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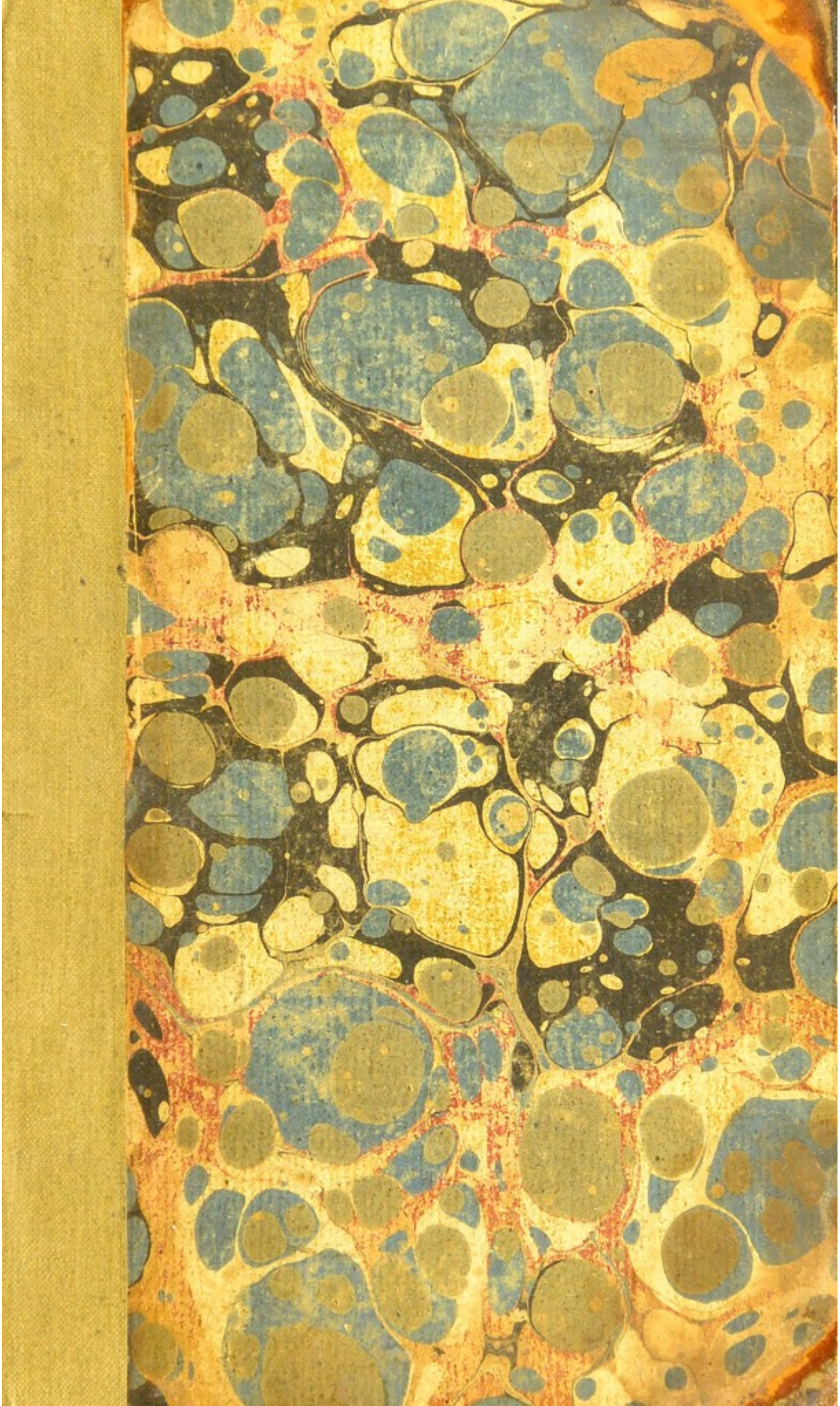

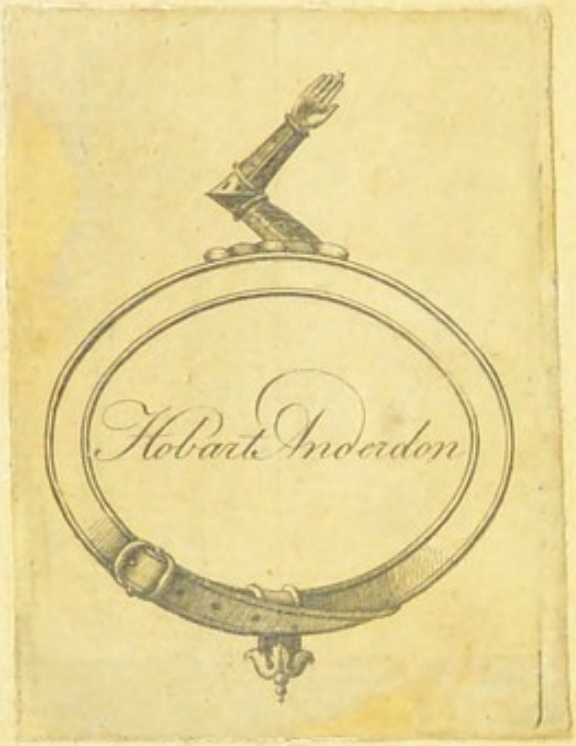

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OBSERVATIONS

ON THE

HISTORY AND CURE

OF THE

ASTHMA.

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HISTORY AND CURE

OF THE

ASTHMA;

IN WHICH THE PROPRIETY OF USING

THE COLD BATH IN THAT DISORDER

IS FULLY CONSIDERED.

BY MICHAEL RYAN, M. D.

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PREFACE.

AMONG the various chronic complaints to which the human frame is liable, very few can be conſidered of a more formidable nature than a confirmed aſthma. The idea of its being an incurable diſorder, its threatening inſtant ſuffocation at every attack, are circumſtances altogether ſo alarming to a patient, as muſt neceſſarily weaken and depreſs a mind endowed with the utmoſt fortitude and reſignation. Any remedy then that could be found capable of adminiſtering permanent relief, to a perſon in ſuch an afflicting ſituation, muſt be looked upon as of the utmoſt importance to mankind.

Unhappily, however, the efforts of phyſicians hitherto, in the aſthma, have generally failed in that reſpect. Hence it is,

that they have ſeldom in view a radical cure in their treatment of aſthma: conſcious of the inefficacy of the preſent practice for producing ſuch an effect, they content themſelves with medicines to alleviate pain, and ſeek not for a balſam to conſolidate the wound.

Very lately, indeed, a particular medicine has been highly extolled by an induſtrious and ingenious phyſician, and is ſaid by him to have repeatedly effected complete cures. How far this remedy may be entitled to ſuch high encomiums, it will probably require the teſt of future experiment to determine. Leaving this matter to be ſettled by other practitioners, it is the Author's intention to recommend, in the following Eſſay, a different mode of treating the aſthma, which facts and obſervations evince to be of very conſiderable efficacy in the cure of this diſorder.

Cold-

Cold-bathing has been mentioned as a remedy for aſthma by a few practitioners, but it never has been conſidered of ſuch utility as to bring it into any general repute. The timidity of phyſicians, or a want of confidence in ſuch a practice, has raiſed a prejudice againſt it, as may be ſeen by peruſing the late writings of ſome of the moſt eminent in the profeſſion, wherein the cold-bath is not numbered in the catalogue of remedies.

To be diſmayed, however, by ſuch a conſideration, would argue a weak and ſlaviſh attachment to the ſyſtems of men of character, and betray a dread of making any innovation dangerous to opinions eſtabliſhed by high authority. In no caſe whatſoever is ſuch ſervility more unpardonable than in the preſent, as in no diſorder is there probably greater room for improvement, from the fluctuating and unſucceſsful

ful ſtate of the practice in aſthma: an undertaking, therefore, to diſcover how far cold-bathing is adapted to its cure, does not ſeem to require an apology, but merits ſome attention from the Public.

As it is the principal object of this Eſſay, to conſider the effects of cold-bathing on aſthmatics, and by facts and cautious deductions to render the practice as univerſal as poſſible, the Author, of courſe, cannot enter into a full diſcuſſion of the hiſtory and cure of the diſorder after the manner of former writers. Several obſervations, nevertheleſs, have occurred to him on each of theſe ſubjects; and as, in his opinion, many of them have been made with accuracy, he thinks it his duty to impart them to the Public.

Kilkenny, July 1, 1792.

CONTENTS

CONTENTS.

PART I.

CHAP. I.

CHAP. II.

CHAP. III.

CHAP. IV.

CHAP. V.

PART II.

CHAP. VI.

CHAP. VII.

CHAP. VIII.

CHAP. IX.

PART I.

OBSERVATIONS, &c.

CHAP. I.

EVER ſince it became faſhionable in phyſic to explain the diſorders of the human body by means of the nervous ſyſtem, phyſicians conſider themſelves as having very much improved upon the ancients both with reſpect to their hiſtory and cure.

In a particular manner, the aſthma may be ſaid to have undergone a change that reflects no inconſiderable degree of luſtre on this reformation.

That ſome advantage has reſulted to me-

dicine at large from the modern pathology, it would be unfair to deny; but it would argue an equal want of candour not to admit, that however ſpecious and ſeemingly concluſive the reaſonings of modern writers may appear, very little real or ſolid benefit have aſthmatics derived from their doctrines and opinions.

On turning over the writings of the ancients, we find that the aſthma has been pointed out as a diſtinct diſorder from other affections of the cheſt; and though ſome inaccuracy and confuſion may be detected in their deſcriptions, by thoſe who wiſh to find fault with every information coming from this ſource, and who religiouſly adhere to the definitions of modern writers, nevertheleſs an unprejudiced reader will readily diſcover thoſe ſtrong and peculiar features of the diſeaſe amply delineated in moſt of the ancient writings.

It is true that, from a very early period down to nearly the preſent time, the title of aſthma has been often indiſcriminately given to many different complaints of the lungs: but ſtill the characteriſtic marks of a ſpaſmodic affection of the lungs are preſerved in every work of eminence, and are accurately drawn by almoſt every pen.

Sir John Floyer himſelf, who had ſo much experience in this diſeaſe, and who has deſcribed its various ſymptoms with ſuch minuteneſs and preciſion, has fallen into this error, if with propriety it can be called ſuch; for he arranges, under the head of aſthma, ſeveral diſorders of the lungs that have not the ſmalleſt affinity to a ſpaſmodic, or what we in theſe days ſtrictly denominate aſthma.

In another point of view, that merits ſome attention, we find the ancients and

moderns differ very materially. In the writings of the former, we find the paroxyſm of the diſorder and all its attending ſymptoms judiciouſly drawn, its periodical return very frequently mentioned, with every other circumſtance that could be ſuppoſed to aſſiſt in elucidating its hiſtory; but with this difference, that in the intervals of the fits the breathing is alleged to be difficult and diſtreſſing: while the latter, conſidering every ſuch permanent affection of the lungs as the offspring of inflammation, obſtruction, &c. inſiſt that a complete intermiſſion between each fit, and a total freedom from diſeaſe, are neceſſary to conſtitute the eſſential and pathognomonic ſigns of this diſeaſe.

In order to decide on this point with impartiality, and to ſettle, if poſſible, this contrariety of opinion, it is neceſſary to take a

view

view of the aſthma as it occurs in different perſons in this climate.

Every practitioner who has attended to the phenomena of aſthma, muſt acknowledge the diſeaſe to be very conſtantly of a mixed and complicated nature, the ſpaſmodic affection being often combined with obſtruction from fluids accumulated in the lungs, or from ſome other very powerful cauſe. Hence it often changes from an intermitting to a continued type. This is ſuppoſed by moſt of the modern writers to take place in an advanced ſtage of the diſeaſe. They aſcribe it to tubercles, water in the cheſt, &c. brought on by repeated fits of the aſthma. But the ſame attentive obſervation ſhould inform every practitioner, that even in an early ſtage the aſthma is often of a doubtful nature, and aſſumes a continued type, at a time when there is not

a poſſibility of diſcovering any obſtruction that could give it this appearance of a conſtant and a permanent affection of the lungs.

This, however, is not the opinion generally inculcated in the writings on aſthma. If, after it has once been eſtabliſhed in the conſtitution, it ſhould happen to aſſume for any time a continued type, it is conſidered to be of a very formidable nature, and to ariſe from cauſes that are ſeldom in the power of medicine to remove. Thus Sir John Floyer ſays, " When the aſthma con-
" tinues for ſome months, it is a true pul-
" monic aſthma, and depends on ſome
" diſeaſe in the breaſt, as dropſy, tubercle,
" abſceſs, which compreſs the bronchia; and
" till that evident cauſe be removed, it is
" impoſſible to cure the aſthma fits*."

* Treatiſe on the Aſthma, p. 120.

But

But Sir John's own caſe is in direct oppoſition to this aſſertion: for he laboured under the aſthma at leaſt thirty years when he publiſhed his Treatiſe; and at that time he ſhewed no ſymptoms of obſtruction, abſceſs, or any ſuch diſorder of the lungs.

In fact, we have frequent inſtances of perſons living to an advanced age, in whom the aſthma conſtantly changes from an intermitting form to a continued one, and, after remaining in this ſtate for a conſiderable time, returns to its original ſhape without the aſſiſtance of medicine: thus Proteus-like varying its features and appearance according to the cauſes that may have been applied, to the habit of body, and other circumſtances of the patient.

In ſuch caſes it would be irrational to ſuppoſe that either tubercle or abſceſs gave origin to the difficult breathing, as theſe diſ-

orders

orders generally carry ſymptoms of mortality with them, and ſeldom fail to produce an affection of the breathing that ſcarcely ſuffers any intermiſſion.

The preſent generally received opinion on certain points in phyſiology, has probably had not a little influence on the minds of phyſicians with reſpect to the hiſtory of this diſeaſe. In conformity to the principles of this ſyſtem, they conſider it to be incompatible with the laws of the animal œconomy, that ſpaſm, properly ſo called, can ſubſiſt for any conſiderable length of time without being alternated by a ſtate of relaxation. This doctrine I ſhall not now attempt to combat; but I can venture to ſay, that I have ſeen perſons ſubject to frequent attacks of aſthma, who, in the intervals of the fits, were affected with a ſpecies of difficult breathing continuing for days, and ſometimes

times for weeks, that evidently appeared to be of a ſpaſmodic nature.

The caſe of M'Bay, to be given hereafter, is ſtrictly in point, and highly illuſtrates this ſubject: for he had recourſe to cold bathing with advantage, and perſevered in its uſe while he laboured under ſtricture at the ſternum, diſtenſion of the ſtomach, cough, uneaſineſs of breathing, with other ſymptoms clearly indicating a ſpaſmodic affection.

It is ſcarcely neceſſary to mention, that, if obſtruction of any kind had a ſhare in bringing on this diſorder, cold bathing would have been attended with very ſerious conſequences. This is not the only inſtance of the kind that I had an opportunity of ſeeing: ſeveral others equally characteriſtic have fallen under my obſervation.

In ſome of them it appeared that the application

plication of cold to the lungs in a ſlight degree, was the principal exciting cauſe of the ſymptoms, though no catarrhal affection was preſent at the time; while in others they ſeemed to be the remains of the preceding paroxyſm not thrown off completely by the conſtitution, or ſubdued by the remedies employed *.

Beſides

* Doctor Withers has, in my opinion, very properly directed his attention to thoſe caſes wherein the aſthma is complicated with ſome other complaint of the lungs. He juſtly obſerves, that, when the humoural aſthma is united to the convulſive, the patient's breathing is often difficult and diſturbed after the fit is over, and continues in that ſtate from the concluſion of one paroxyſm to the beginning of another. This he attributes to a quantity of phlegm collected in the air veſicles of the lungs, which haraſſes the patient until it is diſlodged by expectorating medicines, or ſome other cauſe.

Treatiſe on the Aſthma, p. 10.

But even in many caſes of this kind, the ſtricture at the ſternum juſt now mentioned, and which is evidently of a ſpaſmodic nature, will be often found to accompany this form of the diſeaſe, and to aggravate every prevailing ſymptom.

Beſides this appearance of the diſorder in the abſence of the fits, anomalous ſymptoms of aſthma very frequently occur without any regularly formed paroxyſm; and, as far as can be collected from their complexion and other circumſtances, they appear to be of the ſame ſpaſmodic nature with thoſe juſt now deſcribed.

An author who undertakes to publiſh the hiſtory of any diſeaſe, is highly blameable if he omit to detail at full length thoſe ſymptoms that ariſe during its progreſs, and that are found in any reſpect neceſſary for determining its juſt and preciſe character.

ſymptom. On no other ſuppoſition can we account for the oppreſſed and difficult breathing that ſometimes occurs between the fits. The catarrhal affection no doubt will often contribute to produce this effect; but it is on many occaſions altogether ſo ſlight and trivial, that it would be highly abſurd to ſuppoſe it capable of producing ſuch an affection of the breathing as we muſt often meet with in the abſence of the fits.

It is not alone ſufficient to delineate ſuch ſymptoms as preſent themſelves in the beginning of the diſeaſe: it is on many occaſions abſolutely neceſſary to attend minutely to thoſe that come on at a later period, and are found to diſturb the phenomena in ſuch a manner as to give it the appearance of a diſorder totally different to what it was at its commencement*.

Phyſicians think they have fully diſcharged their duty, if, after deſcribing the patient's ſituation previous to the fit, they bring you to his bedſide, point out with ac-

* Secundo, ea ſymptomata pro notis characteriſticis præcipue ſeligenda putavi quæ perpetuo cum morbo præſentia ſunt, et hoc quidem ſemper annitendum eſſe putavi. Cum vero plurimi morbi ſub eorum decurſu aliam atque aliam omnino formam capiant, in his ex ſerie rerum, et ſymptomatum ſibi invicem ſuccedentium, character ſæpe neceſſario petendus eſt.

Prolegomen. Synopſ. Noſol. Method. Cullen. vol. ii. p. 32.

curacy

curacy the peculiar noiſe of his breathing, the appearance of his countenance, the ſtate of his pulſe, and of every other function that happened at the time to be deranged; then inform you, that as ſoon as theſe ſymptoms diſappear, they leave the patient totally free from diſeaſe, but ſubject to attacks of a ſimilar nature at any future period.

A perſon who has had any experience in the aſthma, muſt be poſſeſſed of little or no talents for obſervation, who would conſider ſuch a hiſtory as this ſufficient for directing a phyſician to form a juſt diagnoſtic in the variety of caſes that daily occur: for though it were admitted to be the ordinary aſpect that the aſthma wears, the deviations from this appearance of the diſeaſe are altogether ſo frequent, as will neceſſarily perplex practitioners if not ſufficiently on their guard; at leaſt I have found myſelf very much em-

barraſſed

barraſſed at times, after carefully peruſing the beſt obſervations to be met with on its hiſtory.

In this ſtate of uncertainty, I have been greatly aſſiſted by attending to the following circumſtances:—If the cheſt continue engaged in the abſence of the fits without any obſtruction or collection of phlegm in the lungs, the patient complains of a ſtricture at the ſternum, ſomewhat analogous to the tightneſs that occurs in the fit, but in a ſlighter degree: his breathing, though not difficult or much oppreſſed, is by no means totally diſengaged: he has a ſenſation of ſome weight preſſing on his cheſt, that ſeems to diminiſh its cavity, and prevent the dilatation of the lungs. There is a peculiarity in the ſound of the cough and breathing, in theſe caſes, that ſhould be cloſely attended to, and they will be in general

general diſcovered, by perſons of a nice ear, to proceed from the lungs in a ſtate of ſpaſmodic conſtriction.

The ſtomach participates of the affection of the lungs, and is frequently diſturbed with flatulence and other ſymptoms expreſſive of the deranged ſtate of its functions. The pulſe, on theſe occaſions, ſhould not be paſſed by unnoticed; and it will, for the moſt part, be found either of a natural quickneſs, or ſomewhat below the ordinary ſtandard of a healthy perſon. If the latter ſhould happen to be the caſe, lowneſs of ſpirits, and other ſigns of an hypochondriacal affection, will be found its conſtant attendants.

On the whole, if a perſon (after having peruſed the hiſtory of this diſeaſe as delivered by the ancient and modern writers) compares without prejudice their obſerva-

tions with what is preſented to his view in actual practice, he will probably agree with me, that, notwithſtanding the multiplicity of caſes daily occurring, wherein the breathing is perfectly free in the intervals of the fits, inſtances of aſthmatics will be frequently met with, whoſe breathing continues affected long after the violent fits have paſſed off, and at a time when no mark or veſtige of obſtruction could be diſcovered in the lungs.

Such are the remarks that have occurred to me, on conſidering the hiſtory of this intricate and ſtubborn diſorder. I have very little doubt but that objections may be made to the hints I have ſuggeſted. However, it is ſome conſolation to me, to find that I am ſupported in my opinion by one of the brighteſt ornaments of antiquity, and at the ſame time one of the moſt accurate obſervers

of the phenomena of diſeaſes, I mean the celebrated Aretæus, who finiſhes his excellent deſcription of the aſthma in the following remarkable words: εν ῃ τησι επανεσεσι κῆν πειῶσι ορθοςαδην τῦ παθε@ φερουσι ξυμβολα.

De Sign. & Cauſ. Morb. p. 40. *

CHAP.

* In addition to what has already been ſaid on the nature of aſthma, it may not be unintereſting to make a few obſervations more by way of illuſtration. In the generality of aſthmatic attacks, after the paroxyſm has ſubſided, the patient ſtill feels the remains of the diſorder about him; his breathing, from a ſtricture acroſs his breaſt, is rendered uneaſy, and it continues in that ſtate till the ſucceeding fit comes on, when this and every other ſymptom ariſe to the ſame pitch as in the preceding. In this manner the diſorder generally goes on for ſeveral days, and then begins to diſappear inſenſibly, leaving the patient in a ſhort time free from aſthma, or any ſort of difficult breathing. This is allowed by phyſicians to be the ordinary courſe of things in a regular attack of ſpaſmodic or convulſive aſthma; and it is worthy of notice, that, even in this ſimple and uncombined ſtate of the diſeaſe, and whether it be of a ſhort or long duration, the uneaſineſs of breathing very

CHAP. II.

EVER ſince the aſthma became an object of attention with phyſicians, they have been diligently employed at different times in inveſtigating its cauſes, and never was there a greater diverſity of opinion diſplayed

frequently keeps its ground between the fits, and is principally kept up by the tightneſs of the cheſt juſt now mentioned. Moreover, when the diſorder is protracted to any conſiderable length, without any deciſive intermiſſion, it will very often be found that the paroxyſms of aſthma will abate of their violence, and almoſt totally vaniſh, while the tightneſs acroſs the cheſt, and its concomitant ſymptoms, will ſtill continue to haraſs the patient. This in truth is ſo often the caſe, that it is not a little extraordinary, that ſyſtematic writers, in their definitions of aſthma, ſhould inculcate no other idea than that of a periodical ſpaſmodic diſeaſe, without the ſmalleſt

played on any ſubject whatſoever. One writer aſcribes the diſeaſe to a defluxion on the lungs, a ſecond to plethora, a third to an affection of the nerves, and ſo on according to the ſyſtem that happened to pre-

ſmalleſt alluſion to a permanent affection, as may be ſeen by the annexed quotations.

Difficultas ſpirandi periodicè recurrens chronica.

SAUVAGE.

Reſpiratio difficilis periodica chronica cum ſenſu anguſtiæ in faucibus.

VOGEL.

Eſt chronica periodica reſpirandi difficultas.

SAGAR.

Spirandi difficultas per intervalla ſubiens, cum anguſtiæ in pectore ſenſu, et reſpiratione cum ſibilo ſtrepitu, tuſſis ſub initio paroxyſmi difficilis, vel nulla, verſus finem libera, cum ſputo muci ſæpe copioſo.

CULLEN.

I thought it unneceſſary to inſert the definition of Linnæus among the foregoing, as he runs into the oppoſite extreme, and defines ſome incurable obſtruction of the lungs, rather than a ſpaſmodic affection of theſe organs.

vail at the time. There are others who, in order to avoid the imputation of partiality to any ſyſtem, enumerate all the cauſes that preceding writers have mentioned, arrange them under general heads, and, without any diſcrimination of their various intenſity and power, aſcribe an equal degree of them to each. By theſe means a cloud of obſcurity is thrown over the ſubject that is not eaſily diſpelled.

It cannot be denied but that there are many complaints in which a number of cauſes concur to produce the deciſive change, from a ſtate of health to that of diſeaſe: but in this multiplicity, it is ſurely the phyſician's buſineſs to point out ſuch cauſes as generally take the lead, and have the greateſt ſhare in the production of the diſeaſe; while he diſtinguiſhes them from others of leſs note, that appear but ſeldom, and ſhould be

be conſidered as fortuitous occurrences, rather than the conſtant and invariable antecedent cauſes of the diſeaſe.

Great ſtreſs has been laid on that ſtate of the body that renders it ſuſceptible of diſeaſe. That in every diſorder there is a prediſpoſition in the habit neceſſary for aſſiſting the adventitious and exciting cauſe to produce its morbid effects, nobody will be ſo abſurd as to deny: but if a writer, in excluſion to the truly conſpicuous and efficient cauſe, exalt this prediſpoſition into a whole inſtead of making it a conſtituent part only, ſuch a theory muſt reſt on a very bad foundation. The doctrines of plethora, debility, irritability, &c. the uſual reſources of phyſicians in endeavouring to account for other ſpaſmodic diſeaſes, have been plauſibly enough transferred by analogy to the aſthma.

On ſome occaſions, there are very ſtrong reaſons for ſuppoſing that one or other of theſe deviations from a perfect ſtate of health may ſo far operate, as to ſubject a perſon more readily to attacks of aſthma than otherwiſe would have been the caſe. But if we take a view of thoſe who for the moſt part become its victims, we ſhall in general find no one particular temperament or habit of body more liable to it than another.

In this country, the lower order of people who are daily expoſed to the various viciſſitudes of the weather, who are conſtantly employed in bodily labour, and poſſeſs in conſequence thereof a rigidity of fibre and robuſt conſtitutions, are very frequently afflicted with aſthma—much more ſo indeed than perſons in the higher walks of life, whoſe frames, enervated by indolence, luxury,

luxury, and a redundance of humours, become irritable in a high degree, and are prone to various other ſpaſmodic affections. Beſides this deſcription of aſthmatics, there is a claſs of artiſans that appear to be the greateſt ſufferers by this diſeaſe, ſuch as brewers, bakers, ſoap-boilers, blackſmiths, and many others *. If theſe be facts whoſe authenticity cannot be called in queſtion, any prediſpoſition from plethora, irritability, &c. either in the body at large or in the lungs in particular, does not ſeem to contribute ſo eſſentially to the production of this diſeaſe as is generally imagined.

The ſymptoms of flatulence, indigeſtion, hypochondriaſis, &c. that ſo conſtantly accompany the aſthma, have in all probability very much miſled practitioners. Inſtead of conſidering them the natural conſequence of

* Vide Withers on the Aſthma, p. 38.

the

the diſeaſe, as they ought to do, they bring them forward as an argument in ſupport of a contrary opinion. They ſuppoſe that ſuch ſymptoms always indicate a weak, lax, and irritable fibre; and that any diſorder, as the aſthma, ariſing in ſuch a habit, and attended with complaints of this nature, muſt be the offspring of nervous debility. Hence the idea of nervous and hyſteric aſthma firſt took its riſe. This, however, is a very falſe mode of reaſoning.

Take, for example, a perſon of the moſt vigorous conſtitution, whoſe ſtomach, previous to the aſthma, would ſubdue the moſt viſcid and indigeſtible ſpecies of aliment; behold him after ſeveral attacks of his diſorder, and you will often find his appetite materially injured, the tone of his ſtomach impaired, while flatulence, diſtenſion of this organ, and various other nervous ſymptoms,

toms, as they are called, will conſtantly follow *. This is in fact ſo often the caſe with aſthmatics, that very few exceptions occur to the contrary.

To diſcover the ſource of the errors on this ſubject, we muſt go back as far as the

* Dr. Percival remarks, that phyſicians and phyſiologiſts have paid great attention to the influence that the ſtomach when diſeaſed has on the lungs, but that they have taken little notice of the converſe of this. He gives a caſe of humoural aſthma, in which the patient could take ſeveral drams of vin. ipecac. at the commencement of the diſeaſe; but as his diſorder increaſed, the irritability of his ſtomach became ſo great, that 15 drops of the ſame wine often acted as an emetic.

Percival's Eſſays, vol. ii. p. 394.

Dr. Percival is certainly juſt in his remarks on the negligence of phyſicians with reſpect to this ſubject, yet it would be an endleſs taſk to enumerate all thoſe caſes of aſthma, in which the ſtomach is deranged in conſequence of the diſordered ſtate of the lungs: for in fact very few aſthmatics can be found (let the previous ſtate of their ſtomachs be what it may) who will not in length of time ſuffer materially from flatulence, diſtenſion, and other ſymptoms of a debilitated ſtate of this organ.

time

time of Dr. Willis. Before he publiſhed his Treatiſe on the Aſthma, though medical writers deſcribed its ſymptoms with tolerable accuracy, they never conſidered it a ſpaſmodic diſeaſe, or that it could be brought on by powers applied to the nervous ſyſtem, or moving fibres.

This celebrated phyſician perceiving, after the diſorder had once taken root in the conſtitution, that it was eaſily renewed by cauſes whoſe operation could not be explained on any other principle than this, extended the idea farther, and was of opinion, that all thoſe various cauſes, ſuch as heat, paſſions of the mind, &c. that are capable of bringing on a relapſe, are equally effectual in giving riſe to the firſt attack in perſons prediſpoſed to the aſthma *.

This

* Quicquid igitur ſanguinem efferveſcit inque orgaſmum concitat, uti motus violentus corporis aut animi, frigoris

This doctrine, in its fulleſt extent, has been received into almoſt every work publiſhed on the aſthma from that period down to the preſent time, and has been adopted with the moſt implicit confidence by every practitioner: any attempt of courſe to overturn a ſyſtem ſupported by ſuch authority, may be conſidered as no ſmall degree of preſumption, and will probably meet with a very ungracious reception. Facts in themſelves abſolutely incontrovertible have been adduced by a variety of writers on this ſubject; but the concluſions that have been drawn from them, are in my opinion neither juſt nor philoſophical.

Thus it is univerſally known, that after two, three, or more fits of aſthma, the lungs

frigoris aut caloris externi exceſſus, vini potus, venus, quinimo interdum merus lecti calor, prædiſpoſitis inſultus aſthmaticos accerſit.

Willis Oper. Omnia, à Blaſio, p. 208.

become

become ſo extremely irritable, and ſo readily diſpoſed to fall into their former ſpaſmodic ſtate, that various kinds of ſtimuli, and many of them of an apparently mild and inoffenſive nature, will be productive of aſthmatic paroxyſms. But does it neceſſarily follow, that, previous to any appearance of fits, or any habit being formed in the ſyſtem, they are capable of producing ſuch violent effects in conſtitutions the moſt healthy and vigorous? I ſuppoſe it does not; and however natural the tranſition and analogy may appear, it would be as erroneous to argue from the one caſe to the other, as it would in the inſtance of an intermittent fever, to exalt to the rank of primary cauſes every irregularity or ſtimulus that is found to bring on a relapſe, after a ſtop has been put to the diſeaſe.

In illuſtration of this, it will ſuffice for the

the preſent to obſerve, that phyſicians, on finding what bad effects the change from a heavy to a light atmoſphere ſometimes produces on aſthmatics, have fallen into the error of placing a diminution in the weight of the air among the primary cauſes of the diſeaſe, though no one well authenticated inſtance of ſuch a fact can be adduced, as will be ſatisfactorily proved hereafter. Objections equally valid can be brought againſt many of the other cauſes that have been aſſigned by medical writers.

Hence we ſhould be very cautious how we take for granted the many caſes of aſthma recorded by medical authors, that are ſaid to originate in ſuch cauſes, as they will be found for the moſt part the offspring of an ill-founded though plauſible theory, and not the reſult of a minute enquiry or accurate obſervation. Moreover it is worthy

of

of notice, that the authenticity of ſeveral caſes of this kind reſts very frequently on the degree of credit that is due to the patient's narrative; and if men of ſcience and erudition be ſo liable to error on this head, we cannot be ſurpriſed at the miſtakes or miſrepreſentations of patients in general: for it muſt eſpecially depend upon the proper and judicious interrogations of the phyſician, and his capacity for diſtinguiſhing the probable from the improbable cauſes, how far he may be able to arrive at any degree of certainty.

From what has been now advanced, I would not wiſh to have it underſtood that I meant to exclude altogether the cauſes in queſtion. I can readily conceive how an acquired degree of irritability or ſenſibility, in certain habits, may ſo far predominate in the lungs, as to expoſe ſuch perſons to fits of aſthma

from

from trivial cauſes, as paſſions of the mind, a light atmoſphere, &c. &c.: but ſtill I am convinced that this is not a common occurrence. The hiſtory of a patient will be related in the courſe of this work, who, after repeated nervous and hypochondriacal attacks, at length got a nervous aſthma, that returned at regular and ſtated periods. A perſon in the habit of reaſoning according to the principles of the preſent faſhionable ſyſtem, woud not heſitate a moment to pronounce the aſthma, in this caſe, to be the effects of the preceding nervous complaints, without the aſſiſtance of any adventitious power; or that ſome very trifling one had ſtirred up the diſorder, already in a latent ſtate in the conſtitution. However, there is very little doubt but that the application of cold was the ſole cauſe of the firſt attack in this patient. He was very conſtantly

expoſed to the night air in the moſt inclement ſeaſon of the year, previous to the appearance of the aſthma; and even after this was in a great meaſure ſubdued, expoſure to cold was the only cauſe that ſeemed to have any effect in occaſioning a relapſe.

In ſome caſes we can with tolerable certainty mark one particular ſtate of the lungs that ſeems to eſtabliſh a ſtrong prediſpoſition to the diſeaſe. This is a mal-conformation of the cheſt, apparently at times connected with an hereditary taint, but more frequently independent of it. In this ſituation the lungs being confined in too narrow a ſpace for their bulk, are eaſily ſtimulated to irregular ſpaſmodic action, by various kinds of irritation. I will relate a caſe in point. A perſon of my acquaintance, from a narrow and contracted cheſt, is ſubject to tranſitory fits of difficult breathing: fatigue, particularly

ticularly from walking too faſt, the ſulphur and ſmoke of coals, and any paſſion capable of agitating the frame, is frequently followed by a paroxyſm, which diſappears in a few minutes, and leaves him in a perfect ſtate of health. But it is a doubtful point whether, in the ſtrict propriety of medical language, this diſorder can be denominated aſthma, as it is not preceded by the ſigns peculiar to this diſeaſe, nor, in its duration or phenomena, has it the characteriſtic marks of a genuine confirmed aſthma. At moſt it is but a very ſlight ſpecies of the aſthma, though, from the very irritable ſtate of the lungs, it is evident that the prediſpoſition is as ſtrongly marked as in any caſe whatſoever. From this fact (if a ſolitary one can have any weight) it may be inferred, that the exciting cauſes of aſthma muſt be of a more powerful nature than is

commonly ſuppoſed to produce a formidable diſeaſe, let the tendency in the habit be ever ſo predominant.

Though it would look like ſcepticiſm to deny that the ſeeds of the aſthma are ſometimes tranſmitted from parents to their offſpring, yet too much pains have been taken by writers to perſuade the world that this is moſt commonly the caſe. This opinion, as far as I am able to judge, was founded on the inefficacy of the remedies that were generally employed, rather than on the more faithful and unerring teſtimony of obſervation. Phyſicians ſuppoſed, as the diſorder ſeldom or never yielded to the power of medicine, that ſome hidden and unconquerable cauſe had fixed its roots deep in the conſtitution; and as an apology for the healing art, and to ſave themſelves the pains of farther inveſtigation, they have thought

thought proper to charge this to the account of an hereditary taint. Happily however the caſe is otherwiſe. It would be nugatory to dwell on the many arguments that might be advanced to overturn this pernicious doctrine. Let it ſuffice for the preſent to ſay, that the cauſes of the diſeaſe are often ſo manifeſt, as not to elude the notice of the moſt careleſs and inattentive obſerver; that on the moſt minute enquiry it cannot be traced to any defect on the ſide of parents or their anceſtors; and that it can be very frequently ſubdued, if proper remedies be adminiſtered in due time, and with judgment.

From the foregoing ſtrictures, it is pretty clear, I ſuppoſe, that too much hurry and inattention have been ſhewn by phyſicians in their inveſtigations of the cauſes of aſthma. Taking into the account ſuch caſes as

ariſe from an hereditary taint, from mal-conformation, and from different accidental cauſes, as in ſmelting of lead, &c. I will ſtill venture to ſay, that in 99 caſes of 100, the application of cold to the lungs is, in this climate, the chief and principal cauſe of laying the foundation of this diſeaſe, of bringing on the attacks, and of continuing it after it has once taken place.

CHAP. III.

IN a climate like this, where cold and moiſture ſo conſtantly unite, it is natural to ſuppoſe, that many of the diſorders incident to it, particularly thoſe of the lungs, are in a great meaſure owing to the influence of ſuch a combination. The aſthma may with propriety be ſet down as one of the number. At leaſt the effects of cold are often obſervable, if the diſorder be carefully attended to at its commencement. For ſome days before the aſthma is completely formed, the patient frequently complains of an uneaſineſs of breathing, cough, pains in his head, and other parts of the body. Sometimes a ſtrong tendency to inflamma-

tion takes place; and in conſequence thereof a pain or ſtitch in either ſide is frequently felt, together with a ſenſation of cold in different parts, analogous to what occurs in catarrhal affections. If, together with theſe ſymptoms, a ſtricture be felt at the ſternum, an aſthmatic paroxyſm may be expected to ſupervene very ſhortly, unleſs prevented by timely applications. The appropriate remedies for ſuch threatenings of aſthma are bleeding and bliſtering, which have often, to my knowledge, warded off the impending attack.

It is neceſſary to remark in this place, that theſe precurſory ſymptoms do not take place in the exact order, degree, or number in which they are ſet down: they will frequently vary according to the difference in the intenſity of the cauſe, the previous ſtate of the patient, and many other circumſtances.

ſtances. However, in fact they are the common and uſual effects of the action of cold on the lungs, and differ in no material point from the ordinary ſymptoms of a catarrhal affection but in this, that in proportion to the degree of inflammatory tendency, and ſtate of the pulſe, the breathing is more oppreſſed than is uſually the caſe in catarrh.

On theſe occaſions an acute obſerver can often foreſee the ſtorm gathering, and guard againſt it with ſucceſs: but this is not always in his power, as in many inſtances no alarm is given, and the diſorder comes on in the moſt ſudden and unexpected manner, without any of thoſe ſymptoms that ſo conſtantly attend the operation of cold. Lying-in women, and perſons after recovery from fevers and other diſorders, by unguardedly expoſing the body to cold in a ſtate of perſpiration,

ſpiration, are, according to my obſervations, very liable to attacks in this way. In other habits the conſtitution is able to reſiſt the action of cold, though frequently renewed, for months, and ſometimes for years, till, by the frequent repetition of the ſame cauſe, the lungs become materially injured in their functions, they loſe their elaſticity and tone, and at length give way to its impulſe. An aſthma brought on in this manner is generally of a very obſtinate nature.

Thoſe who conſider the aſthma to be principally a nervous affection, and to ariſe from cauſes that operate on this ſyſtem without the concurrence of cold, do ſtill admit that the humoural aſthma, as it is called, proceeds in a great meaſure from the operation of cold on the lungs. This opinion is formed in conſequence of its being conſtantly accompanied with cough, ſpitting,

and

and other ſigns of a catarrhal complaint. Let us ſee how far this teſt may be relied upon. A phyſician muſt be poſſeſſed of very little diſcernment, who has not noticed at different times a conſiderable diſcharge of phlegm from the lungs, in every ſpecies and variety of aſthma; in the hyſteric and convulſive, as well as in the humoural and plethoric. Nay, what appears ſtill to be more worthy of remark is, that practitioners will often find the nervous and convulſive kind, with its ſtated and periodical attacks, attended by a copious expectoration of phlegm; while other ſpecies of a doubtful and irregular nature, in which a perſon could diſtinctly trace the application of cold, diſcovered no ſuch ſymptom. How then can it be alleged with any confidence, that the exiſtence of ſuch an affection as this ſhould conſtitute any

ſpecific

ſpecific difference, and be eſtabliſhed as a criterion for aſcertaining the cauſe of the diſeaſe?

In general, it is not from any difference in the cauſe, but from a difference in the diſpoſition of the bronchial glands to pour out the mucous fluid, that one aſthmatic coughs up large quantities of phlegm, while another has little or no tendency to it. Thus ſome people with ſlight catarrhs are accuſtomed to ſpit very freely; while others in the ſame ſituation, and in every degree of the diſorder, from a ſlight cold to a confirmed inflammation of the lungs, bring up little or no phlegm by coughing.

Sir John Floyer himſelf (though he aſſerts that they originally proceed from different cauſes) owns, nevertheleſs, that as to their ſymptoms and phenomena they are exactly alike; and after ſome time the fits in both

both ſpecies are brought on by the ſame means*.

The juſtly celebrated Morgagni has remarked, that many practitioners under the

* Whatſoever cauſes produce the fit of the hyſterical aſthma produce the ſame in the ſpitting aſthma, as changes of weather, heat and cold, violent motions, paſſions, wine, ſurfeits: in neither kind of aſthma can they bear the heat of the bed. Since the ſame cauſes produce the fits in both ſorts of aſthmatics, there is certainly the ſame effervescence in both which occaſions the fits, and that is plainly proved: for at the end of the hyſterical aſthma fit, the water appears feveriſh, with a thick ſediment: and I obſerve that there is the ſame interval between the hyſteric aſthma fits, as there is in the ſpitting aſthma: and there is the ſame quantity of pale water in both kinds of aſthma.

Since therefore theſe two kinds agree in the ſame ſort of conſtruction of the bronchia, in the ſame effervescence of humours occaſioned by external cauſes; all theſe two kinds differ in is the firſt occaſion that produces them, and the ſpitting attends the one and not the other; the reaſon of which I impute to inflammation of the lungs or a catarrh, and the other ariſes after hyſterical fits or a fever.

Floyer's Treatiſe on the Aſthma, p. 114, 115.

influence

influence of Willis's doctrine of aſthma, have been ſo much deceived by falſe appearances, as to treat diſorders of the lungs that evidently aroſe from obſtructions, for nervous and convulſive aſthmas. Such a caution coming from a man of Morgagni's diſtinguiſhed abilities ſhould have its due weight with phyſicians, and deter them from relying with ſo much confidence on a doctrine, that in ſeveral inſtances has been attended with conſequences of a very ſerious and alarming nature *.

Hence,

* Poſtea vero quam Williſius perſecutus eſt fuſius convulſorum nervorum effectus in diffitis quibuſque partibus: medicorum plerique non modo cum oportuit, hanc illius ſequi doctrinam cœperunt: ſed haud raro etiam hujus facilitate et commoditate illecti, interdum quoque fallaci rerum ſpecie decepti, abuſi ſunt uſque adeo, ut cum organorum vitia non deeſſent, nihil niſi convulſiones in multis morbis, præſertim vero ad reſpirationem attinentibus, accuſaverint non ſecus ac veterum plerique

Hence, in every recent attack of convulſive aſthma, if we cannot trace it to the effects of cold on the lungs, or to ſome defect in the formation of the cheſt, an organic obſtruction in ſome of the internal parts may be ſtrongly ſuſpected: at leaſt phyſicians are not juſtifiable in laying down any plan of cure, until every circumſtance with reſpect to this point be examined with the utmoſt deliberation.

Phyſicians can eaſily conceive how ſpaſmodic complaints of the ſtomach and bowels may be excited by cold: but if a ſimilar affection of the lungs be in queſtion, inſtead of aſcribing it to ſo obvious and natural a cauſe (as might be expected from its very conſtant and deciſive influence on theſe or-

plerique accuſabant vapores. Qui abuſus niſi caveamus quam facilis ſit non una in proximis epiſtolis docebit hiſtoria.

Morgagni de Cauſ. et Sed. Morb. p. 131, t. 1.

gans),

gans), paſſions of the mind, a change in the ſpecific gravity of the atmoſphere, &c. are had recourſe to, in order to exhibit a rationale more conſonant to a nervous and convulſive diſeaſe. In all thoſe perſons, as the common people and tradeſmen of this country already ſpoken of, and who were found to be the greateſt ſufferers by this diſeaſe, the trivial cauſes commonly aſſigned cannot, by the moſt zealous advocates for the nervous doctrine, be conſidered of ſufficient magnitude to produce effects of ſo formidable a nature as we are witneſs to every day: and unleſs a predilection for ſcepticiſm, and a deſire of explaining all ſpaſmodic diſorders by means of the nervous ſyſtem, ſhould bias the judgment, a ſatisfactory explanation of ſuch caſes of aſthma will be often diſcovered in the operation of cold on the lungs.

If,

If, after all this, it ſhould ſtill be doubted whether the cold of our climate be capable of producing the flatulent, hyſteric, or any other ſpecies of nervous aſthma, a few well authenticated facts, drawn from writings of no inconſiderable authority in medicine, will clear up this point.

Narciſſus, vir xxxviii annorum, temperamenti cholerico-ſanguinei, tribus circiter abhinc menſibus Francofurtum ad Viadrum profectus ſub itinere, febre multo vomitu ſtipata corripitur: a quâ datis a quodam medico potiunculis diaphoreticis et temperantibus liberatus, ſub diſceſſu de crebris in latere dextro puncturis conqueri cœpit. Redux et per ſex circiter dies domi commoratus, Stetinum quinque milliaribus a loco in quo degebat diſtans nave aperta proficiſci decrevit. Conſcendit quoque illam hora veſpertina ſexta, levi indutus amictu, et non ſolum ſuborta mox tempeſtate pluvioſa,

verum etiam aëre ac cœlo per totam noctem inclementi atque horrido, refrixit. Accedens Stetinum, et biduo ibidem ſub illibata ſanitate commoratus, tum de inſigni præcordiorum anxietate et omnium artuum laſſitudine conqueri cœpit. Hinc protinus domum reverſus, mox corripitur previo horrore brevi, æſtu inſigni cum ingenti anhelatione, ac ſi ſuffocari vellet aliiſque ſymptomatibus ſtipata: quæ inſequenti nocte magis invaleſcebant cum puncturis ſiniſtri lateris. Quare vena in dextro pede ſtatim inciſa, mox evanuerunt dictæ puncturæ: ſed cum reliqua ſymptomata non ſolum inſiſterent, verum etiam dyſuria ac flatulentia accederent, medicum abſentem accerſi curat æger, qui congruis medicaminibus noviſſimas binas adfectiones profligavit quidem, at conſtrictionem aſthmaticam debellare haud potuit.

Freder. Hoffman. Conſult. et Reſp. M. t. i p. 404.

Caſus lxxxix. De Aſthmate Spaſm. Flatulento.

On

On reading the foregoing hiſtory, it is evident (laying aſide every ſort of theory) that this flatulent ſpaſmodic kind of aſthma, as Dr. Hoffman calls it, was brought on by cold.

Narciſſus, in a few days after recovering from a fever, undertakes a journey very lightly clad, in an open veſſel, and on a wet, cold, and ſtormy night: in two days after, he is attacked with cold ſhiverings, ſucceeded by heat and violent ſuffocations threatening immediate death. When ſuch ſymptoms are accompanied with ſtitches in the ſide, and on ſuch an occaſion as this, it would be abſurd to aſcribe them to any other cauſe but cold.

Bleeding had the effect of inſtantly baniſhing the ſtitches, and the other means that were uſed ſo far ſucceeded as to remove the ſymptoms of dyſuria and flatulence: but the ſpaſmodic ſtricture at the cheſt ſtill

remained unſubdued, and never quitted him till it brought on other diſorders that in all probability terminated in his death.

In this caſe, the continuance of the ſtricture at the breaſt, after the violence of the diſorder was ſubdued by bleeding and other remedies, is a proof that the ſpaſmodic affection is often of a permanent nature in the aſthma, and makes it aſſume a continued type.

Quum aliquot abhinc annis in Carolinis degerem fontibus; acceſſit illos vir quidam generoſus, qui in intemperantia potûs et frigori intenſo ſub quo pectus ipſi libere exponendo iter fecerat, ab aëris inclementia, aſthmaticum ſibimet contraxerat morbum.

The following reflections of Dr. Hoffman on this caſe merit particular attention:

Quemadmodum frigus omnibus nervoſis partibus infenſum eſt: ita maxime pectori deprehen-

deprehenditur inimiciſſimum. Quamplures mihi cogniti ſunt caſus ubi ex eo ſolo liberalius admiſſo tuſſes, aſthmata ſpaſmodica, et cardialgiæ atrociſſimæ propullulârunt. Hinc non rarum eſt eos qui venatoriis aut aulicis muneribus præſunt, et pectori uti mos eſt minus tecto incedunt, ejuſmodi affectibus infeſtari. Etſi noſtrum conferamus caſum, non ſane ex alia cauſa originem traxit aſthma quam ex frigore pectori admiſſo: ſiquidem æger venationibus indefeſſus vacavit, nudoque pectore ſub gelidiſſimo cœlo inceſſit. Quod cum forſan inconvenienti tractatum ſit medela: omnino in hydropem pectoris tandem degeneraverat.

Hoffman. Medic. Rat. Syſt. t. ii. p. iii. p. 353-4.

Beſides theſe teſtimonies from Dr. Hoffman in favour of the operation of cold in producing aſthma, he has another paſſage which is ſtill if poſſible more expreſſive. After enumerating the different cauſes that

lay the foundation of this diſeaſe, he concludes his ſubject in the following manner:

Si quid ex cauſis occaſionalibus eſt quod aſthma convulſivum inducere poteſt, certe eſt externum frigus, hoſtis ille nervoſo generi inimiciſſimus. Unde hyemali tempore flantibuſque ventis aquilonaribus ingraveſcit malum: et a frigido quoque potu exacerbatur. Imprimis obſervavi illos qui pectus non bene tegunt, illudque frigori maxime nocturno exponunt, ſæpius hoc malum incurriſſe.

Dr. Willis himſelf, who made ſo material a change in the pathology of aſthma, and conſidered it in every reſpect a nervous diſeaſe, gives us, notwithſtanding, a caſe of convulſive aſthma that evidently aroſe from cold.

Senex perhonorificus multis magniſque titulis inſignitus, iiſdemque omnibus major,

poſtquam

poſtquam per aliquot annos unaquaque hyeme tuſſi cum ſputo moderato et ſatis benigno obnoxius degiſſet, ſub finem noviſſimi autumni, a longo itinere domum reverſus (a frigore uti putabatur ſuſcepto) minus recte valebat. Querebatur enim de dolore in medio pectore juxta ſternum excitato, qui veſperi quamprimum lecto incaleſceret, ingraveſcens ſomnum perturbabat, et plurima nocte valde moleſtus erat, ſine quavis tamen dyſpnœa, aut aſthmatis ſigno evidenti.

Ad dolorem hunc tollendum, et purgatio et phlebotomia celebratur, pectoralia et antiſcorbutica quotidie exhibentur, loco dolenti linimenta et fotus applicantur, ſine magno tamen fructu aut levamine: nam quæ deinceps alteratio contigit, potius in deterius ceſſit: nam dolori paulo remiſſius habenti, reſpiratio difficilis et impedita ſupervenit, ita ut a primo ſomno aut appulſu ejus ſtatim aſthmaticus fieret, atque anhelus, et circa

præcordia laborans in lecto erectus ſedere cogeretur.

Porro hujuſmodi dyſpnœa et ſpirabilium agitatio convulſiva, non modo quovis veſperi redibant, ſed indies immaniores factæ longius durabant: proinde ut nocte quadam a primo ſomno evigilans aſthmatis paroxyſmo graviſſimo, qui ipſum tantum non interemit per plures horas afficeretur.

Willis, Opera Omnia à Blaſio, p. 213. De Medicam. Operatione.

On reading the preceding caſes and obſervations, no perſon, I ſuppoſe, will be ſo hardy as to deny the poſſibility of every form of aſthma from the operation of cold, independently of any other cauſe: and if a multiplicity of them were in any reſpect neceſſary for giving additional plauſibility and weight to this opinion, the records of phyſic would readily ſupply us with them.

From this ſource alſo, even at its origin,

it

it is poſſible we may be able to draw a farther corroboration of our doctrine of aſthma: for it will be found, that the theory under conſideration was embraced in the earlieſt annals of medicine, when the human mind, poſſeſſing its native independence, had no particular bias for any ſyſtem, but recorded with fidelity whatever nature preſented to its view.

If we look into the works of the venerable Father of phyſic, we ſhall find no particular ſection or chapter allotted to this diſeaſe. In the courſe of his writings, however, he takes frequent opportunities of mentioning the aſthma, and that in ſuch a manner as to leave very little doubt on the minds of his readers, that it often engaged his attention, and that he was intimately acquainted with its nature.

Theſe detached and ſcattered paſſages have called forth the exertions of different authors,

authors, particularly thoſe of Galen, who has given us a very elaborate commentary on aphor. 26, lib. 3; aphor. 46, lib. 6, and other parts.

But his intended illuſtrations on thoſe ſeemingly obſcure and mutilated paſſages, inſtead of affording us any aſſiſtance in elucidating them, and giving us a clue to the ſentiments of Hippocrates, rather, in my opinion, pervert the intention and meaning of this illuſtrious writer.

Not to dwell particularly on thoſe parts in which he has miſtaken the ſenſe of the original, it is ſufficient to obſerve, in general terms, that in no one of his remarks has he done juſtice to it: his deſcription of the aſthma does not differ in any material point from dyſpnœa, or any ſpecies of difficult breathing, and of courſe it cannot convey to us an adequate idea of a ſpaſmodic affection of the lungs.

Theſe

Theſe annotations of Galen being then inadmiſſible, it will be neceſſary to diſcover if any other hints thrown out by Hippocrates on this diſeaſe, will admit of a different explanation.

Hippocrates, enumerating the various complaints that occur at different ſtages of life, ſets down the following as diſorders to which the human frame is particularly liable, after the period in which ſpitting of blood and conſumptions of the lungs are moſt frequent.

Τοῖσι δε υπερ την ἡλικιην ταύτην ασθματα πλευριτιδες περιπνευμονιαι. Aphor. 30, lib. 3, ſect. 7.

It appears extremely probable that Hippocrates, in placing the aſthma here in contradiſtinction to pleuriſy and peripneumony, muſt have had in view the ſpaſmodic kind. We ſhall the more readily adopt this opinion, if we attend to the ſucceeding aphoriſm, where he ſays, that old men are very

ſubject to difficult breathing, coughs, and catarrhs or defluxions on the lungs.

Τοισι δε πρεσβυτησι, δυσπνοιαι, καταρροι, βηχωδεες.

Aphor. 31, ibid.

Here we are to ſuppoſe thatHippocrates, in taking notice of the greater part of the diſorders of the lungs, and in giving an appropriate term to each, had a clear and diſtinct idea of their nature and ſymptoms; and if this be the caſe, he could not poſſibly diſtinguiſh the aſthma from the reſt of the pulmonary diſorders, in any other manner than by marking with accuracy thoſe ſymptoms that are peculiar to it as a ſpaſmodic diſeaſe. That he formed ſuch an opinion of the nature of aſthma, will appear pretty clearly from a paſſage quoted by Dr. Millar, in his excellent Treatiſe on the Aſthma of Infants.

Τοισι δε παιδιοισιν, επιπιπτειν σπασμοις και ασθματα ἃ νομιζουσιν το παιδιον ποιεειν και ἱερην νουσον ειναι.

Hipp. Oper. Omn. à Fæſio, p. 283.

Hippocrates,

Hippocrates, ſpeaking of the effects of cold and moiſture on the human body, and of the diſorders which ſuch a ſtate of the atmoſphere produces, makes uſe of the foregoing obſervations.

Whether we ſuppoſe, with Galen, that Hippocrates hinted at the epilepſy by the epithet ἱερὴν, or, if we content ourſelves with an explanation that will readily occur to every intelligent reader of this paſſage, that the appearance of the diſorder was altogether ſo formidable as to induce the vulgar and uninformed ſpectators to believe that it was ſent by the gods for ſome particular purpoſe; in either ſenſe we are warranted to conclude, that the diſorders alluded to by Hippocrates, under the title of aſthmata, were of a ſpaſmodic nature. For if by this term he meant an affection of the lungs, of which there cannot be the ſmalleſt doubt, no diſorder of theſe organs except a ſpaſmodic

dic and convulſive aſthma exhibits ſuch terrifying ſymptoms as to form any grounds for a parallel with the epilepſy, or for believing that it was the effect of an immediate interpoſition of a ſupernatural power. Hence, without putting any forced conſtruction on the words of Hippocrates, it appears that the aſthma mentioned by him was of the ſpaſmodic kind, and that he conſidered cold and moiſture its principal cauſes. At leaſt it muſt be allowed that this was his opinion with regard to the diſorder in children.

We ſhall next direct our attention to another writer of antiquity, and ſee how far his ſentiments coincide with thoſe of the Father of phyſic.

Celius Aurelianus, in giving a hiſtory of the aſthma, writes like one who delivers a true and faithful account of whatever was preſented to his view in actual practice: no

weak

weak or futile theory is ſubſtituted for facts and accurate obſervation.

Gravat autem (ſays he) aſthma atque premit magis mulieribus viros, et juvenibus ſenes, atque pueros et durioribus natura corporibus teneriora, hyberno atque nocte magis quam die vel æſtate: in quibuſdam perfectis irruit paſſionibus: ſed magis ex profundo frigore ſequitur patientes ſpirationis difficultas, et frequenter natura celerior magis quam tarda.

Every phyſician converſant with the aſthma, muſt acknowledge that we have here, as far as it goes, a juſt and accurate account of its hiſtory. What in my opinion ſtamps it with no inconſiderable degree of merit, is the cauſe that is aſſigned for the production of the diſeaſe: ſed magis ex profundo frigore is the expreſs opinion of this ancient writer; and there is ſo much truth in the remark, and it is founded on ſo ſolid

and

and firm a baſis, that it deſerves to be revived in modern times, and raiſed into a ſyſtem.

Indeed, if the greater part of the earlier writers be conſulted on the aſthma, though the ſame abilities in aſcertaining its cauſe cannot be diſcovered in their works, as in thoſe of Celius Aurelianus or Hippocrates; yet the prevailing doctrines among them ſeemed to be the reſult of a careful obſervation of the ſymptoms that conſtantly took place, and led to a practice not only rational but ſucceſsful.

Thus, from the difficult breathing, cough, ſpitting, and other ſymptoms of aſthma, it appeared to them that there was a flow of humours to the lungs, which they called a defluxion, abſurdly imagining that they deſcended from the head to the cheſt, being previouſly drawn up by this organ from the lungs.

This

This explanation, however vague and ridiculous it may appear, was productive of no evil conſequence. The fact being eſtabliſhed with reſpect to the determination of morbid humours to the lungs, or to a redundancy of ſuch as were found, happily directed a practice of the moſt ſalutary tendency: vomiting, purging, and other evacuant remedies came to be employed in the incipient ſtate of the diſeaſe, and were conſtantly crowned with ſucceſs.

Even at an after period, and when the diſorder ran into a chronic ſtate, their inſtructions for aſthmatics have not been followed in vain by practitioners of experience in modern times. Thus Sir John Floyer * has

* I found I had read moſt of the modern writers, and hitherto had tried their methods, and hot pectorals and cephalics in vain. I believed by my ill ſucceſs in their way that they never underſtood this diſeaſe; and therefore turned over ſome of the old writers, Galen, Ægineta, Ætius, &c. where I found more rational no-

 tions,

has borne public teſtimony to the ſuperior efficacy of their practice, and affirms that he obtained more laſting benefit from their preſcriptions, than from any of thoſe that were publiſhed by the modern phyſicians of his time.

Having laid before my readers this account of the doctrines of the ancients with reſpect to the aſthma, I ſhall take the liberty of making a few remarks on ſome paſſages in Dr. Millar's treatiſe on the ſame ſubject, already mentioned, as they appear to be a ſtrong corroborating evidence in ſupport of the theory under conſideration, though brought forward by this ingenious writer for a very different purpoſe.

He ſets out with a deſcription of the ſoil, extent and ſituation of the different coun-

tions, and was directed by them to the uſe of that medicine which does very much relieve and prevent my fits, of which I will hereafter give an account.

Treatiſe on the Aſthma, p. 15.

tries

tries wherein the aſthma was found to be moſt prevalent, recounts the diſeaſes that rage at particular ſeaſons, gives a minute account of the ſtate of the weather which he thinks produced them, and concludes his obſervations in the following ſummary manner:

" Such was the ſtate of the weather, " which at this time introduced the aſthma, " and ſuch were the concomitant diſeaſes: " and as there was little variation in ſuc- " ceeding years, it is ſufficient to obſerve in " general, that from a meteorological re- " giſter, very accurately kept by an ingeni- " ous clergyman, for almoſt fourteen years, " compared with a journal of diſeaſes during " that period, it appears that the aſthma " was more or leſs frequent according to the " ſtate of the weather; that it prevailed moſt " in ſpring and autumn, and eſpecially in " moiſt ſeaſons accompanied with eaſt and

" north-eaſterly winds; when the weather " was variable; when the mercury in the " barometer was fluctuating, but generally " low; and when ſudden changes from " froſt to thaw were very frequent."

Millar's Obſervations on the Aſthma and Hooping-Cough, p. 13.

A perſon diveſted of every ſort of pre-poſſeſſion in favour of any particular theory, on peruſing the preceding obſervations relative to the aſthma, could not, in my opinion, heſitate a moment in forming a deciſion as to its cauſe. But let us ſee the ſuperſtructure that Dr. Millar has raiſed on this foundation.

" From the hiſtory which has already " been given of the aſthma, it appears that " it is chiefly incident to children, eſpecially " ſuch as have been lately weaned; and that " it has been moſt prevalent in ſpring and " autumn, moiſt ſeaſons, changeable wea-

" ther,

" ther, and when the mercury ſtood low in
" the barometer.

" However unſatisfactory the conjectures
" may be which have been formed con-
" cerning the influence of a light atmo-
" ſphere in producing diſeaſes, yet the
" fact ſtands confirmed by the concurring
" teſtimony of phyſicians in all countries,
" and in all ages. An extraordinary
" inſtance of the lungs being affected by
" ſuch a conſtitution of the air, is related
" by Dr. Mead in his Treatiſe concerning
" the Influence of the Sun and Moon upon
" the Human Body. And if we have not
" been groſsly deceived by the relations of
" travellers, the ſudden change from a
" denſe to a light atmoſphere, in aſcending
" high mountains, renders reſpiration very
" difficult."—Ibid. p. 67.

" When moiſture is joined to ſuch a ſtate
" of the air, it becomes ſtill more injurious ;

" the ſuperfluous ſerum, which ought to be " thrown out by expiration, is accumu- " lated; the fibres become turgid and œde- " matous; and the organs of reſpiration " are weakened."—Ibid. p. 69.

Thoſe who labour under no defect of the lungs, for the moſt part bear with impunity very conſiderable changes in the ſpecific gravity of the atmoſphere: even many perſons have reſided for ſeveral weeks on very high mountains, without finding their reſpiration affected, as was the caſe with Meſſrs. Bouger and La Condamine, on Pinchinea * in America. Others affirm that they experienced no difficulty of breathing on the Pike of Teneriffe.

The diſorders that are generally ſaid to attack thoſe who viſit ſuch mountains, are hæmorrhages from different parts of the

* Zimmerman's Experience in Phyſic, vol. ii. p. 111.

body,

body, as from the lungs, noſtrils, eyes, &c. They are accounted for in this manner:—The impediment that is given to the propulſion of the blood through the vaſcular ſyſtem, being in part removed by the diminiſhed preſſure on the tops of mountains, the fluids are propelled with greater force by the vis a tergo; hence the ſmall veſſels becoming more and more diſtended, a rupture of ſuch of them as are leaſt capable of reſiſtance takes place *. This ſeems ſatisfactory enough; though there are ſome who contend that the cauſe of ſuch diſcharges of blood is to be ſought for in ſome accident, and not in any diminution of the weight of the atmoſphere.

However philoſophers may diſagree about this point, they all allow that there is not one well authenticated inſtance of a con-

* Vide Percival's Eſſay, vol. ii.

firmed aſthma in conſequence of the change of air from the loweſt to the higheſt ſituations, by the aſcent of mountains, or by the flights to the upper regions, as in the late practice of aeroſtation. Hence it is but reaſonable that we ſhould reject the explanation given by Dr. Millar, as it is ſcarcely poſſible that the ſlight variation of the atmoſphere mentioned by him (though aſſiſted by moiſture) could produce ſuch violent effects as an aſthma, ſo general at times among children as to amount nearly to an epidemic diſtemper.

It being found by experience, that many aſthmatics, on their removal from a thick and heavy to a light air, were immediately attacked with their diſorder *, phyſicians have

* I have found London air and that of Holland agree beſt with me; and by going into a ſharp air, I have immediately fallen into a ſhortneſs of breath, particularly in my going from London to Epſom; but upon my

have hence rather precipitately concluded, that ſuch a cauſe was ſufficient of itſelf to give origin to the aſthma. But many different cauſes (as we already remarked) will affect the aſthmatic after the diſeaſe has taken root, that would not produce any morbid ſymptom, had they been applied before the lungs were injured by its frequent attacks: ſo a light atmoſphere, by not giving the ordinary degree of diſtenſion to the lungs, may diſagree with an aſthmatic, or occaſion a relapſe, though it could not poſſibly produce any effect on the ſame perſon before the aſthma appeared.

If we attend to the fact ſtated by Dr.

my return next day to London, I was very well. I have had ſevere fits in London; none in Holland, but a little heavineſs, which the Jeſuits Powder put off immediately. Eating a ſupper or any thing in an afternoon occaſions my fits: but in the beginning of my fits ſupper agreed well with me.

Floyer's Treatiſe on the Aſthma, p. 21.

Millar,

Millar, that the ſpecies of aſthma which he treats of prevailed moſt in wet and moiſt ſeaſons accompanied with eaſt and north-eaſterly winds, there ſurely can be no difficulty in forming a tolerably juſt idea of its cauſe, except we wiſh to ſubſtitute ſophiſtry for reaſoning, and ſubtlety for common ſenſe.

Such weather as this is well known to be injurious to the lungs, and is conſtantly found to be productive of catarrhs, pleuriſies, and other diſorders of this ſort: and Dr. Millar himſelf remarked, that, in October 1755, inflammations of the bowels, and the iliac paſſion, were very prevalent at the ſame time with the aſthma *.

This ſhews to a demonſtration, that we are not to refer the cauſe of this ſpecies of aſthma to any change produced in the

* Obſervations on the Aſthma, p. 11.

weight

weight of the air: for it would be highly abſurd to aſcribe inflammation of the bowels, or the iliac paſſion, to a diminution in the weight of the air; and the argument will hold equally good with reſpect to the aſthma that happened to rage at the ſame time.

When the cauſes of aſthma underwent an inveſtigation, many facts and obſervations were adduced, which tended to prove, in a ſatisfactory manner, that the application of cold to the lungs was by far the moſt frequent cauſe of this diſorder. If this be the caſe, does not the moſt ſtriking analogy authorize us to aſſert, that the aſthma which raged during the prevalence of eaſt and north-eaſterly winds originated in the ſame ſource?

To obviate the force of theſe arguments, it may perhaps be alleged, that the diſorder in queſtion is not an affection of the lungs, and does not differ materially from

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the ſuffocatio ſtridula, or croup, of the ingenious Dr. Home. However, in forty inſtances at leaſt of the croup that I have ſeen, both in this country and in Scotland, the ſymptoms had little or no ſimilarity to thoſe of the aſthma of infants deſcribed by Dr. Millar.

In the former, as ſoon as the perſon is attacked, the peculiar ſound that is heard on inſpiration immediately attracts the attention, and points it out as an affection of the upper part of the windpipe. It never has conſiderable remiſſions; nor, as far as I can learn, does it ever run into a chronic ſtate *.

In the latter, the caſe is totally different according to Dr. Millar. Remiſſions are frequently perceptible, and it conſtantly

* Vide Home on the Croup. Michaelis de Angina Polypoſa. Memoires de la Société R. de Medecin pour l'Année 1782-3, p. 82-3.

changes

changes to a chronic diſeaſe; nor do diſſections exhibit the ſame appearances after death. If, notwithſtanding theſe arguments, it ſtill be denied that they are different diſeaſes, this at leaſt muſt be granted, that Dr. Millar's account of the croup differs very widely from thoſe of the moſt judicious authors on the ſubject: ſo much ſo indeed, that there is a ſtrong foundation for a charge of inaccuracy and inattention againſt him: but very few will be diſpoſed to find him guilty of it, who properly conſider the many juſt and faithful obſervations he has left us on this diſeaſe. It was principally on account of the great merit of his work, that I thought it neceſſary to give the foregoing extracts, with remarks upon them, in order to ſhew how one of the moſt intelligent writers on the aſthma may be miſled by a fond attachment to a favourite theory.

I have been thus inſenſibly drawn on to conſider

conſider at greater length than I originally intended, the cauſes that give riſe to the aſthma. From the profeſſed deſign of this work, I ſhould have confined myſelf to a few curſory obſervations only; but the very intereſting nature of the enquiry urged me, when once engaged, to extend my ſubject, and offer to the public ſuch reflections as an attentive conſideration of the ſymptoms and phænomena of this obſtinate malady had ſuggeſted.

But after all this, it may be aſked, how far this theory (admitting it in general well founded) will improve the practice in aſthma? Does it recommend any new method of cure? How, or in what manner, is it ſuperior to the doctrines hitherto advanced by medical writers?

If the application of cold to the lungs be in moſt caſes the principal cauſe of aſthma, the impreſſion that ſuch a doctrine muſt

make

make on the minds of practitioners will be attended with one very important advantage. It will baniſh from their thoughts the idea of its being an hereditary and incurable diſorder, and lead them to conſider that it is in moſt caſes accidental, and that of courſe it will admit of a cure in many inſtances by proper remedies.

Thus, from the effects that cold uſually produces on the human body, evacuations of one kind or other become in moſt caſes neceſſary, in the firſt onſet of the aſthma; and as the diſorder is afterwards continued by the power of habit, ſuch means as are found uſeful in interrupting this, and preventing it from becoming a fixed and permanent affection, ſhould chiefly occupy the attention of the phyſician. If no other purpoſe was anſwered by this view of the aſthma, than the conſideration of its being brought on accidentally by expoſure to cold,

in conſtitutions apparently the moſt healthy and vigorous, it may be productive of ſome advantage.

Except thoſe who have ſome particular remedy or method of cure to recommend, and who (it may naturally be expected) dwell with peculiar pleaſure in praiſe of their own offspring, which they have foſtered and brought to maturity with much aſſiduity and care, very few beſides think a radical cure of a confirmed aſthma within the reach of the healing art. Such ſentiments as theſe, when promulgated by phyſicians of weight and authority in medicine (as is daily the caſe), muſt be attended with the worſt of conſequences; they encourage the old and experienced to content himſelf with treading in the paths of his predeceſſors, and deter the young and timid practitioner from venturing to explore any new or untravelled road.

CHAP.

CHAP. IV.

OF THE PROGNOSTICS IN ASTHMA.

WHEN ſpaſmodic diſeaſes, by frequent repetition, have once taken deep root in the conſtitution, phyſicians at all times have given a very unfavourable prognoſis of them. On the aſthma their prognoſtics have been no leſs gloomy and inauſpicious.

The lungs of the human body, when labouring under ſpaſmodic aſthma, are ſo liable to be affected by a variety of cauſes capable of renewing the diſeaſe, that it is not to be wondered at, if phyſicians

ſhould be very cautious in pronouncing a favourable termination in any caſe.

The opinions entertained of the cauſes of the diſeaſe have probably, in a great meaſure, influenced their deciſions. If the aſthma be a diſorder which is in general tranſmitted from parents to their offspring by an hereditary taint, or if it originate in an idioſyncraſy, as it is called, or a peculiar ſtate of the fibres ſtamped on the frame by the hand of Nature; then a phyſician is juſtifiable in proclaiming the diſorder incurable, and in with-holding that conſolation from the afflicted, which neither his own character, the nature of the complaint, nor any expectations he can have from the common remedies, will allow him to give. But if, on the other hand, the majority of caſes that daily occur in practice be the effects of cold, and cannot be traced to any conſtitutional infirmity, ſome

ray

ray may be emitted from this light to diſſipate the miſt thrown over the ſubject, in conſequence of the errors committed with reſpect to the efficient cauſe of the diſeaſe.

That there is in reality no foundation, from its nature, for paſſing ſo awful a ſentence as is cuſtomary with phyſicians, appears from the many facts and obſervations brought forward to prove it in the greater number of inſtances to be an accidental diſorder; and until the method of cure be conducted according to theſe principles, no reliance, in my opinion, can be placed on the prognoſtics that may be made on the aſthma.

If a perſon, ſhortly after expoſing his body to cold, be attacked with aſthma, his diſorder will frequently admit of a complete cure, on condition that his lungs have not been previouſly injured by catarrhal or pleuritic complaints; that no obſtructions

exiſt in the viſcera; and that proper remedies be timely and judiciouſly employed. Several inſtances of this ſort have occurred to me without any relapſe taking place. The more gradual the aſthma is in its approaches, the more obſtinate it generally turns out. Coming on in this inſidious manner, the patient is totally off his guard: he neglects every ſort of aſſiſtance till a fit comes on, when perhaps the diſorder had been undermining the lungs for ſeveral weeks before. On ſuch occaſions, if the gathering ſtorm be foreſeen, it is often in the phyſician's power to take ſuch ſteps as may effectually prevent any untoward conſequence.

It appears to me, that the obſtinacy of the aſthma ſhould be often charged to the negligence of practitioners in the early ſtage of it. A nice and ſcrupulous attention to this period of the diſeaſe, will often guard

againſt

againſt the formation of obſtructions, and the habitual repetition of the fits, which ever after render it ſo ſuperior to every medical exertion.

It has been remarked by almoſt every writer on the aſthma, that tubercles are moſt commonly formed ſome time before its fatal termination, and that they in a great meaſure contribute to ſuch an event. When water in the cheſt, tubercles, and other obſtructions come on in conſequence of the frequent repetition of the fits, it muſt be owned that very few, if any inſtances, are to be met with on record, of a perſon recovering in ſuch a ſituation.

But if it appear on accurate examination that none of theſe diſorders exiſt, though the aſthma has continued without any diminution in its violence for a great length of time, and has rather increaſed as to the number of its fits, the patient ſtill ſhould not

be given up as irrecoverable. No remedy that affords the ſmalleſt proſpect of relief ſhould be left untried: the cauſe of humanity, the honour of the profeſſion, demand our moſt ſtrenuous endeavours; and there is not a doubt but that they will often triumph over the diſeaſe in the moſt alarming and unpromiſing caſes.

CHAP. V.

OBSERVATIONS ON THE DIFFERENT REMEDIES THAT HAVE BEEN EMPLOYED IN THE CURE OF ASTHMA.

THE remedies that have been generally made uſe of in this diſeaſe are of great variety, ſuch as bleeding, bliſtering, iſſues, expectorants, antiſpaſmodic tonics, &c. A minute detail of each would lead to a long and tedious diſcuſſion, not by any means calculated for an Eſſay of this kind. Some obſervations however appear neceſſary; and theſe are offered to the public with the greateſt diffidence, from the ſtate of uncertainty in which the practice of aſthma is involved.

On the firſt attack of the aſthma, blood-

letting is often looked upon to be a very uſeful remedy; and it really is ſo, when the patient's fulneſs of habit, the ſtrength and quickneſs of his pulſe, with other circumſtances, point out the neceſſity of ſuch an evacuation. But in many inſtances of the firſt onſet of aſthma, blood-letting cannot with any propriety be attempted; for the diſorder ſometimes attacks feeble and exhauſted conſtitutions, which may be materially injured by any loſs of blood whatſoever.

One great advantage, if not the principal one, ſuppoſed by phyſicians to be obtained by bleeding in the aſthma, is the temporary ſuſpenſion of the difficult breathing that generally ſucceeds its uſe. If no other purpoſe was anſwered by it than this, it would be of very little moment, as a renewal of the paroxyſms moſt commonly ſucceeds this tranſitory interval of eaſe.

In order to form a juſt idea of the utility of bleeding in aſthma, we muſt look back to the cauſes that firſt gave riſe to the diſeaſe. From this retroſpect it will appear, that the application of cold to the lungs is the moſt frequent exciting cauſe; and that, in conſequence thereof, very ſtrong ſymptoms of an inflammatory diſpoſition muſt often accompany the firſt ſtage of aſthma.

Hence it is that, in many caſes, a phyſician muſt neceſſarily preſcribe veneſection in order to preſerve the life of his patient, and not confine his views merely to the removal of a plethoric ſtate, or to the abatement of ſpaſm by the relaxing power of blood-letting. On other occaſions too, though no danger to the patient's life ſhould follow the omiſſion of this practice, it will be highly proper to have ſome blood drawn in order to obviate obſtructions, and bring about a ſtate of intermiſſion, ſo neceſſary

for

for the operation of ſuch remedies as are capable of putting a complete ſtop to the further progreſs of the diſeaſe.

Bliſtering, from its well known power of exciting a copious diſcharge of ſerous fluid, ſeems eminently well calculated for removing ſome of the moſt diſtreſſing ſymptoms of aſthma. However, ſome practitioners of character have ventured to aſſert, that in the ſpaſmodic aſthma bliſters are productive of little or no advantage. This is maintained on a principle that the diſorder is ſeated in the nervous ſyſtem; and never was there a more ſtriking inſtance of the baneful influence of theory unſupported by facts. Caſes no doubt will occur, in which bliſters will often fail in producing thoſe ſalutary effects that were expected: but the ſignal ſucceſs daily attending their uſe, proclaim them on many occaſions a

ſpeedy

ſpeedy and powerful auxiliary in the cure of this diſorder.

Whenever the fits are renewed by the power of habit, bliſters will ſeldom avail any thing in overcoming this tendency in the ſyſtem. It is in the beginning of the diſorder, or when a fit is brought on by the application of cold at any period, that benefit is to be obtained by them.

I always make it a rule to apply a bliſter in the firſt paroxyſm of aſthma, be the cauſe of the diſorder what it may; and as no injury can attend it, but very often the beſt effects may be produced, the propriety of the meaſure is evident.

Bliſters appear to be well adapted to that ſpecies of aſthma where an accumulation of blood in the lungs is found to contribute in ſome meaſure to the fit, and where, of courſe, a plentiful evacuation near the diſeaſed part would be a probable means of

removing

removing it. In every primary aſthmatic complaint, whether the patient be of a full habit or otherwiſe, if, in the beginning of the diſeaſe, the intermiſſions be not complete, or if the breathing be any way uneaſy between the fits, bliſters are not only admiſſible, but ſhould on no account whatſoever be omitted.

It ſhould be a principal object with practitioners, as we noticed before, to bring about if poſſible complete intermiſſions early in the diſorder. Sometimes there will be no need of this indication, as the intermiſſions are often well marked from the beginning; but in the greater number of caſes there is an abſolute neceſſity for it. It is deemed a matter of no conſequence to what part of the thorax the bliſter ſhould be applied; nor is it, I believe, for the removal of the ſymptoms of difficult breathing or tendency to inflammation. But

when

when the aſthmatic fit paſſes off, any difficulty or uneaſineſs of breathing that remains, is in a great meaſure ſupported by the ſtricture at the ſternum. To this part, of courſe, it is evident that the bliſter ſhould be applied, and a diſcharge kept up by iſſue ointment, or elſe a repetition of the bliſter made uſe of, until the deſired effect be produced.

I do not reſt the ſuperior utility of this practice on the reaſoning advanced in ſupport of it: facts, which always plead ſo forcibly when well authenticated, can be readily called to my aſſiſtance. Thus, in two inſtances, I had an opportunity of ſeeing a bliſter at the extremity of the ſternum productive of ſingular ſucceſs, both in removing the ſtricture at this part, and in abating the whole of the ſymptoms, after little or no benefit was obtained by its application between the ſhoulders. By purſuing the

plan

plan now laid down, we ſhall have it in our power to remove any ſymptoms of inflammation that may ſubſiſt, and ſhall ſeldom want of courſe a ſeaſonable opportunity of adminiſtering the neceſſary remedies for putting a final ſtop to the diſeaſe.

Dr. Millar has made an obſervation on the aſthma, that, in my opinion, is very well founded. He ſays, that in the irregular return of its paroxyſms, in its remiſſions, and in the affection of the breathing, it bears a ſtriking analogy to the chin-cough. This diſorder, though evidently of a ſpaſmodic nature, often requires bleeding, bliſtering, and emetics, before we can venture upon a radical cure. During its firſt ſtage, it ſo nearly reſembles a common catarrh, that the one may be readily miſtaken for the other: nay, inſtances do very frequently occur, in which the diſeaſe never

puts

puts on the characteriſtic form of a ſpaſmodic diſeaſe.

This matter is well illuſtrated, by attending to a fact that muſt be well known to practitioners. If a number of children in a family be expoſed to the contagion of chincough, and in conſequence thereof happen to be attacked with ſymptoms of catarrh, it is often found, that while one or two of them diſcover no further ſymptoms of chincough, all the reſt, in a fortnight or three weeks after the firſt appearance, will labour under the convulſive cough and hoop. Moreover, after the paroxyſms are formed, the intervals between are often marked by cough, difficult breathing, and other ſymptoms of an inflammatory affection; ſo much ſo as to render it at times a difficult matter to affix a proper appellation to the diſeaſe. Hence we muſt frequently have recourſe to bleeding, bliſtering, and other evacuants,

in

in order to remove any inflammatory diſpoſition that may exiſt, and put the diſorder in a proper train for the adminiſtration of tonic and other remedies. Motives of a ſimilar nature ſhould often influence our conduct in directing the method of cure in aſthma; for though in many inſtances it early aſſumes the form of a genuine periodical ſpaſmodic diſeaſe, yet, like the chincough, it will be conſtantly found in the beginning of a doubtful nature, and, after the fits have come on, to be accompanied with ſtrong marks of an inflammatory tendency.

While it is in this ſtate of a mixed and complicated diſeaſe, little hopes can be entertained of a cure; but if bliſtering, with other evacuations, ſo far ſucceed as to render the breathing free and unembarraſſed in the intervals of the fits, and exhibit the aſthma ſtripped of every ſort of diſguiſe, then

then, there will be room to hope for a favourable termination.

Emetics.—Very frequently in the aſthma the lungs are oppreſſed with a large collection of phlegm, from which it is found neceſſary to free the patient by medicines entitled expectorants. Accordingly phyſicians, to fulfil this intention, have generally preſcribed tart. emetic, ſquills, gum ammoniac, and others of this tribe. From the teſtimony of different writers, it would be ſcepticiſm to deny that theſe medicines have been of ſervice in the aſthma. But, on the other hand, it is to be feared that the conſtant uſe of ſuch drugs may prove injurious to aſthmatics; for they not only increaſe the force of the circulation, and thereby overheat the body, but in a remarkable degree impair the functions of the ſtomach by the conſtant nauſea they

induce, if given in quantity ſufficient for producing any conſiderable effects as expectorants.

Hence, when we wiſh to promote expectoration, an emetic judiciouſly adminiſtered at proper intervals, will certainly prove the moſt ſafe, ſpeedy, and effectual remedy.

Even in thoſe caſes of aſthma where no neceſſity occurs of employing expectorants, vomiting, it is ſaid, may be reſorted to with advantage, for the purpoſe of preventing the recurrence of the aſthmatic fits. This was the practice of Dr. Akenſide: and, on his recommendation, I employed it in three or four caſes with the ſame intention that he did, and always found myſelf diſappointed in my expectations.

Beſides its efficacy as an expectorant, and its effects in removing any catarrhal affection that may be combined with the aſthma,

vomiting

vomiting will be found highly uſeful in relieving the patient of flatulence, diſtenſion of the ſtomach, and other ſymptoms of indigeſtion.

In preſcribing for aſthmatics, it may with juſtice be obſerved, that the more cloſely we adhere to ſimplicity, the better chance we ſtand of aſſiſting them. How is it poſſible that the feeble and diſtended ſtomach of an aſthmatic can bear with impunity ſuch a compound as the following: Suppoſe ſquills, gum ammoniac, ſagapenum, emetic tartar, paregoric elixir, and vitriolic æther, made into a mixture ſecundum artem, and a delicate aſthmatic ordered to take it repeatedly, what ought we naturally to expect to be the reſult? That whatever vigour the ſtomach poſſeſſed before, will now be deſtroyed by ſo many medicines of ſuch various and contradictory operation. It is ſurely more than raſhneſs to overload a

feeble and enervated ſtomach with ſuch a nauſeating farrago: yet we find practitioners preſcribe ſimilar potions in the aſthma, and eagerly contend for their efficacy.

If it be conſidered for a moment with what difficulty their ſtomachs digeſt the lighteſt kind of aliment that can be given to them, we ſhould, I am perſuaded, be very cautious in adminiſtering ſuch compounds; for though one or two patients may be able to withſtand their operation, or ſhould even receive ſome benefit by them, ſtill an indiſcriminate uſe of ſuch heterogeneous mixtures muſt prove in many caſes very prejudicial.

I would not by any means inſinuate that the uſe of medicines, even a variety of them, is to be excluded from the cure of aſthma, as they are ſometimes abſolutely neceſſary: but I maintain, that if ſimplicity

of preſcription be commendable in any diſorder, it muſt be ſo in this, where the ſtomach at times is ſo deranged in its functions, as to partake at length in a great meaſure of the primary ſpaſmodic complaint of the lungs.

Iſſues have been often employed in the cure of aſthma, and I think with much propriety. The idea of a convulſive and ſpaſmodic diſeaſe ſhould not deter practitioners from their uſe, when certain indications point out a probability of ſucceſs from their application.

There are two varieties of the diſeaſe that ſeem particularly to demand their aſſiſtance.

The firſt and moſt ſtriking one is, when the diſorder occurs in perſons of full and plethoric habits. The next is, when the patient, with or without any ſigns of general fulneſs, together with the aſthma

labours under a catarrhal affection. In either caſe the utility of a drain is evident, in order to take off the tendency of the fluids from the internal, and give them a direction to the external parts. If, however, the diſorder ſhould ſtill gain ground, and the body appear to have ſuffered any conſiderable loſs by ſuch, it may not be prudent in ſuch caſes to keep up a conſtant diſcharge, as it might be a means of promoting a proceſs already too far advanced. Iſſues ſhould be immediately inſerted between the ſcapulæ, or in each arm, whenever any ſymptoms of conſumption of the lungs take place: even before they come on, if any apprehenſion exiſts of ſuch an event, no remedy promiſes to be more uſeful than iſſues.

After this account of the evacuations neceſſary to be employed in the aſthma, we are next to conſider what medicines we are poſſeſſed

poſſeſſed of capable of alleviating or ſuſpending the fits.

For this purpoſe, various remedies have been recommended by different writers, and much contrariety of opinion has prevailed on the ſubject. According to Dr. Willis, the fœtid gums and volatile ſalts have ſometimes produced the happieſt effects: while Sir John Floyer *, from long experience in his own perſon and that of others, reprobates their uſe; and aſſerts, that by their heating quality they increaſe the ſuffocation during the fit, and aggravate every prevailing ſymptom. The writers of modern times do not appear more diſpoſed to coincide.

On this ſubject I cannot venture to give ſo deciſive and ſatisfactory an opinion as I could wiſh, not having had experience ſuf-

* Floyer on the Aſthma, p. 112.

ficient to authorize me to do ſo; for when medicines of this kind were indicated, I ſeldom had an opportunity of giving them, and in other caſes I had recourſe to thoſe of a more unequivocal and powerful operation.

However, from what I have ſeen, I do not think them entitled to the high encomiums of the one, nor that they deſerve the ſevere and undiſtinguiſhing cenſure of the other.

When in the beginning of aſthma the fits recur at very ſhort intervals, after evacuations being premiſed, and that ſymptoms are ſtill preſent which forbid the uſe of opium (as muſt ſometimes be the caſe), will a phyſician look on with indifference, and behold the diſorder advance with rapid ſtrides, without taking ſuch ſteps as may oppoſe its progreſs? No. I dare ſay that every phyſician of judgment, in ſuch a ſituation,

ation, would preſcribe muſk, æther, and aſafœtida itſelf in large doſes, in order to lengthen the intervals of the fits, and give himſelf an opportunity of throwing in the bark and other tonics with freedom.

In the hands of Dr. Millar, aſafœtida, when given in large doſes, proved a very powerful remedy in the aſthma of infants; and it is highly probable that, on many occaſions, with proper management, it may be adminiſtered in the aſthma of adults with advantage. It was cuſtomary with him to join a portion of neutral ſalt with the aſafœtida in a ſtate of ſolution, for the purpoſe I ſuppoſe of procuring a moiſt ſkin, having found by experience that it was often ſucceeded by a complete remiſſion of all the ſymptoms.

As cold is ſo frequently the exciting cauſe of aſthma, we are warranted from analogy to ſay, that ſpiritus Mindereri, and other

medicines

medicines capable of procuring a gentle moiſture at the ſurface, may with propriety be given in the early ſtage of the aſthma; and that of courſe the practice of Dr. Millar may be ſometimes transferred to grown up perſons, and imitated with ſucceſs *. Of this, however, I have had no experience.

Among the various medicines of this claſs, opium unqueſtionably, with certain reſtrictions, holds the firſt rank. Ever ſince its introduction into the cure of aſthma, ſome of the moſt celebrated writers on the diſeaſe have conſidered it peculiarly well adapted to the removal of the ſpaſmodic fits. Willis, Floyer, and others have

* In one caſe of the hyſteric aſthma of Sir John Floyer, I have ſeen aſafœtida produce more good effect than any other medicine of analogous power. When other antiſpaſmodics failed in procuring relief, a large doſe of this operated with ſingular efficacy in abating the ſpaſms of the lungs.

given

given it with freedom, and it has frequently anſwered their moſt ſanguine expectations. Willis in particular ſeems to have made ſome juſt obſervations on its uſe; for though he ſpeaks in high terms of its efficacy, yet he qualifies them in ſuch a manner as to guard againſt its raſh or indiſcriminate application.

Quod ſi hoc modo ſpiritus debacchantes ſedari nequeunt (alluding to the other means that he uſed), ad narcotica (ſays he) perveniatur, ut quibuſdam profligatis cæteri in ordinem redeant: enimvero, niſi obſtat pulmonum infarctus, cum inſigni præcordiorum oppreſſione, opiata nonnunquam inſigniter proſunt. In horrendis morbi hujus paroxyſmis, cum alia medicamina minus effeciſſent, ſæpe bono cum fructu diacodium, imo laudanum tartariſatum, exhibui.

Verum hæc non ſine magna cautione propinantur, quia cum reſpirationem, quæ

jam

jam jam difficilis et præpedita eſt, amplius et nimis impediunt, non raro in vitæ diſcrimen adducunt.

Willis, Oper. Omn. à Blaſio, p. 121, De Medic. Operatione.

A phyſician ſhould be very cautious how he adminiſters opiates to a patient in the firſt paroxyſm of aſthma: he can ſeldom be a competent judge of its nature till the fit wears off, and an opportunity offers of examining its appearance during the intermiſſions. This admonition is the more neceſſary, as the diſorder, in its incipient ſtate, is ſo frequently accompanied with a flow of humours to the internal parts, and evident ſymptoms of an inflammatory tendency.

But as ſoon as theſe obſtacles are removed, no time ſhould be loſt in deliberation; a large doſe of the medicine is to be given without delay, in order to put a ſtop to the fits, and thereby counteract that diſpoſition

poſition in the ſyſtem to renew any irregular motions that have once taken place.

If any inſtruction coming from this pen can have weight with practitioners, I would beg leave todirect their attention in the moſt particular manner to the early ſtage of aſthma; for I can ſafely aver, from experience, that a bold and liberal adminiſtration of opium at this early period (when circumſtances render it admiſſible) will often put the diſorder in ſuch a train, that no extraordinary degree of medical talents or ſkill will be requiſite for finiſhing the cure.

In one caſe of ſymptomatic aſthma from retrocedent gout, it proved a ſpeedy and effectual remedy; and in three or four inſtances of a primary diſeaſe, the tendency in the habit to repeat the fits was ſo far ſubdued, that no difficulty was found in obtaining a complete and laſting cure.

The opium poſſeſſes the power of ſhortening

ening or removing the fits altogether; yet a good deal of addreſs is neceſſary for ſelecting thoſe caſes to which it ſhould be confined, and for adjuſting the mode and time of giving it. If the diſorder has ſubſiſted for any length of time, and that the fits return every night, or at ſhort intervals, in conſequence of the aſcendancy of habit, opium, according to my obſervations, will ſeldom anſwer our purpoſe. In ſome inſtances I have rather found it prejudicial, by rendering the ſucceeding fits more violent, and of longer duration than the preceding. It would ſeem as if the effects of opium in theſe caſes were too tranſitory to produce any permanent alteration in the ſtate of the fibre, and that the habit was too firmly rooted to give way to an operation ſo fugacious as this.

Hence there is an abſolute neceſſity, on ſuch occaſions, of having recourſe to medi-

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cines whoſe effects are more durable; and the time ſhould not be trifled away in giving opium, or any other remedy of a ſimilar nature.

It is in the early ſtage of the diſeaſe, or even in an advanced period thereof, if the fit be brought on by accidental cauſes, that we are to place any reliance upon opium; and in order that its full force and efficacy ſhould be diſplayed, a large doſe of the medicine muſt be given immediately before the acceſſion of a fit; or, if this cannot be accompliſhed, as ſoon as any threatenings of it are perceptible. By this management we ſhall often ſucceed in poſtponing the fit, and in laying the foundation of another piece of neceſſary practice, the uſe of tonic remedies.

It appears by the records of phyſic, that thoſe medicines which now-a-days are denominated tonic, were at all times pre-

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ſcribed for aſthmatics under one form or other. The bitter acid, ſo much celebrated by Sir John Floyer, and which he borrowed from the ancients, was unqueſtionably of this nature. Modern practitioners however are very limited in their choice of remedies belonging to this claſs: their practice is chiefly confined to Peruvian bark, and a few others of conſiderable powers. Even theſe are ſeldom extenſively employed in the cure of aſthma. Sir John Floyer, who probably firſt introduced the bark, at leaſt who firſt brought it into any general repute, reſtrained its uſe to the hyſteric and other forms of nervous aſthma, in which the fits return at certain ſtated periods. But terms of ſuch vague and doubtful ſignification ſcarcely deſerve to be mentioned in theſe days; and ſtill it is ſurpriſing to find phyſicians adopt them, and direct their practice accordingly.

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In the firſt ſtage of aſthma, no ſpitting in general takes place till the patient has had repeated attacks of his diſorder; ſo that, from its commencement to the time that this ſymptom ſupervenes, every aſthmatic complaint, let the habit of body be what it may, ſhould be denominated nervous, according to the uſual definitions. But as ſoon as any copious expectoration comes on, this circumſtance alone is ſuppoſed to change its nature, and to conſtitute a different ſpecies.

It is true, indeed, that the recurrence of the fit at a certain hour gives it the appearance of a genuine nervous affection: nevertheleſs it ſhould be conſidered, that this tendency in the diſorder to return periodically, is to be found in every variety and form of aſthma, in the ſpitting kind as well as in that which is accompanied with no ſuch ſymptom.

In Sir John Floyer it aſſumed this type at an advanced period of life, though he was firſt attacked with his aſthma in conſequence of a cold that he got when very young. In fact, it is the caſe with many aſthmatics from the effects of habit on the ſyſtem; and I have often known the diſorder ſhortly after its commencement appear in a periodical ſhape, when it could be evidently traced to the operation of cold.

Many different ſymptoms accompany the aſthma during its courſe, that may in ſome meaſure change its type, though it would be abſurd to eſtabliſh a diſtinct ſpecies on the baſis of every inſtance of this ſort. Should this principle be admitted, there would be no end to the multiplication of ſpecies. The genuine aſthma is, for the moſt part, the ſame in all, but differently modified according to various circumſtances and cauſes.

One aſthmatic diſcharges a conſiderable quantity

quantity of phlegm by coughing, and this is called the humoural or ſpitting aſthma; another is troubled with flatulence, and his is termed the flatulent or hyſteric aſthma; a third perſon's goes under the appellation of plethoric, if he be of a full habit; and ſo on without end.

Hence it is evident that theſe diſtinctions, inſtead of leading to any uſeful or important diſcrimination in practice (as might naturally be expected), have been converted to a very bad purpoſe, by excluding bark from every ſpecies of aſthma that could not be conſidered ſtrictly nervous.

The principal ſymptoms that contra-indicate the uſe of bark in the early ſtage of aſthma, and to which phyſicians ſhould particularly direct their attention, are, inflammation or tendency to it, a full habit of body, and catarrhal affections. All theſe very frequently take place at the ſame time;

and whether they occur conjointly or ſeparately, it would be more than raſhneſs to adminiſter the bark during their exiſtence. But as ſoon as theſe obſtacles are removed by general and topical evacuations, and that no difficulty of breathing remains after the fit has paſſed off, there are very few caſes that will not admit of the bark, particularly if the repetition of the fits be owing to the dominion of the power of habit over the ſyſtem.

The effects of the power of habit in renewing the diſeaſe after the primary cauſes have ceaſed to exiſt, have been already ſpoken of; and in this place it may not be unintereſting to recall the attention to it. Whoever has watched the progreſs of the aſthma with aſſiduity, muſt have remarked that the power of habit operates with the ſame intenſity in this as in other ſpaſmodic diſeaſes; that, if once allowed to take root

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and extend its influence, all the force of the beſt directed practice will not be able to overcome the oppoſition to be met with. This is fully proved by the concurring teſtimony of practitioners. Hence it is obvious how neceſſary it becomes to watch with anxious care the beginning of the diſorder, and oppoſe with vigour and diſpatch, a ſtate ſo dangerous in its tendency, ſo irreſiſtible when once confirmed, as to bid defiance to the united endeavours of experience and judgment.

That the bark may break in upon this habit, and put a ſtop to its further operation, we have reaſon to believe, both from the cure of other ſpaſmodic diſeaſes, and from experience in the aſthma itſelf. Our ſucceſs, it is true, in the latter has not generally anſwered our expectations; and this ſhould probably be attributed in ſome meaſure to a negligence on our part to that pe-

riod of the diſeaſe wherein tonic remedies can act with efficacy.

The cure of aſthma, by means of the bark, ſhould be conducted in the ſame manner as in the caſe of intermittent fevers. The doſes of the medicine ſhould be very large, and ought to be given within a few hours of the acceſſion of the paroxyſm, if we can foreſee the time when the attack is to come on.

With reſpect to the adminiſtration of bark in the humoural aſthma, as it is called, it is to be obſerved, that when the ſpitting is the conſequence of a recent cold, it is very rarely admiſſible: the tendency to inflammation, and ſuch like complaints of the cheſt that generally accompany this affection, proclaim the bark an expedient of a very precarious nature. But as ſoon as the diſorder of the lungs is ſubdued, though the ſpitting ſhould ſtill continue, both reaſon

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and experience fully juſtify a trial of this truly celebrated medicine.

Caſes however will often be met with, in which ſome ſtuffing of the cheſt takes place from cold in the intervals of the fits, with ſcarcely any increaſe of the preceding difficult breathing, if any had ſubſiſted, or any ſymptom of inflammation; and yet it would be injudicious and improper to adminiſter the bark during its prevalence.

Calcined zinc, commonly known by the name of flowers of zinc, next demands our attention. To the induſtry and abilities of Dr. Withers we are indebted for this diſcovery. From his experiments, it appears that he employed the flowers of zinc in almoſt every form of aſthma, and with aſtoniſhing ſucceſs. Since his publication in 1786, I have not heard of any further teſtimony in its favour: for I do not know any practitioner that has followed his very

laudable example, in inſtituting a regular ſet of experiments for this purpoſe.

In ſeveral inſtances it has been adminiſtered, to my knowledge, in pretty large doſes, and with evident advantage; while in other trials its efficacy could not be diſcerned, though given agreeably to the inſtructions delivered by Dr. Withers himſelf.

Without any intention to deduct from the authenticity of thoſe caſes recorded by Dr. Withers, it is to be hoped that practitioners of abilities, who have frequent opportunities, will imitate his conduct, in order to appreciate the virtues of this medicine, and aſcertain how far it may be relied upon in the multifarious caſes of this obſtinate diſorder that daily preſent themſelves in practice.

Like the bark, it will probably be found moſt effectual when given in the intervals of the paroxyſms, in as large a doſe as the

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ſtomach is able to bear; and when no obſtruction, difficult breathing, or inflammation, exiſts to counteract its operation. Yet Dr. Withers aſſerts that, together with its tonic, it poſſeſſes an antiſpaſmodic power; and ſays, that he found it beneficial in removing the difficulty of breathing, as well as in preventing the return of the fits. Something ſimilar to this has been remarked of the Peruvian bark. A caſe is related by Sir John Floyer, of a Lady * afflicted with the aſthma, who, on taking a dram of bark, found her breathing immediately relieved; and, by perſevering in its uſe, ſhe got rid of her diſorder for a conſiderable length of time.

Theſe facts plead very forcibly in favour of a free and undaunted application of ſuch medicines in caſes of an apparently equivo-

* Floyer on the Aſthma, p. 20.

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cal nature: they in particular ſhew us that we are not to be deterred from preſcribing them on certain occaſions, though the breathing ſhould not be perfectly free in the remiſſions.

When water in the cheſt, tubercles, and other organic affections are complicated with the aſthma, it is evident that neither theſe nor any other kind of tonic can be given with ſafety or advantage.

Such are the obſervations that have occurred to me on the different remedies uſually employed by phyſicians in the cure of aſthma. Other means beſides, ſuch as mercury, mineral waters, &c. have been recommended by particular writers; but I purpoſely omit their diſcuſſion in this place, not having it in my power to advance any thing from experience concerning them that would prove uſeful or ſatisfactory. For inſtruction on theſe ſubjects, I muſt refer my readers to

thoſe authors who have had proper opportunities of being well informed of their efficacy and powers. I alſo avoid entering into any conſideration of the regimen and diet fit for aſthmatics, as this ſubject is treated with great judgment by Sir John Floyer, Dr. Withers, and other ingenious phyſicians.

On a retroſpective view of the various remedies treated of in the foregoing pages, a queſtion very naturally preſents itſelf—Is the cure of a confirmed aſthma to be expected from a judicious management of them? If we be governed in our deciſions on this point by the experiments of Sir John Floyer, we ſhould anſwer without heſitation, that a complete cure cannot be effected by them, or in conjunction with the other auxiliaries in common uſe.

Sir John Floyer's Treatiſe on the Aſthma (as far as I can learn) has been erected not

only as a ſtandard for the practice, but for the doctrine of prognoſtics alſo.

The reſpectability of his medical character, his minute and very accurate deſcription of the diſeaſe, his courſe of experiments inſtituted on his own perſon, carry a degree of plauſibility with them that is not a little impoſing. Neither his candour or fidelity in relating the effects of the numberleſs remedies he tried, can be called in queſtion; yet it muſt be acknowledged that the reſult of his experiments has infuſed ſuch a large portion of ſcepticiſm and incredulity into the minds of phyſicians, as muſt have repreſſed their ardour for improvement, and lulled them into an acquieſcence in the futility of almoſt every kind of medicine in the aſthma.

It would be as unphiloſophical to deduce any concluſion from Sir John's experiments, derogatory to the power of medi-

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cine, as it would from ſimilar trials made on a perſon labouring under the epilepſy for the ſame number of years that he laboured under the aſthma.

According to Sir John's own account of himſelf, he was attacked with the aſthma when he firſt went to ſchool, which muſt have been at a very early period of life; and by the time that he arrived at an age fit for making experiments, his diſorder was ſo firmly fixed in the conſtitution, that it was no longer in the power of medicine or regimen to remove it.

When a diſorder, particularly a ſpaſmodic one, has ſubſiſted for a number of years, it is not reaſonable to expect that the action of medicine will produce any ſignal or extraordinary benefit: to an early period, if at all, we muſt look for ſatisfactory and ſtriking proofs of their efficacy; and if the medicines we are poſſeſſed of be tried by this teſt,

teſt, their effects will not be found ſo deſpicable as ſeveral have imagined. On many occaſions, when properly managed, they will put a ſtop to the progreſs of the diſeaſe; and if the occaſional cauſes be afterwards avoided, a radical cure may often with certainty be obtained. This event, however, will not take place as often as could be wiſhed, in ſuch a variable climate as this, without further aſſiſtance. We ſhall frequently meet with diſappointment in our expectations of the moſt powerful medicines, though given in circumſtances highly favourable to their operation; and ſhould we even ſucceed in ſubduing the diſeaſe for a time, yet all the circumſpection in our power will not in general be able to guard againſt a relapſe.

To make up for this deficiency, and, on the whole, to eſtabliſh the cure of this diſeaſe on a firm baſis, cold-bathing muſt be

called

called to our aſſiſtance. In truth, its efficacy has appeared to me ſo ſtriking in many caſes, both in removing the fits and in preventing a relapſe, that, if the inſtructions contained in the ſucceeding part of this work be properly attended to, I do not heſitate to declare, that very few ſpaſmodic diſorders, of ſuch magnitude as the aſthma, will be found ſo completely within the reach of our art.

PART II.

CHAP. VI.

OF COLD-BATHING.

OF all the remedies that phyſicians are acquainted with, there is probably not one held in more univerſal eſteem for the cure of many diſeaſes than cold-bathing. In the long catalogue of chronic complaints, particularly in the nervous and ſpaſmodic, experience has ſtamped a value on it ſuperior to that of any medicine yet diſcovered. In the aſthma, however, this practice has been rarely recommended, as will fully appear from what is to be met with on the ſubject in the writings of phyſicians.

We find but one of all the ancient

writers who recommends cold-bathing in the aſthma.

Cælius Aurelianus ſays, that reſiding at the ſea-coaſt, and bathing in the water, are highly uſeful to aſthmatics; though he produces no inſtance of its ſucceſs to ſupport his aſſertion.

The next authority that we have is Sir John Floyer, who gives ſome proofs of its utility, in his Treatiſe on Cold-Bathing.

"I have (ſays he) diſcourſed with an "aſthmatic perſon, who has had an habitual "aſthma for many years, and ſhe informed "me, that ſhe went into St. Winifred's Well "a Holywell, and that her aſthmatic dry "cough went off for ſome time, but at laſt "returned again."

Treatiſe on Cold-Bathing, p. 121.

"I have had ſeveral accounts of people "being much relieved, and ſome perfectly "cured by the uſe of cold immerſion, in "aſthmas,

" aſthmas, and other difficulties of breathing,
" eſpecially if the infirmity is taken in the
" beginning, and not confirmed by time:
" yet an old gentleman, of ſixty years,
" lately told me that, having had a convul-
" ſive aſthma for at leaſt ſeven years, he was
" ſo cured by three times bathing, that he
" had not the leaſt fit for three months after;
" and believes that, had he lived tempe-
" rate, and continued bathing ſometimes, it
" would not have returned."

Ibid. p. 314.

Dr. Millar, in enumerating the different authorities in ſupport of cold-bathing, tranſcribes a paſſage from Dr. Baynard's Eſſay on this ſubject: but as this quotation agrees word for word with the preceding one from Sir John Floyer, I think it unneceſſary to inſert it here.

I have not the work of Dr. Baynard at preſent in my poſſeſſion, but I imagine that

he took this paſſage from Sir John's work, and that Dr. Millar was miſtaken in ſuppoſing that it originated with Dr. Baynard himſelf.

If this be not the caſe, I cannot account for ſo extraordinary an inſtance of two writers exactly correſponding in their ideas and language on ſuch a ſubject as this.

The only writer that remains to be conſidered is Dr. Smollet, who gives a circumſtantial account of the effects of cold-bathing on his own perſon.

" In conſequence of a cold caught in a " few days after my arrival in France, I was " ſeized with a violent cough, attended with " a fever and ſtitches in my breaſt, which " tormented me all night long without " ceaſing. At the ſame time I had a great " diſcharge by expectoration, and ſuch a " dejection of ſpirits as I never felt before. " In this ſituation, I took a ſtep which may

" appear

" appear to have been deſperate. I knew
" there was no impoſthume in my lungs,
" and I ſuppoſed the ſtitches were ſpaſmo-
" dical. I was ſenſible that all my com-
" plaints were originally derived from re-
" laxation. I therefore hired a chaiſe, and
" going to the beach, about a league from
" the town, plunged into the ſea without
" heſitation. By this deſperate remedy I
" got a freſh cold in my head: but my
" ſtitches and fever vaniſhed the very firſt
" day, and, by a daily repetition of the bath,
" I have diminiſhed my cough, ſtrengthened
" my body, and recovered my ſpirits."

Smollet's Travels, vol. i. p. 22.

Dr. Smollet alſo mentions, in another part of his work, that he had two returns of his diſorder, and that at each time he ſubdued it by ſea-bathing.

His agitatus furiis, æger ad mare provolat: in fluctus ſe præcipitem dat: periculum

factum ſpem non fefellit: decies iteratum felix fauſtumque evaſit. Elater novus fibris conciliatur—febricula fugatur—aëris dyſpnœa ſolvitur.

Ibid. p. 179.

Deſperatis denique rebus iterum ad mare veluti ad anceps remedium recurritur. Balneum hoc ſemper benignum. Dolor ſtatim avolat. Tertio die febris retroceſſit. Immerſio quotidiana antemeridiana ad vices quinquaginta repetita ſymptomata graviora ſubjugavit.

Ibid. p. 180.

Theſe then are the principal, if not the only facts that the records of phyſic afford in favour of cold-bathing in aſthma; and, before we proceed any farther, a few obſervations on each ſhall particularly engage our attention.

From what is to be found in the writings of Cælius Aurelianus relative to this practice, very few, I ſuppoſe, would be fond of adopting

adopting it. The bare ipſe dixit of an author, let his reputation be what it may, will ſeldom induce practitioners to preſcribe any remedy of a precarious nature; they muſt have ſomething beſides conjecture to recommend it to their notice.

No ſuch charge, however, can be brought againſt Sir John Floyer, as he appeals to the teſt of experiment for what he has advanced, and gives a ſatisfactory account of the effects of the water on ſome aſthmatic patients.

But, did Sir John, in conſequence of the information he had on the ſubject, conſider cold-bathing a remedy well adapted to the cure of aſthma?

He laboured under the aſthma, according to his own acknowledgement, for the greater part of his life, without obſtructions in his lungs, or any other diſorder in which cold-bathing would be prejudicial; and ſtill

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we do not find that he had courage enough to make uſe of this remedy.

Moreover, he does not inform us, in any part of his Treatiſe on Cold-Bathing, that he tried it on his patients, or even recommended it to them; and when he comes to give his own opinion, he delivers it in ſuch an equivocal manner, as to leave very little doubt on the minds of his readers, that he placed no great confidence in it, and that he was not well qualified to decide on its virtues.

"I cannot believe (ſays he) that cold-
"bathing can help any defluxions, ſuch as
"the aſthma, without water drinking, and
"in a recent diſeaſe."

Treatiſe on Cold-Bathing, p. 20.

That the internal uſe of cold water ſhould aſſiſt its external application in the aſthma, is an aſſertion of ſo extraordinary a nature, that very few will be diſpoſed to attend to it;

it; and I am convinced that, if Sir John Floyer had experience for his guide in this matter, he never would have been led into this miſtake, nor have broached ſo erroneous a doctrine.

The caſe of an aſthmatic patient will be related hereafter, who, during a courſe of ſea-bathing, drank at leaſt a bottle of wine every day, and ſometimes exceeded this quantity without any injury. In fact, I never gave any particular directions on this head, except in the preſent caſe, and wine was found abſolutely neceſſary from the low and debilitated ſtate of the patient: all the reſt were allowed to drink whatever agreed beſt with them, and the cure went on as well as if the moſt ſcrupulous attention had been paid to this point. There is one circumſtance that ſeems to have led Sir John into this miſtake. He in general found that water agreed better with his aſthmatic

patients

patients than any other liquid ; and, from this principle, he was probably led to believe that cold-bathing would prove injurious, unleſs the patients reſtrained themſelves to the drinking of water during the cure.

The only remaining fact to be conſidered is that related by Dr. Smollet, concerning his own perſon.

In his caſe, cold-bathing was attended with the moſt extraordinary ſucceſs, notwithſtanding there were many circumſtances which ſeemed to point it out as a deſperate expedient. He ſays, that he was induced to try it, from an idea he had of his diſorder originating in relaxation.

It may look like preſumption in me to differ in opinion with a man of no inconſiderable knowledge in medicine about the cauſe of his diſorder, and one who, it is to be ſuppoſed, was well acquainted with the

cauſes that contributed to his valetudinary ſtate; but whatever had been his previous conſtitutional infirmity, the aſthmatical attack in queſtion was evidently the effect of cold, had no connexion with relaxation or debility, and of courſe did not warrant ſo raſh and immediate a uſe of cold-bathing.

The ſuddenneſs of the attack, attended with fever, ſtitches, and expectoration, proclaim a ſtrong tendency to inflammation in his diſorder, and ſhould have deterred him from trying ſo hazardous an experiment until the violence of the ſymptoms had in a great meaſure abated. By his own confeſſion he got a freſh cold in his head, which he probably would have eſcaped, had he waited for a few days till the feveriſh ſtate of his diſorder paſſed off; and it is aſtoniſhing to find that nothing more ſerious befel him in ſuch a ſituation. But he was not to be diſmayed: he perſevered in his reſolution,

lution, and had unheard-of ſucceſs. A ſecond and a third time he had recourſe to this remedy, and with no leſs impunity than at firſt.

Phyſicians, however, ſhould be very cautious how they conſider the fortunate iſſue of this caſe, an example worthy of imitation.

In every recent attack from cold, or indeed from any other cauſe, it would be highly imprudent to precipitate a perſon into a cold bath, without farther ceremony, though no inflammatory ſymptoms were preſent at the time. But how much more raſh and unguarded muſt it be, to direct cold-bathing for an aſthmatic labouring under fever, ſtitches, and difficult breathing, which indicate at leaſt a ſtrong tendency to inflammation in the lungs!

To illuſtrate this, I will give a caſe.

There was a gentleman under my care very

very lately, who, from cold-bathing, was fortunate enough to get rid of his aſthmatic fits, in a great meaſure, after every other method had failed: but by unguardedly expoſing himſelf to cold air, he unluckily got a relapſe. Not dreading, however, any bad conſequence from a remedy that had hitherto ſerved him ſo eſſentially, he continued to bathe every day, until an affection of the lungs, bordering on a peripneumony, obliged him to deſiſt.

This ſhews us very clearly what riſque a perſon in Dr. Smollet's ſituation muſt run from cold-bathing, and accordingly we do not find that his ſucceſs has excited any ardent deſire in the breaſts of other practitioners to follow his example: indeed there is ſo much of the marvellous in his caſe, that one may naturally ſuppoſe it would rather ſuppreſs than promote ſuch a diſpoſition in people of prudence and reflexion.

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On the whole, it is evident that the facts and obſervations to be found in medical authors relative to cold-bathing in the aſthma, are few, unſatisfactory, and deficient. That they have had no weight with practitioners, is fully evinced by the medical writings of modern times.

In all the late publications on the aſthma, cold-bathing is not even mentioned as a remedy, except in one work *, and that too in a tranſient manner: no new facts are brought forward, to give additional credit and ſtability to this practice: the author implicitly relies on the authority of Dr. Millar, and he (as we have already ſeen) reſorts to the doubtful evidence of Sir John Floyer and Dr. Smollet, without any experience of his own to corroborate the teſtimony of either.

The practice of phyſicians, according to

* Withers on the Aſthma, p. 114.

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my information, is perfectly conformable to their writings. If bleeding, bliſtering, and the reſt of the common and well-known remedies happen not to ſucceed, they give up the ill-fated victim to patience and an incurable diſorder.

It is not to be wondered at, that the caſes related by Dr. Millar ſhould have been paſſed by unnoticed by phyſicians. A few ſolitary facts, though unexceptionable as to their authenticity, when founded on experiments of an apparently dangerous nature, and delivered without any attempt to form a ſyſtem of principles, will ſeldom flaſh conviction on the minds of people that are accuſtomed to hear facts publiſhed with confidence by one phyſician to-day, and contradicted by another with the ſame certainty the next.

Theſe, with other conſiderations, have induced me to inſtitute the following expe-

riments, in order to decide on the propriety of cold-bathing in the aſthma; and, I ſuppoſe, the very lame and imperfect account of it to be found in the works of phyſicians, will fully juſtify the undertaking. To guard againſt any objection that may be made to the facts I want to eſtabliſh, I took down a particular ſtate of each caſe at the time the patient was committed to my care, and obtained a preciſe and ſatisfactory account of the operation of the water, either during the progreſs of the cure, or, if this could not be had, immediately after it was fully completed.

In ſhort, from the ſituation of the different patients before recourſe was had to cold-bathing, from the inefficacy of the other remedies employed, and from the manner in which the experiments were conducted, I expect it will appear that no fallacy can be diſcovered in the inferences drawn from them,

them, nor any room left for cavil or contradiction on this ſubject. In many caſes beſides the following, I have known cold-bathing prove highly ſalutary: but as I was not exact in committing to paper the hiſtory and cure of ſuch patients, I cannot think of offering any fact from memory alone, but ſhall confine myſelf to a more faithful and authentic record.

CASE I.

THE firſt inſtance of the good effects of cold-bathing in aſthma that happened to come within my knowledge, was that of a woman, about twenty-five years of age, who had borne ſeveral children. From her firſt pregnancy onwards, ſhe was ſubject to ſpaſmodic complaints of the ſtomach and bowels, both during the periods of geſtation, and the intervals thereof; without the ſmalleſt

tendency, however, to any diſorder of the lungs. But on expoſing herſelf to cold ſhortly after a lying-in, ſhe began to feel an uneaſineſs in her breathing, attended with a ſhort teaſing cough, which, in a few days, terminated in a confirmed ſpaſmodic aſthma. In no caſe whatſoever were the pathognomonic ſymptoms of idiopathic aſthma better marked than in the preſent: the fits returned moſt commonly late in the evenings, preceded by flatulence, continued through the night, and ended towards morning with a free and plentiful expectoration. In fact, all thoſe ſymptoms were preſent that uſually characteriſe the moſt violent and alarming ſtate of this diſeaſe.

Bliſters, aſafœtida, camphor, and the reſt of the uſual remedies in thoſe caſes were tried; but all to no purpoſe, for the fits ſtill returned every night with very little abatement of their violence. At length recourſe

courſe was had to cold-bathing, and the ſucceſs that attended its uſe far exceeded any expectations that were formed of it. In leſs than a week from the firſt immerſion, the patient found herſelf very ſenſibly relieved; and by continuing the practice for the ſpace of ſix weeks, ſhe obtained a complete and laſting recovery.

If a ſingle fact can authoriſe a particular mode of treatment in any diſeaſe, we are certainly warranted in recommending the cold bath in aſthma from the precedent before us, eſpecially as the utmoſt precaution was taken to guard againſt any deception about it. I was altogether ſo exact, that I even intermitted the bath for a few days, after ſome change for the better had taken place, in order to ſatisfy myſelf of its efficacy: but the patient began to relapſe ſo ſuddenly into her former ſituation, that

an immediate repetition of the bath was found abſolutely neceſſary.

Hence we ſee that very little room is left for ſuppoſing that nature was in any degree entitled to the merit of this recovery; and this will be the more readily acceded to, if people conſider how feeble and deficient her endeavours muſt be, when engaged in combat with ſuch a formidable adverſary as the aſthma.

River water was the bath made uſe of on this occaſion, from its vicinity to the patient's habitation, and as a preparatory ſtep to bathing in the ſea; but as the former anſwered every purpoſe that could be expected, the latter was neglected, and the cure went on equally well without its aſſiſtance. This, however, is the only inſtance in which I have ſeen a cure obtained without ſea-bathing; its powerful ſtimulus being

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in moſt caſes neceſſary for reſtoring to the lungs their loſt elaſticity and tone.

CASE II.

RICHARD DUNPHY, of whom ſome account is to be given in this place, was about the age of forty when firſt attacked with the aſthma. During the winter ſeaſon, in particular, he was ſubject to frequent fits of his diſorder; and, in the intervals of them, was affected with more or leſs of difficult breathing. He laboured under his diſorder twelve months and more, when he firſt applied to me in April 1785. Several remedies were tried, ſuch as antiſpaſmodics, bliſters, expectorants and others, with little or no alleviation of the ſymptoms: indeed the diſorder ſeemed to gain ground, notwithſtanding the repeated uſe of them for the ſpace of ſeven weeks.

Finding very little probability of gaining any advantage by the medicines of the Materia Medica, I thought myſelf bound to recommend a trial of the cold bath, from the glaring proofs of its efficacy in the caſe juſt now related; nor had I any cauſe to repent of my raſhneſs, as the patient ſoon experienced the happineſs of getting rid of a diſorder which muſt have inevitably terminated in his death. By his own account, it appears that he had not bathed above ſix days, when he found a very ſenſible change for the better; and by continuing the practice once a day for ſeven weeks only, the aſthmatic fits were totally removed.

On this occaſion ſea-bathing was made uſe of, and nothing was done previous to the courſe, except the taking of a mild purgative: the precautions to be mentioned hereafter were not attended to in this, or in the caſe immediately following: both

patients

patients were conſtantly employed in bodily labour; and on this account they probably did not ſtand much in need of a preparation for ſea-bathing, by having firſt bathed in water of a warmer temperature.

CASE III.

RICHARD HOLLAND, ætat. 48, was ſubject to a cough at different times, for ſeveral years, but was at laſt ſuddenly ſeized with a fit of the aſthma at night, that obliged him to ſit up in bed till morning. From that time till he applied to me in April 1787, which was about two years, he was very few nights in the winter ſeaſon free from an attack. In the ſummer ſeaſon alſo, the fits very conſtantly returned. At all times his breathing was rather difficult, attended with a ſtricture at the cheſt, which ſeemed to impede the expanſion of the lungs.

lungs. His cough, though generally hard through the day, was ſoft in the morning, and generally afforded relief. Being apprehenſive of tubercles having formed in his lungs, from the long continuance of the cough previous to the aſthma, I had ſome doubts about the propriety of cold-bathing: but on finding his pulſe very regular between the fits, I concluded that they had not yet taken place, as a quickneſs of pulſe is generally the conſequence of ſuch an internal irritation: I then, without waiting to ſee the effects of medicine, adviſed him, as ſoon as the ſeaſon ſhould advance, to make a trial of cold-bathing; and in order to induce him to it, I told him that there were little or no hopes of a cure from any other ſource. In defiance of the general outcry of his friends againſt the danger of the remedy, he followed my advice, and, to my aſtoniſhment, returned from bathing

in three weeks time, perfectly free from aſthma, or difficulty of breathing of any kind.

CASE IV.

WILLIAM DONOVAN, of this city, carpenter, ætat. 46, laboured under the aſthma for ſeventeen weeks, when he came to me in September 1789. He informed me that, for a month before the aſthma appeared, he was troubled with a cough. The aſthmatic fits generally came on at night, though at times he would have two or three attacks during the day. His breathing between the fits was ſeldom or never free, particularly if he made any exertion that hurried him, as in walking ſmartly, or in attempting to aſcend any eminence. During the above length of time that he was afflicted with the aſthma, he was never able to work

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one day at his trade. Being of opinion that medicine would avail him very little in his ſituation, I recommended a trial of ſea-bathing. For the firſt week the water had no effect in diminiſhing the violence or duration of his fits, though in other reſpects, as in mending his appetite and ſpirits, he experienced ſome benefit. About the tenth day his breathing began to grow better; and by continuing to bathe every day for three weeks only, he got completely rid of his aſthma. At the preſent time, he is as well able to work at his trade as ever.

CASE V.

MICHAEL M'BAY, ætat. 22, by expoſure to cold, got a ſevere cough that held him for three months, and then terminated in a tightneſs of the cheſt, lowneſs of ſpirits, diſtenſion of the ſtomach, and flatulence. He

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was not many days troubled with theſe ſymptoms, when he was ſuddenly ſeized with a difficulty of breathing, that ſeemed to threaten immediate ſuffocation. About twelve o'clock every day he had an aſthmatic paroxyſm of this kind for upwards of three weeks: but by degrees they began to diſappear; and when he came to me in June 1789, his chief complaints were, diſtenſion of the ſtomach from wind, low ſpirits, and ſtricture acroſs the lower part of his cheſt. He told me that he had applied to different practitioners, without receiving any benefit from their preſcriptions. Judging that the uſual remedies, in ſuch caſes, had been adminiſtered, I applied a bliſter to the lower part of the cheſt, and directed him, as ſoon as the part ſhould heal, to plunge himſelf in a river every morning, it being at that time the only bath that could be conveniently procured. He followed

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my advice, and came every day to inform me what effect the water had on him.

It is curious enough to find that, during the time of immerſion, the ſtricture at his cheſt, and any uneaſineſs he had in his breathing, vaniſhed inſtantaneouſly, and did not return for a conſiderable time after he came out of the water. To make uſe of his own phraſe, he felt his cheſt grow wider; and this effect was produced on the firſt, as well as on every other ſubſequent bathing. Finding, however, after the expiration of eight or ten days, that he did not mend according to my expectations, I thought that ſea-bathing might produce that permanency of effect which was experienced in the former caſes. But in this I was diſappointed. After bathing in the ſea for three weeks, he had ſtill ſome remains of the weight and ſtricture of his cheſt; but his lowneſs of ſpirits, diſtenſion of the ſtomach, and other

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nervous and hypochondriacal ſymptoms were completely removed.

Though a radical cure was not obtained by the bath in the preſent caſe, it nevertheleſs operated in ſuch a manner as to ſtrike the mind with a full conviction of its efficacy in ſuppreſſing the ſpaſmodic affections of aſthma; and it is more than probable, from the great benefit this patient received, that had he perſiſted in bathing for ſome time longer, a complete cure would have been the conſequence.

CASE VI.

Mr. H. ætat. 30, of a melancholic temperament, and ſubject at times to vomitings, lowneſs of ſpirits, giddineſs, and other ſymptoms of hypochondriaſis; at length was ſuddenly ſeized with a ſlight fit of the aſthma, about twelve o'clock at night.

About

About the ſame hour every night for the ſpace of three weeks he had an attack, and every ſucceeding one was more violent than the former.

Dr. Thomas Butler, a phyſician of eminence in this place, and I, were called to his aſſiſtance.

On examination, we found that his diſorder had already made a conſiderable breach in his conſtitution: his pulſe was ſmall, ſlow, and extremely feeble; he was much reduced in fleſh; his hands trembled; his limbs tottered under him; and he ſeemed ſcarcely able to walk acroſs the floor. Beſides this general ſtate of debility, he complained of a ſtricture and weight of his cheſt in the intervals of the fits, that took place on the fifth or ſixth day of his diſorder.

To remove the ſtricture, and prevent the return of the paroxyſm at night, a bliſter was applied to his cheſt; and a draught, with

with paregoric elixir, and ſome drops of the theb. tinct. to render its operation the more effectual, was preſcribed, with directions to have it adminiſtered about a quarter of an hour before the uſual time of the coming on of the fit.

The report next morning was as follows:

24*th*. Had a violent fit at the uſual hour, and ſeems quite low and exhauſted this morning, notwithſtanding his bliſter roſe well, and he took the draught as directed.

On this Dr. Butler propoſed the uſe of the Peruvian bark, in as large doſes as the ſtomach could bear; and from the periodical nature of the complaint, and the enervated ſtate of the patient, it ſeemed to be particularly well adapted to his ſituation, and to promiſe more ſucceſs than any other medicine whatſoever. It was combined with valerian, in the following form:

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℞. Cort. Peruv. Rub. pulv. ℥j.
Rad. Valer. Sylv. pulv. ʒiij.
Syrup. Zingib. q. ſ. ut fiat Electar.—cujus ſumat æger cochleare parvulum 2da quaque hora.

25*th.* He is conſiderably better this day, though the medicines diſagree with his ſtomach. He had but a ſlight fit this morning at four o'clock, that diſappeared in a few minutes. The electuary was continued in the ſame form and quantity.

26*th.* He is not ſo well this morning as yeſterday: had a fit, about four o'clock, that held him three quarters of an hour.

27*th.* The paroxyſm came on about three o'clock, and continued an hour. The electuary ſtill produces ſickneſs of ſtomach, and other diſtreſſing ſymptoms.

To obviate theſe complaints, and to throw in a greater quantity of the bark if poſſible, it was given to him in the form of pills, with an aromatic; and as the flowers of zinc,

zinc, it was ſuppoſed, might aſſiſt its operation, they were ſubſtituted in room of the valerian, and joined to the bark.

28*th*. The fit returned at two o'clock, and continued about an hour and a half, of the ſame violence as the night before.

29*th*. He had a return of the aſthmatic fit laſt night, that continued above an hour.

30*th*. He had a violent attack, which laſted between two and three hours, though he increaſed the doſe of his pills, ſo as to have taken on the 28th and 29th an ounce of bark, and twelve grains of the flowers of zinc each day.

From the foregoing reports, we ſee that the Peruvian bark, on the firſt days of its adminiſtration, conſiderably checked the progreſs of the aſthma; but that, as ſoon as the ſyſtem became habituated to it, its efficacy began to diminiſh every day, till at

length it produced no good effect whatſoever.

It appears extremely probable, indeed, that if the bark could have been given in ſufficient quantity on the firſt onſet, a complete ſtop would have been put to the fits: this, however, was rendered impracticable, by the delicate ſtate of the patient's ſtomach; and all our hopes of a cure from this ſource were fruſtrated. The addition of the flowers of zinc did not render it more effectual.

It is worthy of notice, that, at the time the bark ſeemed to operate moſt advantageouſly in combating the diſeaſe, it had little or no effect in reſtoring the patient to his former ſtate of vivacity and vigour; he ſtill remained depreſſed in his ſpirits, feeble in his limbs, and in every reſpect as enervated as before he began to make uſe of it.

This diſappointment from medicines of

the moſt promiſing nature, fully juſtified a trial of ſome very active and powerful remedy. Accordingly, from my experience of its efficacy in the preceding caſes, I ſuggeſted to Dr. Butler the uſe of ſea-bathing, as the only expedient now left that afforded any flattering expectations. To this he readily aſſented, and informed me, that an aſthmatic, by his advice, had recourſe to it very lately with extraordinary ſucceſs. To prepare our patient for bathing in the ſea, an artificial ſalt bath was immediately got ready; and, on the firſt immerſion, he had no return of the paroxyſm that night, though he awoke at the hour it uſually came on. In this manner he paſſed five or ſix nights free from any threatening of an attack; but on going into the bath one morning, he unfortunately got cold, and, in conſequence thereof, he had a ſlight fit that night.

As he got directions to repair to the ſea

after a few dips in the artificial bath, it happened unluckily that he went there at the time he got this relapſe from cold: for, during the firſt week of bathing, inſtead of any amendment taking place, we find him grow worſe and worſe every day.

At the end of this period, however, he began to improve; and, in the ſhort ſpace of a fortnight, he completely recovered his appetite, his ſtrength, and his ſpirits.

Beſides this re-eſtabliſhment of his general ſtate of health, he had ſcarcely any remains of the aſthma; not more, in fact, than what ſhewed that the tendency in the ſyſtem to renew the fits was not entirely eradicated. For the laſt week he was quite free from aſthma, except once or twice that he had ſome uneaſineſs in his breathing, that vaniſhed in a few minutes.

Deluded by theſe appearances of a complete recovery, and ſeized with a ſtrange

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and unaccountable inſenſibility of the precarious ſituation in which he ſtill remained, he relinquiſhed the water, in direct oppoſition to the advice of his phyſicians, and the eager and preſſing ſolicitations of his friends. During ſix weeks from the time that he left off bathing in the ſea, he remained without any perceptible alteration for the worſe; but by frequent attacks of cold, his diſorder returned to its ancient form.

In the preceding caſes, it has been my chief aim to relate, in a plain and perſpicuous manner, the hiſtory of the diſeaſe in each of my patients, and the effects of cold-bathing on them, without any wiſh or deſire to exaggerate its virtues. Let others decide how far they may ſerve as examples worthy of imitation. Though conſcious of not having been deceived by falſe appearances in the obſervations I made, and

that I have not been duped by any partiality to the practice in queſtion, I ſtill think it neceſſary, from the difficulty that attends the aſcertaining of facts, to ſtrive to eſtabliſh the ſafety of cold-bathing in aſthma, by arguments drawn from a different ſource to that of the experiments above mentioned, and to anſwer every objection that can poſſibly be made againſt it.

Thus both facts and reaſoning will unite in confirmation of this practice, and will exhibit a body of evidence in its favour, as ſtrong and convincing as is generally met with on a ſubject of this nature.

CHAP.

CHAP. VII.

COUGHS, catarrhs, and other diſorders of the lungs, are very common in the winter ſeaſon, in all cold climates. Such complaints are, with ſome reaſon, ſuppoſed to originate in ſuppreſſed perſpiration, or in a change of the circulation of the fluids from the external to the internal parts, in conſequence of the operation of cold. On either ſuppoſition, cold-bathing muſt be looked upon as a very extraordinary mode of cure for any pulmonary affection. And as it appears from daily obſervation, that the application of cold is the moſt frequent cauſe of aſthma, cold-bathing muſt be as prejudicial in this, as in any other complaint of the lungs whatſoever.

It happens to be the caſe with aſthmatics in general, as it is with perſons who have other complaints of the lungs, that the winter ſeaſon is, for the moſt part, injurious to them: hence it follows, that cold-bathing, whoſe operation is ſimilar to that of cold air, muſt be a precarious remedy in the aſthma. Theſe are the principal arguments that, in my opinion, can be advanced againſt cold-bathing in the aſthma; and in all probability they have had very conſiderable weight with phyſicians: but how far they were authorized to reject this practice on ſuch grounds, will be ſeen by the following enquiry.

On examining a number of perſons with various complaints, and of different ages and conſtitutions, who have bathed for a ſeaſon in the ſea, it will in general be found, that few of them have been attacked with coughs or catarrhs. This may afford ſome room

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for ſpeculation to a perſon who would conſider that, perhaps, the major part of them repaired to the water without conſulting any phyſician on the propriety of ſuch an undertaking. It muſt, indeed, appear ſurpriſing how ſuch a number of valetudinarians eſcape with impunity, when we conſider the danger that is ſuppoſed to ariſe from the ſuppreſſion of perſpiration.

However, not only the vigorous and healthy, but alſo the feeble and enervated, ſeldom experience any complaint of the lungs from the operation of this element. Even people of the latter deſcription are often obliged to withdraw themſelves from bathing, in order to avoid many diſagreeable and diſtreſſing complaints, among which a cough or catarrh is very rarely diſcovered. What concluſion are we to draw from ſuch premiſes? The moſt obvious and natural one is, that though the perſpiration be ſuppreſſed,

preſſed, and the fluids be driven from the external to the internal parts during the time of immerſion, they are in general reſtored to their former ſituation ſhortly after the operation of the water is over. If this inference be not admitted, at leaſt it is natural to ſuppoſe that, in the cuſtomary way of cold-bathing, the action of the perſpirable matter on the lungs is not of a very formidable nature.

From the well-known aſtringent effects of cold water on the ſurface of the body, it is reaſonable to believe that a temporary check is put to the perſpiration in every inſtance of cold-bathing: but how or in what degree it is productive of diſeaſe, is probably a matter of difficult inveſtigation.

Without being under the neceſſity of indulging the imagination in any fanciful theory, we can prove, from incontrovertible facts, that a very great latitude may be allowed

allowed in cold-bathing, without any danger from the retention of the perſpirable matter.

Fiſhermen often remain up to the middle in water, for the greater part of a day, without receiving any injury. Perſons who are employed as aſſiſtants at bathing places, have the greateſt part of their bodies under water for ſeveral hours every day during the ſeaſon, without finding any inconvenience from it by cough, catarrh, or any ſuch diſorder.

If we were to reaſon *a priori* on an experiment of this kind, without waiting for the event, we would readily agree about the conſequence: we would not heſitate to declare, that ſome alarming diſaſter muſt attend the experiment; that a ſtubborn cough which may end in a conſumption, an inſuperable inflammation of the lungs, or ſome

other

other very formidable diſtemper, muſt neceſſarily ariſe from ſuppreſſed perſpiration.

Such are the dangers which the fancy, heated with theory, will portend on ſuch an occaſion. But how weak its fears, and how groundleſs its apprehenſions, when a perſon, after reſiding for ſix or ſeven hours in the water, diſcovers not the ſlighteſt tendency to diſeaſe! This fact (which will be ſatisfactorily explained hereafter by ſome obſervations of Dr. Gardiner) is adduced for the purpoſe of baniſhing from the minds of people their fears with reſpect to the influence of cold-bathing on the perſpiration.

But arguments may, perhaps, be advanced againſt this doctrine, and with the effect of overthrowing it. Thus it may be ſaid, that thoſe who are ſo much accuſtomed to the water as the fiſhermen, &c. juſt mentioned, cannot poſſibly experience its ordinary effects:

fects: that the power of habit in reſiſting the cauſe of diſeaſe, is not more evidently diſplayed on this occaſion than on many others which daily preſent themſelves; and that, of courſe, the examples brought forward in ſupport of cold-bathing, cannot amount to any clear or ſatisfactory proof.

As a farther confirmation of this reaſoning, it may be alleged that, in many inſtances, eſpecially on the firſt onſet of bathing, a diarrhœa occurs, which muſt originate in the action of the perſpirable matter on the inteſtinal canal.

The power that the human body poſſeſſes of reſiſting the operation of cold, is allowed by all philoſophers to be very conſiderable, however they wiſh to account for it; and when to this is ſuperadded the power of habit, it muſt be very great indeed. But, that in conſequence thereof it ſhould be capable of preventing the effects of ſuppreſſed

perſpiration

perſpiration on the body, is a conjecture ſupported by very little probability.

In the firſt place, it is evident that the water, during every month of the ſummer, is ſo many degrees below the ordinary temperature or ſtandard heat of the human body, that ſuch a conſtriction is induced on the exhalent veſſels, as effectually prevents the eſcape of that inviſible halitus that conſtitutes the matter of perſpiration. Hence, conſidering the quantity of perſpirable matter that is accumulated in the body during a perſon's reſidence for ſeveral hours in the water, it is improbable to ſuppoſe, that the natural reſiſting power of the conſtitution, the power of habit, or the co-operation of both, can guard againſt a catarrhal affection, if, in any inſtance, it aroſe from ſuppreſſed perſpiration.

When a perſon makes uſe of the water medicinally, and remains in it but a few

ſeconds,

ſeconds, ſuch a briſk vibration of the fibres, and ſuch a univerſal glow of heat in general ſucceed, that any danger which might be apprèhended from ſuppreſſed perſpiration will be effectually obviated by ſuch vigorous exertions of the ſyſtem: but if the body be immerſed in cold water for five or ſix hours, no ſuch effort can take place as may be ſuppoſed to counteract, in any habit, the agency of the perſpirable matter on the lungs.

As to the other argument, I think its fallacy may be eaſily expoſed. Many inſtances of the moſt violent ſtate of coſtiveneſs have occurred, wherein all the uſual remedies were judiciouſly employed without the ſmalleſt advantage, when the daſhing of a few bowls of water on the abdomen, or lower extremities, had the happy effect of procuring an inſtantaneous evacuation. Here it would be extremely unphiloſophical to ſuppoſe, that the feeble action of the per-

ſpirable matter on the bowels removed the conſtipation, when it can be more rationally explained on the principle, that the water, by its ſhock or ſtimulus, brought on an extraordinary degree of action in the bowels, by which they got rid of their contents.

If the diarrhœa of cold-bathing had its origin in obſtructed perſpiration, how comes it to paſs that the lungs are not affected by the ſame cauſe and at the ſame time with the bowels?

The internal ſurface of the lungs ſeems as liable to be acted upon by the perſpirable matter as that of the inteſtinal tube: How are we then to account for the abſence of catarrh when a diarrhœa occurs? A little attention to the difference of ſtructure in theſe organs will clear up this point. Thus aloes and colocynthida rubbed on the integuments, will often bring a diarrhœa, from the ſympathy that ſubſiſts between the external

and

and internal parts. In like manner cold water, by its ſtimulus to the abdomen, will ſometimes act as powerfully as a briſk purgative: but the lungs, not being of a muſcular ſtructure, are not ſo ſuſceptible of impreſſion from the temporary action of ſtimuli externally applied, and, of courſe, will not be ſo readily affected by cold-bathing as the bowels.

It is poſſible that the diarrhœa of cold-bathing may ſometimes ariſe from a redundancy of bile in the bowels; and this may be attributed to the effect of the water in determining the perſpirable matter to the liver: but the explanation will be more ſatisfactory, by ſuppoſing that the ſtimulus of the water is communicated to the veſſels that pour out the bile, and thus occaſions a plentiful flow of it into the bowels.

To illuſtrate and confirm the preceding doctrine, I will preſent my readers with

ſome obſervations in point, from Dr. Gardiner's excellent Treatiſe on the Animal Œconomy. They will alſo be found to contain a very juſt and ſatisfactory rationale of the modus operandi of cold in the production of catarrh.

Dr. Gardiner, not conſidering obſtructed perſpiration the cauſe of catarrh, makes uſe of the following reflections:

"An invariable effect of cold during its "application, is a diminution of perſpira-"tion, from the conſtringing action of cold "on the veſſels of the ſkin. But this uſu-"ally happens without any injury to the "body: for the perſon no ſooner moves "himſelf into a warmer air, than his per-"ſpiration is again increaſed, in proportion "to the degree of heat applied. But with "regard to the quantity of perſpiration or "degree of cold that may be endured with "impunity, cuſtom allows of a conſiderable

" latitude. Shepherds, on the mountainous
" parts of this country, bear the cold of
" winter ſurpriſingly: and I have known
" the guides where ſea-bathing is uſed, have
" the greateſt part of their bodies immerſed
" five or ſix hours every day for ſeveral
" months together in water above forty
" degrees colder than the temperature of
" their bodies. For unleſs the cold is ſo in-
" tenſe, or continued ſo long as to affect the
" energy of the nerves, it produces no bad
" conſequences. I mean not to ſay, that
" long obſtructed perſpiration is not hurt-
" ful to the conſtitution; for certainly it is
" often a principal agent in the production
" of ſcurvy, dropſy, and other diſorders:
" but that a temporary obſtruction of per-
" ſpiration on catching cold, or at the com-
" mencement of a catarrh, ſhould be the
" cauſe of the diſeaſe, I have never yet been
" able to comprehend. The ſpaſm on the

" extreme veſſels of the ſkin, with ſome-
" times a ſlight degree of vigour about the
" beginning of the diſorder, returning at
" uncertain periods, and commonly of ſhort
" duration, can have very little influence.
" For although a free perſpiration contri-
" butes in general to the relief of parts
" affected, as ſhall afterwards be more par-
" ticularly noticed, yet profuſe ſweats are
" not uncommon during the continuance of
" the diſeaſe, without any alleviation of
" the ſymptoms, when the cauſe of it has
" operated ſtrongly on the ſyſtem."

After quoting the ſtatical experiments of Dr. James Keil, which prove that a conſiderable increaſe or diminution of perſpiration may take place in twenty-four hours, without any apparent injury to health, or the ſmalleſt tendency to catarrh; he reaſons in the following manner:

" The ſympathy between the nerves of

" the

" the ſkin, from the application of a certain
" degree of cold, and thoſe of the internal
" membrane of the bronchii, is ſo remark-
" able, that many delicate perſons are im-
" mediately ſeized with a cough, when part
" of their body, and eſpecially their feet,
" have been expoſed to a ſevere cold, inde-
" pendent of the application of cold air to
" the lungs. And if, the inſtant a perſon
" perceives it to have this effect, he moves
" into a warmer ſituation, ſo as to become
" comfortably warm, the cough ſoon leaves
" him. But if he ſhall remain, or be un-
" avoidably expoſed to the cold for ſome
" time, the cough may continue for a ſhorter
" or longer period, and be attended with all
" the effects of ſlight or ſevere catarrh, ac-
" cording to the time he was ſo expoſed."

Gardiner's Obſervations on the Animal Œconomy, p. 245-46.

From the foregoing obſervations, I expect

it will appear, that we need not in general be very much alarmed about the effects of obſtructed perſpiration in the ordinary way of cold-bathing: it will now be neceſſary to take a more particular view of it with reſpect to its operation on aſthmatics.

In the greater part of the diſorders of the lungs, as in ulcers, tubercles, recent coughs and catarrhs, &c. more or leſs of inflammation is commonly found to accompany them. So ſuſceptible of the action of cold are the lungs rendered in conſequence thereof, that cold-bathing cannot poſſibly be ventured upon without the moſt imminent danger: let us therefore adopt what theory we will, whether that of ſuppreſſed perſpiration with writers in general, or that of nervous ſympathy with Dr. Gardiner, an increaſe of the preceding inflammation, and of courſe an aggravation of all the ſymptoms, muſt neceſſarily follow. Without due

attention

attention to the nature of aſthma, we are apt to conclude, that conſequences equally alarming will attend the uſe of cold-bathing in this diſorder alſo. But a little reflection will baniſh ſuch an ill-founded conjecture.

In the firſt attack of the aſthma, we often diſcover ſymptoms of inflammation, or we find the diſorder of ſuch a mixed and complicated nature, that the exact line of diſtinction between a ſpaſmodic and an inflammatory affection of the lungs cannot be eaſily drawn. This ſtage, however, paſſes off in ſome time, and the diſorder aſſumes the form of a genuine unmixed ſpaſmodic complaint. When this period once arrives, and if the diſeaſe be kept up by the power of habit, as is moſt commonly the caſe, we ſhould endeavour with all our might to counteract it; and, for this purpoſe, no danger can in general attend the uſe of cold-bathing. Every ſymptom of inflammation, or tendency to it, has now diſappeared; and in

theſe

theſe caſes we have, for the moſt part, an oppoſite ſtate to that of inflammation to deal with. In this ſtage and form of the diſeaſe, perhaps, the greateſt danger to be apprehended from cold-bathing is ſome inconſiderable catarrhal affection, or, at worſt, a return of the aſthmatic fits. It is even highly probable, that ſuch conſequences are never experienced from the operation of the water itſelf.

We know to a certainty, that ſpaſms in the ſtomach and bowels returning periodically, and continuing for a length of time from a morbid ſtate of irritability, have been very frequently removed by ſea-bathing. Obſtinate vomiting, which often depends on ſimilar cauſes, has been radically cured by the partial application of cold water to the region of the ſtomach, after every other powerful remedy was tried in vain. In caſes of violent hyſteria, cold water, applied to the ſame part, has had an immediate

immediate powerful effect in removing that ſuffocating diſtention attendant on the hyſteric paroxyſm *. Here we have convincing proofs that cold water may be applied to the ſtomach during the exiſtence of ſpaſms therein with ſafety and advantage; and as this is the caſe, it is to be preſumed that cold-bathing may be uſed in ſpaſmodic aſthma, without any danger from ſuppreſſed perſpiration, or any other mode of action whatſoever.

But ſome objections may, perhaps, be raiſed againſt this concluſion with reſpect to the aſthma.

It may be alleged, that the functions of the lungs are altogether ſo different from thoſe of the ſtomach, that it is improper to reaſon by analogy from the one part to the other: that the lungs, from their ſituation and many other cauſes, are ſo readily acted upon in a

* Vide London Medical Journal, vol. vii. p. 123.

diſeaſed

diſeaſed ſtate by cold, that the external application of cold water may injure them when attacked with ſpaſms, though it ſhould relieve the ſtomach when labouring under the ſame diſorder.

But though we ſhould admit this reaſoning to be in a great meaſure well founded, the conſequence ſtill does not follow that immerſion in cold water is prejudicial; for it will immediately appear that cold-bathing may be uſeful to aſthmatics, though they ſhould be materially injured by the partial application of cold.

Coughs, catarrhs, &c. are, for the moſt part, found to ariſe from the partial application of cold. Such complaints, no doubt, are ſometimes brought on by cold applied in a general way: but while we look upon this operation of cold in affecting the lungs as an occurrence by no means frequent, we muſt conſider its common mode of action

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in moſt caſes to be in a partial way. Thus we find the lungs of ſome delicate perſons are readily affected by cold applied to the feet; nay, by ſuch a moderate degree of it, that had it been applied to the whole ſurface equally by immerſion, or in any other manner, no morbid alteration would in all probability have taken place in any particular part. Moreover, it appears that the firſt threatenings of catarrhs, inflammations, and other diſorders of the lungs, are often occaſioned by the partial application of cold air to the lungs when the body is overheated, and are found to ariſe in a mild ſeaſon, if the air be directed to the lungs in a ſtream or current, as by ſitting at a window, or expoſing the body in any ſituation by which a ſimilar effect may be produced. It ſhould alſo be obſerved, that in theſe caſes the diſorder is generally ſlight at the firſt onſet, till, by unguardedly expoſing the body

again

again and again to the air, the affection ariſes to ſuch a pitch as to be attended with danger.

This ſubject is well illuſtrated by the following paſſage from the ingenious author already mentioned:

"Although an accidental expoſure to an "intenſe cold for any conſiderable time is "ſoon followed by a catarrh, catarrhal or "inflammatory fever; yet the effect of ſuch "changes in the weather as are related in "p. 168, are commonly ſlow, and do not "affect the health in any remarkable "manner for ſome time, becauſe it is not "the cold of a few hours which affect "people in general. It uſually requires "the operation of ſome days before ſuch "changes can be brought on the ſyſtem as "are mentioned in p. 146-7, by which the "Doctor means a catarrh, when got to a "conſiderable height." He proceeds and

ſays—

ſays—" On ſuch occaſions its operation is " continued, as it were, by prizes or ſucceſ- " ſive additions. It is not the cold of one " day, but of ſeveral, that is capable of pro- " ducing ſuch conſiderable effects on the " arterial ſyſtem and mucous gland: theſe " at firſt are of a ſlight nature, but gradually " increaſe according to the circumſtances of " expoſure to the weather, and conſtitution " of the perſon, until a præternatural ſen- " ſibility and irritability of the ſyſtem, " which always accompany and keep pace " with the morbid effects of cold, ariſe to " ſuch a degree as, in conjunction with " the ſtimulus of a collection of phlegm in " the ſtomach and bowels, from a diſeaſed " ſecretion of it in the viſcera, an acceſſion " of the fever is brought on."

From the foregoing enquiry it appears, that when the cold of our atmoſphere is productive of catarrhal affections in healthy people,

people, it commonly operates in a partial manner, and, except it be very intenſe, requires ſome days (at leaſt it requires to be reiterated at different times) before it is capable of bringing on any conſiderable morbid affection. Let us now endeavour to find how aſthmatics are affected in ſimilar circumſtances.

From the violence offered to the lungs in every fit of the aſthma, from the origin of the diſorder and other cauſes, it is no way ſurpriſing that ſuch a degree of ſenſibility is induced, as to render theſe organs very ſuſceptible of the action of cold. Accordingly we find no deſcription of people more ſubject to ſlight coughs and catarrhs, than thoſe who are afflicted with the aſthma. Nevertheleſs, every day's experience demonſtrates that ſuch attacks do not often terminate in catarrhal fevers, pleuriſies, or any diſorder accompanied with ſymptoms of much inflammation.

mation. If this obſervation be well founded, it muſt be granted on all ſides, that aſthmatics cæteris paribus are not more liable to inflammatory affections of the lungs than perſons who enjoy good health, and are poſſeſſed of robuſt conſtitutions. It has been commonly remarked by medical writers, that thoſe who labour under ſpaſmodic complaints, are ſeldom attacked with inflammatory diſorders. Exceptions to this general rule, no doubt, will ſometimes occur; but the prædiſpoſition, ſo neceſſary for conſtituting what is called by phyſicians the phlogiſtic diatheſis, being abſent in theſe caſes, the occaſional cauſe muſt operate with more than ordinary intenſity and power, to be capable of producing an inflammatory diſorder.

This circumſtance alone ſhould, in my opinion, be conſidered a ſtrong argument in favour of cold-bathing in aſthma; for if, in general, people of ſound lungs, and good

conſtitutions, are injured as materially by the application of cold air as aſthmatics, how is it poſſible that immerſion for a few ſeconds in cold water, that acts equally on every part of the ſurface at the ſame time, can be attended with any dangerous or alarming conſequence in the aſthma?

But though it ſhould be granted that the lungs of aſthmatics are more liable to inflammatory affections from cold air than people in health, does it follow of courſe that cold-bathing is prejudicial in the aſthma? I apprehend it does not. There are many perſons altogether ſo delicate as to get coughs and colds at almoſt every blaſt of ſharp air, who find not the ſmalleſt inconvenience from bathing in cold water: for, inſtead of proving hurtful, it is in many caſes the beſt and only remedy for guarding the body againſt this effect of the air. This appears in a great meaſure to be the caſe with aſthmatics;

matics; and it would be as injudicious to reaſon from the effects of air to that of water in the one caſe as in the other. Many cauſes in the different ſcenes and occupations of life, which cannot poſſibly have any influence when cold-bathing is employed, muſt often co-operate with cold air in injuring the lungs of aſthmatics. Thus, the viciſſitudes of the ſeaſons, the unguarded expoſure to cold and rainy weather, the removing from a warm temperature immediately into a cold one, with various other accidental cauſes, muſt frequently prove very conſiderable auxiliaries to the action of cold air. Compare an aſthmatic circumſtanced in this manner, to his ſituation when, in a mild ſeaſon, he is plunged into the cold-bath; and can there, with the leaſt propriety, be any analogy eſtabliſhed between them? Can there exiſt in nature any two cauſes that appear to differ more widely in their

manner of acting on the human body? The difference of denſity in the two fluids—the re-action that takes place after the one, and not after the other—the vaſt length of time a perſon may be expoſed to the air in compariſon to that of the water, muſt totally change any ſimilarity of action that could be ſuppoſed to ſubſiſt between them. Moreover, it ſhould be taken into conſideration, that cold air, when productive of diſeaſe, is very frequently applied in a partial manner; while, in bathing, the cold water is applied to every part of the ſurface at the ſame time, and, of courſe, cannot operate ſo powerfully in bringing on catarrh, or any other dangerous attack of the lungs. Hence, though the lungs of aſthmatics be more delicate than thoſe of people in general, and in conſequence thereof are more readily diſpoſed to catarrhs and pleuriſies from the cold of the atmoſphere, ſtill it cannot be inferred that

cold-

cold-bathing is a dangerous remedy in the aſthma.

But in order to ſhew more clearly how fallacious it is to reaſon by analogy from the action of cold air to that of water in any diſeaſe whatſoever, I ſhall take the liberty of advancing a few facts, which, in my apprehenſion, will place this matter beyond the reach of doubt or uncertainty: they will alſo prove a full confutation of the laſt argument that was ſuppoſed to be advanced againſt cold-bathing in the aſthma; to wit, that the cold of winter being in general hurtful to aſthmatics, cold-bathing muſt of courſe be a very precarious remedy in this diſorder.

The cold bath is, in many inſtances, the moſt effectual remedy in chronic rheumatiſm, though the cold of our atmoſphere in general firſt gives riſe to the diſeaſe, and is frequently the ſole cauſe of preventing us

from obtaining a cure. During the intervals of the gout, eſpecially when it has ſome tendency to an atonic ſtate, cold-bathing has been employed with great ſucceſs: yet it is univerſally known, that cold air is pernicious to gouty habits, for in every cold climate the winter is found to aggravate the diſeaſe. In ſome caſes of palſy, cold-bathing has proved very powerful in reſtoring loſt ſenſation and motion; though reſiding in a cold climate is, for the moſt part, prejudicial to paralytic limbs. Having finiſhed this defence of cold-bathing in the aſthma, we ſhall endeavour to point out, in the following chapter, the particular forms or varieties of the diſeaſe that will admit of its application.

CHAP.

CHAP. VIII.

TO aſcertain with any degree of preciſion thoſe caſes of aſthma wherein cold-bathing may be uſed without danger, is an undertaking of much difficulty, from the neglect of phyſicians with reſpect to this practice, and the conſequent deficiency of facts to guide us in our reſearches. In truth, the importance of the ſubject, the apparently dangerous nature of cold-bathing in ſuch a diſorder as the aſthma, demand our moſt ſerious conſideration, and ſhould deter us from advancing any doctrine or opinion but what is founded on experiments and accurate obſervation. Fully per-

ſuaded of the propriety of adhering to this ſyſtem, we will endeavour to regulate our conduct accordingly.

The following are the diſorders which, joined to the aſthma, may be ſuppoſed to preclude the uſe of cold-bathing. Particular attention will be paid to every combination, and reaſons aſſigned for retaining or exploding the practice in each.

Ulcers in the lungs.

Tubercles.

Inflammation of theſe organs.

Catarrh, recent.

Catarrh of a long ſtanding, attended with expectoration of much phlegm, as in that ſpecies of the diſeaſe called humoural.

Plethora, both partial and general.

Dropſy of the cheſt.

Mal-conformation of the cheſt.

Difficulty of breathing from various cauſes.

Ulcers

Ulcers in the lungs, when complicated with aſthma, ſtill retain their characteriſtic marks, and are readily diſcovered by emaciation, purulent ſpitting, and other ſymptoms of conſumption of the lungs. When this event has once taken place, it is unneceſſary to caution practitioners againſt the cold-bath in ſuch a ſituation. The diagnoſtics, however, are more difficult when tubercles occur at the ſame time with the aſthma.

It is a common opinion with phyſicians, that when the aſthma terminates fatally, it is in general owing to the formation of tubercles, which, in length of time, come to ſuppuration, and thus produce a pulmonary conſumption. Such tumours are ſaid not to ſupervene for a conſiderable time after the firſt appearance of the aſthma, and are ſuppoſed to ariſe from the violence done to the lungs by the repeated attacks of the ſpaſms.

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In ſome inſtances the tubercles might have exiſted previous to the aſthma, and acted as an exciting cauſe to the diſorder; but this I believe to be a rare occurrence. In either caſe, we are to form our opinion of the exiſtence of tubercles, by attending to the following circumſtances:

It is ſuppoſed that tubercles, from their indolent nature, may remain a long time in the lungs without coming to ſuppuration, and it is poſſible that this may ſometimes be the caſe; at the ſame time, I am perſuaded, that they ſeldom remain for any time in ſuch an indolent ſtate in the lungs of aſthmatics, as not to afford ſome external ſign, whereby we can judge of their exiſtence with a high degree of probability. For my part, I have never met with any combination like this, wherein a quickneſs of pulſe, ſeldom leſs than ninety ſtrokes in a minute, did not conſtantly attend it; nay, the more frequent

quent the pulſations were, the more immi-nent was the danger, and the ſooner a pul-monary hectic fever was formed. How is it poſſible that, in ſuch a diſorder as the aſthma, tubercles can remain for any length of time in an uninflamed ſtate, ſince the re-peated attacks of the fits muſt prove ſuch a cauſe of irritation as will ſpeedily inflame them? Hence, if, in the advanced ſtage of aſthma, a quickneſs of pulſe approaching to fever height, with more or leſs of difficult breathing, be diſcovered, it is to be feared that the lungs are obſtructed with tubercles. In ſuch circumſtances, cold-bathing would be attended with the moſt pernicious effects. Indeed, without any view whatſoever to tubercles, when ſuch ſymptoms as quick-neſs of pulſe and difficult breathing are com-bined with the aſthma, they are of ſufficient magnitude to deter practitioners from any idea of bathing, as they clearly demonſtrate

that

that the lungs are in a ſtate of inflammation.

Catarrh of a long ſtanding, &c.—The different organs of the human body, as the ſtomach, inteſtines, bladder, &c. that are ſupplied with mucous glands to protect them from the action of various kinds of ſtimuli, are readily affected by cold, if the ſlimy matter that lines them happens to be poured out in any conſiderable quantity. The ſubjacent nerves, thus ſtripped of their covering, acquire an uncommon degree of ſenſibility. In the humid aſthma (as it is called), beſides that from the ſpaſmodic affection, there is the delicacy in queſtion ſuperadded in conſequence of the large quantity of mucus that is at different times diſcharged by coughing: ſo that, from reaſoning *a priori*, it is not to be ſuppoſed that the lungs, in ſuch a ſtate, can poſſibly eſcape

with

with impunity, if cold-bathing be employed. But however plauſible this reaſoning may appear, it muſt ſtill give way to the more ſolid and irrefragable teſtimony of facts. If we look back to the caſes in which cold-bathing was uſed, it will be found that the major part of them were attended with a copious diſcharge of phlegm; and in place of checking the ſpitting, and rendering the breathing more difficult as might be expected, the water had always the contrary effect, by promoting this evacuation, and relieving that uneaſy ſenſation of ſtuffing in the cheſt.

I have lately had an opportunity of ſeeing the cold bath afford more relief to a perſon labouring under an old catarrh, than all the remedies that experience had approved of in that diſorder. The patient indeed made the experiment without any medical advice; nor is it to be ſuppoſed that any practitioner from theory alone would ven-

ture to give his ſanction to a practice fraught with ſo many appearances of danger. In the chronic ſtage of dyſentery, when a white flux is kept up by the remaining delicate ſtate of the bowels, bathing in the ſea was not found to occaſion a relapſe, or aggravate the prevailing ſymptoms. Dr. Blane, in his Obſervations on the Diſeaſes of Seamen, remarks, when treating of the dyſentery, that though cold was in general hurtful and unſafe, he ſaw the ſailors, who, from their habits of life, are commonly heedleſs, bathe in the ſea when labouring under what they called the white flux, without any bad effects. In ſhort, if the precautions to be mentioned hereafter be carefully attended to, there is not a doubt but that cold-bathing may be employed with as much ſafety in the humid aſthma, as in any other variety of the diſeaſe, on condition that the breathing is not rendered difficult in the in-

tervals of the fits, by an accumulation of phlegm in the lungs. If this ſhould happen to be the caſe, it will be neceſſary, previous to bathing, to evacuate any ſuch matter by emetics, bliſters, and medicines intitled expectorants.

Catarrh recent.—Though we have ſpoken with ſo much confidence in favour of cold-bathing when aſthma is complicated with a catarrhal affection of a long ſtanding, we muſt totally reject this practice in the caſe of a recent cough or catarrh. Both theſe diſorders in general proceed from the ſame ſource, yet demand very different modes of treatment. In the recent catarrhal complaint, there is always more or leſs of an inflammatory tendency that requires cooling medicines, and what the phyſicians term the antiphlogiſtic regimen; while in the other a ſtate of relaxation takes place, and demands

mands the aſſiſtance of ſtimulants and tonics; and from them alone can we expect to reap any benefit or advantage. Hence it will readily appear why cold-bathing may be pernicious in the former, though ſucceſs may attend its application in the latter. No people whatſoever are more ſubject to ſlight coughs and catarrhs from cold than aſthmatics, and phyſicians ſhould be very cautious how they preſcribe cold-bathing while any degree of this affection exiſts. It is true, that there are few inſtances of aſthma in which we do not find a cough more or leſs troubleſome attending them, and that too in the intervals of the fits; but a little attention will render us capable of diſtinguiſhing this habitual cough, the concomitant of aſthma, from that which had been lately caught by expoſing the body to cold air.

When a perſon labouring under the aſthma

aſthma has, in the common phraſe, caught cold, he finds his cough, if he had one before, very much aggravated—his cheſt unuſually bound—a ſtuffing in his head, with other ſymptoms expreſſive of the operation of cold. From the delicate ſtate of the lungs in aſthma, we may often expect to find ſuch effects as theſe; and though, when conſidered as conſtituting a morbid affection, they do not generally ariſe to ſuch a pitch as to be attended with much danger, cold-bathing, nevertheleſs, cannot be uſed with any ſafety during their prevalence.

Plethora.—In corpulent and plethoric habits, a fullneſs or accumulation of blood in the veſſels of the lungs, ſeems in a good meaſure to contribute to the aſthma; and the idea receives weight from this circumſtance, that the application of cold, which is very powerful in bringing on internal congeſtion,

is moſt commonly the exciting cauſe of the firſt attack. From this account, and from the nature of the remedies that are found to ſucceed in plethoric aſthma, as bleeding, bliſtering, &c. it may appear raſhneſs in the extreme to ſuggeſt ſuch a method of cure as cold-bathing; for the difficult breathing that ſo conſtantly takes place in this form of the diſeaſe, and that too, in all probability, from ſome degree of obſtruction in the lungs, together with the fullneſs of the habit itſelf, are circumſtances ſo unfavourable to cold-bathing, that, in every caſe where ſuch ſymptoms occur, the practice cannot be too ſtrongly reprobated. But there are probably inſtances of aſthma that can with propriety be called plethoric, wherein cold-bathing may be applied without danger. For example, if, after general and topical evacuations, by means of bleeding, bliſtering, &c. the diſorder be brought to have

complete

complete intermiſſions, with a regular pulſe, while at the ſame time no difficulty of breathing, or tightneſs acroſs the cheſt is diſcoverable, there cannot be any ſolid objection to a trial of cold-bathing.

But, on the other hand, if proper evacuations have been omitted, or if, with their aſſiſtance, the neceſſary intermiſſions have not taken place, and that the patient labours under oppreſſed or uneaſy breathing, every idea of cold-bathing ſhould be laid aſide, as a rupture of ſome blood-veſſel in the lungs, or ſome other attack equally alarming, may be the reward of our temerity.

As ſome doubts may ariſe about the preciſe meaning of plethoric aſthma, I think it neceſſary to point out the ſenſe to which I would have it reſtricted in this place. It is univerſally allowed, that a plethoric ſtate of the ſyſtem may actually take place in habits that have very little appearance of obeſity.

Thoſe of ſanguine temperaments, and robuſt conſtitutions, without arriving at that ſtate which may be properly called corpulent, are the perſons, I believe, moſt liable to a general plethora; and to ſuch only would I allow the uſe of cold-bathing. When obeſity occurs in any conſiderable degree, a partial plethora will be the conſequence, from a greater determination of blood than ordinary to certain organs; and it is principally from this circumſtance of inequality in the diſtribution of the blood, and not ſo much from the idea of a general plethora, that cold-bathing ſhould be condemned in corpulent and bloated habits.

People of this deſcription ſhould be very cautious how they make a practice of cold-bathing, though they have at different times eſcaped with impunity, as the rupture of a blood-veſſel in the head or lungs is always to be dreaded; and the probability of

ſuch

ſuch an event taking place ſhould never be loſt ſight of.

Mal-conformation of the Cheſt.—Many perſons afflicted with aſthma have their cheſts ſo narrow and contracted, as might lead to an opinion of the diſorder originating in ſuch a formation. Whether this be the caſe or no, the fact is, that a plethora in the lungs may be often the conſequence of this deformity; and the greateſt danger to be apprehended in ſuch a caſe, is the rupture of ſome blood-veſſel in the lungs, from the change that takes place in the circulation during the time of bathing. A conſtant and uniform effect of cold water on the human body, is a languid circulation of the blood at the ſurface, and a proportional increaſe of this fluid in the internal parts, ſo that we can eaſily conceive how an aſthmatic, with a cheſt ſo deformed as to give riſe

to a plethora *ad ſpatium* in the lungs, may be attacked with ſpitting of blood from bathing in cold water. To obviate ſuch an event, blood-letting may be employed, if it can be done with ſafety; the ſtomach and bowels be emptied, and, perhaps, a bliſter applied to the cheſt, as a topical evacuation in this caſe may be more effectual in removing the plethora than a general one, which acts on the ſyſtem at large. Particular care ſhould be taken to have the ſtomach empty in this variety of aſthma previous to bathing, as any fullneſs or diſtention of this organ, by preſſing on the diaphragm, muſt impede the expanſion of the lungs, and in this manner co-operate with the water in bringing on a diſcharge of blood.

Dropſy of the Cheſt.—It is poſſible that in an early ſtage we may find this diſorder complicated

complicated with aſthma. In general, however, we muſt look for ſuch a combination at an advanced period of the diſeaſe when its long continuance, and the injury offered to the lungs by its frequent repetition, will in a great meaſure account for the preſence of water in the cheſt. The characteriſtic ſymptoms of water in the cheſt are on many occaſions ſo very obſcure, that the moſt diſcerning phyſician may be miſtaken in his diagnoſtics: but when the ſymptoms of this diſorder, as deſcribed by medical writers in general, ſupervene an aſthma of any long ſtanding, there can then be no doubt of its exiſtence. Even though we ſhould not be able to form a deciſive opinion about the nature of this complaint, no bad conſequence can poſſibly follow, as the reigning ſymptoms will fully point out the danger that muſt attend cold-bathing in ſuch a ſituation.

Difficult breathing.—Though ſome obſervations have been made on this ſubject already, it is neceſſary to give it a more ample diſcuſſion in this place, as will appear by what follows:

As the greateſt expectations are to be entertained from cold-bathing when the breathing is free and natural in the intervals of the paroxyſms, ſo the more it deviates from this ſtate, and takes on the form of uninterrupted difficult breathing, the more dangerous is the bath, and the more cautious we ſhould be in making uſe of it. But if cold-bathing be confined to that form of aſthma wherein the breathing is perfectly free when the fit paſſes off, we will, in the greater number of caſes, be deprived of any benefit that may ariſe from it. That it may be more generally employed, and even extended to aſthmatics with uneaſy breathing, appears very clearly from the ſucceſs that attended

tended the practice in ſimilar caſes; for in moſt of the patients on whom the experiment was made, the breathing was more or leſs affected in the intervals of the fits.

Much diſcernment, however, is neceſſary for aſcertaining the particular caſes to which cold-bathing is applicable. In every inſtance where we can trace the affection of the breathing to plethora, tubercles, or obſtructions of any kind, cold-bathing (as we noticed before) would be abſolutely pernicious: it is in ſuch caſes only where the breathing is hurt by a ſpaſmodic affection, that it can be ventured upon with any degree of ſafety. To diſtinguiſh the one from the other, it will be neceſſary to attend to the following particulars:

The breathing in the former is generally difficult, oppreſſed, and readily hurried by any exertion that accelerates the motion of the blood through the lungs. In the latter,

the

the patient complains of a ſtricture at the ſternum, with a ſenſe of weight preſſing on the cheſt, and impeding the free expanſion of the lungs. Together with this, the breathing will be ſometimes found uneaſy and readily hurried by motion, but by no means of ſo violent or permanent a nature as that which attends obſtructions. When obſtructions exiſt, the pulſe is often quick and irregular; while, in the mere ſpaſmodic affection, it is ſeldom quicker than the natural ſtate *. After examining the patient with due attention, if we have any doubts on our mind with reſpect to the origin of the complaint, it may perhaps be uſeful to direct ſome powerful antiſpaſmodic before we proceed any farther. If, during the operation of any medicine of this claſs, the uneaſineſs of breathing and ſtricture at the ſternum be removed, we may, without heſitation, con-

* Vide p. 22.

clude

clude that the affection is truly ſpaſmodic, and on this preſumption recommend the uſe of cold-bathing.

Perſons advanced in years, from the languid ſtate of the circulation, and the diminution of the vital powers, do not, in general, bear with impunity the change of temperature from our atmoſphere to that of cold water. If the event of ſuch a tranſition be dreaded when no diſorder diſcovers itſelf, what evils are we not to apprehend when the aſthma is added to years! What time of life ſhould then be fixed upon as a boundary which we are not to tranſgreſs in directing the bath for aſthmatics? It is impoſſible to determine this point with any degree of certainty. Different conſtitutions at the ſame time of life reſiſt, with ſuch various diverſity of power, the operation of noxious cauſes, that no criterion or ſtandard can be eſtabliſhed for regulating a matter

of

of this kind. The remarkable ſucceſs from cold-bathing in the caſe of Holland, near the age of fifty, demonſtrates that, at ſuch a period, aſthmatics are not to be deprived of this remedy, except ſome diſorder be added to the aſthma, that would, from its nature, abſolutely preclude it.

If we can rely upon the authority of Sir John Floyer, an aſthmatic of ſixty not only eſcaped with impunity, but obtained great benefit from cold-bathing. However, it is much to be dreaded that, at ſuch an advanced period of life as this, the remedy would prove a greater evil than the diſeaſe, not merely from the debility that attends old age, but more eſpecially from this circumſtance, that the aſthma of old people ſeldom appears in a ſimple form, but is generally complicated with obſtructions of the internal parts, or ſuch an affection of the lungs as muſt render cold-bathing highly pernicious.

CHAP.

CHAP. IX.

HAVING pointed out in the preceding chapter the particular varieties or forms of aſthma that admit of cold-bathing, we will now beg leave to offer ſome inſtructions to aſthmatics on the manner of uſing it to advantage.

In every caſe, before the patient attempts to bathe, it will be proper to empty the ſtomach and bowels, in order to give the lungs as much room as poſſible to act; and if he be of a full habit, a ſmall bleeding may, on ſome occaſions, be neceſſary. When any ſtricture is felt at the cheſt affecting the breathing, though no ſigns of obſtruction exiſt, it will, in general, be a

prudent

prudent meaſure to apply a bliſtering plaiſter to this part, and keep it open for a few days. Among the greater number of aſthmatics, very few, I believe, can be found who on firſt expoſing their bodies to the open air, as in the common way of cold-bathing, that are not liable to be affected with cough or catarrh; at leaſt I had an opportunity of ſeeing ſeveral inſtances of this, though the patients were dreſſed and undreſſed with the utmoſt expedition, and received but one or two ſhocks from the water. This ſhould put practitioners on their guard, and render them very cautious how they allow their aſthmatic patients to bathe in open air on the firſt onſet, for an interruption to the bath at beſt will often be the conſequence, by means of a cough or ſome ſlight catarrhal complaint; and if, in ſuch a ſituation, the bathing be continued, thoſe ſalutary effects we were taught to expect will be defeated,

or

or ſomething of a more ſerious nature may happen. It is always an eaſy matter to provide a temporary covered bath; and as our future ſucceſs in a great meaſure depends upon ſuch a preparatory ſtep, it ſhould be eſtabliſhed as a general rule, with hardly an exception, never to omit it *.

After bathing in this manner for ſome time, the ſurface of the body, and of courſe the internal organs, become more and more inſenſible to the action of the external air, till at length the body may be expoſed to it with impunity, as long as is neceſſary for any purpoſe

* In preparing a bath of this ſort, it ſhould be contrived in ſuch a manner as to have it ſtrongly impregnated with ſalt: for, in the generality of caſes, freſh water will not agree with the lungs of aſthmatics. A perſon afflicted with the aſthma was adviſed to go into a cold bath; and as it was imagined that freſh water would anſwer the purpoſe, the patient went into it every morning for the ſpace of a fortnight, without the ſmalleſt benefit; but by adding a large quantity of ſalt to the water, the moſt viſible good effects from it immediately appeared.

intended by the bath. This effect of the cold bath in rendering the ſurface more inſenſible to the operation of cold air, is not one of the leaſt important advantages that attend it: for aſthmatics in general, from this cauſe, are ſo ſubject to coughs and catarrhs, which often terminate in an attack of the aſthma, or ſomething more ſerious, that the utmoſt care and circumſpection, the moſt powerful and approved of remedies, without the aſſiſtance of cold-bathing, will not be ſufficient to guard againſt a relapſe. However, no conſideration of its utility in this way ſhould make us tedious in our after-bathings in open air: the patient, as ſoon as he is undreſſed, ſhould be plunged into the water without the ſmalleſt heſitation, and as quickly taken out, after receiving one or two ſhocks.

In ſome complaints, eſpecially thoſe of infants, for which cold-bathing is deemed

neceſſary,

neceſſary, it has been found uſeful to raiſe the temperature of the water, by adding a certain portion of warm water to the cold, till, by degrees, the body is brought to bear the cold water without any addition. This is done in order to guard againſt any untoward accident that may happen, by ſuddenly removing the patient from a moderately warm to a comparatively cold medium. In no diſorder whatſoever does this precaution about cold-bathing appear more requiſite than in the aſthma; for, independently of the diſordered ſtate of the lungs, the conſtitution of aſthmatics, from the change that has been wrought in it, will not probably bear with impunity ſuch a ſudden tranſition.

After the body is ſufficiently prepared according to the foregoing directions, ſea-bathing, if the ſeaſon offer, ſhould be directed, as the re-action after it is more perfect than after freſh water, as it ſtimulates more

powerfully the veſſels of the ſkin, and thus promotes a glow at the ſurface, and an increaſe of the inſenſible perſpiration. But the time uſually ſpent in ſea-bathing may not, in general, be of ſufficient duration to accompliſh a radical cure, and of courſe prevent a relapſe from taking place; ſo that it will often be neceſſary to make uſe of an artificial ſalt-bath as a ſuccedaneum, which can be reſorted to in the winter, and continued during the whole ſeaſon.

Having thus acquitted myſelf as well as I was able on the ſubject of cold-bathing in aſthma, before I conclude this Treatiſe, ſome apology may appear neceſſary for recommending ſo free and extenſive an application of this remedy. Thoſe who have not had proper opportunities of making obſervations on it, may be apt to condemn a practice which, from reaſoning *a priori*,

would not only appear abſurd in itſelf, but fraught on many occaſions with the moſt imminent danger. However, it is but fair that they ſhould ſuſpend their judgment till the teſt of experiment enable them to decide with preciſion. Unwilling to obtrude any remedy on the Public, without the moſt convincing proofs in its favour, I deſire no co-incidence of opinion, no approbation, except what candour will extort from every practitioner who draws his information from the ſame ſource that I draw mine.

F I N I S.