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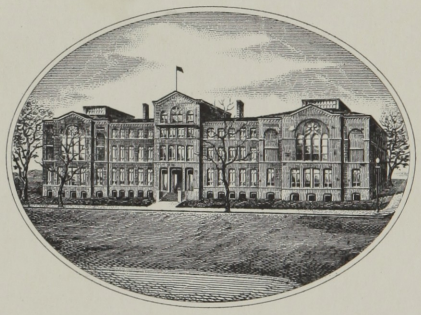

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U. S. Department of Health, Education, and Welfare

Public Health Service

A N

E S S A Y

ON THE

NATURE AND CURE

OF THE

PHTHISIS PULMONALIS:

OR,

CONSUMPTION OF THE LUNGS.

QUOD SI MALI PLUS EST, ET VERA PHTHISIS EST, INTER INITIA PROTINUS OCCURRERE NECESSARIUM EST; NEQUE FACILE ENIM HIC MORBUS, CUM INVETERAVERIT, EVINCITUR.

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BY T. REID, M. D.

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INTRODUCTION.

CONSUMPTIONS of the lungs is a diſeaſe, that has been conſidered, as peculiarly endemical to the inhabitants of this country. Whether occaſioned by the infinite variety, and ſudden tranſitions of the climate, by our inſular ſituation, or manner of living, is not eaſily determined. Where a diſeaſe occurs ſo frequently *, that few families are without melancholy inſtances of its ravages, it might reaſonably be expected, that ſomething more than a palliative method of treatment, would have been diſcovered. But I fear it is an inconteſtable truth, that when it is confirmed, a perfect recovery ſeldom takes place.

The

* In the London bills of mortality, the number ſaid to die of conſumptions, is generally between four and five thouſand annually; excluſive of thoſe that are not buried in parochial church-yards, and in every other part of the kingdom. Though the manner of forming theſe regiſters is liable to ſuch uncertainty, as calls loudly for reformation; and the term Conſumption is applied to many different diſeaſes; yet it will ſerve to demonſtrate, that a great number yearly periſh of this diſeaſe.

The authors who have written upon affections of the lungs, are numerous and reſpectable; each propoſing a method of cure, according to his idea of the cauſe, from which the complaint originates in the conſtitution. Theſe opinions have been ſo various, and ſo different from one another, that ſometimes they appear more like the ſportings of the imagination, than learned and ſcientific enquiries. One author accounts for the hectic fever*, by ſuppoſing the ſtrength of the muſcles to be reduced faſter, than that of the heart; and therefore nothing more is neceſſary for its cure, than diminiſhing the one, and increaſing the other. Some others imagine it proceeds from animacula in the lungs, and recommend mercury and ſteel†. But ſince the publication of the Phthiſiologia by the learned Morton, the general opinion has been, that the hectic fever, and ſubſequent diarrhœa, were cauſed by the purulent matter in the lungs being abſorbed, and carried into the circulating fluids; and hence they have been termed putrid. This hypotheſis has been adopted by the lateſt authors upon the ſubject, and I believe is received by the moſt eminent phyſicians of the preſent age. Though the practice founded upon the theory of putrefaction, is in ſome meaſure given up; yet the impreſſion is not, by any means, perfectly

* Robinſon.

† Marten, Default, &c.

fectly removed; and the diſeaſe continues not leſs fatal, than it was formerly. How far the method, recommended in the following pages, may tend to remove this reflection from the profeſſion, time only, and the experience of thoſe who ſhall make trial of it, will determine.

In the courſe of near twenty years practice, in ſome degree extenſive; and, from particular reaſons, having directed my attention in a ſpecial manner to complaints of the breaſt, I have had frequent opportunities of viewing the progreſs of Phthiſis through all its ſtages, in every ſex and age. And having obſerved with great regret, the inefficacy of the means uſually employed in its cure, I have ventured, with great diffidence and reſpect, to lay before the public a method, I have for ſome years found more ſucceſsful.

In my attendance upon the ſick, maturely reflecting on the various ſymptoms, and changes that take place in different periods of the diſeaſe, I have long been convinced, that the commonly-received opinion of abſorption of matter from the lungs, and of that matter being acrid and putrid, has been too implicitly followed; and when inveſtigated attentively, will be found to reſt upon principles, that do not exiſt in the animal œconomy. However bold and deciſive this aſſertion may appear, I truſt, when I have adduced my reaſons in ſupport of it, they will not only explain the origin of the hectic fever and

and diarrhœa accompanying Phthiſis Pulmonalis, in a manner more ſatisfactory and conſonant to what we know of the human body, than has hitherto been done; but at the ſame time equally abſolve me from the imputation of temerity, or preſumption.

The mode of treatment I ſhall recommend, is founded upon experience; and is what has proved effectual in thoſe periods of the diſeaſe, that are attempted to be pointed out with preciſion. To do this with greater exactneſs, it may be thought, ſome inſtances of the diſorder being cured ſhould be related. But when it is conſidered, with what eaſe caſes may be drawn up to ſuit any theory; and that they muſt reſt upon the ſame ground of veracity with the other parts of the work, they will be found evidences not deſerving much credit.

Excuſes and apologies from young authors, are become ſo common, that they have loſt their deſigned effect: perhaps, they do not always convey an idea of ſelf-diffidence. The following Eſſay is publiſhed with a deſire to improve the manner of treating a dangerous, and too often iucurable diſeaſe. If it ſhould in any reſpect anſwer that purpoſe, or ſuggeſt hints to thoſe of greater abilities, apologies will be unneceſſary. If that ſhould not be the caſe, it will meet with deſerved contempt, and ſink into oblivion, with numbers that have gone before it.

In

In an age like this, of philoſophical enquiry, in which the human mind is daily enlightened by the rays of knowledge, I doubt not, but any attempt, however weak, to promote a ſcience ſo eſſentially neceſſary to mankind, will be received with liberality, and judged with candor.

NEWMAN-STREET,
NOV. 20, 1782.

CON-

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ESSAY

ON THE

PHTHISIS PULMONALIS.

CHAPTER I.

IT is not my intention, to enter into a minute deſcription of every particular ſymptom, and prediſpoſing cauſe of a conſumption. They are numerous and uncertain, and may be found with much greater accuracy, in almoſt every author who has written upon the ſubject. I propoſe taking a ſuccinct view of the general ſymptoms, and progreſs of the diſeaſe. To conſider the moſt common cauſes, and the uſual means that have been attempted in the cure. And then to offer ſuch obſervations, as have occurred in my attendance on the ſick.

Conſumptions ariſing from various cauſes, have been differently denominated, Symptomatic, Scrophulous, Scorbutic, Aſtmatic, Hepatic, &c. *. I mean to confine my enquiries to the true Phthiſis Pulmonalis, or Conſumption of the Lungs, preceded by tubercles.

* Morton, Phthiſiologia, Lib. 3.

I would define the Phthiſis Pulmonalis to be, an expectoration of purulent matter from the lungs, by means of frequent coughing; attended with a fever, having morning ſweats, and remiſſions in the forenoon: occaſioning a waſting of the fleſh and ſtrength.

This diſeaſe uſually attacks people of a delicate, weak, tender conſtitution; and, as ſuch habits of body are peculiar to certain families; in ſuch caſes, it may with ſome truth termed an hereditary diſeaſe; but not in the ſame degree as the Scrophula, Lepra, &c. It appears in perſons of every age; but moſt commonly from fifteen, or about puberty, to thirty-five. But children have been born with violent coughs, emaciated, and have died in the month, evidently of a confirmed Phthiſis.

Young people who have grown faſt *, who are tall, thin, narrow-cheſted, of a delicate complexion, and clear ſkin, are moſt obnoxious to it. The projection of the ſcapulæ, commonly mentioned by authors as reſembling wings, is occaſioned by the narrowneſs of the thorax, the ſhoulders thereby, being brought farther forward; and ſhould not be conſidered as a ſymptom, but the effect of a pre-diſpoſing conformation. An ingenious author † has ſaid, the whiteneſs and tranſparency of the teeth is "the di-"ſtinguiſhing characteriſtic, or a pre-diſpoſition to "it." I muſt confeſs, though I have obſerved this circumſtance in ſome caſes, it has occurred very ſeldom; and in many patients I have attended, was entirely

* "Adoleſcentes, qui pectoris et corporis ferè totius muſ-"culos graciles, tenues, et laxos habent, ut pluriùm in tabem "delabuntur."

Clift, Wintringham, Bar. Com. §. 28.

† Dr. Fort Symmons, New Method of treating Conſumptions, p. 13.

entirely abſent. How far a particular ſymptom can be, at the ſame time, the characteriſtic of the genuine diſeaſe, and of a pre-diſpoſition to that diſeaſe, I ſhall not pretend to determine * ; but conſidered as a diſtinguiſhing character, it appears to me vague, and liable to great uncertainty.

As the great danger in Conſumptions, proceeds from the patients being lulled into a fatal ſecurity, fancying their complaint a common cold, eaſily to be removed by ſimple remedies ; it is of the utmoſt importance, to aſcertain an abſolute criterion of the diſeaſe. For this reaſon, which may induce the author to re-conſider the ſubject, and not from a deſire to criticiſe the works of others, I have noticed this circumſtance.

Whether from their ſedentary life, the ſtructure of their bodies, or ſome other particular cauſe, females are more liable to this diſeaſe than males. We frequently obſerve the moſt beautiful and elegant of the ſex, fall victims to this cruel malady: their minds participating of the delicacy of their bodies ; being, for the moſt part, ſenſible and uncommonly acute in their underſtanding.

The preſent abſurd faſhion of introducing young women early into the world, as it is termed, before their bodies have acquired a proper degree of ſtrength and firmneſs ; and the mode of living among people in genteel and high life, and even in middling ſtations (if any ſuch can be found) is one great cauſe of the frequency of conſumptions : but this will be more particularly conſidered in another place.

The

* " The propenſity to any particular ſtate, muſt ſurely be " ſhort of that ſtate to which it tends, and incapable of giv- " ing that, which it has not itſelf attained."

Dr. Millman on Scurvy, and Put. Dif. p. 57.

The origin of the genuine Phthiſis may generally be traced from Hæmoptyſis, or blood iſſuing from the lungs; from what is termed taking cold; and ſometimes from external injuries. When the diſeaſe has made a certain progreſs, the indication of cure is nearly the ſame, however the ſymptoms may have differed in the incipient ſtate.

A cough more or leſs troubleſome at night, uſually dry, occaſioning pain and ſtitches in the breaſt, ſides, and head; ſlight rigors, and ſome degree of feveriſh heat, with pain in the back, joints, and limbs, are the common effects of taking cold *. This has been by authors reckoned the firſt ſtage of the diſeaſe. The method of treating ſuch complaints is well known: keeping warm, diluting drinks, ſoftening pectorals, gentle aperients, and loſing ſome blood; together with abſtinence, generally removes them in a few days. The learned Sydenham thought the latter injunction ſufficient for the whole †. Indeed, the frequency and facility of removing theſe ſlight indiſpoſitions, render people exceedingly careleſs; and as what can be done at any time, is ſeldom done at all; ſo the remedies which might have ſucceeded in the beginning, are poſtponed till the complaint is too firmly fixed to be removed by their efforts.

The

* "Animadvertendum eſt, effluvia iſta, quæ a ſanguinis "maſsâ per inſenſilem tranſpirationem obligari ſolent, à fri- "gore cutis ſpiracula ſubitò contrahente intrò verti, & in "Pulmones deponi, quos irritando Tuſſim mox excitant."

Sydenham, Tuſſi. Epid. p. 207.

† "Si Tuſſis nondum febrim, atque aliâ ſymptomata, quæ "ut plurimum ſe adjungere ſolere diximus, accerſiverat, ſa- "tis eſſe arbitrabar, ægrum à carnibus & liquoribus Spiritu- "oſis quibuſcunque arcere."

Sydenham, Tuſſ. Epid. An. 1675.

The ſymptoms increaſe: the cough becomes more violent, hard, dry, and inceſſant; reſtleſs nights; the pains in the thorax more lancinating and fixed; the difficulty and quickneſs of breathing conſiderable; expectoration little and frothy; the pulſe quick, hard, and ſometimes like a ſmall cord; at others, full and laborious; the tongue white, and the back part tinged with yellow; the eyes dull; the countenance pale and ſickly. The patient ſtill keeps up; and as it is only a cold, that will eaſily go off, does not think it neceſſary to confine himſelf: perhaps, by the advice of ſome female ſybil, takes ſtrong broth and wine whey, to nouriſh and comfort him.

If the patient happens to be a female, with all the ſpirits, warmth, and inexperience of youth about her; ſhe will wrap herſelf up in the morning, while in the houſe, in what the faſhionable world call an undreſs; but in the evening, whatever may be the ſtate of the weather in this drizzling climate, ſhe is then half naked (being dreſſed) alternately expoſed to the chilling damps of the cold night air, and the heated atmoſphere of a drawing-room, loaded with the various exhaltations ariſing from a crowded aſſembly. We are not then to be ſurpriſed at the rapid and unexpected progreſs which the diſeaſe makes in ſuch caſes.

I have always thought it a matter of great importance, and ſome difficulty, to determine when complaints of the thorax may with propriety be termed a conſumption.

A cough with pain in the cheſt and feveriſh heat, though it may become, cannot be termed the firſt ſtage of the diſeaſe; becauſe we know theſe ſymptoms may be eaſily removed. The frequent application of the term Conſumption to ſuch complaints, has been the cauſe of much evil to thoſe really under the diſeaſe; as by truſting to remedies, that have in

ſuch

ſuch caſes been found effectual, they have been paſt recovery before they apprehended themſelves in danger.

The ſymptoms I have enumerated, may properly be ſaid to tend to a conſumption, if not ſpeedily removed; and as the hard dry cough and dyſpnœa, indicate the exiſtence of tubercles, however ſmall; it may be called the inflammatory or firſt period.

In a ſhort time the fever becomes more intenſe, with ſlight remiſſions in the morning; when a ſweat breaks out upon the breaſt and upper parts of the body, which ſenſibly relieves every ſymptom. The cough continues, and is aggravated in a recumbent poſture, keeping the patient from ſleep till towards morning. The expectoration increaſes in quantity, is frothy, ſometimes ſtreaked with blood. During the fever, the cheeks ſeem painted with a circumſcribed ſpot of pure florid red; the lips, and tubercles in the canthus of the eyes, are alſo brighter than when in health. The fever is augmented after eating, particularly ſolids, with fluſhing in the face, and burning heat in the palms of the hands, and ſoles of the feet.

As the diſeaſe advances, the fever comes on about the middle of the day, increaſes till evening, and is violent moſt part of the night, till the ſweat breaks out, and the patient gets ſome reſt. In the morning they find themſelves relieved; but get up languid, pale, and unrefreſhed by their ſleep. Though the pulſe is always quicker than natural, yet there is a remiſſion of the fever for ſome hours in the forenoon. The expectoration becomes more copious, mixed with pus in ſmall globular maſſes; ſometimes diſagreeable to the taſte; yellow, greeniſh, and, as the diſeaſe advances, of an aſh-colour. The cough becomes leſs hard and looſe; the pains in the cheſt and head abate, which feeds that deluſive hope, by which

which the patient is ſupported through every ſtage of this diſtreſſing diſeaſe; never giving up the expectation of a cure, and always thinking themſelves better. They are particularly ingenious in accounting for every acceſſion of fever, or increaſe of any other ſymptom; and as readily attribute their remiſſion to the effects of ſome remedy which they have taken by the advice of their phyſician, or their friends: for in this diſeaſe, every one who viſits them knows a certain and efficacious remedy.

At this period, when the hectic fever has regular remiſſions, when the ſweats come on every morning, and when the patient ſpits up matter freely, I am diſpoſed to think the diſeaſe confirmed.

The countenance now gives evident ſigns of waſting, the eyes are hollow and languid, the cheeks prominent, the noſe ſharp; their fleſh wears away, and their ſtrength fails them; the cough is more diſtreſſing in the firſt part of the night; the breathing ſhort, quick, and offenſive; their ſleep leſs, and diſturbed; morning ſweats more profuſe and melting; the interval from fever leſs diſtinct. The ſpitting is more loaded with matter, brought up more eaſily, and in greater quantity, ſometimes a pint in twenty-four hours.

This I reckon the ſecond period of the diſeaſe; while there ſtill remains ſome degree of ſtrength, and the ſtomach is capable of digeſting food. From the beginning the body is diſpoſed to be coſtive, particularly after the morning ſweats have taken place. The menſes uſually ceaſe about this time.

The third and laſt act of this domeſtic tragedy, commences by the appearance of the looſeneſs. From being coſtive, they have frequent motions in a day, which ſoon becomes a confirmed diarrhœa; every thing taken into the ſtomach, quickly running off by the bowels. The fever, heat, and cough,

abate

abate of their violence, and the morning ſweats become leſs profuſe. The deluded patient ſtill hopes a favourable event, and really ſuffers leſs than the afflicted parents, who ſee a favourite, perhaps an only child, waſting away before them by an incurable diſeaſe; and full of hope, unconſcious of her danger, rapidly ruſhing to the grave.

The diarrhœa increaſes; the cough, ſpitting, and morning ſweats, diminiſh conſiderably; the fever becomes moderate; their ſtrength totally fails them; they have frequent faintings, ſometimes a ſlight delirium; their lower extremities ſwell; till at laſt, death puts an end to their hopes and ſuffering at the ſame time.

It is not to be ſuppoſed, the ſymptoms keep the regular order in which they are placed here; on the contrary, they vary in almoſt every patient. In ſome the diſeaſe makes a rapid progreſs, and hence termed a Galloping Conſumption. In others, and that the greater number, it is much ſlower. The duration, is in proportion to the youth and ſtrength of the ſick, from ſix months to two years. In ſome caſes, the fever and other ſymptoms, are much more violent than in others, depending upon the habit of body and muſcular ſtrength; and therefore in males the ſymptoms run higher than in the other ſex; and in the latter, the diſeaſe uſually makes a greater progreſs before it is obſerved, frequently beyond the poſſibility of aſſiſtance. Of this I have met with many and melancholy inſtances, and not a few of them at boarding-ſchools; where the governeſs, from a well-meant caution, of not alarming the parents; and conſidering the complaint only as a common cold, neither acquainted them, nor called aſſiſtance till it was too late. Let me therefore caution parents, and all who have the care of young people, not to neglect coughs and affections of the breaſt;

breaſt; leſt by thinking them of no importance, and treating them with greaſy emulſions, and a profuſion of palling ſweets, they ſacrifice that time, which might be employed in purſuing a judicious plan of cure, and ſow the ſeeds of laſting affliction to themſelves.

CHAPTER II.

THE taſk would be difficult, perhaps impoſſible, to account ſatisfactorily for every ſymptom of this diſeaſe. Like many others, its violence and progreſs depending upon circumſtances, which our limited knowledge in the laws and operations of the human body cannot perceive; and on others, with which we are frequently not made acquainted. Violent exerciſe; intemperance in eating, drinking, and the paſſions of the mind; ſudden ſtopping of accuſtomed evacuations, by taking cold liquors when heated; and the effects of cold and moiſture, are among the moſt common cauſes of Phthiſis.

The effect of cold and moiſture, either ſeparately or conjoined, on the human body, has uſually been accounted for, by the ſtoppage of ſenſible or inſenſible perſpiration thereby occaſioned. The ſymptoms which ſucceed, are pains in the limbs, joints, head, and back; ſoreneſs in the throat, with ſlight ſhivering and flushing heat. If theſe ſymptoms were

occaſioned by a retenſion of ſo much perſpirable matter, as would have been diſcharged from the habit, during the time of their continuance; it is reaſonable to ſuppoſe, that by opening the pores, and perſpiring freely, the effects would ceaſe. This, every day's experience evinces is not a fact. The fever and pains frequently increaſe, and continue ſome time; till by evacuations, diluents, and antiphlogiſtic remedies, they are removed. We alſo know, that by the wonderful conformation of our frame, when one ſecretion is diminiſhed, another is proportionably increaſed. In a cold froſty morning, we perſpire leſs, and make more urine. A ſtream of cold air from a door or window, will occaſion a fixed pain in a particular part, without affecting the general habit; as a ſtiff neck, or pain in the ſhoulders. I have ſeen one ſide of the throat ſwelled and inflamed, by a momentary blaſt of cold air, without any other ſymptom ſucceeding. To ſuppoſe a local check to perſpiration, will not reaſonably account for this effect.

Perhaps the exhalent veſſels, that ſecrete the fluid ſerving to moiſten the interſtices of the muſcles, may be ſo affected by cold partially applied; as, inſtead of a clear tranſparent lymph, to ſecrete a fluid ſo viſcid, as not readily to be abſorbed by the lymphatic ſyſtem; and by its remaining ſome time, occaſion that ſtiffneſs and ſoreneſs in the parts, which is conſtantly felt.

I muſt own, I am not perfectly ſatisfied with any theory that has occurred to my mind, upon this ſubject, but leaſt of all with that commonly received; nor am I diſpoſed to enter fully into the queſtion, a diſquiſition of that nature, however connected, not being eſſentially neceſſary to my deſign.

Into every cavity of the body, a great number of exhaling veſſels open; they ſecrete a fluid, which preſerves

preſerves thoſe cavities moiſt and ſmooth; and by lubricating the ſurfaces of the different viſcera, enables them to move on each other without injury. In the lungs, theſe veſſels ſerve a nobler purpoſe; they ſecrete a large quantity of lymph, which is carried off by the air in reſpiration. The apertures of theſe veſſels, from any cauſe exciting inflammation, may be ſo altered, as to excrete a viſcid matter like the ſizy cruſt on blood; with which the cavities, and even the inſide and outſide of the heart have been found lined; and this fluid muſt have the property of coagulating immediately after being ſecreted, otherwiſe, in the heart, the flux of blood muſt have waſhed it off. It is highly probable alſo, that from diſeaſe, theſe veſſels have the power of changing their lymph into pus; as large quantities have been found in cavities of the body, without any appearance of ulceration or abſceſs, from whence it could have proceeded *. The exhaling veſſels in the lungs, having their mouths ſo altered, as to produce this viſcid ſtate of the lymph, a leſs quantity will be ſecreted; and if from the effects of cold and moiſture, the inſenſible perſpiration on the ſurface of the body is obſtructed, and a larger quantity thrown upon the lungs; they will be loaded and oppreſſed; their parenchymatous ſubſtance will become more denſe and inelaſtic; the diameters of the various branches of the pulmonary artery and vein will be leſſened by its preſſure; and conſequently the circulation of the blood through this organ impeded. When the lungs are in this ſtate, the patients will breathe quick, and with difficulty; they will feel pain in different parts of the cheſt, and a general ſoreneſs, and ſenſe of fulneſs, upon a deep inſpiration.

* See Hewſon, on the Lymphatics.

inſpiration. The ramifications of the bronchia * will be lined with this viſcid lymph; which, by irritating their ſenſible coats, will occaſion inflammation and frequent coughing; and we perceive in a recent cold, the matter is expectorated with difficulty, little in quantity, white, viſcid, and taſteleſs. In a ſhort time, as the inflammation and other ſymptoms abate, it changes to a yellow colour †, diſagreeable taſte, and is brought up with eaſe, in greater quantity.

Is it not probable, that ſuch a ſtate of the exhaling veſſels takes place in the whooping-cough; where the fits are violent and continued, till a viſcid glary phlegm is diſcharged? This idea ſeems to be confirmed, by the relief that is experienced, from frequent vomiting and change of air.

If diſeaſe produces ſuch an alteration upon the exhaling veſſels, and viſcidity in the lymph; the ſame cauſe continuing to act, may increaſe that viſcid quality, till it ſhuts up their extremities, and conſtitutes the ſmall granules, every where found in diſeaſed lungs, termed Tubercles. Almoſt every author

* This mucus is ſometimes ſo viſcid, as to fill up the ramifications of the bronchia intirely; and has been coughed up in maſſes exactly correſponding to thoſe cavities, and have been termed Bronchial Polypii. The eminent Dr. Warren has publiſhed a curious caſe of this kind, in the Medical Tranſactions, Vol. 1.

See alſo Philoſ. Tranſ. Ab. Vol. 3. p. 68.

The liquor in the pericardium, has been found jellied to ſuch a degree, as to bear cutting with a knife.
M. du Martell. Ab. Phil. Tranſ. Vol. 3. p. 69.

Other inſtances may be ſeen in Morgagni, Sed. & Cauſ. Morb. Lib. 2. Epiſt. 21. Art. 20.

† The manner of diſtinguiſhing this yellow phlegm from purulent matter, which it ſo nearly reſembles, will be enquired into in Chap. III.

author who has written upon the ſubject, has ſuppoſed them to originate from diſeaſed lymphatic glands; but I have long been of opinion, with a late ingenious anatomiſt *, that there are no lymphatic glands in the ſubſtance of the lungs. It therefore appears reaſonable, to attribute their origin, to obſtructions in the exhaling veſſels; and this opinion will be ſtrengthened, when we deſcribe them more minutely.

CHAPTER III.

TUBERCLES are found, on diſſection of thoſe who have died of this diſeaſe, of all ſizes; from the ſmalleſt granules, to the bigneſs of a horſe-bean, and commonly in cluſters. On cutting into them, they appear of a white ſmooth cartilaginous ſubſtance. In the ſmalleſt, no cavity or opening appears; in thoſe farther advanced, on the cut ſurface we diſcover ſmall pin-holes; in thoſe ſtill larger, are one or more cavities containing a fluid like pus; which being cleared off, in the bottom is perceived ſeveral ſmall openings or holes; through which, on preſſing the tubercle, matter iſſued, ſimilar to that contained in its cavity. The larger tubercles, when emptied of their contents, appear like a ſmall capſula, into which entered a branch of the aſpera-arteria.

When

* Hewſon.

When the tubercles increaſe, they are termed Vomicæ. Theſe are alſo of various ſizes, from half an inch to two or three inches diameter; and are uſually of an oviform. When found entire, their contents are a whitiſh, yellow, aſh-coloured, greeniſh, and ſometimes fœtid matter; and when ruptured, more or leſs reddiſh. Several branches of the aſpera-arteria are found opening into theſe vomicæ; and they alſo communicate with others that lie contiguous: the appertures of the latter, are ragged and irregular; of the former, round and ſmooth.

The larger vomicæ are uſually found empty, but on preſſing the lungs, matter iſſues into the bronchia. The branches of the pulmonary artery and vein running upon the vomicæ, are found much contracted; and ſometimes filled up with a fibrous ſubſtance; their pendulous ends, hanging looſe in the cavities of the vomicæ, completely ſhut up and covered with a thick ſlough. By this wiſe diſpenſation, we ſee the reaſon, why hæmoptoe does not more frequently happen, when ſo great a part of the ſubſtance of the lungs is deſtroyed. And alſo, when it does take place, in what manner the mouths of the bleeding veſſels are ſhut up again.

The parts of the lungs contiguous to the vomicæ are found inflamed, more or leſs ſolid, and impervious to air blown into the trachea; for when the other parts are thus diſtended, they remain depreſſed; nor is air admitted into the vomicæ, or at leaſt in very ſmall quantity.

When the lungs are partially affected, the upper and poſterior parts are always diſeaſed, and the ſound portion is the inferior and anterior. When the affection is general, the ſuperior is the worſt; and the left ſide is generally found more diſeaſed than the right.

Wherever

Wherever tubercles or vomicæ are found, they firmly adhere to the parietes of the lungs near them; by which means a communication between their cavities, and that of the thorax, is entirely prevented*.

We have obſerved, that the exhalent veſſels being affected by diſeaſe in different degrees, are capable of changing their contents, from a pure watery lymph, to a fluid ſo viſcid, as to coagulate immediately on being ſecreted; and alſo to convert that lymph into pus of various qualities; which in its natural ſtate is ſmooth, bland, compoſed of globules reſembling thoſe in milk, and inodorous; but according to the kind of inflammation, may become fœtid, thin, and ſanious; as we find it in phagedenic and cancerous ulcers. If then tubercles are formed by obſtructions in theſe veſſels, by the viſcid ſtate of the lymph; and if pus is produced by ſecretion, and not by fermentation, as has been ſuppoſed; it ſeems probable, that the ſmall pin-holes perceived in the ſubſtance of the tubercles, are the appertures of the exhalent veſſels; and that the pus found in them, and iſſuing out upon preſſure, is the lymph changed into that fluid. "And if pus in theſe "caſes is produced merely by ſecretion, ſo likewiſe "it would ſeem probable, that even in abſceſſes, "where there is a loſs of ſubſtance, it is not the "melting down of the ſolids, that gives riſe to the "pus; but the pus being ſecreted into the cellular "membrane, from its preſſure, and from other "cauſes, deadens the ſolids, and then diſſolves "them; which is confirmed by obſerving, that even "a piece of freſh meat, if put into an ulcer and "covered up, is ſoon deſtroyed or melted down by "the pus, which is thereby rendered more fœtid."

* MS. of the late Dr. Stark.

" tid *." In this manner we can account for the ſubſtance of the tubercles being conſumed by the pus that iſſues into them; and by the continual ſecretion, their ſizes are increaſed, till they burſt into the ramifications of the aſpera-arteria.

As the moſt certain prognoſtic in this diſeaſe, is formed from the quantity and quality of the matter expectorated; it will be neceſſary to conſider with attention, that part of our ſubject.

In the beginning, the matter ſpit up conſiſts only of the mucus lining the trachea, mixed with air-bubbles. As the diſeaſe advances, it gradually changes in quantity, colour, conſiſtence, ſmell, and taſte; and becomes a thick viſcid matter, of an aſh-colour, ſlightly tinged with green, ſometimes with blood; expectorated in ſmall round ſpherical maſſes reſembling pus. It has been ſaid, that matter diſcharged " from a glandular ſuppuration, or eroſions " of the lungs, has commonly a ſweetiſh taſte; and " that from a cyſt is fœtid and diſagreeable†." As we have obſerved that there are no lymphatic glands in the ſubſtance of the lungs, the firſt part of this aſſertion of courſe falls to the ground; and it ſeems probable, that the difference in the quality of the pus, depends upon the ſtate of the inflammation, ſize of the vomicæ, and the time it has been retained.

If pus, or matter, is mixed with water, and ſlightly agitated with a whiſk, it is eaſily diffuſed; and after ſtanding a few hours falls to the bottom of the veſſel. Mucus is with difficulty diffuſed in water, requiring ſtrong agitation, and then forms with it a permanent ropy fluid. When the matter ſpit up by conſumptive patients is agitated in water, it mixes

* Hewſon, on the Lymphatic Syſtem, Ch. 7.

† Gilchriſt on the uſe of Sea Voyages, p. 130.

mixes without difficulty; and on ſtanding a ſhort time, a matter falls to the bottom reſembling pus; and the fluid above remains ropy, reſembling the mucus and water. By this eaſy experiment we can judge, with ſome degree of certainty, whether matter is expectorated, and conſequently to what ſtate the tubercles are arrived*.

There is no abſolute criterion by which we can determine, when tubercles are firſt formed in the lungs. They are to be ſuſpected, when the cough is violent; continued with ſhort intermiſſions, particularly at night; and vilcid phlegm is expectorated with difficulty. But when the cough is accompanied with coldneſs, ſucceeded by fever, and matter ſpit up, which precipitates in water; there is every reaſon to believe vomicæ are compleately formed. A late author, not more eſteemed for his great and extenſive learning, than for his mild and humane diſpoſition, has ſaid, "that as long as the appetite "is good, and the ſleep refreſhing, I do not con- "ceive the diſorder can make any dangerous pro- "greſs. I mention theſe circumſtances, rather than "the abſence of fever, pain, or dyſpnœa, becauſe "theſe ſymptoms, whenever they come on, do "unavoidably affect either the ſleep or appetite†." When the complaint is in ſo early and ſimple a ſtate, I believe the phyſician's aſſiſtance is ſeldom applied for.

* Morgagni Sedibus & Cauſis Morborum, Lib, 2. Ep. 22. Art. 28.
Cullen's Frſt Lines of Practice, Vol. 2. § 818.
C. Darwin's Experiments.
Van Swieten, Comm. Aph. Boerhaave.

† Dr. Samuel Muſgrave, Gulſtonian Lectures, p. 99.

CHAPTER IV.

THE fever attending this diſeaſe is of two kinds. Irregularly periodical, preceded by chillneſs, violent, with burning heat and great thirſt; or continued and generally more moderate, but increaſing towards evening; both kinds being relieved by a ſweat breaking out towards morning. It is always exaſperated after eating, particularly of ſolids; with fluſhing in the face, and burning heat in the palms of the hands and ſoles of the feet.

This fever being ſuppoſed to be occaſioned by the particles of pus in the lungs being abſorbed and carried into the circulation, has by authors been termed a putrid hectic fever*.

That the term Putrid, can ever, with propriety, be applied to the circulating fluids, in any diſeaſe, appears to me extremely doubtful; but even in the common acceptation, it cannot be applied to any period of the Phthiſis Pulmonalis; and I am certain, and have ſeen many melancholy inſtances, that an idea of putridity being taken for granted, a mode of practice has been adopted, that ſo far from curing, has precipitated the patient into the laſt ſtage of the diſeaſe. Of this I ſhall ſpeak more fully when I come to treat of the method of cure.

" If putridity actually took place in the vital " fluids, its firſt effects would be, to break down the " texture

* Morton, Phiſiologia. Martin. Barry. Robinſon. Symmons.

" texture of its parts, as it does that of every other " body; it muſt render it incapable of coagulati- " on*." When we examine the blood drawn from patients in every period of conſumption, we find no ſigns of putrefaction, no ſolution of its contents: on the contrary, the appearances are the very reverſe; a thick buffy ſize and firm craſſamentum. Nor in the progreſs of the diſorder, do we perceive any ſymptoms ſimilar to thoſe found in diſeaſes that are uſually termed putrid; no petechiæ, vibices, ſordes about the teeth, or blood iſſuing from the gums and other parts of the body.

It has alſo been ſaid, that the hectic fever is cauſed by acrimony in the juices, communicated by the abſorption of pus from the lungs.

If by acrimony is meant bitterneſs, ſharpneſs, or particles that by their angular and ſpiculated form, are capable of corroding, and eating away the parts they come in contact with; I muſt own, I do not believe the particles of pus, allowing that they are abſorbed, have any ſuch properties. It has been found in the cavities of the body in large quantities. " The cavities of the pleura, pericardium, &c. are " ſometimes obſerved to contain conſiderable quan- " tities of pus without the leaſt mark of ulceration. " Inſtances of which I have ſeen. In one patient " I found three pints of pure pus in the pericardium, " without any ulcer on that membrane or on the " heart. In another, the cavity of the pleura on " the right ſide was diſtended with a pus that ſmelt " more like whey than a putrid fluid, and the lungs " were compreſſed into a very ſmall compaſs; but " there was no appearance of ulcer or eroſion, either

* Dr. Millman, on the Scurvy and Putrid Fevers, p. 54.

" either on thoſe organs or on the pleura, but only " under the pus was a thin cruſt of coagulable " lymph *." From theſe inſtances, adduced by ſo accurate an obſerver; it ſeemes evident that pus in its natural ſtate is not, at leaſt in the cavities of the body, poſſeſſed of an acrimonious or corroding quality; and if not in a quieſcent ſtate, in large quantities, how much more improbable when circulating in ſmall particles in the maſs of blood? And although it has been obſerved, that a piece of meat put into an ulcer, and covered up, was diſſolved, and the pus thereby become more fœtid; it muſt be remembered that the meat was a dead inert maſs, very diſſimilar from any part of the living body, and therefore ſuſceptible of being acted upon in a very different manner. The ſubſtance of the tubercles, and the parenchymatous ſubſtance of the lungs, when compreſſed and indurated ſo as not to admit the air in reſpiration, or the blood to circulate; come near to the condition of the piece of meat; and are accordingly diſſolved by the pus. If this reaſoning is founded upon fact, it would ſeem, that the living principle muſt be deſtroyed in any part of the body, before it is capable of being converted † into pus.

To the taſte pus gives no ſigns of acrimony, but is ſoft, bland, and inoffenſive: when external tumours are opened, if there is no diſeaſe in the habit

* Hewſon, on the Lymphatic Syſtem, p. 117.

† We are very ſenſible that pus is ſecreted from mucous membranes when inflamed, and which proceeds from the exhalent veſſels being acted upon as we have mentioned above; here it is pus contained in abſceſſes which is meant.

habit, the pain and inflammation abate, and there appears no effect of acrimony.

In ſome caſes of compound fracture lately publiſhed *, that were treated in a new and judicious manner; where the limb was rolled up, and the external air excluded, by frequently pouring on the bandage balſm: traum: and not opened till after ſeventeen days; when the dreſſing was removed, a ſpoonful of pure pus was found in the wound, and the granulations of new fleſh under it perfectly ſound, and free from every appearance of ſharpneſs or acrimony.

Far be from me to criticiſe the works of others, the intelligent reader will ſoon be convinced how unfit I am for ſo diſagreeable an employment; but I have dwelt longer on this part of my ſubject, becauſe I know the idea of putrefaction has led to a mode of practice, replete with dangerous conſequences. It has been too much the cuſtom to make uſe of general terms, without appropriating to them any diſtinct and determinate ſignification; ſuch for inſtance are putrid, acrimonious, nervous, and many others that might be mentioned.

From theſe conſiderations, I am diſpoſed to believe, that there is no perceivable acrimony in the matter expectorated by perſons in a conſumption; and if we may judge from analogy, what the ſurgeons term laudable matter, is a bland, ſmooth, white or yellow viſcid fluid; of the conſiſtence of cream, and void of acrimony or putrefaction; that the abſorption of pus from the lungs of thoſe in a conſumption is not the cauſe of the hectic fever; and that in the common acceptation of the term Putrid, it cannot with any propriety of language be applied

* Mudge, on the Catarrh.

applied to the hectic fever. As a confirmation of this assertion, I will just observe, that the remedies found most beneficial in those fevers termed putrid, as bark, snake-root, volatiles, cordials, &c. have been fatally found highly prejudicial in the pulmonary hectic. And in the secondary fever after the small-pox, which is usually attributed to the absorption of matter, and hence also termed putrid; were a physician, instead of evacuations, to depend upon antiseptics, he would find his error when it was too late.

CHAPTER V.

TO enumerate all the authors who have maintained that the hectic fever attending consumption of the lungs, originates from the absorption of pus, would swell this work beyond any reasonable bounds, and take up the reader's time to little purpose. But it is rather surprising, this opinion should have been implicitly adopted, without ever enquiring whether the fact was so or not; for I do not remember seeing an attempt to prove it by reason or argument. As I consider it of the utmost importance in the cure of this disease, to remove every idea of putridity; I shall take the liberty of considering this subject, divested of the venerable garb it has acquired from antiquity.

It

It is an axiom I believe will not be disputed, that similar causes will always produce similar effects.

If the fever attending consumption of the lungs, were caused by pus being absorbed, and carried into the circulation, a fever of the same kind would take place from the absorption of pus in other diseases. The contrary is known to every practitioner.

In an abscess of the liver or psoas muscle, the fever is continued, without regular remissions and morning sweats. If it is alledged, that the pus in these cases is of a different quality; I answer, that in its simple natural state, pus in all cases, is nearly the same, that is, what the surgeons term laudable matter; but as the strength and tone of the muscular fibre declines, and the disease advances, its quality is changed; and that in the Phthisis Pulmonalis, the purulent matter spit up, is of different colours and consistence, according to the period of the disease.

In recent affections of the lungs, when their substance is inflamed, and tubercles are formed, but not suppurated; the fever is continued, and similar to that attending inflammations of the pleura and other parts of the body. When the lungs become more diseased, their substance obstructed and indurated, so as not to be previous to the air in respiration; the fever changes its type; has remissions in the forenoon, and exacerbations in the evening, terminating by sweat on the breast and upper parts of the body towards morning. If the hectic fever was occasioned by the acrimony of pus absorbed from the diseased lungs, from whence does it proceed before the tubercles are suppurated, or any pus formed in the lungs?

Was

Was the hectic fever owing to abſorption of pus; it might reaſonably be expected, that when a large quantity is excreted into any cavity of the body, as we have before obſerved, part of it would be taken up by the abſorbent veſſels; and being mixed with the maſs of blood, produce a fever of the hectic kind; that is, with remiſſions, morning ſweats, and waſting of the body, which I eſteem the characteriſtic ſigns of the pulmonary hectic; but this alſo is contradicted by experience.

In the compound fracture before mentioned, when the matter was confined in the wound ſeventeen days, no mention is made of any fever being preſent.

In abſceſſes on external parts of the body, where a great diſcharge of matter takes place; and in amputations of the lower extremities, where a large ſurface is conſtantly covered with pus; the ſymptomatic fever, however violent, has not the moſt diſtant affinity with the pulmonary hectic.

I remember in a very uncommon caſe of a fractured ſkull, occaſioned by the wheel of a loaded waggon paſſing over the head; where the whole ſcalp of the right ſide was torn from the bone; the wound was large, with great loſs of ſubſtance. It happened in the end of July, when the weather was exceedingly hot. The ſymptomatic fever was conſiderable; and from the heat of the weather, and the patients particular ſituation, he had two attacks of fever in the Auguſt following, truly inflammatory and continued. The diſcharge from the wound was very great; varying according to the ſtate of his health. It might have been expected, conſidering every circumſtance, that had abſorption of pus been a common proceſs of nature, it would have taken place here; but no ſymptoms of hectic appeared.

peared. In ten weeks from the accident, the wound was healed, and the patient in perfect health.

From weighing these circumstances, is it fair to conclude; that if ever pus is carried by the absorbent system into the mass of circulating fluids, that it produces a fever of the continued kind, differing in essential points from the pulmonary hectic; and that this last is a fever sui generis, arising from a cause peculiar to itself?

When the venereal virus is absorbed by the lymphatics, it stops in the glands of the groin, and produces a bubo; when matter is absorbed from issues, or ulcers on the legs, it does the same. Some small glands about the inferior costa scapulæ swelled by the absorption of matter from a blister on the back*. When by an accidental wound or scratch on the fingers venereal matter has been absorbed, the glands in the axilla swell and become painful. The same happens in cases of cancer in the breast; and milk stagnating in the breasts, occasions the same affection. In the inoculation for the small-pox, the glands in the axilla of the arm where the matter was inserted, swell and grow painful before any fever takes place in the constitution. In short, wherever matter is absorbed by the lymphatics, it generally stops in some lymphatic gland, in its passage to the thoracic duct, the common receptacle of the chyle and lymph.

"The lymphatics of the lungs are in two sets, "one of which passes in the posterior part of each "lobe by its root into the thoracic duct near the "middle of the thorax, and the other set passes "from the fore part of each lobe up towards the "jugular and subclavian vein. Some of the lym-"phatics on the posterior part of the left lobe pass

* Hewson on the Lymphatics.

" under the aorta to get to the thoracic duct *." If matter were abſorbed by theſe veſſels from the lungs, particularly by thoſe paſſing from the upper part, which is firſt diſeaſed; is it not probable it would ſtop in the lymphatic glands about the clavicles; and that ſwellings there would be a conſtant attendant upon the diſeaſe? whereas, except in ſcrophulous habits, theſe glands are ſeldom affected.

A late ingenious young phyſician †, indefatigable in medical enquiries, in opening the body to examine the thorax, happened to ſcratch his fingers in ſeveral places, with the broken ends of the ribs; the next day he opened a body, that had ſome ſymptoms of the venereal diſeaſe; in conſequence of the abſorption of matter from one or both of theſe bodies, he had troubleſome ſores on his fingers for ſome time, and afterwards glandular ſwellings on the back of his hands, arm-pits, and under the lower jaw. Thoſe on the hands and under the jaw, were frequently cut off, and as often grew up again, and the others reſiſted every application for two years. During the whole time his general health was not otherwiſe affected, than by the medicines he uſed to remove ſo troubleſome a complaint.

In low fevers that are commonly termed putrid, I have frequently met with ſwellings in the glands of the groin, which I was certain did not proceed from a venereal cauſe. Perhaps the buboes in the plague, and other peſtilential diſeaſes, are produced in a ſimilar manner.

From the inſtances which have been adduced, is it reaſonable to conclude; that where matter, or offending miaſmata, are taken up by the lymphatic ſyſtem,

* Hewſon on the Lymphatics, p. 203.

† Dr. Stark.

ſyſtem, ſuch particles generally infect ſome lymphatic glands which are ſituated between the place of abſorption, and the thoracic duct; and therefore, as we do not uſually find ſwellings of the lymphatic glands, ſituated in the neck about the clavicles, accompanying conſumption of the lungs and hectic fever; the lymphatics of the lungs do not abſorb pus or purulent matter in that diſeaſe?

It has been obſerved, that the fluid ſecreted by the exhalent veſſels into the cavities of the body (thoſe of the brain excepted) and the fluid contained in the lymphatic veſſels, are in every reſpect ſimilar; both jellying when expoſed to the air in the ſame given time; and both acted upon in the ſame manner and degree by diſeaſe. The fluid that is exhaled from the lungs in the act of reſpiration, agrees with the contents of the lymphatic veſſels, in no reſpect but clearneſs and thinneſs; for it never jellies when expoſed to the air, and is always of the ſame conſiſtence; varying only in quantity according to the heat of the body, or diſpoſition of the atmoſphere.

As a large quantity of this fluid is dicharged during reſpiration; are we to conclude, that either it is excreted into the air-veſicles of the lungs by a particular ſyſtem of veſſels; or that the lymphatics entering the ſubſtance of the lungs (if that is a fact, of which I have ſome doubt) do not act as abſorbents?

The more we carry our reſearches into the ſtructure of the human body, the more we are convinced that every part is deſigned, by the infinitely wiſe Contriver, to ſerve ſome determined and diſtinct purpoſe; and which cannot ſo properly be performed by any other. As the fluid ſecreted into the air-veſicles of the lungs, is deſigned to be expelled the body

body by means of the atmoſphere in the act of reſpiration. which is continued without intermiſſion during life; it does not ſeem neceſſary that any ſyſtem of veſſels ſhould be adapted for re-conveying it into the circulating fluids, from whence it had juſt been ſecreted.

CHAPTER VI.

HAVING in the two former chapters endeavoured to prove, that the hectic fever attending on pulmonary conſumptions, was not occaſioned by the action of acrid particles, abſorbed from pus in the lungs, upon the mas of circulating fluids. I ſhall now, with the reader's indulgence, proceed to lay before him, what I imagine to be the true cauſe of that fever. How far this theory, which I believe is perfectly new, may be found conſiſtent with juſt pathological reaſoning, becomes not me to determine. I ſhall deliver my ſentiments, with as much clearneſs and brevity as the ſubject will admit.

It has been computed that a greater quantity of perſpirable matter is diſcharged by the lungs, than by the whole ſurface of the body *. The inſenſible perſpiration

* "But taking the whole year round, the perſpiration, "made by the skin and lungs, exceeds their abſorption by "about

perſpiration paſſes off from the pores of the ſkin, without our being conſcious of it; but when any increaſe of that diſcharge takes place, either by exerciſe, warmth, drinking warm liquors, or taking ſudorific, and therefore heatning, medicines, the pulſe is always accelerated, and a temporary fever precedes.

When the lungs, from inflammation, or the formation of tubercles and vomicæ, are rendered in part

" about forty ounces a day in Great-Britain; which, though " it has been commonly reckoned the total of the perſpirati- " on, is really no more than its exceſs above the quantity of " fluid taken in by the abſorbent veins of the skin, fauces, " and lungs."

Whytt, Motion of the Fluids, p. 250, 4^to^ ed.

" When we endeavour to expire with all our power, the " whole ſurface of the veſicles of the lungs may ſuſtain a preſ- " ſure equal to 420 pound weight."

Whytt, on Vital Motion, p. 41.

Dr. Hales (Hæmeſt. vol. 2.) ſuppoſes the ſum of the areas of the veſicles of the lungs to be equal to 150 ſquare feet, which is infinitely more than the ſurface of the body; that being eſtimated at only 15 ſquare feet. He ſuppoſes two gallons of air, breathed to and fro for two minutes and a half, becomes unfit for reſpiration. That quantity is equal to 522 cubic inches. In the two minutes and a half he breathed fifty times; and found the moiſture conveyed from his lungs in that time to be equal to ſeventeen grains; which in twenty-four hours amounts to twenty ounces, three drachms, and twelve grains. But this muſt vary according to the quickneſs of the circulation and the condition of the atmoſphere, being more or leſs capable of diſſolving moiſture. For, according to Profeſſor Hamilton, in his Phil. Eſſays, the common atmoſphere has the property of diſſolving moiſture in the ſame manner as water diſſolves ſugar and ſalt; that it diſſolves moſt when in action, and when ſo diſſolved the clearneſs of the air depends upon its warmth; for cold will precipitate it again in the form of vapor or miſt, as may be proved by breathing in a warm room, and in the froſty air; in the latter the breath is viſible, in the former it is not.

part impervious to the air in inſpiration; the uſual quantity of fluid cannot be carried off by the action of reſpiration; the quantity ſo retained will remain in the habit, till excreted by ſome other emunctory. That quantity of fluid ſo retained in the habit, I conceive to be the great and principal cauſe of the hectic fever, which invaribly abates, as ſoon as it is diſcharged by the pores of the ſkin: and as the impediment to its exit by the lungs continues; ſo the fever is daily renewed, that the conſtitution may be relieved from its accumulated burthen. As the lungs become more and more unfit for exhaling the uſual quantity of lymph, we find the morning ſweats proportionably increaſed, and the exacerbations of the fever more violent; till towards the cloſe of the diſeaſe, when the patient's ſtrength is ſo exhauſted, and the muſcular force, and action of the veſſels ſo much weakened, as probably to be unable to produce, ſuch a degree of fever as is neceſſary to force the fluid through the pores of the ſkin; it falls upon the inteſtines, and produces a diarrhœa. From being uſually coſtive, the patient has frequent motions in a day; till in a ſhort time the purging becomes confirmed: we then find the fever and ſweating conſiderably diminiſhed, and the expectoration of purulent matter in leſs quantity.

The ſpitting abating, as the diarrhœa advances, ſeems rather to proceed from the greateſt part of the ſubſtance of the lungs being diſſolved, than from the pus being abſorbed, and running off by the bowels; add to this, that in the latter period of the diſorder the patient has ſcarcely ſufficient ſtrength to cough it up.

In thoſe who have died of this diſeaſe, the portion of the lungs remaining pervious to the air is ſo

ſmall,

ſmall, as not to exceed a fourth part of their ſubſtance *.

We have obſerved that the fever abates upon the breaking out of the morning ſweat; yet a certain quickneſs of the pulſe continues even in the intervals; probably occaſioned by the progreſſive inflammation of one ſet of tubercles after another; of this the patient is ſenſible by the pain and ſoreneſs, particularly on every full inſpiration, and even motion of the thorax.

"The principal uſe of reſpiration," according to the opinion of a learned and ingenious author, "is

* "Et quæ mirabilior eſt Marcij Gerbezij, qui eundem pul-
"monem dexterum totum, una cum aſpera arteria præ putri-
"dine in pultem collapſum, deprehendit. Et quanquam Jo.
"Tackius ita vidit plane corruptum, ut latus dexteram pul-
"mone deſtitutum fuiſſe, ſcripſerit: majori temen admiratione
"afficeret Cl. Ritterus junior qui in ſiniſtro latere alba puru-
"lenta materia ad medium uſque repleto tradit, pulmonis il-
"lius, qui totus fere erat conſumptus, oſcula vaſorum fuiſſe
"aperta; niſi Celeberr. Anatomicus Hallerus confirmaret,
"multum aquæ, ſubfœtidæ, albuminis inſtar viſcidæ, often-
"diſſe, in eaque arteriam aſperam, et vaſa majora arterioſa,
"et venoſa quaſi refecta, patulo fine hiantia, ut ſanguinis ef-
"fluxum quid moraretur, ægerrime invenires. Nam Platerus
"qui non ſemel in Phthiſicis nihil penitus de pulmonibus al-
"terius lateris ſuperfuiſſe, deprehenderat, callo ſaltem aliquo
"vaſa cordis quæ illuc pertinebant, et arteriæ ramos obturata
"conſpexit, quemadmodum in hac 7^ma Sepulchreti ectione
"leges. Sic Columbus inveni, inquit, partem thoracis pulmone
"deſtitui, hoceſt, minimam pulmonis portionem adeſſe: quod
"vero reliquum erat cavitatis, ab aqueo humore occupabatur.
"Sic alias quoque Valſalva, cujus alibi proferetur obſervatio,
"nullum primo aſpectu eſſe credidit pulmonem; adeo ſub-
"multo humore contractus erat! Sic, ne longior ſim; laudatus
"Hallerus in hydrope pectoris pulmones vidit adeo compreſſos
"et inatos pleuræ, ut nullos adeſſe incauto videretur, certe
"tribus lineis vix craſſiores."

Morgagni de Sedibus et Cauſis Morborum. Lib. ii. Ep. 22. art. 7.

" is to carry off the phlogiſton which the blood " acquires during its circulation through the " body *." We have always known, that air by frequent reſpiration in time became unfit for the purpoſes of life †; and that if any animal were ſhut up

* Dr. Prieſtly.

† By ſome ingenious experiments lately publiſhed on this ſubject, it was found that a perſon by breathing one hour into a bottle containing three pints and a half, he collected in that time 124 grains of moiſture, which makes 6 oz. 1 dr. 36 grs. in 24 hours. It is to be obſerved, that the three pints and a half of air would ſoon become ſaturated with moiſture, and although it was condenſed on the ſides of the bottle, yet as freſh air was continually thrown in, the air in the bottle muſt of courſe eſcape to give it room—and as all the moiſture would not be condenſed, a great part would eſcape by that means—conſequently a much larger quantity of moiſture is excreted by reſpiration than is here ſuppoſed. See Cruikſhanks' Letter upon Abſorption, p. 116.

The Abbè Fontana could only breathe 40 times in 352 cubic inches of air. (Ph. Tranſ. vol. 69.) Suppoſing we expire 20 times in a minute; in the above hour, near 50 gallons of air muſt have paſſed into, and out of the bottle,—but if we allow 30 cubic inches to paſs into the lungs * at each inſpiration, the quantity will be more than three times as much.

* Cavallo on Air, p. 391.

Putrid effluvia, in ſome caſes of diſeaſed habits, is expelled from the lungs by reſpiration.

Tib. Cavallo, Treatiſe on Air, &c.

A man perſpires in a day five eighths of what he eats and drinks.

Sanctorij, Med. Stat. Aph. 6. Sect, 1;

Inſenſible perſpiration is double the quantity of the ſenſible, and that is ten times greater than the evacuation by ſtool.

Sanctorij, Med, Stat. Aph. 59. Sect. 1.

The ingenious Mr. Cruikſhanks found, that by confining his hand in a bottle, he collected in an hour 30 grs. of moiſture; which, ſuppoſing the whole ſurface to perſpire equally, he eſtimates at ſeven pounds ſix ounces in a day. He was at reſt, and the thermometer at 71° in a room—after uſing

up in a cube of the greateſt dimenſions, and the external air perfectly excluded; in a certain proportionate time it would periſh, by the contained atmoſphere becoming unfit for reſpiration. But it has generally been ſuppoſed, that a certain principle was extracted from the air, neceſſary to animal life; as well as the air being ſaturated with moiſture from the lungs. The new doctrine of phlogiſton, ſeems to view the argument from a different point.

Now, whether the air attracts phlogiſton from the blood; whether the blood attracts the pabulum vitæ from the air; or whether the air becomes ſaturated with moiſture from the lungs; in either caſe, whatever principle the blood communicates to, or attracts from the inſpired atmoſphere, that will be diminiſhed, in proportion as the veſicles of the lungs become impervious to the air. If that principle is phlogiſton, (and the ſuppoſition ſeems well founded) will not its retention in the circulating maſs of blood be an occaſional cauſe of fever? View the argument in any light; as it is abſolutely neceſſary for the purpoſes of life, that the blood, after receiving the chyle and lymph, poured by the thoracic duct into the left ſubclavian vein, ſhould paſs through the lungs; it is very certain, when the paſſage is impeded by the diſeaſed ſtate of that organ, it will become the cauſe of fever.

It is no objection to this reaſoning, when the diſeaſe is cured, and a ſmall portion of the lungs only remains, that the circulation of the blood will be equally impeded; ſince we know that nature poſſeſſeth

uſing exerciſe, it amounted to 12 pounds a day. In the evening at nine o'clock, the thermometer at 62°, he only collected 12 grs. in an hour.

Letter on Abſorption, p. 112.

poſſeſſeth a wonderful power of accommodating herſelf to different ſituations.

If the hectic fever were occaſioned by the abſorption of pus; from whence does it ariſe, before any purulent matter is collected in the lungs; ſince we very often find it completely formed, when no pus is expectorated? And if the fever and morning ſweats increaſe in proportion as the ſubſtance of the lungs, becoming impervious to air, is diſſolved; is it not reaſonable to conclude, that they are occaſioned by the retention of that fluid, which in health was carried off by the atmoſphere, in reſpiration; and probably increaſed, by the retention of the phlogiſton, which the blood uſed to part with to the air * ?

In the hectic fever occaſioned by abſceſſes in the liver, ad pſoas muſcle, and other parts of the body (as has been before obſerved) we do not find that it has remiſſions and morning ſweats like the pulmonary hectic; on the contrary, it is continued, leſs violent, and the ſkin uſually dry.

When the diarrhœa takes place in the advanced period of the diſeaſe; the lungs are conſiderably reduced and waſted, more than half their ſubſtance having been diſſolved into pus and ſpit up. If this ſymptom proceeded from the abſorption of pus, why does it not appear more early in the diſeaſe, when there is a greater extent of ſurface covered with matter, and when a larger number of the abſorbent veſſels remain uninjured? whereas we find the

* "The air in the lungs acquires a quantity of phlogiſton "from the blood, which diſcharge of phlogiſton is abſolute-"ly neceſſary to the continuation of animal life, and which in "time renders the air incapable of abſorbing any more, and "conſequently unfit for reſpiration."

Dr. Prieſtley's Exper. on Air.

the hectic fever and colliquative ſweats continue, till toward the end of the diſeaſe, when the lungs are ſo much reduced as we have mentioned. Surely, if abſorption of pus were the cauſe of the diarrhœa, it would rather take place ſooner in the diſorder, when the lungs are, as it were, drowned in purulent matter, and the lymphatics remained in a great meaſure uninjured; than at a period when they are reduced in the proportion of four to one!

Let us for a moment ſuppoſe that the fever is cauſed by abſorption, and ſee if we can ſatisfactorily account for the ſymptoms by that theory.

Allowing matter abſorbed to cauſe the fever, from whence proceeds the regular intermiſſions in the morning? Is not that ſyſtem of veſſels always in a ſtate to abſorb matter continually applied to their extremities? As it is moſt reaſonable to think, they would act with greateſt vigour, when the body is at reſt in bed; when the lungs are agitated with the cough, forcing as it were the matter into their apertures; and when there is the greateſt quantity of pus collected; would not the fever be conſequently more violent in the forenoon? Whereas we find it goes off about four or five in the morning, and the remiſſion continues till about noon. What can the abſorbents be doing all this time? If it was the property of theſe veſſels to take up pus, they would continue to do ſo, whilſt there was any applied to their extremities; and if that abſorption occaſioned the fever, it would be continued like its cauſe.

If the diarrhœa was alſo cauſed by abſorption, the matter muſt paſs by the circulation, and conſequently the ſame fever be raiſed as when the offending cauſe was removed by perſpiration; for matter cannot get from the lungs, to the inteſtines by any other paſſage. But, ſuppoſing, by our mode of reaſoning,

reaſoning, the retained fluid occaſions the diarrhœa; ſuch a fever is not neceſſary; it being conſiſtent with the œconomy of nature, to relieve herſelf by the inteſtines, without raiſing any commotion or diſturbance in the habit.

When we conſider that pus is a viſcid, opake fluid, ſpecifically heavier than water; it does not ſeem adapted to enter capillary veſſels, whoſe apertures are ſo ſmall, that in the inteſtines, where they are in greateſt number, they are not perceivable when empty, with the beſt glaſſes.

The more I conſider the ſubject in this light, the more the difficulties appear to be inſurmountable.

On the other hand, it has been computed that a perſon in common health exhales from his lungs more than twenty ounces of fluid in twenty-four hours. If from diſeaſe any part of that fluid is retained in the habit, is it not conſonant to the laws of nature, that a fever ſhould be raiſed to expel it, by the moſt common outlet, the pores; and that this fever ſhould continue till the cauſe is removed? That in conſequence of the morning ſweats, the the fever goes off, and the remiſſion continues ſome hours; till the former cauſe accumulating in the habit, it is again excited, and runs the ſame courſe as before. As the diſeaſe in the lungs advances, a greater quantity of the lymph will be retained, and we find the fever and morning ſweats proportionably increaſe in their violence and duration. Till at length, the natural ſtrength of the body being ſo much reduced as to be incapable of raiſing the fever neceſſary to the expulſion by the pores; it then, by the uſual ſympathy ſubſiſting between the ſkin and inteſtines, falls upon the bowels, and produces a diarrhœa. In conſequence of which, the

fever

fever and perſpiration being no longer neceſſary, in a ſhort time are conſiderably diminiſhed.

This appears to me a plain, ſimple, and natural manner of accounting for the pulmonary hectic fever, and ſubſequent diarrhœa; and I muſt have been very unfortunate, if I have not convinced the intelligent reader, that the abſorption of purulent matter is no ways concerned either in occaſioning or continuing theſe complaints. But that they are originally cauſed, and continued, by the retention of that quantity of phlogiſton and lymph in the habit, which by the diſeaſed ſtate of the lungs, is prevented being expelled by the atmoſphere in reſpiration.

CHAPTER VII.

THE authors who have written upon conſumption of the lungs, generally agree, that it admits with difficulty of a cure even when recent, but in the advanced ſtage, that for the moſt part it terminates fatally. There is no doubt, but this opinion is founded upon experience; every day evinces how little this diſeaſe is under the power of medicine. But I cannot believe, the diſorder in its own nature is attended with ſo much danger; and am diſpoſed to believe, this opinion of its fatalneſs, being ſo generally received, has weakened the efforts of the

the phyſician; and inſtead of attacking the diſeaſe in its ſtrong hold, he contents himſelf with palliatives, and conſigns his patient to country air, butter-milk, and boiled apples.

In the works of ſurgical writers, we have inſtances of wounds in the lungs being cured with leſs difficulty, than thoſe of any other viſcus; and we have abſolute proof from diſſection, of Phthiſis being cured in its advanced ſtage, when one entire lobe of the lungs, and that the largeſt, had been conſumed by the diſeaſe *.

Complaints in the breaſt, when taken in time, are eaſily removed; but their frequency in this variable climate, renders them ſo familiar to the inhabitants, that they ſeldom think of ſeeking advice, until the diſorder has made conſiderable progreſs. The number of infallible remedies ſtored up in every family, alſo tends to preclude the phyſician; and when he is called, it is inconceivable with what difficulty he gets his directions, in any degree complied with. Thoſe who can labour inceſſantly to acquire wealth and honour, can ſcarcely be perſuaded to give themſelves any trouble in regaining their health, the greateſt of all bleſſings; and without which all others loſe their value. On the other hand, pleaſure and diſſipation, raiſe powerful barriers againſt medical reſtriction. When people are ſlightly indiſpoſed, and able to go abroad, they are not eaſily perſuaded to forego, what they eſteem a preſent good, in order to avoid a diſtant, and what they think, an uncertain evil.

Theſe

* Mudge, in his Treatiſe on the Catarrh, mentions a man who died in St. Thomas's Hoſpital, after having perfectly recovered from a conſumption of the lungs, for which he was in the hoſpital formerly. The body was opened, and only the left lobe of the lungs was found remaining, the right having been intirely diſſolved.

Theſe are the cauſes that render pulmonary conſumptions ſo difficult to be cured, and not the nature of the diſeaſe; which from experience, I am warranted to ſay, is curable at any period, before the vital ſtrength is greatly broken down, and the ſtomach and digeſtive faculties rendered incapable of aſſimilating nouriſhment *. There have even been inſtances of recovery after the diarrhœa has been confirmed; and if we reflect on the wonderful powers of nature, in removing the cauſe, and obviating the effects of diſeaſe, it will be difficult, and perhaps imprudent, for any phyſician to determine what is incurable.

The general intention of cure is, to obviate the occaſional cauſes of fever that may be lodged in the ſtomach and firſt paſſages; to remove obſtructions in the hypochondriac viſcera; to evacuate the purulent matter from the lungs; to appeaſe the cough, and to give reſt to the tender inflamed lungs; to regulate air, exerciſe, diet, and the paſſions of the mind.

The recent effects of cold are ſo well underſtood, and may be ſo eaſily removed by bleeding, diluting drinks, abſtinence, and the uſual antiphlogiſtic plan; that any directions to that purpoſe would be inſulting the medical reader's underſtanding.

When from a bad habit of body, or neglect, the cough remains obſtinate and dry; with pain in the breaſt, ſtitches in different parts of the thorax, increaſed upon coughing, and attended with a conſiderable degree of heat and fever; I would recommend

* "Atque hinc ſit, quod Phthiſis vulgò tàm malè audiat, ac "ſi eſſet morbus naturâ ſuâ prorſus incurabilis, quum (quan- "tum ego longâ experientiâ edoctus ſcio) æquè certam cura- "tionem, atque alii morbi admittat, modo debitâ methodo, "ſatis tempeſtivè tractetur."

Morton, Phthiſiologia, p. 171.

mend bleeding in a moderate quantity, and to be repeated at proper intervals, till theſe ſymptoms abate, if there is nothing in the ſtrength or pulſe to forbid it: in this period of the diſeaſe, the patient uſually bears the repetition of the operation without any bad conſequence. The body is to be kept open with gentle ſaline purgatives, drinking frequently of barley-water or lintſeed-tea; and if the cough prevents ſleeping, a proper doſe of Elixir Paregoricum at bed-time, will have a good effect. But the remedy which I have found moſt effectual in every kind of cough, and in every period of this diſeaſe; is ſuch a doſe of the Pulv: Ipecac: as will excite vomiting once or twice; and this I repeat morning and evening, as the ſtrength of the patient and violence of the complaint may indicate *. I by no means approve of vomits given in the uſual manner; that is, a full doſe in the evening, which will operate eight or ten times; as they greatly fatigue the patient, and very frequently aggravate the ſymptoms.

The ſympathy ſubſiſting between the ſtomach and other parts of the body, has been deſcribed with great preciſion, by the late learned Dr. Whytt, of Edinburgh, in his treatiſe on nervous diſeaſes; and that ingenious work being in every one's hands, it will be unneceſſary for me, to repeat them here.

The

* "Vomitoria lenia debitis intervallis repetita, (præſertim "verò ſi cum εὐφοΐαι ferantur, neque nimis ſerò exhibiantur) "multùm ad hujus phthiſicos curationem promovendam con- "ferunt; utpote cerebrum et genus nervoſem deoppilantia, et "Rheumaticos dolores minorantia rigiditatem et ſtuporem fi- "broſi generis univerſalitèr ſublevando; quo fit ut cauſa Pro- "catarctica, ſeu fomus hujuſce Phthiſeos, plurimum ſubtra- "hatur."

Morton, Phthiſiologia, p. 313.

The lungs, from their contiguity, will be affected in a peculiar manner, by whatever is received into the ſtomach; whether from the quantity or quality of the matter *. When a large quantity of food is received into the ſtomach, during the proceſs of digeſtion, the air contained in it, being ſet at liberty and rarefied by heat, that organ will be diſtended; and by preſſing the diaphragm upwards, the cavity of the thorax will be leſſened: conſequently the lungs, being confined in a ſmaller ſpace than uſual, will be incapable of being expanded by the inſpiration of the air; and thereby the motion of the blood through the pulmonary artery and vein impeded. If the lungs are diſeaſed, the cough will be conſiderably aggravated; hence aſtmatic patients find their difficulty of breathing increaſed after eating, and during digeſtion. If from the quality of the food, whether acrid, acid, or affording a quantity of rarefied air, the nerves of the ſtomach are diſagreeably affected; that ſenſation will, by ſympathy, be conveyed to the nerves of the neighbouring parts: and when any part of the body is in an inflamed ſtate, the nerves of that part acquire an increaſed degree of ſenſibility and irritability; therefore the lungs, when in an inflamed ſtate, will be ſenſibly affected by the contents of the ſtomach. And I am diſpoſed to believe, that whenever any of the hypochondriac viſcera, are in a diſeaſed ſtate, be it more or

* "Cui ut in illo caſu non refragemur, nec in aliis fortaſſe, "in quibus multo prius ab exteriore illa cauſa læſiones ven- "triculi quam pulmonem, animadvertantur unde male cibo- "rum confectio viſcidos, acreſve ſuccos paret, qui et ſto- "machum vellicando, tuſſim excitent, et in pulmonibus tan- "dem ſubſiſtendo, irritandoque, cauſam præbeant phthi- "ſis."

Morgagni de Sed. & Cauſ. Morb. Lib. 3 Ep. 22. art. 20.

leſs; the lungs when inflamed will be affected. And even when the lungs have been perfectly ſound, acrid matter in the ſtomach and bowels, has cauſed, and kept up an obſtinate cough.

As we are ſo eaſily and quickly affected by taking opiates, cordials, and poiſons into the ſtomach, by the action of their particles on the nerves and lymphatic veſſels; is it not reaſonable to conclude, that different parts of the body will alſo be affected by offending matter irritating thoſe nerves?

Opiates taken into the ſtomach quiet a cough; their effects being conveyed to the nerves of the lungs, by means of ſympathy with thoſe of the ſtomach: in the ſame manner, coughs are excited by different matter acting upon the ſtomach, and by the ſame ſympathy upon the lungs.

In the whooping-cough it is well known, what ſenſible effects are produced by repeated vomiting; and indeed there is no other medicine that can be depended upon, in that diſtreſſing complaint.

By giving emetics in the manner I have recommended, not only the contents of the ſtomach are evacuated, accumulation of viſcid phlegm and acrid bilious matter prevented; but the lungs being compreſſed during the action of vomiting, whatever mucus and purulent matter are in the ramifications of the aſpera-arteria and air-veſicles, in tubercles or vomicæ, will be forced out and diſcharged; by which means an infinity of laborious coughing is prevented; the patient feels greatly relieved, and the tender lungs remain at reſt, till a freſh accumulation of matter is formed, which requires ſome time.

By the univerſal concuſſion and agitation cauſed by vomiting, obſtructions in the liver, biliary veſſels, and in other hypochondriac viſcera, are attenuated

tenuated and removed * : and in all complaints arising from these causes, it is the most powerful and certain alterative, that can be found in the whole meteria medica †.

People at first, are apt to be alarmed at the novelty of the practice; fearing that by taking vomits every day, the tone of their stomachs will be injured; but I can safely affirm, and I am warranted to do so, by the best of all tests, experience; that I never saw any bad effects from a course of this kind continued for many weeks, with proper precautions; on the contrary, I have scarcely met with one instance,

* Dr. Barry observes, "These intentions may be better "answered by gentle stomachic purgatives, and other attenu- "ating medicines." (On Consumptions of the Lungs.) If we attend to the operation of cathartics on the human body, we shall be convinced that their action upon the stomach is very slight, and principally confined to the intestines. Whatever disease originates from the stomach, cannot be removed by the use of purgatives, unless an emetic precedes. Of this we have frequent instances in cases of diarrhœa.

† "Maxime momenti est post extractionem sanguinis, præ- "cipuè autem si morbus à crapulâ ortum suum ducat; vel si "nauseam et vomendi dispositionem conjunctas habet, Emeti- "cum lene præscribere è melle, vel Oxymelite Scyllitico; im- "mò et aliquandò è Vino benedicto modicâ quantitate sump- "to. A quâ vomitione, non tantum ventriculus humorem sa- "burrâ oppressus relevari, et nausea inde nata tolli, et di- "gestio restituti possint, (quæ omnia non sunt flocci haben- "da;) verùm etiàm moles humorum jam pulmonibus impac- "torum, harum partium exagitatione inter vomendum insigni- "ter expectorari solet, unà cum notabili relevatione ponderis "gravitavi à mole istâ effecti. Atque hoc ritu non tantùm "plurimos impiricos vidi, cum successu felici, sese omnem in- "cipientem Phthisin curaturos gloriari, verùm etiàm ipse ego "ratione, & experientiâ fretus sæpissimè Phthiseos incipientis "progressum, eodem modo, brevi temporis spatio præpedi- "vi."

Morton, Phthisiologia, p. 153. Chap. 8.

inſtance, where the general health was not eſſentially improved.

I prefer the Pulv: Ipecac: to any other medicine of that claſs, becauſe its effects are more certain and leſs violent, and it has a tendency to keep the body open. I uſually begin with a ſmall doſe, according to the age and circumſtances attending the patient, and increaſe it as I find occaſion. An ingenious author on this ſubject *, has recommended the Vitriol: Rom: becauſe it acts quickly. I have not had any experience of this medicine myſelf; but am inclined to think the emetic has had the moſt permanent good effects, when it remained ſome time in the ſtomach, before it operated.

In the early period of the diſeaſe, I ſometimes order a ſmall quantity of tartar emetic, eſpecially if I ſuſpect bile to be collected in the firſt paſſages; but its effects are ſo uncertain, and ſometimes uncommonly violent; perhaps depending upon the contents of the ſtomach, that I ſeldom uſe it, and never in the advanced ſtages of the diſeaſe. During the operation, unleſs the patient ſtrain much, it is not neceſſary any thing ſhould be drank; and as the quantity given only excites vomiting once, or twice at moſt; even when much reduced, they do not find themſelves fatigued by it. However violent, and unnatural the action of vomiting may ſeem, and really is; it is well known not to weaken the habit and reduce the ſtrength near ſo much, as a common purge, even when the vomit is taken in the uſual method †.

I continue this medicine through every ſtage of the diſeaſe; repeating it once or twice a day, as the ſtrength

* Dr. Fort Symmons.

† "Vomiting is a general ſtimulus, and gives a ſhock to "the whole machine. In conſequence of exhibiting emetics, the

ſtrength of the patient and urgency of the ſymptoms may require. In the morning I order it to be taken faſting, and, if the patient is weak, in bed; but not to ſleep after it, as that ſometimes prevents its action on the ſtomach. It is ſeldom I find the repetion neceſſary in the evening; when it is, care ſhould be taken that the operation may be finiſhed before bed-time.

If the cough is ſo violent as to prevent ſleep; a doſe of Elixir Paregoricum ſhould be taken going to reſt, and repeated in the middle of the night, if neceſſary: it being eſſentially requiſite to keep the lungs as quiet as poſſible; as the agitation of coughing not only fatigues the patient, but increaſes the inflammation, and haſtens the ſuppuration of the tubercles. This indication is moſt effectually anſwered by the repeated vomits, which I have rarely ſeen fail. And even the conſtitutional, annual coughs, that old people are ſubject to every winter; I have frequently ſeen removed by this means in a ſhort time.

The lungs differ from every other part of the body in many reſpects, but particularly in the following. Their ſubſtance is more vaſculer, and a greater quantity of blood paſſes through them in a given time. The aſpera-arteria minutely ramifying through every part of their ſubſtance, terminating in air-veſicles, is peculiar to them. And by reſpiration they are kept in a perpetual motion. Theſe differences ſubſiſt through life, in ſickneſs and in health.

When

" the water of aſcites has ſomtimes been removed; and when " the cure has been effected from the conſtitution itſelf, vo- " miting has frequently been the method employed by nature, " for keeping up and increaſing the abſorption."

Cruikſhank's Letter on Abſorption, p. 166.

When the lungs are diſeaſed, their motion is not only increaſed by the reſpiration being quickened; but they ſuffer, for the moſt part, violent concuſſions by means of coughing. This circumſtance attending no other viſcus, renders ſuch diſorders more difficult to cure; for all authors agree in this; that reſt is abſolutely neceſſary to parts when inflamed.

If by any means the cough could be prevented; I preſume diſeaſes of the lungs would be nearly in the ſame ſtate, and admit of a cure as readily, as any other internal part, equally inflamed. The increaſed frequency of reſpiration does not appear to me, in theſe caſes, of great importance; becauſe it is both natural and familiar, as it takes place upon any exertion, or quick motion of the body.

When the cough in conſumptive caſes, has continued any length of time; it either proceeds from affection of the alimentary canal and hypochondriac viſcera, acting by ſympathy upon the lungs; or from mucus and purulent matter lodged in the air-veſicles, and branches of the aſpera-arteria, by irritation exciting inceſſant coughing till it is diſcharged. The conſequence of this reiterated concuſſion is, that the diſpoſition is continued in the exhalent veſſels, of ſecreting viſcid lymph, or purulent matter; by which the latter tubercles are diſſolved, and new ones formed: and alſo, by the general preſſure, the parenchymatous ſubſtance is condenſed and rendered capable of being melted into pus.

The exciting cauſe in the firſt paſſages, may with certainty be removed; and thoſe in the lungs greatly, if not entirely obviated, by the frequent uſe of gentle emetics, given in the manner we have directed. And when the cough is prevented, or even conſiderably alleviated, the inflammation will readily

ly diſperſe; the immediate cauſe of its continuance being removed *.

By this means the ſtomach and firſt paſſages; the biliary veſſels and hypochondriac viſcera; will, by the frequent concuſſions and agitations during the action of vomiting, have their obſtructions attenuated, and removed; their ſecretions will be reſtored to a natural ſtate; digeſtion will be properly performed; good chyle will be produced; and conſequently the blood will be mended, the body nouriſhed, and health again be eſtabliſhed. And, as I am diſpoſed to believe, the major part of the diſeaſes, incident to mankind, originate from a morbid ſtate of the ſtomach and bowels; our curative indication ſhould be directed primarily, and principally, to remove from them every exciting cauſe †. When that is done; Nature will exert that wonderful power, with which the omnipotent Author of the univerſe has endowed her, of reſtoring the parts of the body to a ſound ſtate.

As emetic medicines are known to be powerful and active agents in the conſtitution; they ſhould be uſed with great caution and attention. The judicious phyſician will weigh, and conſider the ſymptoms and ſituation of the patient; and although there are few caſes in which they may not be given with ſafety; yet he will ſometimes find them improper. During pregnancy, in delicate women, though they

* "If any remedy is capable of diſperſing a tubercle, I believe it to be vomits."

Dr. F. Simmons, on Conſumptions, p. 66.

† This ſubject was intended by the author, to have been conſidered at large in a work he was preparing for the preſs. But his other avocations not allowing him time to render it in any way fit to appear before the public; he has laid it aſide, at leaſt for ſome time.

they frequently vomit ſpontaneouſly; emetics, as they act in a different manner upon the ſyſtem, are very apt to occaſion abortion; eſpecially in the early period. In ſuch caſes, I would adviſe them to be entirely omitted.

In ſchirrous affections of the ſtomach, emetics are highly improper; and in many other diſeaſes, which being well known to every practitioner, need not be enumerated here.

Some people vomit with great difficulty, and are acted upon in a particular manner by medicines of this kind. I therefore, as a general caution, recommend, to begin in all caſes with a ſmall doſe; repeating it, according to the effects upon the diſeaſe, at longer or ſhorter intervals: and whenever it is found to diſagree with the patient, its uſe muſt be diſcontinued, or omitted altogether. But in the courſe of my practice, ſuch inſtances have very rarely occurred.

CHAPTER VIII.

WHEN purulent matter, or pus, is mixed with the mucus in the expectoration; I am very cautious in ordering the bleeding to be repeated; except when the fever runs high, the pulſe full and hard, with frequent pains and ſtitches in the breaſt and ſides. Then it may be done with ſafety;

ſafety * ; always attending carefully to the patient's ſtrength, and not to the appearance of the blood, which is ſo apt to miſlead unwary practitioners.

In no diſeaſe has bleeding been ſo generally ordered, and ſo frequently repeated in a given time, as in that under our conſideration; and I fear the obſervation has been but too much verified, "that more "die by the lancet than the lance †." In the early period of the complaint, when the cough is dry, hard, and frequent; with pain, ſoreneſs, and ſtitches in various parts of the thorax; the pulſe hard, quick, and full; the breathing ſhort, with pain and difficulty; bleeding is an appropriated remedy; and may be repeated according to the ſymptoms, with great ſafety. But performing this operation two or three times, or oftener, in a week, as is frequently done; I am convinced anſwers no good purpoſe; but on the contrary weakens the patient, draws off that ſtrength he ſo much wants in combating the diſeaſe, and greatly accelerates the fatal period.

When the patient ſpits up purulent matter; when the hectic fever, with remiſſions and morning ſweats, are confirmed; when the fleſh is waſting away, and his ſtrength viſibly decaying; whatever may have been the appearance of the blood in a former operation, withhold the lancet, or his life will flow out at the orifice.

* "Nec quidèm ipſo Venæfectio hîc convenit, niſi ad præ-"cavendam inflammationem Peripneumonicam, quoties ſcil. "à dolore Pleuritico, potatione liberaliori liquorum ſpirituo-"ſorum, à frigore recens percepto, atque aliis ejuſmodi, me-"dico ſagaci eam præ foribus eſſe ſuſpicari liceat. Atque "tunc etiam ſanguis, ob tabem præſentem et virium languo-"rum, parcâ potiùs manu ventilandus, quàm profuſe extra-"hendus."

Morton, Phthiſiologia, p. 174.

† Dr. Amſtrong.

The celebrated Boerhaave, and other eminent authors, recommend bleeding to be repeated while the buffy cruſt remains upon the blood, conſidering that as a criterion of inflammation * ; and this practice has been pretty generally followed, particularly by the lower order of the profeſſion. No appearance can be more fallacious than the ſize upon the blood; becauſe it frequently happens, when it is received into ſeveral cups, one or two of them ſhall have it, and the others not. In pleuriſies, the blood will ſometimes be free from ſize, and yet the complaint continue †. In pregnant women the blood is generally ſizy, when no diſeaſe is preſent. And therefore, it is far from being an inconteſtible proof of inflammation.

Contrary to the received opinion, inflammation is found to thin the blood, and particularly the coagulable lymph ; by which means the red particles are precipitated to the bottom of the veſſel, and the lymph remaining above, forms what is termed ſize or buff; the denſity of which, when jellied, is in proportion to its previous thinneſs. It is ſuppoſed to be occaſioned by the action of the veſſels upon the blood ‡.

I by no means would be underſtood, that bleeding is never proper when pus is expectorated from

* Aphor. 1199, 1200. in Hæmoptoe.
In quocunque morbi generere ſanguinis miſſi et refrigerati ſuperficies, pellis albæ, duræ, ſimilitudinem induit, indolem inflammatione comitatam denunciat, et rarò ſine repetitâ hujuſmodi exinanitione ſanatur iſte æger; cæteriſque paribus, ex hâc ſolâ re cognoſcatur aliquo modo inflammationis gradus.
Cl. Wintringham, Quibuſd. Morb. Comment. § 62.

† Dr. Heberden, Med. Tranſ. Vol. 2. p. 499.

‡ Hewſon on the Properties of the Blood.

from the lungs; many caſes and circumſtances occur, in which it is highly expedient. But in treating the ſubject in general (and it is impoſſible to particulariſe every variation in the ſymptoms) I wiſh to enter my caveat againſt the frequent repetition of the operation, as a means of cure.

I am very ſenſible how much, in this, I differ from the moſt eminent in the profeſſion. Men not more diſtinguiſhed for learning and knowledge; than for liberality and humanity. But were we implicitly to follow authorities, even of the higheſt reputation; all improvement would be precluded, and the ſcience, like the arts in China, remain for ever at the ſame point of imperfection.

The tranſient relief experienced from repeated bleedings in the advanced ſtage of the Phithiſis Pulmonalis, proceeds from the veſſels being emptied, and for a ſhort time the breathing being leſs oppreſſed; as it reduces the ſtrength of the muſcular fibre, the action of the veſſels will be weakened, and the circulation become ſlower.

Bleeding is certainly a moſt effectual and valuable remedy, in this, and many other deſeaſes; but it is uſed too indiſcriminately in this great city; where thoſe of the true inflammatory kind ſeldom occur.

CHAPTER

CHAPTER IX.

FROM the ſuppoſed efficacy of gums and balſams on external wounds and ſores; it was imagined they would have a ſimilar effect when taken internally; and from the idea of there being an open ulcer in the lungs, medicines of this kind have been given conſtantly, and in great quantities, in conſumptions of the lungs.

In ſome authors, particularly Morton, the claſs of pectorals, demulcents, attenuants, incraſſants, &c. is ſo extenſive, that he ſeems to have copied the whole pharmacopœia. I am diſpoſed to believe, that the conſtant and indiſcriminate uſe of greaſy, oily medicines in diſeaſes of the breaſt; ſo far from producing any real benefit, frequently do much harm. The patient depending upon their ſuppoſed virtues, waſtes that time he might ſo much better employ. They relax and foul the ſtomach; and from their diſpoſition to become rancid and acrid, increaſe that complaint, they were meant to relieve. It has been ſaid *, "that oily linctuſes and anodyne "medicines act by ſupplying an artificial defence to "the aſpera-arteria, which is abraded, and de-"prived of its lubricating mucus, and thereby be-"comes exceedingly ſenſible to cold air, or the "acrimony and heat of the humours diſtilling from "the glands." This is the common received opinion;

* Barry, p. 218. Friend, art: Lohock.

nion; but it will be found without foundation, when we enquire by what means theſe medicines are to get to the parts ſo abraded. The leaſt particle getting within the epiglottis, cauſes inceſſant coughing; and he ſurely cannot mean, that they ſhould go the round of the circulation.

In catarrhal tickling coughs; where a thin rheum falling continually upon the fauces and epiglottis, irritates the parts, and excites frequent coughing; by which the natural mucus that covers them is waſhed off. In this caſe, ſoft oily medicines, ſo far as they tend to ſupply that mucus, and defend their ſurface, may be of ſervice. The uſual forms are oily emulſions, linctuſes, mixtures with ſpermaceti, &c.: but as theſe compoſitions in ſome meaſure conſtantly injure the ſtomach; I prefer a ſolution of Gum Arabic, or a mucilage of Sem: Cydon: with a proper quantity of Syr: Emecon:. Theſe will be found to anſwer every purpoſe intended by oily medicines, without any of their offenſive qualities. Further than this, I preſume pectorals can do no real ſervice in diſeaſes of the lungs. Some tranſient relief may be imagined in their paſſage down the œſophagus into the ſtomach, by their coolneſs giving a new ſtimulus to the trachea; but experience will ſoon convince, that no permanent relief can ariſe from taking them. From the mouth, they paſs immediately into the ſtomach, where they mix with its contents; from thence into the inteſtines, and whether any of their particles are taken up and carried into the blood, is a matter of much doubt; certainly not in that proportion as to act in the nature of a healing balſam to the diſeaſed lungs.

The idea of oily, and viſcid fluids, cloathing the particles of acrid matter, in the ſtomach and bowels; ſo as to prevent their irritating or vellicating the fibres, ſeems more imaginary than real. Particularly

cularly in the ſtomach, where there is ſo frequent an ingreſs and egreſs, of ſolids and fluids; the ſmall quantity of medicine taken for that purpoſe, does not ſeem adequate to produce the effect. For if the acrid, or offending matter, was in ſuch a quantity, as to be enveloped by a few ounces of an oily emulſion or linctus, taken in the courſe of a day; it would not be ſufficient to injure the health.

I have frequently experienced good effects from the uſe of ſquills, in humeral aſthmas, and coughs without inflammation; but as they are uſually united with opium, great part of their effects muſt be attributed to its anodyne quality: and their promoting expectoration, ariſes from ſtimulating the ſtomach, and ſometimes exciting vomiting.

The terebinthinate balſams and gums, come under the ſame predicament; very few of their particles paſſing into the circulating fluids; and thoſe more apt to increaſe, than alleviate the complaint. When any relief has been found from their uſe, in aſthmatic caſes, it proceeded from their warmth giving a gentle ſtimulus to the ſtomach; and ſometimes from their opening quality.

The intelligent reader may imagine, theſe obſervations uſeleſs and ſuperabundant; at a time, when the medical ſcience is ſo much improved, that hot balſams and turpentines are ſeldom given in diſeaſes of the lungs, and never relied upon. But I have lately, more than once, ſeen patients with a conſiderable inflammation on the breaſt, tightneſs, pain, cough, and difficulty of breathing, with a full and quick pulſe, ſwallowing boluſes of Balſam: Locatelli. This is a compoſition of olive-oil, bees-wax, and turpentine; the laſt, in the proportion of one to four. Nothing but ſeeing and receiving the fact from the patients themſelves; could have

have convinced me it was poſſible, ſuch a ſubſtance could at any time be taken medicinally; far leſs under ſuch circumſtances. Theſe and many other reaſons, have convinced me, that oily and balſamic medicines, ſo far from producing any permanent benefit in theſe complaints; do by their greaſy viſcid quality, foul the coats of the ſtomach, greatly injure digeſtion, and very frequently increaſe the ſymptoms they were meant to remove.

CHAPTER X.

WHEN there is a fixed pain in the breaſt or ſides, increaſed by coughing; that does not yield readily to bleeding, and the antiphlogiſtic medicines uſually given; I have ſeen good effects from ſmall bliſters, applied to the part, and repeated as ſoon as the ſkin is healed. This method anſwers better than uſing the bliſtering ointment, which always occaſions great pain and ſoreneſs, and ſeldom produces a copious diſcharge.

If there is any ſuſpicion of matter being collected in the cavity of the thorax; and the ſymptoms are either not ſo clear and determined, as to warrant the operation for the empyema; or if they are, the patient's fears will not allow it to be performed; I recommend

recommend a ſeton, made as near as poſſible to the part affected, which frequently produces conſiderable relief.

Not only in phthiſis, but in many other chronic complaints; iſſues, cauſtics, ſetons, and perpetual bliſters have been very generally uſed. It has been ſuppoſed, that the matter diſcharged by theſe means, was the diſeaſed particles of the blood; and that in time it would work itſelf pure, and health be reſtored. That an idea of this kind, ſhould ſtrike people of common underſtanding, unacquainted with the principles of the animal œconomy, is very natural; but we are ſurpriſed to ſee men of learning and experience, entertain ſuch a notion. "Further, while bliſters evacuate chiefly the ſerous "humours, iſſues and ſetons generally diſcharge "true purulent matter, and on this account may "be of greateſt ſervice in internal ulcers *." Notwithſtanding the wonderful power of that principle called nature, in the human body; I doubt much whether it is capable of expelling the diſeaſed parts of the blood, by theſe artificial openings, and retaining the ſound.

The fact is, that wherever there is a wound with loſs of ſubſtance; or what is preciſely the ſame thing, where a wound is prevented healing by the intervention of an extraneous body; there will be a diſcharge of matter from the mouths of the divided veſſels; and the quantity and quality will depend upon the degree of tone in the muſcular fibre, and in ſome meaſure upon the ſituation of the wound. For I believe it will be granted without bringing evidence in proof; that an iſſue in a ſound healthy perſon, will diſcharge as much, and as purulent

* Whytt, Remarkable Effects of Bliſters, p. 720. 4to ed.

rulent matter, allowing for the difference in the muſcular fibre, as in a perſon that is diſeaſed.

An author upon this ſubject, has recommended drains, which he emphatically ſays "*may be felt* *." Iſſues made in the back with cauſtic, three inches diameter; that when the eſchar is digeſted off, are capable of containing *fifty peas*. As the greateſt number of conſumptive patients are generally of the weak and timid ſex; I fear ſuch a remedy, would be thought more formidable than the diſeaſe; even were we ſure of its producing good effects.

As far as my experience has gone in this matter, I have obſerved; that in proportion to the quantity of diſcharge, they have tended to reduce the ſtrength of the patient; and were always ſore, painful, and diſagreeable. I have never ſeen any of the magnitude mentioned above; but I ſhould apprehend the pain occaſioned, in a delicate, irritable, diſeaſed habit, by an ulcer of nine inches circumference, full of hard peas, would of itſelf, produce a very conſiderable degree of fever. On the whole therefore, as a general remedy; I do not think myſelf warranted in recommending them in Phthiſis Pulmonalis.

As from the earlieſt ages, to the preſent time, it has been ſo generally taught by authors and profeſſors, that the ſeat of diſeaſe was in the circulating blood; it might reaſonably have been imagined, an eaſy matter to determine, when, and in what manner, that fluid was acted upon, and became acrid, putrid, or mixed with various humours. But as they are ſilent upon this important part of the ſubject; and inſtead of proving a poſition, ſo eſſential in the practice of medicine, are always ſuppoſing the affirmative taken for granted: I fear in this, as

* Mudge, on the Catarrh.

in many other inſtances, they have founded their theory upon the ſandy baſis, of general and unde-fined terms.

That the circulating blood is ſuſceptible of various changes; we are fully convinced, by examining its parts, when out of the body.

From inanition, conſumptions, and other lingering diſeaſes, in which the body has not been ſufficiently nouriſhed, we find it thinner, and the red particles in a leſs proportion, than when in a healthy ſtate. From intemperance, eaſe, and luxury, it probably acquires a different property.

During inflammatory diſorders, when the circulation is greatly quickened, and the animal heat conſiderably increaſed; we find it thinned; but the relative proportion of craſſamentum is not diminiſhed; the coaguable lymph, not retaining the red particles, they precipitate to the bottom of the veſſel; thereby forming what is termed the buff or ſize.

Since the publication of the microſcopical obſervations made by Leeuwenhoeck; the red particles of the blood have been univerſally believed to be globular; that form being ſuppoſed better adapted for circulating in veſſels of various diameters. But from the ingenious experiments of a late eminent anatomiſt, we are induced to believe, that they are perfectly flat veſicles, containing a fixed central point; that they circulate in this form through the veſſels; that they do not become globular, but in conſequence of putrefaction out of the body; and that this form is eſſential to life, he preſumes, from having obſerved it take place throughout the animal kingdom *.

The

* Hewſon, on the red Particles of the blood.

The motion of the blood being accelerated, probably depends more upon the action of various ſtimuli, applied in different degrees, to the coats of the veſſels in which it circulates, by means of the nervous ſyſtem; than upon any quality poſſeſſed by the particles of the fluid,

In many diſeaſes, where the craſis of the blood was ſuppoſed to be broken down, and become putrid; as in the plague, and ſcurvy; on examination, no ſuch appearance has been diſcovered; on the contrary, the craſſamentum was found as firm as in the higheſt degree of inflammation *.

From the opinion being adopted, that the blood underwent certain changes in its conſtituent parts, producing diſeaſe, the application of medicine has been directed to that ſource. Hence we have ſeen formed, the long catalogue of antiputreſcents, antiſcorbutics, antihectics, ſweeteners, alteratives, &c. But experiments have evinced, that the greater part of medicines given to anſwer ſuch intentions, do not enter into the circulating fluids.

On examining the blood of a perſon, who had taken ſteel for ſome time, with a tincture of galls, it gave no ſign of that metal being preſent. But upon mixing with it, a quantity of Sal Martis, the ſerum became immediately black on adding a few drops of the tincture †. Cathartics and emetics act only upon the ſtomach and bowels. Mercury has always been ſuppoſed, to pervade every part of the body; and even to lodge in the cells of the bones. Yet from ſome experiments I have made, and others that

* Lind, on the Scurvy. Millman, on Putrid Diſeaſes.

† Philoſoph. Traſact. Vol. 50. Pt. 2. page 595.

that have been lately publiſhed *; I am inclined to believe, its action is principally confined to the lymphatic ſyſtem; and that it ſeems to me very doubtful, if ever fluid mercury circulates with the blood.

Notwithſtanding the many diſcoveries which have lately been made in this part of phyſiology; we are far from being perfectly acquainted with the properties and parts of this vital fluid. And as it is generally

* The many experiments that have been made, by an ingenious and accurate anatomiſt, upon the blood in various ſtates, on the ſaliva, and upon the urine of perſons under the influence of mercury; in order to diſcover whether it was preſent in theſe fluids; ſeem to determine it in the negative. He obſerves, "that the changes it (corroſive ſublimate) afterwards "undergoes in the body, *in becoming quickſilver*, is moſt probably produced in the *blood-veſſels*." p. 144. He afterwards ſays, "I am inclined however, upon the whole, rather to "think with *Mr. Hunter*, that *the mercury* is in the *human* "*fluids* in the form of *a new ſalt*; ſince *gold*, &c. were *not* "*amalgamated* by *theſe* fluids, obtained in ſuch a ſtate as made "them be preſumed to be *fully ſaturated* (if one might ſay ſo) "*with mercury*." p. 219.——At laſt he concludes, "In whatever ſtate *mercury* exiſts in the *blood*, I *am convinced* that it "always *exhales* from the *body*, *after its action is over*, in the "*form* of *running mercury*; and that it may not only be *decom*"*poſed*, but *ſomehow acquire phlogiſton in the human fluids*." p. 223. If I underſtand the learned author right, the mercury when introduced to the habit in the form of a ſalt, is reduced to fluid quickſilver in *the blood-veſſels*; that in order to produce its effects on diſeaſe, it is again changed into a new ſalt; and laſt of all, in order to make its eſcape, after producing ſuch effects, is changed a ſecond time to *running mercury*. I muſt confeſs ſuch repeated changes and alterations do not ſeem to be conſiſtent with the uſual ſimplicity of nature's operations; and that it is probable the mercury acts ſolely upon the lymphatic ſyſtem without entering the blood-veſſels; where, had it been in a fluid form, the above experiments would have diſcovered it.

See Cruikſhank's Letter on Abſorption.

rally preſumed to be much, much ſeldomer in fault * than we have been taught to believe; it ſurely becomes a duty to direct our attention particularly to the ſtomach and viſcera; where probably, enquiries will be attended with more ſucceſs, and remedies applied with greater effect.

In the early period of Phthiſis, when the fever and heat are conſiderable, ſmall doſes of nitre, or the common ſaline mixture in larger quantities than is commonly given, cools the habit, and has a tendency to keep the body open; which ſhould be carefully attended to. One motion at leaſt ſhould be procured every day; for which purpoſe, a proper doſe of Sal: Polychreſt and Rhubarb may be taken at bed-time, or in the evening. I have found this compoſition a uſeful medicine in theſe caſes, though in no ways deſerving the encomiums that have been laviſhly beſtowed upon it. If this powder ſhould diſagree with the ſtomach, which ſometimes it is apt to do, a morſel of lenitive electuary will anſwer the purpoſe equally well.

When by theſe means the fever and heat are conſiderably abated, and before purulent matter appears in the ſpitting, I have ſometimes uſed the Hydrargyros in ſmall doſes with ſingular advantage: but the caſes having been few, and it requiring great precaution, the judicious phyſician muſt determine, from the ſymptoms and other circumſtances, the quantity and mode of giving it. For I ſhould be very cautious in recommending any medicine here, that I was not warranted to do from the fulleſt conviction

* "The more we are acquainted with the animal œcono-
"my, the more reaſon we find to believe, that the ſeat of
"diſeaſes is not in the blood; with the ſenſible qualities of
"which, it ſeems to have very little relation."
Dr. Heberden, Med. Tranſact. Vol. 2. Queries.

viction of its propriety; and that conviction can only arise from long experience.

In the advanced period of the disease, when the hectic is confirmed, and the morning sweats profuse; I find a draught with the Elix: Vitr: acid: given at bed-time, cools the patient, and checks the colliquative discharge by the skin; it may be joined with an opiate, when that is indicated. The Spiritus Vitrioli dulcis, in the quantity of two or three drams to a pint of water, with some red syrup, makes an elegant and grateful julep; a glassful of which may be taken frequently; it attemperates the heat, relieves the sinking spirits, and acts as a gentle bracer.

CHAPTER XI.

THE regular remissions in the pulmonary hectic, and its general similiarity to intermittents, when joined to the belief of its arising from the absorption of putrid matter, very naturally suggested the practice of giving the Cortex Peruvianus. But though this medicine has been exhibited in every stage of the disease, in every form and quantity, there never was an instance of a consumption of the lungs being cured with it *. On the

* The reader may peruse a paper on this subject, by the late Dr. Fothergill, Med. Obs. and Inq. Vol. 5.

the contrary, I believe experience will juſtify me in aſſerting, that in every caſe where it has been given, the ſymptoms have been aggravated, and the patient precipitated into the laſt ſtage of the diſorder.

Hectic is a term ſo undefined, and applied to ſo many fevers, ariſing from cauſes totally different; that it is not to be wondered, if the bark has cured ſome of them. As for inſtance; in large diſcharges from ulcers, or from a long continuance of the fluor albus, the fleſh and ſtrength melts away, the pulſe becomes quick, and a ſlow continued fever is the conſequence; in ſuch caſes, under proper reſtrictions, the bark is a proper and effectual remedy. But as I mean to confine myſelf to the genuine Phithiſis Pulmonalis, I ſhall not take up the reader's time with common-place obſervations on other ſubjects.

I have entered ſo fully into the nature and cauſe of this fever in former chapters, that I flatter myſelf, I have convinced the reader how perfectly free and diſtinct it is from every ſympton of putrefaction; and my opinion upon this ſubject will receive additional ſtrength, by conſidering the effects of the ſame medicines in each of the fevers.

In the putrid fever the remedies found moſt effectual are, bark, ſnake-root, camphor, volatiles, cordials, and others of the antiſceptic claſs, together with a plentiful uſe of wine. Let any of theſe medicines be given in the pulmonary hectic, and what will be the conſequence? The fever and thirſt will be increaſed, with pain, tightneſs on the breaſt, and difficult breathing; the fever will become continued, attended with ſlight delirium; perhaps nature may make an effort to relieve the conſtitution by the bowels; the diarrhœa will come on before its uſual period, and the patient be hurried to his grave.

grave. This picture is not drawn from any fancy; I have seen repeated instances of it in practice. And therefore earnestly enter my protest against the whole tribe of cordials and antiseptics; excepting only a very small portion of vitriolic acid.

When the patient has arrived at the second or suppurative period of the disease; when he spits up much matter or pus with the mucus; when the cough is frequent and violent, particularly in a recumbent posture; when the hectic is completely formed, with regular remissions and colliquative morning sweats; the intention of cure is, to evacuate the pus in the speediest and most easy manner; to allay the distressing cough, and to give ease and rest to the inflamed and tender lungs.

If the purulent matter can be evacuated from the vomicæ as often as it is collected; not only absorption (if ever it takes place) will be obviated, but the pus not being deposited in the air vesicles and ramifications of the asperia-arteria, in such quantities, much laborious coughing will be prevented; and the tender inflamed lungs acquire rest, the great desideratum in this disease. For the cough not only fatigues and weakens the patient; but by the reiterated concussions of the lungs, the tubercles that are recently formed are, by increasing the inflammation, brought forward to suppuration much sooner than they otherwise would be.

These desirable purposes can only be answered by exciting to vomit frequently. Such a quantity of Pulv: Ipecac: is to be given in the morning fasting, and in the evening, if necessary, as will make the patient vomit once or twice; and this must be repeated every day, as I have before directed; should there be no particular reason to the contrary. It is wonderful to see the effect of this simple reme-

remedy *; the patients themſelves are often aſtoniſhed at the relief they feel, and confeſs it in the ſtrongeſt terms. As by vomiting, a quantity of matter is diſcharged from the lungs, they are ſenſible of immediate eaſe; they breathe with leſs difficulty, and remain many hours almoſt free from coughing; their ſpirits get up; and, as they ſometimes exclaim, they feel themſelves in another world. Although in ſome caſes it is difficult to perſuade them to begin ſuch a courſe; confirmed cuſtom not being eaſily overcome, and long prejudices having great weight even with thoſe in health; beſide, ſuch is the extenſive influence of knowledge; that in chronic complaints, particularly conſumptions of the lungs, not only the patient, but every one they are connected with, become phyſicians; and reaſon and diſpute every inch of ground: but when the remedy has been uſed a few mornings, the ſenſible relief they experience removes every doubt, and induces them to perſevere with great punctuality.

In this period I continue the uſe of Elix: Vit: acid: and the julep, with Sp: Vit: dulc: with the opiate at bed-time, if the cough diſturbs the reſt; conſidering it eſſential not only to procure ſleep, but to keep the lungs quiet; which, happily for the diſtreſſed patient, is always in our power by the means of opium.

In

* Egregium verò vim medicaminum emeticorum ſæpiùs in eo expertus ſum, quotiès ſcil. in maximo diſcrimine verſari videbatur, à gradu aſthmatis aucto, et ab inappetentiâ, et maximo languore indè conſequenti.

Morton, Phthiſ. p. 241.

A vomitorio levamen univerſim ſenſit, id que nòn tantum à ſymptomatis Phthiſicis, verum etiam Rheumaticis.

Morton, Phthiſ. p. 317.

In common caſes, I order no other medicine, but what may be neceſſary to keep the body open. Many circumſtances will perpetually ariſe, where the phyſician muſt be guided by his own judgment; here the ſubject can only be treated in general terms; to deſcend to particulars would ſerve no other purpoſe, but to ſwell the work, and embarraſs the young practitioner.

As the major part of thoſe affected with Phthiſis are females; they are greatly alarmed at the ceſſation of their monthly evacuations, which uſually takes place when the diſeaſe is confirmed, and are very ſolicitous for their return; but as I conſider this circumſtance as merely the effect of the increaſed diſcharge by the lungs and pores, and general weakneſs of the habit; I never order any thing with an intention to its removal, well knowing, that will take place, when the ſtrength of the muſcular fibre is reſtored.

If the plan which has been laid down, is adopted before great ravages are made in the conſtitution; before the body is greatly waſted, and the ſtrength reduced; I am hopeful the third or laſt period of the diſeaſe will ſeldom occur. But if from lateneſs of ſeeking relief, or from any other cauſe, the diarrœha has made its appearance; I perſiſt in recommending the uſe of the Pulv: Ipecac: as the ſtrength of the patient will permit. If aſtringents are of any uſe (and in deſperate caſes we muſt attempt relief by every means) they ſhould be of the mildeſt kind; ſmall doſes of torrefied rhubarb; Decoct: Lig: Campech: and, as acidity is frequently preſent in the firſt paſſages, the Decoct: Alb: makes a very proper drink for common uſe.

Did our power over the operations of the body extend ſo far, as to regulate the diſcharge by the pores

pores and inteſtines in ſuch a manner, as only to evacuate the offending matter; they would not be attended with any ill conſequenee. But the effort raiſed in the conſtitution, in order to diſcharge that offending matter; ſeems to give ſo ſtrong a tendency to the humours, and occaſions ſuch an irritation or diſpoſition in the excreting organs; whether the pores, inteſtines, ſtomach, or kidneys; that the diſcharge continues longer than is neceſſary to relieve the habit; by which means the bodily ſtrength is greatly reduced.

When a medicince is taken to excite vomiting, the coats of the ſtomach become ſo irritable, that very often the operation may be continued to any extent, by only drinking warm water. Sweating and purging ſometimes continue long after the cauſe ceaſes to act. A ptyaliſm, raiſed by a ſcruple of Æthiops mineral, has been known to continue, notwithſtanding every means uſed to ſtop it, for ſeveral weeks. Cuſtom and habit have a wonderful effect upon the bodily organs, as well as upon the mind; and an evacuation that has frequently taken place, will be more eaſily occaſioned, than if the body had not been accuſtomed to it.

In this manner, I apprehend, the profuſe morning ſweats are continued much longer than is neceſſary to relieve the conſtitution from the accumulated fluid; and therefore checking them will prevent that reduction of vital ſtrength which always ſucceeds. But this muſt be done with caution and moderation; for whenever they have been entirely prevented, the fever has become continual, more violent, and every ſymptom exaſperated. Upon this principle I have recommended the few mild aſtringents before mentioned. Their quantity and uſe muſt depend upon their effects; for in this, as in many other diſeaſes, it is not eaſy to determine

à priori what will be a ſufficient doſe; for which reaſon I have avoided giving any formula of the medicines recommended.

When the patient is recovering, and has loſt the cough and hectic fever; a languor and weakneſs frequently remain. In this caſe, bitters, and the chalybeate waters of Iſlington or Tunbridge, will have a good effect, in reſtoring the tone of the firſt paſſages, and ſtrengthening the digeſtive faculties. But as all tonicks, in their action on the human body, quicken the circulation, and augment the heat, we muſt be exceedingly cautious in giving them whilſt any fever remains.

In a diſeaſe attended with ſo many alarming ſymptoms, and ſo frequently terminating fatally; in which authors of the firſt reputation have recommended ſuch a quantity and variety of medicines; it may appear, that the remedies I have propoſed are ſimple and few in number. They are what I have experienced to be efficacious; and I ſeldom find it neceſſary to preſcribe to the fears or fancies of the patient. For in this, as in many other complaints, I am diſpoſed to believe; the more we ſimplify our practice, the better we ſhall aſcertain the effects of the remedy, and the greater will be our ſucceſs.

CHAPTER

CHAPTER XII.

FREE country air is peculiarly neceſſary, and it ſhould, if poſſible, be procured early in the diſorder. But this, like many other means of relief, is too often deferred till it cannot be of any real uſe. How often do we ſee an unfortunate patient, worn down to the laſt dregs of life, hurried out of town to Briſtol, or ſome other place at a diſtance from the capital, expire upon the road; before he reaches half-way to his deſtination? I cannot too often inculcate the neceſſity of keeping the inflamed lungs, as much as may be, at reſt; and nothing contributes ſo much to that end, as breathing a pure, dry, elaſtic air *. There are many places near town well adapted to conſumptive patients in every ſeaſon of the year; where the keen north-eaſt winds of the ſpring, and the ſultry heats of the ſummer, may be avoided. This ſubject has been ſo accuratety treated by a late eminent phyſician †; the ſituations and changes pointed out with ſo much medical ſkill and preciſion, as renders it unneceſſary for me to enlarge upon it here.

Conſumptive

* If the method recommended by Dr. A. Fothergill, in his ingenious Hints on Animation, of giving dephlogiſticated air, ſhould become practicable; I think it is probable to prove a valuable medicine in diſeaſes of the lungs.

† Dr. Fothergill, Med. Obſ. and Enq. Vol. 5.

Conſumptive patients are very generally ordered to Briſtol, to drink the waters at that place. If this journey is undertaken early in the diſeaſe, before the patient's ſtrength is exhauſted; the exerciſe of travelling will probably be of uſe; and drinking pure light water in a clear air, highly conducive to the cure. But I am inclined to think, there is no reſtorative quality in this water, ſuperior to any other of equal purity and ſpecific gravity.

Of all the means that have been attempted to ſtop the progreſs of this ravaging diſtemper; none have been ſo often recommended, or ſo highly celebrated, as riding on horſeback. The learned Sydenham, who deſervedly lies upon the ſame ſhelf with the father of phyſic, had ſo high an opinion of this exerciſe, that he aſſerts, neither mercury in the lues venerea, nor the cortex peruvianus in intermittent fevers, are more certain remedies, than riding on horſeback is in the Phthiſis Pulmonalis; provided the journeys are ſufficiently long, and the traveller takes care to have his ſheets well aired *.

When

* " Neque magis Hypochondriacis prodeſt hoc exercitii ge-
" nus, quàm Tabidis Phthiſiciſque, quorum nonnulli mihi ſan-
" guine juncti multum terrarum equo vectore peragrantes, ex-
" meo conſilio, ſanitati ſùnt reſtituti; cum certò ſciam me vel
" medicamentis quantivis pretii, aut alia methodo, quæcunque
" demum ea fuerit, nihil magis iiſdem proficere potuiſſe, quam
" ſi multis verbis hortatus fueram ut rectè valerent. Neque
" in levioribus tantum malis, crebrâ tuſſi et macie ſtepatis, id
" remedium obtinuit, ſed et in Tabe tantùm non deploratâ,
" ubi nocturnis ſudoribus jam etiam acceſſerat Diarrhœa iſta
" ſuperiùs dicta, quæ Phthiſi confectis mortis prænuntia ſolet
" eſſe, atque adeò ut plurimum ultima rerum linea. Verbo
" dicam. Quantumcunque exitialis Phthiſis et ſit et audiat,
" utpote quâ intereunt duo ferè trientes eorum quos morbi
" Chronici jugulant, hoc tamen ſanctè aſſero, quòd neque
" Mercurius in Lue Veneriâ, neque Cortex Peruvianus in In-
" termittentibus

When an author of ſuch extenſive practice, learning, and candour, makes an unqualified aſſertion, which unfortunately is univerſally acknowledged to be void of foundation; it ſurely ought to humble every writer in his own eyes, and teach him to ſpeak with diffidence and modeſty of the remedies he recommends.

It is well known to every practitioner, who has been converſant in diſeaſes of this kind; that the exerciſe of riding on horſeback, unaſſiſted with other remedies, never cured the Phthiſis Pulmonalis; on the contrary, the indiſcriminate uſe of it has, I have no doubt, very frequently been the means of aggravating the diſeaſe *.

In coughs without inflammation, before tubercles are formed, or at leaſt not increaſed to any degree, it certainly will be of uſe; as no exerciſe ſo effectually ſtrengthens the ſolids, and removes obſtructions in the hypochondriac viſcera. But where the tubercles are advanced, or vomicæ formed; where the parenchymatous ſubſtance of the lungs is much inflamed; where reſt and quiet are ſo eſſentially neceſſary; agitation on horſeback muſt be extremely diſtreſſing

" termittentibus efficaciores extent, quàm in Phthiſi curandâ
" Exercitium jam laudatum; modò æger curet, ut linteamina
" lecti probè fuerint arefacta, atque etiam ut ſatis longa itine-
" ra emetiatur. Attamen hoc notandum, quod vitæ ἀκμὴν præ-
" tergreſſis multo diutiùs in hoc exercitio perſiſtendum, quàm
" infra iſtam ætatem poſitis. Atque hoc multiplici experi-
" entiâ, quæ vix me fefellit unquam, dedici: Et licèt equo
" vehi Phthiſicis præcipuè conferat, tamen et itinera curru
" facta mirandos ſanè effectus quandoque ediderunt."
Sydenham, Epiſt. ad Dr. Cole.

* " Hic vero Phthiſicus alter eſt de duobus, quibus laudata
" adeo ab Sydenhamio equitatio mortem acceleravit."
Morgagni de Sedibus & Cauſis Morborum,
Lib. 2. Ep. 22. art. 13.

diſtreſſing to the patient, and greatly increaſe the inflammation *. Add to theſe conſiderations, that the exerciſe is uſually taken at the moſt improper ſeaſon; in the middle of the day or afternoon; when the hectic fever has come on, and conſequently the tender lungs are more unfit for motion. Whereas, when the exerciſe is adviſeable, it ſhould be taken in the morning, when the fever is off; and, provided the weather is good, the earlier the better; for riding in the heat of the ſun fatigues the patient, and aggravates every ſymptom.

Were riding on horſeback and country air productive of the good effects we have been taught to believe; the diſeaſe would hardly ever prove mortal, but in great cities; where theſe remedies are not to be procured. But it is frequent and fatal in every county in England; where the patients conſtantly enjoy the one, and generally the other, in ſome degree. Allowing riding on horſeback and long journeys to be as effectual as Sydenham has aſſerted; there are but few conſumptive patients whoſe circumſtances will permit them to make the experiment; the greater number being among the lower, and middling claſs of the people, who cannot even afford the expence of breathing country air, ſo eſſential in every period of the diſeaſe.

In the convaleſcent ſtate, when the patient is recovering, when the fever abates, and the cough and ſpitting leſs frequent; eaſy motion on horſeback, in in the morning and forenoon, as it agitates the whole frame, will greatly aſſiſt in recovering perfect

* Errant ſæpè medici, dum exercitationes ægris et valetudinariis imponant, præſertim Phthiſicis, quibus equitatio indiſcriminatim imperatur.

C. Wintringham, de Morb. Quibuſd. Comment. § 73.

fect health; but they ſhould be exceeding cautious of riding in the evening, if there is the leaſt increaſe of fever. Before this period, if their circumſtances will permit, they ſhould go out in a carriage in the morning and forenoon; but even that ſhould be avoided in the evening, if there is an exacerbation of fever in the afternoon. It may be continued as long as their ſtrength will admit of, without fatigue. If this cannot be procured, let them move about a garden, or the fields, when the weather is fair; or wherever there is vegetation and ſhelter from the ſun. Their motion ſhould be gentle, even, and ſlow; avoiding every thing that increaſes their quickneſs of breathing, particularly going faſt up ſtairs, or any acclivity.

Conſumptive people ſhould go to bed early, lie upon a hair matraſs, and get up ſoon in the morning; even if they are obliged to lie down upon the bed or a couch in the courſe of the day. For nothing weakens and relaxes the body ſo much, even in health, as lying ſeveral hours in the morning, doſing between ſleeping and waking; its effects being ſimilar to a hot bath, and nearly as enervating. But in the diſeaſe under our conſideration, it is peculiarly prejudicial; as it promotes and prolongs the melting ſweats, which by early riſing are checked, and the ſubſequent languor in ſome meaſure prevented. Independent of theſe conſiderations, the heat of the bed has been, in the opinion of men eminent in the profeſſion *, thought to increaſe pleuriſies and inflammations of the breaſt: how improper muſt it then be, where a continual inflammation ſubſiſts? This is an additional reaſon for riſing early, and which I cannot too ſtrongly recommend.

We

* Sydenham. Muſgrave, Gulſt. Lect.

We are frequently ſurprized to find the minds of conſumptive people wonderfully ſupported by hope, through every ſtage of the diſeaſe, even to the laſt moment of their lives. Firmly perſuaded they ſhall recover their health, and live to execute the numerous plans they are ingenious and induſtrious in forming. This happy diſpoſition ſhould be encouraged; and every thing that is likely to diſturb the quiet of their minds, aſſiduouſly guarded againſt. Such amuſements as their ſituation permits them to ſhare in, and to which their inclinations lead them; will not only alleviate their ſufferings, but, from the ſympathy ſubſiſting between the mind and body, contribute, not a little, to removing the complaint. Above all, muſic produces this effect in an eminent degree; it gently ſooths the imagination, harmonizes the paſſions, and attunes every jarring element in our frame to quiet and reſt. This was the opinion of the reſpectable author of that elegant poem, The Art of preſerving Health *; where we are at a loſs which to admire moſt, the juſtneſs of the medical precepts, or the beauty of the numbers they are delivered in.

* There is a charm, a power, that ſways the breaſt;
Bids every paſſion revel or be ſtill;
Inſpires with rage, or all our cares diſſolves;
Can ſoothe diſtraction, and almoſt deſpair.
That power is MUSIC:——
Muſic exalts each joy, allays each grief,
Expels diſeaſes, ſoftens every pain,
Subdues the rage of poiſon, and the plague;
And hence the wiſe of ancient days adored
One power of med'cine, melody, and ſong.
Amſtrong, Art of preſerving Health.

CHAPTER

CHAPTER XIII.

THE great efficacy of ſea-voyages in curing diſeaſes has been evinced by authors, both ancient and modern. In Phthiſis Pulmonalis, among the former, it is recommended by Celſus * and Pliny †. Among the moderns, by Boerhaave ‡, Mead ||, Cullen ¶, Whytt §, and Gilchriſt, who has

* " Quod ſi vero Phthiſis eſt, opus eſt, ſi vires patiuntur " longa navigatione. Si id imbecillitas non ſinit mare tamen, " ſed non longe, vectari commodiſſimum et."

Celſus, Lib. 3. Cap. 22.

" Utilis etiam in omni tuſſi eſt peregrinatio, navigatio lon- " ga, loca maritima."

Celſus, Lib. 4. Cap. 4. Sect. 4.

" Si vero pituita Stomachus impletur ultis navigatio."

Celſus, Lib. 4. Cap. 5.

† " Quin et vomitiones ipſæ, in ſtabili volutatione commo- " tæ, plurimis morbis capitis, pectoris, oculorum, medenter, " omnibuſque propter quos elleborum bibitur."

Plin. Hiſt. Lib. 31 Cap. 6.

‡ Aphor. Sect 857, 858.

|| Monita et Præcepta Medica, Cap. 4. De Febris Lentis.

¶ Cullen, Firſt Lines of the Practice of Phyſic.

§ " A young gentleman lately my patient, who had a very " delicate nervous ſyſtem, and whoſe ſtomach and inteſtines " were ſo uncommonly ſenſible, that a ſingle ſtool, procured " even

has written expreſsly upon the ſubject; and relates many caſes apparently authentic, where it performed a perfect cure.

Of late years it has been the cuſtom to ſend conſumptive perſons to Liſbon, and other parts abroad; but this, like every attempt to cure, being generally uſed when in the laſt period, we are not to wonder that it ſeldom ſucceeds.

In the caſes where change of climate has proved ſucceſsful, I am diſpoſed to attribute the benefit received, to the effect of the ſea-voyage, rather than to the air of the place where they reſided. I have myſelf known ſome cures performed by this means; and have no doubt, that if it was uſed in proper time, before the ſtrength of the patient is deſtroyed, and the digeſtive powers weakened, the inſtances would be more numerous.

Some authors who have written upon this ſubject, have ſuppoſed the good effects of ſea-voyages are produced by the patients conſtantly inhaling balſamic and reſinous particles with which the air is impregnated from the ſhip and her equipage; and to the exerciſe by the ſhip's motion. All this is merely imaginary. Whoever has been at ſea muſt know,

" even by Elixir Sacrum, made him faintiſh; and vomiting " or purging was almoſt ſure to bring on fainting fits, with " ſlight convulſions. This perſon, I ſay, had his conſtituti- " on ſo changed-while he was at ſea, that although, during a " voyage of 4 or 5 weeks, *he vomited much every day*, and " purged frequently; yet he had neither any faintings nor was " ſenſible *of any particular weakneſs in his ſtomach or bowels.* " After this voyage he had no return of thoſe fits to which " for ſome time before he had been liable, till at the diſtance " of eight months, when he applied a bliſter to the under " part of his breaſt; the pain of which, when taken off, oc- " caſioned fainting, with ſlight convulſions."

Whytt, on Nervous Diſorders, p. 643.

know, that there is not near ſo much exerciſe as in a carriage: and if we conſider the free circulation of air; the wind perpetually blowing whatever ſmells may ariſe, away from the veſſel; and the largeneſs, and cleanneſs of the apartments; whatever balſamic or reſinous particles may fly off from the ſhip or her rigging; muſt be ſo thinly diſperſed, that no poſſible effects can ariſe from their application to the lungs.

In conſequence of this mode of reaſoning, patients have been placed in ſmall rooms, in which gums and reſins were burnt on hot iron. The air being loaded with ſmoke and vapor, they breathed in it for a certain time every day, and it is ſaid with good effect *. Various other ſteams from vegetable ſubſtances have been uſed upon the ſame principle; but as far as I can judge from experience; and I have ſeen them tried for a great length of time; I am diſpoſed to think they produce no permanent relief; and very frequently I have ſeen the cough aggravated, by the heated air ſtimulating the inflamed tender lungs. One conſtant effect of all theſe applications, is quickening the breathing, which ought at all times to be carefully guarded againſt.

When people firſt go to ſea, they are, with few exceptions, always ſea-ſick, which continues many days, in ſome the whole voyage; but, after a ſhort time, only in the morning when they firſt ſtand erect; for during its utmoſt violence, they are rarely ſick in an horizontal poſture.

To the ſickneſs, I attribute the ſucceſs of ſea-voyages in Phthiſis. For though this is of all ſickneſs the moſt diſtreſſing; ſtraining violently, till pure bile is pumped into the ſtomach and diſcharged; thereby occaſioning obſtinate coſtiveneſs; yet their

* Mudge, on the Catarrh.

their appetite remains good, their ſpirits light and chearful, they get fleſh, and are evidently in perfect health. I have known ſeveral people, who were always ſea-ſick when it blew hard, even if the ſhip was at an anchor; and though they were ſubject to this for years, yet their health was not in the leaſt impared. This I conſider as a poſitive proof, that vomiting may be repeated frequently, and perſiſted in to any length of time, without injury to the ſtomach or general health; for ſea-ſickneſs is more violent, than the operation of any emetic medicine that ever I ſaw given.

In the caſes enumerated by Dr. Gilchriſt, the patients were generally ſea-ſick, and vomited much bile; and in ſome, the good effects ceaſed, when they grew familiar to the ſhip's motion and were no longer ſea-ſick. He relates the caſe of a conſumptive patient who went to ſea three times; the diſtance ten leagues each time; he was each time ſick, vomited bile, and was cured of his diſeaſe. The Dr. ſuppoſes the benefit his patients received, to ariſe from the exerciſe, and breathing a pure air, impregnated with ſaline, bituminous particles. But in the laſt caſe we have mentioned, where the patient was at ſea only five or ſix hours at a time, the effects could not proceed from the air or exerciſe; but were evidently owing to the vomiting. The ſtomach was cleaned out, the bilious obſtructions removed, and the digeſtive faculties reſtored; good chyle was produced, and the body recovered its former health; the cauſe of the diſeaſe being removed.

The inſtances in which ſailing has been tried, having been in deſperate caſes, and conſequently often failing, ought not to be brought as an objection to its uſe. I muſt own I ſee no difficulty in carrying ſuch

ſuch a practice into execution with as much eaſe, as going from London to Briſtol.

A trial might be made in ſhort trips on the weſtern coaſt of England, or acroſs the channel to France; or even to Holland, according to the ſeaſon of the year. When a diſtant voyage is eligible, the ſouthern climates ſhould be choſen. Liſbon is near, and acceſſible by the packets going every month. Madeira is ſtill better, being at a greater diſtance, more to the ſouthward, and the air, from its inſular ſituation, purer and infinitely more healthy. But the Mediterranean is what I would prefer to all other ſea-voyages. The time at ſea is ſufficiently long; the patient would breathe the ſoft balmy atmoſphere of Italy, and feed upon its delicious fruits. There, they might make excurſions on ſhore, and agreeably amuſe their minds, in viewing the remains of antiquity, to be met with almoſt in every part: but the ſhip ſhould be their place of reſt, to her they ſhould return every night, as to their home. Italy is delightful for many things; but the accomodation for ſleeping, eſpecially to a ſtranger, is not among the number.

Whenever the patient has got the better of ſeaſickneſs, or when they are not at firſt affected by the motion; I would recommend that they ſhould vomit every morning, or every other morning, as the ſymptoms may indicate; and to guard againſt coſtiveneſs by any proper opening medicine: when the ſea-water agrees, nothing can be more ſuitable. In a ſhip of any conſiderable ſize, they can be ſufficiently ſupplied with proper food, and, excepting vegetables, equal to what they have on ſhore.

This remedy, like every other, to prove effectual, muſt be uſed early in the diſeaſe. When that is the caſe, and when it can be undertaken without diſturbing the mind, in a proper ſeaſon of the year;

year; in a ſhip of ſuch burthen as to afford every neceſſary convenience; and under the reſtrictions above-mentioned; it is my opinion, that art can furniſh no method of cure more effectual in Phthiſis Pulmonalis.

I muſt here ſolicit the attention of the reader, while I obſerve; that the great cauſe of the inefficacy of remedies that have been uſed in this diſeaſe, proceeds from the lateneſs of their application. The patient is uſually far advanced before the phyſician is conſulted. They have loitered away their time in uſing family noſtrums, and oily greaſy emulſions, till it is beyond the power of art to ſave them from the grave.

There is no diſeaſe more replete with danger than the pulmonary conſumption, and that danger is augmented by becoming familiar from its frequency. It ſteals upon the patient under the inſiduous guiſe of coughs, colds, and rheums, of which this uncertain climate of ours is ſo productive: and when they, and their friends, ſo far from ſuſpecting danger, imagine they are getting better; hear with aſtoniſhment that they are paſt recovery. This is a matter of ſuch importance, that if I could only put people upon their guard, and quicken their apprehenſion of danger; I ſhould hope my time had not been uſeleſsly employed upon this ſubject.

From whatever method the ſymptoms of the diſeaſe begin to abate, it is eſſentially neceſſary to perſevere with unwearied diligence; for a ſmall relaxation may reduce the patient to his former point of danger. Even when the cure is perfected, and every ſymptom of diſeaſe has diſappeared; it will be neceſſary to continue in his plan of diet for ſome time, and to return with cautious ſteps to his former mode of living. This in ſome conſtitutions

can

can never be done with ſafety; the diſorder, in a peculiar manner, leaving a tenderneſs, and a diſpoſition to its former ſymptoms, in the habit; which render them liable to get cold, and ſuſceptible of every variation in the weather.

The moſt effectual means of reſtoring general health, and ſtrengthening the conſtitution, after they have been injured and reduced by this or any other chronic diſeaſe; is by living upon a nouriſhing, ſimple, ſpare diet, not exceeding in quantity or quality; breathing a pure, dry, country air; taking ſuch exerciſe as the ſtrength will bear without fatigue, particularly on horſeback; and uſing the cold or ſea bath with proper precautions.

CHAPTER XIV.

IT has long been a characteriſtic of the inhabitants of this country, to indulge in groſs animal food: and it is extremely difficult to perſuade them that any good can ariſe from abſtinence. Even when ill, they think nouriſhing and comforting, eſſential to their recovery: and this is obſerved, not only among the lower and middling claſs, but among thoſe, whoſe education and rank in life might be ſuppoſed to teach them better. Strong broths, jellies, wine whey, &c. are as regularly found

in a ſick chamber, as if they thought a cook more eſſential than medical advice.

When the body is diſordered, nature wiſely ſhews an averſion to food; what then can be ſo abſurd as to force down aliment when there is no appetite? Nothing——except drinking when there is no thirſt.

The principle in the human body termed Nature, has a wonderful power of reſtoring health, if left to itſelf, and no impeding cauſe introduced to the conſtitution. Many diſeaſes might be cured by abſtinence alone, perſevered in to a ſufficient length of time; but that abſtinence muſt be ſomething more than lowering the common diet, and avoiding high-ſeaſoned food and ſpirituous liquors. What I mean by abſtinence, is living upon as little food as will ſupport life, and that of the plaineſt and ſimpleſt kind, compoſed of particles the leaſt heating and irritating; drinking only water; lying upon a hard bed, and riſing early in the morning. I could adduce many living inſtances in proof of the efficacy this plan has been attended with. Perhaps the caſe moſt publicly known, is Wood, the miller of Bellericay, in Eſſex; who, from a corpulent and generally diſeaſed habit, at the age of forty; became thin and perfectly healthy, by abſtinence and exerciſe alone. He lived upon pudding made of ſea-biſcuit and a little milk; drank only water; lay few hours in bed; and uſed as much exerciſe as his ſtrength would admit of, without great fatigue.

As the fluids of our bodies are perpetually circulating and changing; new chyle being conſtantly poured into the ſubclavian vein, collected by the lacteals and lymphatics; and the finer parts continually excreted by ſenſible and inſenſible perſpiration, the groſſer by other emunctories; by drinking only water, and living on a vegetable diet, merely

ſufficient

ſufficient to ſupport the ſtrength; thoſe fluids will in time be entirely altered, their quality and diſpoſition changed. The parts of the body which had been injured by diſeaſe, or intemperance, will recover their natural ſtate, and health be reſtored. I am of opinion, where a ſufficient degree of vital ſtrength remains, and the digeſtive faculties are not deſtroyed; few chronic diſeaſes would reſiſt a plan of this kind, ſtrictly purſued for a ſufficient length of time. It is not to be expected, that when the limbs are rendered uſeleſs, the joints fixed, and the glands indurated; a ſpare diet will work miracles, and reſtore thoſe parts to their original ſtate. But it will do more than any other method; and, where a cure cannot be performed, the ſymptoms will be mitigated, and the diſeaſe rendered ſupportable; which, in many deplorable caſes, is all that can be expected from art.

Such a plan ſhould be entered upon with great caution and circumſpection; all ſudden changes being dangerous. For though there is a power in the human body, as in the mind, of accommodating itſelf to its ſituation; the inhabitant of the north enjoying health under the verticle ſun in Africa; yet ſuch tranſitions, if poſſible, ſhould be made gradually. Regard muſt be had to the former manner of life; and where they have indulged freely in the pernicious luxury of the table, let them retrench by degrees, till they come to that point it is proper to remain at.

The changes in the conſtitution being produced by ſlow and imperceptible degrees; patience and perſeverance are therefore indiſpenſably requiſite.

Much depends upon the regulation of diet in every diſeaſe; but in none more, than where the lungs are affected. In ſuch caſes, the uſual practice has been, to abſtain entirely from animal food; and in general,

general, it is judicious and proper. In the inflammatory period of the diſeaſe, when the fever is continued, and before pus is formed in the lungs; I would recommend a vegetable diet, with milk, in any form it will agree with the ſtomach. Sago, barley, millet, and rice, make a pleaſant variety; and ripe fruit may be indulged in at pleaſure. Thames flounders, and ſmall whitings, may be taken occaſionally without prejudice.

In the advanced ſtage of the diſeaſe, when purulent matter is ſpit up, and the hectic fever with remiſſions and morning ſweats compleatly formed; I think a ſmall portion of animal food, taken for an early dinner, of uſe in ſupporting the ſtrength. It ſhould conſiſt of chicken, or weak broth, from lamb or veal, in preference to beef or mutton; made by boiling the meat a ſhort time.

Jellies of calves feet, harts-horn ſhavings, and iſinglaſs, are univerſally recommended to the weak and infirm. They are made from the moſt viſcid parts of animals; and by long boiling, their lighter and more volatile parts being diſſipated, they are not only liable to the ſame objections as animal food in general, but I much doubt of their poſſeſſing any nouriſhing property. There is always a certain quantity of wine added to them, and that commonly conſiderable; they are therefore unfit diet for the conſumptive; where it is neceſſary to be particularly guarded againſt cordial and nouriſhing meſſes.

Milk is a mild ſoft fluid, that requires little force to be aſſimilated into nouriſhment; it may be taken in any manner that is agreeable. Sometimes cows milk forms a curd too denſe to be eaſily digeſted; in ſuch caſes, runnet-whey may be ſubſtituted, or aſſes milk, which is lighter; but it ſhould be drank to the quantity of one or two pints a-day. The lighteſt

lighteſt and beſt of this claſs is women's milk, and when it can be taken, is to be preferred to every other. There are inſtances related of its curing, without the aſſiſtance of medicine, even in the laſt ſtage of the diſeaſe *.

The vulgar practice of mixing rum or ſpirits in the milk cannot be too ſtrictly guarded againſt. Butter-milk, from its aceſcent quality, is cooling, nouriſhing, and refreſhing; it may be drank at pleaſure.

Ice-cream is extremely grateful, and not a contemptible medicine, eſpecially when there is a diſpoſition to hæmoptoe,

Oyſters, muſcles, craw-fiſh, and other teſtacea, are uſually admitted into the diet of the conſumptive. Their qualities are nearly equal, and are among the tendereſt of animal foods; but from their viſcidity, are not eaſily expelled. They may be taken occaſionally as a variety.

It is to be carefully obſerved, that the quantity of food ſhould be the leaſt the patient can ſubſiſt upon; and of parts the ſofteſt and moſt eaſily diſſolved. A ſmall portion ſhould be taken at a time, and repeated the oftner.

The drink, in every period of the diſeaſe, ſhould conſiſt of water, the lighteſt and ſofteſt that can be procured, with toaſted bread infuſed in it; or, what is better, boiling water poured upon toaſted bread, and let ſtand till it is cold, by which the animal and vegetative matter will be precipitated †. Milk and water, runnet-whey, and lemonade, may be taken as a change. In ſummer, when there are ripe

* Robinſon, p. 2. p. 148.

† Diſtilled water is lighter than any other, and when it can be procured, is greatly to be preferred, not only as a ſoft pleaſant drink; but its medicinal quality I conſider of great importance, in the cure of chronic diſeaſes.

ripe fruits, their juices mixed with water makes an agreeable and elegant beverage. But when the patient is indulging with ripe fruit, attention muſt be paid to the ſtate of the bowels, and the firſt tendency to a diarrhœa guarded againſt.

Wine, ſpirits, and fermented liquors of all kinds, however diluted, and however anxiouſly longed for, muſt be rigidly forbidden. They raiſe the ſpirits, and relieve the languor and faintneſs always attending on morning ſweats; but they infallibly increaſe the ſucceeding fever, and aggravate every ſymptom.

To thoſe unacquainted with the chambers of the ſick, ſuch regulations may probably appear trifling and unneceſſary; but they who ſee and know, how ſick people are dieted; know that upon ſuch trifles, the well-being of the patient depends. In vain the phyſician may preſcribe the moſt powerful and efficacious medicines, if the nurſe is allowed to pour in ſtrong broths and high-ſeaſoned haſhes in his abſence.

I cannot too ſtrongly inculcate, the greateſt attention to diet in every period of this diſeaſe. Diet alone, without the aid of medicine, will go great lengths in the cure; but there is no medicine, nor any other remedy, that has yet come to my knowledge, capable of producing any permanent relief, without a ſtrict regulation of diet. And however ſevere ſuch reſtrictions may appear to the patient or their friends; they may reſt aſſured, and I ſay this with full confidence, that ſo far from being ſtarved, as they ſo much apprehend; a ſhort trial will convince them of its powerful good effects.

CHAPTER

CHAPTER XV.

SOME authors have ſuppoſed pulmonary conſumptions to be infectious *. Of this I can ſay little from my own experience. Perhaps in the laſt ſtage, when the remaining portion of the lungs is, as it were, deluged with purulent matter, particles of it may be exhaled by the breath; and, if received into the lungs of a healthy perſon, the diſeaſe may poſſibly by that means be communicated. It is therefore neceſſary to guard againſt it, by preventing children and young people, being much about the ſick; particularly not to let them ſleep in the ſame bed, or even in the ſame chamber, if it can be avoided.

I have now gone through the ſeveral heads propoſed at the beginning of this work; in the courſe of which, I have been leſs ſolicitous of writing well, than writing intelligibly. I have endeavoured to unite perſpicuity with brevity, by avoiding common-place, trite obſervations, and uſeleſs digreſſions. Many errors and repetions I am ſenſible will be perceived; but, ſhould the practice recommended be found uſeful, in a diſeaſe, hitherto, when confirmed,

* Contagium etiam hunc morbum propagat. Hic enim affectus (uti frequenti experientiâ obſervavi) lecti ſocios miaſmate quodam, ſicuti febris maligna, inquinat.
Morton, Phthiſiologia, p. 70.

firmed, ranked among the incurables; I have no doubt but the reader will paſs them over with liberality; regarding the deſign, rather than the execution.

A ſhort recapitulation will put the reader in poſſeſſion of my ideas upon this ſubject, at one view.

In the early inflammatory period, before matter is ſpit up, bleeding is to be repeated according to the urgency of the ſymptoms, and ſtrength of the patient. Vomiting to be excited every morning. Cooling, lubricating, and anodyne medicines. The body to be kept open by gentle purgatives. Thin diluting drinks to be taken plentifully. The patient to keep warm, and promote perſpiration. The bed to be avoided in the day-time. Diet; milk, ſeeds, and vegetables.

In the ſecond period, when purulent matter is diſcharged in large quantities; the hectic fever, with remiſſions, and morning ſweats, confirmed; and when the fleſh is waſted, and the ſtrength debilitated; the vomiting powder is to be repeated morning and evening; a draught with Elix. Vitr. at bed-time; and the julep, with Sp. Vit. d. through the day. If the cough prevents ſleep, an anodyne to be given, and repeated occaſionally. The body to be kept open by gentle aperient medicines. Diet to conſiſt of ſeeds, milk, vegetables, ripe fruit, broth made of young animal ſubſtance, and the tendereſt and ſmalleſt fiſh, oyſters, muſcles, &c. The drink, toaſt and water, or water with the juice of ripe fruit, and lemonade. Country air, gentle exerciſe, and ſea-voyages, when they can be complied with.

In the third and laſt ſtage, when the diarrhœa makes its appearance, the ſame method of cure is to be continued; with the addition of mild aſtringents;

gents; varying the remedies according to the ſtrength, and other circumſtances, of the patient.

In every period of the diſeaſe, it is of the utmoſt importance to keep the mind calm, eaſy, and chearful; for whenever anxious corroding care, vexation, or uneaſineſs, ſits brooding on the imagination, medical aſſiſtance will be applied in vain.

To conclude. From conſidering this ſubject for many years, obſerving with careful attention ſuch caſes as have occurred in my own practice, and miſſing no opportunities of examining the bodies of thoſe who have died of this diſorder; I am of opinion, that a conſumption of the lungs, if taken in time, before the ſtrength is greatly debilitated, and the digeſtive faculties have loſt the power of aſſimilating nouriſhment, is as curable, as any other diſeaſe of the internal viſcera.

But if the patient, or their friends, will defer calling aſſiſtance; or, when called, neglect the advice, till the diſeaſe is far advanced; and ſpend that time in ſwallowing family noſtrums, and uſeleſs nauſeous medicines, which might be employed in following the beſt advice they are able to procure; are we to be ſurprized, that a diſeaſe, in itſelf always full of danger, ſhould ſo frequently terminate fatally?

PRINCIPIIS OBSTA, SERO MEDECINA PARATUR,
CUM MALA PER LONGAS CONVALUERE MORAS.
OVID.

FINIS.