is first excited to the perception of such symptom, cannot be considered as the first of disease. This symptom is oftentimes some acute pain, found on inquiry to arise from a state of inflammation, more or less advanced; which must, therefore, have pre-existed, though disregarded until characterized by pain. If attended to at earlier periods, it is highly probable that the incipient stages of disease would be found distinguished by appropriate symptoms, equally expressive as those which characterize a state of fever or inflammation.

“It is also probable, that a correspondent treatment to that which is found most effectual in relieving a state of fever or inflammation,

would best alleviate the antecedent stages; and even, by correcting the error at its source, avert altogether the consequences that otherwise result from it.

“And the doctrine, if true, holds out to us the flattering expectation of being able to strike at the root of a large proportion of human diseases; many of which, and perhaps among the most inveterate, may be distinctly traced to a state of increased arterial action, originally overlooked or neglected; the evidences thereof being subsequently afforded, either by the disordered functions or destruction of parts which the higher degrees of inflammation so eminently occasion, or else by the diseased structure and altered organization to which its less active occurrence so frequently gives rise.

“To ascertain the nature of disease, therefore, in its earlier stages, so as to avert, by timely remedies, consequences, which, when they do ensue, are too frequently beyond the reach of art, must be deemed one of the most valuable applications of medical science.

“It is manifest, however, that such perfect knowledge of diseases can never be possessed until pathology shall have succeeded in tracing

their progress through every progressive change, from their nascent state to their final termination.

“And during this progress we may observe four periods as more particularly distinguishing the nature of the changes going forward. To the first belongs the interval between the commencement of a state of plethora, and that of increased action. The second includes that wherein increased action is but irregularly and imperfectly excited, and may be either a simple constitutional disorder, or complicated with incipient disease in some particular organ. The third is marked by actual fever or inflammation, and derives a further character from the nature of the organ to which blood may by such high excitement be more particularly determined. To the fourth may be referred all the consequences which result from such febrile or inflammatory state, when not subdued either by the powers of nature or by medical treatment.

“It was in the nature of things, that the two latter stages should have engaged the earliest attention, and have been most successfully investigated by medical inquirers. Nor is it intended, in these remarks, to throw the slightest im-

putation on our predecessors, to whose labours we are so deeply indebted; and who would have illustrated, with equal ability, the earlier stages of disease, if adequate opportunity for taking cognizance of them had been afforded.

“ It appears to me, however, that to such early periods of disease attention may now be most beneficially directed; and that while we continue to avail ourselves of the accumulated experience of ages in treating the more advanced stages, it is incumbent on us to extend the boundaries of the science we profess by more completely investigating the earlier approaches; thus to discharge to posterity some part of that debt which the labours of our forefathers have imposed on us, by illustrating, as far as we are able, those early and important periods of disease in which medical treatment may be of most avail.

“ These early periods, as far as they have yet been investigated, are found to be marked by symptoms indicating an inadequate power of the arterial system; the pulse being, for the most part, low, oppressed, irregular, and intermittent.

“ A misconception of this state, and misapprehension of its real nature, have given rise to much erroneous practice, and have laid the foun-

dation for many inveterate prejudices. For it was natural, that at first view of such complaints, and when their real nature was misunderstood, cordials and stimulants should be resorted to, as the best curative means for a state presenting such obvious marks of debility.

“The symptoms of diminished action in the arteries, and of prostration of strength in other powers, seemed to evince unequivocally a state of weakness, while the effect of cordials and stimulants, in alleviating uneasy sensations, and in giving increased tone and renewed regularity to the circulation, seemed to place the propriety both of the theory and practice almost beyond a doubt.

“And yet there is good reason to believe, that such relief is, for the most part, temporary and fallacious, and that the morbid actions are only altered or repressed, while their cause is still unremoved.

“Nor are the phenomena thus produced difficult of explanation; for the effect of stimulants, exhibited under such state of languid circulation, is merely to render the animal powers more equal to the increased labour they are called on to perform, and to re-excite a renewal of those

natural efforts, which they had been ineffectually endeavouring to exert.

“By which means, however, the symptoms only are alleviated, but the disease not removed.

“As originating in a state of plethora, it does not appear how it can be really curable unless by means of some sort of evacuations.

“And it is directly in proof of the doctrine here inculcated, that, in the diseases now referred to, the debility disappears under blood-letting and evacuations, and is even superseded oftentimes by symptoms of increased energy in the arterial system; consequences which, it is apprehended, could not possibly take place if the preceding debility was real.

“It is a further evidence, too, that even the most strenuous advocates for such stimulant practice are obliged to resort to frequent use of purgatives, in order to enable their patients to sustain a continuance of cordial treatment.

“And a confirmation, the most unquestionable, is oftentimes unexpectedly afforded by the great and immediate relief which spontaneous hæmorrhagy frequently gives to patients who are supposed to labour under diseases of debility, and treated accordingly.

“But another source of plethora, or rather of disordered condition of the blood, exists, besides that of inordinate nutrition; for the excrementitious matter returned into the blood, must, if not duly discharged, accumulate therein, and adulterate its nature.

“As exercise is the principal stimulant for exciting the various excretions to a due performance of their functions, this source of adulteration may be supposed more peculiarly to exist in the sedentary and the indolent.

“Both sources of plethora, however, may co-exist in the same body, and be variously combined and modified, according to the degree of each existing, the nature of the constitution they occur in, and the variety of collateral causes by which their natural tendencies may be impeded or accelerated.

“Fully to illustrate the peculiar effects of each species, and to explain all their combinations, must require a long course of observation and experience.

“As such, however, cannot be expected to be entered on, unless attention is particularly directed to this mode of investigation, it seems requisite to bring forward such proofs as shall

shew that the views of disease, thus briefly and imperfectly sketched, are at least fundamentally just.

“It will go far to establish this, if it shall be made to appear, that inordinate nutrition is a chief source of fever and inflammation; and that the preceding state, though marked by apparent debility, is yet essentially different, and not curable by tonics or stimulants, nor by any means but that of evacuation, under which the debility disappears, though, if real, it should be directly and immediately increased thereby.

“And the correctness of such views may, I apprehend, be considered as sufficiently proved, when repeated experience shall have evinced the effects of depletion, not only in removing those symptoms of debility, but even in substituting others unequivocally denoting an opposite state, or one of increased action; and above all, when it shall have traced the transition from this state of apparent debility into one of fever or inflammation, by a progression regular and uniform in its great leading characters, though modified by circumstances peculiar to, or casually affecting each individual.

“The term plethora expresses but imper-

fectly, and not very accurately, the altered condition of the blood referred to in the foregoing pages. Some single term, however, seems desirable; and, until a better shall be devised, this may perhaps be retained without injury. If so, then each species may be distinguished by its appropriate epithet of nutritive or excrementitious.

“It is hardly necessary, after what has been said, to remark, that blood-letting is the direct and legitimate remedy for the former; that purging and exercise are most conducive to relieving the latter; and that these several means must occasionally be combined and modified, as either state may most prevail. Hereafter, when this subject shall be more successfully investigated, I should hope that the symptoms and effects of each state would be so characterized and understood as to introduce considerable accuracy into the practice required for their removal. At present it would be premature to enter further into such distinctions, and injurious to the advancement of our knowledge on this important subject, to affect a precision which is not yet attainable.”

Such were the views which I entertained of disease when my former essay was written. How far I have profited by the long interval that has since elapsed to extend and improve them, the reader must determine.

FINIS.

