

**A practical and historical treatise on consumptive diseases : deduced from original observations, and collected from authors of all ages.**

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London : Underwood, 1815.

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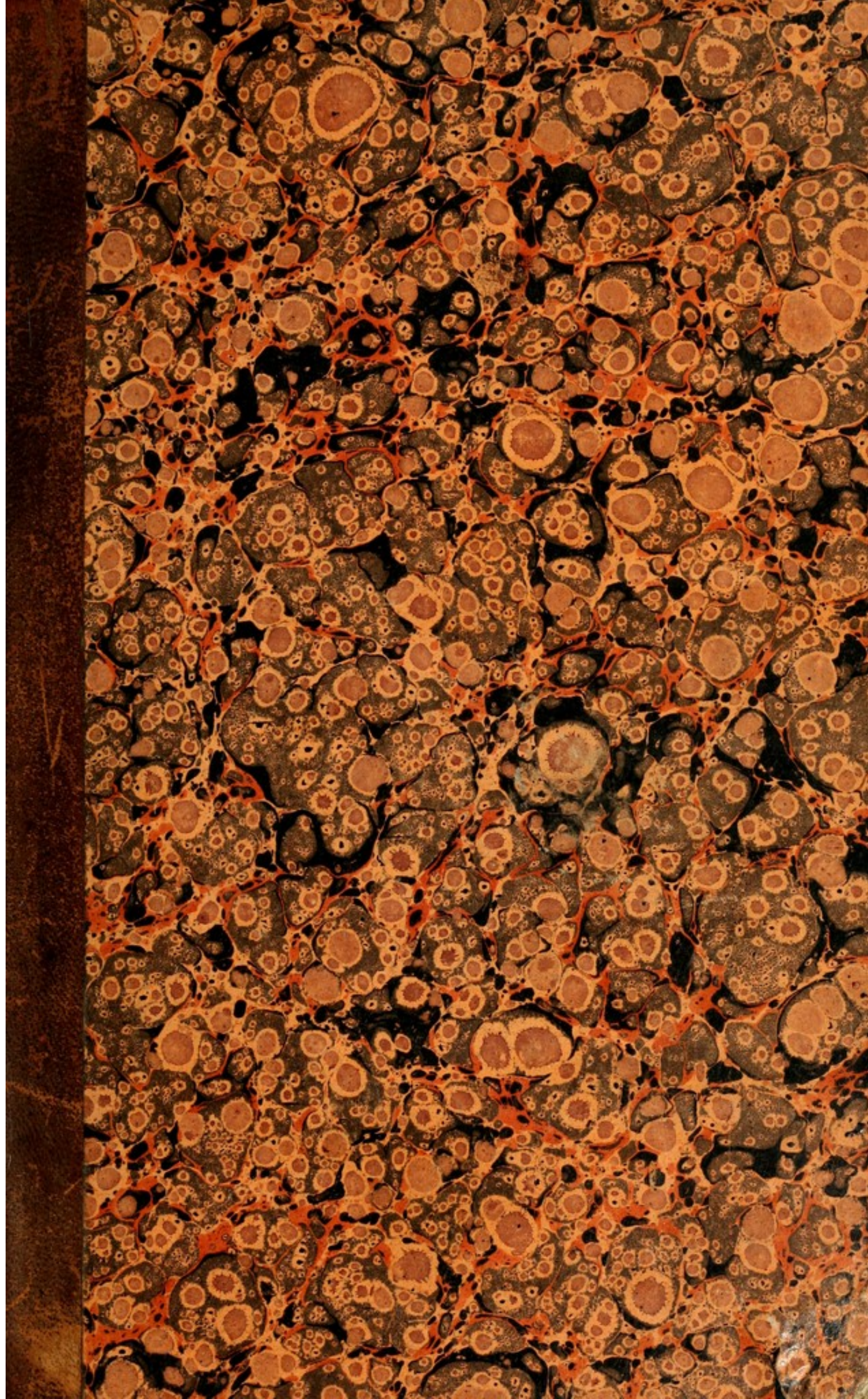
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A PRACTICAL  
AND  
HISTORICAL TREATISE  
OF  
CONSUMPTIVE DISEASES.

DRAWN FROM ORIGINAL OBSERVATIONS,  
AND COLLECTED FROM AUTHORS OF ALL AGES.

**A TREATISE**  
ON  
**CONSUMPTIVE DISEASES.**

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, AND PHYSICIAN  
TO ST. GEORGE'S HOSPITAL.

LONDON.

PRINTED BY A. B. HOWLAND, 10, WHITE COURT, LANE.

FOR THOMAS UNDERWOOD, 32, FLEET STREET, AND  
JOHN CALLOW, CROWN COURT, ROYAL

1816.



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LONDON:

PRINTED BY E. N. HOWARD, 10, BOND STREET, 1804.  
FOR THOMAS UNDERWOOD, 35, FLEET STREET, AND  
JOHN GALLON, CROWN COURT, 1804.

# PREFACE.

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TO HUDSON GURNEY ESQ.

THIS WORK IS DEDICATED

IN TESTIMONY OF SINCERE REGARD

BY THE AUTHOR.



## PREFACE.

---

I HAVE endeavoured to comprehend in this work every fact of importance, which I have been able to observe, or find recorded, with respect to the nature and cure of the diseases belonging to a single genus: and I conceive that the information, contained in my Medical Literature, may in some measure facilitate the execution of a similar monography, respecting every other disease, which may be selected by any future author. It will readily be granted, that labour, thus concentrated, must commonly be more conducive to the advancement of science, than when employed in the compilation of a more general and more elementary work; and I shall consider the publication of this volume as affording a sufficient apology, for the nonappearance of the more extensive system of practical physic, in which I was once engaged. I must not omit to acknowledge my great obligations, in the first place, to Ploucquet's col-

lection of references to authors, so much more ample than it was the object of my own Medical Literature to exhibit; and secondly, to the Library of the Medical and Chirurgical Society, without which a very considerable part of the materials, employed in this work, would, for the present, have been inaccessible to me.

The title of the second book is not to be understood in exact contradistinction to that of the first; many of the facts related in it being immediately applicable to practice, and some original observations being occasionally intermixed with them: but the historical order was considered, for several reasons, as the best calculated to enable the reader to attend to them with the least effort, and to appreciate their importance with the greatest confidence: and the index will enable him to connect them, in any order, that is most convenient for the objects of his pursuit.

T. Y.

WELBECK STREET,  
15 July, 1815.

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A TREATISE  
ON  
CONSUMPTIVE DISEASES.

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BOOK I. PRACTICAL OBSERVATIONS.

CHAPTER I.

SYMPTOMS OF HECTIC FEVER.

**CONSUMPTION** is, in almost all civilised countries, the most extensively and inevitably fatal of diseases. The number of the works, which have been published respecting it, has been proportional to the importance of the subject; and he who attempts to offer any thing new, with regard to consumptive diseases, may easily fail of exciting or deserving the public attention, from the high respectability of his predecessors in the same department of medicine, and may be in danger of being accused, by those who are aware of the difficulty of the undertaking, either of thoughtlessness, or of rashness. But no man's abilities are so mean, that, if he employs them diligently, he may not hope to be of some use to the public, in the improvement of the science

which he professes ; and a very few accidental, but well established observations, on a particular branch, may be sufficient to justify him in choosing that branch for the subject of further researches, both practical and literary. The physician, who studies nature only, confines himself to the faculties and opportunities of a single individual : he, who endeavours to profit by the experience of all ages, calls up to his assistance thousands of the dead and of the living : and he, who combines both these sources of improvement, may produce a work, which must be secure of excelling the productions of former authors, provided that, with equal talents, he possess superior industry and perseverance.

We are to understand the appellation “ Consumptive Diseases,” as comprehending all the species and varieties, which are referred, according to the classification approved by Mead, Macbride, and many other authors, to the genus Hectic Fever. It is indifferent to the propriety of this arrangement, whether we consider Hectic Fever as sometimes an idiopathic and independent disease, or as always merely symptomatic of some other local or constitutional affection : for “ we are at liberty,” as I have observed on a former occasion, (*Med. Lit. P. 40.*) “ to choose any of the train of causes and effects, for determining the character ” of a disease, “ as may be most convenient for the general purposes of the system,

provided that they be sufficiently constant ;” and there is no question, that the hectic of the consumptive is abundantly constant to form a technical character, certainly much more so than any of the criteria, usually employed by naturalists, for establishing the distinctions essential to their methodical arrangements.

From the time of Hippocrates to that of Mr. John Hunter, it has been generally supposed, that in affections, complicated with febrile symptoms, the fever is the most formidable and fatal part of the disease ; and although Stahl was of opinion, that a serious derangement of any important viscus was of itself sufficient to destroy life, yet it is by far most eligible to omit the precise state of the diseased viscera, in the definitions and divisions to be employed in practical nosology ; since the greatest uncertainty must often be introduced by characters of this kind, until the moment when all our systems can be of no further advantage to the patient. The existence of idiopathic hectic is asserted by Galen, by Hunter, and by Willan ; and in all diseases, accompanied by a symptomatic, or sympathetic fever of this kind, the fever is a better measure of the degree of constitutional affection, and of the chances of recovery, than any other assemblage of symptoms that can be put in competition with it.

The essential character of a Hectic Fever consists in a frequent weak pulse, flushings in the face, the hands, or the feet, and profuse night sweats, or diarrhoea. The state of the renal secretion is too various to assist in the distinction of the disease, except so far as it is influenced by that of the cutaneous exhalants.

The fever is more or less remittent, but never wholly intermittent: the frequency of the pulse is generally from 100 to 140 in a minute; seldom falling below 100, even in the time of a remission, and in some cases, never being under 120; while in other constitutions, the pulse of health may be so slow, that 90 strokes in a minute would be enough to indicate an exacerbation of the fever. The pulse is generally weak, but sometimes hard and wiry, though small: this commonly happens where there is much tendency to inflammation in the constitution, and in such cases the remissions are commonly less observable.

The temperature, as indicated by the thermometer, affords, in almost all fevers, a criterion of the severity of the disease, more certain, and less liable to accidental variation, than the numerical frequency of the pulse: and in fevers of the continued form, the heat, measured under the tongue, in the axilla, and even in the hand, when

well covered, is in general pretty regularly progressive in its increase and diminution, according to the actual intensity of the fever, without materially abating during the temporary remissions of the preternatural frequency of the pulse. De Haen has indeed related a case, in which a fever was announced by a great increase of the thermometrical temperature, some days before the the frequency of the pulse was affected, as if the increase of the action of the heart were rather a consequence than a cause of the increase of animal heat; an opinion which is perhaps in some measure favoured by the experiments of Mr. Brodie on the functions of respiration.

In hectic fever, the thermometrical temperature has been seldom recorded, and I have been able to find but very few authorities to compare with my own remarks on the subject. Dr. Kinglake has observed, that the temperature is less elevated, in consumptive cases, above the usual standard of health, than in other fevers; and it is not uncommonly believed, that the real elevation in hectic is very inconsiderable. Where, however, I have had leisure to ascertain it, the elevation has seldom amounted to less than  $2^{\circ}$ , and has very often been as much as  $4^{\circ}$  or  $5^{\circ}$ : a thermometer even held in the hand, for a sufficient time, frequently rising to  $100^{\circ}$  or  $102^{\circ}$  at all hours of the day: although, in some far advanced cases, it has stood at  $97^{\circ}$  only, under the tongue. It has

been observed that Europeans, going to the West Indies, generally have the temperature of their bodies elevated a degree or more, for the first year or two of their residence there; a circumstance, which may be considered as showing the presence of a slight degree of habitual hectic fever, in its simplest form.

The tongue is seldom so much furred as is usual in most other febrile affections; its edges are generally of a bright red, and the papillae swollen and prominent. Where, however, the biliary system is deranged, the tongue is generally covered with a white coat, which appears to be connected with some sympathetic affection of the stomach: while, in the most common kinds of hectic, the digestive powers are little impaired, and the appetite remains good to the last.

The principal exacerbation of the fever generally occurs about five in the afternoon; but it sometimes happens at nine or ten in the morning, as I well remember to have constantly observed in my own case, at the age of fifteen, when I had every symptom usually attending the formation of pulmonary tubercles, though they never arrived at the period of suppuration. A similar instance of an exacerbation occurring in the morning only is recorded by De Haen; but it happens more commonly that there is a secondary or slighter paroxysm about noon, or soon after, while the principal fit is in the evening. It is

also a matter of dispute among authors, whether a paroxysm is not always brought on, in true hectic, by taking food : Galen makes this circumstance a characteristic of a regular hectic ; and though Cullen asserts, that food taken in the morning will not occasion an exacerbation, the truth of his opinion has been questioned by Vogel, Wilson, and other late authors, who confirm the observation of Galen, and assert that a full meal, taken at any time of the day, is always followed by a very observable increase of the febrile symptoms.

The exacerbations are marked by a sensation of burning heat in the palms of the hands, which become red and mottled, and frequently in the soles of the feet : there is also a circumscribed redness in the cheeks, particularly in persons of a delicate and florid complexion ; and in such persons, the colour constantly present in the cheeks, during the remission, has also a more abrupt termination, and a brighter tint, than in the state of perfect health.

It is commonly asserted, that the hot paroxysms of hectic fever are preceded by very distinct cold fits or chills ; and there can be no doubt that the sensation of cold is often in reality very severe : but it does not appear to have been ascertained, that the thermometrical heat of the blood in the internal parts is even reduced, during these cold fits, to the natural standard, though the cir-

ulation in the extremities may possibly be impeded by the contraction of the capillary vessels. It is well known that the sensation of chilliness is often perceived, while the skin is manifestly rather hot than cold to the touch of another person: this sometimes happens immediately after a meal, without any other symptoms of hectic fever: and it may possibly be merely the consequence of a morbid increase of sensibility in the nerves of the skin.

Whatever may be the form, or the irregularities of the exacerbations in the day time, they are generally succeeded, towards the end of the night, by copious sweats, either from the whole surface of the body, or, in the more unfavourable forms of the disease, from the neighbourhood of the parts principally affected. The fluid, discharged by the skin, is more or less unpleasant in its sensible qualities, especially if suffered to accumulate, by a want of attention to frequent changes of linen. When a diarrhoea supervenes, in the later stages of the disease, the sweat generally disappears, and sometimes one of these affections succeeds the other alternately, at longer or shorter intervals, although the sweat does not always return when the diarrhoea has been checked. The renal secretion frequently deposits a reddish sediment of uric acid, which, as Dr. Wilson has shown, may be considered as depending on the state of the cutaneous exhalants: frequently too

the sediment assumes the form of a light branny substance: it is generally observable after the sweats, and absent during the hot fit, when the secretion is usually pale and limpid: but, as Dr. Heberden has remarked, these qualities, and the times of their appearance are liable to great irregularities; the deposit being sometimes observable during the hot fit, and disappearing after its removal, or even being at all times absent.

In the more advanced period of the disease, as the emaciation increases, the bulbs of the hair no longer perform their secretory functions, and the hair falls off: the bulbs, however, remain unimpaired, and resume their functions, if the health becomes fully restored: but they require some time to recover their activity; and in my own case, the hair continued to fall off, when the other hectic symptoms were materially abated. The nails become bent, apparently from a similar deficiency of nourishment; the secretion at the middle of the nail only continuing as usual, while the edges are a little more slowly supplied with new matter; so that the curvature follows, as a necessary consequence of the comparative contraction of the edges: and this change is sometimes accompanied by considerable pain, which would hardly happen, if the nail simply adapted its form to the contracted dimensions of the membranous parts beneath it, as some authors have supposed.

In many cases of hectic fever there are irregular pains in the limbs, which are probably occasioned by the unavoidable pressure of the emaciated parts on some of the nerves, deprived of the usual protection of the adipose membrane; the integuments also frequently suffer, in sitting or in lying, from the same circumstances, and become inflamed and ulcerated; and in some of the varieties of the disease, there are most severe headaches, which are among the first symptoms of indisposition, and continue with increasing violence to the last, independently of any temporary exertion that might be supposed to occasion them.

It is impossible to assign any definite remote causes for the production of hectic fever as a genus; its separate species must have their peculiar causes, in the constitution or habits of the patient, or in accidental circumstances which occur to him: but the exciting cause of hectic is almost always some local disease, and generally a great, if not an incurable one; so that this fever seems to be a feeble and hopeless struggle of a constitution about to be overpowered, without any apparent tendency to the removal of the cause. There are cases in which a particular change in the state of the fluids, secreted by diseased parts, seems to superinduce the hectic symptoms, as when an abscess is opened, and the pus is exposed to the air: but this state of

the fluids is not the only cause of hectic, for it often occurs not only without an open abscess, but without any abscess at all : and on the other hand, in cancerous cases, where there is a very unhealthy suppuration, with great pain, there is often no material hectic to the last. Where, however, the hectic symptoms are derived from a local affection, they generally correspond to the severity of that affection, or to the degree of danger ; and if the diseased parts be removed, as by amputation, they will sometimes completely disappear in the course of a few hours.

## CHAPTER II.

### SYMPTOMS OF DECLINE.

**I** HAVE considered the genus *Hectica*, in my Nosology, as comprehending three species, *Hectica debilium*, that is, simple hectic, without emaciation; *Hectica tabes*, decline or wasting, without pulmonary affection; and *Hectica phthisis*, or consumption, with cough. The first species is of rare occurrence, corresponding nearly to the slow fever of the ancients, as contradistinguished to marasmus; and though it may be proper to retain a place for such a disease in a systematic arrangement, it is unnecessary to enter into any practical discussions respecting it, otherwise than as a stage, or at most a variety of one of the other species.

If we consulted the evidence of anatomy only, we might enumerate a great diversity of separate local affections, which give rise to hectic fever, and which might be considered as characteristic of an equal number of distinct species of the disease: but there is only one part of the body, which, on account of the danger attending

its chronic affections, as well as from the peculiarity of their symptoms, deserves to be thus distinguished in a practical arrangement: so that phthisis or pulmonary consumption only is defined as a hectic attended by cough or pain in the chest, while the other forms of the disease are comprehended under the species *tabes*, or decline, whether with or without any other local affection. It is true that negative definitions of this kind are in some measure objectionable, but Linné and Cullen have both admitted that they are sometimes unavoidable. (Med. Lit. P. 37.)

Dr. Cullen has defined his genus *Tabes*, an emaciation accompanied by debility and by hectic fever, and he has placed it in the class *Cachexiae*, or depraved habits of body, without primary fever, or nervous disease, and in the order *Macies*, emaciations. He enumerates, as species of *tabes*, the purulent, depending on an ulcer or abscess, the scrofulous, occurring in scrofulous constitutions, and the poisoned, occasioned by some noxious substance. It is obvious that these definitions are totally inadequate to the establishment of correct specific differences, since an abscess might be formed in a scrofulous constitution, in consequence of the effects of poison, and the disease attending it, though single, might belong to all the three species at once: nor is it possible to subdivide this genus

into any well defined species of a more limited description.

There are, however, several varieties and sub-varieties which require to be enumerated, although some of them cannot be considered in their whole extent, without involving other diseases, of which they are principally symptomatic. The first of these varieties, A, is simple decline, independent of organic disease; and we may place next to it, B, the intestinal decline, with a languid action of the bowels, which is indeed sometimes scarcely distinguishable from it: the third, C, is accompanied by a tumour, and especially by enlarged glands; and the fourth, D, by suppuration, whether in the form of an abscess or an ulcer.

A. The occurrence of simple decline has been questioned by many modern authors: but whatever theoretical doubts we may entertain respecting the existence of some latent cause of irritation, we must admit that there are cases in which no such cause can be discovered. Bennet has observed, in his Theatre of Consumption, that a decline without organic disease is very common, and very fatal in this country; the Hectica of Sauvages comprehends many varieties of a similar affection; and Dr. Willan, with his usual fondness for subdivision, has enumerated several distinct forms, under which the disease

appears at different times of life. Sauvages makes a number of species of *Hectica*, most of which are distinguished rather by the causes than the symptoms: among them we have the infantile hectic of Sydenham, in which the heat is not considerable, the nostalgic hectic, or the nervous hectic of Willis, a symptom of the *erethismus nostalgia*, derived from an affection of the mind, and the *hectica nervea*, noticed by Lorry, as generally ending in a consumption, which is also occasionally the termination of the nostalgia. The Hectic occasioned by poison may be either a simple or an intestinal decline. Dr. Willan's species of hectic are not very clearly defined, even by the ages of the patients; but we may distinguish those, which belong to the simple decline, as juvenile, adult, and senile: the first, *a*, occurring about the time of puberty, with pains in the limbs and swellings of the joints: the second, *b*, in middle age, with pains in the head, aphthae, nausea, and diarrhoea: and the third, *c*, the *marasmus* described by Hofmann, with dryness of the mouth, hoarseness, parched skin, hard pulse, and want of sleep.

B. Besides these forms of hectic, Dr. Willan mentions in the first instance the infantile fever of Sydenham, but describes it as accompanied by irregularity of the bowels, so that it belongs more properly to the intestinal than to the simple decline: it is accompanied by great irritability

and restlessness, want of appetite, or craving for food, and general debility. Dr. Hamilton describes a similar disease under the name *marasmus*, with fullness of the abdomen, foetor of the breath and of the faeces, swelling of the lip, itching of the nose, and grinding of the teeth, symptoms which might lead to the suspicion of the presence of parasitic animals, and would also probably be relieved by the mode of treatment, which such a supposition would dictate.

C. The varieties of hectic depending on tumours and abscesses belong properly to the genera, under which the local affections would be classed, this form of the fever being so far symptomatic, as always to require the employment of means immediately directed to the removal of the primitive disease; while in consumption almost the whole treatment must be rather general than local. At the same time, some of these varieties are so nearly allied to consumption, that their symptoms and treatment may justly be considered as affording important illustrations of that disease. The most material of these are the *Tabes mesenterica*, *glandularis*, and *rachialgica*, the *Scrofula mesenterica*, and the *Atrophia rachitica* and *infantilis* of Sauvages, which Cullen has quoted as varieties of his *Tabes scrofulosa*, although some of these terms appear to be completely synonymous with each other; a circumstance which is a necessary consequence of

the method adopted by Sauvages, who often considers a certain assemblage of symptoms as sufficient to distinguish a species or genus, although they may be only a small part of those which constitute the true disease, and may leave another assemblage, equally important, to be arranged in a separate part of the system. The form of glandular disease, which approaches the nearest in its symptoms to consumption, and which is the most frequently complicated with it, is the *tabes mesenterica*, or mesenteric decline.

The mesenteric decline is generally preceded by more or less of headache, languor, and want of appetite; it is more immediately distinguished by acute pain in the back and loins, by fullness, and as the disease advances, pain and tenderness of the abdomen; these symptoms are accompanied, or succeeded, by a chalky appearance and want of consistency in the alvine evacuations, as if the chyle were rejected by the absorbents, and left in the form of a milky fluid in the intestines, and the functions of the liver were at the same time impaired, the natural tinge of the bile being wanting: the evacuations are also sometimes mixed with mucus and blood, and are attended by pain, irritation, and tenesmus, somewhat resembling those which occur in a true dysentery. Occasionally also there are symptoms of dropsy, and especially of ascites, as if the absorption of the fluid, poured into the cavity of the abdomen,

were prevented by local obstacles ; the absorbent glands, which are enlarged, being rendered impervious, and pressing also on the lacteals and lymphatics, which enter them and pass by them. The appetite is generally good, and often ravenous, the food not being converted into nourishment, from the interception of the chyle, in its passage towards the bloodvessels. This variety of decline, as well as the intestinal, is often supposed to be dependent on worms, and the mistake is sometimes encouraged by the success of purgative anthelmintics in combating it. Though generally dangerous, and often fatal, it is yet much more under the controul of medicine than true consumption ; and when proper means are adopted, before the constitution is exhausted, the patient has a very fair prospect of recovery.

D. The hectic attending on suppuration is the more easily distinguished, as it seldom occurs while the suppuration is latent : but when an abscess bursts, the air is admitted, and is supposed by many to communicate an acrimonious quality to the pus, which produces the symptoms of hectic by its irritation. Mr. John Hunter imagined that the opening of the abscess had only the effect of rousing the system to the performance of the curative process, and attributed the hectic to its inability to complete that process : but this is certainly going back a step in the attempt to explain the nature of the symptoms,

instead of advancing; and the same retrograde movement upon final causes, which is perhaps a proof of a very wise and philosophical cautiousness, may be observed in some other parts of the speculations of this ingenious physiologist, which have been mistaken for rapid advances in discovery.

Dr. Cullen enumerates, as belonging to his *Tabes purulenta*, the various forms of the disease, which Sauvages has distinguished under the appellations *Tabes a vomica*, *ulcerosa*, *apostematodes*, *renalis*, *hepatica*, *a stomacho*, *a pericardio*, and *catarrhalis*. In all these instances, the hectic fever may be considered as merely symptomatic and secondary, as well as in the *Arthropyosis* of Cullen, a genus comprehending the *Psoas abscess*, *Lumbago psoadica*, the *Lumbago apostematica*, the *Lumbago ab arthrocace*, and the *Ischias ab abscessu* of Sauvages, and the *morbus coxarius*, or hip case, of De Haen: diseases which generally, if not always, occur in scrofulous constitutions, and which are usually considered as belonging to *scrofula* by surgical writers; although I have not been able to find any correct definition of *scrofula* capable of being extended to simple swellings of the joints, and have therefore referred these diseases to the genus *Emyxium*; avoiding, by this arrangement, the arbitrary assumption, that such diseases must always be of a scrofulous nature.

### CHAPTER III.

#### SYMPTOMS OF CONSUMPTION.

OF all hectic affections, by far the most common and the most important is pulmonary consumption, a disease so frequent as to carry off prematurely about one fourth part of the inhabitants of Europe, and so fatal as often to deter the practitioner even from attempting a cure. The hectic fever is the most unerring characteristic of every well formed consumption; and besides the hectic fever, there is also either cough, or shortness of breath, or pain occasioned by deep inspiration. It is remarkable that a very learned modern author has erroneously termed the disease consumption "of the lungs:" but the name was never intended by the ancients to denote a wasting of the lungs themselves, which it was impossible for them to ascertain, but a wasting of the body, depending on a disease of the lungs.

It is to the earliest stage of consumption that the attention of the patient and his friends ought to be particularly directed, because it is only in the earliest stage, that we can entertain any well grounded hopes of arresting its progress. When

a cold, or a pleurisy, or a spitting of blood, has already alarmed us, we are not unprepared to expect its degenerating into a more serious disease; and provided that we do not wilfully shut our eyes, we are likely to be sufficiently aware of the danger that may occur: but it is the insidious approach of consumption that most requires our caution. The patient is at first somewhat languid, and feels a considerable difficulty of breathing, especially when he has ascended a flight of stairs, or taken any violent exercise: and the respiration, instead of about 20 times in a minute, is performed 30 or 40 times. He does not complain of cough, but he may be observed to cough occasionally, almost without perceiving it, and he has generally more or less of pain or uneasiness in a certain fixed part of the chest, when he makes a deep inspiration. These symptoms are sometimes very distinctly marked, before the pulse is much accelerated, or the night sweats occur; but when either of these unfavourable circumstances has supervened, the first stage of the disease may be said to be decidedly established, and nothing that art or friendship can perform, for the relief of the patient, must be left untried.

The degree, in which the actual mechanical obstruction of the lungs has taken place, may be discovered by means of a test, which was some years since proposed by Mr. Abernethy; its

object is to measure the capacity of the remaining cavity of the chest, by means of a pneumatic apparatus. Inverting a large jar, filled with water, in a bason, the patient makes a deep inspiration, and blows into the jar through a bent tube: the height of the water remaining in the jar is then marked; and by filling the bottom of the jar up to the height of the mark, and measuring the fluid contained in it, we may easily ascertain the quantity of air which has been expired: this, in a healthy person, should be from six to eight quarts; and if it is only one or two, we may be sure that the lungs, or some other parts concerned in respiration, are materially diseased. Avenbrugger has proposed the percussion of the chest, with the closed hand, as a mode of judging of its emptiness, by the clear and hollow sound produced by the blows; but this test can only afford information of the same kind as is obtained by Mr. Abernethy's experiment, and with much less certainty and precision, as far as it relates to the general extent of disease, though it may possibly be of some additional use in ascertaining the parts of lungs most immediately affected. In some very rare cases indeed, there may be a fallacy in the sound, from the presence of air, or some other gas, which has taken the place of a fluid poured into the thorax: since the sound will here be as clear as if the lungs were in a natural state: but

the capacity of the chest, measured by the test of expiration, will still be found to be diminished. There is also a much simpler mode of ascertaining whether or no the lungs are materially obstructed, which is merely to desire the patient to make a deep inspiration, and to observe whether the sternum rises in a natural manner, so as to show that the lungs retain their expansibility, or remains nearly fixed, as it must do, when they are incapable of undergoing the usual changes.

As the disease advances, the emaciation, and the other symptoms of a well formed hectic fever continue to increase : the cough becomes more and more observable, being at first dry, but afterwards accompanied by an expectoration of mucus, which by degrees acquires more and more the character of pus, though it is never completely purulent, or without a considerable mixture of mucus ; and the breathing, as Bennet has observed, is frequently accompanied by a sound like the ticking of a watch. The teeth often become more transparent than usual, and the sclerotics of the eye of a pearly whiteness. The second stage of the disease is usually dated from the commencement of purulent expectoration, and the third from that of diarrhoea ; although some authors comprehend the second and third stages in the denomination of confirmed consumption ; but neither of these distinctions can be applied, with any degree of precision, to the greater number

of cases; the first appearance of the symptoms, on which they depend, not corresponding, in all cases, to a state of disease by any means uniform.

The cough, which is so prominent a feature of consumption, deserves to be somewhat more attentively considered, with respect to the mechanism by which it is performed, than has usually been done by physiologists. The irritating substances, attached to the membrane lining the bronchiae, require a certain velocity in the current of air, for their expulsion, in the same manner as a considerable force of wind is required, for carrying along with it a portion of water, over which it sweeps; and in order to produce this velocity by the simple act of expiration, the whole chest would be obliged to undergo a considerable change of form, and the muscles to be violently exerted: but this labour is saved, by the operation of closing the glottis, till the air within the lungs has been a little condensed, and then suddenly opening it; and it is demonstrable, that the velocity produced by the expansion of the air, thus condensed, may easily be very considerable: a force, for instance, sufficient to support a column of a quarter of an inch of mercury only, being capable of causing a velocity of about 120 feet in a second, which is greater than that of a violent gale of wind; besides the advantage of the suddenness of the impulse, and perhaps of the tremor constituting the sound, in detaching the of-

fending substances. This action of coughing is instinctively and almost convulsively excited by the irritation, which is sympathetically referred to the neighbourhood of the larynx, where a sensation of tickling is felt. In a similar manner, the still more involuntary action of sneezing is directed by nature to the expulsion of foreign substances from the fauces and the nostrils: the passage being first closed at the back of the mouth, and the soft palate being suddenly depressed, so as to allow the condensed air to pass into the nostrils, at the same moment that the base of the tongue descends, and opens the way into the mouth.

The qualities of the matter expectorated may be extremely different, without materially altering the severity or danger of the disease. The mucus is often of a bluish cast; and it becomes whitish, as Bennet has observed, when exposed to heat: a change depending in all probability on the partial coagulation of mucus, which Dr. Pearson has described as occurring about the temperature of  $160^{\circ}$ , and which seems to depend on the presence of albumen. When the expectoration begins to become purulent, its taste is sweetish, and sometimes saltish: thus Bennet says, that many consumptive persons have died at Bristol, after expectorating only a sweetish substance, with very little cough: he also notices, as a fatal symptom, an ash coloured clay like expectora-

tion, which appears to depend on a disorganization of the texture of the lungs: and it generally happens, that, before the end of the disease, some blood is mixed with the mucopurulent matter, either in streaks, or more uniformly, so as to render the whole of a fawn colour; the vessels being either eroded by the progress of the ulceration, or, in some cases, pouring out blood at their enlarged orifices only, a change denominated, by the ancients, anastomosis. When haemoptysis degenerates into consumption, the pure blood, which is at first discharged, becomes by degrees mixed with mucus and with pus; and if this incipient consumption is cured, the pus by degrees disappears, and leaves the expectoration only mucous.

The essential characteristic of pus is afforded by the globules which it contains, and which were first observed and described by Sir Everard Home. Dr. Pearson has expressed a suspicion that they may be formed of the red particles of the blood, while the remaining parts of the pus differ very little, in their chemical nature, from the lymph and serum: and I have confirmed the conjecture, by observing, that the magnitude of the globules of pus is not sensibly different, when ascertained by the most accurate tests, from that of the corpuscles of the blood, reduced to a round form by the addition of water or otherwise; while the globules found in other animal

fluids, for instance, in milk, are of totally different dimensions. Mr. Hunter found that pure pus was inspissated by muriate of ammonia; but Dr. Pearson observes, that this test is never applicable to any expectorated matter: nor has any other chemical process been indicated, by which we can distinguish the presence of pus with accuracy. There is, however, a very simple and certain optical criterion, dependent on the presence of globules, while the colour indicates that there is no mixture of blood. If we put a small quantity of the substance to be examined, between two pieces of plate glass, which may be carried in the pocket for the purpose, and, holding it near the eye, look through it at a distant candle, we shall observe the appearance, even in the day time, of a bright circular corona of colours, of which the candle is the centre; a red area, surrounded by a circle of green, and this again by another of red; the colours being so much the brighter, as the globules are more numerous and more equable. If the substance be simply mucous, there will be no rings of colours; although sometimes there is a sufficient mixture of heterogeneous particles, even in mucus, to cause the appearance of a reddish area only, about the candle. It frequently happens that the expectorated matter, when agitated in water, is separated into a purulent part, which sinks to the bottom, and a flocculent mucus, which re-

mains partly suspended in the fluid, and which would be still more disposed to float in the sea water employed as a test by Hippocrates; although very commonly mucus, when free from air, does actually sink to the bottom. We must indeed allow the justice of the remark of Aretaeus, that such an examination is seldom necessary for ascertaining the true nature of the disease; and the various experiments, which have been made on the substances expectorated, are rather to be considered as objects of historical research, than as applicable to practical utility.

During the greater part of the disease, the patient's spirits are generally good, and he flatters himself that his health is improving. In the later periods there is generally more or less of hoarseness, and frequently a succession of aphthae, or excoriations in the fauces, or a sore throat, and a great difficulty of swallowing: together with symptoms of dropsy in its various forms, whether anasarcaous swellings of the hands or feet, or ascites, or hydrothorax; and these swellings are generally most observable when the night sweats and the diarrhoea are least excessive: in females also, there is almost universally amenorrhoea. A few days before the patient's death, he is frequently unable to expectorate from apparent weakness, and sometimes dies absolutely suffocated: but much more commonly, the secretion of pus, as well as the ex-

pectoration, has ceased, as if the capillary arteries had lost their power, or the fluids of the system were exhausted. There is also sometimes a degree of languid delirium for some days, and occasionally a total imbecility for a week or two: though, in general, the faculties are entire, and the senses acute, the patient being perfectly alive to the danger and distress of his situation, and retaining, even when his extremities are becoming cold, a considerable quickness of hearing and feeling. The closing scene is often painful, but it sometimes consists in the gradual and almost imperceptible approach of a sleep, which is the actual commencement of death.

The duration of the disease is said to vary from a fortnight to more than forty years: but it most frequently terminates in eight or ten months. Not uncommonly it is suspended for a time, and then returns: and, during the suspension, another affection sometimes takes its place; thus Bennet mentions a swelling on the tibia of a child, which appeared to suspend the disease for three months, and Mead relates a case in which a mental derangement afforded a similar respite: another instance also occurred to Bennet, in which a tooth ache superseded, for two days, all the consumptive symptoms, except the emaciation. Other authors have described cases somewhat similar, in which metastases of various kinds have been observed; the pulmonary affection having

been relieved during the formation of an abscess, or the appearance of a cutaneous eruption: but these occurrences are very rare, and of little practical importance, except as having a tendency to indicate the propriety of exciting a counterirritation, as a mode of cure. It has sometimes happened, that a patient has died with every symptom of consumption except the fever: and it is a matter of indifference, in a nosological point of view, whether we call such cases singular varieties of consumption, as if a plant should go through all its periods of growth, without producing flowers, or whether we refer them to either of the genera *Inflammatio* or *Ulcus*.

## CHAPTER IV.

### MORBID APPEARANCES IN CONSUMPTION.

**I**T has occasionally, although very rarely, been observed, that after every ordinary symptom of a confirmed consumption, with purulent expectoration and diarrhoea, which has ended fatally, the lungs have exhibited scarcely any appearance of diseased structure, the whole of the matter expectorated having been afforded by the morbid secretion of the membrane lining the bronchiae. It is true, that some have professed to be able to distinguish cases of this kind, under the name of the tracheal or bronchial phthisis, during the life of the patient, judging especially from the dry and ringing sound of the cough; it is probable also that the capacity of the chest would be less diminished in these cases, than in genuine tubercular consumption: but the possibility of such a distinction is by no means generally admitted, nor indeed would it afford us any material information for the direction of the treatment, at least in the present state of medical practice.

In a very great majority of consumptive cases, we observe, through a considerable portion of the lungs, the appearance of circumscribed nodules, or indurations, denominated tubercles. They are found indiscriminately in all parts of the cellular texture, but more abundantly at the upper and posterior parts. They are at first very minute, whitish, and commonly opaque, like small absorbent glands; but sometimes more transparent, like cartilage, with some black spots in their substance, as Mr. Bayle has observed. They enlarge gradually, until they are half an inch or more in diameter; but in general, when they have acquired the size of large peas, they begin to soften in the centre, and then open, by one or more small apertures, into the neighbouring bronchiae, or remain for a longer time closed, and constitute small vomicae, containing a curdy half formed pus; and when this substance is discharged, it leaves a cavity, which sometimes remains open and empty, and sometimes collapses. The cartilaginous granulations, according to Mr. Bayle, are less subject to these alterations; but in this country they have been little observed. The rounded bodies, in the neighbourhood of the larger branches of the bronchiae, which have been called by some conglobate glands, and by others conglomerate, but which seem to be more analogous to the thymus and the spleen, are sometimes, but

not always, found in a state resembling that of the tubercles. It is confessed by all accurate observers, that tubercles are found where no absorbent glands can be discovered, and that the direct analogy between consumption and scrofula is only imaginary, so far as it has been inferred from the opinion that these tubercles are simply enlarged glands: but the evidence of their being generally observed in scrofulous constitutions, and accompanied by other glandular enlargements and indurations, is independent of this mistake; and it has been argued by a celebrated professor at Edinburgh, that scrofulous tumours are not confined to glands, but are sometimes extended to the bones, the skin, and other soft parts. On the other hand, it must be confessed, that the admission of so general a character of scrofula would render its nosological distinction extremely difficult, nor does the treatment, required for all these diseases of different parts, at all confirm the opinion, that their nature is perfectly identical. Mr. Bayle, however, has justly remarked, that the deposition of the matter of tubercles is very strictly analogous to the scrofulous enlargement of a gland, since, in both cases, there is an accumulation of interstitial and unorganized matter, which is out of the reach of the immediate powers of absorption, and is only capable of being removed by a very slow process, while tumours of other kinds, when the irritation

which causes them has ceased, disappear in general with much greater rapidity.

The parts contiguous to the tubercles are generally rendered thicker and more solid, partly perhaps from the coagulable lymph thrown out by the usual effect of inflammation, and partly from the filling up of the ulcerated bloodvessels with an internal coagulum, which prevents the effects of haemorrhage; but this thickening is not universally attendant on the tubercles, and it is occasionally observable in parts of the lungs where no tubercles exist.

In some cases, and especially where the consumption has originated in haemoptysis or peripneumony, we find simple vomicae, or abscesses, without any traces of the previous formation of tubercles. The ulcerous phthisis of Mr. Bayle is characterized by the want of a membrane lining the abscesses, which is generally observable in the vomicae of tubercles, as well as by the peculiar foetor of the pus: but this author is disposed to deny the accuracy of the distinction, which is often made, between tubercular consumption, and consumption from haemoptysis, since he is persuaded that tubercles, in a nascent form, are almost always the original foundation of all pulmonary consumptions.

The lungs have been sometimes found, by different observers, converted into a mass resembling liver, or into a still more horny substance;

Mr. Bayle's melanosis is a change of this nature, more or less extensive, and accompanied by black ulcers; the lungs too becoming as black as charcoal, and of the consistency of leather, in the neighbourhood of the ulcers, while the remaining portions are sometimes perfectly sound.

The calculous concretions, which are occasionally scattered throughout the lungs, but especially about the bronchial glands, have been found to consist of phosphate of lime, with some animal matter, and cannot therefore be considered as simply collections of the particles of foreign substances, which have entered suspended in the air, although some such particles may possibly be sometimes detected in them. Mr. Bayle has described the state in which the lungs are found in the consumptions of cancerous persons, containing whitish tumours, of different sizes, somewhat resembling brain in their appearance, always pervaded by minute bloodvessels, and containing, when soft, a fluid of the consistence of cream. Besides these changes of structure, many other accidental variations occasionally occur: Bennet observes, that the lungs are sometimes found reduced to a consistence like mud or clay; and Bonetus and Lieutaud have collected accounts of gangrenes, scirrhus indurations, ossifications, and a number of other morbid appearances and disappearances.

Where the hoarseness has been strongly marked,

there is generally a thickening of the membrane lining the glottis, with traces of considerable inflammation; very commonly too there is ulceration of the larynx, and as my colleague Dr. Nevinson has observed, this ulceration is almost always accompanied by more or less of ossification, which he has often been disposed to think the primitive disease, in cases independent of pulmonary affection: although it seems probable, that it is more frequently a simple consequence of the ossific inflammation, which is usually excited by the injuries of cartilages. Mr. Bayle found the larynx diseased in one sixth only of the cases that he examined: and he notices the occasional occurrence of ossification. He has also fully described another important appearance, which had long been observed by Dr. Nevinson, that is, the frequency of inflammation and spots of ulceration in different parts of the intestines, but more especially in the ileum, when the diarrhoea has been severe. Mr. Bayle found ulcerations of this kind in 67 cases out of 100, and attributes them to a tubercular degeneration of the mucous glands of the intestines, analogous to the changes of the cervical and mesenteric absorbent glands, which are frequently observable in the same constitution: and he even professes to have seen occasionally in the intestines the transparent granulations, which he describes as occurring in the lungs. But the usual

appearance of the spots by no means agrees with this theoretical explanation: the inflammation is at first apparently confined to the surface of the membrane, and independent of any thickening of the glandular follicles, until a superficial ulcer has been formed, the edges of which are afterwards thickened, as happens in almost all ulcers of a similar nature: sometimes, however, there is a manifest thickening without ulceration.

The heart is frequently thin and small, perhaps as partaking of the general emaciation, or because, having been the instrument of a feeble circulation, its vigour may have been lost for want of exercise: Mr. Abernethy has also observed, that the foramina Thebesii are frequently enlarged. The ancients considered the decay of the heart as the primary cause of marasmus; they also believed that a great part of the blood was consumed, being converted into pus. It has indeed often been found, in modern times, that the quantity of blood remaining after death has been very inconsiderable: but the observation is by no means universal: nor is the patient always materially emaciated, even in his external form.

## CHAPTER V.

### CAUSES OF CONSUMPTION.

**IT** is not uncommon for three fourths of the lungs, or even more, to be rendered impervious to air by the various changes which take place in consumption ; hence it is natural to suppose, that the functions of respiration must be in some degree disturbed ; and it might even be expected, that immediate suffocation would be the necessary consequence of such a state of the organ ; we shall find, however, on consideration, that since, in ordinary respiration, we inspire little more than one tenth as much air as the chest is capable of receiving, and since the air is vitiated almost in an equal degree, whether we make a slighter or a deeper inspiration, the blood might be sufficiently decarbonised, even if one tenth part only of the lungs performed its functions completely. The same change of the general form of the chest, also, that takes place in healthy respiration, would be nearly sufficient for the inspiration of the usual quantity of air, provided that the diseased parts were solid or totally obstructed, although, if there were any hollow abscesses, capable of expanding and ad-

mitting air, without producing the appropriate changes in it, the action of respiration would be rendered proportionally more laborious. In fact it has been considered as almost demonstrated, that the lungs do actually perform this part of their functions in consumption sufficiently well, by experiments on the respiration of oxygen gas, since the symptoms are in no degree relieved by the greater abundance in which this vital element is supplied; at the same time the inference cannot be allowed to be perfectly conclusive, since the results of some late experiments make it doubtful, if more oxygen is consumed when the pure gas is inspired, than in ordinary respiration. There may however be a greater deficiency in the performance of those functions of the lungs, by which the conversion of the chyle into blood is supposed to be effected: and this deficiency may serve to explain the general emaciation, as well as the smallness of the quantity of blood that is sometimes left in the system: but it is not even certain that the blood is formed at all in the lungs, and we must be careful not to allow any conjectures of this kind to influence our practice, except perhaps in making us cautious in the adoption of large or frequent bleedings, where the patient's strength seems unable to support them.

Of the immediate or essential cause of consumption it is impossible to speak with any cer-

tainty, except so far as to say what it is not. It is not a peculiar acrimony, for every symptom of consumption has sometimes been observed, where the presence of a foreign substance has obviously been the only essential cause, and the disease has ceased on its removal; nor is it always a mechanical irritation, for in the varieties which have sometimes been distinguished by the appellations pituitous and tracheal phthisis, as well as in the ulcerous phthisis of Bayle, there is no preternatural structure to which the irritation can be attributed. At the same time it must be confessed, that these cases are rare, and that a great majority of consumptions depend on a peculiarity of constitution, of which the first, and sometimes the only effect is the deposition of a morbid and apparently inorganic substance, in the parenchyma or cellular membrane of the lungs, and perhaps in the air cells themselves: and it is extremely uncertain whether the causes, which have been considered as exciting the disease, may not in general be posterior to the existence of some such nascent tubercles.

With respect to the original causes of the peculiarity of constitution which favours this deposition, they seem to agree almost exactly with the causes of scrofula; of these none are more common than debilitating excesses, and we may reckon among them every habit, and every occurrence, which exhausts the activity of the nervous

system, and lessens its vigour. A want of proper nourishment seems also to be another frequent cause of a consumptive constitution; and the remains of other diseases, or the consequences of the treatment required for their cure, may be the remote causes of pulmonary affections: these diseases are especially scrofula, syphilis, and measles, and sometimes intermittent fevers, scurvy, or gout; to which we may add all the other varieties of hectic fever, either idiopathic or symptomatic. But the least ambiguous of all the remote causes of the disease is the removal from a warm to a cold or changeable climate, as is often seen in negroes who settle in England, as well as in monkeys, and other animals, which are the natural inhabitants of tropical countries. Nor can it be questioned, that the vicissitudes of temperature are considerably concerned in the production of a consumptive constitution, because in those climates, which are constantly either very hot or very cold, the disease, in its genuine form, is little known; though it sometimes occurs in the West Indies, as a sequel of catarrh or haemoptysis, and a few fatal cases of this kind are mentioned in Sloane's History of Jamaica. The frequency of consumption in Great Britain is usually such, that it carries off about one fourth of its inhabitants; at Paris the mortality by consumption has been estimated at one fifth; and at Vienna it is said to be one sixth of the whole: but this

progressive increase of consumption, as the latitude increases, is neither uninterrupted nor constant; the mortality, both at Paris, and even in the south of France, having frequently amounted to one fourth of the whole: while in Russia the disease is by no means common. Of all places, however, which have hitherto been compared, the proportional mortality from consumption appears to have been the greatest among the inhabitants of Bristol; and yet, as if in defiance of experience, this very place has been chosen as the great resort of consumptive persons. It is probable that the disease is less frequent in the southern than in the northern counties of England: but its fatality seems to be as great in the town of Plymouth as in some villages in Yorkshire or Shropshire, though considerably less than in London or Bristol. In the south of Spain and of Italy, and in the islands of the Mediterranean, consumptions are probably much less frequent, but there is a want of accurate registers of mortality in these countries.

When the consumptive constitution already exists, it is often very evidently transmitted from parents to children. In this form it is commonly associated with a fair complexion, light or reddish hair, a long neck, a narrow chest, and high shoulders; but sometimes the skin is dark, and the hair almost black. According to Dr. Withering and Dr. Darwin, the most constant

mark of a consumptive habit is the unusual magnitude of the pupil. It is certainly not identical with a scrofulous constitution, at least with a constitution liable to scrofula in its ordinary forms, for in North America consumptions are not uncommon, while scrofula is very rare. Long and dark eyelashes have been noticed, by an accurate observer, as a mark of a consumptive constitution; and I have myself found it more than once present in fatal cases of consumption, complicated with scrofulous affections.

There is a very general prejudice respecting the transmission of a tendency to scrofula, which is often the source of much unnecessary uneasiness; it is supposed by many to constitute a marked and decided character, incapable of being increased or diminished, and which must in all probability produce, at some time or other, the most melancholy effects in the individual and in his descendants. In fact, however, no man was ever born incapable of becoming scrofulous, and in this sense every person may be said to possess more or less of a scrofulous taint, which may become mischievous or fatal to all, under improper management, but which, in other circumstances, may easily remain latent through life. Indeed there is some reason to conjecture, that the enthusiasm of genius, as well as of passion, and the delicate sensibility, which leads to a suc-

cessful cultivation of the fine arts, have never been developed in greater perfection, than where the constitution has been decidedly marked by that character, which is generally considered as an indication of scrofula, and which is often evidently observable in the victims of pulmonary consumption.

The hereditary predisposition to the disease may sometimes be so decided, as to produce it without any external exciting cause; for tubercles and ulcers have sometimes been found in the lungs of foetuses, and of newly born children, who have been exempted from the operation of all such causes. More commonly, however, the actual appearance of consumption is referable to some catarrhal affection, or some other pulmonary irritation, which has either given rise to the deposition of tubercular matter, or rendered the neighbouring parts susceptible of inflammatory action, from the effect of such matter previously deposited. Thus also the dust of hard substances, constantly inhaled, seems to have an indisputable tendency to excite the disease: but the smoke of towns probably much less so than might naturally be imagined. In my own case, the symptoms originated in a very pure air, in a very healthy part of Hertfordshire, and subsided principally during a residence of some months in Red Lion Square, surrounded by closely built streets. Haemoptysis

is usually enumerated among the exciting, or even among the more remote causes of consumption; but in a healthy constitution, haemoptysis is not materially formidable; and it is conjectured, that when it appears to produce consumption, it has itself been occasioned by an incipient obstruction of a different kind: at the same time it is possible that extravasated blood may, in some rare cases, produce a morbid irritation, and cause the symptoms of consumption, in persons who would otherwise have remained free from the disease.

The greater number of authors, ancient and modern, have copied from Hippocrates, and from each other in succession, that the age most liable to consumption is from 18 to 35; but if we consult the evidence of actual registers of cases, we shall find that the disease is even more frequent above 35 than below it: under twelve years of age, however, it is very rare; while the mesenteric decline occurs much the most commonly in children.

A case is related by Bennet, in which a periodical bleeding at the nose contributed to the prevention of consumption: he has also observed that not only deformed persons, but also those who have had limbs amputated, are particularly liable to it; perhaps as being plethoric, yet wanting exercise: for nutritious diet, with athletic exercise, seems to operate as a powerful prophylactic, and Dr. Beddoes has shown, that butchers

are seldom consumptive. The French physicians have been in the habit of considering amenorrhoea as a frequent cause of consumption; but in this country it is almost universally regarded as a consequence; except indeed by the patients, who are generally disposed to attribute all their complaints to circumstances of this kind. Pregnancy, on the other hand, generally affords a respite to the disease, nor does it invariably return when it has been thus suspended, unless nursing has been continued too long. Consumptive symptoms have frequently occurred in the progress of some cutaneous diseases; and eruptions of different kinds have sometimes been supposed to assist in its cure by a counterirritation; Bennet mentions also a case of psora, which remained obstinate till an expectoration took place, and was then relieved.

It has been much disputed, whether or no consumption is ever capable of being communicated by contagion: and it must be allowed, that it would be extremely difficult to produce any strongly demonstrative evidence of the fact. It may often have been observed, that the husband or wife of a consumptive person has died consumptive, within a few months after that person's death: but it will appear, upon calculation, that this circumstance must happen in London more than once in about two months, before we can deduce from it any proof of the probable connexion of the

two events. For one, at least, of 50 adults, may be expected to die annually, and consequently one of 200 by consumption, or one out of 400 in six months; and if we estimate the number of married persons dying annually of consumption at 2000, we may expect to find five instances of apparent contagion without any real foundation. The evidence which has been adduced, to prove the infectious nature of consumption, has been by no means of this precise nature: but it has consisted, in great measure, of absurd and almost superstitious accounts of the propagation of the disease by articles of dress or of furniture: at the same time, there has been a very general impression, among medical men of the best judgment, with the best opportunities for observation, that they have met with unequivocal instances of the communication of the disease, especially between husbands and wives, and in families partaking of the same hereditary constitution: and Dr. Rush has given an account of a consumption manifestly contagious, which spread, from the family of the proprietors of an estate, among the negroes, who were neither related to the first victims, nor had been subjected to fatigue or anxiety on their account. I have myself known an instance of a carpenter, who died of a laryngeal consumption, and whose wife died soon after, as I was informed, of a disease precisely similar: and I should think it unjustifiable, from a full confidence in the ab-

solite impossibility of infection, unnecessarily to expose any person, who appeared to have the slightest predisposition to the disease, to any intimate communication with a consumptive patient; as, for instance, to sleeping in the same bed, or living constantly in the same room; which is nearly the extent of the apprehension expressed by Galen himself, who observes, that it is dangerous to pass the whole day with a consumptive person.

Consumptions are not uncommonly connected with hepatic affections, not only as exciting causes, but also as parts of the same disease: the liver adhering to the diaphragm, and the suppuration, which has commenced in it, making its way into the lungs, so that the expectoration contains a mixture of bile. Cases of this kind are not always incurable: but I have mentioned one, in my Medical Literature, which was rendered unavoidably fatal, by the total obstruction of the gall duct, into which a large hydatid had descended from the abscess, so that the whole of the bile was obliged to find a passage through the lungs.

## CHAPTER VI.

### TREATMENT OF CONSUMPTIVE DISEASES.

**THE** radical cure of symptomatic hectic fever can only be attempted, by remedies calculated to remove the primary disease on which it is dependent. But the severity of this fever may often be palliated, and its progress retarded, by appropriate remedies; which must be of still greater importance, when the hectic appears to be an idiopathic disease, or when its causes are wholly latent.

It is not easy to find a specific antihectic, even as a palliative; the frequency of the pulse may indeed often be reduced, by the digitalis, from 120 to 50 strokes in a minute: but this medicine is extremely uncertain in its operation, and frequently violent and unmanageable in its effects; nor is it, either immediately, or ultimately, beneficial in simple hectic affections. Small doses of opium, which Morton employed as a direct febrifuge, or of syrup of poppies, or of ether in some of its forms,

or of camphor, are more likely to lessen the irritation, which excites the febrile symptoms ; and ipecacuan may be combined with the opium, if it be required to promote perspiration : but when the night sweats are troublesome, the sulfuric acid is a remedy that seldom fails to check them, at the same time that it frequently allays the fever.

For the diarrhoea of hectic, as well as for almost all other diarrhoeas, ipecacuan is the most powerful palliative ; and it may be occasionally combined with chalk, logwood, and opium : but when these palliatives fail of producing the desired effect, and there is reason to suppose that intestinal ulceration is beginning, it may be advisable to try the effect of calomel, which has sometimes appeared to succeed in such cases, combined with opium, or otherwise, and which is often of service in declines of various kinds, especially in such as depend on intestinal or visceral derangements. Of tonics, steel appears to be the best, when the hectic symptoms have somewhat abated, and general debility has taken place ; and in many cases myrrh makes a useful addition to it : and it may be succeeded by the vegetable bitters or barks, according to circumstances.

Calomel, in small doses, is also the principal remedy in the mesenteric decline ; it may often be advantageously united with extract of hem-

lock, and occasional laxatives may be employed at the same time, notwithstanding the diarrhoea, which generally accompanies this disease, when completely formed, and which may also require to be palliated by small quantities of opium, ipecacuan, logwood, catechu, or chalk, separately or united. If the calomel appears to act unfavourably on the bowels, we may substitute friction of the abdomen with mercurial liniment: taking care not to continue it, if the gums become tender, or if the constitution exhibits any other signs of mercurial irritation, such as sickness, languor, restlessness, or tenesmus. Steel is a valuable medicine in the later periods of diseases of this kind, being apparently well calculated to assist the debilitated powers of absorption; and light vegetable tonics are also occasionally beneficial, but especially, as I have often found, the infusion of cusparia, the Angustura bark. By a combination of these means, judiciously varied, we may hope to be successful in a great majority of cases of mesenteric decline.

But in consumption the prospect is far different: it is probable that without assistance not one case in a thousand of the disease would recover; and with the utmost power of art, perhaps not more than one in a hundred will be found curable. However discouraging this representation may be on the one hand, it is still some consolation, supposing it correct, to

think, on the other hand, that ten times as many lives may be saved by medical treatment as without it: and we may be induced, by this statement, to argue with extreme caution respecting the comparative value of the medicines which we may think proper to prescribe: for since the utmost, that we can expect from the operation of the most powerful remedies, is to save one out of a hundred cases of confirmed consumption, we must have witnessed the failure of any new mode of treatment in at least fifty cases, before we are fully authorised to suppose, that it has been less successful than the most effectual remedies previously known; and even if we admit the number of curable cases to be somewhat greater than is here assumed, the general inference from the argument will not be materially altered. Nor would this mode of reasoning be superseded by the admission of Mr. Bayle's opinion, that every genuine consumption is absolutely incurable: for in the first place he is willing to allow, that the duration of the disease may be extended, and the patient's life prolonged, almost without limit; and in the second place, the disease, which he considers as incurable, cannot be fully identified without anatomical investigation, since its most characteristic symptoms may sometimes be found united in such a manner, as to constitute a genuine consumption, in the nosological and practical

sense of the term, and yet this assemblage of symptoms may be curable by appropriate remedies.

In fact, however, notwithstanding Mr. Bayle's observations, I cannot help being persuaded that in my own case there was an incipient formation of tubercles, the difficulty of breathing, and hectic symptoms, which I experienced, not being intelligible on any other supposition, since there was for a considerable time neither cough nor expectoration; and that these tubercles must have disappeared at a subsequent period, was completely demonstrated by the restoration of the capacity of the chest, to the extent of containing seven or eight quarts of air.

Since therefore it is convenient to propose to ourselves some immediate object to be attained by the administration of our remedies, we may safely proceed upon the supposition of the presence of tubercles, in the first period of the disease, which are capable of being resolved, and of ulcers, in the second, which are capable of being healed. Besides these indications, the symptoms themselves will generally present to us the secondary objects of inflammation to be moderated, in the former period, and of debility to be supported, in the latter, since the tubercles are seldom discoverable, until they produce some inflammatory affection of the membranes in their neighbourhood; and the inflammation, having

subsisted for a certain time, is usually productive of the ordinary symptoms of general debility.

For promoting the resolution of preternatural structures, we frequently employ bleeding, emetics, cathartics, mercurials, and other sorbefeccients, besides epispastics of various kinds: for obviating the symptoms of inflammation, we generally bleed and evacuate in various ways, and prescribe a low diet: for healing ulcers, we sometimes apply local remedies, producing a slight excitement, but depend most on general medicines, especially tonics, which are at the same time the best calculated for removing debility. Such would be the modes of treatment which would most naturally be adopted, upon theoretical or general principles; and if we judge from the result of more direct experience only, we shall find that the most successful practice has actually consisted in the appropriate administration of bleeding, emetics, epispastics, and abstinence, followed by tonics of various kinds.

It would, however, be in vain to attempt a very methodical appropriation of a certain combination of remedies to every possible variety of consumption in its different stages, as we might venture to do with respect to many other febrile diseases: and we shall find it most convenient to consider separately the operation of the principal remedies, which have appeared to be most

successful, and to endeavour to deduce the circumstances, under which each of them deserves to be adopted, partly from the results of general experience, and partly from some particular cases, which will be related in illustration of their effects.

We shall therefore proceed to examine the respective advantages of Bleeding, whether general or local; or Cathartics, as neutral salts, calomel, and sulfur; of Emetics, as ipecacuan, tartar emetic, sulfate of zinc, and sulfate of copper; of Sorbefacients, as digitalis, mercury, and alkalis; of Epispastics, as blisters, issues, caustics, cauteries, and setons; of Sudorifics, as antimony, Dover's powder, and sarsaparilla; of Expectorants, as gum ammoniac, squills, and polygala; of Demulcents, as oils and gums; of Narcotics, as opium and hemlock; of Suppuratories, or detergents, as balsams and balsamic vapours; of Astringents, as the mineral and vegetable acids, catechu and kino; of Tonics, as steel, myrrh, bark, Angustura, and lichen; of Diet of various kinds; of Exercise; and of a change of Climate.

BLEEDING is a very important remedy at the only period of the disease, in which there can be a well founded hope of benefit from any remedy: and if the inflammatory symptoms can be obviated by it, the suppuration and debility, which are their ultimate consequences, may also be, in great measure, avoided. Besides, a mo-

derate degree of depletion is favourable to absorption, so that even if we grant that tubercles generally exist previously to the inflammation, the bleeding may be extremely beneficial by its operation as a sorbefacient. On the other hand, there is some reason to believe, that repeated bleeding has a tendency to establish a predisposition to inflammatory diseases: thus a pleurisy has more than once occurred, where this remedy had been previously carried to a great extent; and one modern author has even speculated on a reaction of this kind, in consumptive cases, as a mode of counteracting the constitutional disease. But where a full pulse and a plethoric habit encourage the practice, and especially where there is haemoptysis, we may certainly venture to bleed very liberally in the first instance, and perhaps more fully and frequently than has been usual with modern practitioners; and we must remember, that relief is sometimes felt a day or two after a bleeding, which has not appeared to be of any advantage more immediately. From six to twelve ounces may be taken away with safety in every incipient case, and the operation may generally be repeated, with advantage, three or four times, at proper intervals: but to do more than this might justly be called an experiment, which, however laudable in proper circumstances, is not to be recommended in the ordinary routine of practice. I was myself bled twice only,

by the direction of the elder Baron Dimsdale, and of my uncle Dr. Brocklesby. We may at any time venture to order a small bleeding, to the extent of three or four ounces, as a palliative; not forgetting, however, that numerous bleedings must in the end exhaust the patient, and would probably lead to dropsy, even if they relieved the inflammatory symptoms of consumption.

The truth of this remark will scarcely be questioned by those who are aware of the importance of the blood to all the functions of life: but it may be proper to enforce it by the event of a case of supposed abscess, which occurred some time ago at St. George's Hospital. A woman, named Arnold, had been long a sufferer from a severe pain in the left iliac region, with more or less of swelling, and tenderness of the neighbouring parts: a tumour was said to have existed there previously to her admission, and to have suppurated, and discharged its contents once or twice by the intestines: she had been frequently bled, and was so decidedly relieved by the operation, while nothing else seemed to render her existence supportable, that she could not be satisfied without its occasional repetition to the extent of an ounce or two, which was also thought likely to be of some advantage with respect to the local inflammation, though it had an evident tendency to reduce her strength, and to produce a general anasarca. At last she died,

and no appearance whatever, either of inflammation, or of its consequences, could be discovered; and it is highly probable, that if venesection had never been performed from the beginning, the event might ultimately have been more fortunate.

When there is much fixed pain in any part of the chest, accompanied by great languor, or by any other circumstances, which render general bleeding less advisable, it may sometimes be convenient to substitute cupping for venesection, especially where an expert operator can be procured. Such a person will often take away six ounces of blood in a time little longer than is required for bleeding, to the same amount, from the arm, and with little more pain to the patient.

It happens, in most diseases, which require bleeding, that a saline CATHARTIC will cooperate in its effects, and afford a similar benefit in counteracting the tendency to inflammation: and where there is an apprehension of producing too much weakness by bleeding, a medicine of this kind may be substituted for it with propriety. Its effect, however, is by no means paramount in all cases to that of bleeding, which not only more immediately empties the bloodvessels, but produces an equable subtraction of all the parts of the blood, while the serum is probably the only part affected by the operation of the cathartic; the lymph and the red corpuscles being left undi-

minated. Dr. Hamilton has insisted largely on the utility of active purgatives in the intestinal decline; and where a vigorous effect is required, it is almost indispensable to combine the infusion of senna with the sulfate of magnesia or of soda, the senna powerfully increasing the peristaltic motion, while the salts occasion an effusion of fluids from the exhalant vessels: and the disagreeable taste and smell of the mixture may be rendered less perceptible, by the addition of a drop of the oil of cloves, or a little camphor, or camphorated spirit. In the mesenteric decline also, a similar combination, in a moderate quantity, is occasionally useful: and wherever the functions of the intestines are disordered, even in obstinate diarrhoea occurring as a symptom of hectic fever, it is often of use to give a single cathartic, as well for the purpose of carrying off any offending substance, as in order to diminish the irritability of the secreting membrane, by a temporary exhaustion of its powers. We find many timid practitioners very studious to avoid the use of laxative medicines, for fear of promoting the diarrhoea; but I have given them again and again with a contrary effect; and Dr. Donald Monro has testified their frequent utility in similar cases.

In haemoptysis also, I have found saline cathartics extremely beneficial; and in this case I have generally preferred the sulfate of soda,

from an impression, perhaps imaginary, that it is somewhat more astringent than the sulfate of magnesia: nor have I ever had any reason to think that the use of cathartics in haemoptysis at all promoted a tendency to consumption, as a hasty remark of Sydenham would lead us to apprehend.

Where a gentle and habitual aperient is required, especially when costiveness is attended by haemorrhoidal affections, there is no remedy more generally useful than sulfur; although this medicine has been employed in consumption rather as an expectorant than as a purgative. It has sometimes been called heating, perhaps by an absurd inference from its inflammability only, or because it has often been given in combination with essential oils: and having at one time been extravagantly extolled, it fell naturally, at a subsequent period, into unmerited disrepute. I have employed it with apparent advantage in some coughs, and from its utility as an internal medicine, in various cutaneous affections, it appears amply to deserve a fuller trial, in some kinds of consumption, than has lately been allowed it. The precipitated sulfur would be a convenient form for administering it, but this preparation is almost always found in the shops adulterated with gypsum, being very improperly made from the sulfuret of lime, and the sulfuric acid, instead of the muriatic.

When calomel is employed in dysenteric affections, together with opium, it is not intended to act either as an effective cathartic or as a mercurial sialagogue : it appears, however, to produce a local stimulus, somewhat like that which is afforded by small doses of saline cathartics, which are often beneficial in similar affections : and when the diarrhoea of hectic is accompanied with pain, and resists the effect of astringents, it may sometimes be successfully combated by small doses of calomel.

In a hectic fever attending an inguinal abscess, where I had reason to suspect the presence of intestinal ulcerations, I succeeded in checking the diarrhoea, principally by means of calomel and opium ; but the abscess never healed, and the patient died some weeks afterwards, though the hectic symptoms in general were somewhat abated. The intestines were found free from any ulceration ; and I was inclined to believe, that slight ulcerations had at one time existed, and had been cured by the treatment which was adopted. The patient was a young man, who had been for some time under the care of the surgeons of St. George's Hospital, and was removed into an adjoining building, for the sake of a freer circulation of air, but without any permanent advantage.

It has been observed, that EMETICS are powerful remedies for promoting absorption in cases of

sarcocele and of some other tumours: they were occasionally employed in consumption by Morton, and have been more strongly recommended, by a variety of later authors, than any other class of medicines. Much has been said in favour of the sulfates of copper and of zinc, either separately, or combined with tartar emetic, but there seems to be little reason for preferring them in any case to ipecacuan: nor do antimonials appear to have any peculiar advantage, except when we wish to promote expectoration, or to excite the action of the liver, and of the intestines. In my own case, small doses of tartar emetic appeared to be of use in relieving the hectic symptoms, for a few weeks, at an early period, taken in an oily mixture, with which it made a nauseating compound. But I have generally thought it more eligible to give ipecacuan, from its singular power of subduing haemorrhages of all kinds, and of restraining some other excessive discharges: and I am disposed to consider it as a medicine little, if at all, inferior in importance to cinchona or mercury. The utility of ipecacuan in dysentery and diarrhoea is perfectly decided, and it is surprising that some medical writers, of great practical eminence, should have omitted to notice its powers in these affections: where there is simple effusion of blood and mucus from the capillary arteries of the intestines, it appears, with the interposition of occasional ca-

thartics, and sometimes with the assistance of aromatics and direct astringents, to be almost always sufficient to effect a cure. I have also been induced to depend principally on ipecacuan in haemoptysis, from its well known utility in uterine haemorrhage; and from its successful employment as a preventive of abortion, in a case respecting which I had the advantage of consulting with the author of the Essay on the diseases of the abdominal viscera: and I have generally combined it, in the first instance, with a neutral salt, especially the sulfate of soda, the utility of such medicines having been very strongly exemplified by cases which have occurred in America and in Denmark. The usual dose has been from half a drachm to two drachms of the wine of ipecacuan every four hours, in an emulsion, or in the infusion of Angustura, with a drachm or less of the sulfate of soda, according to the state of the bowels. I have generally wished to produce a slight nausea by this medicine, an effect which is sometimes obtained from one third of a drachm of the wine, especially after several repetitions, and sometimes not from two drachms: when it nauseates too much, some opium may be added, and in this case the salts may become still more indispensable, in order to avoid costiveness.

With such a combination, I have relieved several cases of haemoptysis and of internal haemorrhage more speedily than by any other means, not excepting even the acetate of lead, which

seems also to be a less permanent, as well as a less safe remedy. In the case of Mrs. K., the wife of a tradesman in Welbeck Street, the hæmoptysis was accompanied by hectic fever, and an expectoration apparently purulent: she had lately been confined, and there was no symptom which encouraged me, at first sight, to think favourably of the probable result: but the mixture appeared almost immediately to diminish the quantity of blood expectorated, and it agreed so well, that she continued to take it every four hours, for some months, without alteration; the expectoration and the febrile symptoms gradually subsided, and she has remained in perfect health for more than a year. The same combination of medicines was, for a time at least, equally successful in a case of hæmoptysis, which afterwards occurred at Worthing; but the final event yet remains to be determined.

The difference between bloody mucus and pus, either chemically or pathologically considered, appears to be so small, that I have thought it right to employ ipecacuan in many cases of purulent expectoration, without admixture of blood, and I have frequently found it successful in improving the quality, and diminishing the quantity of the expectoration: too often, however, although all the principal symptoms of consumption have been relieved, the hectic fever itself has continued, and has carried off the patient at last.

It is remarkable that a very great majority of

the cures of consumption, which are related by different authors, have either been performed by emetics, or by decidedly nauseating remedies, although their full action may not always have been exhibited; and we may include in this description, not only ipecacuan, and the sulfates of copper and of zinc, but also the digitalis, sea voyages, and swinging; and of all these means there seems to be none, that can generally be administered with so much ease and convenience as ipecacuan. The objections to emetics, though specious, have been principally derived from mere theory; the only real exception to their perfect safety seems to be the case of the existence of great and manifest plethora, and congestion in the head, together with that brittleness of the vessels, which is generally observable where apoplexy has once occurred, in persons above the middle age. In such cases it is said, that emetics have been known to produce a fatal recurrence of the apoplectic attack: but if accidents of this kind had very frequently happened, it could scarcely have been so universal a rule as some physicians have made it, to give an emetic, whenever an apoplexy is supposed to originate from an affection of the stomach: and even if there is any apprehension of this kind, the dose of the ipecacuan may very easily be regulated, so as never to produce a decidedly emetic effect.

Of SORBEFACIENTS, one of the most powerful,

in some of its operations, is *digitalis*, though whatever benefit may have been derived from it, in consumption, is probably rather attributable to its narcotic or sedative effects; whether we suppose this narcotic action to be immediate, or to be preceded or accompanied by an increase of the vigour of the circulation; although some authors have thought that its efficacy rather depended on the promotion of the speedy absorption of pus, without allowing it to acquire an acrimonious quality by long exposure to the air. It does in fact sometimes reduce the frequency of the pulse in a most singular manner, and in some rare cases the alteration thus produced is permanent: I believe also that this effect has been most frequently observed, where the greatest pains have been taken in the cultivation or selection of the plant, as I had lately an opportunity of remarking in the case of a patient, whom I saw in company with a respectable practitioner in Sussex. But I must confess that from the number of instances, in which I have prescribed this medicine with little or no advantage, I have very little reason to place any confidence in its virtues: and I imagine that all its good effects may be obtained from *ipécacuan*, with far less chance of inconvenience. The tincture of *digitalis* seems the best adapted for pulmonary cases, beginning with a dose of ten minims three times a day: the sickness and

distress, which it often occasions, are generally palliated by vegetable acids, and by opium; and the retardation of the pulse may sometimes be lessened, by placing the patient in an erect posture.

Mercurial medicines, which are powerful remedies in promoting absorption, where the mesenteric glands are enlarged, have been frequently given, on account of the supposed analogy of the diseases, in pulmonary consumption, and a few cases have been recorded, in which apparent advantage has been derived from them: but the general opinion of a multitude of practitioners is completely unfavourable to their exhibition. They have been sometimes employed so liberally, as to produce complete salivation, and with a view of reducing the pulse to a typhoid state of debility, in order to prepare the constitution for the effect of tonics, but this reasoning is far too speculative to afford a justifiable ground for practice. I have frequently prescribed mercurial medicines to a considerable extent in consumption, without any perceptible advantage; but I must acknowledge, that I have never had reason to suppose that they aggravated the disease, nor can I conceive that, with proper caution, there is any reason for such an apprehension.

Alkalis, though not very powerful in their operation, are in some measure useful, in many

cases of consumption. Soda has been given with apparent advantage in pretty large doses, at all periods of the disease; and some benefit was derived, in my own case, from the long continued use of the supercarbonate of potass, or artificial Seltzer water.

External applications, whether EPISPASTICS or caustics, are often highly useful in relieving the pain, and the other symptoms of inflammation, and probably also in promoting the absorption of tubercles. The temporary benefit of a blister is so decided and undeniable, that no reasonable practitioner omits to prescribe it, when the existence of any constant pain in the chest points out a particular spot, which requires its assistance. In my own case, a small blister was kept open more than a year; but it was occasionally for a short time exceedingly painful; and it is now a more common practice to suffer a blister to heal, and to apply a new one from time to time, as long as the pain continues; and it may be often prudent to repeat the blister, even when there is no immediate return of pain. Bennet speaks highly of issues, and says that they may be kept sweet by employing a pea of orris root. It has also often been asserted by modern authors, that setons are more effectual than blisters: Pouteau insists that the actual cautery is incomparably preferable to any of these remedies: and a very large caustic between the shoulders,

as recommended by Mudge, might possibly be still more active, if a patient could easily be induced to submit to the inconvenience. A less alarming mode of exciting a cutaneous irritation is afforded by the tartar emetic ointment, rubbed night and morning on the chest, for a quarter of an hour, until the eruption takes place, and continued afterwards somewhat more sparingly. This application is often singularly beneficial in the whooping cough; it is also said to have succeeded extremely well in consumptive cases; and it appears to deserve a more ample trial than has yet been allowed it. For the relief of slight pains in the chest, it may sometimes be of use to apply camphorated or opiate liniments, as simple palliatives or anodynes; and Dr. Trotter has observed that ether, poured into the hand, and held to the chest, will frequently relieve an acute pain in a very short time.

SUDORIFICS may either be employed for diminishing the febrile heat in the earlier stages of the hectic, or, according to Bennet, for the relief of partial sweats, in the same way that cathartics are sometimes prescribed for diarrhoea: and although this practice is not at present common, I have sometimes found it successful; the patient having requested that a dose of Dover's powder might be repeated in the evening, as he found it the most effectual remedy for checking the night sweats. As febrifuges, antimonial me-

dicines are the most in use; and either James's powder, or the precipitated sulfuret of antimony may be given with advantage, where there is occasion for a diaphoretic, which may also act as an expectorant. The antimonial powder of the shops is often inert: I have more than once given it in doses of a scruple every four hours, without the slightest effect, though sometimes a smaller dose will nauseate: and even tartar emetic, when sold in powder, is usually a mixture of the pure crystals with the uncrystallized saline mass that generally remains when the solution is evaporated, containing the "peroxyd," or perfect oxyd of antimony, instead of the protoxyd; while the sulfuret must necessarily contain the protoxyd only, unless wilfully adulterated. The new edition of the pharmacopoeia, however, exhibits a mode of preparing the tartar emetic, communicated by Mr. Hume, which seems to be free from every objection: and the precipitated oxyd made from it will also probably be equally uniform in its quality. The sudorific woods, employed for the compound decoction of sarsaparilla, have been extolled by some authors as useful in consumptive diseases: but their utility is probably confined in great measure to cases complicated with syphilis, or with other cutaneous affections.

The operation of EXPECTORANTS is somewhat obscure, and their powers limited; but there are

certainly many cases of cough, and some of consumption, in which benefit may be derived from the tincture, or the oxymel of squills, the milk of ammoniac, or the compound pills containing both these remedies : they seem not only to promote expectoration, where it is deficient, but also to allay the irritation, which excites too frequent coughing. The polygala is sometimes given with a similar view, and is also considered as possessing some tonic powers. Ipecacuan has been recommended by some authors as an expectorant, and it certainly modifies in some cases the nature of the expectoration in a favourable manner, but it rather diminishes than increases its quantity : it may be given for this purpose in substance, three or four times a day, a grain being combined with three grains of the extract of hemlock, or in any other form that may be more convenient.

The palliatives, which are frequently required for relieving the cough, and for procuring sleep, are either DEMULCENTS or NARCOTICS. As demulcents, simple mucilages are often sufficient, and gum arabic is one of the best ; either alone, or united to other similar substances in the form of a lozenge, or combined with oils, where the stomach will bear them, as with spermaceti, or oil of almonds, in small quantities, made into an emulsion, or a linctus, together with some agreeable conserve, and taken frequently, but very sparingly : and syrup of poppies may always be

added, when a decided sedative is required ; nor will it be practicable, in many cases, to do without large doses of opium, which generally checks the expectoration for a short time, but facilitates it in the end ; although, on the whole, opiates seem ultimately to afford no very material benefit : Tralles even insists that opium always produces more subsequent depression than immediate ease : but he is reluctantly obliged to confess that the syrup of poppies, which he considers as somewhat different in its mode of operation, is frequently a very useful demulcent.

The balsams seem to have been first employed as vulnerary or SUPPURATORY remedies, and in the character of detergents or bechics, strictly so called ; being intended to produce a slight irritation and coughing, and to improve the quality of the suppuration, and at the same time to promote the expectoration. The practice was probably founded rather on theory, than on observation ; but its grounds have sometimes been misunderstood, and it has been opposed by theories equally arbitrary. In fact the balsams are not much employed ; at the same time the benzoic acid appears to have a favourable effect in some pulmonary diseases, either as entering into the compound tincture, or as a constituent part of the balsam of Tolu. The balsamic and sulfureous fumigations, recommended by Bennet and others, can only have been useful as detergents :

Bennet professes to have performed great cures with them, but no very strong evidence has been adduced in confirmation of his statement. He observes that where there has been haemoptysis, the fumigations ought never to be employed within a fortnight from the time of its cessation. When the vapour of ether has afforded relief, it has probably acted as a narcotic, but its impregnation with hemlock cannot have been of material importance. The hypericum, which is very strongly recommended by Linné, seems to abound in resinous matter, and essential oil, and to be somewhat analogous to the vulnerary remedies of the older schools; but its utility has not yet been subjected to sufficient examination.

Of ASTRINGENTS, which are principally required for moderating the secretions of the skin and of the intestines, by far the most important is the sulfuric acid, which almost always palliates, and sometimes completely prevents the night sweats. It may generally be made to agree with the bowels by the addition of aromatics and opiates, if required: it has no tendency to aggravate the febrile symptoms, but frequently appears to alleviate them; and in incipient or rather impending cases of hectic, it has alone been sufficient to restore the patient to health: where, however, the disease is more advanced, its utility is chiefly confined to the relief of the night sweats. For this purpose it is more effectual

than the vegetable acids : these acids, may, however, be preferable to it when there is any complication with scurvy, especially the citric, which must be considered as having some peculiar specific action in the cure of this disease. The astringent vegetable principle, or the tannic semiacid, may sometimes be of use, in the form of catechu or kino, or their tinctures, for the purpose of checking both the sweats and the diarrhoea : and besides the ipecacuan and calomel already mentioned, the chalk mixture, the compound powder of chalk, and the extract of logwood, are frequently useful auxiliaries ; and in slight cases of diarrhoea, may alone be sufficient palliatives, or may merely require the addition of a few drops of the tincture of opium. Nitre, in small doses, is much recommended by some authors as an astringent in haemoptysis, with digitalis as a sedative : but I have not seen much benefit from either of these medicines in such cases.

The most important of TONICS is the Peruvian bark. Much has been said for and against the utility of this remedy in consumption, and both its advantages and its inconveniences have probably been exaggerated. I have known it decidedly beneficial at the beginning of the disease, nor have I ever observed that it increased the hectic symptoms at any period : in my own case the decoction first, and afterwards the powder, and the cold infusion in artificial Seltzer water,

appeared uniformly to promote the gradual amendment, which continued, with one relapse only during a very cold winter, till by degrees the recovery was completed. In a great number of cases, however, bark has been of no perceptible advantage: perhaps it may have been given in too small quantities to be of any use: the powder too is often adulterated; and sometimes it disagrees with the stomach: the extract, though not much more powerful than an equal weight of the substance itself when genuine, appears in some instances to have succeeded better. Whatever inconveniences may be apprehended from a trial of bark, they are generally temporary, and may be avoided by watching its immediate effects, while the advantages to be expected from it, in promoting the absorption of the tubercles, as well as in giving general vigour to the constitution, require considerable perseverance for their attainment, and, when once attained, are permanent. Dr. Chapman insists, that bark is only proper where the disease partakes in some measure of the nature of an intermittent, and judges of its eligibility from the total subsidence of the urinary sediment, leaving the fluid above perfectly clear: but without disputing the occasional utility of this test, we may question the necessity of confining the exhibition of the medicine within limits so narrow, and so

incommensurate to the usual practice respecting it.

In the mesenteric decline, I have generally preferred the *Angustura* bark to the cinchona: I first gave it in a case of this kind, that appeared to be almost desperate, with a view to relieve the chalky diarrhoea, which had taken place in an alarming degree, adding to it a little extract of logwood, and compound tincture of cardamom, and a drop or two of tincture of opium, while a quarter of a grain of calomel was given twice a day, and a gentle saline purgative once or twice a week. The patient was then a delicate child five or six years old, and is now a healthy young man. The *cusparia* succeeded so well in this instance, that I advised it from the beginning in the case of a boy somewhat older, whom I first saw in consultation with two other physicians, of established celebrity: here, besides the common symptoms of hectic fever and debility attendant on the mesenteric enlargement, there was an effusion of fluid into the cavity of the abdomen. From some accidental circumstances, a temporary sarcocele took place, with an inflammation of the spermatic chord, which loosened the natural adhesions of the surrounding membrane, and opened a communication with the abdomen; so that the fluid passed half way down the chord, and produced the appearance of a

hernia. In this case, the powers of absorption appearing very languid, besides moderate doses of calomel taken internally, a small quantity of mercurial liniment was rubbed into the abdomen, in order to assist its operation: and the treatment was ultimately so successful, that all apprehensions for the health of the patient have for many years been at an end. The hernial opening was to all appearance closed by means of the moderate pressure of a bandage, continued for some months after the removal of the swelling, and of the fluid which occasioned it. In both these cases, the tepid or warm sea bath was employed at Worthing for a considerable time, and afterwards the patients bathed in the open sea, and one of them for several successive seasons.

The preparations of steel are very important medicines in scrofula and in the mesenteric decline, appearing to possess a valuable combination of tonic and sorbefacient powers. I have little immediate experience of their beneficial effect in consumption; at the same time I have often given them, either alone or with myrrh, and have never observed that they have produced the inconveniences which some practitioners have experienced from them. They may probably be employed with advantage in many pulmonary affections, accompanied by a languid circulation; and Dr. Griffiths is not the only practitioner that

professes to have found them extensively useful. Chalybeates and myrrh, as well as bark, where they disagree, are found to occasion an increase of cough, of pain in the chest, and of difficulty of breathing: and if these symptoms appear to forbid their exhibition, it will be prudent to desist from the attempt; and it may sometimes be eligible to substitute for them cascarilla, quassia, or gentian, which may possibly be less liable to these objections.

With respect to the DIET of the consumptive, a few theorists only have declaimed in favour of supporting the diminished strength, by the most nutritious and invigorating food, such as animal substances in abundance, with rich wines; and have appealed to a few insulated cases in support of their system. But the almost unanimous consent of the most celebrated authors of all ages, in opposition to this doctrine, has pointed out milk as the great dietetic remedy, of more importance than even more active medicines. Asses' milk, taken liberally twice a day, has been generally preferred, but cows' milk, where it agrees with the stomach, appears to be little inferior to asses': and it is sometimes rendered more digestible by long boiling, with the addition of water, or by being mixed with soda water, or lime water: whey or buttermilk too may sometimes agree better than milk, and be equally salutary in its remote effect. Eggs are also a very valuable

article of diet for the consumptive: but animal food in general, together with wine or other fermented liquors, is condemned by almost every judicious practitioner, except when it may be allowed in small quantities, on account of any particular languor in the system, or when it is thought no longer of any importance to contradict the patient's inclination. Farinaceous food of all kinds, in its various forms, may be taken in addition to milk and eggs: and some consider the lichen as merely a useful mucilaginous article of diet. I was myself strictly confined to milk, buttermilk, eggs, and vegetables, with a little very weak broth, especially fish broth, which was little more than water in disguise; and I adhered very rigidly to the direction for two years. A more complete system of absolute fasting, and living for weeks on cold water alone, as proposed by Pouteau, would scarcely be adopted by the most credulous patient, even if his physician should be hardy enough to propose it; notwithstanding the anecdote related by Willis, of the recovery of a consumptive person, who was starving in a prison.

There is an old receipt for a preparation of milk, made by boiling down a quarter of a pound of mutton suet in a pint of it, for the daily use of the patient, which would perhaps not have been thought of much importance, if it had not been the only peculiarity in the treat-

ment of one case of extraordinary recovery. The man had been a waiter at Portsmouth, and came to London with haemoptysis, an expectoration decidedly purulent, and a well marked hectic: he obtained partial relief from some medicines which I recommended him, but when he went into Northamptonshire, I never expected to see him again: he however returned in a few months, free from his cough and his hectic, and told me that, besides the medical means which I had directed, he had constantly taken his milk and suet, and had in the mean time gradually recovered his health and strength.

EXERCISE in the open air, especially riding, sailing, and every change of scene, must be allowed to be highly beneficial as prophylactics, for securing delicate constitutions from consumptive diseases, and even to have effected many apparent cures in far advanced cases. I was myself in the habit of riding daily, even when the weather was cold; and I am naturally unwilling to exclude any of the remedies, that were prescribed in my own case, from the list of such as are likely to be found generally beneficial. Van Swieten used to recommend persons of the lower class, who were confined to sedentary occupations, to endeavour to procure employment as coachmen; and he is persuaded, that by this advice, he has saved the lives of many.

During the winter, a removal from this country

to a warmer CLIMATE, or from its colder to its warmer parts, may unquestionably be of considerable advantage in incipient cases, and at any period before the commencement of decided ulceration: and there is some appearance of good sense in the general remark of Celsus, that the worst air for the patient is the air which has given rise to the disease. Where a removal is impracticable, it will be highly proper to keep the patient's rooms constantly heated, by means of a stove, to a temperature of about  $65^{\circ}$ ; and this precaution may be equally beneficial at a later period of the disease, when it would be by no means advisable that a long journey should be undertaken. But for a more particular comparison of the advantages and disadvantages of different climates, I shall refer to the next chapter, which contains an investigation of the medical effects of climates, already published in my Introduction to Medical Literature, a work now nearly out of print, and with the other parts of which this essay is less immediately connected than with the present subject,

## CHAPTER VII.

### AN ESSAY ON THE MEDICAL EFFECTS OF CLIMATES.

MEDICAL LITERATURE. P. 561.

A COMPLETE system of meteorology, even so far as the properties of climates, with regard to temperature only, are concerned, presents almost as great difficulties as a complete theory of the nature and cure of diseases. In this, as in many other departments of medical knowledge, we perpetually find a multiplicity of accounts, apparently well attested, but totally at variance with each other, which render it desirable to appeal to some more satisfactory testimonials, than the results of common and superficial observation; while the evidence, which would be required for forming useful conclusions, upon safe and scientific grounds, although in this case completely within the scope of the human faculties, is still such as to require, for its production, a combination of perseverance and accuracy, which has certainly never yet existed, and

which probably can scarcely ever be expected to be found in a sufficient number of collateral observers. Any voluminous work on the subject, whether systematic or empirical, must unavoidably contain much useless, and some erroneous matter; and a short statement of a few facts, which appear to be tolerably well ascertained, first, respecting the physical characters, and secondly, respecting the medical effects of the principal climates, which deserve our notice, is all that it will be possible to attempt in the present essay.

The simple indications of a thermometer, however accurately they may be observed, in the most unexceptionable exposure, by no means afford a correct test of the temperature, as it affects the human system: nor is it possible to express the modifications produced by wind and moisture, even supposing them to be easily known, by any numerical measure which shall be applicable to every relative situation of the individual. I have known an atmosphere at  $65^{\circ}$ , with a thick fog, and a very little wind from the N. E., appear, to a person taking moderate exercise, most oppressively sultry; although a person, sitting long still, might have felt the same air uncomfortably cold. Moisture must make both heat and cold more sensible; the one, by diminishing perspiration, the other, by increasing the conducting power of air. Wind is doubly

concerned in affecting the properties of a climate ; first, as the great cause of preventing a general accumulation of heat over considerable tracts of country ; and secondly, as having a similar effect with respect to the immediate neighbourhood of the person ; and its operation is as generally perceptible in the latter way, where we have no precise mode of estimating its magnitude, as in the former, where it is correctly indicated by a thermometer sufficiently exposed : although, in fact, the most shaded fixed thermometer may often be observed to indicate a temperature many degrees higher, than that of the breeze which is circulating in the neighbouring country. Still more commonly, by the sea side, the wind exhibits the temperature of the water over which it has blown : at Worthing, it is seldom above  $64^{\circ}$ , in the hottest weather, although the sea, when the tide flows in at noon, over the heated expanse of sand, is sometimes raised to  $78^{\circ}$ , where it is several feet deep.

To the inhabitants of these islands, the most important properties of the climates of other countries are those, which render them more or less fit for the residence of persons, liable to catarrhal or consumptive affections. Hence, warmth and equability of temperature, especially in the winter months, are the first objects of our inquiry in the theoretical comparison of climates. Moisture is supposed, by some, to be favourable,

by others, to be unfavourable, to such persons: it may therefore be safely neglected, except as tending to increase the evils depending on a want of equability of temperature. The effluvia of moist and marshy ground are sufficiently well known as the causes of paludal fevers; further than this they require no particular investigation. Nor can we attempt to assign any reason for peculiarities, which render some situations preferable to others, for some individuals only, labouring under a given disease, as asthma; which is sometimes induced by the atmosphere of cities, and sometimes of the country; and which is occasionally mitigated by a residence in places having no marked distinctions from such as are less favourable to it, as Kensington, and perhaps some others.

In the hotter seasons, there are few diseases, and few constitutions, which would require a climate milder than our own: in the colder, an increase of the facility of circulation, which heat appears to afford, may often be beneficial, partly perhaps as exciting perspiration, and partly as preventing too great a congestion of blood in the internal parts of the body. The mean temperature of the six winter months is therefore the first point of comparison, that requires our attention, and such a comparison may easily be derived from the registers, which are usually kept in circumstances nearly similar.

## From October to March.

London, R. S. 1790-4	43.5°
Edinburgh	40.4
Sidmouth, Dr. Clarke, 1812, mean of extremes of each month (Lond. 41.8°)	42.9
Dawlish, Sir W. W. M. S. 1794 (Lond. 44.1°)	45.3
Ilfracombe, without doubt incorrect	(55)
Paris	41.2
Lisbon	55.5
Malta, Domeier (27)(p. 100)	63
Sidmouth, Dr. Cl. 1814, at 9	40.2
mean of extremes	41.2
Madeira, Gourlay. (S. W. aspect, M.)	63
Bermudas, M. S. R. S. 1790	68
Jamaica, Botanic Garden at Kingston,	
Clarke, Dunc. med. comm. VII. 369	74.5

## From November to March.

London, 1808-9	42.6°
Penzance, Stirling, 1808-9, at 10, or about 1° above the mean	48.1°

## From November to February.

London, 1813-4, about 8 and 3	36.3°
Torquay, Mrs. R. 1813-4, at 8 and 2	40.5

## From January to March.

London, 1809	43.1° (Jan. 37.9°
Glasgow, Stirling, 1809, at 10	40.3 33.1)

Penzance, 1809, Stirl. at 10  $48.5^{\circ}$  (J.  $46.7^{\circ}$  D.  $43.7^{\circ}$ )  
 Lond. 1790-4, 8 or 7 and 2  $41.6$  (J.  $39.1$   
 Sidmouth, M. S. R. S. 1800,  
 8 and 2  $41.7$   $42.3$ )

### February and March.

London, 1803, 7 and 2  $41.5^{\circ}$   
 Clifton, Carrick, 1803, 8 and 2  $42.5$

### From October to December.

London, 1811, mean of extremes in each  
 month  $47.0^{\circ}$   
 Sidmouth, Clarke, 1811  $45.7$

### From December to February.

London  $39.7^{\circ}$   
 Edinburgh  $36.7$   
 Paris  $36.8$

### January.

London, 1814, 8 and 3  $28.8^{\circ}$   
 Penzance, Mrs. R. 1814, 8 and 2  $37.4$

It appears from this comparison, that none of the situations here enumerated, North of Lisbon, except Penzance, has any material advantage over London in the mildness of its winter. The best parts of Devonshire seem to be about a degree and a half warmer; Torquay however may perhaps be a little milder than this; the

account, which was kept at Ilfracombe, must have been taken from a thermometer in a confined or a sunny situation. But Penzance may be fairly considered as having a temperature  $4\frac{1}{2}^{\circ}$  higher than London in the coldest months; nor are the journals here employed the only ones, which allot such a superiority to the climate of this extremity of our island. It is remarkable, that the temperature of the three coldest months is the same at Paris as at Edinburgh, being, in both these cities, about three degrees lower than in London. There are probably particular spots on the coast of Hampshire or Sussex, which, from their sheltered situation, must be considerably less subject to the effect of the Northerly and Easterly winds, than most other parts of the island; and Hastings, or its neighbourhood, may perhaps be reckoned among the most eligible of these; but the further we go up the channel, the more remote we become from the mild gales of the Atlantic, while the prevalent South Westerly winds, in passing over a considerable part of the continent, must have lost much of their warmth. It is scarcely necessary to observe, that both Malta and Madeira present, numerically, a mean temperature for the winter months, as favourable for an invalid as can possibly be desired.

Equability of temperature is a second quality, of no small importance, as tending to diminish

the chance of incurring, or aggravating, pulmonary diseases, by repeatedly taking cold. When, indeed, the temperature is much below  $60^{\circ}$ , the most material changes are those which occur upon going from the house into the open air; so that a cold climate becomes, in some degree, of necessity a changeable one also. The regularity of this change, and the power of avoiding its effects by additional clothing, as well as of obviating them in some measure by exercise, contribute however to lessen its influence; and it does not therefore altogether supersede the effects of that changeableness, which consists in a great extent of variation of the temperature of two successive days, or of different hours in the course of the same day. The simplest, and perhaps the best, mode of appreciating the effect of the extent of such a variation, in deteriorating a climate, is to observe, for each month, the greatest variation, at the same hour, in any two successive days within its duration. The mean variation of successive days may also be computed, in order to assist in the comparison; and the mean diurnal range, or the space through which the surface of the mercury moves, in ascending and descending, throughout the day and night, will give a collateral estimate of a similar nature. The best practical mode of deducing this range from the observations is, to find sepa-

rately the mean of the heights for the morning and afternoon, and to double their difference. Where none of these particulars can be obtained, the extreme variation of each month will afford a character not altogether unimportant.

Mean of the greatest variations of successive days in each month, for the winter months.

London, 1790-4, 6 mo.	11.5°
London, 1794 (Greatest of all 15°)	10.7
Knightsbridge, Read, 1790-1 (Greatest 23°)	16.3
Dawlish. 1794 (Greatest 13½°)	10.7
Lisbon, 1788 (Greatest 11°)	8.7
Bermudas, 1790 (Greatest 13°)	9.0
Montreal, 1778	40.
Penzance, 1808-9. Nov. to March. (Gr. 10°)	9.2
Torquay, 1813. Nov. to Feb. (Gr. 17°)	12.7
Sidmouth, 1800. Jan. to March. (Gr. 16°)	10.9
Gravesend, 1787. Jan.	13.0
Ashover, Derbyshire, 1805. Jan.	13.5
Minehead, Atkins, 1782, Jan.	16.
Clifton, 1803, Feb. 9°, March, 13°, mean 11.	
Penzance, 1814. Jan.	13.

Mean variation of successive days, for the winter months.

London, 1790-4, 6 mo.	3.62°
London, 1794	3.51

Knightsbridge, 1790-1	5.45°
Dawlish, 1794	3.68
Lisbon, 1788	2.70
Bermudas, 1790, about	3.00
Montreal, 1778	13.2
Penzance, 1808-9. Nov. to March	2.80
Torquay, 1813. Nov. to February	3.50
Sidmouth, 1800. Jan. to March	3.32
Clifton, 1808. Feb. and March	3.55
Penzance, 1814. Jan.	4.30
Gravesend, 1787. Jan.	4.15
Ashover, 1805. Jan.	3.33
Minehead, 1782. Jan.	4.00

Mean diurnal range for the winter months.

London, 1790-4, 6 mo.	13.0°
Torquay, 1813. Nov. to February	9.2
Sidmouth, 1800. Jan. to March	10.0
Clifton, 1808. Feb. and March.	
(Lond. 16.2°)	11.4
Penzance, 1814. Jan. 8, and 2.	5.6
Sidmouth, Dr. Cl. 1814. 6 mo. 9 and 2	(8.7)

Mean monthly variation, for the winter months.

London, 1793-6, 6 mo.	25.9°
Madeira, 1793-6, 6 mo.	12.6
Sidmouth, 1811. Jan. to March	34.
Clifton, 1803. Feb. and March (Lond. 36°)	31.
Sidmouth, Dr. Cl. 1814, 6 mo.	28.7

It does not appear that Devonshire possesses any decided advantages over London with respect to equability of climate, if we judge of the climate of London from the observations made at the apartments of the Royal Society only; but in so central a situation, the changes must be rendered much less sensible by the effect of the surrounding buildings; and they appear to be considerably greater at Gravesend, and greater still at Knightsbridge. In this respect too Penzance retains its superiority even over Devonshire. Lisbon seems to have a less variable temperature than any part of Great Britain; and in Madeira, to judge by the monthly variation only, the advantage in this respect appears to be still greater.

The greatest possible equability of temperature seems however to be obtained in a sea voyage to a warm climate, in which the variation seldom amounts to half as much as in the most favourable situation on shore, even on a small island; and in pulmonary cases, the motion of a ship would probably, in general, be rather beneficial than otherwise, while the fatigue of travelling in bad roads, and the danger of sleeping in damp beds present an alternative, by no means favourable to a journey by land.

The direction of the wind alone can seldom have any immediate effect on the salubrity of the

climate, except by variously modifying its temperature, according to the seas or countries over which it blows. There is a method of computing the mean direction of the wind, which does not appear to have been hitherto adopted, but which affords a very simple and intelligible result, although somewhat laborious, if extensively applied. It consists in finding the bearing and distance of a point, to which a light body would be carried by the wind in the course of the year, supposing the velocity to be constant, when its variations have not been ascertained by observation. It is obvious that the bearing of such a point will show at once the mean direction of the prevalent winds; and its distance, compared with the effect of a constant wind for the same time, as a unit, will indicate the degree in which those winds have prevailed.

#### Prevalence of winds.

London, 1790-4 W.  $9^{\circ}$ S. .234.

London, 1794 W.  $33^{\circ}$ S. .188.

Dawlish, 1794 W.  $6^{\circ}$ S. .466.

Lisbon, 1788 N.  $1^{\circ}$ W. .315.

According to this comparison, it appears that the mean direction of the wind in Devonshire is somewhat more westerly than in London: and that the degree, in which such westerly winds predominate, is more than twice as great as in

London: or, if we convert the measure into days, that the predominance amounted, in 1794, to 68 days for London, of a wind nearly W. S. W. and to 170 days for Dawlish, of a wind a little to the South of West, or W.  $\frac{1}{2}$  S.

The variations of the climate of the same place, with respect to mean temperature, are easily collected from the usual meteorological computations. Dr. Heberden has very successfully combated the common opinion respecting the superior salubrity of cold winters; it appears however that the winter, which he particularly observed, was more variable, as well as colder, than usual. Mr. Kirwan has attempted to account for the greater frequency of colds, which he supposes to occur in spring and in autumn, by the greater variability of the temperature at those seasons; but both the fact and the explanation are very questionable: for in reality the variations of temperature, if estimated by the total range of the thermometer within the 24 hours, are almost uniformly greatest in the hottest weather. In London, the greatest variations of successive days at the same hours in the morning are greatest in winter; in the afternoon, in summer; and although the latter are a little greater in April than in some of the succeeding months, the difference is by no means considerable.

Of the empirical evidence, which may be col-

lected, respecting the medical effects of different climates, the most authentic is perhaps that which is derived from well regulated bills of mortality; since these documents ought to afford us a tolerable criterion of the general healthiness or unhealthiness of a place, from the proportion between the annual deaths and the population, and at the same time a pretty correct determination of the degrees in which different diseases are fatal. Thus when we find, that in Stockholm the annual deaths amount to  $\frac{1}{19}$  of the population, in London to  $\frac{1}{21}$ , in the Pays de Vaud to  $\frac{1}{35}$ , and in some villages in different parts of Great Britain to  $\frac{1}{60}$  only, or even less, we cannot hesitate to consider a residence in the country as generally more healthy, than in a metropolis similar to either of those cities; although it cannot fairly be concluded that the healthiness is precisely in the proportion which might be inferred from this comparison, until we have considered how far the effect of emigration to a great town may influence the apparent mortality. After the age of 8 or 10, the probable duration of life may be estimated with sufficient accuracy, as Demoivre has very ingeniously shown, by assuming that, of a certain number of persons born together, one will die annually until the whole number is become extinct; and it is well known, that this number may in common cases be supposed to be 86; so that at any given age, for instance 36,

we may find the probable duration of life by deducting it from 86, and halving the remainder, which will give us 25 for the estimate required; and if this law were universally true from the time of birth, it is easy to show that the mortality in a metropolis would always be increased by the accession of settlers; so that if, for example, the whole population were supplied by settlers at 20, and all children were sent to a neighbouring village to be educated, the mortality of the town, instead of  $\frac{1}{43}$ , would become  $1 : (43 - 10) = \frac{1}{33}$ , and that of the village would be  $1 : (86 - 10) = \frac{1}{76}$ ; and that any partial changes of a similar nature would cause a smaller alteration of the apparent salubrity, in proportion to their extent. But the mortality during infancy is actually much greater than is assumed in the simple hypothesis of Demoivre, and from this circumstance, as well as from the frequent return of aged persons into the country, Dr. Price has inferred that emigration in general has no tendency to increase the mortality of cities. In reality the question depends altogether upon the mortality which may be supposed to take place within the first year, which is often estimated at one third of the births; but this proportion seems to be much too great for a tolerably healthy city; and on the whole it does not appear that Dr. Price's observations can by any means be admitted as conclusive.

With respect to the evidence afforded by the prevalence of diseases, it has been observed by Dr. Gregory, that removing from a colder to a warmer climate may be beneficial, even in those diseases to which the inhabitants of the warmer climate are subject; but if they appeared to be equally or more subject to any disease than the inhabitants of the colder, there would surely be little encouragement for the change; for instance, in a person supposed to be liable to diseases of the liver, it would surely be injudicious to undertake a voyage to a hot climate, with a view of avoiding the chance of taking cold, since the well known frequency of hepatitis, in such climates, would much more than counterbalance any prospect of advantage from the change.

The frequency of consumptions is decidedly greater in cold than in hot climates, but not by any means in exact proportion to the depression of the mean temperature. The principal situations, that require to be compared with the metropolis, as a standard, are the South of England, the South of Europe, the Islands of the Mediterranean, Madeira, and the West Indies.

There do not appear to be any precise accounts of the proportionate mortality from consumption at any place upon the Southern coasts of this island, on a scale sufficiently extensive for the comparison, but there is abundant reason to think that such reports would be greatly in

favour of the salubrity of these coasts, more so indeed than any conclusions, that we should be at all authorised to form, from such thermometrical observations, as have hitherto been compared. A greater number of registers is still wanting to obtain sufficient evidence for the inquiry: and it would be desirable that some journal should be kept at one of the Scilly islands, or at Guernsey or Jersey, as a situation fully exposed to the influence of the sea air; for there can be little doubt, that for equability of temperature, a very small island must have great advantages above every other situation on shore. But in the present state of our knowledge on this subject, although we are fully justified in recommending a residence in Devonshire or Cornwall as advisable in a certain stage of consumption, it does not appear that any meteorological observations will authorise us to represent the advantages, to be gained by such a residence, as by any means equivalent to those, which may be found in remoter situations; nor that the empirical testimony, derived from accounts of the comparative prevalence of the disease, is at all so clear, or so firmly established, as to make up for the want of evidence of a great and decided superiority of the climate.

In the South of Europe, the situations which have been most frequented are Lisbon, or some other part of the peninsula, the neighbourhood

of Montpellier, and different parts of Italy. In Spain, and probably in Portugal, consumption is said to be not common, but by no means wholly unknown; and whether from accident, or from causes which are likely to have a constant operation, the climate of Portugal has certainly failed, in a number of instances, of producing any material benefit, where there has been apparently a very fair chance for the patient's recovery. With respect to the South of France, it is perhaps sufficient to remark, that the general proportion of deaths from consumption at Marseilles is fully as great, as the greatest which has been observed in London, where, according to Dr. Heberden's remark, its prevalence has of late years been so much increased. In Italy the disease appears to be decidedly less frequent; and there is no reason to doubt but that, in the Southern parts of that country, there may be situations in which the climate approaches to that of the neighbouring islands.

It is, however, highly probable that some of these islands possess very considerable advantages over almost every part of the continents which surround them, at least as far as we can judge by their affording a climate of that description, which seems to be the most desirable; for actual experience will not allow us to be too confident of obtaining success, even from a resi-

dence in these. Dr. Domeier informs us, in his very interesting account of the island of Malta, that the thermometer seldom varies here more than  $6^{\circ}$  in the 24 hours, or stands below  $51^{\circ}$ , even in the depth of winter; while in Lisbon he has seen ice, and both ice and snow in Naples; besides that, in these two cities, the difference between day and night often amounts to  $20^{\circ}$ . If an invalid leaves England in the middle of August, the voyage lasts about a month, and is often of itself highly beneficial, so that he arrives at Malta, in time to be fully prepared to be further benefited by the mild winter; it appears, however, from the more particular account which Dr. Domeier elsewhere gives of the temperature, that it continues throughout October rather higher than is altogether desirable, being seldom below  $70^{\circ}$  throughout that month; and in a country where there is scarcely any visible foliage, walls occupying universally the place of hedges, this cannot be a matter of perfect indifference.

In Madeira, though a thermometer attached to a building is seldom found below  $54^{\circ}$ , there are frequently cold winds, snow, or more commonly something intermediate between snow and hail, often falling on the mountains, at the height of 1000 feet above the sea, and at still greater elevations sometimes lying undissolved till July: and this imperfect kind of hail falls oc-

casionally even on the low grounds. The island is probably a more agreeable residence than Malta, but it seems very doubtful whether it possesses any determinate advantage over it with respect to climate ; and it is not impossible, that some other islands in its neighbourhood may afford a greater equability of temperature. We have however a more established experience of its beneficial effects in pulmonary diseases than of almost any other situation. Dr. Adams says that, " in cases of tubercular or scrofulous consumption, if the patient does not saunter away his time after you have advised him to leave England, we can with certainty promise a cure." (Med. phys. jour. Apr. 1800.) This true English consumption he thinks is not to be found in Madeira, while the catarrhal affection, which somewhat resembles it, though without purulent expectoration, is not uncommon, and may be fatal, if neglected or improperly treated. Dr. Gourlay agrees with Dr. Adams, in his report of the general benefit derived from the climate of Madeira, by consumptive persons, going to it from colder countries, to pass the winter in the island, and of the frequency of catarrhal affections among the inhabitants ; but he strongly insists that genuine consumption is also very common and very fatal. There can however be little doubt, from the concurrent testimony of the majority of observers, that the

climate of Madeira is extremely salubrious, and that consumptions, though they may sometimes occur, are comparatively rare.

In the West Indies, it is agreed by all authors, that consumptive affections are almost unknown, and that scrofula in all its forms is uncommon: while the inhabitants of the West Indies, coming into a colder climate, are peculiarly liable to the attacks of these diseases. Dr. Hunter, however, observes, that notwithstanding this exemption in favour of the natives of the West Indies, a residence in this climate appeared to him to be of no manner of advantage to persons, who were already affected by incipient consumptions when they arrived there. We cannot doubt the accuracy of this evidence, as far as regards the facts, which came immediately under Dr. Hunter's observation; they principally related to the military, who perhaps laboured under some peculiar disadvantages; but other practitioners have given much more favourable reports of the events of cases, in which they have made trial of the effect of a residence in this climate; and if we may be allowed to draw any inference from the qualities of a climate, as indicated either by the thermometer, or by its effects on the constitutions of the inhabitants, there can be little doubt that a residence in Bermudas, in a temperate and sheltered part of Jamaica, or in some other of the West

India islands, together with the equable qualities of the sea air, to which the patient must be exposed during the voyage, must present every advantage, towards the recovery of a consumptive person, that climate alone can possibly bestow.

In other diseases, the effects of climate are perhaps less exclusively beneficial ; although it appears that gouty persons often derive considerable benefit from a residence in the hottest countries, as in the East Indies, or at Ceylon in particular. Dr. Gregory seems to be persuaded that life may be lengthened, and the inconveniences of old age retarded or mitigated, by repeated emigrations into warmer and warmer climates, after the age of 50 or 60, according to circumstances : and he thinks that even posterity may be benefited by an emigration of this kind.

In whatever situation the residence of an invalid may be fixed, it is of no small importance that the aspect and exposure of the house, which he occupies, should be selected with a view to the qualities of climate he is desirous of obtaining. We have an illustration of the truth of this remark, in an observation recorded by Dr. Carrick, respecting the influenza of 1803. " One of the most open and exposed of the buildings on Clifton Hill is Richmond Terrace, which forms three sides of a parallelogram, fronting respec-

tively the East, South, and West ; on the East side, not one family, and scarcely an individual, escaped the complaint, while on the South side, a great majority, both of persons and families, in all other respects similarly circumstanced, escaped it entirely." Such facts as these are among the few which afford solid grounds for medical reasoning, and they deserve the more attention, as they relate to circumstances of continual occurrence, and of perpetual influence on our health and comfort ; and in proportion as both the medical and meteorological sciences become founded on a firmer basis, it cannot be doubted that their beneficial effects will be more and more experienced, as well in the preservation of health, as in the treatment and cure of diseases.

## TABLE OF THE ANNUAL MORTALITY

OF THE DIFFERENT COUNTIES OF GREAT BRITAIN,  
ACCORDING TO THE RETURNS OF 1811.

Middlesex	1 in 36	Rutland	1 in 53
Kent	41	Suffolk	53
Warwick	42	Brecon	54
Cambridge	44	Cumberland	54
Essex	44	Westmoreland	54
Surry	45	Wilts	54
York, E. R.	47	Hertford	55
Huntingdon	48	Oxford	55
Lancaster	48	Sussex	55
Buckingham	49	Bedford	56
Southampton	49	Derby	56
Mean of England	49	Radnor	56
Chester	50	Dorset	57
Durham	50	Leicester	57
Norfolk	50	Salop	57
Lincoln	51	Devon	58
York, N. R.	51	Hereford	58
York, W. R.	51	Mean of Wales	60
Denbigh	52	Gloucester	61
Nottingham	52	Carmarthen	62
Northampton	52	Cornwall	62
Somerset	52	Merioneth	62
Stafford	52	Montgomery	63
Worcester	52	Monmouth	64
Berks	53	Pembroke	64
Flint	53	Carnarvon	67
Glamorgan	53	Anglesey	72
Northumberland	53	Cardigan	73

It is obvious that those counties, which contain large manufacturing towns, exhibit a mortality

wholly independent of their climate, as is exemplified in the case of Warwickshire; while the natural salubrity of others, for instance, Cornwall, is probably rendered more conspicuous by their exemption from sedentary employments.

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A TREATISE  
ON  
CONSUMPTIVE DISEASES.

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BOOK II. MEDICAL HISTORY.

**ALTHOUGH** we may not expect to obtain, from the medical **works** of the ancients, any great variety of information, immediately applicable to practical purposes, we may still feel a sufficient interest in the history of a science, which deeply engages our attention, to induce us to inquire, how long the few truths, which are fully established with regard to it, have been sufficiently demonstrated. When indeed a fact is once well authenticated, no accumulation of authorities can be sufficient to invalidate its credibility; yet we cannot help placing a greater degree of confidence in opinions, which we are for other reasons inclined to adopt, when we are informed that they are sanctioned by the observation of the most respectable authors of every age. To enter into a minute detail

of modes of practice perfectly obsolete, would be a mere waste of time ; and the study of the whole works, even of the most celebrated of the Greek physicians, has long been considered as unnecessary to a complete medical education : but an author, who is concentrating the whole power of his faculties upon a single point, and who, proceeding for a time upon the grand principle of the division of labour, endeavours to put himself and his readers in possession of all that relates to his immediate object, ought not to be excused from undertaking to reduce into a narrow compass, every fact and every observation of importance, that he can extract from the vast mass of useless matter, with which the whole extent of the medical sciences is incumbered.

HIPPOCRATES has enumerated, in different parts of his works, several varieties of consumptive affections, including the consequences of some other pulmonary diseases, as well as atrophies arising from different causes. He notices the short dry cough, with which genuine consumption usually begins, the subsequent expectoration, the pain in the chest, the temporary flushes of heat, the diarrhoea, the falling off of the hair, and the curvature of the nails. A defluxion of matter from the head, which was supposed to

HIPPOCRATES, B. 460. D. 361. B. C. Hippocratis opera omnia, Gr. L. Foesii. Fol. Genev. 1657.

constitute the catarrh, that sometimes precedes consumption, he imagines to be in this case the immediate cause of the disease, and fancies that a part of the expectorated substance is derived from this source, and another part from a true ulceration of the lungs: in other instances, he speaks very correctly of the nature of suppurations of the lungs, subsequent to inflammatory affections, and to injuries of various kinds. He does not appear to have noticed the burning heats in the hands and feet, and the recurrence of the sweats at night, which are so constantly observed to be characteristic of hectic in modern times: although he mentions, in speaking of empyema, that profuse sweating is a symptom of the disease; and that the paroxysm of fever occurs at night. Of the remedies which he recommends, the most powerful are caustics, accompanied or preceded by milk diet, with meat in moderate quantities: asses' milk and mares' milk are mentioned, together with that of other animals: and exercise, gradually increased, to the extent of walking 10 or 15 miles a day, avoiding the extremes of heat and cold, is the most essential article of one of his modes of cure. Emetics too are pretty constantly recommended: they were however so liberally used by the ancients, as a part of their dietetic system, that the prescription does not add much authority to the peculiar adoption of

them in this disease: cathartics also are advised in moderation; and many simple vegetables are ordered in a prolix detail, which are now considered as having but little efficacy, and from which, where they are recommended, no very appropriate action seems to have been expected. Oxymel is the favourite demulcent, and must indeed often have been of service in allaying the irritation of the cough. Diarrhoea is considered by Hippocrates as a fatal symptom, as well as the subsidence of the matter expectorated in sea water, or the emission of a rancid odour when it is burnt: and it must be allowed, that the specific gravity of the water of the Mediterranean is such, as to render it much better adapted for a criterion of the difference between pus and mucus, than common water, in which mucus free from air very frequently sinks; although the additional precaution of employing a vessel of copper, which is defended by a friend of Morgagni, can only have been dictated by some fanciful theory, or founded on some inaccurate observation.

The principal passages of the works attributed to Hippocrates, in which consumptive diseases are mentioned, well deserve, on account of their acknowledged antiquity and universal celebrity, to be separately examined. In the Predictions it is observed, that the easy expectoration of white matter is a sign of a favourable result: in the

Coan Prognostics and the Aphorisms, that “when the expectoration of a consumptive person emits a strong rancid smell in burning, and the hair of the head falls off, the disease will be fatal.” “If the expectorated matter sinks in sea water, the disease will be shortly fatal: but the water should be contained in a vessel of copper.” “Diarrhoea supervening in phthisis is fatal.” “The most dangerous consumptions are caused by a rupture of the great vessels, or by a defluxion of matter proceeding from the head,” “which corrodes the lungs.” “The age most liable to consumption is from 18 to 35.” “If there is no expectoration, suppuration succeeds to pleurisy on the fourteenth day, and terminates in consumption about the fortieth.” “Purulent expectoration, after haemoptysis, is dangerous; it is succeeded by emaciation and colliquation; and when the expectoration ceases, the patient dies.” “Before a suppuration in the lungs, the expectoration is at first salt, then sweet.” The salt taste, which has also been noticed by Bennet, is attributed by Van Swieten to an effusion of serum from the capillary vessels previous to haemorrhage. “Milk is improper where there is head-

HIPPOCRATES, Predictions, P. 91. Coan. Progn. 434. p. 187.

Aph. V. 11. p. 1253. C. Pr. 435. C. Pr. 436. Aph. V. 14.

C. Pr. 438. On glands, p. 273. C. Pr. 439. Aph. V. 9.

8. 15. VII. 15. 16. C. Pr. 403. Aph. V. 64. IV. 3.

ache, fever, flatulence, or bile in the evacuations ; but it is beneficial in consumption without much fever, and in all slow fevers where these symptoms do not occur." " Persons of consumptive habits may take occasional cathartics, but should avoid emetics."

The subjects of consumption and other similar diseases of the chest are discussed under the names of phthisis, phthoe and empyema, in the first and second book on Diseases, and in the beginning of the book on Internal Affections, with somewhat more of minuteness than precision, and with an appearance of repetition and inconsistency not commonly found in the works of any one author. " When pleurisy or peripneumony is not relieved by expectoration, the collected humours putrefy and become pus : there is a slight cough : the saliva is a little bitter : the heat at first is moderate, afterwards more violent, with great weight and pain : the expectoration is thick, and by degrees becomes purulent, with an increase of fever and cough, a loss of appetite, and a diarrhoea, which immediately precedes the fatal termination." Dr. T. Reid imagines that Hippocrates had noticed the frequent continuance of a good appetite until the last stage of consumption ; but he misinterprets the word signi-

HIPPOCRATES on Dis. I. p. 450. Reid on Cons. Ed. 2. p. 20.

C. Pr. 433, Aph. V. 13.

fyng want of appetite, and considers it as expressing hunger or abstinence. When a blood-vessel bursts, it is observed in the Coan Prognostics, that frothy blood is brought up by coughing: a portion of it remaining in the lungs becomes putrid, and is changed to pus: in the course of the disease, pus and blood are discharged: it is at first curable; but if neglected is fatal. Sometimes the veins of the lungs become varicose, causing a dry cough, with occasional haemorrhage, and, as is elsewhere remarked, headache, and swelling of the face. In some cases, consumption originates from an effusion of blood into the lungs without haemoptysis, especially after a strain, or accidental injury; a collection of phlegmatic humours is formed around it, causing pain and cough, with purulent and bloody expectoration. Erysipelas of the lungs is attended by acute fever, dry cough, and severe pain towards the back, but is more particularly distinguished by frequent vomiting and fainting: the nostrils are also dilated, and the tongue sometimes thrust out (Int. Aff.): if the patient does not recover in a few days, the whole mass of the lungs becomes purulent. The formation of a tubercle or tubercles, is attributed to the putrefaction of phlegm or of bile: it is attended by dry cough, pain, and flushes of heat;

there are also sometimes tubercles in the pleura ; and sometimes ruptured or varicose vessels lay the foundation of a suppuration. Empyema is caused by wounds which are healed prematurely at the surface only, or by wounds of large vessels. In general, all pulmonary diseases are more severe and more dangerous in young persons ; and where the affection becomes chronic, it is occasionally complicated with an attack of pleurisy or peripneumony, which carries off the patient.

Of the most ancient modes of practice in these diseases, some idea may be formed from the directions given in the second book. It is observed that “ on the eighteenth day of a peripneumony, if the expectoration continues, and becomes sweet, the disease may be expected to last for a year. The patient must take, in the beginning, sweet and weak wines in small quantities, and ptisan with honey, till the fever ceases : after the eighteenth day, decoction of lentils, and fried lentils, with a large portion of fat, if it be not hot weather ; but in hot weather, salt meat with fish, and fat dishes : afterwards he should live principally on farinaceous vegetables, and abstain from stimulating food, and from beef, mutton, and pork.” In the empyema succeeding peripneumony, there is a dry cough, with great

difficulty of breathing; the legs swell, and the nails are contracted. In these cases, after warm bathing, the root of arum is prescribed, with honey, salt, water, and oil; and the patient is to be shaken, in order that the abscess may be burst: when this attempt has succeeded, fat and salt meats are to be given; but as the spitting goes on, they are to be used more sparingly. As the disease advances, the patient cannot lie on the sound side, and the hollow parts under the eyes swell. On the fifteenth day the operation of paracentesis may be performed, shaking the patient, in order to hear on which side the fluid is collected, or judging by the prominence of the parts: and after the operation, a tent must be employed, to retard the discharge for some days.

In another description of the symptoms of pulmonary consumption, we are told that the expectoration is thick, sweet, and greenish: there is grinding of the teeth, and pain in the sternum and the back, a wheezing respiration, dry fauces, and a red spot on the cheeks: the voice is hoarse, the legs swell, the nails are curved, the body is emaciated, the expectoration nauseates, and the cough is most troublesome in the morning, and in the middle of the night. At an early stage of the disease, some benefit may be derived from the cream of lentils, and after a day

or two, hellebore may be given in small doses, so as not to act powerfully on the bowels. If there are griping pains, enemata may be necessary, and one of the best consists of boiled asses' milk. When there is much fever, the patient may eat boiled mutton, poultry, gourds, and beet: savory and marjoram may also be employed in different forms. If there are temporary flushes, the patient must eat fish, the best and fattest, and bread in preference to other vegetable food; he must walk in the open air, avoiding the sun and the wind, and take emetics after eating, when he thinks proper. Another species of phthoe, without fever, except slight flushes of heat, is said to be curable by a mode of treatment nearly similar, but to last from seven to nine years. An aphthous state of the windpipe is next noticed, causing pain and itching of the chest, with a fetid breath, and hectic symptoms.

In the tabes dorsalis, which is properly an asthenia, arising from excesses, complicated with a shortness of breath, a heaviness of the head, and other symptoms, a milk diet is recommended at first, and afterwards mild food of a more solid nature.

When consumption is subsequent to a wound of the trachea, caustics are to be applied to the

chest and back, the patient being first prepared by a nutritious diet, especially of milk.

In erysipelas of the lungs, which is generally attended by a variety of dyspeptic symptoms, asses' milk, among other remedies, is much recommended; and, in young persons, cauterizing the chest and back: in the book on Internal Affections, cold applications are advised in the first stage. A sort of peripneumonia notha is next described, in which the lungs are said to be filled and obstructed.

When the lungs adhere to the pleura lining the cavity of the chest, the patient cannot sleep well on the sound side: but this posture is recommended to him as conducive to a cure: and fomentations are to be applied in bladders to the parts affected. If the adhesion is the effect of a wound, it is recommended to inflate the cavity of the chest by means of a pipe; and, however extraordinary the practice appears, it is not impossible that it might be beneficial where the adhesion was not such as to prevent the collapse of the lungs, allowing the wounded parts to reunite more readily than in the natural process of respiration, since they would be more intimately in contact with each other, though not more at rest; that is, supposing the orifice to be closed again. Where there are tubercles in the costal

pleura, the patient cannot lie on the side affected, and an operation is generally required.

The symptoms of dropsy of the lungs resemble those of empyema, but the progress of the disease is slower; the nails are curved, and the feet swell. The water of hydrothorax is to be let off gradually; if the sore suppurates on the fifth day, the patient recovers; if it remains dry, he sinks under the disease.

Many of these varieties of pulmonary diseases are again described in the book on Internal Affections. When haemoptysis is wearing off, a sort of scales is mixed with the expectoration, and the chest becomes sore. The patient should then be kept as quiet as possible; the diet a moderate quantity of fish and herbs, with old, austere, sweet, and black wine. If this mode do not succeed, the cautery must be employed, premising a regimen of milk to make the patient stout. Cows' and goats' milk are recommended in consumption after pneumonia, the patient being prepared by the use of asses' milk as an aperient, and afterwards of mares' milk; and in other cases whey is added. If there is an abscess, which points, it may be opened. Puppies and fowls, well boiled, and the broth made from them, are often recommended, especially in tubercles of the lungs: and the patient is advised to sleep on a soft bed.

We here find a new and apparently independent subdivision of consumptions into three species: the first lasting one year, and derived from an affection of the head; the second three years, commonly occasioned by great fatigue, and the third nine years, depending on an affection of the spine. In the first, fat and highly seasoned food is to be avoided; and old austere wine to be taken in small quantities, with emetics after eating, and moderate exercise, if it agrees, the patient being confined, in the winter, to the fire side. The second kind is attended by dyspnoea, and commonly remits in the summer. In the third, there is great oppression, with occasional sickness, which affords temporary relief: there are chills and flushes, alternating with sweats. The remedies here are fomentations, an emetic of water, honey, and vinegar; a hot bath early in the morning, taking care to avoid exposure to cold: then, after sleeping, the patient is to walk two miles at first, and increase the distance daily half a mile, to 15 or more, keeping the bowels regular: he is to drink a decoction of herbs, with fat taken from the kidneys: after a month, the diet is to be bread and fat wild boar: and the cure will probably be completed in a year. In the *tabes dorsalis*, various opening medicines are recommended, and especially milk;

and after a sufficient preparation by milk diet, cauteries are to be applied to the loins in four places : gentle laxatives, and food little at a time, principally vegetable, with weak wine, are also recommended in the book on the parts of the human body.

Among the disorders of which the occurrence is noticed in the books of the Epidemics, consumptions are frequently mentioned. Thus in the third book, consumptive diseases are said to have been very fatal, beginning with the winter, and carrying off many in the spring ; others remained subject to a cough through the summer, and of these a considerable part died in the autumn, but the greater number recovered. They had frequent chills, constant fever, and sweats ; but some remained cold, and could hardly be warmed. The bowels were irregular. The cough was frequent, and the expectoration abundant. The want of appetite was very distressing, and they were not even thirsty : they had a sensation of weight and drowsiness : most of them became dropsical, with shivering and delirium before death. The persons most liable to consumption were those with smooth, fair, and ruddy skins, and blue eyes, as Galen explains the words ; of a leucophlegmatic habit, and with

HIPPOCRATES on Int. Affect. p. 536. On the parts of the human body, p. 416. Epid. iii. p. 1089. Galen, V. 429. Ed. Bâle, Hipp. Epidem. vi. p. 1175. Galen, V. 481.

shoulders projecting like wings. The same peculiarity of form is mentioned in the sixth book, as derived from weakness of the constitution, and unfavourable in case of the occurrence of severe catarrh. In the fifth book, we have an account of a dyspeptic decline, cured by bleeding copiously in the hands: not a consumption, as Gideon Harvey makes it.

In the works of ARISTOTLE, who flourished about half a century later than Hippocrates, we find the earliest traces of the opinion, that consumption is an infectious disease. In the first section of the Problems, Aristotle, indeed, observes, that the plague, or pestilence, is the only infectious disease; but in the eighth he inquires, Why are consumptions, psora, and ophthalmia, communicated to those who approach near to the person affected by them, while dropsy, fevers, and apoplexy are not communicated in the same manner? Is it because the eye sympathizes most readily with the affections of external objects, moving when they move, and being disturbed when they are disturbed? And because consumption makes the breath corrupt and offensive; but those diseases are most easily communicated, in which the breath is so vitiated, as, for example, in the pestilence: and those, who ap-

HIPPOCRATES, *Epidem.* V. p. 1142.

ARISTOTLE, B. 385. D. 322. B. C. Probl. I. 7. VIII. 8.

ERASISTRATUS, Fl. Ab. 257. B. C.

proach the diseased person, breathe the air thus affected, and acquire the same disease which has vitiated it, as if it had been vitiated by their own respiration. And psora is communicated as a superficial affection of a moist nature.

We are informed by PLAUTUS, that resin and honey were the usual prescriptions among the Romans for haemoptysis, and by OVID, that they were well aware of the fatality of the disease.

DIOSCORIDES, the physician of Cleopatra, was considered by the ancients as the most accurate and comprehensive author on the *Materia Medica*. He recommends sulfur as useful in coughs and consumptions, either taken with eggs, or as a fumigation.

We have no means of judging of the date of ARETAEUS's writings; but there is something in the stile, which inclines us to place him within a moderate interval after Hippocrates. The elegance and accuracy of his nosological descriptions have been universally acknowledged. He observes, in speaking of some of the acute diseases of the lungs, that where they are fatal, the patient seldom despairs to the last. In his description of the chronic affections, he says that

PLAUTUS, *Merc.* I. ii.

OVID *de Pont.* I. iii.

ASCLEPIADES, *Fl.* 63. B. C.

DIOSCORIDES, *Fl.* 33. B. C. v. 124.

MUSA, *Fl.* 23. B. C.

ARETAEUS, *Acute Dis.* ii. 2. *Chr. Dis.* i. 6.

purulent expectoration, after abscess of the lungs, or chronic cough, or haemoptysis, is called pyë and phthisis ; with suppuration of the chest, empyema ; with ulceration of the lungs, phthoe ; and this name is employed in the subsequent parts of the chapter, as denoting the most genuine form of consumption. The attendant fever he supposes to be constantly present, so as to prevent nutrition, but to become latent in the day, and only more manifest at night. The pulse is small and obscure, and there is great restlessness, debility, and emaciation : the expectoration may be very various ; livid, full black, light brown, or light green ; flattened or round ; hard or soft ; fetid, or void of smell. The tests of fire and water, which have been sometimes proposed, appear to be superfluous ; for the sight is more accurate than any other sense, not merely for observing the sputa, but for judging by the appearance of the patient : for if any common person sees a man pale and languid, coughing and emaciated, he decides correctly that he is consumptive. Indeed in some consumptions there is no expectoration at all. The patient feels a weight in the chest, with nausea, and chills in the evening, succeeded by heat towards the morning : he has partial sweats about the thorax : his voice is hoarse : his neck is slender,

and as if contracted: the fingers too are shrunk, except at the joints, which become prominent: the nails are bent for want of support, and become painful: the nose is sharp, the cheeks are red, the eyes sunk, but bright, the countenance as if smiling: the whole body is shrivelled: the spine projects, instead of sinking, from the decay of the muscles; and the shoulder blades stand out like the wings of birds. At last a diarrhoea supervenes, and the case becomes hopeless. The disease most commonly attacks persons of a slender and compressed form, with prominent throats, thin chests, and a fair complexion, and such as reside in cold and moist situations. In the chapter on abscesses of the lungs, it is asserted that considerable portions of the bronchiae, and of the lungs themselves are sometimes expectorated: and after the description of asthma, a species of dyspnoea is mentioned under the name of pneumodic affection, with a small and quick pulse, and a cough almost dry; it is said to be generally fatal in six or eight months, and seems to resemble a complication of consumption with dropsy of the chest.

For the cure of consumption sea voyages are much recommended; the saline particles appearing to dry up the ulcers: and afterwards the liberal use of ointments. Milk is to be taken as

largely as the stomach will bear it: this fluid is agreeable to the taste, easily swallowed, nutritious, and congenial to our habits from our infancy: it is pleasing to the eye, and demulcent to the trachea: it expands the bronchiae, raises the phlegm, facilitates respiration, and glides easily downwards: it affords a sweet balm to the ulcerated parts, and is every way more friendly than any other food, serving at once for nourishment and for medicine. We may add to it cakes and puddings: and if variety is required, the cream of ptisan, sweetened to the taste: when there is indigestion, some light pot herbs, with salt, vinegar, or honey, may also be given; otherwise ptisan is best alone. Fresh eggs, boiled soft, are also a good article in the diet of the consumptive; and beans are of advantage in checking the expectoration, where it is too abundant; but they are liable to the inconvenience of causing flatulence. The beginning and end of this interesting chapter are lost, but what remains is of considerable importance, as establishing the high antiquity of the use of a milk diet and sea voyages, in the treatment of consumptive diseases.

CELSUS has briefly recorded the practice of the most celebrated physicians and surgeons of the earlier ages. He relates a singular mode of treating the slow fever, which is a simple and

mild form of hectic, giving wine and water in such quantities as to excite a more violent febrile action, and to overcome the original disease; or in some cases throwing cold water on the patient, so as to cause a chill, which produces the same effect. Petron, after the days of Hippocrates, used to cure fevers, otherwise desperate, by covering the person with clothes, so as to occasion great heat and thirst, and then giving cold water, which would have been injurious without the previous excitement.

As species of *Tabes* he enumerates first, *Atrophy* or wasting, principally derived from errors in diet; secondly *Cachexy*, the consequence of long sickness or eruptive diseases; and thirdly *Phthisis*, which is still more dangerous, and which, beginning from the head, descends to the lungs, and is accompanied by ulceration and fever, with cough, and expectoration of purulent and often bloody matter, which emits a disagreeable smell when burnt. The two former are to be treated principally by dietetic methods. In genuine consumption, a long voyage, with a change of climate, is advisable if the strength allows it; and Alexandria is generally preferred: a shorter voyage may be tried, if the strength is much reduced; or the motion of a coach or chair. It is elsewhere observed, that the worst air for

any disease, is that in which it has originated. Fatigue, however, is to be avoided, as well as the extremes of cold and heat. Milk may also be given with propriety, as in all chronic fevers, though it is a poison in acute fevers, and in pains of the head, and bilious affections. Bathing is disapproved, though recommended in atrophy and cachexy. The diet is to consist of acrid vegetables, as garlic and leeks, with vinegar, and farinaceous substances, and occasionally some very mild animal food: flour, boiled with mutton suet, may be considered as a medicine: and some light and austere wines may be allowed. When the disease is more severe, the cautery must be applied; under the chin, in the throat, twice on each breast, and under the shoulder blades; and the ulcers must not be healed as long as the cough continues: frictions and warm baths, wine and water are directed alternately. The juice of plantain is considered as a good medicine, and that of horehound with honey: also turpentine, butter, and honey boiled up together. But diet, carriage exercise, sailing, and gruel are the principal remedies: after these, other exercises may be used, and great temperance is to be observed for a long time.

For a cough, whether consumptive or otherwise, hyssop is to be taken every other day:

the patient must endeavour to run, holding his breath; and to read aloud, disregarding the interruption of coughing, which by degrees will subside: walking and friction are also useful: and sometimes roasted figs, cupping the chest, sinapisms to the throat, horehound, linctus of squills, vinegar of squills, or garlic in wine, and raw or soft eggs with sulfur; also a long journey or voyage, residence by the sea side, and sea bathing. The drink should be at first water; then every other day wine.

Haemoptysis is one of the causes of purulent expectoration. In this disease, bleeding may be performed for several days in succession, if the symptoms require it. Wool, wetted with vinegar, may be placed on the part where the pain is felt, and kept moist with a sponge. Erasistratus recommended ligatures, applied to the limbs in several places, to prevent the return of the blood to the lungs: Asclepiades thought this practice founded on an erroneous theory, but experience is in its favour. The head should be kept high, the face wetted with water, the room cool, and the patient perfectly at rest.

The elder PLINY enumerates a variety of specifics for consumption, with an almost superstitious credulity. After mentioning the pectoral virtues of gum ammoniac, he observes that

woods affording an abundance of resinous effluvia are very beneficial to the consumptive, even more so than a voyage to Egypt, or a course of milk in the mountains. He praises the juice of plantain, and a linctus of betony with honey. He says, that in Achaia, a wolf's liver infused in wine, the lard of a lean sow, fed on vegetables, and asses' flesh, together with the broth, are used for curing consumptions: and the smoke of dry cow dung, drawn through a reed, and the tips of bullocks' horns, burnt and powdered, and mixed with honey. Goats' fat in gruel, or with honey and water, and a little rue, is recommended by many: and a very respectable author affirms, that a consumption, in the last stage, has been cured by the fat of a mountain goat, taken in milk: others employ the lungs of a stag with straight horns, smoke dried, and triturated with wine.

The voluminous works of GALEN contain a system of practice, founded on an intricate, and often fanciful theory, and intermixed with a vast superfluity of detail and distinction, but not till lately superseded in the continental schools of physic, and even yet essentially retained in the prescriptions of many of the fashionable physicians of France and Italy, although in the North

GALEN, B. 123. D. 193. Works. 5 vol. fol. Bale, 1538. Method of healing, vii. IV. 106.

of Europe ~~it~~ has generally given way to simpler and more vigorous methods. A mere glance at the works of Galen, as they stand on the shelf, is however sufficient to show, that he was no ordinary man; while the same evidence must be allowed to afford a strong presumption, that all his writings cannot possibly be of the very first class. He professes to despise the esteem of the public, and to value nothing so much as truth and science; and whether with sincerity or not, he entreats his disciples not to praise him extravagantly, nor even to inscribe with his name the works, which he composed for their instruction, as well as for the exercise of his own faculties, and the assistance of his memory. We cannot avoid entering with some degree of interest on the writings of an author so long considered as almost oracular, although it is not a little difficult to compress his prolix and digressive discussions into a moderate compass.

The nature of hectic fever, as independent of consumption, is fully considered by Galen in various parts of his works. It is mentioned in the treatise on the Irregular error of temperament, as an instance of exception to the general rule, that fevers are derived from such an irregularity, with the remark, that the fever being continued, there is no inequality in the sensation,

and the heat is not perceived. In the first book on the Distinction of fevers, hectic is described as generally succeeding ardent fevers ; and in its second stage, when the substance of the heart is wholly dried up, as constituting Marasmus, which is generally incurable ; the heart being burnt up, like the wick of a lamp which is consumed, so that even the addition of fresh oil cannot revive it, though a feeble and unsteady flame still hovers round it, till by degrees it is extinguished. There may be marasmus without fever, as in the wasting of old men : Philippus speaks of an old age from disease, which we have not uncommonly seen, even in young persons ; but the true marasmodic fever is hot as well as dry, the whole body being dried up, as a tree is dried by a fire. The hectic which accompanies marasmus is easily distinguished, even without observing the pulse, or the heat : the eyes are hollow, as if placed in pits, from the loss of their moisture, the bony margin of the orbit being obviously prominent : the dry sordes of the eyelids are abundant : the patient looks as if he had been running a whole day on a dusty road in the sunshine : he loses the bloom of health : he keeps his eyes half closed, without being sleepy : his temples are hollow, the flesh being wasted away, and in short he has nothing left but bones and integuments. The

skin is dry and firm, like leather: the pulse is thin, and hard, and obscure, and frequent: the heat is not perceptible at the first touch, but afterwards becomes acrid and caustic, and the more so the longer the contact is continued. But while the moisture is yet unexhausted, the fever is hectic and not tabid. It may be distinguished by its causes, and by its continuing without intermission, but still more certainly by the effect of food in bringing on an exacerbation, with a stronger and more frequent pulse, independent of any preceding rigor, or partial chill, or sleepiness. The hectic fever has no regular paroxysms, and is distinguished from continued fever by the pulse, which is small and less frequent, in the same proportion as the heat is less. The taking of food seems to produce an exacerbation in the same way as water, thrown on unslaked lime, causes it to heat and smoke. Hectic fever may be occasioned by affections of the lungs, especially abscesses and consumptions; by those of the stomach or liver, the colon, the bladder, or the kidneys; by chronic inflammations of any kind, and by dysenteries and lenteries: but it never succeeds to any visceral disease, without some affection of the heart itself. The arteries are always hotter than the neighbouring parts, as is most observable, when the body has been cooled by bathing or otherwise, which is not the

ease in other fevers: the heat of the beating pulse remains unaltered, while the general temperature is depressed; nor is the nature of the pulsation at all changed: and by this mark, the hectic fever may be known, when it is complicated with an intermittent, or with a fever of any other kind.

We find, in the Essay on Marasmus, a prolix disquisition on old age, as the simplest form of this affection, which cannot be cured, but may be retarded by bathing, and nutritious food, and sleeping on soft beds, which preserve the moisture of the heart. The death of starved animals is a sort of marasmus, but not accurately the same, the body not being so uniformly dried up as in true marasmus. In the premature old age, which Philippus considers as a marasmus without heat, the pulse is hard, but the breathing is small and slow: and Archigenes is wrong in making a hard pulse alone a criterion of fever. In the scorched or scorching marasmus of Philippus, as well as in the fainting or syncopodic, the pulse is small and frequent. The cold marasmus is generally derived from the injudicious use of cold drink in fevers, either given in excess, or at an improper time.

The treatment of hectic fever is prescribed at

large in the tenth book of the Method of Healing. It is first considered as derived from ardent fevers in hot and dry summers, after too much fasting, especially in hot and dry constitutions. When the hectic is formed, the patient's diet must first be cream of ptisan, and gruel, with some bread, and then the fever must be extinguished by cold water, if there is no inflammation, nor putridity. In some cases the cold water may be given to increase the inflammatory fever, and overcome the hectic: and if this is thought too dangerous, cold may be applied externally to the cardia or thorax, or bathing, in dry habits. The proximate cause of inflammation is the too great distension of the vessels with blood: it may also arise from the escape of the blood out of the vessels into the intermediate pores: but without this escape, the juices may putrefy within the vessels. When there is fever in a dry body without putrefaction, the indications are to moisten and to cool: this may be done either by external means, as by bathing, and the quality of the air, or by food: moisture being slower in its effects, and cold more rapid. The patient's habitation should be low, and its aspect northerly: it should be provided with fountains and basons of water; or water should be continually poured from one vessel into another, and sprinkled on the floor,

which should also be strewed with roses, or vine branches, or other cooling plants. If the cold be too intense, it will constrict the surface, and not penetrate to the interior parts of the body: but this may be prevented by clothing: and at any rate it must operate without impediment on the lungs, which is especially of importance, when the hectic depends on a primitive affection of the heart; but if the original disease is in the stomach, it may be more easily reached by internal medicines. Hectic fevers generally arise from an affection of the heart or the abdominal viscera: less commonly from the lungs, which are naturally moist and spongy: but they do sometimes originate in the lungs, as well as in the mesentery and the other abdominal and pelvic viscera. The author has never seen a marasmus depending on the diaphragm, but sometimes a simple hectic, attended by delirium, and ending fatally. If the lungs are primarily affected, they will manifestly stand in need of cool air. As a medicine, vinegar diluted with water is the best refrigerant: and for an external application to the thorax or the whole body, a mixture of one part of wax with four of roseate oil, and some water, first immersed in a vessel of very cold water, and repeatedly applied and often changed: and cooling vegetables are sometimes added to the mixture. Bathing is very strongly recom-

mended, and the process is very minutely described: first warm air is employed, next warm water, and then cold water, and lastly the sweat is wiped off. When we are fatigued or dried up by exercise, the bath restores us to comfort, and defends us from fevers: a strong young man in the country will plunge into cold water at once when heated, and be much refreshed by it: animals also wash themselves when they are hot, by a natural instinct, as they eat when they are hungry, and seek warmth when they are cold. In fevers, if we had sufficient powers of discrimination, we might probably sometimes derive material advantage from the use of the cold bath, without premising the hot; and some persons have been actually benefited by this remedy: but without a more intimate knowledge of diseases than we possess, we cannot generally venture on the practice; and least of all in hectic fever, where there is not strength enough to bear the shock. A stout young man, having a fever, in warm weather, without visceral inflammation, would bring on a salutary perspiration by bathing in cold water; and if he were in the habit of cold bathing, he might have recourse to it with the more confidence: but for the hectic it is unsafe, especially when there is much emaciation: thus in a hot and dry summer, those who have travelled far, and are become thin and weak, have no need

of being cooled, nor would it be safe for them to use the cold bath without first going into the warm. For we seem to be hardened by the cold bath like iron, when heated first: and if we previously warm ourselves by exercise, the effect is the same. The cold bath must, however, follow in hectic, otherwise no good is done: but it must be used with great moderation: the patient being carried through the whole operation by four men, holding the corners of a cloth. It is necessary to incur the danger for the probability of the benefit, and at any rate if we cool too much, we can warm again. But when marasmus is once confirmed, the case is hopeless: if we succeeded in cooling the patient, the dryness would still remain, as in extreme old age, although this might be better than suffering him to die without relief. In all cases of marasmus we may bathe passively and cautiously: a single rapid immersion in the cold water will be sufficient for the conclusion of the process; and where the person is very delicate, he may have cold or tepid water thrown on him in the hot bath room, without going into the cold. The food must be of farinaceous gruels, and ptisans, with some sweet herbs: and if the fever is advanced, asses' milk; giving honey or salt, if necessary, to prevent its coagulation; but honey is in general to be avoided in hectic, as drying up

the patient. The ass should be brought into the room, in order that the milk may be perfectly fresh.

To complete the account of the Galenic treatment of hectic, we must return to the conclusion of the treatise on Marasmus ; first remarking how nearly the opinions of Galen, respecting cold bathing, coincide with those of the ingenious Dr. Currie. It is here observed, that true marasmus is incurable, and that when physicians have fancied that they have conquered this disease, they have merely mistaken some other for it. Philippus insists, that bathing is injurious in marasmus, which is a very extraordinary opinion, when we observe how much it moistens, and relieves thirst. It is very salutary in every curable form of marasmus, while there is any strength left. Cold water may also be drank at proper times : and cold applications, to the region of the heart and liver, may be employed as soon as the hectic can be decidedly distinguished, by its continued type, from an ephemeral fever. Where there is an erysipelatous diathesis, cold water must be taken freely ; and lettuces, with or without vinegar and water, but the vinegar must be free from vinous qualities : we must also apply poultices of herbs and flour, moistened with snow water, and changed as they grow warm, till the patient is thoroughly chilled, and the thirst ceases. The

scorching marasmus after ardent fevers must also be cured by cold remedies: the variety which constitutes premature old age, by analeptic means. The food must be capable of easy assimilation, the powers of the system being weak, and nothing seems more appropriate than milk, especially that of a woman, taken from the breast, as Eurypho and Herodicus recommend in consumption. This diet agrees not only with the fainting, but also with the scorching marasmus; and ptisans and gruels may very properly be added to it. In the cold marasmus, wine is serviceable; in the scorching, injurious; and in the fainting marasmus allowable, when the temporary symptoms appear to indicate its use.

The various symptoms of pulmonary affections are discussed in different parts of our author's extensive works. The particular nature of hæmoptysis, and the properties of some of the substances expectorated are examined in the fourth book of Local affections; and the occasional appearance of calculous concretions is observed. There are also some useful cautions respecting the discharge of blood from the fauces, which may sometimes be mistaken for hæmoptysis: and several cases of consumption beginning with an expectoration of bile, in the course of which some fragments of ulcerated lungs were also discharged.

With respect to the possibility of the communication of consumption by contagion, Galen appears to have adopted the sentiments of Aristotle. In the first book on the Distinction of fevers, we find this passage. "That a pestilent constitution of the air produces fever, is well known to all intelligent persons, and that it is dangerous to have intercourse with those who labour under the disease, on account of the probability of infection, as is manifest in cases of psora or ophthalmia: it is dangerous too to pass the whole day with the consumptive, and in general with all those persons, whose diseases generate putrid effluvia, so as to make the house in which they live offensive."

The treatment of pulmonary consumption is fully considered in the fifth book of the Method of healing. The different kinds of hæmorrhage are first considered, and a general caution is given against the use of astringents, or cold external applications, in internal hæmorrhages. From the subject of internal ulcers in general, the author proceeds to those of the lungs in particular. He observes, that such ulcers require very powerful remedies, because they are out of the reach of their immediate application: the operation too of coughing, which is required for cleansing the lungs, may be mischievous by the agitation which it causes, and even the motion of respiration is

unfavourable; so that when a vessel has burst, unless it unites without inflammation, the disease is incurable. If, however, the injury is in the larynx or trachea, it may be relieved by art, being within the reach of remedies, which will insinuate themselves into the larynx, if the inclination to cough be firmly resisted. This has been observed in the ulcerations which have followed the great plague with eruptions, which is still raging: a crust or cicatrix was coughed up, and the patient felt that it came from the larynx. He was directed to lie on his back, and hold a styptic medicine in his mouth, and he was sensible of its effect, acting either directly, or by transmission, but he thought he perceived that the action was direct. After a short time he sailed down the Tiber, and in four days more he arrived at Stabiae, and used the milk of that place, which is not unjustly celebrated. The air of Stabiae is dry, the pastures healthy: the hill is of a moderate height, three miles from the Bay of Naples, sloping gently to the west. It is near Vesuvius; which makes the air still drier, by means of its volcanic heat, and defends it from the northerly or rather north westerly winds. Such a hill might be chosen in any other country, not facing the north, providing such vegetables as afford a good and astringent milk, for instance the agrostis, lotus, polygonum, and melissophyllum,

the mastich, comarum, and cytissus. At Stabiae the milk of cows is used: it would be better to have asses and goats also; the asses' milk being the lightest, the goats' of an intermediate nature. All milk should be taken warm from the animal: woman's milk was justly preferred by the ancients. When it coagulates in the stomach, honey may be added; with a little salt, if we wish it to enter the constitution speedily. The person in question, who had the ulcer in the larynx, was cured by the milk of Stabiae, as many others have been. In a second case, the interior part of the larynx appeared to have been expectorated, after a long protracted catarrh, yet the patient recovered, though his voice suffered. The consumptions, which occurred after the pestilence, seem to have been more easily curable, because the ulcers were naturally dry; and it is the general indication to dry up ulcers. The treatment of haemoptysis from accidental violence has been already mentioned: we are now to consider haemoptysis succeeding to catarrh. A lady of high rank sent to me, says the author, on the first appearance of blood in the expectoration: I did not bleed her, as she had fasted for four days on account of the catarrh: but I ordered an active enema; I had her legs and arms rubbed and tied, and her head shaved, and covered with pigeons' dung: I then ordered the bath, desiring her to be well clothed

after it, and to take some austere wine with fruit and some drinks; and a mild opiate before she slept. It appeared that her lungs still wanted cleansing, but I suffered her to remain at rest through the day, only employing frictions and giving an opiate at night. The next day she took some boiled honey and cream of ptisan, and the frictions were repeated. This system was continued, with proper alternations, for some days, and the patient recovered without the use of milk. In another case, a young man was bled four times in the first two days, with frictions and ligatures: in the evening he took the diaspermaton, an opiate, containing the seeds of hyoscyamus and of other plants: on the second day a cerate was applied to the whole chest; the next day he was bathed. In the mean time, he was fed lightly with drinks and ptisan, and a little fish. He afterwards took an emetic and an opiate, and was sent to Stabiae. This mode of treatment has always succeeded with those who have applied early; but not always after the first two or three days; and never perfectly when a fever has been excited by the inflammation, although even in such cases some relief has been obtained from it. The only cases radically incurable appear to be those, which are derived from a fault of the humours or constitution, shown by the saltness of the saliva; these ge-

nerally admit of palliation only; but before the occurrence of haemoptysis, our remedies have sometimes effected a cure. The indications are to relieve the cough, and to obviate the defluxion from the head: this is to be performed, first, by cathartics, as by pills of aloes, scammony, colocynth, agaric, bdellium, and gum arabic; secondly, by the application of the thapsian cerate to the head; and thirdly, by baths and exercise. The cathartics may be repeated occasionally, as well as bleeding, with proper intervals for recruiting the strength by nourishing food. All that are curable, are cured by bleeding, purging, and strengthening the head; and we should not waste our time in experiments, or in beginning with feebler remedies, as if the disease were void of danger. We must not imitate Erasistratus, who substitutes ligatures for bleeding, in order to save the blood for the time of inflammation, when it may be required to take it away; but it will then be too late; as if a pilot should throw spars to a sailor, when he has suffered his vessel to be wrecked. Erasistratus could not have thought inflammation universally necessary to the cure of wounds, if he had observed those of the gladiators, which frequently heal without any inflammation, and are perfectly well on the second, third, or fourth day. We have also cured many accidental haemorrhages without the occurrence of inflammation: for if inflammation

had supervened, the sputa would have shown it: in fact, a wound of the lungs cannot unite if it does inflame. It is also remarkable, that Erasistratus does not mention the utility of purgatives: Thessalus the methodist is zealous for bleeding in haemoptysis, though in direct contradiction to his own principles, which limit the employment of this remedy to diseases of stricture: but here he is obliged to become an empiric.

We may form an idea of the *materia medica* and of the pharmacy of the Greek physicians, from the work of Galen on the Composition of medicines for local uses. In the seventh book he enumerates the medicines which were employed for relieving the affections of the lungs, and which were commonly called *arteriacs*, as relating to the trachea and its branches. The term *bechics* properly denoted such remedies as were employed to excite coughing, in order to cleanse the lungs; but it was sometimes extended to those which were intended to allay the cough, and improve the expectoration. Many of the prescriptions, enumerated by Galen, were copied from Asclepiades, Musa, Andromachus, Heron, Crito, Menecrates, Archigenes, and Philippus; but most from Andromachus, containing generally frankincense, myrrh, saffron, squills, liquorice, mastich, tragacanth, and similar substances, with

syrup of grapes and honey. When the discharge was excessive, Andromachus added opium and castor to dry it up: he sometimes employed a formula of Blastus, containing aloes, saffron, and mastich. He also used the juice of hyoscyamus, with pepper: others more frequently the seed of hyoscyamus, which is known to possess similar powers. The lozenges were to be held under the tongue, and coughing was to be avoided, in order that they might pass down the trachea while it remained open. Gum ammoniac, employed by Crito, is, as Galen observes, a powerful medicine in chronic cases. Crito recommends, for preparations of this kind, the use of a diploma, or water bath, as used by the perfumers, over a charcoal fire. Many different prescriptions are given for preparing the diacodium, or syrup of poppies, made with honey: Damocrates, in his metrical Philater, gives some very elaborate directions for this process, and orders the syrup to be kept in a glass vessel. A lozenge of Scribonius Largus consisted of liquorice, myrrh, turpentine, and tragacanth. Andromachus, after having described many bechic medicines, adds, that all narcotic and soporiferous substances may be reckoned as bechics, since they thicken the too thin discharges, and are drying and cooling; and Galen agrees with him in the propriety of giving such remedies. Sulfur too was occasionally recommended for coughs, with cardamoms and cin-

namon: and Antonius Musa employed the juice of the crambe with honey. For the orthopnoea, which is commonly a symptom of asthma or hydrothorax, a medicine of Asclepiades is mentioned, containing millepedes, which are supposed, as Galen acknowledges, to have an attenuant and diaphoretic power, but he is at a loss to understand upon what grounds Asclepiades could first have thought of employing them. This remark might be extended, with equal justice, to a great variety of popular medicines.

The books on Euporistic or extemporaneous medicines contain no very important additions to these articles. For dry coughs, iris with honey is recommended; for haemoptysis, roses, gum, and tragacanth, bole, linseed, and polygonum: for consumption, iris with hyssop, bitter almonds, the juice of squills with honey, southernwood, and other simple remedies.

In the Medical definitions, which form a part of the collection of Galen's works, though not supposed to be genuine, phthisis or consumption is described as an emaciation, occasioned by an ulceration of the lungs, attended by a cough and a slow fever; and phthoe as nearly synonymous with it.

The Euporistics addressed to Solon are a spurious and heterogeneous work, sometimes written in very modern Greek. In the third  
GALEN, II. 472. IV. 393. 438. 451.

book, scissile arsenic, or orpiment, with pepper and many other vegetables, is recommended for smoking, and to be taken internally with honey: and burnt sponge is mentioned as a remedy useful in some pectoral diseases.

The age of CAELIUS AURELIANUS is extremely uncertain: he does not mention Galen, nor even Celsus, but the blunders and barbarisms of his stile appear to indicate a later date than either of these authors. He gives a copious and correct account of consumption under the name of phthisis or phthoe. He observes that there is sometimes an acute pain in the chest: that the ends of the fingers are thickened, the tip of the nose is pale, and the external ears cold. He supposes the disease to partake of stricture and solution, or, in the language of Brown, of the sthenic and asthenic diathesis. If the ulcer is disposed to tumefaction, which is known by the pain, a warm residence is to be chosen, fasting is to be observed for a day, and fomentations and cataplasms are to be applied. The medicines are to be honied water, fenugreek, or as more powerful detergents, iris, and tares; aristolochia, arum, and horehound: fir cones, for thickening the expectoration, with honey and liquorice; diacodium, with butter and honey. Gentle passive motion, as that of gestation, and friction

with ointments are beneficial. Theriac and mithridate may be useful, where drying remedies are required; and salt food, the drimyphagia, is recommended, as in haemoptysis. Sailing, especially to a distant climate, and reading aloud are good exercises. Diocles is censured for having employed emetics, which are hazardous, garlic, which is flatulent, and the cold bath, which is dangerous. Themison recommends constant suspension in a swinging bed, which the author thinks likely to exasperate the fever, at the time of the paroxysms; and for a similar reason, he observes, that the food ought to be given during the remissions. Themison also employed, under the mistaken notion of carrying off the humours, very large ulcerations, which have the disadvantage of preventing the application of friction, dropaces, cupping glasses, sinapisms, and paropthesis, or full exposure to the heat of the sun, or of a fire.

In another part of the work, where he treats of a catarrhal cough, he observes, that some of the methodists call it a disease of stricture, others of solution, but the most approved authors think it a mixture of both. Where stricture appears to prevail, he enjoys abstinence for three days, rest, and warm clothing, and a residence in a light situation and mild climate; where solution, a dark and cold place is to be preferred,

and as the cure advances, a change of residence, especially to the sea side. The causes and kinds of haemoptysis are very minutely discussed : for its cure, absolute rest is recommended, and the patient is to avoid the sight, or even the thought of blood : externally, cold applications are to be employed, and alum to be taken into the nostrils. Astringent electuaries are also prescribed ; Themison gave pomegranate with aloe. If the haemorrhage continues in a moderate degree, we are to bleed on the third day, since inflammation will then take place : but if the symptoms are urgent, with dyspnoea, we must bleed at an earlier period. With respect to ligatures, there is some difference of opinion ; the principal physicians of the sect of the methodists, however, maintain, that if applied with moderate force, they are ineffectual, or at most of temporary utility ; but if made extremely tight, they are intolerably painful.

The works of the Greek physicians after Galen, as well as those of the Arabians, consist principally of abridgments and extracts from the voluminous writings of that author. ORIBASIUS, at the conclusion of his meagre abstract of Galen's practice in consumptive cases, observes that a milk diet is of more importance than all other remedies put together. AETIUS makes a similar remark respecting asses' milk : he also recom-

mends venison fat, dissolved in a soup ; and when the disease is inveterate, a circle of caustics to the chest. ALEXANDER TRALLIAN exhibits somewhat more of original observation. In hectic, he recommends ripe fruit, besides the means commonly employed, but when the disease is of a cold nature, only grapes, as they are rather warm. In erysipelatous, or bilious inflammation, he has ventured to give cold water, with immediate benefit, though the disease has been somewhat protracted in its duration. Pus, he observes, may be distinguished by its solubility in water: a tubercle in the lungs first produces dyspnoea, this is succeeded by cough, and the excretion of a viscid humour, which causes a wheezing sound: sometimes also calculi are formed, and he has known a calculus expectorated, so hard, as to ring like a stone, when it fell on the ground: the patient recovered by means of a cooling diet. He is surprised that Galen should ever have thought it right to give mithridate and other heating things, which are enumerated among the arteriaca, but remarks, that even the divine Galen was not exempted from error. Among bechic remedies, he mentions the juice of lettuce with liquorice, which was used by Psychrestus: and he says that in many

AETIUS, Tetr. II. i. 92, 93. iv. 67.

ALEXANDER TRALLIAN, xii. 4. v. 1. .4.

febrile diseases, diacodium is of use in relieving thirst and excessive perspiration, and particularly in erysipelas of the chest. In his eleventh book he gives a long account of the hermodactyls and their combinations, which were for ages a standard medicine in gout, and which have lately been employed in the same disease with decided advantage: they are also mentioned in the seventh book of Paulus Aegineta, and Rhazes considers them as possessing aphrodisiac powers. In the second book of PAULUS AEGINETA, where he treats of hectic fever, we find a correct abridgment of the description and distinctions of Galen. The great remedy, he says, is food of a humid nature: cream of ptisan, gruel, and bread: where there is no inflammation, cold water may be employed, and cold applications may be substituted for cold drink, if it appear safer: bathing he considers as always beneficial. In suppuration of the chest, and consumption, he recommends leeks, with farinaceous food, and honey and water; and the application of fomentations and poultices, besides a variety of other well known remedies. He mentions the expectoration of calculi, as having sometimes occurred to him in haemoptysis preceding a fatal consumption. In ACTUARIUS we find scarcely any

thing relating to hectic, or consumption, which has not been already quoted from some earlier author.

RHAZES, the most esteemed of the Arabian physicians, has given a tolerably comprehensive compendium of Galen's doctrines: he is strongly in favour of milk, and observes, that if it disagree, it may be left off, and resumed when the fever which it creates has subsided; and he has a mixture of arsenic or orpiment with aristolochia, myrrh, styrax, and galbanum in equal parts, formed into a mass, with a sufficient quantity of butter, for a fumigation.

AVICENNA observes, that a febrile paroxysm, lasting more than twelve hours, constitutes a hectic: that in marasmus the eyelids are depressed as if by a weight: the hair grows long, and the whole person is shrivelled and squalid. He recommends the use of camphor lozenges, and of crabs, besides barley water and milk; and bathing in the Galenic manner: as the patient recovers, he allows fresh cheese with some animal food. The hectic of old age must be incurable, otherwise death itself might be escaped: but it may be palliated by warm and moist remedies,

ACTUARIUS, iii. 31. iv. 4.

RHAZES, Fl. 959. To Mans. x. 3. ix. 60. Antid. i. 34.

AVICENNA, B. 983. D. 1036. Book 4. Fen. 1. tr. 3. c. 1. B. 3.

Fen. 10. tr. 4. c. 18. 21.

as by the bath after digestion is completed, by milk from the breast, and by honey, which is very bad in the common hectic: at the same time friction may be employed to keep up the vital warmth. With respect to pulmonary ulcers, he observes, that they are always dangerous, and those of the cartilages of the trachea incurable: that consumption is most common in cold countries, and that it is often attended by an intermittent fever besides the hectic: he recommends a dry air and milk diet for its cure; in the early stages he advises bleeding, and he considers the sugar of roses as perfectly marvellous: but in general he adheres closely to the precepts of Galen.

The medical authors of the fifteenth, and of the first half of the sixteenth century, seldom ventured to deviate very materially from the doctrines and practice of the ancients: although many of them faithfully registered the facts which they observed, and contributed in this manner to the improvements which were made by their successors.

We must not however include, in this remark, the fanciful and original PARACELSUS, who can by no means be accused of too servile imitation; although he agrees with his predecessors in re-

ferring consumption to want of moisture, and says that the whole body is dried up by the disease. He observes, that cough may be occasioned not only by an affection of the lungs, but of the liver or kidney. When the skin bursts or cracks about the knees, the case is desperate. The diet is of the greatest consequence: it should consist of liquorice, polypody, lentils, raisins, lettuces, radishes, cabbages, beet, and other vegetables. An ointment is prescribed for universal friction, morning and evening: and a powder *Diacoralorum*, containing crude antimony and crocus martis, is to be given in pretty large doses, until the spongy froth in the urine disappears: and an ointment, chiefly composed of the fat of field mice, is recommended as an experiment, with the same limitation: the patient is also to try the use of a bath, containing a decoction of herbs with sulfur. When the disease has been once cured, it is said not to return.

The earlier botanists were all physicians, and seldom described a plant without enumerating its real or supposed virtues. FUCHSIUS, who, in 1542, first described the *digitalis* or foxglove, which had been known to the Germans under the name finger hood, or thimble, observed, that it was bitter, like gentian, and that it had probably

the same power as other bitters, of evacuating pus from the thorax. In the German translation, published the following year, he adds, that the powder has been found beneficial in healing ulcers.

FERNELIUS, in his pathology of consumption, has principally followed Hippocrates. He considers a consumption attended by oedema as incurable. He orders a drachm of rhubarb to be taken if haemoptysis should occur; and gives a pectoral and detergent syrup, with plenty of sugar; asses' milk in the spring, or cream of barley with conserve of roses. In another case after haemoptysis, in an earlier stage, two small bleedings were premised, a gentle laxative was given; then bole, tragacanth and asses' milk, with sugar of roses: but the lady died. In a third instance of a similar nature, after occasional cathartics and venesection, rhubarb is again prescribed, and its astringent powers are said to be improved by roasting.

LOMMIUS, in his concise and elegant *Observations*, enumerates the bending of the legs among the characteristics of a disposition to consumption: the nails, he says, are not only curved, but also

FERNELII *universa medicina*. Ed. 6. Fol. Hanau. 1660. D.1558.

Path. v. 10. Consil. n. 19. 21.

LOMMII *Observationes medicinales*. 1560. 8. Amst. 1720.  
P. 120, 197.

pale: he thinks the sputa contagious, and remarks that the disease is hereditary. The dorsal tabes, he observes, is without fever; and it sometimes returns every seven years.

The work of NICOLAS PISO on diseases is professedly a compilation from Galen and other early authors. He mentions the recovery of a consumptive woman, in consequence of her attendance on a bakehouse: he recommends snails among other articles of diet; and for diarrhoea prefers the use of astringent enemata, as less likely to produce difficulty of breathing than swallowing astringent medicines.

PROSPER ALPINUS mentions consumptions among many other endemic complaints of Egypt, but passes them over very slightly: he observes, however, in another part of his work, that active purgatives, of scammony, antimony, or colocynth, have frequently cured incipient catarrhal consumptions, which had resisted milder means.

SOLENER is remarkable for little except his long letters, always professedly written in great haste. His practice is principally Galenic: he

N. PISONIS Lotharingi de cognoscendis et curandis morbis libri tres, a Boerhaave. 2 v. 4. Leyd. 1736. B. 1527. D. 1579. I. 379.

PROSPERI ALPINI de medicina Aegyptiorum. 4. Leyd. 1745.

Dated Venice, 1591. I. xiii, xiv. IV. vi.

Consiliorum medicorum R. SOLENERI sectiones 5. Fol.

Han. 1609. Dated 1596. Sect. ii. n. 25, 26, 28.

prescribes in an incipient consumption the dew gathered from betony, hyssop, or lungwort: he also uses other pectoral plants, with mild cathartics, and milk.

FORESTUS is one of the first medical writers that distinguished themselves by an accurate recital of a variety of cases, founded on a very extensive practical observation. In his cases of hectic he professes to have followed the opinions of Galen, and refers to the passages of the later Greek physicians which have been principally copied from him. He wets the floor of the room, and sprinkles it with rose leaves: bleeding and cathartics he thinks injurious in simple hectic, and sometimes even fatal: but highly recommends the bath, milk from the breast, and the powder of Haly, which consists of gum arabic, tragacanth, and liquorice, with a variety of mucilaginous seeds, as those of poppy, quince, purslane, and cucumber; bone ash, and lump sugar. In the sixteenth book he records a recovery from consumption, by means of asses' or goats' milk, in a case succeeding haemoptysis: the occurrence of another similar case he attributes to the imprudent use of astringents for checking the haemoptysis: he mentions some cases which

FORESTUS B. 1522. D. 1597. P. Foresti Observationum et curationum opera omnia. 4 v. f. Rouen. 1653. iv. 1., . xvi. 49....

had been fatal after a duration of eight years or more : one in which a violent mercurial medicine was very injurious, and a recovery from a hopeless state by means of chicken broth with sugar of roses, and another by sulfur with the white of egg.

The labours of the industrious SCHENK have sometimes been very unjustly undervalued by modern writers : if a compiler is accurate and laborious, and gives his authorities, his readers are at liberty to employ their own judgment in appreciating the facts which he offers them. As he professes to exhibit little original matter, he would scarcely require to be mentioned on an occasion like the present, if he had not copied from a number of authors whose works are almost forgotten. In hectic fevers, he quotes Paschal as recommending turtle broth, and snails fattened on sugar and flour : for the virtues of milk he refers to Eugubius. We are naturally ready to search among the records of medical practice for the few cases of consumption which have been treated successfully, and we find that the remedies, which have acquired credit in such instances, have been of a very miscellaneous nature : it will, however, be generally worth while to notice them briefly wherever they are found.

Placentinus relates that a consumptive cough of eighteen years standing was principally cured by sugar of roses, with a little manna and rhubarb. We find two pretty good cases of confirmed consumption, cured by decoction of guaiacum, from Ingrassias; and Erastus bears witness to the efficacy of the same medicine, accompanied by nutritive diet, after proper evacuations. Rhazes professes to have succeeded with goats' and asses' milk: Avenzoar with oil of olives: Taranta with Haly's powder: Avicenna, Mesue, Crato, Valleriola, and Forestus agree in attributing the same good effects to sugar of roses: Lobelius and Schenk the younger praise the drosera, or sundew; Rubens recommends sulfuric acid; J. G. Schenk thinks the balsam of sulfur one of the best remedies in extreme cases. Benivenius has known consumption cured by bleeding alone; Valleriola chiefly by milk. Avenzoar calls crabs a specific: Manardus has a case in which they seemed highly beneficial, together with pigeons' eggs and the young birds. Helidæus considers the application of cauteries to the head as a safe and effectual remedy. Ground ivy, veronica, and pulmonaria, have also their several advocates, among the authors, whose works have been compressed into this useful, or rather well imagined compendium.

The observations of PLATERUS appear to contain a number of important cases, but with respect to consumptive diseases, he follows very closely the doctrines of the Greeks, and his practice is in general inert. He mentions several cases of pulmonary ulceration after accidents, which terminated favourably, and one after hæmoptysis, which was only fatal after eleven years or more. The distilled water of snails is one of the remedies which he advises: the physicians of the middle ages appear to have imagined that all virtues must be improved by distillation.

BALLONIUS or Baillou was a physician of considerable experience, but apparently not of striking talents: his works are in general filled with prolix and useless discussions, chiefly copied from the ancients; but in his *Paradigmata*, we find some neat and concise notes, which are much more interesting. He relates some cases of consumption, supposed to have been induced by nursing consumptive persons: he recommends abstinence from wine, and as little water as possible: he considers the morning as the spring of

*Observationes F. PLATERI*, 1614. Ed. 3. 8. Basle 1680. L. iii. s. 4. . . .

BALLONIUS, D. 1616. *Ballonii opera omnia*, a Theuart. 4 v. 4. Ven. 1734. II. 3. Cons. i. n. 2. III. 229. Cons. iii. n. 3, 115, 69.

the day, and thinks that both morning and spring afford a remission of the symptoms of consumptions. For a case of expectoration, with a sense of heat in the lungs, he recommends cassia, mild opiates, milk and baths: but some of his prescriptions are so complicated, that it is difficult to understand what their effect could have been.

POTERIUS, a native of Anjou, and physician to the King of France, was by no means a passive follower of the great authorities of his predecessors; but seems rather to have pursued the path, which had lately been opened by Paracelsus: he used many powerful chemical remedies, but kept most of the modes of preparation secret. He is remarkable for having first described the Bolognan phosphorus. His antihectic was long a favourite medicine, and has even been recommended of late years: it appears to have consisted of two parts of tin, and one of antimony, oxydated by means of nitre: the stomachic was chiefly an antimonial oxyd, and the aurum diaphoreticum an oxyd of mercury, which had been amalgamated with gold, and oxydized by means of salt or otherwise. With his diaphoretic powder, he cured a hectic succeeding an intermittent, with abdominal obstructions: another case of hectic he

P. POTERII opera omnia, F. Hofmanni. 4. Frankf. 1698. Pharmacopoeia Spagyrica. Bologn. 1622. Obs. i. 3, 23, 21, 40. ii. 6, 21, 28, 98. iii. 19. .21, 78, 83. i. 34.

treated successfully with the antihectic, and sugar of roses: a third with sugar of lead, which he thinks the best of refrigerants: a fourth with aperients and acids, where the abdominal viscera were affected, and where he says refrigerants would have been improper: a hectic after an intermittent with the stomachic and goats' milk: another hectic, accompanied by general swelling, was cured by the stomachic and a little of the diaphoretic gold; and a scrofulous hectic, of long standing, by the use of the diaphoretic alone. Poterius relates a case of confirmed consumption, with diarrhoea, and loss of the hair, in which the ordinary modes of treatment had failed, and which he professes to have cured by giving five drachms of balsam of sulfur every morning with syrup, and the antihectic in the evening, sulfur lozenges and iris powder being held constantly in the mouth; with a diet of wine and animal food. His commentator Hofmann is of opinion, that the vapour of the lozenges was inhaled, and acted favourably on the lungs; observing, that Gehema relates a case of consumption cured by the effluvia of assafoetida, camphor, and castor only: but he disapproves the use of wine in consumption: the balsam of sulfur, he says, should be made with oil of almonds, and given in milk: essential oils make it too heating. In a complication of consumption with a diseased liver and

spleen, the balsam of sulfur, and a large dose of martial pills, were given with success. Poterius seems to have been well acquainted with the hermodactyls; he recommends the extract of this plant, together with that of hellebore, as an immediate cure for the gout, to be followed by the diaphoretic powder.

SPIGELIUS fancied that consumptions were more common in England than elsewhere, from the habit of confining the chest in young women by tight dress: at Venice, where children were more left to nature, they appeared to be healthier.

SENNERTUS was an industrious, and sometimes rather a servile follower of Galen; his works were long considered as the best general system of medical practice. In hectic he recommends a portable bath, and thinks that the practice of the ancients may be simplified, by pouring in cold water, at the end of the immersion in the hot, or even by allowing the patient to remain in the bath, till it is sufficiently cooled. In treating of consumption, he mentions the case of the woman employed in a bakehouse, from the commentary of Matthew de Gradibus on Rhazes, and attributes the preserva-

SPIGELIUS B. 1578. D. 1625. Opera. Amst. 1645. De corp. fabr. I. ix. Van Swieten. IV. 10.

D. SENNERTI de febribus libri 4. 3. Lyons 1627. iii.

tion of her life for 28 years, to the dryness of the air : he also quotes an instance from Avicenna, in which a consumption lasted for 23 years. He considers the debility and diarrhoea as depending rather on an acrid sanies generated in the lungs, than on the descent of a humour from the head, as supposed by Hippocrates. He recommends a great variety of medicines ; the first of them is rhubarb, with infusion of roses and goats' whey ; but he cautions against great evacuations of any kind ; he thinks the expectoration may be moderated by an issue in one or both arms ; but that cauteries, or even issues, should be avoided where there is extreme debility. Honey he prescribes as a detergent, to be followed by horehound and hyssop as expectorants ; and by roses, bole, haematite, and herbs of various kinds, as glutinants : in favour of guaiacum and ginseng, he quotes Arcaeus and others ; and observes, that sulfur was recommended by Dioscorides. With respect to snails, he thinks even broth made from them inadmissible, because Galen observes, in his third book on aliments, that they are indigestible, though nutritious.

The Works of HORSTIUS are frequently quoted, but with respect to consumptive diseases, they ex-

SENNERTI *Practica medicina*. Wittenb. 1629. 2 v. 8. Lyons, 1630. II. ii. 12. II. 254, 264, 255, 269.

GR. HORSTII *Opera*. 2. v. Fol. Nuremb. 1660. Dated 1623.

hibit little but the usual practice of the age, which was generally feeble.

BONTIUS, in his treatise on the Medicine of the Indies, relates a case in which fragments of the bronchiae had been expectorated; and others were found after death, on the right side, torn away from the lungs. In the mesenteric decline, he recommends deobstruents rather than purgatives, which he thinks too debilitating: but in the beginning of catarrh they are necessary, especially in India. For true consumption with hectic, he relates wonders of his opiate extract of saffron, which stops bleeding, quiets the cough, and has cured many desperate cases alone: he also prescribes conserve of roses, with poppy seeds and sulfur, and decoction of ginseng or sarsaparilla. SANCTORIUS, in his commentary on Galen, mentions a remarkable instance of a priest disposed to consumption, who succeeded in gaining health and strength of lungs, by preaching daily with a loud voice.

TULPIUS has some very interesting cases, concisely related: one of a nutshell retained seven years in the trachea; a second of an emaciation

BONTIUS de Medicina Indorum, 1630. With Prosper Alpinus, 1745. P. 248.

S. SANCTORII commentaria in artem medicinalem Galeni. 4. Lyons. 1632. B. 1561. D. 1636. C. 67. ii. P. 459.

N. TULPII Observationes medicae, 1641. 8. Amst. 1672. ii. 7. 14. iv. 21.

cured by eating oysters, for which the patient had a great desire; another of a consumption after an accident, which terminated favourably without medicine; and a fourth in which some of the vessels of the lungs were expectorated, although he does not say, that the substances so described and figured were hollow. But in the next chapter he proceeds to describe a still more remarkable occurrence, if it be supposed correct, that a piece of the lungs, several inches in extent, was brought up, during the operation of an antimonial emetic. He observes, that coughs may often be cured by a decoction of rapes; and describes, as a curiosity, at the end of his book, a specimen of tea, which had been sent over from China.

SEVERINUS, in his work on the nature of abscesses, mentions a case of consumption, which was remarkable for the eruption of a number of pustular swellings on the thorax only: his treatise on active remedies, professing to cure all diseases with a Herculean hand, armed with steel and fire, is chiefly a compilation from old authorities: for pulmonary affections, he directs the

M. A. SEVERINUS de recondita abscessuum natura. Ed. 2, auctior. 4. Frankf. 1643. ii. 5. De efficaci medicinâ, with Hildanus. P. 239, 240.

MALLOUIN (on Sago in consumption) 1645. Borsieri, V. §. 95.

application of the cautery, as prescribed by Hippocrates. FABRICIUS HILDANUS has recorded a variety of dissections of consumptive cases, in many of which a mesenteric and a pulmonary affection were combined: in several of them calculi were found in the lungs; in one a gypseous substance in all the viscera: he also relates several instances of the success of setons, in the neck and elsewhere: his observations are very clearly stated, and have every appearance of accuracy. The continuance of appetite to the last is now considered as a general occurrence, but in the time of Hildanus, it deserved to be recorded.

The observations of PANAROLUS constitute an amusing collection of medical anecdotes, but contain nothing very important, with respect to consumption. An atrophy is said to have been cured by eating a lemon, for which the patient had a longing; and the expectoration of the bookseller Landini to have poisoned the flies that touched it. We have also a case of a decline arising from love, and of a mesentery in which stony concretions were found.

Our countryman BENNET, though his stile is

G. FABRICII HILDANI Opera observationum et curationum. Fol. Frankf. 1646. Obs. ii. 29, 44. iii. 38. Epist. 66. Obs. i. 70.

D. PANAROLI Romani Iatrologismorum pentecostae quinque, 1651. 4. Hanau, 1654. ii, 36, 49. v. 18, 19.

obscure and inelegant, may be considered as the earliest writer that can now be quoted, with perfect confidence, on the subject of consumption. We are justified in allowing him this rank by the example of Van Swieten, with whom indeed he seems to have superseded, not only his predecessors, but most of his successors also : and his experience of the disease, in his own person, gives some additional authority to his observations. With respect to the symptoms of consumption, Bennet observes, that a sound in breathing, like the ticking of a watch, is a mark of its commencement ; that the expectoration generally returns periodically in the morning, and at four, five, or six in the afternoon : the bluish sputa, he says, become whitish when they are exposed to the heat of the sun, or of a fire ; such a secretion as this never comes from the nostrils : nor does the matter expectorated in general descend from the head, as the ancients supposed, but it is secreted by the arteries of the lungs, since it may often be observed, where there is no catarrh ; although in some cases the congestion does appear to be derived from the head : the diagnosis from the tests of pus, he thinks, is sometimes fallacious ; blood which has stagnated may smell offensively, and

Tabidorum theatrum, item Vestibulum tabidorum, authore CHR.

BENNET, 1654-6. 8. Leyd. 1742. Th. p. 87. Vest. Ex. 12, 21, 15. Th. p. 93. Vest. Ex. 14.

perhaps deserve the name of pus, without consumption: even fresh blood, when burnt, has a fetid smell; and blood remaining a few hours on the skin, near a wound, acquires the colour and smell of very offensive pus: the expectoration is generally more difficult in moist weather than in dry, when there is a catarrhal congestion: the state of the skin too changes readily with that of the weather: the fever in the last stage assumes a putrid form: an ash coloured clay like expectoration is a fatal symptom; and after death, the lungs are sometimes found reduced to a state like mud or clay. When the sputa are good, even by day only, the prognosis may be favourable. The juices appear to be attenuated, and rendered unfit for nutrition, by the excessive heat of the hectic fever. At Bristol, an elevated situation, where consumption is common, Bennet had seen several persons die of the disease, after having expectorated only a sweetish substance, with very little cough: in one such case, the lungs appeared softened, but otherwise sound: indeed a decline without any organic disease is very common in England, and generally fatal. Deformed persons, and those who have had limbs amputated, are more liable to consumption than others. The disease, when hereditary, though incurable, is

BENNET Th. p. 94, 95. Vest. Ex. 24, 22. Th. p. 87. Vest. Ex. 23. Th. p. 99, 97, 99.

slow in its progress. Consumption is sometimes prevented by moderate bleeding at the nose, occurring periodically: in one case, an ounce or two flowed daily, and when it ceased for a season, phthisical symptoms succeeded, and continued till it was restored. Consumption seems sometimes to be suspended by other affections: thus all the symptoms, except the emaciation, ceased for two days, during a severe tooth ache; as asthma is sometimes relieved by various abdominal diseases: and a swelling of the size of a walnut, in the tibia of a consumptive child, procured a respite of three months. On the other hand, a case of psora, which had resisted all other remedies, was cured by means of an expectoration, which continued for a month. The frequent connexion of consumption with syphilis, and of asthma with gout, is also particularly noticed.

In the haemoptysis which often leads to consumption, Bennet objects to cold applications and ligatures, as favouring an accumulation of the cause of disease, during its temporary suspension: he depends chiefly on bleeding, and the application of warmth to the extremities: after the first bleeding in the arm, if the symptoms continue, or amenorrhoea is present, he bleeds in the foot. As the disease advances, a moist or

a dry air may be chosen, according to the form which it assumes. Milk may be employed instead of meat in incipient consumption, when it agrees; but in confirmed cases he prefers medicated whey. Sweet things are to be used with caution, being liable to fermentation; thus honey and sugar promote the fermentation of liquors, and a little sugar sprinkled on meat, in a warm place, causes it to putrefy rapidly. Laxatives he thinks most beneficial when given at night, so as to operate two or three times early in the morning: they are to be used sparingly in the earlier stages, together with expectorants and sudorifics. The best detergent expectorants are those which contain resin and turpentine. Sudorifics are recommended, where there is already a partial sweat, in order to equalise the circulation: the morning sweats, the author thinks, may be indulged as procuring an abatement of the symptoms: by these means, together with frictions and fomentations of the extremities, many cures have been performed. Bennet professes also to have been equally successful in several confirmed cases, by means of balsamic fumigations, for the administration of which he describes a particular apparatus: they consist of frankincense, turpentine, and styrax, with cin-

BENNET Th. p. 101. Vest. Ex. 26, 27. Th. p. 105, 107, 108, 130. Vest. Ex. 30, 28. Th. p. 140.

namon, coltsfoot, and other vegetables, made into a powder or troche, and burnt on coals: there are also several other prescriptions, some of which are occasionally employed with twice their weight of orpiment, rubbed down with the white of eggs: at first, the patient has some difficulty in using the fumigation, but as soon as the detersion is completed, the operation becomes easier. It must not, however, be employed within a fortnight of the cessation of haemoptysis. There are also some mixtures of herbs, of which the vapours are to be inhaled, by holding the head, covered with cloths, over hot water, in which they are immersed. Issues are very beneficial, in pervious parts, as under the arms, in the groin and hams, and between the shoulders: they may be kept sweet by using peas of orris root; and a mixture of equal parts of hermodactyls and wax may be used, to promote the discharge. An under garment of Welsh flannel is recommended, not to be often changed, in order that it may retain the animal spirits. In general, animal food is allowed, especially the muscles of animals, neither very fat nor very lean: the meal should begin with soup, followed by vegetables, and then meat, for the digestion is best performed in this order: the orifice of the

stomach is then to be closed, by taking some quince, in order to avoid flatulence: neither spices, nor salted nor dried meat should be admitted, and fasting should be occasionally enjoined: when the stomach is loaded, a gentle emetic may be given. A decoction of sarsaparilla and other woods, with ginseng, is recommended for drink. All violent exertion of the voice is considered as dangerous.

In returning from our countryman Bennet, to the continental physicians, we seem to be making some steps backwards towards the earlier ages. BORELLI records a case of a woman who expectorated calculi for a considerable part of her life; he considers tight bandages as a common cause of consumption in children, and the smoke of candles in studious persons. He says, that a woman, who suckled two children, had milk enough besides to make butter of it, which was used as a secret by an apothecary, for the cure of consumption: and he mentions a gentleman who became consumptive from a piece of nutmeg, which had entered the larynx unperceived, and recovered, by coughing it up, from a state of extreme danger. SILVATICUS, who appears to have been a judicious practitioner, depends chiefly, in BENNET Th. p. 132, 138, 132.

P. BORELLI *Historiarum medicophysicarum centuriae quatuor.*

8. Par. 1656. i. 67. iii. 59. iii. 82. iv. 63.

B. SILVATICI *Consilia.* Fol. Padua 1656. ii. 40. . .

consumption, on bleeding, issues, and sulfurated lozenges.

RIVERIUS was long celebrated, both as a practitioner, and as a systematic writer. His description of consumption, in his *Praxis medica*, is principally copied from Sennert: in his mode of treatment, there is little novelty. He observes that Cardan had cured many desperate cases, by a diet of barley and sugar, and crawfish broth: and Avenzoar by bread and olive oil: that Capivaccius and Claudinus used the sulfuric acid to cleanse the ulcers in the lungs, and Hartman, and other chemists, the peroxyd of antimony. He recommends the use of the tepid bath, and of fumigations, without orpiment, though he has published a case from an anonymous manuscript, of a singular cure, performed by arsenical fumes, which occasioned profuse sweating. There are also several of his detached observations which deserve to be noticed. An incipient consumption was cured by a laxative, venesection, a pectoral decoction, a bath of a decoction of barley and almonds, and a composing syrup at night: another case by decoction of guaiacum; and both these cases occurred after nursing persons who had died of the disease: a circumstance which he thinks most likely to happen to a relation of the

consumptive person. In one instance, a caustic under each axilla was successful: in another, between the shoulders. Low diet and occasional laxatives succeeded in a hectic, supposed to be phthisical: another, with visceral disease and continued vomiting, was cured by the spagyric remedies of Poterius, the stomachic, and the diaphoretic gold, with Peruvian balsam: a diet of bread and raisin, with a drink of barley water and liquorice, cured a consumption in eight months. An instance of a repeated communication by contagion is found in the case of the Abbé St. Paul; he had infected a nurse, whose milk he took from the breast, and she died two months after him, having first communicated the disease to her sister, a girl of fifteen: the sister, however, recovered, having had two caustics applied to the nape of the neck, besides the usual laxative, demulcent, and anodyne remedies. In a hectic after a dysentery, snail broth was used with advantage. A cautery to the tip of the ear, dressed with a bit of the root of thymelaea, is said to be of great use in pulmonary affections, as well as in many others, discharging sometimes as much in a day, as a seton would do in a week. In a case of phthisis complicated with syphilis, guaiacum is said to have been of

great use. His correspondent Marfin recommends the application of a cupping glass to the cauteries on the back, which occasions a great, and as he thinks, a beneficial discharge. Des Grandsprez adds his name and that of his sons, with three other persons, to the number of those who had been cured of consumptive affections by woman's milk from the breast: but some of the cases were after pleurisies. Rufus gives an account of a person whose lungs were found suppurated and gangrenous, with a quantity of fetid water in the thorax, having had no preceding symptoms of disease but a slight dry cough.

BARTHOLIN appears to have been an industrious, although a somewhat hasty observer. He relates a case of consumption, distinguished by purulent and fetid expectoration, occasional haemoptysis, and slow fever, but without pain or emaciation. In another case he says the heart was, as usual, found thin and dry. He mentions a part of a vein discharged from the lungs, referring to Zacutus and Tulpius, but does not say that it was hollow. He relates a case in which consumption was averted by the application of a cauterium between the first and second dorsal

RIVER. Obs. Marfin Obs. n. 6. p. 562. Des Gr. Obs. n. 4.

Ruf. Obs. n. 3.

T. BARTHOLINI *Historiarum anatomicarum centuriae*. 8. Copenhagen. 1654. ii. 14, 19. iii. 98. iv. 33, 86.

vertebrae: he thinks that remedies held in the mouth may possibly glide down the larynx: but that they act more in the form of vapour; and that a sitting room may be made, by proper effluvia, to serve instead of a voyage to Egypt. In his epistles we have a discussion of Severinus on the expectoration of pus from the interpleural cavity of the thorax: Ambrose Paré is quoted as asserting, that bitter injections, thrown into the thorax, caused a bitter taste in the mouth: but it is not certain, that in these cases, the lungs were not wounded.

SYLVIUS presents us, in his pocket volumes, with a clear and distinct abstract of the older doctrines respecting consumption, accompanied by some judicious remarks of his own. He considers the predisposition to consumption, hereditary in some families, as depending both on the solids and on the fluids; but as consisting principally in the existence of glandular tubercles, which, when in a state of suppuration, constitute the vomicae. He thinks we must necessarily suppose, that there are in the lungs a number of minute and almost invisible conglobate glands, such as are often discovered in a state of disease in other parts, as

T. BARTHOLINI *Epistolarum centuriae*, 1663. 8. Hague 1740. i. 68.

FR. DE LE BOE SYLVII *Praxeos medicae idea nova*. 3 v. 12. Leyd. 1671-4. III. iv. 4. n. 26, 42, 51, 52.

in the mesentery and choroid plexus : he does not however deny the descent of humours from the head as a concurring cause : and believes, that in the predisposed the disease may be excited by contagion. He says, that Galen is mistaken in supposing that the consumptive are ever suffocated for want of expectoration, except when an abscess bursts ; for that pulmonary ulcers, like all others, cease to afford pus a little before death ; as is shown by anatomical examination. For the cure of consumption, he prescribes opiates, demulcents, lozenges, and emulsions, fumigations, decoctions of the woods and roots, including oak, with colocynth, hermodactyls, or agaric, to carry off the viscid humours. Of all detergents, he thinks balsam of sulfur the best, especially if prepared slowly with oil of anise : he says, that no medicine is more powerful for healing ulcers, whether used externally or internally ; it renders the pus more fluid, promotes its excretion, and relieves dyspnoea : the milk of sulfur is much inferior. Conserve of roses he has not found of any use. The appetite may be assisted by the elixir proprietatis, which is made of myrrh, saffron, aloes, sulfurous acid, and spirit of wine digested together. The diet should be of wheaten bread, broth, milk, yolks of eggs, and biscuits,

with a little rich generous wine: the occasional use of essential oils and ambergris is also very refreshing to the consumptive.

The prevalent doctrines respecting consumption are exhibited by GIDEON HARVEY, in a compendium rather popular than elegant, under the name of the *Morbus Anglicus*; the work is not deficient in learning, and contains a better description of the disease than many modern publications of a similar nature. The pathology is sometimes ludicrous enough; for instance, "melancholy calcined by the flame of choler must remain the sole cause of acrimony and corrosion, and inclusively of occasioning ulcers, both within and without the body." The author mentions two cases of haemoptysis cured by copious bleeding, steel, opiates and astringents, and says, that bleeding was successfully employed in consumption by Hippocrates and Galen, though great caution is required in ordering it, as well as in the exhibition of emetics. Milk, though generally recommended, he thinks liable to some objections, and much prefers whey, to be taken very liberally, with conserve of roses, not lately made. Crabs, lobsters, and oysters, he says, are too indigestible. Masterwort, the *imperatoria*, was men-

G. HARVEY's *Morbus Anglicus*, or the anatomy of consumptions. 8. Lond. 1672. P. 61, 115, 122, 118, 120, 124.

tioned to him as a specific by a physician at Padua; and he professes to have performed a cure by means of a preparation of antimony, together with an infusion of soot, sweetened with brown sugar.

DIEMERBROEK considers consumptive complaints as sometimes occasioned by the mechanical pressure, employed as a remedy for gibbosity of the thorax, which has been derived in the first instance from too tight lacing: he affirms, that in several cases of empyema, after the evacuation of pus, the taste of bitter injections was very perceptible in the mouth, and that in some of them, the fluid itself, thus injected, was expectorated; and he observes, in opposition to Riolan, that neither the lungs nor their membranes have much sensibility, their wounds not being at all painful. He also records a case of consumption after fever and haemoptysis, which had resisted the means commonly prescribed, but was cured by taking goat's milk three times a day, for three months, without any other remedy: twelve years afterwards the patient relapsed and died.

Our countryman WILLIS, with much learning, and labour, and anatomical accuracy, has produced little that is interesting respecting consumptive diseases, except a continued panegyric

on sulfur. Atrophy, in his sense of the term, comprehends, as its species, the dorsal decline and consumption. The former he attributes to some disease affecting the loins or their neighbourhood, especially to a loss of the fluids peculiar to the sexual organs, which he thinks essentially the same with the nervous fluid, furnished to the brain. Consumption, he says, is not derived from the head: the humour expectorated exudes from the minute vessels of the trachea, the whole mass of blood contributing to overwhelm the lungs with its serous parts: and when the discharge putrefies, it forms ulcers. The atmosphere of towns is not always unfavourable; some consumptive persons having better health and less cough in London than in the country. Turf fires seem to exempt some parts both of England and of Holland from the disease, on account of their sulfureous smell: and a sulfureous arsenical fumigation is like a balsam to the lungs. In recent cough, after bleeding, Willis recommends narcotics, in order to retard the motion of the heart: and besides the usual remedies, he speaks highly of the muscus pyxidatus, a species of lichen. Warm air and warm bathing are beneficial in incipient consumption,

T. WILLIS *Pharmaceutice rationalis, de medicamentorum operationibus*. Pars. 2. Oxf. 1675. Posth. *Opera omnia* 2 v. Fol. Ven. 1720. Ph. R. II. i. 4, 5, 6.

as causing a determination of the fluids to the skin rather than the lungs: and frictions and blisters may be employed for the same purpose. Sulfur is prescribed in all possible forms, and is supposed to obviate the acidity of the blood: several balsams are mentioned, and water distilled from tar: and it is observed, that some have derived benefit from smoking orpiment, or cloth painted with it, like tobacco. For the palliation of confirmed cases, besides the usual remedies, the distilled water of green wheat is recommended, with syrup of poppies. In one case the patient was relieved from violent coughing by taking no other drink besides generous wine: he was also occasionally bled, though the pulse was weak, and was much benefited by the open air, with daily exercise on horseback, or in a carriage. In another instance the symptoms somewhat resembled those of croup, and were relieved by a strong dose of calomel and jalap; a warm climate completed the cure. In a case of haemoptysis, bleeding was always found to increase the disease, while ligatures tended to check it: another case, with fetid purulent expectoration, was cured by starving in a prison: after death the lungs were found hardened, but without any trace of an ulcer.

The compilation of BONETUS is considered as one of the classical works upon the morbid

changes produced by diseases: but it is encumbered with numberless repetitions, and a very unnecessary multiplication of authorities: some of the histories are ludicrously marvellous, but none more so than those which are copied from an anonymous work on Watercresses. A surgeon of Brussels cursorily advises a consumptive countryman to live on watercresses, raw and boiled: after a year, to his great surprise, the man returns perfectly cured: the surgeon takes him into a private room, under the pretence of examining him more minutely, and stabs him with a stiletto, in order to satisfy his curiosity, with respect to the state of his lungs, which are found to have been completely corroded, and again regenerated: the man's wife, who has been waiting for her husband, suspects some mischief, and gives information to a magistrate: but the surgeon finally obtains a pardon, on account of his great skill. The same respectable author furnishes us with an account of a magical swelling, or concretion, of a bony substance, which, being discharged, was formed into a spoon, and coming accidentally into contact with some watercresses, was speedily dissolved, by the antimagical virtues of the remedy.

Bonetus seems to believe, that there are open

pores in the pleura, capable of transmitting fluids, and quotes the great Harvey in support of this opinion, which is indeed advanced in the third exercise on the Generation of animals. The subjects of tabes or decline in general, and of pulmonary consumption in particular, occupy the seventh section of the second book of the Sepulchretum, and all the morbid appearances, commonly observed, are minutely described. In one instance, the lungs are said to have weighed eighty ounces; in another to have been lighter than a feather: a consumption fatal in twenty four days is mentioned from Ballonius: the pleura covering the lungs of the thickness of a finger, from Bartholin: in another case, after purulent expectoration, no ulceration was found: and in another, mentioned by Massa, a large ulcer not preceded by pain or cough. From Schneider, we have an observation of a catarrhal phthisis, without any disease of the brain: from Fernelius and others, cases of hectic affections, depending on ulceration and other diseases of the heart, the liver, the mesenteric glands and the glands of the neck; and the mesenteric glands and the pancreas: on concretions in the mesaraic veins or the lacteals, on an abscess or scirrhus of the mesentery, or of the stomach;

on a diseased state of all the viscera, of the lumbar glands, or of the pancreas; on the presence of worms or calculi, in or about the kidney; on the caries of a vertebra; on a tumour of the muscles of the loins; on an abscess; on the presence of round worms in the liver; on an ossification of the bronchiae, and on an erosion of the epiglottis. In another part of the work, properly devoted to hectic fever, he records a number of observations of a nature nearly similar: he considers hectic fever as the usual attendant on internal inflammations, and calls it sometimes marasmodic, sometimes a slow fever, and sometimes a tabific fever, depending on diseases of the constitution in general, as dropsy, or on those of the thoracic, abdominal, or pelvic viscera, or the bones. He agrees with Walaeus, that a single grain of opium will kill a dropsical person.

Upon the character of SYDENHAM, it would perhaps be presumptuous for a modern individual to sit in judgment: but among the practical writers on consumption, he cannot be considered, even by his warmest admirers, as holding a distinguished rank. We must not, however, omit

BONETUS Sep. II. vii. 144. 150, 152, 153, 160, 163, 164, 168.

IV. i. 11, 14. 24, 15.

HAWORTH on Consumptions. Lond. 1682.

T. SYDENHAM Opera universa. 8. Leyd. 1726. Processus integri. 1696.

to examine, with attention, the few passages of his works, in which the subject is mentioned. The sketch of the disease, which was intended as a part of a separate treatise, was left unfinished, at the time of his death, in 1689, and afterwards published at the end of his *Processus integri*. The first and most important kind of consumption, he says, is derived from cold taken in the winter, and generally becomes fatal in the course of the succeeding summer. The lungs, being incapable of assimilating the proper aliment, are overwhelmed by a crude phlegm, and scatter the miasmata over the whole body; hence arises a putrid fever, of which the paroxysms are terminated by sweating; and afterwards a diarrhoea, from the accumulation of humours, and the loss of tone of the viscera. A part of the humours, which ought to be thrown off by perspiration, is retained in the lungs; another part is secreted by the salivary glands, and descending the trachea, causes coughing. In a confirmed consumption of this kind, remedies are but of little use; but it may be proper to try the effect of bleeding, with mild cathartics, and pectoral medicines; and incrassants or attenuants, according to circumstances. The fever is to be kept in check by refrigerants, as asses' milk, distilled water of milk, emulsions, and opiates. For healing the ulcers, opobalsamum is supposed to be beneficial. After

bleeding, laxatives may be given for three days, then intermitted, and repeated after two or three days more. Daily riding is the principal remedy, and supersedes all rules of diet. It has been observed, that some persons, who have recovered by means of this mode of treatment, have afterwards had tumours in the neck, not much unlike scrofula. Another kind of consumption commences with a cough, about the beginning of summer, and occurs especially in young and weak persons: it is accompanied by haemoptysis, especially after drinking wine, and by uneasiness in the chest. This disease is easily cured in the beginning, by an alternation of bleeding and cathartics, and by avoiding animal food. A third species is derived from febrile matter, remaining in the constitution after a fever; for example from suppuration after pleurisy: a fourth is the consequence of too great evacuations, and is often attended by aphthae.

The benefit to be obtained by riding had been before extolled in still stronger terms, in Sydenham's letter to Cole. "Horse exercise," he says, "is no less useful to the consumptive, than to the hypochondriac: in several instances, some of my own relations have been restored to health by taking very long journies on horseback, at my recommendation, when medicines had been

of no avail: and not in slight cases only, but where night sweats and diarrhoea had supervened, as usually happens in the last stage. In short, notwithstanding the acknowledged fatality of this disease, which carries off two thirds of those who die of chronic affections, I do not hesitate solemnly to affirm, that neither mercury in syphilis, nor bark in intermittents, is more effectual, than riding in consumption: provided that the patient take care to have his linen well aired, and to continue his journey long enough; the longer as he is more advanced in life; and this I have learned by multiplied experience, which I have scarcely ever found to fail: nor is carriage exercise by any means to be despised, though not equal to riding." This panegyric is repeated, though somewhat more faintly, in the *Processus integri*, where it is said that riding cures consumption, "almost" as certainly as bark cures intermittents. In this concise summary of Sydenham's practice, he directs, for a simple cough, abstinence from wine and meat, for a few days, with ten drops of anisated balsam of sulfur, taken occasionally on a lump of sugar, or lozenges containing liquorice, elecampane, anise seed, angelica, iris, and sulfur, besides a linctus of oil of almonds, with syrup of capillaire and violets. If the cough continue obstinate, or be attended by

fever, bleeding and cathartics must be employed, as in peripneumonia notha: and if the patient be threatened with a consumption, he must take ten drops of Peruvian balsam, three times a day, and after it a decoction of bitter plants: but riding is the principal remedy. The repeated recommendation of cathartics, in these passages, seems to supersede a remark in the observations on acute diseases, where it is stated, that haemoptysis is to be cured, like other haemorrhages, by bleeding, a daily injection, diacodium, and diet; but that cathartics, especially if repeated, are likely to throw the patient into a consumption: an observation which is by no means confirmed by the results of modern practice.

For the hectic of infants, distinguished by languor and emaciation, without much fever, Sydenham prescribes, in the *Schedula monitoria*, two drachms of rhubarb, to be infused in a quart of beer, or of any other liquid, and administered night and day, for the common beverage; and the same rhubarb will serve for two more quarts of beer in succession, which will generally be sufficient to cure the disease.

The coarse and presumptuous satire of GIDEON HARVEY, entitled the *Art of curing by*

SYDENHAM *Observationes medicae*. Opp. 285.

GIDEON HARVEY'S *Conclave of Physicians*. Ed. 2. 12. Lond.

1686. *Art of curing diseases by expectation*. Lond. 1689.

G. Harvei *Ars curandi morbos expectatione*, Stahl. 8.

Offenb. 1730.

expectation, exhibits, together with much unwarranted assertion, some proofs of acuteness and ingenuity, which, however, are generally more amusing than instructive. In his Conclave of physicians, the bark is said to be a frequent cause of consumptions, when given hastily, without premising evacuations of all kinds. The sixth chapter of the Art of curing by expectation treats of the Ass doctors and Butcher doctors. Milk, the author says, is universally of easy assimilation, and is therefore easily assimilated to the prevalent morbid matter, for instance to bile, to acid in the stomach, to phlegm, or to gravel: consequently it must be as useless in the cure of an internal disease as in that of a luxation: and one might as well attempt to roast a capon in the Thames, as to cure an ulcer in the lungs, with the usual symptoms of hectic and emaciation, by the use of asses' milk: although its fatty particles may possibly puff up those who swallow it into some degree of corpulency. Poterius, who pretends to cure an ulcer, which wants detersion, with his drying antihectic, is a mere prater. Chalybeate and aluminous waters must be bad, as impeding expectoration. Syrups and lohochs and lozenges only act by levigating the oesophagus, and soothing, for a short time, the neighbouring trachea. All the simples, which have been extolled in consumption, have only relieved spurious cases, not true ulcers, with hectic

fever, minute abscesses, and putrefaction of the lungs. Shaving the head, and making issues in the arm, or at the back of the neck, is of no more use than cutting the nails: although in some few cases, cauteries, applied to the chest, and converted into perpetual issues, have been of great advantage: and change of air is a condition absolutely indispensable to the recovery of health. The twenty seventh chapter is devoted to the subjects of consumption and hectic fever. Colds and coughs the author has perpetually cured by bleeding or by cathartics, or by both together: ulcers of the lungs require different remedies: but if an ulcer were washed with asses' milk a hundred times in a day, it would not be cured; for, according to Hippocrates, and to universal experience, ulcers are to be cured by drying remedies: and even if asses' milk were drying, how much must it be changed before it arrived at the lungs! It is pretended that cures have been effected by asses' milk: but in truth neither man, nor woman, nor child has ever been cured of an ulcer of the lungs by any kind of milk, except by the pigeons' milk sold on the first of April. Ground ivy has been recommended as a detergent; but a whole handful of it is less powerful than half a drachm of myrrh: and sugar, and conserve of roses, and haematite, are equally inert. If six or seven patients who are taking these remedies recover, while ten thou-

and die under the same circumstances, can the recoveries be fairly attributed to the virtue of the medicines? Erastus and Fracastorius talk of the decoction of guaiacum, and maintain, at the same time, a foolish theory of the descent of an acrid lymph from the brain through the sphenoid bone to the larynx, and thence to the lungs: Cardan the astrologer recommends a decoction of crawfish, which could not cure a chilblain or a pimple; and Forestus praises the powder of Haly, of which a pound a day might be given without cleansing an ulcer. There is however a single cheap remedy which does wonders: but this remedy our satirist, for obvious reasons, conceals: Stahl, in his commentary, suspects that he means a syrup containing millepedes. Physicians often talk of the difficulty of curing a hectic fever, as if it were an idiopathic disease, instead of being symptomatic of an ulcer; while in fact it would not exist an instant if the ulcer were cured: it is generated by the pus which enters the blood, being repelled through the veins, for the hectic is partly an affection of the fluids, and not, as has sometimes been supposed, of the solids alone.

Passing over the works of BELLINI, which af-

BELLINI *Opus de urinis et pulsibus, de missione sanguinis, de febribus, de morbis capitis et pectoris.* 1683. Boerhaavii. 4. Leyd. 1730.

ford little that is of importance to our subject, though they contain a treatise on the diseases of the chest, and some judicious remarks on the pulse, we hasten to the *Phthisiologia* of MORTON, which is generally considered as the foundation of the modern practice in consumption; although if we take from it what was anticipated by Ben-net, and what has been controverted by later experience, the remainder will occupy but a small part of the volume. Among the superfluous remedies, we must not forget to notice the distilled waters of milk, capons, and sucking pigs, recommended as highly nutritious: since such instances cannot but serve to prevent our placing too implicit confidence in the accuracy of the observer. Morton considers consumption as either original, or symptomatic of other diseases, which however it would have been more simple and natural to call merely different causes of the same disease: and the original consumptions he divides into atrophy and pulmonary consumption; the atrophy, tabes, or decline, is unattended by any material fever or cough, and is either nervous, as in the case of many persons who have returned from Virginia, or other warm climates, or derived from inanition, as haemorrhage, gonorrhoea, great suppurations, nursing, dysentery, diabetes, salivation, dropsy, or excessive sweat-

1689.

ing. With respect to haemorrhages, Morton agrees with those authors who have recommended the application of ligatures: in the decline which follows it, bark is his favourite remedy, especially for allaying the hectic fever; so that hectic must not be considered as excluded from his definition of atrophy. Ulcers too are frequently accompanied, not only by hectic fever, but also by true pulmonary consumption: in such cases, sarsaparilla is recommended, and from 25 to 30 grains of calomel, with 16 of sulfurated scammony, or resin of jalap, which corrects the blood, and assists in healing the ulcers: and if there be not too much fever and debility, the patient may be salivated with calomel or turbith mineral. Nurses often become tabid from too great exhaustion, sometimes, however, suckling for a moderate time appears to obviate a tendency to consumption: the child should be weaned as soon as the nurse's appetite begins to decline, otherwise hectic fever and pulmonary consumption often follow. In a case of diarrhoea, which lasted a year, the patient was extremely debilitated; and when the diarrhoea was checked, it was found that the lungs had become affected. In speaking of atrophy from dropsy, Morton relates a case in which a milky fluid was drawn off from the abdomen, and some enlarged glands were found

close to the thoracic duct, which he considers as affording sufficient evidence, that dropsy sometimes depends on a rupture of the absorbents, produced by a mechanical cause. In the decline attending lientery, he observes, that the appetite remains good, and there is no fever.

An incipient consumption is distinguished from a catarrh by the dry cough, which is observable even where a catarrhal cough with expectoration has preceded it: the sensation in the trachea originating from a cause in the bronchiae, as when a stone in the bladder produces a pain at the end of the urethra: in strumous habits the secretion of the bronchiae is too viscid, and such persons are liable to indolent tumours in other parts of the body. The author observes, that a consumptive cough is generally mild in the beginning, and is very frequently accompanied by a disposition to vomit, the appetite remaining good, which he thinks almost a characteristic of the disease; it is also more troublesome when the patient lies on one side than on the other. In the confirmed stage, a putrid intermittent fever occurs, from the suppuration, which succeeds to the inflammatory fever attendant on the earlier stages of the disease: the type is generally quotidian, but sometimes tertian, beginning with cold fits, succeeded by intense heat and profuse sweats, which

exhaust the patient; although they leave him in high spirits during the intermissions: nothing is gained by checking them, as has frequently been observed when a patient has changed the air, or got out of bed for the purpose. Nor is any relief obtained when the diarrhoea is stopped by astringents, nor can the dropsical symptoms be removed by diuretics: and they are well known to indicate the approach of a fatal termination. A sore throat and aphthae are also frequent towards the close of the disease. The pulse is sometimes only febrile after meals; sometimes it is hard, from pulmonary inflammation, so as to indicate venesection, which affords instant relief. The urinary secretion is generally scanty and high coloured, depositing, during the suppuration, either a whitish or reddish farinaceous sediment, which however sometimes alternates with a more limpid discharge, especially after drinking light wines, or other diuretic fluids. With respect to the distinction of the expectorated substances, it is sufficient to observe, that pus is always fluid and free from fibres; the colour is a more uncertain test. The duration of the disease may extend to 20 or 30 years, the tubercles not completely suppurating, but the pulse being frequent, the appetite unequal, with frequent expectoration, and occasional haemoptysis. In young persons the

progress of consumption is generally more rapid than in old ones: and where the disease is simply a consequence of a fever, more rapid than where it is derived from a scrofulous constitution. The most frequent cause of consumption is catarrh; but sometimes it arises from contagion, for it may be communicated to a bedfellow, like a malignant fever. In the first or second stage, before ulceration takes place, consumption is as curable as any other disease: but it is generally neglected or misunderstood in the beginning. It is most fatal when derived from contagion, and when it occurs in autumn or winter, or in cold and cloudy weather.

In the earliest stages of consumption, or when the disease is apprehended, strong cathartics are injurious, as they agitate the blood too much: but mild evacuants are of advantage. The smoke of coals should also be avoided by those who are supposed liable to the disease. The smoky particles, whether from coals or tobacco, appear to enter the lungs, and to obstruct the glands about the trachea, and to cause them to appear full of a black or greyish fluid. Venesection in the early stages is indispensable, in the later ruinous. Where a catarrh is attended by hectic fever, opiates are beneficial, not only in quieting the cough, but also in moderating the

constitutional affection; they should always accompany cathartics: thus an aloetic tincture may be given every three or four nights, with a dose of laudanum. On the other hand, it is dangerous, and may even be fatal, to check a copious expectoration by opiates. Chalybeate waters, as those of Islington, are of more importance in preventing consumption, than all the materia medica besides, especially in scrofulous constitutions; and even some desperate cases have been cured by them: they are to be taken largely, cold or warm, if they pass off freely; but not otherwise. Morton frequently prescribes his stomachic pills, consisting of aloes, myrrh, mastich, cinnamon, saffron, cloves, wormwood, nutmeg, mace, calamus, rhubarb, musk, cardamoms, and some other articles. After bleeding, emetics, he says, are of great use in the cure of consumption, and will often check it in the early stages: they ought to be succeeded by opiates. Opiates are of use in all the stages, but more especially in the beginning of the disease. In scorbutic and scrofulous consumption, he recommends pills of gum ammoniac, with benzoin, balsam of Peru and of sulfur, and millepedes. He thinks the patient should live in a dry and thin air, considering marshy and smoky situations as unfavourable. In the second, or inflammatory

stage, he forbids evacuations, unless the inflammatory symptoms run high. Bark he considers as the great and general febrifuge in consumptive cases. He thinks the night sweats may sometimes be avoided, by awakening the patient repeatedly, when they are about to commence. After discussing the subject of consumption in general, Morton examines the variations, produced by its complications with other diseases, or by peculiarities of constitution. The presence of scrofula does not affect the prognostic; the state and progress of the disease determining the degree of danger alike in all cases. The scorbutic consumption is supposed to be distinguished by a miliary eruption, and a salt expectoration. In asthmatic phthisis, opium is said to be dangerous, as increasing dyspnoea: ammonia, and the citrate of potass are the most useful remedies for asthmatic symptoms: the natural death of old age seems somewhat to resemble a consumption of this kind. In the melancholic or hysterical phthisis, a milk diet seldom agrees, nor strong cathartics: but gentle emetics act like magic, and opium is particularly necessary. In one case of this kind, however, opium could not be given, on account of the dyspnoea which it occasioned, even when the diarrhoea required its use. For the prevention of phthisis after haemoptysis,

bark is Morton's Herculean remedy; he gives a drachm every four hours, after venesection, and other temporary measures. Calculous persons often die consumptive: in such cases chalybeate waters are excellent palliatives: calculi, formed in the lungs, may act as foreign substances; and any such substance may sometimes lie for a long time inactive, in the internal parts of the lungs, as is shown by a case, in which some nails remained for several months, without producing much inconvenience, till too much exercise brought on the symptoms of the disease. The consumption which succeeds to syphilis is often of the asthmatic kind, with dyspnoea, and a secretion of viscid mucus. Chlorosis often passes into consumption by imperceptible degrees, unless relieved by proper evacuations, and chalybeates. Peripneumony, when bleeding has been too sparingly employed, frequently lays the foundation of consumption. The Hippocratic aphorism, that pleurisy, without expectoration, ends on the fortieth day in empyema, is confirmed by a case, in which the precise period was observed, and the patient is supposed to have been saved from suffocation, by the immediate use of an emetic of sulfate of zinc, and tickling the fauces. Rheumatism not uncommonly leads to consumption, and Morton gives pectoral medicines in all rheumatisms, with a view to obviate

such a tendency: this consumption is of the asthmatic kind, and seems sometimes to be produced by too copious bleeding: in one instance, it had assumed the type of a tertian: warm bathing, bark and chalybeates are the most appropriate remedies. The consumption, which follows an intermittent, is generally more curable than other forms of the disease. It is, not uncommonly, occasioned by scirrhus indurations of the liver; but here the dropsical symptoms are generally the immediate cause of the fatal termination. The last variety considered is that which depends on an internal ulcer: and it is observed, that when the original disease is near the heart, the progress of the consumptive symptoms is rapid, and the patient dies without much ulceration of the lungs, although he has been affected by violent cough and dyspnoea: but when the ulcer is in, or about the pelvis, the case may go on for a year, with the usual morbid changes of structure. For internal ulcers in general, calomel is very liberally prescribed every third or fourth morning, with diaphoretic antimony every night: where the kidney or bladder is affected, chalybeate waters are said to be of great use. In one case of renal calculus, it is very strongly asserted, that the emulgent veins were found lined with a thick crust of calculous matter.

BRUNNER professes to have entertained strong doubts of the propriety of Morton's practice of giving bark in haemoptysis, till he found by experience that it succeeded, where every thing else had failed.

In the Philosophical transactions for 1694, Mr. CLAYTON gives an account of some experiments, which he made in order to illustrate the operation of poisons: he found that crude mercury, injected into the veins of a dog, occasioned a consumption, which was fatal in sixteen weeks; and when the lungs were examined, a globule of mercury was discovered in the centre of each of the suppurations. The author suspects that where consumption occurs in the human subject, after large doses of mercurial medicines, a similar deposition in the lungs may be its immediate cause. He found that both alum and nitre injected into the veins are speedily fatal: the former coagulating the blood, but not the latter.

The pathology of pulmonary affections was in some measure illustrated by the anatomist RUYSCH, who appears to have been the first that

J. C. BRUNNER de glandulis duodeni. v. p. 101. Van Swieten. IV. 37.

CLAYTON, Phil. trans. XVIII. 1694. p. 121....

Fr. RUYSCH Observationum centuria, et catalogus musæi. 4. 1691. Van Swieten IV. 25, 31.

observed the true nature of the arborescent substances expectorated in some consumptions, as being in general formed of coagulable lymph.

The consumption of Lancashire is said to depend on a state of the lungs rather dry than purulent. LEIGH is disposed to attribute it to the abundance of vitriol in the county.

In ETTMULLER's works, there appears to be little that is interesting with regard to consumption. He recommends a few emetics, as singularly beneficial in the beginning of the disease, a diet of milk and raw eggs, some vulnerary medicines, and change of air; but avoids cathartics, sweet syrups, and linctuses: according to Trnka, he praises dry currants, and their pulp, as almost a specific in hectic.

BAGLIVI, in his Practice of physic, cursorily mentions tubercular consumption as an instance of the difficulty attending a correct diagnosis of diseases: he observes that it generally begins with dyspnoea, pain, dry cough, inability to lie on the side affected, redness of the cheeks, and other symptoms of slow fever, which are followed by those of suppuration. He erroneously

LEIGH *Phthisiologia Lancastriensis*. 8. Lond. 1694.

M. ETTMULLERI *Opera medica*, Westphali. 2 v. Fol. Frankf. and Amst. 1696. II. De nutr. laes.

G. BAGLIVI *Praxis medica*. 8. Rome, 1696. II. viii, ix, I. p. 109.

asserts that Galen referred consumption to a descent of humours from the head only, and imagines that Morton was the first to correct the error. In speaking of dysentery, he says, that ipecacuan is a specific and almost infallible remedy in this disorder, as well as in other hæmorrhages and discharges; an observation for which he was indebted to Dr. Sherard, the English botanist, then on his travels.

The edition of the *Sepulchretum* of Bonetus, published by MANGETUS, contains several additional observations, relating to pulmonary and other visceral affections, attended by hectic fever; but the most interesting of these additions is the description of tubercles of various kinds, published by WEPFER in the 19th volume of the *Miscellanea Curiosa*. He calls them *grandines*, and thinks it probable, though not certain, that they arise from lymphatic glands, but remarks that the question is of little importance; he says, they are distended by a deposition of juices rather nutritious than excrementitious, and afterwards inflame and suppurate. He has several observations of consumption complicated with the effusion of serous or viscid fluids into the different cavities of the chest; and some others of emaciations derived from indurations of the different

abdominal viscera, or from diseases of the heart.

The same Wepfer, in his Observations on the affections of the head, gives an account of an endemic consumption at Waldshut on the Rhine, where there is a cavern in which mill stones are dug and wrought: the air is always hot, even in the winter, and a very fine dust floats in it, which penetrates leather bags, and discolours money contained in them: all the workmen employed in it become consumptive, if they remain for a year, and some even in a shorter time; and they all die unless they apply early for assistance. Wepfer thinks the antihæctic of great service in cases not absolutely desperate; especially when combined with asses' milk. He was a great admirer of the works of Willis.

Dr. WRIGHT and Mr. COWPER have related, in the Philosophical Transactions for 1703, a case of pulmonary abscess after small pox, in which the pus was very freely discharged, when the head was lower than the body: a caustic was applied at the part indicated by the pain, by which a free opening was made, communicating with the

J. J. WEPFERI Observationes de affectibus capitis. 4. Schaffh. 1727. 8. 444, 438, 446, 447. B. 1622. D. 1695.

WRIGHT Phil. trans. XXIII. 1702-3. P. 1372. Abr. V. 221.

COWPER P. 1386. Abr. V. 225.

bronchiae; and the event was successful. The taste of the injections was sometimes perceived in the mouth: the lungs seem to have been much exposed, and did not exhibit any sensibility when touched: but a slight pressure on the heart, for a few seconds, occasioned faintness.

The writings of STAHL exhibit some marks of an acute and ingenious mind, but he appears to have been too frequently led away by hasty observation and precipitate reasoning. The principal part of his doctrines, relating to consumption, are contained in an inaugural dissertation of Feder, reprinted in Haller's collection. The exacerbation of a cough on repeated inspiration, with a sense of local obstruction, is mentioned, not very correctly, as a test of its phthisical nature. The permanence of froth on the surface of the urine, which seems to have been first noticed by Paracelsus, is also considered as a general criterion of the disease, though it sometimes occurs in a simple cough: this circumstance, as indicating the presence of some mucilaginous substance, would imply either a want of proper action in the organs of assimilation, or a singular derangement in those of secretion. Stahl forbids the use of balsams, opiates, expectorants, and the antihectic, and depends chiefly

G. E. STAHL et Chr. Feder de Phthisi. Halle, 1704. Haller Disp. pr. II. n. 58.

on bleeding, with nitre in moderate doses, restraining the cough by the smoke of crude antimony: milk he thinks of no advantage. The mode of treatment is to be principally directed to the cure of the hectic. Tobacco, especially the extract, checks a consumptive, but not a common cough, and may be employed as a nosological test: consumption, he thinks, scarcely happens to one in a thousand: but this can hardly be correct even in the most favourable climates. Stahl disapproves of ethereal balsams of sulfur, myrrh, and the vegetable balsams, as being too heating: opiates too, except in small doses, he thinks liable to the same inconvenience. The antihectic of Poterius, and the antiphthisical tincture of Grammann, which contains a salt of lead, he thinks highly objectionable. The flowers of sulfur he considers as safe, and he has felt the benefit of inhaling the sulfureous fumes of crude antimony, having been cured by them of an obstinate cough in a few hours. The nummularia, and the root of the minyanthes, he thinks deserving of trial: but the nummularia is said to make sheep consumptive. The benefit of riding, in cases not yet confirmed, is discussed in a separate dissertation.

In his Theory of medicine, Stahl observes, that females have more frequently symptoms of inci-

patient consumption than males, but have a greater chance of escaping its fatal termination. The disease, he thinks, is often the consequence of inactivity and full living, especially of the use of vinous and spirituous liquors: astringents aggravate it by impeding expectoration, and in short, all other medicines are injurious or useless.

This opinion is still further illustrated in the Commentary on Gideon Harvey. Asses' milk, when set aside for twelve hours, exhibited no cream, and therefore contains no fattening particles, as Harvey supposed: it appears to be nothing but a cold mucus, and is fit only "for asses." In one instance, he says, a tertian fever was unquestionably produced by it. He does not deny that Harvey may have cured a hundred catarrhal coughs by bleeding and cathartics; but in the mean time a thousand have been cured without either of these remedies. Although the hectic is truly a symptomatic fever, it does not depend on the presence of any morbid matter; and the modes of practice tending to promote the evacuation of such matter have been unsuccessful. It is not produced by psora, lepra, or syphilis, why therefore by the acrimony of pus? Indeed sometimes one side of the thorax is filled with pus, yet there is no hectic. Hippocrates imagined that visceral diseases only destroyed

STAHL *Theoria medica vera* 4. Halle, 1708. P. 1014. Stahl de hecticâ abscessus comite. Halle, 1710. In Harv. c. 6. 27.

by the fever they occasioned; but it is not possible to prove that they may not kill immediately, and independently of fever. We may sometimes palliate the symptoms of consumption by demulcents and discutients, as the distilled waters of vulnerary and astringent plants: but exercise on horseback, or in a carriage, is the most powerful remedy. Stahl fully agrees with Harvey in all his prejudices against cinchona, which, he says, has certainly often produced hectic, consumptions, jaundices, and dropsies, after intermittents: and the same inconvenience attends the use of other strong astringents, as tormentil or galls. Bark will not cure intermittents more rapidly than other medicines, unless administered in imprudent doses: and no practitioners should be trusted with bark, who cannot cure an intermittent without it. A physician, who objected to bark, had cured 200 agues in 18 months by other remedies, while of a much smaller number cured by bark, more than 20 had become hectic, dropsical, or asthmatic: a more candid reasoner might however suspect, that most or all of these would have been the victims of the original disease, if they had not taken the bark.

FULLER, in his *Medicina gymnastica*, has re-

commended nauseating and emetic medicines in consumption, as affording a salutary exercise: and he agrees with Sydenham, that where consumption is "without fever or ulcer," riding is almost the only specific: but the patient must become a Tartar, and live on his horse.

The public life of **FREDERIC HOFMANN** commenced towards the close of the seventeenth century: but the dates of his principal publications were a little later than those of the works of his rival Stahl. His practice appears to have been in general more Galenical than that of some earlier physicians in this country: in consumptive diseases he seldom ventures on remedies much more powerful than a little nitre. Of his system of rational physic, a good abridgment has been published in English, by Dr. Lewis and Dr. Duncan. The subject of hectic fever is discussed at large among other febrile diseases: the slow fever, which Hoffmann attempts to distinguish from hectic, is evidently only an earlier stage. It is observed that a simple hectic fever, with indigestion, may often be relieved by an emetic of ipecacuan, followed by a dose of aloes; where amenorrhoea is the concomitant disorder, we are directed to bleed in the foot, and give deobstruent remedies; where there

F. HOFMANNI Opera physicomedita. 6 v. Fol. Geneva, 1740.

A system of the practice of medicine, from the Latin of Hoffmann, by Lewis and Duncan. 2. v. 8. Lond. 1783. Opp. II. 175. . . Lewis II. 328. . .

are indurated mesenteric glands, as in the hectic atrophy of children, warm bathing is advised, with nitre, sulfate of potass, and sal ammoniac. In all hektics, milk is a principal remedy, especially woman's milk; next asses' milk, or cows', with manna or conserve of roses, or with Seltzer water: and if evaporated to one half, and again boiled with as much water, it agrees better with hypochondriac persons: we may also always venture to give the tincture, or infusion of roses, cascarrilla, cinchona, and nitre, which prevent the colliquation of the blood, and tend to prolong life. Lead is much more dangerous than useful: exercise, especially riding, is very beneficial: bleeding should be administered with great caution, since it may be very injurious in delicate habits. When the appetite is weak, the muriate of potass, as prescribed by Moebius, affords an excellent stomachic, creating an almost insatiable desire for food. Among the cases recorded, we find instances of the beneficial effects of purgative mineral waters with milk, of milk taken with coffee, and of pectoral decoctions with nitre, a gentle laxative being premised: and an account of a clergyman who continued to expectorate white pus for thirty years, being kept alive by losing some blood twice a year, and drinking a decoction of ginseng and sassafras.

A mode of treatment nearly similar is recommended in another part of the work, particu-

larly devoted to the subject of pulmonary consumption, the symptoms of which, the author supposes, may sometimes be occasioned by a translation of matter from the mesentery or the kidneys, without any actual disease of the lungs. He considers consumption as in some degree contagious, or at least thinks that a natural predisposition to the disease may be called into action by attendance on a consumptive patient. Tall persons, with long necks, are the most subject to it, and it is most frequent in those countries, in which strong wines are drank in abundance, as in lower Austria. The experience of all ages is agreed in recommending a milk diet for its cure: but in plethoric habits, milk sometimes promotes acidity, and where there is much dry heat, it may be proper to substitute whey: mineral waters or lime water may also be mixed with it. The best laxatives are senna, rhubarb, and manna, or magnesia, taken in milk: other cathartics create too much disturbance. Diuretics also sometimes afford relief to the chest, as milk or whey with parsley seeds or celery seeds. Vulnerary balsams are supposed to cleanse the ulcers, but at the same time they promote febrile action; the best consist of copaiba, the watery extract of myrrh, extract of saffron, aromatic oils, opium, honey, wax, spermaceti, and oil of almonds.

Warm baths are often useful; and air and exercise, with frequent bleedings, are the best prophylactics: but in the young and plethoric, care must be taken to avoid such exertions as might bring on haemoptysis. Half of the cases of consumption originate in haemoptysis; and care must be taken not to stop the bleeding too hastily by astringents: in consumptions of this kind, asses' milk and mineral waters are the best remedies. Nitre is a very effectual refrigerant, but sometimes weakens the stomach and intestines. Bleeding to the extent of an ounce, or even half an ounce, will often relieve the respiration in advanced cases: in greater quantities it is only admissible in the earlier stages. Emetics and strong cathartics are injurious: issues in the neck and between the shoulders are often beneficial. A stomachic elixir, with myrrh, saffron, nutmegs, and buckbean, is recommended to be taken at meals, with a diet of milk, broth, and ptisan. The colliquative sweats may be checked by nitre and opium in small doses. A case is related, in which a consumption is said to have been cured by eating strawberries: another was protracted for thirty years, by the use of goats' milk, with infusion of veronica, conserve of roses, and bleeding three times a year. In the collection of Consultations, sulfur and diaphoretic antimony

are supposed to be very useful in tubercular consumption; the saturnine tincture of Grammann is said, like most other astringents, to be rather a cause than a cure of consumption. In other parts of Hofmann's works, the virtues of milk with mineral waters are still more strongly enforced, and a case of slow fever cured by whey is recorded.

Dr. MUSGRAVE, in his essay on Irregular gout, has adduced some clear instances of the occasional connexion of that disease with consumption. The gouty consumption, he observes, occurs commonly at a later period of life than the ordinary disease, and seldom exhibits the symptoms of hectic fever, till an abundant expectoration has already taken place, and has debilitated the patient. He recommends balsams, bitters, sulfur, and warm remedies in general, when the fever permits, adding also sometimes cauteries, where the symptoms are obstinate: opiates he thinks dangerous, as tending to fix the disease in the chest, though useful in other consumptions: to strengthen the lungs, he gives, as the cure advances, steel, and a decoction of the woods, and advises a change of air. In the cases which terminated favourably, the disease was shortly succeeded by a regular fit of gout in the feet.

We must not pass over, in its proper place, a  
 Hofm. Opp. IV. 147. V. 222, 225. VI. 16.  
 G. MUSGRAVE de arthritide anomala sive interna, 1707, 12.  
 Amst. 1710. C. xii. P. 195.

name so celebrated as that of BOERHAAVE, although there is little in his works, relating to our subject, that deserves to be separated from those of his elaborate commentator Van Swieten. He observes that people of a consumptive habit are liable to sweat during their sleep, from any slight cause, without the actual presence of hectic fever. He considers consumption as a conversion of all the blood and chyle into pus. In his Chemistry he theorizes on the medical properties of sulfur, calling it fat, acrimonious, indigestible, warm, and injurious to weak lungs, scorching the body, which is already too dry.

In SALMON's English herbal we find a syrup of the flowers of digitalis, recommended as a valuable medicine in pulmonary diseases: and it appears that the remedy had been occasionally used in private families at subsequent periods, before its late revival.

A detached dissertation of COSCHWITZ, republished by Haller, furnishes us with an account of a peculiar affection of the labourers in the quarries of Seeberg, supposed to be of a varicose nature in the beginning, like the spado of Hip-

BOERHAAVE Aphorismi. 8. Leyd. 1709. § 1198, 1201. Elementa Chemiae 2 v. 4. Leyd. 1732. II. 430. Van Swieten, IV. 88.

W. SALMON's English herbal. f. Lond. 1710. Sherwen Med. Phys. Journ. II. 175.

COSCHWITZ de spadone Hippocratico. Halle, 1721. Haller Disp. pr. II. n. 47.

pocrates, and ending in phthisis. It is attributed to great exertion in their work, followed by cold drink, and begins with a pain in the right scapula, the chest, and the arm; this is followed by a pulsation under the left clavicle, a sense of tightness, a cough, haemoptysis, and consumption. The medicines recommended are scordium, warm sudorifics, bitters, and rhubarb, to be taken in ale.

Dr. BARRY published at Dublin, in 1726, a hasty essay on Consumption, in which he recommends sulfur, millepedes, the gums, balsams, and woods, the flesh brush, and riding: emetics he thinks generally useless: where the pain and oppression direct us to the seat of an abscess, he advises that an opening be made as for empyema, in order to allow a free exit for the matter, which affords the only chance of a cure. In a subsequent work on digestion, he gives some successful examples of this practice.

The Synopsis of ALLEN was long considered MARTIN<sup>e</sup> on consumption. Lond. 1722. Animalcular theories. R. BLACKMORE on consumptions. 8. Lond. 1724. "A rapid writer." E. BARRY on consumption of the lungs. 8. Dubl. 1726. P. 152, 218. On digestions, p. 410. J. ALLEN Synopsis medicinae practicae. Ed. 5, auctior. 8. Amst. 1730. C. iv. art. 29. Opuscula Scientifica. 12. Ven. 1728. . . COGROSSI on the effect of small doses of ipecacuan in haemorrhage. Haller in Boerh. Meth. St. Med. II. 941.

as a useful compendium of the opinions and practice of the most celebrated physicians, but from the nature of the work, it can contain but little original matter. Buttermilk is said to have been sometimes given with wonderful advantage: the root of the helenium is recommended, from Lindanus, in decoction: tobacco is said to cleanse the ulcers as a vulnerary, as well as an expectorant: and the vapour of sulfur to have cured some consumptions in Ireland, on the authority of Boyle. The contagious nature of the disease is enforced by several examples, which, however, are mentioned as uncommon. A manuscript of Pitcairn recommends, for the first stage, calomel, followed by a decoction of the woods, with occasional purgatives. Barbette and Colebatch have found weak acids very useful, though disapproved by most authors: a drink acidulated with the vapours of sulfur is elsewhere recommended. Lister, in his work on dropsy, suggests the use of elaterium in small doses, on account of its beneficial effects in hydrothorax.

A paltry compilation of a Dr. Strother, published under the name of RADCLIFFE, is only remarkable for containing a recommendation of the use of emetics, with the condition that the

RADCLIFFE'S practical dispensatory. Ed. 5. 8. Lond. 1730.  
P. 19.

lungs must be strong and not brittle : and the patient not too much oppressed by the hectic heat.

A case of consumption is recorded in a dissertation of SCHACHER, in which the lung on one side is said to have been completely destroyed, water only having been found in its place : but Haller, who has republished the work, thinks it probable that the lungs must have been compressed into the form of a membrane.

WERLHOF has very justly defended the bark against the attacks of Stahl, who had expressed a paradoxical suspicion, that the abundant use of this medicine in England might have predisposed the inhabitants to consumption : this Werlhof considers as merely a whim, and highly commends the “ golden phthisiologia” of Morton.

In DOVER's Legacy, we find authority for a very active and somewhat hazardous practice in consumption and some other diseases : it consists in the frequent repetition of venesection in small quantities, which he says is more beneficial than even horse exercise, notwithstanding the great utility of this remedy : and he supports his opinion

SCHACHER *Incisio phthisici cadaveris.* Leipz. 1730. Haller  
Disp. pr. II. n. 59.

WERLHOF *de febribus.* 4. Hanov. 1732. P. 54.

T. DOVER's *Ancient physician's legacy to his country*, 4th ed.  
enlarged. 8. Lond. 1733.

by the relation of several cases: one, in which there was a considerable fetid expectoration, and haemoptysis, was cured by bleeding every other day, and the cold bath. He recommends anise seed and crocus martis, made into pills with Locatelli's balsam, five to be taken every morning; and elixir of vitriol in the afternoon, with an antiphlogistic regimen. Crude quicksilver too is "the best thing in all the world for the lungs, an ounce every morning." He mentions a pleurisy, in which 260 ounces of blood were taken away with success; another case, in which the patient lost six ounces every day for a fortnight, then every other day, afterwards every third and fifth day: and a third patient was bled at least fifty times, and did well. Among the symptoms of the disease, he notices the swelling of the ends of the fingers, which some other authors have also mentioned. Several cases of the failure of bleeding are stated in TURNER's remarks on this publication.

A short essay of DESAULT of Bordeaux, published with some other dissertations, contains several interesting remarks on the nature and cure of Consumption, supported by an appeal to

D. TURNER's Ancient physician's legacy surveyed. 8. London. 1733.

P. DESAULT sur les maladies vénériennes, la rage, et la phthisie. 12. Bord. 1733. P. 331, 390, 338, 352, 356, 361, 363.

practical experience. He insists that an ulcer of the lungs is merely an effect, and not a cause; and that tubercles constitute the essence of consumption, being generally anterior even to hæmoptysis. The liver too is very often indurated and painful in consumption, and it is surprising that this circumstance should not have been noticed by medical writers. Both scrofula and consumption, he thinks, are contagious, when ulcerated: the putrefaction breeding worms, which propagate the disease, and cause it to spread. He adopts the opinion of Sydenham, Baglivi, Dolaeus, and Lassalle, respecting the utility of riding and carriage exercise, and confirms it by the relation of several cases: exercise, he says, must tend both to break down the tubercles, and to remove the obstructions in the liver.

The year 1733 is remarkable for the publication of the first volume of the *Edinburgh Medical Essays*. In this volume, there is a paper by Dr. Lowis, on an atrophy from a hernia of the stomach, without fever: a round stony brittle body was found at the first division of the bronchiae, resembling a substance which the patient had once expectorated. In the second

volume, Dr. ST. CLAIR mentions a child, who had died of epilepsy, having been for some time in apparent health, yet the lungs were found full of tubercles and abscesses; and Dr. WAUGH relates a case of consumption, and dropsy of the chest, from a wound with a penknife too hastily closed: one side of the lungs was in a state of suppuration; on the other side were eight pounds of water, with a quantity of a sediment like suet.

The medical opinions of Stahl were collected and methodized in the *Conspectus* of JUNCKER, which contains a repetition of what has been already extracted from that professor's works, but in a form somewhat more convenient, than that in which it was originally published. He attempts to distinguish slow from hectic fever, the former being intended for the purpose of discussing an infarction, the latter for the perpetual absterision of some ulcerated viscus: the one being an effort to avert, the other to correct, though often in vain: he confesses, however, that an obstinate scirrhus may be accompanied by a true hectic. The slow fever does not confine the patient to his bed, and is not attended by diarrhoea: it is cured by resolvents, neutral salts, mild chalybeates, stomachics, analeptics, astringents, to check the sweats, such as gums, and

coral, and laxatives: venesection is not often necessary, nor emetics, except in bilious cases: where haemorrhages have been suppressed, they ought to be recalled. In hectic, he says, that stopping the sweats, by astringents only, accelerates the fatal termination; he recommends riding as paramount to a voyage to Egypt, and disapproves of warm balsams, and of aloes. Atrophy he defines as a defect of nourishment, chiefly derived from obstructions of the mesenteric glands. It is accompanied by languor, want of appetite, excess of sensibility, loss of colour, dulness of the eyes, swelling of the eyelids, restlessness at night, oppression after taking food, swelling of the abdomen, costiveness, turbid urine, emaciation, thirst, and more or less of hectic fever, especially at night: there are also frequently external scrofulous swellings. It sometimes arises from worms, or may be traced to some other debilitating cause. It may be cured by calomel, Epsom salts, sulfate of potass, rhubarb, manna, and syrup of buckthorn, with deobstruents, resolvents, attenuants, and martial tonics: antimonials may be given with other resolvents; and diaphoretics, and nitre, if there is fever. After this very rational enumeration of medicines, it is somewhat humiliating, to find the touch of the hand of a person dead of the disease, recommended as a very efficacious remedy; and antimagical baths, or instead of them simple

baths, if there is no suspicion of magic. Consumption is somewhat injudiciously described as an ulcerated state of the lungs: it is derived from plethora as a remote cause. Here it is asserted, that it is the hectic, and not the consumption that kills, and that the danger is proportional to the fever. Among a number of inert medicines, a sympathetic powder is directed to be thrown on the expectorated matter. Steel is said to be bad for the chest, and for this reason the antiphthisical tincture is condemned; being made from sulfate of iron, with acetate of lead, which must of course be converted into insoluble sulfate of lead, and acetate of iron. Sulfur is depreciated, and said to be incapable of curing even a pustule of psora.

The subject of consumption is discussed with something like originality in WAINSWRIGHT'S account of the nonnaturals. He considers Cheyne as having established, in his new theory of fevers, that the quantity of blood is much diminished in hectic. He thinks that pectorals and balsamics have been the destruction of many, and can be of no use, unless they serve as stomachics or diuretics. Gentle emetics, mild stomachics, riding, pure air, the cold bath for a short time, with

J. WAINSWRIGHT'S mechanical account of the nonnaturals,  
5th ed. 8. Lond. 1737.

frequent blisters, and a digestible diet are the principal remedies.

An ANONYMOUS writer, in the fourth volume of the Edinburgh Essays, strongly recommends Dover's plan of repeated bleedings in young and plethoric subjects, especially after suppuration has taken place; expectorants being preferable in the early stage: and suggests that bark and other remedies, which strengthen without stimulating, and gentle exercise, may be employed at the same time with venesection.

We find, in the Physicomedical transactions of 1737, a paper by CAPPER, relating two cases of the completely unsuccessful employment of riding in consumption: this result is confirmed in a note of BUECHNER, who thinks however that riding may be of use in incipient cases, especially when they are derived from a hypochondriac origin. The next paper in the collection discusses the mode of prognosticating from the patient's dreams.

In the fifth volume of the Edinburgh Medical essays, there is a paper by Dr. THOMSON, on the good effects of small doses of antimonial wine, in cases of chronic debility and consumption. A man, apparently in an advanced stage of the disease, took daily six drachms, which produced

ANON. Ed. Med. Ess. IV. 1737. P. 418.

ACTA Physicomedica Naturae curiosorum. IV. n. 47.

THOMSON, Ed. Med. Ess. V. 1742. P. 86.

occasionally transient nausea, and was by degrees increased to an ounce: the expectoration gradually diminished, and at last went off altogether. He also cured some dyspeptic cases by small doses of aloetic wine.

A dissertation of WAGNER, republished by Haller, strongly recommends, in phthisical hæmoptysis, a powder composed of the sulfate of iron, absorbent earth, opium, diaphoretic antimony, and cinnabar, with the addition of bark when there is any fever.

HEVIN has related, after Hoechstetter, in the Memoirs of the Academy of Surgery, a case of hoarseness and emaciation occasioned by swallowing a gold coin, which continued for two years, until the coin was returned. FOUBERT has described, in the same volume, a remarkable projection of an abscess of the lungs, which was observable between the ensiform cartilage and the cartilages of the ribs, where he thinks in an earlier stage it might have been opened with safety. The sixth part of the Medical Essays contains an account of an unexpected cure of a hectic fever, derived from a suppuration supposed to be in the liver, by Dr. MONRO; a cataplasm of oatmeal, basilicon,

WAGNER de hæmoptoes habitualis curatione, Leipz. 1742.

Haller Disp. pr. II. n. 55.

HEVIN Mém. Acad. Chir. I. 1743. P. 452. FOUBERT, P. 717.

MONRO, Ed. Med. Ess. V. ii. 1744. P. 500. ARNOT, P. 613.

SIMSON, P. 616. AYTON DOUGLAS, P. 629.

and raw onions was applied to promote the suppuration; but by degrees the whole disease disappeared, without any observable evacuation of pus. A consumption is mentioned in the same volume by ARNOT, from which the patient recovered after coughing up a bone, which he had swallowed two months before; it had formed a tumour above the sternum: and an ulcer in the lungs, by SIMSON, from which the author was persuaded that the pus had passed by the bronchiae to the sound lung of the opposite side, and had caused it to appear distended with pus. There is also a paper by AYTON DOUGLAS on a consumption accompanied by a remarkable tumour under the scapula. The tumour was a sort of empyema, which was cured by a seton placed below it, but not communicating with it: as it was getting well, it became distended with air, and as large as a quart bottle, when the man coughed: afterwards its sides apparently united: the case seems to have originated in a pleurisy.

Dr. HUXHAM, in his observations on the air and diseases of the year 1738, published a few years afterwards, has noticed the occurrence of many cases of consumption after catarrh, especially where tubercles had been previously form-

M. GHISI *Lettere mediche*, 4. Cremona, 1749. Iced water in haemoptysis. Borsieri.

J. HUXHAM *Observationes de aere et morbis epidemicis Plymuthi factae*, 2 v. 8. Ed. 2. Lond. 1752. II. 3.

ed. He affirms, that an ulcer is by no means essential to consumption; that the disease may become fatal while nothing more is expectorated than a salt, a sweet, or even an insipid mucus, secreted by the glands of the trachea, in the same manner as diabetes or diarrhoea may be fatal without ulceration. In this serous kind of consumption, the oily, sweet, emollient, and inciding remedies, which are useful for dry coughs, are no longer admissible, since they disagree with the stomach, and cause diarrhoea; instead of them we must employ gentle diaphoretics, as recommended by Bennet, blisters between the shoulders, mild cathartics, with anodynes interposed, decoction of bark, with guaiacum and styrax, which would be improper for a dry cough, and inhalation of drying fumigations, which are of use also in colds, and have been recommended by "Laurentius," and by Morgagni in his *Adversaria*. Huxham advises those who are of consumptive habits, to remove into the country in the spring, for a change of air, and to lose a little blood by way of precaution.

Dr. RUSSELL's important treatise on glandular decline and sea water contains several interesting cases of consumptive diseases. In catarrhal affections, attacking the glands of the trachea, he recommends repeated bleeding, laxatives, emul-

R. RUSSELL *de tabe glandulari, sive de usu aquae marinae in morbis glandularibus*. 8. Oxf. 1750. P. 26, 36, 55, 65, 78.

sions with nitre, and abstinence : or, if the glands have burst, exercise on horseback, though rest is desirable while there is active inflammation : but in this form of the disease sea water is too irritating, tending to promote suppuration. On the other hand, a hectic, after the use of mercurial medicines, was cured by sea water : and in incipient glandular consumption, sea water draws off the defluxions from the lungs to the intestines ; and cures the cough without an abscess. For mesenteric obstructions, no remedy is so powerful as sea water continued for a length of time. Upon the same idea of derivation, emetics are sometimes to be added to purgatives ; and sea bathing is occasionally useful : in affections of the chest, squills are particularly recommended. Too much clothing, and long hair, are said to make children delicate, chiefly by promoting perspiration. Several cases are related, in which pulmonary ulcerations were combined with affections decidedly scrofulous : in one instance with swellings in the neck : there was a dry cough, but after bleeding, a small vomica burst : ethiops mineral was given at night, and a lotion of potass with sea water : in another, pus was found in the lungs, with enlarged mesenteric glands : there had been only a dry cough, and sea water had failed to afford any relief, having been tried too late. The author has generally found, that hectic with

emaciation, derived from diseases of the intestinal canal, has been cured by sea water. Dr. WILMOT sends him a case of scrofula with symptomatic dry cough, in a child six years old, cured by sea water, five spoonfuls night and morning: and in another case of purulent expectoration, with scrofulous caries of the leg, the same remedy was equally successful. It is observed, that the medical use of sea water is coeval with Hippocrates, who employed it in enemata; and Scribonius Largus directs it as a lotion for scrofulous tumours: Dr. Russell's work certainly affords many proofs of its utility as an internal medicine, a form in which it has been too much neglected by many modern practitioners.

The celebrated Dr. MEAD was long in possession of the esteem and confidence of the public, but his medical writings are rather elegant, than original or profound. He very properly arranges consumption as a form of hectic fever; and quotes Radcliffe's opinion in confirmation of its usual connexion with scrofula, especially in cold countries. He says, that the periodical character of hectic has not been sufficiently noticed, and deduces the great utility of the bark from the prevalence of the intermittent type: he asserts, however, that bark is very injurious when the lungs have become ulcerated. Milk, though generally recom-

R. MEAD *Monita et praecepta medica*. 8. Lond. 1751. B. 1673.

D. 1754. i. 10. iii.

mended, is a poison where there is indigestion, with bilious or bloody evacuations : asses' milk is preferred ; but we may substitute for it the whey of cows' or goats' milk, especially if the goats are fed on odoriferous plants. When milk disagrees with the bowels, it may be boiled with roses, pomegranates, and cinnamon, adding water to supply the evaporation ; and afterwards sweetened with sugar. The fumigations employed by Bennet, our author thinks, have been too much neglected in later times. A change of climate, a voyage to Lisbon or to Naples, riding, or carriage exercise, is desirable in almost all consumptive cases. In atrophy and cachexy, independent of pulmonary consumption, chalybeates and laxatives are strongly recommended. In the chapter relating to insanity, an interesting case is mentioned, in which a consumption, in the last stage, was superseded by an attack of religious melancholia, which continued for three months, and was again exchanged for the consumption, which soon became fatal.

Dr. BRYAN ROBINSON has made some important remarks on the effects of emetics, to which Dr. Cullen has referred in treating of the cure of haemorrhage. " By observing the pulse of several men after taking a vomit," he says, " it has been found, that so soon as a man begins to

B. ROBINSON'S Observations on the virtues and operations of medicines. 8. Dublin, 1752. P. 62, 146.

grow sick, his pulse becomes low, quick, and irregular, and in the action of vomiting is often so low as not to be felt:" but "in the space of an hour becomes fuller than it was before the vomit was taken." "From these effects we discover the great usefulness of vomits in stopping haemorrhages from small vessels." He relates a case in which an emetic of ipecacuan, taken three times a week, kept off haemoptysis for eight years, while tar water constantly brought it on: taken two or three nights together, it cured a cold: another person was kept alive for eight years by emetics, after all other means had failed: and relief was obtained from emetics of ipecacuan, or of chamomile, in several other consumptive cases.

Dr. HORSEBURGH has published, in the *Physical and literary Essays*, some experiments on the Hartfell Spa, near Moffat, an aluminous and chalybeate spring; and he relates several cases of decided benefit derived from it, in an advanced stage of consumption, with the usual symptoms of danger.

HORSEBURGH, *Edinburgh Essays Physical and Literary*. I. 1754. P. 341.

BUECHNER et Hebenstreit de scirrho mesenterii. 4. Hall. 1756. A fatal case, at 44. Trnka §. 22.

GERVASIUS a Monte Falisco de usu aquae frigidae in haemoptysi. 4. Rom. 1756.

WOODWARD'S cases, by Templeman. 1757. P. 117. Emetics in haemoptysis.

The advantages, attributed to Sea voyages, are very fully discussed in a valuable essay, by Dr. GILCHRIST: the cases which he relates are on the whole favourable to the credit of the remedy, and not so marvellous as to appear exaggerated. The first was an incipient consumption, which appears to have been cured by sailing: there was no sickness, and the appetite was keen from the beginning: the second was more advanced, but the patient had often been better and worse; she was considerably relieved, but died a few years afterwards: the third was an impending consumption averted: the fourth a cough, with dyspepsia, and marasmus, not febrile, permanently cured: in the seventh, ninth, tenth, fourteenth, nineteenth, and twenty first cases, considerable relief was obtained, but all the patients afterwards died; while the termination of the eighth case, which was incipient, and the fifteenth, which occurred after an accident, was ultimately favourable. In the nineteenth case, the sweats and diarrhoea were suspended for a considerable time, by the immediate effect of the first two days sickness. The author very naturally attributes considerable benefit to the action of vomiting, which he says improves the tone of the stomach and bowels, and is a powerful deob-

E. GILCHRIST on the use of sea voyages in medicine. 1756.

Ed. 2. 8. Lond. 1757. P. 1, 17, 47.

struent, removing tumours, inflammations and pains, producing a favourable change in the condition of ulcers, and stopping haemorrhages. Even the anxieties, apprehensions, and vicissitudes of a voyage, assist, as Aëtius has observed, in curing some inveterate diseases. The sea air appears also to be beneficial, while too dry an atmosphere is unfavourable. On a rocky coast, where the inhabitants live much on shell fish, consumption is decidedly more rare than in an inland country, a few miles distant. The spray of the sea, suspended in the air, the author thinks the best possible application for diseased lungs: and the most debilitated persons bear the fatigue of sailing, and even moderate exposure to the weather, without inconvenience, and often with advantage. A case is related, in which great benefit was derived from riding by the sea side, the patient perceiving a strong salt taste from the spray.

Dr. Gilchrist notices the existence of a "pituitous consumption," consisting in the expectoration of a saltish or sweetish matter, without any ulceration; and he observes, that abscesses in the lungs, occurring after accidents or fevers, are seldom fatal; but that a milk and vegetable diet is essential to the cure. Where the abscess is encysted, the cyst must be expectorated,

before the recovery can be completed. The author has thought it right to try the effect of calomel as an alterative, but has found it of no use: he was, however, much more successful in several incipient cases with the mercurial pill, which in some of them produced slight salivation. Opiates he thinks hurtful, and says, that they neither lessen the whole sum of the patient's suffering, nor lengthen his life. Milk he has found of little use in advanced cases; but buttermilk, a little acid, is always beneficial. Where the lungs are simply ulcerated, without much induration, he imagines that balsams may be of service: and issues and blisters are universally recommended. In short, he considers the whole practice in consumption, as consisting in the proper administration of bleeding, issues, mercurials, balsams, diet, and a sea voyage.

Haemoptysis, Dr. Gilchrist observes, is very frequently a consequence of tubercles, previously existing: and hence arises the danger of a relapse, though the disease may have been suspended by bleeding and other remedies. We must also remember, that there are generally still tubercles to be resolved, even after the ulceration has taken place; and that it is difficult to find appropriate medicines for every stage, in

which the tubercles may be found: but sailing and sea air appear the best calculated to fulfil all the necessary indications at once.

The practice of MARRYAT is allowed to have been original and vigorous, but was frequently somewhat hazardous. Among the symptoms of consumption, he enumerates great unevenness of temper, and sudden starts and bursts of joy, terminating in tears: circumstances which have been mentioned by many authors, but which are by no means constant, although there is often a little more irritability than usual. He objects strongly to bleeding in this disease, and recommends a nourishing diet, especially of pork broth, and exercise on horseback, but above all, the "dry vomit," consisting of a grain of tartar emetic, with about three of ipecacuan, to be taken, fasting, twice or thrice a week, without drinking after it: or if there is much diarrhoea, a grain of sulfate of copper, with four of ipecacuan. When an ulcer has been formed, he says that the copaiiba should never be omitted, about twenty drops being taken on sugar, night and morning: a solution of five grains of the sulfate of copper in an ounce of the tincture of cantharides, given in gradually increasing doses, has also per-

WHYTT on blisters for coughs with infarction and fever. Ph. tr. 1758. P. 569.

T. MARRYAT Therapeutice. 4. Lond. 1758. Therapeutics, Bristol. 1788. Ed. 23. 12. Lond. 1813.

formed wonders, and may be combined with the copaiba. Bark, steel, squills, gum ammoniac, chermes mineral, and nitre are also prescribed in various forms, without much discrimination of the symptoms indicating them. In haemoptysis, the author is equally confident in the efficacy of his peculiar mode of employing emetics, and advises us to give two grains of tartarized antimony, and as much of the sulfate of copper, in half a spoonful of water: or to begin with the tartar emetic, adding the sulfate when the nausea commences. Bark, nitre, sulfur, chermes mineral, and alum, are also recommended, and bleeding is thought highly objectionable, and always superfluous. For scrofula, he prescribes the corrosive sublimate, with the very proper addition of a little muriatic acid, which must tend to prevent its decomposition; or ethiops mineral, with crude antimony: and he says, that mercurials, in small doses, are wonderfully beneficial, but require to be continued for some months.

A singular circumstance in the dissection of a consumptive patient is related by MARTEAU, in Vandermonde's *Journal de Médecine*: he says that the right cavity of the chest was found empty, the lung having nearly disappeared, and a putrid exhalation having taken its place, which

MARTEAU de Grandvilliers. *Journal de Médecine*. IX. 1758.

P. 240.

escaped with a hissing noise: the man had only died the preceding day, so that the gas could scarcely have been wholly produced after death. An incautious observer might indeed sometimes mistake the entrance of air into the chest for its exit, if the abdomen had been previously opened, and its viscera removed.

The learned and elaborate work of TRALLES, on the use of opium, contains a very full account of consumption, and of the modes of treatment which have been employed for relieving it: his discussion of the bad effects of opium is extremely prolix, but the importance of the subject is such, that it deserves to be fully examined. His pathology is somewhat antiquated: he agrees with Willis and Hofmann, that consumption may depend upon a general acrimony of the humours, affecting the lungs, and talks of the indication of involving and thickening these humours. Its nosological character is derived from the hectic symptoms, hoarseness, and difficulty of breathing after motion. The tubercles, which are its immediate cause, are partly diseased bronchial glands, and partly vesicles distended by viscid

ROEDERER de catarrho phthisin mentiente. Gott. 1758.

BRILLOUET (on the scrofulous nature of consumption.) 1759, 1773.

B. L. TRALLES *Usus opii salubris et noxius*. 4 parts. 4. Breslau, 1757-62. Sect. IV. P. 1.

humours: they were known to Hippocrates, and distinguished as destroying by dyspnoea or by suppuration. Willis has observed, that consumption may be fatal without ulceration, and Stahl describes a consumption not purulent: De Haen's opinion of the immediate secretion of pus from the blood, in some cases, is well known, but disapproved by Haller in the second volume of his *Physiology*. Tralles has relieved some catarrhal cases by manna and other common remedies, with milk diet, the smoke of amber and mastich, and afterwards bark and honey: opium too is very useful in catarrhal cough and in incipient phthisis, but after the formation of the hectic, it is injurious, being a warm medicine: Dr. G. Young also thinks it improper when the lungs are already obstructed: in pituitous cases it is injurious: experiment shows that it retards excretion from the trachea, and thickens its mucus: it may indeed be accidentally useful in keeping the parts quiet; whence Boerhaave and Van Swieten prescribe it at night, after detergents in the day. In the last stage it is not always even a palliative: it has been shown, that it increases febrile heat, as Stahl and Pringle have observed: and Young has found that it aggravates thirst and inflammation: Willis calls it a poison: Leigh says that it only affords a short truce, and increases the dyspnoea: its combination with squills must be inert, the opposite qua-

lities destroying each other: it deprives the dying of their tranquillity and composure, and does not procure euthanasia, as Willis imagines: Ettmüller says that it sometimes prevents sweating, but Pitcairn asserts that he must have been mistaken, and it certainly has in common an opposite effect. After all, our author's prejudice against opium does not extend to the syrup of poppies, which he says is not only soporific, but also demulcent and saponaceous: and if the cough is very violent, he even allows opium in small doses: and recommends it in the form of an enema, for restraining the putrid diarrhoea: when administered in this way, it does not check the expectoration so materially. The tubercles he thinks may sometimes be resolved by soap, gum ammoniac, soot, squills, and honey: Boerhaave recommends the juice of grass and riding for the same purpose: Desault says much in favour of chalybeates; Tralles thinks they accelerate the pulse too much, and recommends Plummer's compound calomel pill, from its utility in scrofula. Bark, in his opinion, is improper, unless the disease originates from a true intermittent, and he somewhat exaggerates the authorities of several distinguished writers, who have objected to it: he says that it suppresses the expectoration, and causes great anxiety and distress. He recommends milk diet, with lime water, farinaceous substances, and emulsions, as the best mode of

treatment: inhaling vapours of aromatic herbs; and tepid ablutions. In an extreme case, where a little extension of life was highly desirable, he professes to have procured a respite of a day or two, by giving an enema of two grains of opium, in a saturated decoction of bark, made with milk; but he considers this remedy as merely calculated for a temporary palliation of the diarrhoea.

In LEWIS's valuable work on the *Materia medica*, we find the cinchona somewhat too hastily condemned: "in hectic," he says, "or wherever pus is formed, or juices are extravasated, it does harm:" although in the same page he tells us, that it is of great use in promoting the resolution of scrofulous tumours.

The opinions of DE HAEN, respecting the formation of pus, occupy a prominent place in his *Account of the practice of the hospital at Vienna*. He supposes this substance to be contained in the blood as a noxious humour, though perhaps not precisely in the form of pus, any more than the pleuritic crust is circulating as a crust in fevers: but he produces several cases of an abundant purulent expectoration, where no disease was found in the lungs after death: the pus

STEPHENS on consumption. 1761.

W. LEWIS's experimental history of the *materia medica*. 4.

Lond. 1761. P. 429.

A DE HAEN *Ratio medendi in Nosocomio practico*. Vienna.

Repr. 8. Leyd. 1761. . . I. xi. p. 60.

having been "secreted immediately from the blood," which is the particular point of practical importance. He observes that a wound, dressed too often, does not produce healthy pus; that in the same manner the lungs, when too much agitated by coughing or otherwise, afford a thin sanies; and that in such cases, after sleep, whether natural or artificial, the pus is improved. We find scattered through the whole work a variety of interesting cases of a miscellaneous nature. A very formidable abscess, attended by hectic, was cured by half an ounce of bark taken daily, with milk diet, and the constant application of a saturated decoction of bark, the abscess being opened in the thigh: another case was less successful; it was attended by considerable cough and expectoration, but the lungs were found sound: in another very severe case, a decoction of two ounces of bark was taken daily, with goats' milk, and appeared to be beneficial. The ischiadic decline is sometimes curable by bark and issues, with milk diet, soap, and antiscorbutic plants. Although consumption is often checked by pregnancy, an instance occurred of a woman dying at the end of the seventh month: the Caesarian operation was performed immediately, but the child was found dead. The symptoms of consumption are sometimes occasioned by an effusion of water, where there has been no reason

to suspect hydrothorax: in one instance a hectic was observed without any emaciation, originating in an affection of the sternum.

De Haen appears to have been a little credulous with respect to the virtues of some remedies: vipers' broth, in particular, he observes, was esteemed by Galen, by Mead, and Morgagni, as efficacious in several diseases, especially of an eruptive nature. He considers it as having been beneficial in a case of consumption with external ulcers, after measles, the patient taking a quarter of a viper boiled down daily, for nine weeks, together with bark and milk. The elixir of vitriol had been greatly in fashion in England: Dr. Pate, who was much prejudiced against it, afterwards became its advocate: De Haen had objected that it would coagulate milk: but it was answered from London, that milk was always coagulated in a healthy stomach: he afterwards found it useful in several cases of consumption, after pleurisy and measles, and especially where there was purulent expectoration without ulceration. The agaric appears to have been serviceable in checking night sweats; they were however succeeded by dysenteric symptoms, which were relieved by two or three doses of milk, well boiled with the fat of an omentum. The agaric was employed as detergent and purgative, from

the time of Galen. In another case of caries with hectic, milk and bark were given with great advantage: the mother of the patient discovered that the decoction of bark was rendered more agreeable by straining it cold through paper: De Haen however seems not to have been aware that this process deprived it of a great part of its strength. There is a very important observation respecting the theory of fever in general, that in one case the heat of the body was raised from 6 to 12 degrees above the healthy temperature, before any alteration in the pulse could be perceived: afterwards however the pulse rose as usual.

The Medical years of STÖRCK are a useful collection of observations and dissections. Among them we find instances of an emphysema of the lungs, causing chronic cough and dyspnoea, which he calls aerial consumption, and which, though incurable, he has sometimes been able to identify during life: a case of a sac containing eight pounds of a watery fluid, found between the pleura and the lungs, where there had been an abundant purulent expectoration: an ossification of the lungs three inches long and a quarter of an inch thick, which had produced an obstinate and fatal dry cough: and a puriform

expectoration, attending an affection simply catarrhus.

The great work of MORGAGNI, on the Seats and causes of diseases, affords less information on the subject of consumption, than on most other morbid changes of structure, and chiefly on account of the groundless apprehension, which both he and Valsalva entertained, of the propagation of contagion, by the dissection of consumptive subjects. Some interesting observations will, however, deserve to be noticed. Hardness of the skin Morgagni considers as a general symptom of hectic fever, simply depending on emaciation, and discoverable by touching it with a knife or a needle; it being also found, that the fattest hogs' skins are the most easily minced: in one case of hectic, supposed by some to be consumptive, the dura mater only was found diseased, and adhering to the neighbouring parts: in another hectic person, the heart was found rough, and without fat, and some of the arteries ossified, besides an enlargement of the mesenteric glands, which the author is disposed to attribute to the interception of chyle in its passage; Fantonus has seen the smaller lacteals filled with chyle, while the larger were empty. Cowper once found two of these enlarged glands

pressing on the lacteal sac in a very thin girl. In some subjects, these glands seem to have disappeared: in old age, they commonly become smaller, the proper passage of the chyle being probably impeded in either case. The connexion of cough with irritations, independent of the chest, is very properly illustrated by the example of the cough, which is excited, when the membrane of the tympanum is touched; and an instance is quoted from Vesalius and Bonetus, in which cough was a symptom of hydrocephalus: several cases are also related, in which it was occasioned by the affections of various abdominal viscera: in one instance, after peripneumony, the trachea contained a quantity of purulent matter, without visible ulceration, although some small tubercles were observed. The immediate seat of tubercular consumption, Morgagni has not dissected consumptive patients enough to determine with accuracy: the bronchial glands, which are frequently found diseased, are supposed to be of the conglobate kind, and they do not appear to communicate with the trachea: at least some of them, which are found black, suffer no black fluid to escape when they are squeezed. But the lungs may be found sound, after the expectoration of purulent matter, which has all the characters that nosologists have as-

signed to true pus. Zanichelli was disposed to depend on the Hippocratic test in all its rigour, believing that the copper vessel prescribed really made the sea water a little lighter, and more adapted to ascertain the precise limit of the specific gravity. Morgagni defends the opinion of Galen, that the patient is sometimes suffocated by an accumulation of pus, against that of Sylvius, who says, that this termination of the disease never occurs: and he denies the assertion of Tozzi, in his commentary on Hippocrates, that the blood is always consumed in phthisis, since, in several instances, an immense quantity of blood has been observed after death. Valsalva found the upper parts of the lungs more frequently diseased, than the lower: and the truth of the remark has been confirmed by more modern observations: but Morgagni seems to think that tubercles occur equally often in every part. Coiterus had found water more frequently on the right side of the chest, than on the left. A bone was coughed up, in a case observed by Valsalva, which he supposed to be an ossification of a part of the larynx. Morgagni thinks the laryngeal more easily cured, than the true pulmonary consumption, but in this opinion, he appears to be mistaken. He gives one instance of an affection of this kind, which had produced the symptoms of

asthma, and destroyed by suffocation. He quotes, with approbation, the cautions of Capper and Büchner respecting the recommendation of riding: nor would he venture to imitate the patients of Sanctorius, who appear to have been benefited by loud speaking and reading: Cicero relates, in his book on orators, that his own health was much improved, in his youth, by a retirement of two years from the forum, during which he travelled into Asia; returning with renewed vigour to the duties of his profession. Ramazzini too has observed, that public speakers, readers, and singers, are most liable to pulmonary diseases, and Morgagni and Valsalva have confirmed the observation. A case is mentioned, in which a laryngeal phthisis, with little or no fever, was cured by confining the patient to a warm, but spacious room, forbidding his speaking to his friends, except in a whisper, and giving him about half a pint of milk from the breast every morning and afternoon, and puddings made of barley meal, ginseng and milk, but enjoining abstinence from wine. By observing this regimen from November to May, the patient was completely restored: upon this, every consumptive person in Lucca adopted the same diet; but

MORGAGNI, Ep. xv. 13. xxii. 13, 27, 31.

LANDEUTTE on a fatal hectic after haematuria. Journ. Méd. XIV. 1761. P. 352.

without a single additional instance of success. In a cutaneous affection, with phthisical symptoms, broth made from vipers, frogs, and the tails of crawfish is supposed to have been of immediate benefit, with some light decoctions: there was purulent expectoration, but no hectic fever: the patient finally recovered by the use of a milk diet.

CLAPIER relates, in one of the volumes of the *Journal de Médecine*, for 1763, a case of confirmed consumption, cured by living some time in a coal mine: he says that the expectoration was promoted, and attributes the benefit of the remedy to the vapours of the sulfur, which have long and justly been celebrated.

The valuable essay on the Diseases of the army, by SIR JOHN PRINGLE, contains a number of practical observations of importance in every department of medicine. In recent coughs, after bleeding, he gives mucilages, oils and ammonia, in the form of an emulsion, and at night laudanum, with the addition of oxymel of squills, or gum ammoniac, which prevents constipation. Later in the disease, oily medicines may disagree. When the symptoms continue, and begin to assume the form of hectic, he repeats the bleeding

CLAPIER *Journ. Méd.* XVIII. 59.

AVENBRUGGER de percussione thoracis. 8. Vienn. 1763.

SIR J. PRINGLE'S *Observations on the diseases of the army.*  
Ed. 4. 8. Lond. 1764. P. 169.

once a week ; and finds that the greatest benefit is generally observed two or three nights after the operation: he also recommends low diet, and the application of setons, which are still more beneficial than bleeding: if the thirst and heat are so great as to indicate putridity, he prescribes an acidulated diet, and buttermilk, without animal food: for checking the sweats, sometimes sulfuric acid, and sometimes lime water is most beneficial: for a cough depending on ulcers, balsam of Peru, or Copaiba, in conserve of roses, were recommended in the early editions of the work: but in his subsequent practice, the author was often disappointed in his expectation of benefit from balsams, and therefore laid them aside. Air and exercise he thinks of great use, with a milk and vegetable diet. In a cough with an expectoration of a thin rheum, incrassants may be required, as conserve of roses and opium, adding squills, to prevent the too great obstruction of the secretion. Where there is debility and lowness of spirits, and to convalescents, the bark may be given with advantage. The author has also found benefit from repeated bleedings, in the hectic occasioned by the absorption of matter from suppurating wounds.

Dr. BROCKLESBY, in a work which has acqui-

red some reputation on the Continent, has recommended, in catarrhal cough, for the prevention of consumption, bleeding, with pretty large doses of nitre, two drachms daily in a quart of water gruel, and abstinence for two days from animal food. In rheumatisms he sometimes gave ten drachms of nitre in 24 hours, and he found that the stomach would bear half an ounce at once, if sufficiently diluted. I have been able to give this medicine in doses nearly as large, but I have not found it very effectual for the cure of rheumatism, though sometimes useful in catarrh.

The practice of Pringle was very generally adopted by DONALD MONRO, who has also furnished us with some interesting results derived from his own experience. He always found bleeding necessary, where a cough was attended by pain: and a removal to a more airy ward was thought useful to many of his patients: an out patient at St. George's Hospital was cured by milk diet, riding, and saline draughts. Bark was of most use, where the vessels were relaxed, without pain or difficulty of breathing, and balsams seemed of service in some similar cases; but in other instances they appeared

D. MONRO on the Diseases of the British military hospitals.  
8. Lond. 1764. P. 124.

PAITONI on a morbid change of the lungs. Phil. trans. 1765.  
P. 79.

to heat too much. Setons were of great use, and issues in the back, in a haemoptysis with hectic. In many consumptive cases diarrhoea supervened, with griping pains: these symptoms were most readily removed by a dose of rhubarb, or some other mild purgative, followed by opiates, and sometimes by astringents; after a few days the purgative was repeated, or an emetic was given, if there was much sickness: but opiates, administered at first to stop the diarrhoea, always did harm, increasing the fever, and affording but temporary relief to the diarrhoea. A gentle emetic was also often of use, as a palliative for the difficulty of breathing.

In Holland, according to the *JOURNAL de Médecine* for 1765, the distilled oil of asphaltum had acquired some celebrity for the cure of consumption and of internal ulcerations in general. The asphaltum was distilled with twice its weight of salt and sand, and from 10 to 15 drops were given for a dose. A similar medicine is still sold under the name of Dutch drops, and is certainly a powerful nephritic.

The synopsis of LIEUTAUD exhibits but few innovations in the treatment of consumptive affections. He describes an atrophy as frequent in

*JOURNAL de Méd.* XXIII. P. 369.

J. LIEUTAUD *Synopsis universae praxeos medicae.* 2 v. 4.  
Amst. 1765. I. P. 283, 181.

England and Holland, especially from hard study, which is generally curable by the use of stomachic tonics, decoctions of crawfish and snails, milk, and whey: camphor and Hofmann's anodyne are almost always useful, narcotics less generally: baths and frictions, change of air, cheerfulness, horse exercise, and generous wine are the best remedies. In haemoptysis he is cautious of employing astringents, or purgatives, but recommends ligatures to the limbs, and cold applications to the scrotum. In consumption he thinks the peculiar smell of the sputa, when burnt, afford the best diagnosis of their purulent nature: he considers it as certainly propagated by contagion among relations, but is doubtful if between husband and wife. He observes that there is often ulceration of the heart, and disease of the thymus gland, and of other viscera. Bleeding, he thinks, has often been injurious: milk he considers as the principal remedy; with pectoral decoctions, gums, balsams in small doses, sulfur, tar water, Morton's balsamic pills, opiates in moderation, the waters of Bonnes or Seltzer, or lime water, mixed with the milk, riding, abstinence from wine, the fumes of balsamic herbs, and cauteries to the occiput, or between the shoulders. Mercury is only to be employed in secondary or symptomatic cases.

The anatomical history of the same author

consists of a very ample display of cases and dissections, collected and original, judiciously and elegantly compressed into a small compass : they are, however, so miscellaneous and anomalous, that they serve rather to prevent our forming too hasty conclusions on general grounds, than to afford us any positive instruction. Thus we have instances of the bronchiae being filled with gypseous concretions, in a young man who had worked in a plaster shop ; of adhesions ; of emphysema, the lungs being elastic, from Störck ; of large vesicles of air scattered through the lungs ; of an abscess supposed to be erysipelatous ; of the bronchial and abdominal glands being enlarged in the same subject ; of asthma from tubercles ; of mucus so hardened as to be almost stony ; of a consumption from a suppuration of the glands at the bifurcation of the bronchiae only ; of calculi found in the lungs without any previous complaint ; of others where there had been asthma or dyspnoea ; of the same symptoms from ossifications ; of the lungs being dry after smoking tobacco, and gangrenous after fevers ; of mesenteric decline complicated with dropsy ; of consumptive symptoms without disease of the lungs, from affections of the pancreas

J. LIEUTAUD *Historia anatomicomedica*, a Portal, 2 v. 4. Par. 1767. I. P. 439. . . 494, 503, 505, 509, 538.

and mesentery; of the pleura becoming cartilaginous or ossified in consumption; of 130 small gallstones found in a consumptive subject; of a variety of appearances in the lungs of persons who had died with haemoptysis, some tuberculated, some ulcerated, some inflamed and turgid, the vessels being torn; of a cicatrix found in the lungs, where a consumption had been cured, from Valsalva; of a disease in the lungs, with a pain principally in the epigastrium; of ulcers in the lungs, without pain or cough; of consumptive symptoms arising from an affection of the frontal sinuses; and of a decline without sensible cause, in which the heart was found purulent. There are several convenient tables for the comparison of symptoms with morbid structures, as shown by dissection, and of the various affections of the respective viscera: but the inaccuracy of the references much diminishes their value.

In an academical dissertation on mosses, LINNE' mentions the lichen pulmonarius as very useful for curing the coughs of cattle, as well as the jaundice in the human subject: the lichen Islandicus he does not notice, although it was well known to some earlier authors.

LIEUTAUD II. P. 85, 462. . . Book iii. n. 344. II. P. 400.

LINNE' et Berlin Usus muscorum. 1766. Am. Ac. VII. P. 370, 383.

A residence in a cowhouse, which has been a favourite project with some modern speculators, appears to have been first distinctly discussed in a French essay of a Mr. READ, bearing the date of London, 1767. It is recommended especially for atrophy and marasmus, and said to be preferable to any balsamic fumigations for ulcers and tubercles: there are to be from two to six animals, so that the temperature may be kept between  $63^{\circ}$  and  $68^{\circ}$ : they should be fed on aromatic but not acrid plants: the patient on mild animal and vegetable food. The author seems to have produced nothing like practical evidence of the importance of his suggestions; and he says the mode of treatment was discovered by chance.

The Nosological tables of RAZOUX would lead us to consider the climate of Nîmes as somewhat favourable to consumption, since upon extracting the returns of deaths for 27 different months, we find that the number of consumptions is only 75 out of 406, or less than one fifth of the whole: the work however does not bear the appearance of very great accuracy.

The subject of hectic fever is discussed in a

Essai sur les effets salutaires du séjour des étables. Par M.

READ. 8. "Lond." 1767. Comm. Lips. XVI. P. 140.

RAZOUX Tables nosologiques, dressées a l'hôtel dieu de Nîmes.

4. Bâle. 1767.

candid and judicious paper of Dr. HEBERDEN, published in the second volume of the Medical transactions of the College of London. The paroxysms, he observes, are very irregular, the chilliness sometimes returning in the middle of the hot fit, which never happens in any other fevers: the qualities of the urine are also very various: it is sometimes clear in the paroxysms, and turbid in the intervals, as in other fevers, but sometimes the reverse. Sometimes there are pains resembling rheumatism, which materially distress the patient, and occasionally transient swellings of the limbs, without pain or change of colour. Where the hectic is derived from the irritation of a small wound, opium and assafoetida are sometimes very useful: bark is seldom beneficial where there is no ulcer, and not always in cases of gangrene: it is however innocent: but Bath waters have sometimes been prejudicial. The cases mentioned by the author, in which the pulse is not affected, belong rather to the genus *asthenia*, than to *hectica*.

The Nosology of SAUVAGES, however important, as a foundation for subsequent improvements of classification, by no means affords us

HEBERDEN, *Med. trans.* II. Lond. 1772. P. 1. 8. Read 1768.

F. B. DE SAUVAGES *Nosologia methodica, sistens morborum classes juxta Sydenhami mentem et botanicorum ordinem.* 2 v. 4. Amst. 1768. With posthumous corrections. I. P. 316. II. P. 446.

much facility in the consideration of hectic affections, nor are his arrangements quite consistent with each other; thus he places the infantile hectic of Sydenham under the genus *Hectica*, as well as under *Atrophia*, which is without fever. The *Hectica* is referred to the class Fevers, and the order Continued: of the class *Cachexiae*, the first order is *Macies*, "Consumptions," or Emaciations, containing the genera *Tabes*, *Phthisis*, *Atrophia*, and *Aridura*: the two former being confessedly febrile diseases, as much as the *Hectica* itself. In short the whole arrangement is rather that of a Symptomatology than of a Nosology.

The species enumerated under *Hectica* form a catalogue of the various causes of the disease, and of the affections of which it is symptomatic. The most remarkable are, 1, the *H. infantilis* Sydenhami, *Febris lenta infantum* F. Hofmanni, indicated by emaciation and languor, without much heat, and curable, according to Sydenham, by rhubarb infused in beer: 5, *H. scrofulosa*, the fits beginning with chills when the glands are suppurating: 8, *H. nostalgica*, the *H. nervosa* of Willis, which is often accompanied by a brown spot on the legs, and for which there is no medical remedy: and 13, *H. nervea*, noticed by Lorry as a slow fever generally ending in consumption.

Under *Tabes* we have the emaciations without

cough or purulent expectoration, arranged chiefly according to their proximate or remoter causes. First, *T. dorsalis*, from excesses : 2, *T. renalis*, the nephritic consumption of Hippocrates, with a reference to Col. Townshend's case, related in Cheyne's English malady : 3..6 ; species from Morton : 7, *T. a pericardio* : 8, *T. hepatica*, sometimes cured by incision, or by poultice, as in Monro's case : 9, *T. mesenterica*, mentioned, among other authors, by Wharton in his Adenographia, generally cured by steel, infusion of rhubarb, and milk diet : 10, *T. glandularis*, from scrofula of the external glands, for which Geoffroy recommends antimony, and Russell sea water : 12, *T. ulcerosa* : 13, *T. catarrhalis* of Hofmann, resembling incipient phthisis : 14, *T. a stomacho*, in one case of which, supposed to be truly consumptive, the stomach alone was found gangrenous : 15, *T. a vomica*, with a case in which the cyst was expectorated, from the Journal de Médecine, for 1758 : 16, *T. rachialgica*, of which a case is related in the same journal for 1764, agreeing with the second dorsal decline of Hippocrates : and 17, *T. a veneno*, especially from arsenic.

Consumption is defined from emaciation, slow quotidian fever, cough, and dyspnoea, generally attended by purulent expectoration, which is however absent in the first species, *Phth. sicca* : for this, after bleeding, the usual regimen of broths made of chicken, frogs, and crawfish is

prescribed, with ground ivy, coltsfoot, whey, mil-lepedes, catechu, the antihectic, milk of different kinds, rice and sago, and the waters of Cauterets : 2, the Phth. humida, is little more than the third stage of the sicca : in this, balsams are advised, with larger doses of mineral waters, if they pass off : when milk disagrees, broths and farinaceous decoctions are to be substituted : but the circumstance is unfavourable. The remaining species are called secondary, chiefly from Morton, 3., 16 : 17, Phth. chylosa of Leigh, with whitish faeces, is the mesenteric decline : 18, Phth. a vomica, the vomica of Linné : 19, Phth. a plica : and 20, Phth. cellularis of De Haen, with the expectoration of a white crust, like the exudation after inflammation.

The various species of Atrophy, if considered as without fever, must be referred to Dyspepsia or to Asthenia ; the Aridura is merely symptomatic, or a local disease of structure.

The virtues of hemlock have been not a little exaggerated in the writings of STOERCK, but it has certainly been occasionally beneficial in scrofulous constitutions, and its effects in consumption have been highly extolled by VAN DER BALEN of Brussels.

In 1770, some interesting papers on consumption appeared in the Medical Observations and

Inquiries: one by Dr. DICKSON, who considers riding as rather pernicious than beneficial during the hectic paroxysm, and only advisable when confined to the early part of the morning; and recommends a bolus of conserve of roses, with one eighth of its weight of nitre, as an almost certain remedy for haemoptysis, which he learned from Dr. Letherland: and two other papers by Dr. FOTHERGILL; the first, little more than a repetition of the objections of some former practitioners to the use of balsams, chiefly on theoretical grounds, though he professes also to have seen much actual inconvenience arising from their administration: the second entering more generally into the treatment of the disease. The mortality from consumption, he thinks, is estimated too high from the parochial returns, all those, who die of any lingering disease, being generally reported as consumptive. He considers all chyle as stimulating the lungs, and hence prescribes temperance as indispensable in every cough, and advises thin gruels and light broths as the utmost nourishment that can be allowed; with bleeding, when there is any heat or pain, and gentle anodynes. Even oils, if a little rancid, and nitre and saline draughts, unless in small doses, are too irritating. Fresh poppy seeds and Bristol water make a

safe emulsion. Anodynes must not be used until the inflammation is abated, unless to obtain a truce: afterwards they may be given with greater propriety. When the expectoration is a frothy phlegm, streaked with blood, we should withdraw as much nourishment as possible, without actual inanition, and forbid all vinous fluids. Excesses of all kinds, and crowded cities should be avoided. In a more advanced stage of the disease, the bark is required, with elixir of vitriol; but abstinence must still be observed. Although the justice of some of these remarks is undeniable, yet there seems a mixture of timid and precise detail, in others, more derived from reasoning, than from direct experience.

VAN SWIETEN'S Commentaries may be considered as a common place book, well calculated for the use of other writers or teachers, but too prolix, and too little methodized to be of equal advantage to a student; and greatly encumbered with the Boerhaavian hypotheses of acid, and alkaline or putrid acrimony, and of glutinous humours, which are supposed to be the principal causes of diseases. Besides a great display of learning, they exhibit some original observations. The first which occurs is a caution respecting

G. L. B. VAN SWIETEN *Commentaria in Hermanni Boerhaave aphorismos*. 5 v. 4. Leyd. 1741. 1772. §. 60, 80, 69. Vol. IV. 1756. Ed. 2, with some additions. 1770.

the source of haemorrhage, the author having experienced, in his own person, the effusion of blood from a small vessel in the soft palate, which discharged a drop about every second, but contracted and disappeared in a few hours: one of these drops, falling into the larynx, might easily have excited the apprehension of haemoptysis, as a suppuration of the nostrils has sometimes been mistaken for phthisis. The more frequent use of animal food in England, than elsewhere, to which he is disposed to attribute the frequency of consumption in this country, has been, with great reason, denied by later writers. A consumption is, in one instance, said to have been cured after the appearance of a fungous tumour on the thumb, discharging a chalky matter: and in another case, an issue between the finger and thumb had the credit of a similar cure. Among the causes of consumption, the author enumerates haemorrhoidal affections too abruptly checked; confirming the aphorism of Hippocrates which mentions dropsy or consumption, as the consequence of such a practice, by a case in which both these diseases occurred at once. In a consumptive affection after haemoptysis, great relief was experienced from the expectoration of a thick membrane, which had probably been the lining of a vomica. Several authorities are adduced to show, that immersion in cold

water has sometimes been beneficial, not only in haemoptysis, although Galen discouraged the practice, but also in catarrhal cough. Bleeding is sometimes necessary in haemoptysis, but it should be employed with caution, as tending to produce a plethoric habit. The author observes, that many singers and trumpeters have fallen victims to haemoptysis, which they might have avoided in other professions: and that Moliere died of this disease, immediately after performing, for the fourth time, his *Malade imaginaire*. In detarging the lungs after haemoptysis, care must be taken, lest too violent remedies should remove the external coagula and internal plugs, which stop up the ruptured vessels. Van Swieten is a believer in the communication of consumption by contagion: and he also believes, that the kiss of a dying wife had taken off the hair of her husband's beard, leaving a spot that was ever after bare. He mentions, as an instance of the insensible progress of the disease, that a great musician was able to perform, the day before his death, with wonderful execution. That a disposition to consumption does not necessarily imply its actual existence, is shown by the example of a man of an extremely consumptive family, who saved himself from the disease by frequent bleeding, but continuing the practice too long, became dropsical, and died at forty, leaving

several children, who were exempt from any consumptive tendency.

The practical opinions of Van Swieten are all referred to a sort of chemical theory of diseased action. He concludes from the sweat and diarrhoea, that there is great putridity in consumption, and hence infers, that all antiseptics must be beneficial: for instance, myrrh, which Pringle found most powerfully antiseptic, crabs, as containing alkali, which has also the merit, according to the same author, of acting in some cases as an antiseptic; Seltzer water; and sugar of roses. Pringle has shown that sugar is highly antiseptic, and thinks that its more frequent use, in modern times, may be the cause of the greater rarity of putrid diseases. Bark too, and camphor, are strongly antiseptic, and Avicenna recommends camphor. The merits of bark have been questioned: Torti thinks, that it only takes off the intermittent character, without radically curing the disease: yet he is obliged to confess, that he has in some cases been more successful with bark; and Van Swieten testifies the same of a consumption, not preceded by haemoptysis. In Hofmann's case of a cure, effected by eating strawberries, for which the patient felt a craving, he concludes that sugar was taken with them in abundance, and was of advantage as an anti-

septic. Balsams, he thinks, may be of use as diuretics: sudorifics may be tried with caution, especially a decoction of the woods: Marcellus Donatus, as well as Ingrassias, has some histories of consumption, cured by guaiacum. Salt meat was recommended by Hippocrates as a detergent, to promote expectoration. A singular instance of the benefit of asses' milk is quoted from Gallo; it is said to have cured by causing a translation of pus to the kidneys. The vapour of benzoin has sometimes been of use by exciting a cough, and bursting an abscess: but the best of all detergents are air and exercise. Riding is very beneficial, where it can be afforded: and the author has known several sailors and fishermen cured of consumptions, after becoming coachmen. The smell of fresh earth may perhaps be salubrious; hence the earth baths, recommended by Solano de Luque, in his *Origen morbosus*, may have been of service. Bark is often useful, notwithstanding Mead's idea, that it ought not to be given, where the lungs are ulcerated. Van Swieten favours also the practice of frequent bleedings, and says that he knew a lady, who lost several ounces of blood almost daily, and sometimes twice a day, for several years, and survived, though much reduced by the remedy. Opiates he considers as useful for improving the pus, facilitating the expectora-

tion after sleep, and promoting the cicatrisation of the ulcers. He adds his own opinion to the weight of authority which he adduces in favour of milk; he has never feared to recommend it: preferring woman's, then asses', goats', or ewes'; cows' he thinks the most nourishing. For relieving the diarrhoea, he employs an enema of a drachm of turpentine, rubbed down with the yolk of an egg, adding half an ounce of theriac, and four ounces of new milk. With respect to consumptions, independent of the lungs, he observes that the general disease is the same as in pulmonary consumption, and that the local affections are distinguished nearly in the same manner, as the inflammatory diseases of the same parts.

We find in the work of GRANT on fevers, so much admired by the Germans, a great deal of discussion respecting the digestion of morbid matter, according to the doctrines of the ancient pathology. He describes an English hectic fever, the anastomosis of Boerhaave, as a disease of the spring season, occurring to young persons from 15 to 25, and to nurses, with night sweats, slight occasional epistaxis, and loss of strength and flesh, but without much febrile heat: and

VAN SWIETEN, IV. P. 105, 111, 113.

R. DE LACHASSAIGNE Manuel des pulmoniques. Par. 1770.

W. GRANT on the fevers most common in London, 8. Lond. 1771.

he recommends, for its cure, rhubarb, sulfuric acid, antiscorbutics, frictions, and cold bathing. The hectic arising from internal abscesses is preceded, as he imagines, by a mixture of pus with the urine, and characterized by the absence of a lateritious sediment.

MACBRIDE, in his *Methodical introduction*, considers Phthisis and Tabes as the two principal species of hectic fever, distinguished from each other by a cough, and observes that though the wasting, weakness, and loss of appetite, are often evident for a considerable time before the febrile symptoms are perceptible, the hectic supervenes so constantly, that it would be wrong to arrange the disease, as Sauvages has done, in any other class than that of fevers. The duration of hectic fever being so considerable, the cure, he says, must be principally attempted by diet: goats' whey, asses' milk, buttermilk, Seltzer, Bristol, and Malvern waters, riding, and especially sailing: sometimes however bark may be given with advantage. In the beginning of consumption, gum ammoniac, soap, and ammoniacal iron may be employed as deobstruents; gentle emetics are necessary, in order to promote expectoration, and also as an exercise: setons or issues too are often of advantage. In the variety arising from haemop-

D. MACBRIDE'S *methodical introduction to the theory and practice of physic*. 4. Lond. 1772. P. 404. 393. . .

tysis, the juices are supposed to be very acrimonious, and the bark is prescribed, with Bristol or Mallow water, occasional bleedings, and opiates. In the mesenteric decline, deobstruent gums, soda, soap, chalybeates, with whey, and milk are recommended ; and in hectic from abscesses or ulcers, bark is the principal remedy.

We find in HAUTESIERCK's Collection of observations, several instances of the translation of suppuration, the lungs having been apparently relieved by the formation of abscesses in other parts. Thus a purulent expectoration was exchanged for a fistulous abscess, and the patient recovered after an operation: the lungs were affected after the disappearance of some scrofulous tumours, but were relieved by an abscess of the liver. There is a case by LISSARDET, of a fatal consumption which succeeded to a psora, supposed to have been too hastily cured, and another, by CAUVET, of a more favourable termination under similar circumstances, the dartre having reappeared. It has occurred more than once to myself, that the lungs have been attacked during the cure of cutaneous affections, and in one instance fatally: but not from any hasty modes of treatment.

R. DE HAUTESIERCK Recueil d'observations de médecine des  
hopitaux militaires. 4. Par. II. 1772. P. 286...

AVENBRUGGER traduit par R. de Lachassaigne. Montp. 1772.

LINNÉ, in a Dissertation on the Medical effects of respiration, praises the climates of Athens, St. Helena, and Bermudas ; and suggests, in an essay on Strawberries, the probable benefit to be derived from the use of this fruit in calculous consumption.

The Commentaries of WINTRINGHAM, on Mead's medical admonitions, exhibit no very extraordinary powers of mind : but they contain some particular remarks which deserve to be noticed. He asserts that during the hot fit of hectic, there is no urinary sediment ; the fluid, on the contrary, being, in all cases, occasionally pale and watery : but that in the morning, after the sweat, there is generally a reddish yellow furfuraceous deposition, and not uncommonly, a precipitate of a brick colour : others, however, have found more irregularity in these respects. He disapproves of the use of fumigations, recommended by Mead and Bennet, but thinks the steam of water, and of vinegar of squills may be inhaled with advantage. He says that the side of the chest most affected is warmer than the other : and that the blood is redder than in health, and less cohesive.

DR. JAMES SIMS is disposed to attribute

LINNE' et Ullholm *Respiratio diaetetica*. 1772. Am. Acad. VIII. n. 152. Linné et Hedin *Fraga vesca*. 1772. Am. Acad. VIII. n. 160.

Mead *Monita et praecepta*, a CL. WINTRINGHAM. 2. v. 8. Lond. 1773. I. P. 53, 184, 178, 181.

many of the consumptions of young men to the effects of gonorrhoea, supposed to have been cured about a year or two before: he imagines that morbid poisons may remain latent for a time in indurated glands, and asserts that symptoms of syphilis have been known to occur some years after the infection, upon the resolution of such glands. In cases of this kind, mercurial medicines are indispensable; in others, gentle emetics are often so serviceable, that the disease might be supposed to be in the stomach. Sulfur is also a valuable medicine; it appears to be the only laxative that does not diminish perspiration, and it is by no means heating in its effect: its advantages in coughs and in incipient consumptions are great and certain: it may be combined with bark, and in this form may be given, and has appeared to cure, even after suppuration has commenced; it will obviate the objections to balsamic medicines, which may be added to an electuary containing it; but bark is less pleasant in an electuary than in a decoction. The patient should wear flannel next the skin; and he may often avoid a fit of coughing by going to bed without undressing. In phlegmatic habits, tar water may be of use, but tar pills are better. Goats' whey is sometimes eminently beneficial;

but for the last stage it is too laxative. Milk often increases the cough and causes sickness, apparently by promoting the secretion of mucus, and it renders frequent emetics necessary. Females not uncommonly have a respite from consumption when they marry, but sink under the disease after having had two or three children. The author has often known the catamenia remain natural till the last stage, though this occurrence is contrary to the opinion of most medical writers.

Dr. PERCIVAL informs us, in his *Essays*, that he has frequently given fixed air, procured from chalk and vinegar, as an antiseptic in consumption, with abatement of the hectic, and improvement of the expectoration. Dr. WITHERING, he says, has cured one patient by it, and relieved two others: but in his own opinion it will be principally found useful as a palliative in the last stage. He thought it possible that all antiseptics might derive their power from fixed air, but he did not succeed in obtaining this air from tincture of myrrh, camphorated spirit, or tincture of Tolu.

The physicians of Copenhagen have shown, in their different volumes of transactions, a spirit of research and observation which renders their publications highly worthy of attention. The

PERCIVAL'S *Essays*, II. 1774. Ed. 4. 8. Warrington 1789.

P. 308. Priestley on air, Ed. 2. I. 301.

properties of the Iceland moss were particularly brought into notice by a paper of SCHOENHEYDER, who found it very useful in the consumption following measles, after the removal of the inflammatory symptoms: of twelve cases, in which bark had failed to relieve, the greater number were cured in about five weeks: in one there was great emaciation with purulent expectoration, in another the expectoration was mixed with blood. The lichen sometimes occasioned diarrhoea, but this was checked by gum arabic; and in one instance a diarrhoea was relieved by giving a dose of rhubarb in the morning, and gum arabic in the evening. In the same volume a severe case of syphilitic consumption is recorded by TODE, in which a cure was effected by corrosive sublimate, with infusion of bark, lichen, and a diet of milk and broth.

In the third volume of the Medical commentaries of Edinburgh, we have an interesting illustration of the benefit derived from a seton, by BRYMNER; the patient was relieved, and the

OSTEND on a fatal catharsis from Ailhaud's powder. Journ. Méd. XL. 1773. P. 260.

BILLARD Mém. Ac. Chir. V. 1774. P. 546. On the great utility of resinous fumigations. Bors.

SCHOENHEYDER Collect. Soc. Med. Havn. I. Copenh. 1774. P. 126. TODE P. 171.

FARR on bloodletting in consumption. 8. Lond. 1775. Against it. BRYMNER Med. Comm. Ed. III. 1775. P. 422.

seton was dried up: she became very fat, and afterwards died of a pleurisy: the lungs on the right side, to which the seton had been applied, probably as being most affected, were found sound, the left lungs purulent. DUPLAN published, in the same year, a case in which a similar advantage had been obtained from the cautery, applied between the shoulder blades. "DECASTRO" asks him, with some irony, why the cautery is preferable to the seton recommended by Pringle. PARIS informs us, that cauteries are almost universal in Turkey, and that they are employed in the dorsal decline, when purging and bleeding fail, though he prefers tonics and cold bathing. This disease, he says, is very common among the women, from their habits and restraints.

DR. FOTHERGILL's remarks on consumption are continued in the fifth volume of the Medical Observations. He objects strongly to bark, as causing haemoptysis in the early stages, and as being useless in the later: except in consumptions from too long suckling, from abscesses, wounds, or leucorrhoea: where it disagrees, it produces pain, tightness, or oppression, and often fixes wandering pains. Elixir of vitriol too has sometimes increased every symptom, when given in the inflammatory stage, and brought on hae-

DUPLAN Journ. Méd. XLIII. 1775. P. 505. DECASTRO XLIV. 1775. P. 314. PARIS. P. 539.  
FOTHERGILL Med. Obs. Inq. V. 1776. P. 345.

moptysis, when the pulse was quick and hard; but in the latter periods it is a good palliative: it is said that half an ounce, taken by mistake at once, cured a patient of Sir Edward Hulse of a consumption. The author has often found Bristol water “of signal benefit:” the journey, and the cool morning air may cooperate with its virtues. The air of cities he thinks indisputably bad: but the neighbourhood may be salubrious, especially towards the South, in this climate; the North and North Easterly winds being softened by blowing over them: thus vegetation is sometimes at least 12 days earlier at Chelsea than any where North of London: hence we may choose Camberwell, Peckham, the lower parts of Clapham, the drier parts of Lambeth, Battersea, Fulham, Chelsea, Brompton, or Kensington for the winter, and more elevated situations for the summer: or the West of England may be preferred for the winter, and Buxton or Matlock for the summer: the South of Europe and Madeira are sometimes recommended: the voyage to Madeira may be an objection, but sea sickness is often beneficial, and perhaps repeated mild emetics would be of use. The places most frequented have been Nice, Marseilles, Naples, Lisbon, and Cintra. Exercise, with proper precautions, is very advantageous: and repeated bleedings, except in delicate constitutions. Amenorrhoea may be disregarded, as

a natural consequence of debility. Oxy-mel of squills is very injurious from its irritating quality, where there is actual inflammation. Milk is advisable when it agrees with the stomach: it may be mixed with lime water where there is acidity, or whey may be substituted; but the addition of rum or brandy is improper. Of all remedies the most important are early abstinence, milk and vegetable diet, country air, quiet of mind, good hours, moderate exercise, and frequent change of scene.

The gradual decay of consumptive patients is particularly described by CHALMERS in his account of Carolina. "So easily do they die to all appearance, that I have known many," says this author, "who had been gradually exhausted, go to sleep for ever, with so little trouble either of mind or body, that though the pulse could no longer be felt at the wrist, and the hands and feet were already cold and livid, yet when a fly settled on any part of their face, they would drive it away." It has, however, been justly remarked by other writers, that this favourable representation is by no means uniformly true; the spirits are often good, while the sufferings are great. In Carolina it appears that catarrhal consumption is frequent and fatal. Cinchona and

L. CHALMERS'S account of the weather and diseases of South Carolina. 2 v. 8. Lond. 1776. II. 131, 121. . .

oak bark in decoction, with poppy heads, alum and "Roman" or white vitriol, and iron filings are sometimes useful in checking the inordinate secretion of mucus: an acetate of iron, made by infusing iron for three days in about an equal weight of vinegar, is also said to have succeeded in some far advanced cases, though nauseous and harsh to the taste, a small teacup full being taken every three hours. Red wines are also recommended, in moderation: and horse exercise: but change of climate has been found of little use: a high situation, or an upper room, is thought to afford the best air.

The use of chalybeates is strongly enforced in a small pamphlet of Dr. MOSES GRIFFITH, whose prescriptions have been very properly admitted into the London pharmacopoeia, notwithstanding the author's chemical error, in doubting the decomposition of the sulfate of iron by the subcarbonate of potass. He adds to these salts nitre, in young subjects and recent cases, having begun with bleeding; myrrh, in a more advanced stage, and when there is more debility. In all cases he recommends a diet of asses' milk, or skimmed milk, puddings, rice, and potatoes, with as little animal food as possible, of the lightest kind, once a day: snails

M. GRIFFITH on the cure of Hectic and the Pulmonary Consumption. 1776. 8. Lond. 1795.

also, either raw, or boiled in milk, he thinks materially beneficial, and prefers them to asses' milk: they may be bruised, and hung up in a cool place, and the viscid fluid that oozes from them may be made into lozenges. The warm or tepid bath he has found very useful in inflammatory hectic, particularly for children, and in one case he considers it as having cured a consumption in an advanced state.

We find in an academical dissertation of LINNÉ a very favourable report of the utility of the *Hypericum perforatum*, in hæmorrhagic and ulcerous consumption: a handful of the tops of the plant is to be made into a decoction with Spanish wine, boiled down to one third, and an eighth to be taken morning and evening: a lady is said to have cured at least a hundred hectic patients by the use of this simple remedy.

The works of CULLEN must always hold a distinguished rank among the didactic and elementary treatises, which most deserve the student's attention: they also contain some original matter, which requires the careful consideration of the rational practitioner. Respecting hæmorrhage

LINNÉ et Hellenius *Hypericum*. 1776. Am. Ac. VIII. n. 171. P. 326.

W. CULLEN's First Lines of the practice of Physic, 4 v. 8, Edinb. 1777. 1789. II. P. 256. §. 735.. § 853. I. § 349.

in general, he asserts, that being unnatural, it can never be necessary, unless established by a bad habit, which it would be advisable to avoid, and that bleeding, in order to prevent plethora, tends ultimately to increase it. In the treatment of haemorrhage, lead he thinks dangerous, and the antiphthisical tincture nearly inert: chalybeates and bark improper, as tending "to increase the phlogistic diathesis," and as having been found injurious in his own practice. Evacuations of all kinds, a low regimen, and blisters to the breast or back, followed by issues, are recommended, and active exercise discouraged, although sailing and the motion of a carriage have been found of use. Consumption is defined as an expectoration of purulent matter, with a hectic fever, more or less exquisitely formed. Ulceration is considered as probably always present: De Haen's opinion is much questioned, at least it is supposed that, in De Haen's cases, the pus was formed on the membranes of the bronchiae, and not carried about in the blood vessels, and that it may possibly have been only a serous or lymphatic effusion. Hectic never attends a catarrh, and may therefore be considered as a criterion of suppuration: the patient is often

G. CULLEN *Synopsis nosologiae*. 2. v. 8. Edinb. 1785, 1792.

W. CULLEN's *Treatise on the materia medica*. 2 v. 4. Edinb. 1789.

chilly in the exacerbations, if there are no regular shiverings: the first exacerbation occurs about noon; sometimes an hour earlier, but the evening attack is "always" the most considerable: eating alone, for instance in a morning, produces scarcely any sensible fever: there is seldom headache, and hardly ever delirium. Hectic is not attendant on all ulcerations, as in scurvy or cancer, nor on all pulmonary abscesses, as after peripneumony: and the ulcer may heal, when the pus has not acquired the character which produces hectic. Catarrh is probably very seldom the cause of consumption, in persons not predisposed to the disease: but it ought not to be neglected: spasmodic asthma not uncommonly terminates in consumption. There is probably some noxious acrimony in the purulent matter, perhaps the same that prevails in scrofula: the children of scrofulous parents often dying consumptive, and consumption being often combined with mesenteric decline: the complexion also is of the same description in both diseases. The acrimony may however sometimes be of an exanthematic or a syphilitic nature. In two cases of the expectoration of a calculous matter, the patients recovered by the use of a milk diet, and by avoiding irritation, without becoming actually consumptive. The author dares not assert that consumption is never contagious, especially in warm climates, but he has

never seen an instance in which it has been decidedly communicated. In tubercular consumption the patient is at first scarcely aware that he has any cough at all, but the breathing is easily hurried, with languor and emaciation: at length pain in the chest succeeds, generally beginning under the sternum: even when there is no pain, the patient can only lie with convenience on one side. Consumption from haemoptysis is less universally fatal; haemoptysis is not always followed by ulceration, nor is ulceration always attended by hectic. Pregnancy retards the symptoms, but they generally recur, and become fatal, soon after childbirth.

Notwithstanding the apparent connexion of consumption with scrofula, the analogy affords us no assistance in the treatment. Sea water and other mineral waters are wholly useless; and mercury seems prejudicial. The antiphlogistic regimen must be adopted; milk is a principal remedy: violent exercise, and external cold and heat are to be avoided. Passive exercise of all kinds is of use: the sea air is only desirable from its moderate temperature. Blisters and issues applied to the thorax are frequently of service: the balsams seem to have been often injurious, and myrrh, though lately recommended, has sometimes done harm, from its acri-

mony : mercury has been often tried without the least benefit, and has generally been found pernicious. Bark commonly increases the phlogistic diathesis, and even when it relieves for a time, the symptoms speedily return. Acids are useful as antiseptics and refrigerants, especially the native acids of vegetables : vinegar sometimes excites coughing. Demulcents often disagree with the stomach : opiates are necessary for allaying the cough, they check the expectoration, but for a time only : they however tend to increase the sweats. The diarrhoea requires astringents and mucilages ; all purgatives, Dr. Cullen thinks, are dangerous : but ripe fruits are often both agreeable and beneficial.

The Journal de Médecine for 1777 contains a variety of papers on consumption, by LECOMTE, MORIN, DESONDES, SOUVILLE junior, and BRILLOUET. Lecomte's case of incipient phthisis is remarkable for little but the slowness of the pulse and the excessive use of bathing : the patient remaining in the bath for ten hours at a time, and dining and supping in it ; the year before, she had taken sixty baths, and all the symptoms had then disappeared : now the relief was only temporary, though a slight oedema was in

LECOMTE, Journ. Méd. XLVIII. P. 14, 348. MORIN. P. 326. DESONDES, P. 340. SOUVILLE. P. 343. BRILLOUET, P. 405.

the mean time removed. Morin had tried Billard's balsamic fumigations without success, and sometimes with disadvantage, from the irritation. Souville relates a case which occurred after parturition, in which bark, with rice and farinaceous food, effected an unexpected cure in a few weeks. Brillouet refers to a former essay, printed in 1759, in which he had endeavoured to illustrate the identity of consumption with scrofula: and in pursuance of this opinion, he gave the corrosive sublimate to a girl of 19, with purulent and bloody expectoration, hectic fever, and diarrhoea, increasing the dose gradually, and giving two or three ounces of manna every fortnight, with a diet of soup, eggs, and vegetables: by degrees she perfectly recovered: the catamenia returned fourteen months afterwards: there was no suspicion of syphilitic infection: but some enlarged glands afterwards appeared in the neck, and subsided spontaneously. Another person, of a delicate constitution, was much relieved by taking the sublimate for three months: it was supposed that the disease originated from his having continued to sleep with his wife, who died of a consumption six months before: but he had also a cold, which he neglected.

The practical Observations of STOLL may be

considered as a continuation of the publications of De Haen: we find in them much discussion respecting gastric diseases, and some information respecting the effects of the lichen, polygala, and arnica. A consumptive girl, by no means emaciated, died somewhat suddenly: the lungs were found heavy, like liver. Consumption after haemoptysis, peripneumony, or pleurisy, he thinks the most fatal: hence it might be suspected, that his mode of treatment, in such cases, was not the most judicious. He disapproves of balsams, bark, and astringents, where there is any inflammatory affection: riding carries the patient to the banks of the Styx, as it would do in pleurisy; but in dyspeptic atrophy, with habitual cough, it may have succeeded: lichen and polygala are useful, where the lungs are weak and relaxed, and the expectoration too copious: but in cases of haemoptysis, both these medicines are liable to the same objections as the bark, and the best of all remedies are small and repeated bleedings. From a prejudice against bleeding, many colds have been converted into consumptions: bilious colds indeed require emetics and cathartics, but in the highly inflammatory, bleeding is necessary, in order to prevent the extension of the inflammation to the lungs.

CASTELLANI, 1777.

STOLL, I. P. 204, 210. II. 1778. P. 4, 98.

A cough and a pituitary consumption, originating in a gastric fever, have often been cured by bitters, lichen, polygala, root of arnica, bark, and restorative diet. In such cases, the irritation causes coughing, the cough an influx of humours to the lungs, and at last ulceration: the lungs are commonly found heavy, with small whitish tubercles; and in many instances the mesenteric glands have also been affected. In the early stages, the disease was often cured by the saturated decoction of couch grass, and taraxacum, succeeded by the lichen; in the last stage it was perfectly incurable. In one case of phthisis succeeding haemoptysis, gentle cathartics and an emetic were given, with temporary advantage. The root of the arnica is considered as a specific antidysenteric, and has sometimes relieved a hectic diarrhoea, where bark had been useless: a drachm was given every two hours, which sometimes acted as an emetic, without any further inconvenience. Infarction of the lungs, or tubercular haemoptysis, was greatly relieved by gentle emetics; solvents or sorbefacients alone were insufficient for its cure. Incipient consumptions were sometimes checked by moderate bleeding, acid and nitrous drinks, a gentle emetic, and afterwards lichen, or polygala, or bark. These tonics are especially useful in warm weather: but if

they are continued in winter, they bring on pleuritic pains, the lungs become filled with abscesses, and the intervening substance is hardened: consequences which may sometimes be avoided, by the use of moderate venesection and demulcent drinks. A case apparently of chronic peripneumony, perhaps with slight supuration, was cured by repeated bleeding, in smaller and smaller quantities, and by vegetable diet.

The Iceland moss is recommended by BERGIUS from his own experience, as agreeing particularly well with weak stomachs, and as very nutritious in some consumptive cases. It is gently purgative, but in some countries, it is used for food. Scopoli, in his second Annual report of natural history, mentions several instances of its great utility. It is employed in Carniolia for fattening hogs, and for feeding horses and cattle: when it is used in medicine, the bitterness is to be extracted by a previous maceration. This precaution may perhaps have been thought superfluous, by those who wished to administer it rather as a tonic remedy, than as a palatable article of diet.

P. J. BERGII *Materia medica e regno vegetabili*. 2 v. 8. Stockh. 1778.

HULME'S safe and easy remedy.

DE MERTENS *Observationes medicae*. Vienna, 1778.

Dr. CHARLES DARWIN's experiments on pus were first communicated to a medical society, in 1777, and noticed soon after in Duncan's Commentaries: they were published at large after his death, by his father. The practical conclusion appears to be, that if we dissolve the substance to be examined in sulfuric acid, and in a solution of pure potass, and add water to each, if there be a strong precipitation in both, there must be some pus: if in neither, the substance is merely mucus. Pus is less soluble than mucus in the acid, and sometimes insoluble in the alkali, which then prevents its diffusion in water. Corrosive sublimate coagulates mucus, but not pus. Mucus, separated from the acid solution by water, is either suspended or floats, while pus falls to the bottom: so that the old Hippocratic test seems not to be altogether unconfirmed by the most elaborate experiments.

After Dr. Priestley's revival of Hales's pneumatic researches, and Black's discovery of the carbonic acid, the various gases were exclusively employed in the prosecution of medical experiments. In DOBSON's Commentary on fixed air, we are informed that Dr. Percival had tried

C. DARWIN on matter, and on the absorbents. 8. Litchfield, 1789. Dunc. Med. comm. V. 329. VII. 150.

M. DOBSON's Medical commentary on fixed air. 8. Lond. 1779.

this gas in thirty cases of consumption, without obtaining any more than a temporary benefit: that Dr. Withering had cured one patient with it, and relieved two others: that Dr. Hulme had found it of some benefit: and that the author had himself tried it with great advantage in a confirmed consumption after peripneumony, although it did not succeed in tubercular cases.

Dr. MUDGE employed not gases, but vapours, for the cure of catarrhus cough, and his Essay on the subject contains several interesting remarks on consumption. He conceives that haemoptysis is often the consequence of the obstruction produced by tubercles: besides other remedies for incipient consumption, he strongly recommends the application of scapular issues: but not in miniature, as is too often done in many other instances. He exemplifies this remark by a case of catalepsy, which was at last cured by half an ounce of valerian, taken in substance twice a day, until seven pounds had been consumed; smaller doses having totally failed to produce any effect: and by a description of the caustic, by which he was himself cured of a consumption with haemoptysis, and which was nearly three inches in diameter, and held fifty peas; he took also asses'

milk, and a vegetable diet: the milk, he says, should constitute the greater part of the food. A person who had recovered from a consumption, and died of the small pox, was found to have lost the greater part of the right lung. In one instance, the author has seen benefit derived from the smoke of resin, with country air, and he thinks that the vapour of the tar may be of advantage in sea voyages. For haemoptysis in general, he considers nitre, dissolved in water, as the best remedy: which, with bleeding, may be employed as a prophylactic, upon the occurrence of a confusion of sight, which often precedes an attack; giving after it a cathartic, and an ounce and a half of syrup of poppies at night. Emetics are sometimes useful, and always safe. But for a catarrhus cough, the inhaler affords a certain cure in a single day, being used for twenty minutes, or half an hour. For an obstinate husky cough, gum ammoniac with laudanum is wonderfully successful, or half a drachm of anisated balsam of sulfur, on sugar: if these remedies fail, we must proceed, as for consumption, to employ occasional bleeding, a large scapulary issue, and a diet of milk and vegetables.

JEANROY Mém. Soc. R. Méd. 1799. P. 48. On catarrhs degenerating into consumptions, among the English prisoners at Dinan.

In a case of consumption recorded by GRATELOUP, the waters of Bonnes, with bark, had appeared to cause a return of haemoptysis : asses' milk and cauteries on the legs were more successful, with a little corrosive sublimate ; and diaphoretic antimony, tartarized iron, soap, rhubarb, millepedes, and a little aloes, were found to form a useful deobstruent pill. There had been a variety of eruptive complaints, and some symptoms of scrofula.

Dr. SIMMONS's Observations on consumption are concise and generally judicious. He remarks, from Kirkland's essay on childbed fevers, that scythe grinders, from breathing the dust of the sandstone and iron, are affected with a consumption which they denominate the grinders' rot : he thinks that consumption is not strictly analogous to scrofula, nor tubercles to scrofulous glands : he observes that the consumptive are remarkable for having generally sound teeth, which become of a milky white, and more or less transparent, a circumstance pointed out to him by Professor CAMPER : before the chest is materially affected, the breathing is hurried, and the person becomes languid, pale, and thin. In a catarrh, tending to consumption, besides other

GRATELOUP, Journ. Méd. LI. 1779. P. 524.

S. F. SIMMONS's Practical observations on the treatment of consumptions. 8. Lond. 1780.

remedies, the tepid bath has been found very beneficial, and flannel should be worn next the skin, notwithstanding the objections of some practitioners: bark generally exasperates a phthisical cough: oranges and ripe fruit, in the early stages, are preferable to sulfuric acid. Dr. Simmons is more disposed to agree with Fuller, who recommends the balsam of copaiba, than with Dr. Fothergill, and thinks that, in the suppurative stage, this balsam, or that of Peru, may be taken on sugar with advantage. Nitre and camphor are considered as useful in hectic fevers by Dr. Musgrave: myrrh and spermaceti may also be very properly combined: Dr. Saunders thinks myrrh better alone than with bark and steel, especially in hektics depending on ulcers, or succeeding to peritoneal inflammation, and in chronic haemoptysis: but in cases purely consumptive, Dr. Saunders has found it of little use. The practice of bleeding was carried too far by Dover: the author has known a person bled more than fifty times, and the blood last drawn was as sizzly as the first. Setons are very useful: opiates mischievous: ripe fruit and other antiseptics the best remedy for the diarrhoea: a little animal food, plainly dressed, may be allowed, if much desired. A marvellous case is quoted from Mutzel, in which a cure was effected by a diet of bread, cucumbers, and cold water. Riding may

be of use under some circumstances, but in the last stage, a carriage is preferable: and a cure has been effected by it, where the disorder became worse whenever the patient remained a few days at a place. In the last stage, change of climate is useless, and it must be remembered, that the progress of the disease is commonly more rapid in warm climates, its duration in Italy seldom exceeding three or four months. A lady's life was however saved for several years by spending her winters at Toulouse and her summers in Britain: but a winter at home was fatal to her. Emetics are strongly recommended, as likely to disperse the tubercles, especially in the early stages, when there is not great debility: they may be given twice or thrice a week, and sometimes every day: the author prefers the sulfate of copper, on account of its astringency, giving first half a pint of water, and then from two to twenty grains of the sulfate in a cup of water, and afterwards another half pint of water, as recommended by Dr. Brookes. Sea water he thinks injurious in genuine consumption, hastening the inflammation, and increasing the hectic fever: aqueous vapour he finds more beneficial than the vapour of ether or fixed air, and often highly useful at the first attack of the disease. But to crown all his recommendations, he expresses great hopes of success from the

earth bath of Solano, approved by Van Swieten and Fouquet, and found by Dr. Lind, and by many navigators, of signal service in the scurvy.

After the precision with which the consumptive age has been pointed out by Hippocrates and his numberless followers, it is a little remarkable to find it asserted by HOME, and confirmed by other modern authors, that, in some countries at least, more patients die of consumption above than under forty. In the upper ranks there are more female patients than males, probably from the greater variation of dress; in the lower the reverse, from the greater exposure of the men. In the case of one lady, the paroxysm abated, instead of increasing, about eight in the evening. A tickling cough, with a thin expectoration, was relieved by starch: carbonic acid and water allayed the fever, and was a useful tonic: the vapour of frankincense appeared to disagree: sulfuric acid and alum were of little use; and bark was uniformly injurious.

Dr. DUNCAN, in his Cases, has recorded an

F. HOME's Clinical Experiments, histories, and dissections. 8. Edinb. 1780. P. 106 . . .

SCHUELER on the use of Burgundy and Tent wine in marasmus from abscess. Journ. Méd. LIII. 1780. P. 264.

A. DUNCAN's Medical cases. 1781. Ed. 2. 8. 1784. P. 86, 367.

FOURNIER de la Fievre lente ou hectique. Dijon, 1781.

DESLONGEOIS de la Pulmonie. 12. Par. 1781. "Practical." Portal.

instance of chronic catarrh cured by an emetic, followed by squills and an issue: and another of haemoptysis, in which nitre was of advantage.

DR. THOMAS REID has exhibited some ingenuity and originality in his Essay on consumption, but his authority would have had more weight, if he had recorded some more detailed cases. It is difficult to deny the hereditary transmission of actual disease, if we admit, with Dr. Reid, that children are sometimes born with cough and emaciated, and die within the month evidently of confirmed consumption. The white and transparent teeth, mentioned by Simmons, he has not been able to find: he observes that food, taken in the morning remission of hectic, does not bring on an exacerbation, as the ancients asserted: and there is not generally a second exacerbation in the evening. The division of the disease into three stages is not constant nor well marked, but usually the second may be dated from the commencement of the purulent expectoration, and the third from the diarrhoea. Tubercles the author thinks neither scrofulous nor glandular, and imagines that they consist in

T. REID'S Essay on the nature and cure of the phthisis pulmonalis. 8. Lond. 1782. Ed. 2, with an Appendix on the use and effects of frequent vomits. 1785. Fr. By Dumas. 1792. P. 4, 14, 39, 41.

an obstruction of the exhalant vessels, caused by the viscosity of their contents: blood, he says, is not converted into pus by putrefaction, because it is found in large masses unaltered, after hæmoptysis: he describes the form of tubercles from a manuscript of Dr. Stark, and quotes, from Hewson's work on the Lymphatics, the observation, that meat put into an ulcer is soon dissolved by the pus, which it renders more foetid. Musgrave says, that the disease is not dangerous while the sleep continues refreshing; but we must not place too much dependence on this prognostication. Hewson, like other anatomists, has often found pus contained in the pericardium and cavity of the pleura, without any mark of ulceration. The hectic of consumption is certainly not occasioned by any irritation derived from the pus, which is often mild and healthy; it occurs before the appearance of any symptoms which indicate the presence of matter, and long before the expectoration: the author thinks that even if pus entered the absorbents, it would be stopped by their glands, like other offending substances, and he imagines that the great cause of the symptoms is the accumulation of phlogiston, and the retention of the natural exhalation of the lungs. He objects to bleeding often repeated, but thinks it may be occasionally required, on

account of inflammation. The tablets of Mayerne for smoking, composed of frankincense and sulfur, he found to occasion a fit of coughing and expectoration: he agrees with Fothergill in reprobating the use of bark. His general mode of treatment is to bleed in the beginning, and to give gentle saline laxatives, or, if there is any reason to suspect an accumulation of faeces, calomel and rhubarb, which, he thinks, will sometimes bring away hardened scybala, which had resisted the action of milder medicines. After this preparation, in every cough and every consumption, he gives an emetic of ipecacuan morning and evening, in order to cleanse the lungs, as well as the stomach and liver: and he observes that the practice may be continued for several months with perfect safety. Emetics of ipecacuan have also been found of great use in asthma and asthmatic cough, by Akenside and others. Tartar emetic is less certain in its operation than ipecacuan, and is more likely to act on the bowels: the "Roman" or white vitriol is too violent, and perhaps too rapid, in its action: although it has sometimes appeared to agree with a patient who took as much as a scruple for a dose. In the early stages of the disease, nitre or the saline mixture are occasionally beneficial; and before the purulent expectoration has commenced, mer-

curials may be employed with advantage. Where the pain has not been relieved by bleeding, repeated blisters may be applied; they are preferable to a single blister kept open. Sulfuric acid with an opiate may be given for the sweats: and the sickness caused by opium may be relieved by coffee in the morning. The spirit of ether, with syrup of red poppies, makes also a pleasant julep. Where there is great debility, myrrh may be given in lime water; and for simple languor, steel may be added: but in a confirmed hectic, all tonics appear to increase the symptoms. In this climate, the spring is the most fatal season to the consumptive, especially the north easterly winds of March, not the autumn, as formerly in Greece. At the beginning of the disease, Bristol affords a good sheltered situation, on the south of the hill: but the author does not place much dependence on change of climate: sea voyages he thinks beneficial as producing sickness, which often continues daily for months without the least injury to the constitution: in Gilchrist's cases, the patients were generally very sick, and sometimes the good effects subsided with the sickness: in one instance, which occurred to the author, a very violent and inveterate cough was cured by the sickness which the patient experienced during the passage from Dover to Calais, in the way to a warmer climate; al-

though slight emetics had before been taken without much benefit. The climate of Lisbon is of little advantage on account of the cold easterly wind, which generally blows there in the evening, and the badness of the accommodations; and Madeira is liable to objections nearly similar: Dr. Gordon, who resided there, discouraged his friends, from his own experience, from sending out their patients, and considered the South of France, or the mountains in the West Indies, as more eligible. Fumigations have been tried for a long time without benefit. The diet should be chiefly of vegetables, with a few flounders or whittings, and in the advanced periods, a little animal food may be allowed. Milk from the breast seems to deserve a preference: iced cream is not contemptible; oysters, crawfish, and other shell fish appear to be digestible and nutritious: but this opinion must not be admitted without great caution. In extreme cases, the disease may perhaps be slightly contagious, and young persons should not sleep in the same bed with a consumptive patient: but where nurses have appeared to be infected, the disease has perhaps originated from inanition. Emetics, which are so strongly recommended by Dr. Reid, are also said by Dr. Gray to have been highly beneficial in epidemic catarrhs; they have been

REID, P. 285, 296, 288, 350.

EVERS de contagio phthisis. Gott. 1782.

constantly prescribed by Dr. Osborn in uterine haemorrhage, and have been found to act as powerful styptics in haemoptysis, by Clossy and Woodward.

Of the Institutions of BORSIERI, the groundwork is antiquated, and almost obsolete, but the accounts of more modern practice, collected from other authors, are interesting and important. He describes the symptoms of idiopathic hectic, from Galen, but does not recollect to have seen the disease; he considers the specificum stomachicum of Poterius, as undeservedly forgotten, and thinks that his antihectic is not entirely to be despised. Tissot, in his work on the saturnine colic, has recorded some dreadful cases of this colic, produced by the use of the *tinctura antiphthisica*. In treating of cough, he confirms the report of Prosper Alpinus, of the frequent utility of cathartics: he talks of the vapours of emollient plants, and of drawing out the acrid humour by cantharides: some obstinate dry coughs, he says, have been cured by mineral waters, and tepid bathing. Genuine haemoptysis, he thinks, is never free from danger: among other remedies, he recommends ligatures to the limbs; acids, if they do not excite coughing, and

J. B. BURSERII *Institutiones medicinae practicae*. 4 v. 8. Ven. 1782-5. Engl. by Brown, 5 v. 8. Edinb. 1800-3. I. § 313, 322. V. § 12, 29, 32.

gum arabic, and tragacanth, as agglutinants: the powder of gum arabic, taken for some time, succeeded in the case of the professor of physic at Bologna. Bark may be given in the form of Fuller's electuary, with one eighth of balsam of Tolu and of catechu: cold water sometimes succeeds, half a pint being taken every half hour, for a week, first, at the common temperature, then gradually colder and colder, without any "other" food. Borsieri has often tried blistering between the shoulders, as recommended by de Mertens, but without success. Clerc, in his *Histoire de l'homme malade*, professes to have cured more than twenty patients of haemoptysis by the milk of a cow, fed on bran and water, and nettles. Among the causes predisposing to consumption, Borsieri enumerates inordinate study, premature excesses, tall stature, and an atmosphere too damp or too light; respecting contagion, he observes, that the College of Physicians in Tuscany have decided against it, but they have not been able to convince the government of the inutility of precautions. Among the symptoms, he mentions pustules on the metacarpi; and observes that small ulcers in the lungs may easily escape the notice of a negligent dissector: he asserts, that good pus may be so light as to float in pure water: but this circum-

stance, if it has occurred, must have depended on the presence of air bubbles. He has known an ulcer of the lungs remain open for forty years, being probably surrounded by a callus. Besides Desault's recommendation of mercurials and steel, for resolving tubercles, it appears that Lancisi had used calomel in small doses for the same purpose; and Clerc says, that it had been found of great use in Lorraine. Werlhof was himself cured of an ulcer in the lungs by the dulcamara, which seemed to promote suppuration: in Transylvania, the *cistus helianthemum* is employed: the utility of milk is generally allowed, but it sometimes causes diarrhoea, where there is suppuration. In scorbutic or scrofulous phthisis, the balsamic pills of Morton may be of use, but without the sulfur, which is too heating; bark is also highly beneficial in incipient cases of this kind. Emetics the author thinks too debilitating, and they are forbidden by Hippocrates. Balsamic remedies are hazardous: the mildest, however, may be of use, for cleansing the ulcers, as balsam of Tolu, or of turpentine: but camphor is a still better and safer antiseptic: the flesh and soup of vipers are highly beneficial, whatever a few sceptical persons may say. In one instance, where many complicated remedies had failed, the patient recovered by means of a simple milk

diet, and change of air. In syphilitic cases, the decoction of the woods seems to be the most successful. Animal food is in general forbidden, but chicken, fed on farinaceous substances, are allowed to be an exception. In Brunswick, according to Lange, a pottage, made of rye flour and butter, is used with advantage. The best climates in Italy, for the winter, appear to be those of Naples and Pisa. An emulsion of almonds, lean chicken, poppy seeds, rice flour, and milk is recommended as an article of diet, and, according to Clerc, cured a lady, who could not take milk alone; but it cannot be very digestible to a weak stomach.

POUTEAU is a most zealous advocate for the efficacy of fire, which he considers as the true, the great, the heroic remedy in a variety of diseases. In his memoir on consumption, which seems to have been written about the year 1773, he records a case in which the thorax was so much distended with air, that a candle was blown out when it was punctured: he takes up Bonetus's old story of the watercresses in a new form, from the newspapers, an English physician being substituted for the surgeon of Brussels, and himself relates wonderful histories of the efficacy of watercresses in the cure of old sores and con-

BURSERIUS, V. § 91, 94.

POUTEAU *Oeuvres posthumes*. 3. v. 8 Par. 1783. I. 313.

sumptions. A diarrhoea attendant on an empyema was stopped by taking ten grains of ipecacuan daily, which had been given at first with another intention. Where there is a fixed pain, with a very copious expectoration, he thinks the lungs may be saved by the operation for empyema, which is not materially dangerous. He considers the depression of the side of the chest affected, as indicating more danger than its projection. Erysipelatous inflammation sometimes obviously attacks the lungs, though Lieutaud wishes to confine the use of the term erysipelas to the skin: in such cases a blister in the first instance is decidedly the best remedy. Blisters too are recommended for checking the partial sweats of the head and chest, which sometimes occur in pleurisy; when the pain is circumscribed, they may be preceded by cupping, and they must be followed by general bleeding and an emetic; in consumption such sweats are unfavourable symptoms. The author insists much on the propriety of local applications to parts which had been affected by rheumatism or otherwise, before the appearance of consumptive symptoms: and he observes, that the sympathies of such parts are strongly exhibited during the burning of cylinders of cotton, which often produce most severe pain in the arm, when applied

to the thorax. He mentions a practice of Dr. Burton, who gave cantharides, with camphor and bark, as a remedy for severe coughs: he is also disposed to expect much from earth bathing. Fire, he says, has often succeeded where blisters have failed: and he thinks its immediate operation more important than the suppuration which follows, in the same manner as a heat of  $110^{\circ}$  or  $120^{\circ}$  will sometimes cure an old sore: caustics he has found of no use whatever. Milk he seems to have given frequently with some advantage, but says that it often disagrees, especially when the cow is with calf: an immediate change being perceptible in the smell. Cold water was very liberally administered for many weeks to some cancerous patients, without a particle of food, and apparently with advantage: for a pain in the stomach, in a consumptive case, it was employed for a whole month "without the least diminution of strength," but with little improvement: fire however completed what water had begun, and a cylinder of cotton, burnt on the ensiform cartilage, carried off the pain in a few days. Pouteau defends the Hippocratic prescription of a cautery to the head, by the analogy of the falling off of the hair, and by an instance of severe pain of the head, derived from an affection of the lungs only. It appears however that

one case had occurred, in which the application of the cautery to the head had been fatal: in another there was a palsy of the opposite side, though the brain showed no marks of disease on dissection; and in his first publication, the author had not so fully related the whole of these particulars, as candour might have required. The worst consumptions, he says, are free from pain: and the existence of pain is of advantage, as affording an indication for the employment of the cautery.

A singular case of hectic emaciation is related by COLLINGWOOD, in which there was a discharge of about two ounces of chyle daily, principally from four to six hours after a full meal: a tumour had been opened, and it was supposed that the lacteal sac had been wounded in the operation: the termination was fatal.

The compilations of TRNKA deserve some commendation for extent and accuracy of research, but little for discrimination in the selection of materials. He says that adults lose their appetite in Hectic, and become thirsty: but that in young persons the appetite is increased. In mesenteric cases, purgatives have always been found of advantage; in an instance related by

COLLINGWOOD Ed. Med. Comm. IX. 1783-4. P. 344.

WICHELHAUSEN de phthisi pituitosa. 1783.

TRNKA DE KRZOWITZ Historia febris hecticæ, omnis ævi observata continens. 8. Vienn. 1783. § 7, 8.

Gebauer, the recovery commenced from the operation of a very strong cathartic, given by mistake. From his own experience he recommends the agaric, the boletus pini of Linné, as an excellent astringent for hectic sweats. He agrees with Alston and Raulin in praising the antihectic of Poterius, and says that its failure in desperate cases proves nothing against it: Triller had fancied that Alston was partial to tin as a British production; Alston seems however in reality to have thought but lightly of the antihectic. In idiopathic hectic, stomachic tonics are recommended after cathartics, especially quassia and peppermint: the decoction of toasted acorns, mixed with a little cocoa or coffee, is said to be a singularly useful resolvent, and Marx professes to have cured five cases of hectic with it. The saturnine tincture of Grammann seems also to have been beneficial in some instances, notwithstanding its inconveniences: it is made with an ounce and a half of sugar of lead, an ounce of sulfate of iron, a drachm of acetate of potass, and half a pint of distilled vinegar and of spirit of wine, filtered after solution: hence it must probably contain acetate of iron, with some remains of acetate of lead, the sulfate of lead being separated by the filtration. Bark is considered as a powerful antihectic. Warm baths seem to

have been useful in many cases, and vapour baths in one: whey, and motion in an open carriage, are also commended: a frequent change of linen is advised, after Forestus, and Avicenna's proposal for a bed of leather, inflated with air, is considered as worthy of some attention.

In the Transactions of the Royal Medical Society of Copenhagen, DE MEZA has published a case, in which half a drachm of bark, taken every two hours, repeatedly occasioned a return of haemoptysis, nor were any other tonics more successful: he finds bleeding only useful in plethoric constitutions, as a measure of precaution. AASHEIM gives an account of a violent haemoptysis from an accident, cured by small doses of ipecacuan, and quotes Piso, Baglivi, Murray, and others, in favour of the virtues of this excellent medicine, which has also been employed with great advantage in uterine haemorrhages, by Dahlberg and Gulbrand.

The first volume of the Medical communications contains much interesting matter. A case of consumption is related by KEIR, in which the ulceration had spread into the oesophagus, so that nothing could be swallowed, for a week before the patient's death: and an opening was found in the trachea half an inch long. The

DE MEZA. *Acta Regiae Societatis medicae Havniensis* I. 1783.

P. 40. AASHEIM. P. 170.

KEIR. *Med. commun.* I. 1784. P. 157. CHAPMAN. P. 260.

question respecting the utility of bark is discussed by CHAPMAN, who attempts to obtain a criterion of its admissibility, from the deposition of a lateritious urinary sediment, leaving the fluid transparent, while it has appeared to disagree when the fluid has remained turbid. In one case of hectic, accompanied by expectoration streaked with blood, the bark repeatedly relieved and at last cured the patient: in another instance there was an exacerbation every other day: but the author appears to have practised in aguish countries. He also found benefit from milk diet and riding. Dr. STARK's posthumous observations on consumption are published and highly commended by Dr. CARMICHAEL SMYTH, as wholly original, and derived from cases which occurred in St. George's Hospital, though some of them exhibit slight traces of being copied from Morgagni, as the author would perhaps have acknowledged, if he had completed and published the work. His description of tubercles is somewhat more minute and accurate than that of Wepfer; he observes that they are found in the cellular membrane, and are of all dimensions, but generally less than a horse bean, without any vesicles surrounding them, or any vessels that are visible even after injection; some of them have cavities, which remain closed till

they become about half an inch in diameter ; they have then minute orifices, and begin to constitute vomicae : some of the orifices occasionally extend to the pleura, especially at the upper and posterior parts, where the tubercles are generally more abundant : but the communication with the cavity of the chest is prevented by adhesions : into the larger vomicae bloodvessels pass, the ends sometimes hanging loose, but being closed by coagula : the neighbouring parts of the lungs are inflamed and hardened ; but after injection, the parts which had previously been softest are rendered hardest, from being more vascular : the wax rarely enters any of the vomicae, and never either the smallest or the largest. The left side of the chest is more commonly diseased than the right : the "lymphatic" glands are frequently blackish, and sometimes contain a substance like moistened chalk. In some cases, the vomicae were found nearly empty, when there had been but little expectoration for some time. The substance expectorated seems always to be of a mixed nature, affording in a few days a deposit of purulent matter, from water through which it has been diffused, but leaving the water ropy. The breathing, even in the early stages, is generally two or three times more frequent than in health. The age of the patient is commonly between 17 and 35, and the duration of

the disease is nearly proportional to the age. The febrile symptoms sometimes subside towards the close, so that the frequency of the pulse is only 60 in a minute. Where there is haemoptysis, the approach of a fit is generally known by an increased expectoration, and a sensation of warm blood rising from the chest. The operation of medicines in all pulmonary complaints is very uncertain: vinegar of squills seems to relieve the cough and dyspnoea, and oily medicines, or spermaceti, almost certainly procure a temporary palliation: but bleeding is the great and most appropriate remedy, and seldom fails to relieve, either immediately, or in a day or two, except in the last stage. Dr. Smyth has perhaps attributed too much knowledge of the nature of tubercles to Hippocrates and Galen, and too little to later observers, although he acknowledges the merits of Sylvius and of Hofmann: he confirms, by a comparison of recorded cases, the assertion of Stark, that the left side is more frequently affected than the right: he objects to Cullen's character of consumption, as including purulent expectoration, which is not always present, as Willis, Bonetus, and Huxham have shown; he thinks also that a similar variety of the disease is intended by Hippocrates, in a passage of the Coan prognostics, which has been variously understood.

In the London Medical Journal for 1784, Dr. PERCIVAL has observed, that in cases where there is a great sympathy between the lungs and the stomach, a glass of cold water, or of wine, will sometimes check a purulent expectoration. In the Medical observations and inquiries, HALL relates a case of some symptoms of consumption, produced by an aneurysm of the aorta, which at last burst into the trachea: and Dr. W. HUNTER, some instances of emaciation, belonging rather to atrophy, than to hectic fever.

It has been cursorily observed by HOULSTON, in a work on Poisons, that the combination of tartar emetic and white vitriol affords a mild and safe compound, probably from the mutual decomposition of the salts, although he was disposed, in the first instance, to expect that its operation would have been violent.

The treatise of RAULIN is full of accounts of great cures, and of implicit faith in the doctrines of Hippocrates: of his reasoning powers we may judge, by his theory of the mechanism of respiration, which he attributes to the expansion of the portion of air inhaled, by the effect of heat, in consequence of which it is again expelled by the denser air rushing in: but it seems that many

PERCIVAL, Lond. Med. Journ. IV. 1784. P. 56.

HALL, Med. Obs. Inq. VI. 1784. P. 23.

HOULSTON on Poisons, 3. Lond. 1784.

RAULIN Traité de la phthisie pulmonaire, 8. Par. 1784. P. 7.

people succeed in physic, who could not have made a pair of bellows. Raulin observes, that the too great indulgencies of all kinds, to which young persons of rich families are accustomed from their infancy, are to be considered as the causes of their weak health, and in particular of consumptions; and that a province, which had been the residence of a very dissipated court, long retained the marks of its gallantries, in the frequency of consumption. He adopts the opinion of Harvey, respecting the transmission of pus from the cavity of the pleura through the lungs, in their entire state: he is very positive respecting the communication of consumption by contagion, and among a thousand examples, knew a very strong man, who was infected by playing piquet very frequently with a consumptive lady. He says, that the disease is common in marshy countries, for instance, in Holland. He thinks the Hippocratic test of pus sufficient, provided that the examination be made in the morning, when it is least mixed with mucus, and says, that though all sputa are offensive when burnt, the worst may still be the most offensive: he relates several cases of metastasis, either real or apparent, the expectoration alternating with another discharge: and a remarkable termination of the case of a lady, who died twenty one days after her con-

finement, having dried up the milk ; the lungs were found overflowing with a fluid, which had precisely the appearance of milk, but otherwise sound. An ulcer in the larynx alone has sometimes been fatal. The author agrees with Hippocrates in thinking the autumn the most unfavourable season to the consumptive, as much so as to the leaves of trees. He imagines that chyle, unanimalised, may be secreted by the lungs, and mistaken for a purulent expectoration, or may stagnate and form tubercles. Ipecacuan is said to possess a power of suppressing leucorrhoea, which may sometimes be pernicious, and lay the foundation of consumption, or of other diseases ; but a grain every morning is very useful in catarrh. A cough appears, in one instance, to have been completely suspended by a hasty journey. Bleeding is very useful in the first stage of the disease, but not afterwards ; and what is singular, meat is allowed only at the same period : coffee and chocolate are also forbidden : and against the accumulated experience of thousands of years, the author sets his own, of half a century, with the addition of some wretched arguments, to show that milk is pernicious, though whey is less objectionable, milk being supposed to pass unaltered into the lungs. In the West Indies, when the negros are threatened with consumption, they

are sent to the boiling houses, and are there enveloped in thick clouds of vapour; and by these means they are generally cured in two months. Chalybeate waters are sometimes useful in the first stage of the disease: the benefit depends on the general action of the remedy, derived from its effects on the intestinal canal, for iron does not enter the circulation, as Whytt found by experiments on the chyle of a dog, who had taken a large dose of the sulfate: those waters, which are slightly purgative, are found to be the most beneficial: Spa water is too strong, containing three or four grains of iron in a pound. The author speculates on the effects of bark, from Hales's experiments on the effusion of a decoction of bark through the intestinal exhalants, which show that it is a powerful astringent; hence he infers that it must be mischievous, by retaining the corrupted matter of transpiration: and he reasons very justly on the probable effects of astringents in increasing haemorrhage. Gums are preferred to emulsions, in the second and third stages: cascarilla is recommended in powder, or in decoction, as an excellent remedy for the diarrhoea and the hectic sweats: the waters of Cauterets and Bonnes are considered as a sort of specific for convalescents. Syrup of Tolu is

RAULIN, P. 207, 270, 348, 299, 314, 318, 320, 376.

MARX Kräfte der eicheln. Hanov. 1784.

given by spoonfuls, with ptisan; and a bolus of myrrh, camphor and a little opium, every night: opium is sometimes of manifest utility in violent haemorrhages: nitre, with slight purgatives and chalybeates, is recommended in the first stage of tubercular consumption; and where the constitution is affected by cutaneous eruptions, madder may become a proper remedy, being indispensable in some such diseases.

GRATELOUP relates, in the *Journal de Médecine*, a case of a fatal abscess in the liver, in which the lungs were considerably affected, although there was no cough, until a very late period: and CHEVILLARD another of a confirmed consumption, cured by a diet of farinaceous vegetables, and woman's milk, with occasional doses of manna, and a blister to the nape of the neck. ARCHIER professes to have been equally successful with snail broth, and spirit of ether, substituting asses' milk for the broth, after six weeks, and then allowing eggs with a little fish and poultry. In an atrophy, with a scirrhus pylorus, TARANGET found all the viscera shrunk, and the heart scarcely to be distinguished.

In the year 1785, the attention of the medical profession and of the unmedical public was strongly excited, by different publications on the subject of the digitalis, a medicine of un-

deniable efficacy, and, in many cases, of considerable utility. Dr. WITHERING was induced to employ this remedy in 1775, by finding it recommended in an old family receipt for dropsy; and a Mr. Saunders of Stourbridge had extolled it as a certain cure for consumptions, in a manuscript note on Parkinson's herbal. Dr. Withering found it of advantage, in several cases of hydrothorax attending consumption, and his correspondent Vaux considers its operation as connected with its emetic powers. Consumption, the author says, is an increasing malady, and "is certainly infectious." A disease resembling it, in young females, is curable by steel and bitters. The state of the teeth by no means affords a certain criterion of a consumptive constitution: an unusual dilatation of the pupil of the eye is a much surer mark. A simple vomica is generally curable, and it is much benefited by fixed air: probably the case related by Dr. Withering in Percival's essays was of this kind: for in genuine consumption he has scarcely ever been able to obtain a cure: he suspects, from Sydenham's account, as well as from the testimony of the benefit derived from digitalis, that the disease may formerly have been more curable than at present. In one case of consumption, with hy-

drothorax, a temporary relief was obtained from the operation of paracentesis; a coagulable fluid was discharged, and the wound healed: but the patient died a few weeks afterwards. Dr. DARWIN observes, in the third volume of the Medical transactions, that digitalis is peculiarly active in hydrothorax, and that since ulcers require absorption in order to be healed, it may naturally be beneficial in pulmonary suppuration: he relates a case of a person about 20, with dark hair, who appeared to be cured by the decoction in two months: but in two cases of persons with light hair, in a more advanced stage, the remedy failed. The decoction was given with advantage in cases of scrofulous ulcers; or from five to ten grains of the leaves, twice a day; while either pitch, or a mixture of bark and white lead was applied to the ulcers. Sir GEORGE BAKER, in an appendix to Darwin's paper, expresses a suspicion that the beneficial effects of digitalis may depend on the sickness which it excites, a physician of great experience having found sea voyages most useful when they occasioned sickness.

Sir GILBERT BLANE, in his judicious essay on the Diseases of seamen, informs us that con-

E. DARWIN Med. trans. III. 1785. P. 255. BAKER. P. 287.

G. BLANE's Observations on the diseases of seamen. 8. Lond. 1785. P. 91, 39.

sumption, though less common in the West Indies than in colder climates, is in most instances more rapidly fatal. Asthma, as well as difficulty of breathing in general, is frequently much relieved by a removal to a tropical climate: but where ulceration has once taken place, the progress of the disease seems to be accelerated. The best climate for the consumptive appears to be between 30 and 40 degrees of latitude. The author records a remarkable fact respecting the effect of a hurricane at Barbadoes, in 1780, either on the air, or on the nerves of the sufferers, some of whom were cured by it of incipient consumptions and of pleurisies, and others were decidedly relieved, and freed, for a time, from the hectic symptoms, where the disease was more advanced. A lady, who had a pleurisy, was long exposed to the air, and immersed in water, and the next day was free from her complaint.

So persuaded is EMALE of the danger of contagion in consumption, that he strongly objects to the use of milk from the breast, as recommended by Chevillard and others, on account of the hazard which the nurse must incur; and he adduces some facts, which, he considers as establishing his opinion. In a case related by LAPEYRE, the sulfuric acid, mixed with the common drinks, ap-

peared to be highly beneficial; afterwards milk was given with lime water: a second case, in which milk disagreed, was rapidly fatal.

The compendium of VOGEL is an elaborate and useful compilation, and although the author is somewhat credulous, he exhibits more knowledge and discrimination than the generality of systematic writers. He considers hectic as no otherwise distinguished from slow fever; than by the greater severity of the symptoms: the cold fit is sometimes wholly confined to the extremities, and the tip of the nose. Coffee, chocolate, broth, or beer, will often cause flushes, and increase the frequency of the pulse; but especially eating, notwithstanding Cullen's doubts of this fact. The coloured pellicle, which is frequently observed on the urine, is not particularly unfavourable, occurring also in other cases, especially, as the author might have added, in dyspepsia. In the last stage, there is generally some confusion of intellect, especially during the exacerbation; and in almost all hectics the lungs are sooner or later affected. Vogel imagines that acid acrimony in general occasions spasm, and alkaline fever; perhaps from the frequent advantage derived from ammoniacal and acid remedies respectively. Hectic is sometimes occasioned

by the improper use of corrosive sublimate, as happened in some cases related by Fournier. Vogel is perfectly convinced of the contagiousness of consumption, notwithstanding the objections of Cocchi, and the argument of Castellani, that no ulcer is contagious, which indeed is not universally correct; and he quotes a variety of opinions on the opposite side, especially those of Sarccone, Colombier, and Fritze: the latter, he says, adduces some strong instances of its communication by contagion, as well as Wichmann. He seems to think that study predisposes to hectic affections, and laments "that the health of the body is so much at variance with the culture of the mind; that the one sinks and decays, as the other raises itself, and enlarges the sphere of its knowledge: that faces like triangles, and limbs like oaten straws, and hearts of butter, and stomachs as weak as blotting paper, and flaccid, and feeble, and marrowless little bodies are commonly associated with the greatest and the most brilliant talents:" in fact, however, the most laborious writers are not the most learned men, and a few hours well spent, with an occasional variety of objects, will often effect more than many days of drudgery. For the diet in hectic fever, he gives the usual directions, and mentions, after Sims, the benefit sometimes derived from oysters; and parti-

cularly recommends the oxalic and other vegetable acids, with gum arabic : in hectic after other fevers, the bitter extracts, as taraxacum and horehound, with cold infusion of bark, and rhubarb : and issues where there are suppurations. Bark must be avoided when there is a tendency to inflammation, obstruction, or bilious derangement, even venesection not rendering it safe in such cases ; on the contrary, when there is much debility and an abundant mucous discharge, it may be of great use : sometimes however the bark agrees or disagrees, when just the contrary would be expected. The cold infusion may be first tried, with acids or nitre, or made with whey instead of water, and it should be given in the remissions of the fever : where it agrees, the lichen and the polygala may be combined with it. The objections to the use of opium seem to be vanishing. Fournier remarks, that when given before the evening paroxysm, it always diminishes its intensity : and a single large dose is often more effectual than many smaller ones. For the aphthae which sometimes occur, the best remedy is borax with honey of roses.

In the London medical journal for 1786, Mr. HOLMAN has described a case of cough and hæmoptysis, with hectic diarrhoea, occasioned by a bone three quarters of an inch long, and appa-

rently carious, which had lodged in the throat fifteen years before, and had been forced down with a probang. It was coughed up after the discharge of a pint of blood, and the symptoms were immediately relieved: they had before been frequently palliated by bleeding. Dr. HAMILTON of Ipswich has related, in the Medical commentaries for the same year, a case of hectic from nostalgia, beginning with weakness, ringing of the ears, giddiness, and a slow and small pulse; these symptoms were followed by great emaciation and debility, crooked nails, quick pulse, and night sweats, so that after three months the patient seemed to be in the last stage of a consumption: he was a soldier, and a native of Wales, and was always talking of his home: a promise of a furlough produced so much amendment, that in two months he was well enough to profit by it, and finally recovered. In the *Journal de médecine* we find a case of consumption, in which SCHNEIDER obtained great and rapid benefit from the use of the willow bark: and DUSSAUSOI gives a favourable report of the efficacy of hemlock, in a consumption, arising from an ill conditioned sore, which occurred after the opening of a ganglion.

R. HAMILTON. Dunc. med. comm. XI. P. 343.

SCHNEIDER. Journ. méd. LXVII. 1786. P. 358. DUSSAUSOI, LXIX. P. 22.

The *Animadversions* of QUARIN contain a variety of judicious practical observations, although unfortunately they are chiefly of a negative description. He says that the expectoration is sometimes very fetid, and sinks in water, without any disease beyond simple catarrh, referring to Rosen's dissertation, published by Haller; and that in such cases bark and the lichen are of advantage. He believes that a certain quantity of chalybeate medicines may enter the circulation, observing that Haller found three times as much iron in the blood, when such medicines were taken, as at other times; but it must be remembered, that even in the present state of chemistry, the quantity of iron existing in the blood has been but very imperfectly ascertained. Quarin has given half a grain of chermes mineral in haemorrhage with advantage, though he seems to think the practice hazardous. Among the causes of consumption in the army, he enumerates, after Baldinger, the severity of military punishments. Mineral acids, with opiates or demulcents, he found rather injurious than serviceable: Borelli had recommended pumpkins for food, Schulz reports that two ounces of the juice of cucumbers, taken twice a day, have cured a consumption. Fixed air, the author says, does more harm than good: and oils or

ointments taken into the stomach are injurious. The polygala amara or the senega is a good expectorant, where the mucus is too viscid, but does not cure the disease: the lichen he has found ineffectual, but not injurious, as Cullen thinks it: its pectoral virtues, he says, were announced by Borrichius in 1674: but Borrichius, in the *Acta Hafniensia* for 1673, only mentions it as gently cathartic in spring, and nutritious in summer. Bark Quarin considers as the principal remedy for consumption, and he thinks himself justified in the opinion, notwithstanding the objections of Lewis and others, by the results of his practice for thirty years. The decoction, he says, generally agrees better than the substance, at least in the beginning; but the cold infusion is very weak: where the bark agrees, we may venture to give as much as half an ounce daily. Emetics he thinks are unsafe, and sometimes highly dangerous; agaric causes oppression without relieving the sweats, which are more effectually checked by bark and sulfuric acid. For the diarrhoea, an enema with gum and opium is preferable to turpentine and theriac. Woman's milk is peculiarly beneficial, especially when bark is given to the woman; goats' milk varies considerably, according to the food of the animal, as the ancients had observed. The de-

coction of acorns has been given in many cases without the least benefit. Where there is much debility, Spa water with milk seems preferable to Seltzer. According to Paschetti, the air of Genoa is unfavourable to the consumptive, the disease being very frequent there; the atmosphere of a cowhouse almost suffocated a person whose case is related by Murray, although there was only one cow; the sulfureous vapours of Baaden, exhaling from the bath, seem to have relieved some patients who were sent there from Vienna. The celebrated Störck died consumptive, though he was in the constant habit of riding, and the exercise appeared to have brought on a hæmoptysis. The digitalis was recommended by Van Helmont as a specific for scrofula: Quarin has found the extract very useful in this disease, and the juice, alone, or mixed with butter, materially improved the quality of the suppuration.

A modification of passive motion was proposed, as a cure for consumption, by Dr. CARMICHAEL SMYTH, in the form of swinging. He made a number of experiments on its effects at the Middlesex Hospital, and found that it generally reduced the frequency of the pulse about ten

QUARIN, P. 102, 103.

J. CARMICHAEL SMYTH's account of the effects of swinging in pulmonary consumption and hectic fever. 8. Lond. 1787.

DUNCAN's Med. comm. XII. 1788. P. 143.

strokes in a second, suspended the cough, and facilitated the expectoration. Several of the cases, which he has recorded, terminated favourably : but it is remarkable, that in almost all of them, caustics were at the same time applied to the chest, which were, in all probability, the most effectual of the means employed. Notwithstanding the advantage derived from sailing, Dr. Smyth thinks the immediate effect of the sea air prejudicial to the hectic and consumptive ; and the same remark has been made by Dr. Knox at Scarborough, and Sir Lucas Pepys at Brighton. Montpelier the author declares, from his own knowledge, to be a very improper place for the residence of the consumptive, not only from its vicinity to the sea, but on account of the north, and north easterly winds, which descend on it from the neighbouring mountains. Madeira too, he says, is certainly very unfavourable, when the lungs are materially injured, notwithstanding the mildness and equability of its climate. A young lady found great inconvenience from the air at Margate, until she was directed to sail for some hours every morning, when the weather allowed it ; and she derived surprising benefit from the motion, without ever being sick : nor was sickness produced in many other cases when sailing has been of advantage, while persons, who have been sick, have often found little or no benefit from it : the swing

too does not lower the pulse, where it produces faintness and giddiness; and these inconveniences may sometimes be avoided, by using it after a full meal only. Motion without exercise seems to act immediately as a sedative, not only on the heart, but on the intestinal and nervous system in general, producing costiveness, as well as sleep. The author has often found the extract of hyoscyamus of great use in cough with haemoptysis, as well as in other cases of haemorrhage. Dr. DUNCAN, in his abstract of this essay, reports the unsuccessful result of the experiments, which he had made on the effects of swinging at Edinburgh; it generally produced intolerable giddiness, and was of no use, where it was unattended by this inconvenience.

Dr. MOSELEY, in his essay on Tropical diseases, as well as elsewhere, has exhibited considerable originality of character and of practice. He enters at large into the subject of consumption, but appears to direct his attention principally to the disease as occurring in England, the climate of which, on the whole, he says, is the best in the globe, as the race of people and the breed of animals demonstrate, and it affords change enough for an invalid; Penzance, in

B. MOSELEY's Treatise on tropical diseases, 1787. Ed. 4. 8.  
Lond. 1804. P. 74.

BOGUIS Journ. med. LXXIII. 1787. P. 39. On an incipient consumption cured by an abundant gonorrhoea.

particular, being one of the mildest situations ; early in the disease, a voyage to Madeira may be of advantage, small islands being the most equably temperate : but even between the tropics a change of climate is desirable, according to the well known observation of Celsus : in these countries, consumption frequently occurs as a secondary disease, though rarely as a primary one. The author attributes the benefit of sea voyages to the air, the motion and the consequent sickness producing only a transitory benefit, and afterwards becoming mischievous. Montpellier often agrees with a patient at first, but the complaint frequently becomes stationary in a short time, and requires a temporary removal to Avignon, Aix, or Marseilles, and then a return to Montpellier : the journey should be taken on horseback, although Aëtius and Oribasius think horse exercise bad for the chest. Dr. Moseley says, that a freedman of the younger Pliny was cured of a consumption, by travelling in Egypt ; but in fact, from Pliny's wish to send him for air and milk, to Forum Julium, the relief seems to have been but temporary : the disease originated in hæmoptysis, brought on by reading aloud. Notwithstanding the author's objection to sea sickness, he strongly recommends, for pulmonary oppressions and hæmoptysis, the vitriolic solution,

made with three drachms of sulfate of zinc, and one of alum, to a pint of water, taken fasting by spoonfuls, each containing about six grains of the sulfate: it produces vomiting almost instantaneously, and never violently, leaving the stomach invigorated; the medicine is more efficacious in this form, than in that of pills: in nauseating doses, it lessens the force of the heart, but does not weaken like bleeding. It should be followed by a sea voyage, as is shown by the example of a person who had often bled nearly to death, and was cured by sailing.

“SALVADORI published, in 1787, a plan for the treatment of Consumption, which he professed to have combined from the works of Hippocrates, Bennet, and Sydenham. Discarding medicine, and all exactness of regimen, Salvadori directs his patient in the morning to climb, as quickly as he can, up some eminence, till he is out of breath, and bathed in sweat, and then to place himself near a large fire, to increase the perspiration. He is afterwards to change his linen, and gradually withdrawing from the fire, to partake freely of salted meat and wine. He was opposed by several of his countrymen, among whom were Canella, Fontana, and Ribbia.”

SALVADORI del morbo tifico. 2 v. 8. Trent, 1787. Beddoes  
Ess. on Cons. P. 27.

MASCAGNI, in his splendid work on the absorbent vessels, confirms the assertion of Hewson, that the bronchial bodies are conglobate glands; and he thinks that the black particles found in them have been brought by the lymphatics, and arrested, in order to be prepared for assimilation with the blood: he has not, however, been able to discover any superficial absorbent glands, as described by Portal in the *Memoirs of the Academy*. He imagines that the general indication, in consumption, is to remove the obstruction, and that medicines, exhibited in the form of vapour, must have the most direct tendency to produce this effect.

A mode of treatment, somewhat resembling Salvadori's, was adopted in 1788, by Dr. MAY; who has related a well marked case of consumption, in a scrofulous constitution, at the age of 18, in which the pus was examined by the tests of Brugman and Darwin: the patient took laudanum night and morning, an emetic of ipecacuan, and then bark, and the emetic was repeated when the stomach was found loaded, the bark having been accumulated and mixed with a viscid fluid: the diet consisted of soup, meat, wine, porter, brandy and water, eggs, and oys-

P. MASCAGNI *vasorum lymphaticorum historia*. f. Sienn. 1787.

P. 112. Note.

MAY, *Lond. med. journ.* IX. 1788. P. 268.

ters, with proper condiments. Swinging was employed twice a day, and horse exercise completed the cure. Dr. Kentish, in his inaugural dissertation, printed at Edinburgh, in 1784, mentions the case of a Mr. Beckwith, which was successfully treated in a similar manner.

Dr. STARK'S Works, published in a separate volume by his friend Dr. Smyth, exhibit some very interesting experiments and observations of a nature altogether new: those which relate to diet tend very strongly to prove, that a mixture of different foods is not only best, but almost necessary to life. He relates a case of diseased lungs, in which sudden death took place, from the bursting of an aneurysm of the pulmonary artery.

An interesting dissertation on the properties of pus was one of earliest productions of SIR EVERARD HOME. This substance, he observes, is to be considered as formed by a secretion, which is uniformly preceded by inflammation. In inflammation, the local temperature is often raised, but never exceeds that of the internal parts of the body, which, in the human subject, is supposed to be about  $100^{\circ}$ ; being  $98\frac{1}{2}^{\circ}$  in the rectum. Pus is a whitish fluid, composed of globules, contained in a transparent liquid: it does not

STARK'S works, by J. C. Smyth. 4. Lond. 1788. P. 31.

E. HOME on the properties of pus. 4. Lond. 1788.

coagulate by heat, and alcohol only condenses it: it readily separates from the surface of an ulcer, while the coagulable lymph, which is often thrown out, when the healthy process is impaired, from slight disturbances in the constitution, is more disposed to adhere to the surface. In indolent ulcers, flaky particles are mixed with the globules: and some abscesses, which appear to have been formed without inflammation, are wholly filled with such flaky matter. In irritable sores, the discharge is sometimes thinner than usual, and contains fewer globules. Pure pus, remaining in an abscess, checks putrefaction in substances immersed in it, but when mixed with blood, seems to accelerate their destruction. Mr. Hunter appears to have been the first that noticed the globules in pus: Dr. Brugman has observed, in his thesis, published in 1787, that solutions of the neutral salts render pus somewhat thicker: Mr. Hunter had before ascertained, that a saturated solution of sal ammoniac, applied on the point of a toothpick to a drop of pus, made it viscid and ropy, but had no effect on a drop of blood. The globules of pus are larger than those of chyle, and pus does not coagulate, like chyle, by exposure to the air. Milk is said to be composed of globules nearly of the same size as those of pus: this is however a mistake, for the globules, floating in milk, are much smaller, and less uniform in their dimen-

sions, than those of pus. A small blister having been applied to the skin, a serous discharge was observed in 8 hours; in 10, the fluid contained a few small globules; in 14, it seemed to be thickened by sal ammoniac; in 20, the pus was perfectly formed. A bougie, introduced into a healthy urethra, caused a secretion of pus in 5 hours: but in the wounds of muscles, 48 hours are generally required for the commencement of suppuration. Pressure seems to prevent the formation of true pus: but it may be collected on thin pieces of talc, applied to an ulcer, by means of a plaster of cerate: after 5 minutes, a fluid is found free from globules: but the globules soon after appear, even while the fluid is under the microscope, provided that it do not evaporate too rapidly: in one portion, which had been secreted in 2 minutes, the globules appeared under the microscope in 5 more; and in other instances, they became more distinct, and more opaque, while they were examined: hence the author concludes, that they are secreted in a liquid form, and only assume the character of globules, after the expiration of a certain time: and this time appears to be somewhat shortened by exposure to the air. There can, however, be little doubt, from the perfect uniformity of their magnitude, that their formation must be dependent on some more determinate cause, than this spontaneous kind of coagulation.

Dr. GRIEVE professes to have administered the koumiss, a vinous liquor made from mares' milk, with some success, in an incipient phthisis, and in an abscess accompanied by some degree of hectic fever. Another liquor, called airen, is made from cows' milk, but it is only one third as strong as the koumiss, and much time and agitation are required for obtaining it.

In the *Journal de médecine* for 1788, there are some good cases of the utility of a decoction, or the powder of polygala, by BAUME: he observes, that it is peculiarly useful in pituitary affections of the bronchial glands, where the lymphatic glands appear not to be affected; but he thinks it objectionable, where there is any kind of scirrhus. DE L'HUMEAU relates a case of scorbutic consumption, cured by "watercresses and" lemonade; and MARCQ, a second, by watercresses, with bread and milk diet, besides a few gentle purgatives: PASCAL describes the cyst of a vomica, expectorated during the operation of an emetic of ipecacuan; the apparent cyst was soluble in boiling water: the patient afterwards recovered: DE L'HUMEAU gives

GRIEVE on koumiss. Ed. tr. I. 1788. Dunc. med. comm. XIV. 1789. P. 126.

BAUME *Journ. méd.* LXXIV. P. 63. DE L'HUMEAU, LXXV. P. 20. MARCQ. P. 24. LAPEYRE's two fatal cases. P. 26. PASCAL. P. 29. DE L'HUMEAU. P. 33. ST. FRESNE, LXXVI. P. 53.

an account of a consumption occasioned by the accumulation of milk, after too early weaning; it was cured by cathartics and cauteries, with chermes mineral: ST. FRESNE ascribes great efficacy to the polygala Virginica, with oxymel of squills, in suppuration after peripneumony: the expectoration being at first much promoted, then diminished, and at last subsiding altogether.

The adherence of some of the Germans to the Hippocratic maxim of maturation before evacuation is exemplified in the *Medicina clinica* of SELLE, who informs us that a hectic from impurities in the first passages is not to be cured by cathartics, which would weaken the patient too much, but the offending substances are to be first rendered moveable, especially by the acetate of potass, and then evacuated: afterwards bark may be given. He considers consumption as contagious: riding as only useful when the disease arises from visceral obstructions: external ulcerations, he fancies, may draw off the pus directly through the cellular membrane: and when the pus can escape freely, bark may be employed for correcting its acrimony; but not otherwise. Tracheal phthisis, he observes, is the least curable of any, but bark and mercurials seem to palliate it: anxious respiration and obstinate hoarse-

ness are its characteristics. In the pituitous phthisis, fixed air, bark, and myrrh have been employed with advantage.

Dr. CRICHTON has given some account of the lichen Islandicus in the London medical journal for 1789 ; he says that it did not fulfil his expectation in the cases which he saw at Vienna : that it is often of use in mucous consumption, and sometimes in consumption with haemoptysis, and without inflammation, especially after measles, but not in the tubercular kind, most common in this country. It strengthens the digestion, and improves the expectoration : it diminishes irritability and moderates the hectic : and it is said to be of great use in chronic dysentery. It may be boiled in milk, or in water, over a slow fire, for a quarter of an hour only.

DUPAU has related a case of rheumatism translated to the chest, with bloody expectoration, which was relieved by laxatives and opiates : SOUVILLE thinks setons better than cauteries : and DUBUEIX has recorded a remarkable instance of a decided consumption with diarrhoea, which was cured by a long perseverance in the use of Ailhaud's powder, an active quack medicine, consisting of resinous cathartics, disguised

CRICHTON Lond. med. journ. X. 1789. P. 229.

DUPAU Journ. med. LXXX. 1789. P. 347. SOUVILLE  
LXXXI. P. 27. DUBUEIX. P. 211.

by soot, which the patient took once a week or a fortnight for a year or more.

In the Lectures of STOLL, we find a variety of opinions respecting consumption, by no means universally adopted. In hectic emaciation, he affirms that the strength of the muscles is little if at all diminished, and that the loss of substance is confined in great measure to the fat interspersed between them, and between their fibres. He thinks a vomica excites more hectic, while it remains closed, than after it is open. Among the causes of consumption, he enumerates haemoptysis treated by cold, astringents, and opium, and intermittents suppressed by bark or arsenic, the proper evacuations having been omitted, or solvents not having been premised: he attributes the consumptions of nurses rather to weaning too early, than to suckling too long, observing that a woman, who is strong enough to produce a child, must be strong enough to nurse it after birth: and says that a child should not be weaned, till dentition is completed, if the mother has sufficient strength to support it. The decline attending rickets appears to have been noticed by Salus Diversus, under the name of *tabes pectora*. Where hectic is the consequence

M. STOLL *Praelectiones in diversos morbos chronicos*, ab Eyerel. 2 v. 8. Vienn. 1789. II. P. 111. 123.

of too copious suppuration, bark is useful, and the root of arnica sometimes succeeds when bark has failed. For the cure of consumption there is no specific, and can be none: and though scrofula in other forms may be cured, a scrofulous affection of the lungs is almost inevitably fatal. A variety of directions are however given, according to the prevalent doctrines of the school and the age; 1, among nutrients, broth may be given, but not calves' feet jelly: in purulent consumption meat may be too heating; 2, as a tonic, bark does not succeed well in internal suppuration; a drachm of the root of arnica every two hours may be substituted when the bark disagrees, or a decoction of the *salix alba*, in milk: journies are advisable, and aromatic vapours, as the air of fir woods: but in purulent consumption riding is injurious, as well as elixir of vitriol, and, 3, detergents and balsamics, which are only useful for carrying off some acrimony by diuresis: 4, as resolvents, Seltzer water and antimony may be used: 5, antiphlogistics are absolutely necessary where there is hæmoptysis, with symptoms of inflammation; and, 6, evacuants are frequently of use, especially emetics, which are particularly proper when there are visceral obstructions, though in some other cases they may be hazardous.

The oil of asphaltum and rye broth are the

favourite remedies of BANG: he gave about eight drops of the oil morning and evening in rye broth, and relates several cases of its success, especially after peripneumony or hæmoptysis. It failed in a case attended by dropsical symptoms, with a large expectoration of reddish or whitish lateritious matter, which adhered to the bottom of the vessel: but here the "sweet" spirit of salt and vinegar of squills were more successful. In two instances consumptive symptoms were relieved by the appearance of an eruption, with more or less of suppuration, which, he says, is not surprising, considering the great benefit often derived from issues. He has also published a favourable account of the oil of asphaltum, in one of the volumes of the transactions of the medical society of Copenhagen.

Dr. RUSH has opened a career of original speculation and bold practice in many branches of medicine, although by no means with uniform success in all. In his first paper on the subject of consumption, he affirms, that the disease is unknown among the Indians of North America, and very uncommon among the colonists in the

L. BANG *Selecta diarii Nosocomii Regii*. 1782-7. 2 v. 8. Copenh. 1789. I. 7, 101, 166, 189. II. 73, 74. 388. Act. Soc. Med. Harn. II. P. 292.

B. RUSH'S *Medical inquiries and observations*. I. 8. Phil. 1789. P. 158.

first stage of civilisation. He examines the principal remedies which have been recommended, and thinks that they may all be reduced to exercises, or to remedies which enable the patient to take exercise. The hardships of a military life, he says, have effected cures in a multitude of cases of confirmed consumption; and a riding postman has been relieved, more than once, by the pursuit of his occupation. If riding is less beneficial in England than Sydenham represents it to have been in his time, it is because the constitutions of the English are debilitated. Medicines alone can do but little: tonics, however, may be of some service, as cooperating in the effects of exercise.

Dr. WALKER of Leeds has published, in the *Memoirs of the Medical Society*, some interesting remarks on the atrophy of nurses, of which he has seen two hundred cases in two years. He imagines that it has often arisen from the excessive use of tea in the place of food: the symptoms nearly resemble those of ordinary tubercular consumption. He recommends immediate weaning, better diet, and early meals, with gentle tonics, nitre, occasional laxatives, and change of air: bleeding is inadmissible, unless there is a fixed pain, and is then only to

be employed sparingly : the food should consist principally, but not exclusively, of milk and vegetables : mucilaginous mixtures are better than oily emulsions : blisters should be repeated from time to time, and myrrh may be given with greater safety than in genuine tubercular phthisis, arising from other causes. Dr. PERCIVAL has observed, in the same volume, that the sea air sometimes irritates the symptoms of consumption, but certainly not always : that nitre often first reduces and then increases the frequency of the pulse ; while camphor and myrrh have precisely the opposite effects : he recommends a waistcoat or shirt dipped in a decoction of bark for allaying the hectic sweats : and he relates an instance of relief being obtained, in a gouty consumption, from wine whey and salt of hartshorn, and another of haemoptysis cured by wine and opium.

Dr. PERCIVAL has continued these remarks in a volume of his essays : observing that the sweats and diarrhoea may tend to relieve a plethora as bleeding would do, and that rising before the sweat takes place causes an aggravation of the fever : a biscuit steeped in wine, a draught of porter, or a mixture with myrrh will often serve to moderate the sweat, and the patient will rise

refreshed after it: in the period of languor he would allow a little wine. Myrrh he thinks one of the most valuable additions to the remedies for consumption, although he at first doubted of its safety: a saline draught may be given at the same time. Buxton water is found to raise the pulse from 80 to 109; he therefore objected to its administration, when it was suggested by Dr. Fothergill: and he found, on inquiring of a practitioner at Buxton, that the water had always been found injurious in genuine consumption, though of advantage in hectic arising from the stomach and liver, even with purulent expectoration.

Some further remarks of MAY appeared in the London medical journal for 1790; insisting on a tonic and nourishing mode of treatment, as the best of antiphlogistics, in a disease of debility, evidently connected with scrofula; and relating two or three additional cases, in which his system had succeeded, the patients taking as much exercise as could be borne.

Almost the whole of the theory and practice of pneumatic medicine, which has since been so much discussed by Dr. Beddoes and others of our countrymen, is comprehended in a memoir of FOURCROY, of which an extract is found in the Annals of chemistry. The effect of inhaling

MAY, Lond. med. journ. XI. 1790. P. 255.

FOURCROY, 1789. Ann. Chim. IV. 8. Par. 1790. P. 83.

oxygen was ascertained in 20 cases of consumption, 12 of which were in advanced stages: they felt a momentary relief, but became worse in a fortnight, and the disease afterwards advanced more rapidly; the change being manifestly occasioned by the use of the oxygen, as well as the increased signs of inflammatory action, the uneasiness, the sense of suffocation, and of heat in the lungs, the suppression of expectoration, and the haemoptysis. Experiments on animals had also shown, that oxygen accelerates the pulse and the respiration, increases the temperature, and causes an inflammatory fever, ending in gangrene of the chest. Fourcroy found it of some use in chlorosis and in abdominal obstructions: and he conjectures that the benefit found in cow houses may depend rather on the reduced purity of the atmosphere, than on the animal exhalations.

PANVILLIER pursues, in the *Journal de médecine*, the subject of blisters, which had been considered by Taranget two years before: he recommends them more strongly in the early than in the later stages of consumption, when he thinks the disease has contracted a scorbutic character: DESGENETTES records an authentic instance of a calculous consumption, in a man

who was found to have been employed in sawing marble and beating plaster; it is remarkable that none of the concretions were found in the bronchiae, but most of them in the lymphatic vessels, which appeared to have absorbed the solid particles: some of them also were as if extravasated in the cellular membrane. In the same work we find an abstract of a paper of ZEVIANI, who professes to have cured a syphilitic phthisis with large doses of hemlock, and of a treatise of GELMETTI on the calaguala, a root said to be useful in consumptions and pulmonary inflammations.

A modification of the treatment by emetics has been highly extolled by MACKITTRICK ADAIR, who gave, in a genuine scrofulous phthisis, first a pint of warm water, and then a grain of sulfate of copper with a drop of dilute sulfuric acid, in half an ounce of water, every other evening for three days, then every morning; and the leaves of hemlock in gradually increasing doses, beginning with four grains morning and evening, besides a blister and a laxative mixture. The sweats did not occur the nights that the emetic was taken; and in three months the patient perfectly recovered. Two other cases are also related, in which the success was somewhat less

ADAIK Dunc. med. comm. XVII. 1791. P. 473.

RYAN on consumption. 1791.

distinctly marked ; in several others life has been prolonged and rendered more comfortable. A teaspoonful of the solution is said to be a good medicine in dyspnoea, and to act as a gentle laxative.

GOURRAUD confirms, in the *Journal de médecine*, the favourable report of Schneider, of the efficacy of the willow bark, with which he cured a consumption following peripneumony.

In the second volume of the *Acta medica Havniensia*, we find an account, by RANOE, of the utility of the oil of asphaltum, and of a hæmoptysis cured by the application of a blister between the shoulders, which afforded relief as soon as it began to act, after the failure of bleeding and other means: he found hæmaturia curable by ipecacuan, and BUCHHAVE has a paper on the same subject: there is also a remarkable case of the efficacy of this substance as a remedy for vomiting, by Schönheyder, half a grain being given hourly; the second dose produced the desired effect, and the constipation, which was the original disease, was afterwards removed by other means.

Dr. FERRIAR, in the first volume of his *Me-*

GOURRAUD *Journ. med.* LXXXVII. 1791. P. 203.

RANOE *Acta R. Soc. med. Havn.* II. 1791. P. 9, 306, 397, 309. BUCHHAVE, P. 320. SCHÖNHEYDER, P. 139.

J. FERRIAR'S *Medical histories and reflections.* 8. Warrington and London. 1792. P. 190.

dical histories, has recommended digitalis in cases of active haemorrhage, particularly where there is a tendency to relapse, after bleeding and other remedies: he has chiefly employed the infusion, giving three or four spoonfuls daily: in one case six spoonfuls daily were found to cause sickness.

Mr. DAVIDSON, believing inflammation to consist chiefly in simple distension, has attempted to substitute abstinence from liquids for bleeding and other evacuations, and relates two cases of pulmonary haemorrhage, which were speedily and permanently cured by this remedy: in one of the cases there was purulent expectoration, with pain in the side. If however we compare the distressing and feverish sensation of extreme thirst, with the agreeable and even luxurious languor, which succeeds to a well timed venesection, we shall be convinced that the operation of the two remedies cannot be altogether indifferent.

The administration of emetics is most strongly opposed by METTERNICH, in an essay, which

DAVIDSON Medical facts and observations. III. Lond. 1792.  
P. 68.

MAY on consumption. Lond. 1792.

FOURCROY Médecine éclairée par les sciences physiques. 4. v.  
8. Par. 1791-2. Some extracts from Portal.

METTERNICH vom schaden der brechmittel in der lungensucht.  
8. Maydz. 1792. Journ. med. XC. 1792. P. 465. GOUR-  
RAUD XCI. P. 140.

appears from the abstract inserted in the *Journal de Médecine*, to be purely speculative, insisting only on the necessary evils attending so great a commotion of the system: at the same time the editor very properly observes, that there is some defect in the evidence which has been adduced in favour of this mode of treatment, the identity of the disease having by no means been sufficiently ascertained. In the same journal GOURRAUD relates a case of a consumption, which seems to have been carried off by the effect of a confluent small pox, and of the blisters applied for its cure: but the disease was merely the consequence of an accident.

In the third volume of the *Acta medica Havniensia*, BANG has related a case of phthisis, which ended fatally without suppuration, the lungs being found adherent and contracted: and two others which terminated more favourably, the one after a pleurisy, relieved by milk with Seltzer water, chocolate, and an expectorant powder; the other of 30 years standing, with haemoptysis, cured by the use of acids: and DE MEZA has given an account of the effect of a spoonful of salt, taken in water, as an immediate cure for haemoptysis.

BANG *Act. R. Soc. med. Havn.* III. 1792. P. 49. 119. DE MEZA. P. 302.

W. HUNTER, *York.* 1792.

SACHTLEBEN von auszehrenden krankheiten. *Danz.* 1792.

The year 1793 was distinguished by the publication of a variety of medical works of considerable interest, at the head of which we may place the *Morbid anatomy* of Dr. BAILLIE: although the description of tubercles is almost the only part of it which relates to our subject. Tubercles, the author says, are firm white bodies, interspersed through the substance of the lungs, and apparently formed in the cellular structure; for nothing like a gland is to be discovered in the cellular membrane of the lungs in a healthy state: and the follicles of the bronchiae are not converted into tubercles: they are at first very minute: the clusters probably unite and form larger masses: the most common size is that of a garden pea: they are firm in their consistence, and often contain a portion of thick curdy pus: at last they are converted into capsules, containing a more fluid substance: they occasionally unite into large abscesses: and the neighbouring parts of the lungs generally become harder and firmer, but sometimes remain in the natural state: the pus resembles that of scrofula. In some cases, the tubercular matter has been more uniformly diffused through the substance of the lungs, converting a considerable portion into the form of a scrofulous gland. Some other diseased

M. BAILLIE'S *Morbid anatomy* of some of the most important parts of the human body. 8. Lond. 1793. P. 46.

appearances are noticed, which belong rather to the illustration of dyspnoea, than to the symptoms of consumption.

Dr. SAUNDERS's relates, in his Treatise on the liver, a repetition of Mr. Clayton's experiment, illustrative of the formation of tubercles. Two drachms of crude mercury were injected into the crural vein of a dog; after a day, there were symptoms of fever, and in two or three days, difficulty of breathing, which increased till the dog died: the lungs were found tubercular, many of the tubercles had suppurated, and each was found to contain a globule of mercury.

The learned and ingenious, but rapid and sanguine Dr. BEDDOES has enlarged on the experiments of the French chemists in his Observations on calculus. He observes, that in consumption, the blood is brighter than in health, though of a purplish hue, and thinks the florid red of the cheeks an indication of the excess of oxygen: he repeats the remark, that too airy situations are unfavourable for the consumptive: and inserts a letter from Dr. LESLIE, respecting an academy, and a convent, on a high hill at Liege, in both of which consumption was very

W. SAUNDERS's Treatise on the structure, economy and diseases of the liver. 8. Lond. 1793. P. 211.

T. BEDDOES's Observations on calculus, sea scurvy, consumption, catarrh, and fever. 8. Lond. 1793. P. 118, 270, 157, 26.

prevalent, so that it was necessary to send the young men into the lower parts of the country to recover, as to Bruges, Antwerp, or Ghent; and the convent was removed, for this express reason, to a lower part of the town. Cold, he thinks only noxious, as producing a morbid sensibility to heat: in typhus, and in scurvy, he supposes the oxygen of the system too scanty. In a letter to Dr. Darwin, published in the same year, Dr. Beddoes notices the occasional occurrence of a violent spasmodic cough, alternately with the short dry cough, which commonly indicates an incipient consumption; referring to Murray and Raulin, in support of his observation. He relates the case of Mr. Crump, who was much relieved by breathing a mixture of 1 part of hydrogen, with 2 of common air: he submitted in his own person to the experiment of breathing an atmosphere containing about half its bulk of oxygen, 20 or 30 minutes daily, for seven weeks: it occasioned true hectic, and emaciation, with florid colour; the pulse was raised from 80 to 90, there were heats in the hands and feet, with a little dry cough and dyspnoea, and occasional bleeding at the nose. It is not impossible, that the exertion of the attention may have produced more fre-

T. BEDDOES'S Letter to E. Darwin, M. D. on a new method of treating pulmonary consumption. 8. Bristol, 1793. DARWIN, P. 63, 64.

quent respiration during the continuance of the experiment, and thus have really oxygenized or decarbonised the system more than in perfect health; while imagination effected the rest: but to judge from the experiments of Allen and Pepys, it is very doubtful, whether the addition of oxygen to the atmosphere inhaled could have any tendency to increase its consumption.

Dr. DARWIN professes himself a complete believer in the contagion of phthisis, between persons nearly connected, whether of a scrofulous nature or otherwise. The scrofulous consumption, in fair persons, generally occurs between 17 and 27: in dark eyed persons, the disease is confined to no age, and generally commences with haemoptysis, which commonly begins during sleep, from the diminution of voluntary action. Hectic fever he thinks the immediate consequence of the exposure of any ulcer to the air. The pupil, in consumptive persons, of either complexion, is always large.

Mr. DAVIDSON relates, in the Medical facts, an additional case of haemoptysis cured by abstinence from liquids: a consumptive person of 64, in a fit of coughing, brought up three or four pints of blood, with symptoms of apoplexy: he was bled, and confined to half a pint of fluid in

24 hours: he recovered from the attack, but afterwards died of a relapse: the aorta was found ossified: a fact of importance as illustrating the state of the arterial system in hæmorrhage. Emetics he thinks may sometimes have been beneficial in consumption, by promoting absorption. He sometimes gave hemlock at night, and Epsom salts every other morning: where his mode of treatment did not cure, it materially relieved; and it was also useful in some asthmatic cases.

We find in Professor RICHTER's Observations a very distinct account of the mucous consumption, with the history of a case which occurred after an intermittent fever. This disease seems to be to the lungs what leucorrhœa is to the uterus, or gonorrhœa to the urethra, arising from an irritation, which is commonly either gastric, or rheumatic, or perhaps syphilitic: the mucus assumes occasionally the character of pus, but does not become watery, as if its effusion depended only on the atony of the vessels. It may be a symptom of the existence of tubercles, or may be the cause of tubercles, and may thus become fatal: it is often mistaken for a true purulent consumption, and hence consumption has been supposed to be cured, by issues, myrrh, oil

of asphaltum, or dulcamara. It can only be distinguished by a daily examination of the expectoration, which, though sometimes purulent, never fails to become occasionally mucous only. Lichen has often cured this disease, when it has occurred after a bilious fever: in one instance, after a catarrh, the symptoms required repeated bleeding, and the cure was completed by the lichen and dulcamara.

Dr. SENTER has drawn, in the Transactions of the College of Philadelphia, a very flattering picture of the success attending the use of emetics. He has found bleeding of little use, rather producing weakness than relief: he thinks the sulfate of copper a very good medicine; but in Maryat's combination it almost destroys the efficacy of the tartar emetic, and acts chiefly as a purgative: he finds ipecacuan more certain, with the sulfate of copper: from seven to ten grains of each of these medicines are to be taken every second or third morning, without eating or drinking; increasing the dose if necessary: and as much of Griffith's chalybeate mixture as the stomach will bear in the intermediate time: for children the sulfate of zinc is preferable, as recommended by Moseley: it acts without debilitating. To one patient twenty four dry emetics

SENER Trans. Coll. Phys. Phil. 8. Philad. I. 1793. P. 232.  
Read 1792.

were given in three weeks, with about three pints of Griffith's mixture, and these remedies, together with a milk diet, completely cured a confirmed case of hectic, with purulent, fetid, and bloody expectoration. The same mode of treatment has succeeded in a variety of other instances of scrofulous consumption, oftener than any other which the author has tried or heard of. In bilious affections also, he has found the sulfate of copper agree better than antimony.

The publication of this volume was also accompanied by that of a continuation of the *Inquiries and observations* of Dr. RUSH, who has pursued the subject of consumption in a second paper. He considers the disease as the effect of debility, a term by far too general for the foundation of any accurate reasoning, and wofully misapplied by the puerile theorists who professed to be followers of Dr. John Brown: he also argues that it is a primary affection of the system, not essentially a disease of the lungs, since it often alternates with other symptoms, as those of rheumatism, gout, madness, tooth ache, headache, dyspepsia, eruptions, ulcerations, and diarrhoea, and is relieved by pregnancy: thus an apoplexy is a disease of the system exhibited in a local affection; and an apoplexy may happen in the lungs, and cause suffocation: con-

sumption may also be considered as a chronic peripneumony. It can seldom be supposed to originate from a local cause: thus of wounds in the lungs, 23 out of 24 recover: hooping cough and asthma scarcely ever end in consumption, and a miller's cough is proverbially without danger. Tubercles are nothing more than a collection of an inorganic mucous substance: they are clearly not scrofulous glands: in Great Britain scrofula may often be a predisposing cause of consumption, but certainly not in America, where scrofula is very rare, consumption not uncommon. In warm climates it is decidedly contagious: Dr. Beardsley knew an instance, in which it carried off several members of a family, and afterwards spread to the negros, on whom neither fatigue nor grief could have operated. The nature of the substances discharged is of "as little" importance as in dropsy. The author considers the disease as exhibiting three species or varieties, rather than stages, the inflammatory, the hectic, and the typhous, which do not always succeed each other in regular order, but which must be carefully distinguished by the state of the pulse. From an early attention to the signs of the first stage, infinite benefit would accrue to the public, and proportionate loss to the physician. These are slight fever, increased by the

least exercise, burning heat in the hands, weakness of the eyes on waking, an increased secretion from the kidneys, dryness of the feet, flushing of one or both cheeks, pain in the chest, headache, want of appetite, and inactivity. In such a case the patient should immediately abandon all sedentary employments, and have recourse to a more active life, with bathing, bark, and steel. There is often enough of inflammation, in the first stage, to require more copious bleeding than in peripneumony, the pulse being very hard, with a bloody expectoration; in such cases the author has bled 15 times in six weeks, taking away never less than eight ounces at each time; and ten ounces or more have been lost eight times in a fortnight: Dr. Hamilton of Lynn also bled with success in a highly scrofulous constitution: a small bleeding once gave great relief when the patient was, and was supposed to be, within a few hours of the fatal termination: but in Europe Dr. Rush thinks it possible that bleeding may not be so generally advisable. Milk diet must also be recommended in this variety of the disease: and emetics may be tried, where there are objections to bleeding: nitre has been of some use, but it frequently impairs the appetite: walking may in some cases be considered as a substitute for bleeding. In the hectic stage or variety, we can only palliate the symptoms, for little can be done where bleeding is no longer

indicated : tonics, and arsenic among others, have been given without any alleviation of the fever. In the typhous stage, a temporary benefit is sometimes derived from balsam of copaiba or of Peru, oil of amber, turpentine, or tar, objectionable as they may be in inflammatory cases : garlic also, dandelion, horehound, and other bitters may be employed with advantage, and bark is innocent, and sometimes actively useful. The diet should now be cordial and stimulating, such as meat, even salted, and oysters, which are supposed to be highly nutritious : not forgetting exercise, as the great strengthener.

In every variety of the disease, Dr. Rush thinks that damp situations should be avoided : and that a high and dry residence in the country should be preferred : he imagines, with Dr. Irvine, that a mixture of land and sea air or water is unfavourable, and that though sea voyages are beneficial, a residence on the coast is pernicious, adducing an instance, in which a captain of a ship was always first informed of his approach to land, by an attack of catarrh. A loose and warm dress is advised, and flannel next the skin : and in the earlier stages, repeated blisters and “small” issues : the vapour of tar, and the smoke of resin have appeared to be of some use : opiates may be given in small doses throughout the day, and more largely at night, and the

more freely as there is less inflammatory action: care must be taken to avoid chills from the profuse sweating: the lungs may with safety and propriety be moderately exercised in reading, speaking, laughing, and singing, although a violent fit of laughter has sometimes burst a blood vessel. An occasional haemoptysis was checked, from time to time, for 24 years, by a course of bark and exercises in the country: haemoptysis may also be easily stopped by taking daily from a tea to a table spoonful of common salt, which sometimes causes sickness, and serves as a temporary remedy: its efficacy was accidentally discovered by an old woman. Those who practise singing are little liable to haemoptysis; ministers of religion are less exempted, perhaps for want of exercising the lungs constantly.

Exercise, which affords the radical cure, should at first be extremely gentle, and gradually more and more active. The employment of the arms appears to be the most salutary, as in rowing, or even working a printing press: riding too in every stage is advisable, and especially long journies, which are of advantage even to persons habitually laborious, as affording a change of exercise; nor must women be excepted from the recommendation: but fatigue must be avoided. The continent of America would afford a European every advantage in such a

journey, to say nothing of the voyage across the Atlantic: but the summer heat of July is very unfavourable to the consumptive of Philadelphia. Every two years a journey of six or twelve months should be performed: and a change of climate must not be expected to produce its full effect in less than two years: a medical attendant should accompany the patient, if possible, to prevent his losing time in the pursuit of all sorts of remedies, which will be recommended to him. Some additional authority must be allowed to Dr. Rush's observations, from the circumstance of his having been subject to consumptive symptoms, during a considerable portion of his life, and having at last combated them with success.

The works of Mr. JOHN HUNTER exhibit many indications of a mind powerful and active, but not always subject to the laws of correct reasoning, and still less accustomed to be confined to clearness and precision of expression. He justly observes that the hectic fever is not exclusively a consequence of suppuration, since it may be caused by any irritation, which is insuperable by the constitution, and sometimes even appears to be idiopathic, as if a slow form of dissolution: an instance has occurred, in which

J. HUNTER on the blood, inflammation, and gunshot wounds.

4. Lond. 1794.

a sore on the patella has produced so much hectic fever, that the limb has been amputated, upon a mistaken supposition that the joint was diseased. It happens not uncommonly, after wounds or operations, that the symptomatic inflammatory fever passes gradually into a hectic, as the constitution becomes less capable of overcoming the disease. When the cause is removed, the hectic often subsides almost instantly, the pulse sometimes sinking from 120 to 90 in a few hours after an amputation, and the sweats and diarrhoea completely ceasing. Bark is generally useful for supporting the constitution in hectic, and sometimes wine may co-operate with it, although it usually increases action rather than strength. It is not very easy to reconcile these doctrines with the frequent absence of hectic from cancerous affections, even in an advanced state: and it is impossible to attach a very distinct idea to the "sympathetic fever" of dissolution, which is considered as in some measure opposed to hectic. The hectic from opening an abscess is referred, not to the effect of the air, but to a peculiar stimulus given to the constitution, in rousing it to a curative process which is beyond its power.

The medical professors of EDINBURGH, in the years 1793 and 1794, were disposed to consider

consumption as almost universally connected with scrofula; the causes and constitutions being always nearly the same; and they argued that the existence of lymphatic glands in the lungs was not necessary to establish this identity, since bones, and other parts, not glandular, are sometimes affected by scrofula, in the common acceptance of the term. The diarrhoea was considered as most commonly a fatal symptom, though one instance had occurred of a recovery, after its commencement, in a case subsequent to peripneumony. As an example of the occasional protraction of the disease, a person was mentioned who had been consumptive from 18 to 72, and died of it at last. The hectic of diabetes, or from nursing, was quoted as occurring without suppuration. The occasional absence of the morning exacerbation was noticed, and it was observed, that the pulse had been known to be 20 or 25 beats in a minute quicker in the morning, than in the evening: that there was sometimes shivering and chilliness, with an actual increase of warmth: that a full meal would probably cause an exacerbation at any hour: that there was often a succession of aphthae when the debility was great; and that the tongue was, in a great majority of cases, of a bright red, and the sclerotica of a bluish white. The contagious nature of the disease was not admitted, and some strong cases of exposure were adduced, in which it was not

communicated. In the treatment, mercury was thought pernicious; warm clothing, and a spare, but not a very low diet advisable; swinging had been tried without effect, and rather accelerated the pulse, than reduced its frequency: the climates of Madeira and Bermudas were recommended: Nice was thought too liable to cold winds: blisters, issues, and setons were principally found useful in the haemorrhagic cases, perhaps because they were naturally more curable: myrrh was thought of no use; bark of little: acids good as palliatives: a patient of Dr. Gregory senior, who recovered, was said to have used three dozen of lemons in a day, on his journey to Bristol: and this acid was preferred to the sulfuric. Emetics were considered as sometimes useful, even without operating very powerfully: sulfur as liable to be too laxative, and cathartics in general as aggravating the diarrhoea.

Professor FRANK, in his *Epitome*, refers the pituitous consumption to the chronic catarrh, as a variety: he thinks the discharge, though purulent, lighter than in genuine consumption: the hectic, when present, only arises from the debility produced by the discharge. He recommends bark, exercise, a nourishing diet, and a mild

climate as the best remedies. The dorsal decline he thinks not improperly so called, from the sense of tingling and cold in the back, and the wasting of the muscles of the loins: a similar disease, he observes, may sometimes be observed in young horses, from similar causes: goats' or cows' milk, perfectly fresh, he thinks a good remedy; woman's milk, for obvious reasons, objectionable.

Dr. FERRIAR has found the digitalis, with change of air, very useful in the mucous consumption, which occasionally succeeds to typhus: this medicine will also frequently check an incipient consumption, where the patient is too weak to bear evacuations. He also mentions the gouty consumption, which was cured by Dr. Percival with wine whey, hartshorn, and spermaceti; and was succeeded by a regular fit of gout. He has made a number of experiments on pneumatic remedies, and has found their effects at best slightly palliative, and completely transitory; and this remark is repeated in the preface of his third volume.

The theories of the chemists appear to have suggested to Dr. GARNET the use of the sulfuret of potass, and powder of charcoal, in the florid

J. FERRIAR'S Med. hist. II. Lond. 1795. P. 18, 22, 225. III. 1798. P. vi.

GARNET, Dunc. med. comm. XX. 1795. P. 369.

consumption: he gave a drachm of each of these substances, four or five times a day, in warm water, with the effect of promoting expectoration, and with material improvement in other respects. The sulfuret appeared to pass off partly by the kidneys, their secretion blackening salts of lead.

The Essay of BAUME has been much commended, but does not appear to be distinguished by any prominent feature: he asserts the contagious nature of consumption, and denies its connexion with scrofula.

Much ingenuity, much practical knowledge, and much absurdity, are combined in the Zoonomia of DARWIN. To follow his theories would be useless, but some of his hypothetical assertions require to be noticed, for their singularity and boldness. The mesenteric decline, he says, belongs to scrofula, "but as the matter is not exposed to the air, no hectic fever, properly so called, is induced:" soon afterwards, however, he observes, that if pus be accumulated and become putrid, one part may be "aerated" by the "air" given out by the other part: or if the abscess be opened but for one day, a hectic will be produced: hence it would be advisable to

BAUME *Traité de la phthisie*, couronné 1783. 2 v. 8. Montpel. 1795. Par. 1805. *Corv. Journ. méd. cont.* X. 1805. P. 217.  
E. DARWIN'S *Zoonomia*, or the laws of organic life. 2 v. 4. Lond. 1794-6. II. P. 284.

exclude the air in such a case, if possible. In consumption, he thinks the powers of absorption deficient, whence the occasional haemoptysis, and the difficulty of healing the ulcers: the large pupil demonstrates an inirritable temperament. The aerated pus seems to acquire a contagious quality, which causes the ulcers to spread, and in three or four instances, the author has observed a husband and a wife to die, in consequence of the disease, which originated in one of the parties only. For the cure, he proposes the trial of a lowered atmosphere; or the inhalation of caustic ammonia, to neutralise the acid poison, which he supposes to exist in the ulcers, or of powder of bark and ceruss, or zinc, agitated and suspended: or absorption may be promoted by means of nausea, produced either by digitalis, or by sea voyages: but the case before related, in the Medical transactions, terminated fatally after two years: in another instance, somewhat resembling peripneumonia notha, the digitalis succeeded better. The diet should not be too low: meat, with weak wine and water, or small beer, may be allowed once a day: in incipient cases, half a grain of opium twice a day is very beneficial. Instead of swinging, nausea may be more conveniently produced by the rotatory motion of a chair, properly suspended by a rope, and turned 30 or 40 times round: this may be done several times a day for an

hour or two, and continued for a month ; but it is scarcely credible that human resolution will ever give a fair trial to this proposal. Dr. CURRIE's case, which is related by himself, is highly favourable to the system of exercise on horseback or in a carriage : he found that the motion of a post chaise, on a rough road, almost always prevented, or deferred, or mitigated the hectic paroxysm : the moist and cold air of Matlock, with riding, agreed extremely well with him : animal food created drowsiness, and the sleep was followed by fever, which was in some measure obviated by taking coffee : vegetable food had not this inconvenience, but it was not sufficiently nutritious : he abstained entirely from wine or beer. He was under great depression of mind during the greater part of his recovery, and conjectures that this circumstance may have been favourable to his health. The blood, whenever drawn, was buffy. He had reason, from his practice, to think well of the effects of swinging, and he had seen the paroxysm prevented or cut short by ablution with tepid water.

In the first volume of Duncan's Annals, we find an account by WILSON of a hectic, occasioned by a nail two inches long, which was swallowed by a child, and remained fifteen months

in the stomach, and disappearing after the nail was thrown up: and a circular letter of Dr. RICHARD PEARSON, on the efficacy of the vapour of ether in the cure of consumption: he puts a teaspoonful or two of the liquid into a tea cup, and holds it to the mouth till it evaporates; repeating the dose four or five times a day, for a month or two. The ether may be previously impregnated with hemlock, by macerating a scruple or half a drachm of the leaves in an ounce of it, for some days: and the combination, thus employed, is said to have been of use in some cases of florid consumption, without abdominal disease.

Dr. MUEHRY published, at Gottingen, an interesting inaugural dissertation on the Respiration of carbonic acid, which was employed in five cases of consumption, and one of asthma, without material benefit.

Dr. ROLLO's work on Diabetes affords us some chemical illustrations of pathology in general, which are not altogether inapplicable to our present subject. He observes that Mr. Spalding found, in his diving bell, that he consumed more air when he lived on animal than on vegetable food, and that the difference was so great as to induce him to abstain from animal food, when he

MUEHRY. Gott. 1797.

J. ROLLO's account of two cases of Diabetes mellitus. 2. v.

8. Lond. 1797. I. P. 305. 296.

was employed in diving. That consumption may be strictly hereditary, he thinks is shown by the case of a child, who died of hydrocephalus at the age of seven months; the mesenteric glands were enlarged, and the lungs filled with tubercles, which had the appearance of curdled milk: the father had died of tubercular consumption. He is confident that the disease is most common in scrofulous habits. Mr. Cruikshank found, by experiments on the urine of a consumptive person, that it contained much microcosmic salt, which readily crystallized on evaporation, but little extractive matter: and this result seems to set aside the observation of Paracelsus and of Stahl, on the usual permanence of the bubbles formed on this fluid. The keen appetite, clean red tongue, and clear urine, which frequently attend the disease, alternate occasionally, he observes, with a state opposite in all these respects, and return in a few days. In incipient consumption, Dr. Rollo recommends a spare diet of animal food, without vegetables or fermented liquors; and the introduction of hepatic gas, or hydrocarbonate, and ethereal vapour, into a small apartment: with a few drops of hepatized ammonia, accompanied by hemlock and camphor, three times a day. It does not, however, appear that he has advanced any practical evidence, to establish the utility of this chemical mode of treatment.

Mr. HOWISON relates, in *Duncan's Annals*, a very interesting case of a consumption in an advanced stage, which had succeeded to a catarrh, and which appeared to be completely cured by a reduced atmosphere, with the mephitic vapours of the bilge water and the drainings of sugar, in the hold of a ship, during a voyage from Prince of Wales's Island to Bengal. The foetor of the hold was almost intolerable, and a candle burnt dimly in the air: by the tenth night the symptoms were much relieved; at the end of the voyage, after 25 days, the cure was complete, with the exception of a little cough. The disease had certainly not been prevented by the voyage, for the patient had been at sea the whole time. The gas seemed to produce sleepiness, and a degree of torpor, which was probably salutary.

Dr. J. FRANK, in his *Account of the establishment at Pavia*, professes himself an advocate for the tonic and nutritious mode of treatment in consumption, proposed by Salvadori and others, though with much greater moderation in the degree; palliating the urgent symptoms by opium, and endeavouring to relieve the debility by bark, lichen, milk, wine, exercise, and nutritious food.

HOWISON, *Dunc. Ann.* 1797. P. 324.

J. FRANK *Ratio Instituti clinici Ticinensis. Praef. J. P. Frank.*  
8. Vienna, 1797. P. 290.

The *arum triphyllum* is used, in some parts of America, as a specific for consumption, the root being boiled in milk, to which it communicates its acrimony. Dr. BARTON has known one case cured by digitalis, but only one: others however have been palliated by it. He has found greater benefit from emetics in several instances, especially the sulfate of zinc, as recommended by Moseley: some of his medical friends appear to have succeeded better with digitalis.

Dr. JOHNSTONE of Worcester has related a fact of some importance, with respect to the causes of consumption, in the Memoirs of the Medical Society. Persons who are employed in the needle manufactories, in dry grinding or pointing the needles, are found to be so liable to consumption, that they seldom live to be 40: the dust of the stones seems to accumulate in the air cells of the lungs, and to cause irritation and suppuration: they are also obliged to wet their hands continually with saliva, which is supposed to be another cause of debility. This observation affords a confirmation of Dr. Kirkland's account of the grinders' rot, as quoted by Dr. Simmons.

B. S. BARTON's Collections for a materia medica. 1798. Ed. 2.

2 pts. 8. Philad. 1801-4. Pt. II. P. 29.

JOHNSTONE Mem. Med. Soc. V. 1799. P. 89.

Dr. BEDDOES has collected, in his Essay, a variety of important information on points more or less immediately connected with the subject of consumption; some of his inquiries appear to have been suggested by the speculations of Dr. Rush, whose opinions respecting exercise and regimen he is in general disposed to adopt. He observes that too flattering a picture has often been drawn of the cheerfulness of the consumptive, the disease being frequently attended by protracted pain and misery. In a part of Bristol, he says, out of about 10 000 inhabitants, the annual deaths for seven years were 208, and 98 of these were reported under the article consumption, although probably not very correctly ascertained to belong to it: but in a subsequent publication, the annual deaths are made 236 instead of 208. In the West Indies, according to a letter from Mr. Edwards, consumption is little known, although it sometimes occurs after pleurisy in the negroes: but West Indians coming to England are extremely liable to it. Of the climate of Lisbon, a physician who resided there two winters gave no very favourable report; the sun and shade appear to differ too much; and the author adduces an instance, in which a patient was cap-

SUTTON on consumption. Lond. 1799.

T. BEDDOES'S Essay on the causes, early signs, and prevention of pulmonary consumption, for the use of parents and preceptors. 1799. Ed. 2, enlarged. 8. Lond. 1799. P. 7, 22.

tured on his voyage there, off the coast of Portugal, and carried back to England, and in the mean time his consumption was cured. Hieres has been much recommended, but the South of Spain is probably preferable. Of Madeira the author received from a medical friend an account not more favourable than that of Dr. Gordon, scrofula and consumption being not uncommon there, and two British settlers having died consumptive within a year. Dr. Withering having observed, in 1793, that butchers and catgut makers seldom became consumptive, Dr. Beddoes made many inquiries among butchers, of whom there were about 500 in Bristol, and could scarcely find an instance of a consumption having occurred among them: while, if we calculate from the reports already mentioned, we shall find that about five must have died annually of consumption, out of an equal number of the inhabitants at large: at Bath Mr. Creaser found some butchers who had apparently constitutional predisposition, but had escaped the disease. Consumption appeared also to be almost unknown among the fishwomen on the Firth of Forth, who live well, and take very violent exercise: three of them, for instance, went 27 miles, carrying 200 pounds of herrings each, in five hours: and one, who became a mother on a Wed-

nesday, went five miles with her creel the next Saturday: they have seldom scrofulous complaints, but frequently inflammatory ones, and they are not long lived. Dr. Trotter has observed that consumption is rare among seamen, except fifiers on board of ships of war: Dr. Withering, that stable boys and grooms, who are exposed to alkaline vapours, seldom have the disease; and a Reviewer has extended the remark to dragoons. Taking snuff, Dr. Withering thought, did not preserve even from the contagion of consumption. Inhaling very soft powders seems to do little harm, but joiners and carpenters are often consumptive. Mr. Carlisle has seldom known scrofula of the glands about the large joints accompanied by consumption: he has found the disease sometimes spreading through the whole lungs, and sometimes confined to the lymphatic glands near the root: the latter form is more rapid in its progress, but sometimes, he thinks, unexpectedly subsides: he is informed that of the apprentices to gilders in London, six out of seven die of consumption in their apprenticeship, without scrofulous symptoms. In Holland, according to Dr. Cogan, coughs are very rare, from the habit of wearing abundant clothing, and sitting in cool rooms. Of two brothers of Mrs. Cogan, one, who dressed in the

French stile at all seasons, died about 30, the other, adhering to the Dutch customs, lived perfectly free from coughs of all kinds. In Scotland, consumption is generally the disease of the effeminate and inactive, rheumatism of the hardy and incautious: of the fertile Carse of Gowrie, the lowest parts are the healthiest, though the inhabitants are very subject to rheumatism. The English have been often supposed to eat more animal food than their neighbours: but the Germans certainly eat much more on the whole than the English, and even more of animal food: their dishes are also more numerous, and this variety the author thinks favourable to digestion. Some have denied the necessity of exercise, and Darwin observes that many women live healthy and arrive at an advanced age without it: but Beddoes thinks that such a state of health can scarcely deserve the name. Hearne mentions a consumptive Indian woman in North America: Lapérouse found the disease in California, but among a puny race. In Egypt, according to Browne, it is very uncommon. Dr. Beddoes considers tubercles as merely resembling scrofulous glands, and analogous to them, but not as identical. Potatoes, he says, are less nutritious than grain, and the Irish who live on them are liable to scrofula. He has known the attacks

of hæmoptysis prevented by a saline purgative taken almost daily for many years: but the patient's health was in the mean time precarious. A singular instance is related of a fatal consumption in a person having a hereditary predisposition to the disease; commencing from an exposure to a stream of cold air, when some medicine had been taken, which had caused diarrhoea; a pain in the abdomen being immediately transferred to the chest. The cold bath is decidedly injurious in consumption, and the open sea unsafe, notwithstanding the advantage which infants generally derive from habitual immersion in cold or cool water, while too light clothing tends to render them invalids: but the tepid bath is very salutary both in scrofula and in consumption; nothing is so powerful, as Mr. Creaser observes, in producing softness and moderate force and frequency of arterial action. Mineral waters are idle at all periods. But riding the author has seen in two cases eminently useful, so as even to justify the encomiums of Sydenham: he has himself produced a report equally encomiastic of the effects of the digitalis, observing that he daily sees "many patients advancing towards recovery with so firm a pace," that he hopes "consumption will, hence-forwards, be as regularly cured by the foxglove, as ague by the Peruvian bark:" he has, however,

thought it necessary to retract this too hasty opinion in the second edition of the essay, presuming only, "that it will sometimes act with as good effect as the Peruvian bark in ague."

The evidence on this question is brought forwards in the volume of Contributions, published in the same year, which contains also an account of some valuable experiments on the respiration of gases. Mr. CROWTHER relates a case of pulmonary "abscess," in which the expectoration had commenced the night before: a pint of hydrocarbonate gas was inhaled twice a day, with 24 quarts of atmospheric air, and the quantity was increased by degrees to two pints and a half: an issue, a swing, opium, myrrh, and steel were also employed, and the patient was effectually relieved: he also found the vapour of ether with hemlock of use in atrophy from nursing. Dr. Beddoes mentions a young lady, whose case had been considered as desperate, and who was cured by breathing twice a day a quart of hydrogen, mixed with fifteen of common air: and he quotes from Girtanner some experiments on the respiration of carbonic acid, with a diet of salt meat, which procured a little temporary relief only, and from Hufeland a case of

T. Beddoes's CONTRIBUTIONS to physical and medical knowledge, principally from the West of England. 8. Bristol, 1799. CROWTHER, P. 341. BEDDOES, P. 353.

confirmed consumption, cured by following the plough: but he observes that Mühry's experiments have superseded those of Girtanner. At Aix la Chapelle, he says, there are few consumptions; but at Monjoye, 28 miles off, in a mountainous country, they are said to carry off half of the inhabitants. He mentions four cases, in which the vapour of cows, and a residence in cow-houses were tried without success, except some temporary palliation.

Dr. DRAKE of Hadleigh is one of the most zealous advocates for the employment of digitalis in consumptive cases. It was recommended in affections of the chest, by Fuchsius, who first distinctly described and named it: also by Gerard and Parkinson, and especially by Salmon. Its diuretic power seems to have been unobserved till 1770. Dr. Drake's experience is unfavourable to the suspicion of Sir G. Baker, that its beneficial effects might be in some measure dependent on the action of vomiting: he is rather disposed to think, that it acts by promoting the absorption of the pus, before it has had time to become fetid, as well as by diminishing the powers of secretion: and absorption may certainly be produced by digitalis without nausea. He gave 15 drops of a saturated tincture twice a

day, increasing the dose gradually to 40 or 50 : when the full action took place, the pulse was reduced to 50, or even 40 beats, in a minute : and the qualities of the matter were decidedly improved : in one case, the pulse continued slow for more than a week after the medicine was omitted : in another, it returned to 112 : but both did well : bark, quassia and saline draughts being given at the same time : the purulent nature of the expectoration was fully ascertained in both cases.

Dr. FOWLER of Salisbury relates a greater variety of cases, principally of the patients of an hospital, in different stages, many of whom were much relieved by the decoction of digitalis. Dr. Ferriar had cured four cases of haemoptysis by the infusion, and had stopped an incipient consumption. Of two patients in the hospital, who were relieved, one had a purulent, the other a bloody expectoration, and both had more or less oedema.

Dr. BEDDOES himself finds the remedy beneficial in incipient cases, but he has not succeeded with it in the last stage, although it has afforded some alleviation, and protraction of life. In one of the cases, travelling had nearly suspended all the symptoms during summer, but they returned in winter. The patients had all been delicately educated, a circumstance which, he thinks, may have been unfavourable to the ope-

ration of the medicine on the absorbents of the lungs.

The efficacy of the digitalis has been amply discussed by a variety of writers in periodical publications, and especially in the Medical and Physical Journal for 1799. MOSSMAN gave a grain every two hours without benefit, except in a case of haemoptysis: but in some subsequent instances, it appeared to be more efficacious, combined with a milk and vegetable diet, and with swinging. MACLEAN of Sudbury has tried it in 20 cases, and finds it very useful, and the more so, as it is administered earlier; it has, however, cured some in a more advanced stage, where the most approved remedies had failed: he thinks it principally useful as a narcotic, allaying all irritations. SHERWEN points out the panegyrics of Salmon on the plant, and considers its supposed action in consumption as confirmed, by the power attributed to it in scrofula: at the same time he thinks there must have been good reasons for its disuse, although it may have been serviceable in cases complicated with hydrothorax. Dr. BREE advances some

MOSSMAN, Med. Phys. Journ. 81. 1799. P. 35. 231. MACLEAN, P. 113. SHERWEN, P. 175. BREE, P. 314, 430. Westm. Hosp. P. 319. DRAKE, 417.

LOMBART on a consumption from a suppressed fistula. Sédillot, Journ. gén. med. VI. 1799. P. 204. MOREAU on a hectic, from excess of study, P. 299.

strong evidence against its utility: he tried it in nine cases without benefit: the pulse was little affected, except in one: six of the cases were indeed very far advanced, but the distress, occasioned by the medicine, especially from the weakness of digestion, was a positive evil, much discouraging its administration: at the Westminster hospital too, it was tried with little benefit.

The Annals of THOMANN exhibit a series of judicious and accurate observations, though somewhat tinged by the unintelligible phraseology of an absurd theory. He records some cases of tracheal consumption, which he says is not uncommon, and perhaps even more incurable than the pure pulmonary affection. The disease begins with difficulty of swallowing, dryness of the fauces, pain in the larynx, mucous expectoration, dyspnoea in walking, wheezing in respiration, and inflammation, or ulcers, of the fauces. The best remedies seem to be antimonials and calomel, with mercurial frictions and blisters, or setons to the neck. Evacuations of all kinds are said to be injurious. Lichen and decoction of bark have been given, with burnt sponge; at a later period polygala and opium; and afterwards opium alone. A slight salivation was tried in one

case without success: in another, mercury succeeded better, having been prescribed from an experience of its good effect in ulcers of different kinds. A case of consumption, after catarrh and peripneumony, with a most abundant expectoration, was cured by small doses of opium and ipecacuan, together with the lichen: bark disgusted the patient, and was discontinued.

In the Medical Repository of New York, we find some bad eudiometrical experiments, advanced by DAVIDSON, in illustration of the rapid fatality of consumption in the West Indies. Even at Barbadoes and Antigua, he observes, where the trade winds blow uninterrupted by high lands, consumptions are not more curable than in the larger islands, as writers on the diseases of the West Indies agree: he thinks that if sea voyages are beneficial, it is only by exciting sickness, which determines to the surface of the body, and prevents the absorption of oxygen. There is also an observation of MACKITTRICK on the heat of the bodies of Europeans in the West Indies; which he says is two or three degrees higher than that of the natives: and hence he infers the propriety of bleeding those who are lately arrived from Europe.

DAVIDSON, Medical Repository. 8. New York. I. Ed. 3. 1805.

P. 157. II. 1799. 263. MACKITTRICK, II. 190.

The discussions respecting digitalis were continued through the year 1800. KINGLAKE announced some successful experiments with the tincture: BAILEY found that at St. Thomas's hospital it seldom even palliated the symptoms: MAGENNIS related a case of a Dutch prisoner who was cured by it: it was remarked that the affections of the stomach, and not the pulse, afforded the best test of its safety. SHERWEN recommended the decoction as the most convenient form of administering the medicine; or the seeds, which, like those of the hyoscyamus and the red poppy, partake of the virtues of the plant, while the seeds of the white poppy are known to be simply mucilaginous: he found the remedy very useful in incipient cases. MOSSMAN had been convinced that his first failures depended upon the bad quality of the plants that he used: he considered animal food and cream as the best diet during the employment of the medicine, and thought it desirable that a week should elapse before the full effect was produced. PENKIVIL cured a bad consumption and a scrofulous tumour in the axilla at the same time: but he

KINGLAKE Med. Phys. Journ. III. 1800. P. 120. BAILEY, P. 127. MAGENNIS, P. 128. MACLEAN, P. 150. DRAKE, P. 305, 350. SHERWEN, P. 307. MOSSMAN, P. 311. PENKIVIL, P. 315. CARSON, P. 513.

MOSSMAN on scrofula and consumption. 1800.

does not infer that digitalis acts merely as a sorbefacient, since mercury, which will cause the absorption of tumours, is considered as injurious in consumption. CARSON'S case was a slight one, and occurred during pregnancy: the digitalis was given in pills with opium.

The Researches of BUSCH appear to exhibit more of theory than of observation. He proposes to diminish the morbid irritability and sensibility in the early stages, by aconite, hemlock, henbane and dulcamara, combined occasionally with ipecacuan, chermes mineral, and honey of squills; and to prevent the oxydation of the pus in the later, by means of the sulfuret of lime, of which he gives six grains every two hours, provided that the appetite be not impaired: and with this remedy he professes to have been successful in treating pulmonary ulcers. He prefers the leaves of aconite to the extract, and gives two grains every two hours, increasing the dose to the extent of a drachm daily: the sulfuret may be given in pills, to avoid its nauseous taste.

DR. WILLAN'S Reports afford us some authentic information respecting the fatality of consumption, by which it appears that it has not

J. J. BUSCH, *Recherches sur la phthisie pulmonaire*. Strasb. 1800. *Corvisart Journ. méd. cont.* II. 1801. P. 178. VII. 1804. P. 531.

R. WILLAN'S *Reports on the Diseases in London*. 12. Lond. 1801. P. 14, 261. Pref. ix. P. 19.

been rated too high from the public reports, since in his own practice, very nearly one third of the whole number of deaths were occasioned by this disease, including however, as usual, the consequences of pulmonary inflammation and catarrh: these were 77 out of 246; and in the London bills of mortality, from 1796 to 1799, excluding the still born and casualties, 17559 out of 52237, or somewhat more than one third of the whole. Dr. Willan follows the Greeks in considering hectic as an independent disease, characterized by the recurrence of the paroxysms daily, or every 12 hours, with flushed cheeks, and sweating towards the morning, sometimes terminating in marasmus. He divides it into four varieties; the first is the infantile fever of Sydenham, accompanied by great irritability and restlessness, want of appetite or craving, irregular bowels, wasting, and loss of strength: it frequently lasts for a considerable time, and its termination is followed by a rapid increase of growth: it must not be confounded with the infantile fever of Hofmann, which is a mesenteric disease: the second is that of young persons during their growth, and after puberty, attended by pains in the limbs, swellings in the joints, as described by Musgrave on gout, and great emaciation: it seldom lasts more than 10 or 12 weeks, except in case of the occurrence of a cough. Dr. Fothergill recommended bark

and steel, in the Gentleman's Magazine for 1753, as the best medicines in cases like those which Musgrave has described. The third variety occurs in middle age, when the vigour begins to decline, generally attended by a succession of aphthae, abundant mucous expectoration, pains in the head, neck, and limbs, roughness of the throat, redness and enlargement of the papillae of the tongue, and of the veins of the fauces, followed by nausea, hiccup, diarrhoea, with brown and often bloody faeces, deafness in one ear, pain and tenderness in the soles of the feet, slight delirium, restlessness, and languor during the day: the symptoms generally continuing from five to twelve weeks. The fourth is the hectic of old men, described by Hofmann, to whom the author refers for further particulars. In the mesenteric decline, after the removal of the causes, Dr. Willan recommends the precipitated iron as commonly the best medicine. He describes the pituitous consumption of some authors as the sequel of a catarrhal cough, the secretion being puriform and often bloody, without any ulceration, and the patients frequently recovering, even after the occurrence of night sweats and hectic diarrhoea.

Dr. W. HEBERDEN has shown that the num-

WILLAN, P. 255, 147, 3, 4.

W. HEBERDEN JUNIOR on the increase and decrease of different diseases. 4. Lond. 1801. P. 44.

ber of deaths from consumption, as stated in the parochial returns for London, has considerably increased within the last century. He thinks the disease is almost unknown among barbarous nations; and observes that the mortality in these climates is considerably greatest in winter, although not in hot countries: and that cold, rather than wet weather, generally makes a season unhealthy.

Of all the reports of the efficacy of digitalis, by far the most favourable is that of MAGENNIS, published in the fifth volume of the Medical and Physical journal. At Norman Cross he cured, with the tincture, two out of eight bad cases, notwithstanding the unfavourable state of the weather at the time: he afterwards gave it in 72 cases of consumption, that occurred among the sailors of the channel fleet: 24 of these were incipient, of which 15 recovered, and nine were relieved: 48 were purulent; and of these 25 recovered, 13 were relieved, in 1 the medicine had no effect, and 9 only died while taking it, that is, one eighth of the whole. He gave large doses, sometimes 100 drops three times a day, though, in other instances, 40 drops a day were as much as the patient could bear: the pulse was once brought down to 44: where it was not affected,

no benefit was derived: the medicine never acted on the kidneys; in one instance it even produced dropsy, which was cured by a chalybeate diuretic. He is confident that the relief is obtained not by the absorption of pus, but by the extinction of morbid action: he has found it necessary to guard his patients carefully from exposure to cold while it is administered.

The industrious Dr. BEDDOES continued to give an account of his researches in his essay on the Management of the consumptive. The principal novelty of the volume was the account of the advantage derived from confinement to rooms of a temperature varying only from 60° to 65°, which in one case appeared to be great and decided: and it was observed, that even the attendants on the patients seemed to be rendered less liable to take cold, by being frequently in the heated rooms. Where the cold fit of hectic is strongly marked, the author thinks that hot water, with spice and opium, may be given with advantage: and in the hot fit, tepid or cold drinks. He mentions Dr. Magennis's successful practice, and adds several other striking cases of the efficacy of digitalis: he says that it succeeds worst with the debilitated and necessitous, and recommends to

T. BEDDOES'S Observations on the medical and domestic management of the consumptive, on the powers of digitalis, and on the cure of scrofula. 8. Lond. 1801. P. 92, 79, 111.

such patients a full diet, while they are taking it, with meat twice a day, and wine at intermediate times, to avoid flushes of heat. The pulse should be examined while the patient is in a horizontal posture, since when he is erect, it is often more frequent by 50 or 60 strokes in a minute, so as to conceal the effect of the medicine in reducing its frequency. He thinks it has sometimes been most beneficial when it has occasioned nausea; while Kinglake is of opinion that the nausea is always injurious. Its operation is sometimes assisted by large doses of opium, with bitters, and hyoscyamus or hemlock: thus half a grain of the leaves, with two of squills, two of opium, and seven of extract of hemlock at night, seems to have been very beneficial, in a case where the simple tincture did not succeed so well. The author has been encouraged by the success of calomel in mesenteric decline, to prescribe it in consumption, half a grain, or a grain, twice a day: in one case it appeared to effect a cure, and in another to afford relief; he has also sometimes given other mercurials, both with and without digitalis, and thinks the objections to this practice totally without foundation. He has sometimes found, that although digitalis has relieved the urgent symptoms, the patient has sunk exhausted by the debility. The action of this remedy he thinks rather tonic

than sedative, since in doses properly regulated it constantly increases the vigour of the circulation, although, like other tonics, it may act differently in an over dose. It is, however, often an excellent soporific, given either with, or without opium; for this purpose, five or six drops may be taken three or four times a day in infusion of quassia: and it will supply the place of opium, in removing the effects of a catarrh, when the inflammation has subsided, and thus serve as an excellent preventive of consumption. It also tends, in a moderate dose, to strengthen the digestive power. In a large dose, like opium, it causes languor and nausea: perhaps bitters might do the same. On frogs, its action is nearly like that of opium. In pleurisy, it would be mad and mischievous to attempt to substitute digitalis for bleeding. Dr. Beddoes has found the muriate of lime of great use, in almost all forms of scrofula: three drachms of the solution were fatal to a dog: it was very effectual in the case of a young lady who had enlarged and ulcerated glands, with some paralytic symptoms, which seem to have been brought on by cold bathing, and were partly relieved by the use of an appropriate machine.

In an Appendix to this work, Dr. KINGLAKE

BEDDOES, P. 189, 221, 219, 223, 227.

R. KINGLAKE in Bedd. Man. Cons. App. 1.

has given a particular, but not a very encouraging account of the effects of digitalis in consumptive cases. He prefers the tincture to the other forms of administering the medicine: the powder being more cathartic and nauseating, the infusion and decoction more diuretic. The tincture of broom seemed in one case to serve as a substitute for digitalis, but it was not generally efficacious. In advanced cases of phthisis, treated with digitalis, he has found the heat under the tongue lower than in health, and seldom above  $94^{\circ}$ ; and even in the earlier stages lower than in other febrile diseases. The digitalis acts most favourably, when it produces neither nausea, nor any increased evacuation: it should be given without interruption, the system becoming by habit more susceptible of its operation: and before ulceration commences, it is often found highly beneficial, but not afterwards. Dr. Kinglake considers it as a powerful narcotic stimulant, operating primarily and principally on the stomach, like opium, conium, and hyoscyamus. Dr. Beddoes adds some extracts from Hufeland's journal, on the use of the oily extract of hyoscyamus in haemoptysis: he recommends issues, and especially caustics, as sometimes preferable to blisters in tubercular consumption: and he relates a case of hectic, in which the pulse became

harder and stronger during the paroxysms, but not more frequent than usual.

In CORVISART's journal, we have an account of a consumption after empyema, in which a membranous substance was expectorated; and in which the cure was much promoted, by the patient's indulging a longing for cherries, and eating three pounds at once.

The fourth volume of the Medical repository contains an account of a case of consumption in an advanced stage, in which Dr. DEROSSET of North Carolina had succeeded with the powder of digitalis, and of another, in which Dr. Spence of Virginia had been equally fortunate.

Dr. HEBERDEN's Commentaries exhibit a useful but not an encouraging report of the results of long experience, unseduced by enthusiasm, unenlivened by speculation, and perhaps we may add, unimproved by elaborate research. He observes that the symptoms of mesenteric decline so much resemble those of consumption, that the purulent expectoration is sometimes the only criterion of the difference. The pulse is the truest index of the degree of danger; in a

CORVISART, Journ. méd. cont. II. 1801. P. 195.

DEROSSET, Med. Repos. IV. Ed. 2. p. 312.

PEARS'S Cases. 1801-2.

G. HEBERDEN Commentarii de morborum historia et curatione, 8. Lond. 1802.

case where it has been the only favourable symptom, the patient has remained ill three years, and then recovered. The author has "not yet" been able to make up his mind respecting the contagiousness of consumption: but confesses that he has seen several fatal cases, for which no more probable cause could be assigned than the patients' having been constantly with other consumptive persons, and having even slept with them. Asses' milk is of use in allaying the fever, decoction of bark and sulfuric acid in relieving the sweats, and opium in quieting the cough, and favouring sleep; three drops of the tincture, after each evacuation, generally check the diarrhoea. Where there is urgent pain, five ounces of blood may be taken away, but frequent bleeding, even in very small quantities, seems to be injurious: a more obtuse pain requires a blister. A case is mentioned, in which the membrane, lining a vomica, was expectorated, and the patient soon recovered. Sir Edward Wilmot was consumptive before he was 20, and his medical friends thought his case hopeless, yet he lived in vigorous health to the age of 90: and there is no doubt that the same persons who become consumptive in consequence of cold, or of intemperance, might have continued free from the disease, if they had avoided its exciting causes. The diet of the patient should be principally vegetable; and the drink the purest

water, which sometimes carries off glandular obstructions, apparently arising from some pernicious qualities in the water commonly drank. A sea voyage has sometimes been a palliative, and appears to be always safe. A small island without hills would be the best situation for the winter months.

Whatever efficacy may have been attributed by other authors to the effects of pure or mineral waters, Dr. THOMAS, in his Practice of physic, very strongly asserts the inutility of the Bristol water, which he has not known, during a long residence at and near the Hotwells, to be materially beneficial in a single instance of confirmed consumption, independently of the habits and exercises of the place: although the testimony of Dr. Carrick and Dr. Saunders respecting it is somewhat more favourable: it contains about a grain and a half of sulfate of soda, and a grain of muriate of magnesia, in a pint. Dr. Thomas observes that life has sometimes been supported, when not more than one twentieth part of the lungs can have been fit for performing their functions. He considers an emetic every second or third day as one of the most powerful remedies, which never ought to be neglected, and advises either Marryat's sulfate of copper and tartar emetic, or, where there is any diarrhoea, Senter's sulfate

of copper and ipecacuan in pills: and affirms that he can bear ample testimony to the success of this remedy, having adopted it in many incipient cases with "infinite advantage." He thinks a drachm of myrrh, with twelve grains of sub-carbonate of potass, and six of sulfate of iron, the utmost that should be given for a draught; he says that besides this draught and the emetics, the digitalis may also be taken with advantage: and he considers this plant as forming the most essential part of a quack medicine, known by the name of the "vegetable syrup," which is supposed to have been occasionally beneficial.

Dr. BEDDOES's popular speculations were continued in his *Hygeia*, a series of essays, of which one is devoted to scrofula, and another to consumption. He thinks that the common prejudice against healing a scrofulous ulcer is generally without foundation, and he is even disposed to question the truth of the opinion, sanctioned by Mr. John Hunter, of the benefit of sea bathing. He quotes from Huxham an instance of the bad effect of sea water taken in great excess: and imagines that the sea side makes children grow too fast. All, he says, are liable to consumption, as is shown by the acci-

dental operation of local causes ; but the scrofulous are most liable.

At Chester, according to Haygarth, the deaths in two years were 135 out of 731, or 10 out of 54, which is a very small proportion for any part of this country. At Holycross in Shropshire, the proportion is more than one fourth. Among the causes of haemoptysis, Beddoes enumerates singing, on the authority of Grétry's memoirs. He adduces as a strong fact, against the propagation of the disease by contagion, that although 2735 patients died consumptive in the hospital at Vienna from 1797 to 1799, no physician or nurse was infected by any of them : and supposes that when a person is believed to have taken the disease from a near relation, he has incurred it only by neglect of himself. In another part of the work he observes, from Dr. J. Hutton's experiment, that evaporation in March or April will often sink a thermometer  $9^{\circ}$  or  $10^{\circ}$  ; in summer seldom more than  $3^{\circ}$  or  $4^{\circ}$ .

In the Medical and Physical Journal for 1802, we find two cases of incipient phthisis related by ROGERS, in which the digitalis succeeded, with a vegetable diet, and especially Gloucester jelly, which consists of a decoction of barley, sago, rice, and eryngo root, with the addition of milk.

ROGERS Med. Phys. Journ. VIII. 1802. P. 82. HARRISON, P. 225.

There is also an interesting paper by Dr. HARRISON, of Horncastle, in Lincolnshire, in which he confidently asserts, that consumption is less frequent in the marshy districts, than in other parts of his neighbourhood: and that several cases which occurred in a dry situation, at Lynn, were checked by a removal to Wisbeach, which is more surrounded by fens.

DR. RUSH adheres, in the Medical Repository, to the tonic mode of treatment, which he says, combined with salivation, has succeeded in two cases: the first case, however, cannot be called an example of the exhibition of tonics, since after bleeding, the patient was confined to a vegetable diet, and took 15 grains of nitre, half a grain of calomel, and one sixth of a grain of tartar emetic three times a day; when sixteen doses had been taken, salivation came on, and the patient was cured: but after some time a fatal relapse occurred, upon taking cold. The same medicine was given in the second case, which was in the last stage, with the addition of mercurial friction, calumba, and elixir of vitriol: allowing wine, porter, and a cordial diet. Salivation did not take place, but the patient recovered, and remained well.

ROBERT CORV. Journ. méd. cont. IV. 1802. P. 251. Fatal hectics after epidemic scarlatinas.

RUSH, Med. Repos. V. 1802. P. 5, 476. SPENCE, P. 16.

SPALDING and BARKER, P. 220. SPALDING, P. 354. VI. 432. PFEIFFER, V. P. 394.

Dr. Stewart had cured another case by similar means, Dr. Physic two, and the author afterwards two more. In a subsequent instance, where there was a copious expectoration, and the patient was too weak to sit up in bed, opium and brandy toddy effected a complete cure in six weeks. Dr. SPENCE's case of a cure of consumption by digitalis is more particularly related in the same volume. The pulse varied from 80 to 100: 110 drops of the strong tincture were taken three times a day without nausea, and reduced the pulse to 45. The remedy palliates, if the stomach will bear it, even in the last stage, when it will not cure. We have also an account of the beneficial effects of alkalis, by SPALDING and BARKER; a teaspoonful of soda was taken for a dose, and alkalis were mixed with all the food: digitalis, sulfuric acid, and bitters all disagreed: the patient had taken, in the whole, near two pounds of potass and soda, which, as the authors imagine, had neutralised some poisonous acid, that preyed on the fibres of the body. SPALDING reports the annual mortality at Portsmouth, in New Hampshire, as amounting to  $\frac{3}{4}$  of the population,  $\frac{1}{3}$  of the deaths being by consumption; that is, 20 in 100, and of these

BRIEUDE *Traité de la phthisie*, 2 v. 3. Par. 1803. *Corv. Journ. méd. cont.* VII. 1804. P. 363.

ON idiopathic hectic, *Corv. Journ. méd. cont.* V. 1803. P. 348.

VIGNE' on a consumption after a fall. VI. P. 107.

20, only five were under 40 years of age. At Montpelier, we are elsewhere informed, the annual mortality amounts to  $\frac{2}{59}$  of the population. PFEIFFER records several cases of a cure by salivation, one of them unequivocal, at the age of 55: but there is great reason to suspect, from his account, that in this instance the spleen had been diseased. In the next volume of the same work we find an interesting case by TRACY, of a consumption relieved by haemorrhage from the nose, which occurred after a useless trial of mild mercurials, digitalis, and sulfuret of potass, and lasted 60 hours, and during which at least six pounds of blood were lost, besides a pound taken from the foot. Extreme debility followed, but it was gradually removed by the assistance of bark and sulfuric acid, and the patient appears to have permanently recovered. We are informed that at NEW YORK nearly one fourth of the deaths are attributed to consumption, or more accurately 395 in 1717.

VITET, in his voluminous *Médecine expectante*, chiefly follows Morton with respect to consumption: in the scrofulous kind he recommends sulfur and dulcamara: in slow fevers he dislikes

TRACY *Med. Repos.* VI. 1803. P. 256. *MED. REP.* VI. P. 443.

A. PORTAL *Cours d'anatomie médicale.* 5 v. 8. Par. 1803. V. P. 31, 82.

C. VITET *Médecine expectante.* 5 v. 8. Lyons, 1803. III. P. 237. I. P. 104.

caustics and all other violent remedies, as tending only to distress the patient. FOULON relates a case of incipient consumption, with mucopurulent sputa, cured by a spoonful of rum, taken every night, with syrup.

We obtain much authentic information respecting the diseases of seamen from Dr. TROTTER's well known Essay; and in particular an account of the circumstances under which consumption became unusually frequent in the channel fleet, after the month of April, 1800. The summer was hot and dry, but the duty in blockading the port of Brest had been very severe: the sailors, wet with sweat, were frequently exposed to currents of air at the port holes, and little time had been allowed for refitting: lemon juice and sugar had been served daily for many months to prevent scurvy, which perhaps might have weakened the digestion, and predisposed to the disease, as connected with something like acidity. Several hundred cases of consumption occurred, and many fatal ones; though, as we have already seen, a great proportion of those patients, who were sent on shore soon enough, recovered under the administration of digitalis. In 1801, the disease was less com-

FOULON *Corv. Journ. méd. cont.* V. 1803. P. 432.

T. TROTTER's *Medicina nautica.* 3 v. 8. Lond. 1804. III. P. 325. 359.

mon, the duty being easier, and the food better. In the greater number of cases, opiates and ether were beneficial; bleeding, and other modes of depletion injurious: and the author somewhat hastily pronounces low diet in general unspeakably mischievous, advising the early employment of a nutritious regimen, in order to prevent debility. With respect to the effect of climate, he has seen scrofulous tumours and ulcers gradually subside, as the sailors approached the tropics, continue well as long as they remained near the equator, and reappear on the passage back to England: and he is persuaded that residing in a warm climate, till the middle age, would be the most effectual mode of preventing consumption. Hectic fever he has sometimes seen assuming the form of a double quotidian, with a long and severe cold fit returning at regular intervals. The pain in the chest may be relieved by frictions, sinapisms, or dry cupping: but more especially by ether, which gives immediate ease when rubbed on the spot. Digitalis was of use in the channel fleet, combined with opiates: but the author has not found it successful in any severe case under his own immediate care: Mr. Lloyd had a patient on board the *Barfleur*, whose pulse was at 106, with expectoration apparently purulent, and who was cured by it: the cases sent on shore were mostly incipient: but care had been taken in collecting the medicine, and the general result

was certainly much in its favour. In order to show the nature of the operation of this remedy, he adduces a case in which it corrected a purulent expectoration, and reduced the pulse from 120 to 70, when the consumption had not arisen from a constitutional but from an accidental cause; which was a plumb stone, that had been pushed down with a probang, and was ultimately vomited up; the patient soon after perfectly recovering. The truly scrofulous consumption seems to be in great measure prevented by the use of salt and salt diet: in scrofulous cases in general, the author has found cinchona with sulfur the most effectual remedy. For a diuretic, he thinks squills, extremely well dried, the most convenient medicine, giving as much as a scruple in 24 hours. Flannel, he says, ought not to be worn next the skin, nor suffered to remain more than one night unchanged: he also recommends daily ablution for hardening the whole body.

Dr. WILSON's compilation on Febrile diseases contains some original facts and experiments, though mixed with some superfluous theories. Respecting the paroxysms of hectic fever, he observes, that the patient's sensation of chilliness generally continues some time after the temperature of the skin, as shown by the thermometer,

A. P. WILSON's Treatise on febrile diseases, 4 v. 8. Lond.  
1803-4. IV. P. 460...

has become elevated above the natural standard: he asserts, in contradiction to Morton, that a disposition to vomit is not by any means characteristic of a consumptive cough. He quotes from an essay of Dr. White, published in 1792, by Dr. Hunter, of York, a remark respecting the pus produced without ulceration, which is said to become acid when kept, instead of putrefying, but which is mixed, where there is ulceration, with putrescent blood and the particles of solids, affording a fetid smell when exposed to heat. Dr. White has also seen the expectoration assume the form of small rounded masses, without having any reason to suppose, with Dr. Stark, the existence of vomicae. The author observes, that ramified coagula are sometimes swallowed, and appear in the alvine excretions. Of the existence of inflammation, he judges by the hardness of the pulse. The urinary sediment consists of uric acid, which is always deposited when an extraordinary secretion from the skin has taken place. In the last stage, the fever and expectoration sometimes disappear together, the pulse falling to 70 or 80, without any improvement in the chance of recovery. A case of consumption, without hectic, or emaciation, or purulent expectoration, destroying merely by suffocation, could not very correctly be called a "consumption," as supposed by the author, but would rather be referable to suffocation, as a species of asthenia, or to

a distinct species nearly resembling it : both ancient and modern nosologists being agreed in referring the term consumption to the body at large, and not to the lungs, which the ancients never examined, and the moderns cannot examine while nosology is of any importance. Influenzas have been supposed to produce consumption more frequently than common catarrh, and this has probably happened from their greater violence. Excesses of various kinds, without leading to syphilis and its consequences, have a direct tendency to predispose to consumption, and to the other forms of scrofula. Enlargements of the liver have sometimes caused consumption without being suspected, and have occasionally been cured by mercurials, together with the consumption depending on them. The disease seems sometimes, though very rarely, to be derived from contagion, and it is wisest to avoid sleeping in the same bed with a consumptive person. The haemoptysis, supposed to be a cause of the disease, is very frequently one of its symptoms. In tubercular cases the expectoration is sometimes at first, as Burserius has observed, like soapy water. Saline cathartics are advisable in the early stages : and nitre, which the author has not found liable to the inconvenience of ultimately raising the pulse : but it

should be given in a state of considerable dilution. Of acids the sulfuric is the most effectual for checking the sweats. Mild animal food, he thinks, may be given with propriety several times a day in the last stage, taking care to avoid the exacerbations. He has often used the lichen without advantage, and has not found the digitalis materially beneficial after the formation of the purulent stage. The best remedy for the cough is generally half a tea spoonful at a time of a mucilaginous mixture, with a little opium and spermaceti: at an early period tartar emetic is a very useful expectorant, if taking in nauseating doses: the vapour of warm water, in which onions have been boiled, is also recommended for softening the mucus when it is too viscid. For the diarrhoea, calumba has been recommended by White and Percival.

Mr. BONNAFOX DEMALET is not distinguished either by learning, or by diffidence: he has, however, often endeavoured to be original. He asserts that the arterial blood, returning from the lungs, is three or four degrees warmer than the venous, which enters it: he observes, that the centre of a tubercle is always first softened, and that the change must consequently depend rather

J. BONNAFOX DEMALET sur la nature et le traitement de la phthisie pulmonaire. 8. Par. 1804. P. 6, 13.

GIRAUDY Manuel des phthisiques. Par. 1804.

on putrefaction, than on any vital power. That a disease may be strictly hereditary, he shows from the example of a contagious consumption among cows, as related by Hurzard, which frequently produced abortion: the calves had all ulcers at the division of the lobes of the lungs, the mothers too had ulcers in the same situation. He mentions constipation of the bowels, and irritability of temper, as frequently observable in the two first stages of consumption. The duration of the second stage is sometimes much protracted, the nails remaining curved, with purulent expectoration, for three years or more. Of the author's metaphysics, we have a singular specimen in the assertion, that "the voice is not a simple vibration, it is animalised, it is alive, like the organs which produce it." He says, that the spasmodic asthma degenerates into consumption, more frequently than the humid: and both more commonly than some modern authors have believed: how much may be gained from this observation, we may infer from the remedy proposed as highly valuable for the relief of asthma, which is the application of an artificial magnet to the chest, and of another, at the same moment, to the soles of the feet.

We find from Corvisart's Journal, that Du-

FRESNOY of Valenciennes had recommended the agaricus piperatus and deliciosus, made into lozenges with spermaceti, sulfur, and conserve of roses, as a remedy for consumption; but we have no evidence of his success. In Sédillot's Journal, we are informed by DOUBLE, that one fifth of the deaths in Paris are from consumption: Dubor of Toulouse states, that two fifths of the patients in an hospital there were consumptive, but the mortality is not reported. RICHERAND relates a fatal case of the disease, immediately subsequent to a rapid growth of more than an English foot in a year: and LADEVEZE recommends emetics and incisives, after the manner of Wagler, Finke, and Stoll, in the consumptions which seem to have become frequent from an epidemic constitution, rather than bleeding and milk diet.

Dr. UNDERWOOD's publication on the Diseases of children, though partaking much more of the nature of a popular compilation, than of a scientific treatise, may still be consulted in many cases with advantage. He approves Mr. Royer's proposal to employ mercurials, for the cure of the mesenteric decline, in the form of enema, thinking, that when thus administered, they may possibly

DOUBLE, Sédill. Journ. gén. méd. XIX. 1804. P. 417. RICHERAND, XX. P. 255. LADEVEZE, P. 260.

M. UNDERWOOD's Treatise on the diseases of children. Ed. 5. 3 v. 12. Lond. 1805. I. 233, 243.

be made to exert a local action on the diseased glands, without much affecting the system. Chermes mineral he has found the most generally useful of antimonials, and he speaks highly of Sir William Fordyce's antihectic combination of rhubarb and sulfate of potass. He considers the hectic fever of children, attending dentition, which has been described by Armstrong, and the infantile remittent of Dr. Butter, as merely varieties of the fever depending on a foul state of the bowels, or the intestinal decline, aggravated by neglect: and says, that the disease is always successfully combated by gentle purgatives; with the addition of light cordials, when it is accompanied by languor.

Dr. BOURNE has made some elaborate experiments on the use of the uva ursi, which he has related with great accuracy; but the remedy has not been very successful in the hands of other practitioners. He had found a mixture of ten grains of this plant, with fifteen of bark, and half a grain of opium, taken three times a day in mint tea, extremely beneficial in relieving a hectic, which accompanied a nephritic affection; hence he was led to try its effects in consumption, and in some cases it appears to have been at least a good palliative. He never found more than a

R. BOURNE's cases of pulmonary consumption treated with uva ursi. 8. Oxf. 1805.

scruple of advantage for a dose, and generally gave only ten or twelve grains, two or three times a day. When it was occasionally omitted, the patient manifestly felt the want of it: its principal utility was in the earlier stages, but several confirmed consumptions seem to have recovered during its administration, together with other remedies, especially small doses of opium. Its operation seems to be immediately on the circulation, lowering the pulse, in one instance to 50 strokes in a minute, but not increasing its force, as digitalis does; nor does it affect a healthy pulse like digitalis. It is found frequently to tinge the urine of a green colour, as Dr. Heberden has also observed: and it improves the state of this secretion in hectic. Nearly half its weight may be extracted in the form of decoction or tincture; and the powder often agrees best with the stomach, when left some time to macerate in a draught. The author is not an advocate for bleeding, or for abstinence, except during the presence of active inflammation. He observes, that the respiration in consumption, where there is ulceration, is more frequently attended by a crackling than a wheezing sound: flatulence in the stomach is also sometimes a troublesome symptom. His "insidious pulmonic abscess," the pulmonic vomica of Willis, does not pro-

perly belong to consumption: abscess after peripneumony, he observes, is generally curable. He has found, that the bark of the shops, as sold in powder, is "always" adulterated, and that it is sometimes even void of any astringent principle.

Some experiments on cold bathing are related in Stock's collections; it appears, that immersion in cold water uniformly makes the pulse smaller, and often almost imperceptible, and when any exertion is used, generally quicker. Rush recommends walking in cold air, in the inflammatory stage of haemoptysis: Brydone saw the good effects of eating ice in the case of an English lady at Nice: and Grose has witnessed the advantage of bathing the chest with cold water, morning and evening, in a consumption which had resisted all other means.

We find, in HAMILTON's valuable Essay on purgative medicines, an account of a variety of tabes, under the name of marasmus, which he supposes to be principally dependent on the want of a proper action of the bowels: it is distinguished by lassitude, loss of appetite, wasting, fulness of the abdomen, foetor of the breath and

J. E. STOCK's Medical collections on the effects of cold. 8. London and Bristol, 1805. P. 185, 110, 112.

J. HAMILTON's Observations on the utility and administration of purgative medicines. 8. Edinb. 1805.

of the faeces, swelling of the lip, itching of the nose, and grinding of the teeth; in the second stage a hectic supervenes, with flushes, and a hot and dry skin. These symptoms are generally attributed to worms, but they frequently arise from the effects of confinement, impure air, and want of proper nourishment. The author fancies that the faeces may sometimes be accumulated, perhaps for months: but there is surely no evidence to authorise such a suspicion: it has never been shown that a foreign body, not retained on account of its form or magnitude, has remained for any great length of time in the intestinal canal, without absolute constipation: and nothing is more fallacious than the appearance of scybala, which are often believed to have been concealed in some imaginary recesses, which do not exist, merely from the preconceived opinion of the observer. It is true that plumb stones and cherry stones have sometimes been retained long enough to form abscesses, but they have probably been entangled in some mucous follicles, which could not have obstructed the passage of a larger substance. Dr. Hamilton's practice is however supported by experience, whatever difference of opinion there may be respecting its theoretical foundation. In the first stage of this disease, mild purgatives

ought to be given at proper intervals: in the second, calomel in small doses, not repeated so often as to produce mercurial irritation, but continued long enough to prevent a relapse; these may be succeeded by chalybeates, light bitters, and lime water, which are the only tonics required. If the marasmus is not properly treated, it may degenerate into hydrocephalus: and even incipient hydrocephalus may sometimes be cured, by the means appropriate to this decline. The author relates some cases in which moderate purgatives of calomel had been given, with but partial advantage, while a full evacuation of dark and fetid faeces, procured by infusion of senna, produced very decided relief, the grinding of the teeth and other symptoms disappearing almost immediately.

In the *Manual of Health*, Dr. BEDDOES does not seem to appreciate the utility of opiates in catarrh quite so highly as in some of his former works; he observes that the paregoric elixir has "sent many prematurely to the shades below," "aggravating all the mischiefs" of the complaint; and he recommends James's powder in preference, without confining the patient to his

HAMILTON. P. 202.

SALMADE sur la contagion de la phthisie. Par. 1805.

[Beddoes's] *MANUAL of health, or the invalid conducted safely through the seasons.* 12. Lond. 1806. P. 197, 193.

bed; meaning, of course, where there is much inflammatory disposition. Colds, he says are often caught by coming cold into hot rooms, a shivering often succeeding the glow which is felt at first: and some colds are quickly stopped by drinking largely of cold water, others by taking the hottest liquids that can be borne. The circulation is often better kept up in the extremities by a poultice of bran, with one sixth or more of flour of mustard, than by friction of any kind: this is a good application for the prevention of chilblains: but the best cure is ether, held to them twice a day. The habit of wearing flannel next the skin has been found mischievous by the most unprejudiced: it produces permanent feebleness, as well as the use of fleecy hosiery: a case is related, in which an accumulation of clothing evidently served only to increase the sensation of chilliness and numbness. The effect of a change of temperature is not always proportional to the number of degrees expressing it: thus a depression of  $12^{\circ}$ , from  $60^{\circ}$  to  $48^{\circ}$ , makes us feel the want of a fire: the depression from  $44^{\circ}$  to  $32^{\circ}$  is much less sensible. The art of killing by expectation is often practised in the first insidious attack of consumption, the slight pleurisy with which it commences being perpetually neglected. The

exposure to cold winds often occasions swellings of the parotid glands alone; on the contrary sudden hot weather more frequently causes, in scrofulous children, enlargements of the more sheltered glands under the chin only: so that either heat or cold may be the immediate cause of such enlargements. Hectic flushes sometimes occur from mere want of vigour, without any general fever: the sensation in the hands and feet does not appear to arise from any excess of heat in those parts, the whole skin being, as the author thinks, equally dry and heated.

The sensations are not always correct tests of safety; for a cold may be caught by exposure to grateful breezes and draughts: although in general, pleasure is a great remedy, and mechanical occupations which amuse are highly conducive to health: thus dancing fatigues less than walking, and journies much less than airings. The atmosphere of hospitals often seems unfavourable to hectic patients: and some find the sea air too sharp, as Currie appears to have done. Change of climate is generally recommended, when the practitioner feels that nothing more remains to be done by art. Clifton water is of no manner of use: though some other waters may be pernicious; it has been supposed that small quantities of lead,

taken in water, have occasioned scrofula and consumption: it is well known that the administration of mercurial medicines sometimes causes a disposition to consumption: but perhaps the author ought to have added, that it is principally by causing debility, and injuring the general health, that they produce this effect. The West of England, taking its mildness and moisture both into consideration, has no advantage worth the trouble of a journey even of 50 miles: myrtles grow there, because the air is damp; but myrtles are not men and women in these days: it is just as easy to be warm in one's own house as in Devonshire; and home has always its comforts. It deserves to be mentioned, however unconnected with the present subject, that Zinke seems really to have done good in preventing hydrophobia, by applying an arsenical paste to the bite.

Dr. GIRDLESTONE, in a paper on the use of arsenic in lepra, asserts that Dr. Beddoes had saved the lives of several persons of a consumptive family, who had mesenteric affections, by means of this powerful remedy.

Dr. JOHN REID's essay on Consumption is con-

BEDDOES. P. 386, 348. 409.

GIRDLESTONE, Med. Phys. Journ. XV. 1806. P. 299.

J. REID's Treatise on the origin, progress, prevention, and treatment of consumption. 12. Lond. 1806.

fessedly more a popular than a professional work. He speaks highly of the utility of the sulfuric acid and of opium in haemoptysis. He quotes the observation of Winterbottom, that the Nova-scotians, who settled at Freetown in Africa, became occasionally consumptive, after other diseases, and died sooner than they would have done in a colder climate. He considers tepid bathing, from  $90^{\circ}$  to  $96^{\circ}$ , as generally very salutary, and always innocent, at the first attack of consumption: and relates a case, in which cold water, drank by a person unusually heated, occasioned a fatal inflammation of the thoracic viscera. Small doses of digitalis he thinks stimulant; steel beneficial in cough with haemoptysis; emetics and nauseants often of advantage, especially where a determination to the uterus is required, as for removing amenorrhoea. A pain in the side sometimes occurs from muscular debility only; and is most sensible during the act of expiration; a pain from pulmonary inflammation during inspiration: in fact, however, many muscular affections must be expected to cause most pain during inspiration. Emetics are often highly beneficial in mesenteric diseases, or hepatic obstructions, complicated with cough and other symptoms of consumption: and of

REID, P. 102, 185, 225, 246, 299, 303, 307.

WICHELHAUSEN über die lungensucht. Manh. 1806.

steel, in a variety of tabid disorders, attended by hectic fever, it is scarcely possible to speak too favourably.

Dr. W. HAMILTON has collected the principal facts which had been ascertained respecting the digitalis, and added to them some experiments and observations of his own. He is disposed to consider it rather as a direct sedative than as a tonic, but he has not found it advisable to employ it early in inflammation, as Ferriar, Mossman, and Currie had done. He agrees with Mossman, that it is of little or no benefit unless the circulation is retarded before any deleterious effects are exhibited: nor does he appear to contradict the assertion of Ferriar, that even when the reduction is effected and the symptoms mitigated, the relief is in general but temporary. He could discover no greater difference in the frequency of the pulse, in different postures, under the influence of digitalis, than in other cases of debility: he agrees with Maclean that the infusion is more diuretic than the tincture. He is persuaded that it possesses no power over inflammation, and that where there are inflammatory symptoms, low diet and not tonics must uniformly be employed. It may be given in a

W. HAMILTON's Observations on the preparation, utility, and administration of the digitalis purpurea. 8. Lond. 1807. P. 61, 70, 80, 103.

saline draught, or with lemon juice after an alkaline solution: its greatest utility is before the commencement of inflammation. Dr. Maton, in Freake's Essay, has suggested that it may be combined with hop: and during its administration, the preservation of a regulated temperature is of the highest importance. Half a grain of the powder, with as much opium, given every four hours, will sometimes suspend the symptoms of spasmodic asthma.

MOUTON has published a variety of cases, not the most desperate, in which the digitalis appeared to be extremely useful; he gave a grain and a half of the powder every morning fasting, with some Dover's powder, for forty days, and sometimes the strong tincture, from 16 to 112 drops daily: the plants which he used were not in the highest perfection.

Another essay on Digitalis was published in 1808, by Dr. SANDERS, attempting to prove that its beneficial operation is always tonic, and never sedative, and that the reduction of the pulse is always mischievous, except when it depends on

ANSIAUX on the rapid growth of three consumptive brothers.

Corv. Journ. méd. cont. XIV. 1807. P. 263.

MOUTON Sédill. Journ. gén. méd. XXIX. 1807. P. 13.

J. SANDERS'S Treatise on pulmonary consumption, to which is added an inquiry, proving that the medicinal properties of the digitalis are diametrically opposite to what they are believed to be. 8. Edinb. 1808. P. 126.

the subtraction of irritation. He thinks opium always injurious in inflammatory consumption: swinging or sailing, like sitting, he says, can only diminish the frequency of the pulse in comparison with standing. He confirms the remark of Galen, that the affusion of cold water in hectic does not lower the pulse. He has found some advantage from the inhalation of muriatic acid vapours. He mentions the fatal event of a paracentesis of the chest, performed in order to relieve a sense of suffocation, the atmospherical air appearing to have rushed in and caused the collapse of the lungs; although he thinks that this circumstance does not always happen, perhaps because there have been adhesions, in the cases that he has observed. He appeals to a great number of witnesses of the decided effect of digitalis in immediately raising the pulse; and he relates a remarkable case of its efficacy, when taken in doses of 20 drops of the tincture every two hours for three days. Dr. LAFFAN states clearly, from a number of experiments, that digitalis given in health at first occasions an increased force and frequency of pulse, but that the subsequent sedative effect was greater than could have been the simple consequence of the preceding excitement. Dr. Sanders thinks that the weakest bear digitalis best, except after sud-

den depletion, agreeing rather with Withering than with Beddoes: and if the pulse becomes strong and rapid, he says that the dose must be diminished. For scrofulous tumours, before they ulcerate, he found the muriate of lime the best remedy, in doses varying from five grains to two drachms, taken three or four times a day.

Dr. WOOLLCOMBE has collected a variety of facts relating to the mortality by consumption in different places, from documents more or less complete. At Bristol, according to Beddoes's *Hygeia*, 10 die of consumption out of 24; at Warrington out of 30; in London, 32; at Shrewsbury 40; at Plymouth, according to his own observations in the dispensary, 43; at Ackworth, 43; at Holycross, Shropshire, 50; and at Chester, according to Dr. Haygarth's statement, care being taken to exclude all cases in which there was no cough, 10 out of 54. He remarks that the apparent increase of the comparative mortality by consumption is not a direct proof of its absolute increase; since it is possible that the difference may arise from the smaller number of deaths that occur from other diseases, in proportion to the increased population: but he confesses that the general salubrity of the country can scarcely

W. WOOLLCOMBE'S Remarks on the frequency and fatality of different diseases, particularly on the progressive increase of consumption, with observations on the influence of the seasons on mortality. 8. Lond. 1808.

have increased in a century so much as in the proportion of 2 to 3; which it must have done in order to explain the variation in this manner. The disease is by no means so much confined to youth, as is commonly supposed. According to Dr. Haygarth, half of those who died in two years at Chester were above 30; at Warrington three eighths had passed 45: and it appears that at Plymouth two thirds were above 30. In fact if we calculate from the tables inserted, it will appear that the mean age of those who died at Chester was about 31, at Warrington about 33. Dr. Woollcombe has reduced Short's tables of mortality for different months, according to the number of days in each: hence it appears that, from the average of more than 30 different registers, in different parts of England, the daily mortality may be called, in numbers derived from Dr. Woollcombe's, for July 827, August 877, September 963, October 969, November 1002, December 1021, January 1100, February 1137, the greatest, March 1102, April 1081, May 1006, and June 914. At Montpelier, however, he observes that the mortality of the six months from June to November, which may be called the autumnal half year, is nearly one third greater than from December to May. It may be added that at Vienna, according to Gruner's report for 1788 only, quoted in the 85th volume of the *Journal de médecine*, the greatest mortality is in May,

and the least in September, the half year from February to July being much more unhealthy than the remaining six months; the proportion of deaths being nearly as five to four.

Dr. BADHAM, in his essay on Bronchitis, describes a spurious consumption without ulceration, resembling the mucous or pituitous consumption of the Germans, which he says sometimes originates from the bronchitis asthenica, or peripneumonia notha: the chest, in this affection, may be extended to its full capacity without much uneasiness, the substance of the lungs not being diseased: the patient can lie down without difficulty: the sputa, as Stoll describes them, are viscid, and like paste: the skin wrinkled, dry and scaly. There is some fever, with sweats, and emaciation, but the patient generally recovers in milder weather. The lichen is occasionally of advantage, but has been praised too highly by Stoll. The author has found the sulfurets of antimony less likely to produce vomiting than the other preparations.

Mr. WATT has advanced some singular opinions, and related some bold experiments, in his Cases of diabetes. He has carried bleeding to a

C. BADHAM'S Observations on the inflammatory affections of the mucous membrane of the bronchiae. 12. Lond. 1808.

R. WATT'S Cases of diabetes, consumption, &c. with observations on the history and treatment of disease in general. 8. Paisley. 1808.

very unusual extent in consumption, as well as in some other diseases. His object is to excite a febrile reaction by repeated bleeding, which is to be sufficient to overcome the disease. He gives, at the same time, calomel and opium, so as to produce salivation, an effect which he thinks principally beneficial, from the impossibility of taking food during its continuance: and he enjoins strict abstinence, together with bleeding. In two cases of consumption, after exposure to cold, he succeeded by means of bleeding and abstinence, in bringing on a "febrile action," which "completely restored the blood: the process was aided by casual diarrhoea, and by perspiration." In a third case, the appetite improved, and was excessively indulged, and an exposure to cold brought on a fatal hectic. He has treated many others in the same way, and the "greater number recovered." Mercury not only assists in bringing the fever to a salutary crisis, but serves also as a test of the practicability of a cure, by affecting the mouth: he thinks corrosive sublimate, on the whole, the best form of this remedy. He justly observes, that it may be as practicable to cure sweating by sudorifics, as diarrhoea by cathartics. His success in diabetes has been confirmed by that of Dr. Satterley and some others; but it is difficult to obtain sufficient evi-

dence, to justify the adoption of so severe a mode of treatment.

However the frequency of the connexion of consumption with scrofula may have been over-rated, it cannot be denied, that many hectic affections originate from scrofulous causes; and the treatment recommended in scrofula must in some measure tend to illustrate the subject of consumption. Mr. RUSSELL's essay on Scrofula appears to afford the latest and best information, respecting this disease. He observes, that it is principally found between the latitudes of  $45^{\circ}$  and  $60^{\circ}$ , especially in damp and cold situations: that it is clearly hereditary, that is, as far as relates to the transmission of a particular liability to the disease: it is not infectious, nor could Kortum succeed in the attempt, to propagate it by inoculation, though, with more curiosity than humanity, he frequently repeated the experiment, which only occasioned a little local irritation. Persons of a scrofulous constitution should not abstain from a nutritious diet of animal food: the younger children of a family have been preserved by its adoption, where the elder had suffered from an injudicious confinement to vegetables: too much exertion should also be avoided, excess of fatigue having sometimes in-

duced the disease. Cold sea bathing is a good remedy, when it appears to agree at the time: if there is much debility, the warm bath may be premised, or may be used alone: it relieves the distressing "dryness of the skin, which often accompanies scrofulous emaciation and weakness:" indeed in many cases of plethora it seems to do better than cold bathing: and there is no material risk of taking cold: the temperature may be from  $90^{\circ}$  to  $100^{\circ}$ , and the patient may remain in the water from 12 to 20 minutes. It is doubtful, whether the effects of sea water in bathing have been very accurately ascertained: but it can do no harm: and the author might have added, that there some cutaneous irritations, which probably aggravate the disease, and which are manifestly relieved by the effect of the saline contents of the water. Invalids should begin bathing early in the season, in order to secure the whole advantage of mild weather. They should allow themselves a sufficient portion of sleep, and should keep early hours. In plethoric cases, salt water may be of use internally, but in the author's opinion, merely as a purgative. In debilitated constitutions also, the bowels may want some assistance, to enable them to perform their functions; and on the whole, the waters of Harrowgate and Moffat have generally been bene-

ficial. Calomel is undoubtedly very useful ; but it should not be given so as to produce the specific effect of mercury, which has sometimes been the beginning of fatal scrofula: from one to three grains only should be taken daily, and continued for some time: but in affections of the bones, it appears to be useless. Bark, calumba, chamomile, sulfuric acid, and especially iron, may be given where tonics are required: hemlock is of some use, but its virtues have been much overrated. The muriate of lime has been fully tried by Professor Thomson and others, without success, and in some cases with manifest disadvantage: in one instance, however, a patient recovered, after taking an ounce of the solution three times a day for many weeks. Issues seem to have been very decidedly beneficial, as preservatives from scrofula. In scrofulous hectic, sulfuric acid and saline draughts appear to agree better than bark, at least in the earlier stages.

A note of VALENTIN informs us, that the superacetate of lead is much used in America, by Barton and others, in consumptions and hæmorrhages, combined with opium and ipecacuan.

The late Professor RICHTER has published, in the Transactions of Gottingen, a memoir on the cure of consumption by an operation; but he

RUSSELL, P. 81, 103, 116.

VALENTIN, *Corv. Journ. méd. cont.* XV. 1808. P. 359.

RICHTER, *Comment. Gott.* XVI. 1804-8. P. 1. Read 1805.

recommends the practice only where there is an abscess, which decidedly tends to make its way to an external part of the chest, and especially where the disease is not constitutional: and he objects to Mr. Bell's operation of cutting into the cavity of the chest, and feeling for the lungs with the fingers, as much too hazardous to be attempted. He thinks the great difficulty of curing consumption consists in the want of a depending orifice, and says, that the patient should be as much as possible in the horizontal position, in order to obviate this inconvenience. A case is mentioned, in which Dr. Hofmann found great benefit from the use of emetics, and the author had been equally successful, in prescribing ipecacuan to a woman of 40, who survived ten years, and in the course of that time took six hundred emetics.

The neglect of venesection in catarrh is mentioned, as a cause of consumption, in the Reports of Professor FRANK, who confesses that he was formerly too much influenced in his opinions and his practice by the imaginary theories of Dr. John Brown. He however still advises a nourishing diet in consumption, and relates a case in which it was successful, with the assistance of tonic remedies: another in which the juice of

nettles was given as an antiscorbutic, but without benefit, and a third in which the patient recovered, after the expectoration of a spike of corn. The acetate of lead was ineffectual in relieving a diarrhoea, which was afterwards stopped by Dover's powder. Digitalis, he thinks, may be useful in florid persons, where there is haemoptysis, and bitters, with aromatics, or ether, may be employed for obviating the bad effects of an over dose. The infusion of the seeds of the phellandrium aquaticum often relieves very essentially, by promoting expectoration. The sweats are checked by sulfuric acid with paregoric elixir: where there is much weakness and no plethora, the infusion of hyssop may be very beneficial. For relieving oedematous swellings of the feet, the author recommends fumigation with juniper berries, and diuretics, as nitrous ether, juniper, restharrow, and parsley root. Diffused pain of the chest is often removed by the application of volatile liniments: theriac is sometimes better than opium for checking the diarrhoea: and in the last stage, a

A. PORTAL Mémoires sur la nature et le traitement de plusieurs maladies. 3 v. 8. Par. 1808. I. P. 248. On the glands of the lungs. P. 293. On consumption, against contagion. II. P. 70. On the communications of the lungs. From the Memoirs of the Academy.

R. HOOPER'S Physician's vademecum. 12. Lond. 1809. P. 220. A useful collection of memorandums.

little spirit of hartshorn is frequently very refreshing. A case is mentioned, in which the hot and cold stages were as violent as in an intermittent: but the other symptoms identified the nature of the disease: the beauty of the person was of that kind which is often indicative of scrofula, and the result of the case confirmed the opinion of its nature. The annual mortality at Wilna is greater than might have been expected in a town of moderate dimensions, amounting to  $\frac{1}{22}$  part of the inhabitants.

Dr. PEARSON has entered into a minute detail of experiments on the chemical pathology of pulmonary affections, the results of which have been made public at different times in the Philosophical transactions. The first paper relates to the properties of expectorated matter, of which seven varieties are distinguished: the first is gelatinous, bluish, semitransparent, healthy mucus, sinking in water when free from bubbles of air, and containing a few globules, visible by means of the microscope: the second, the thin mucilaginous transparent matter of catarrhs, generally secreted in great abundance, sinking when left in water, and becoming fetid sooner than pus, without losing its transparency: the third, the opaque, straw coloured, tenacious matter, produced by the irritation of tuber-

cies not yet in suppuration, or secreted in pneumonia, resembling thick cream, and free from any offensive smell: it appeared to contain some globules larger than those of the blood, and more permanent, which in all probability were particles of fat: the fourth is puriform matter not produced by ulceration, as has been ascertained by dissection in one case of measles, and in another where the lungs had assumed the appearance of liver: it mixes easily with water, but afterwards subsides, and it appears to be distinguished from pure pus, by coagulating at a heat of about  $160^{\circ}$ , as the first and third varieties are also found to do: the fifth is a mixture of the second with nodules of the third or fourth: the sixth, pus from tubercular vomicae; and the seventh, pus from vomicae not tubercular. Dr. Pearson concludes, from his various experiments, that expectorated matter affords, by evaporation, from  $\frac{1}{15}$  to  $\frac{1}{45}$  of dry animal matter, but most commonly about  $\frac{1}{25}$ : it contains muriate of soda, potass, phosphate of lime, and some ammonia: the thickest matter is the least saline, leaving after evaporation a dry residuum, which is only softened by exposure to the air, while the thin sanious fluid affords a deliquescent substance; and pure pus, on the other hand, when it has been dried, attracts no moisture: the serum of the blood or of a blister, notwithstanding its apparent tenuity,

leaves  $\frac{1}{12}$  of a brittle residue, which is much more than is usually obtained from the thickest expectorated matter. An experiment of Professor Colman is cursorily noticed, which shows that the morbid matter producing or constituting disease is sometimes actually mixed with the blood, the glanders having been communicated by transfusion from a horse to an ass; but not from an ass to a horse.

Dr. PARR's edition of the London medical dictionary informs us, that the calculi of the lungs, when analysed, appear to be formed from the animal fluids, and not to consist of foreign particles inhaled. Consumption is said to be common in those who are liable to cutaneous diseases, the conglobate glands being affected by the absorption of morbid matter from the skin. The patient "never" can lie on the side affected. The editor has seen six examples of recovery, principally spontaneous. The pain is to be pursued by blisters as it changes its place. It is well known that pregnancy often affords a temporary relief: and it has sometimes effected a permanent cure. Emetics often succeed in haemoptysis, and may be given without informing the patient of the operation intended: especially ipecacuan. Mild diaphoretics are useful:

sudorifics in general are too heating. A cough is often relieved by applying a blister to the nape of the neck: of demulcents, gum arabic is the best. Balsams are only of use where the expectoration has been checked from debility, and the antihectic of Poterius has sometime been beneficial in similar cases: myrrh is occasionally of service as a slight tonic and a sedative; bark is only proper where there is great weakness. Cicuta may be useful as a narcotic, and hyoscyamus, especially the seeds, which are more uniform in their quality than the extract. Digitalis certainly does more harm than good: mercurials seem to be of little use. Sulfuric acid is merely a palliative. In winter the sea side must afford a milder climate than inland situations. In the countries best adapted for a residence, there are vicissitudes which the houses are ill calculated to obviate: even in the West Indies consumption is not unknown. It is sometimes a good precaution for the patient to get into bed not completely undressed, in order to avoid chills. Hemlock frequently palliates the cough without increasing the sweats so much as opium would do: on the other hand gentle diaphoresis, obtained by antimonials and opium, sometimes relieves the hectic sweats. Where there is flatulency, assafoetida may be given, which has also the advantage of acting as an expectorant. In the last stage, no benefit

can be expected from emetics, and their effects may be inconvenient, and even dangerous.

The work of PORTAL has been sometimes considered as the most important essay on Consumption that has been published since the time of Morton: it appeared in 1792, and was translated into German by MUEHRY, and into Italian by FEDERIGO; the second edition contains most of the observations of the translators, with the author's replies. His subdivisions of the disease are numerous, somewhat resembling those of Morton and Sauvages: his first species is the scrofulous phthisis, which he considers as either constitutional or accidental: the second is the plethoric, and the remaining twelve are merely distinguished by their causes, which are chiefly pneumonia, eruptions, catarrh, asthma, gout, calculus, scurvy, syphilis, fever, excesses, parturition, and accidents. Tubercles, he thinks, may be of three kinds, in the substance of the lungs, in the lymphatic glands, and in the bronchial bodies: the two former kinds being principally observable in scrofulous consumptions, the latter in catarrhal. In one case, in which death was preceded by haemorrhage, the lungs were found hard and callous. Contagion is certainly not one

A. PORTAL Observations sur la nature et le traitement de la phthisie pulmonaire. 2 v. 8. Par. 1809. I. P. 2, and Mém. Ac. Par. 1780, Anat. Med. III. V. Obs. 1. P. 34.

of the causes of the disease : a husband has been known to lose two or three wives in succession by consumption without being infected ; and all precautions are absolutely superfluous : Federigo, Cocchi, and several other physicians of Italy agree that even in that country it is not contagious : but Mühry adheres to the opinion of Galen, Morton, Sarcone, and Frank. In consumption with amenorrhoea, the French seem uniformly to direct their practice to this symptom, and the application of leeches in large numbers, as near as possible to the parts affected, is a favourite remedy, with occasional bleeding in the feet : nor does this mode of treatment appear to have been always unsuccessful. Federigo recommends rhubarb also as an active emmenagogue, and he is certainly correct in asserting, that it does sometimes act powerfully on the rectum and the parts in its neighbourhood. Sea voyages Portal has sometimes known to be of advantage : the exercise of the voice in singing he has discouraged, but in several cases the patients do not seem to have been the worse for neglecting his advice. He has frequently used mercurials with success, in combination with antiscorbutics and bitters, having been induced to try them from the analogy of the disease to scrofula and rickets : nor has he found reason to alter

his practice since the publication of the first edition: in one instance a mercurial syrup was continued for four years, with a cautery on the arm. In another part of the work, however, he expresses a suspicion, that wherever mercury has been beneficial, the disease has been of syphilitic origin: but he might with equal justice have added, according to his own principles, that it might have originated from scrofula or rickets. Federigo quotes Berlinghieri as having cured a periodic haemoptysis by large doses of bark. The connexion of consumption with scrofula is established by the symptoms of scrofula which frequently accompany it, as a part of the same disease: and by an instance of a consumption which took place after some glandular swellings had been repelled. Federigo relates a case in which a peripneumonic abscess burst externally, the orifice communicating with the bronchiae: the patient afterwards recovered. Of the digitalis, the author has no reason to think favourably: nor does he prefer the modern fashion of giving animal food in abundance to scrofulous children. He thinks the antihectic of Poterius has sometimes been of use, but that it requires to be given cautiously: it is made by deflagrating one part of metallic antimony and one of tin, with six of nitre, and washing off

the superfluous salt. Styptics, in particular the sulfuric acid, he thinks injurious in consumptive haemoptysis, and considers Barthes as having done much mischief with this acid. Bleeding is not advised in scrofulous consumption, but in a catarrhal case, the author bled a man of 78 three times, with perfect success: he has often attempted to reproduce psora, when it had been too hastily cured, without the use of internal remedies, and has sometimes succeeded in this object, but without saving the patient. There is also a case of consumption, preceded by a swelling in the arm, occasioned by checking the axillary secretion, by means of alum: Lorry also, in his work on cutaneous diseases, has an instance of the occurrence of consumption after the removal of a wen. Blisters are most useful at an early period; moxa or other cauteries may be employed later. The author does not consider the percussion of the chest as affording much assistance in judging of the state of the parts contained in it: he has often found the sound appear clear when there has been great congestion within. In catarrhal phthisis, he prefers ipecacuan to antimonials: three or four grains may be given three or four times a day, till the pulse is lowered; afterwards the quantity may be diminished: he also advises

a lozenge of ipecacuan, with gum ammoniac and some vegetable extracts. He denies the existence of the mucous consumption of Murray as a distinct species: observing that the sputa may be mucous and abundant in any of the varieties. Though consumption may sometimes have followed asthma, yet dropsy of the chest is more frequently the consequence of that disease. When there is danger of haemoptysis, Portal thinks emetics hazardous: but in this respect he is surely mistaken: he says they have sometimes been useful in rheumatic phthisis, with the extract of aconite as a deobstruent. That even soft particles floating in the air may excite consumption, appears to be shown by the example of some of Portal's pupils, who were barber surgeons by profession, and who found it necessary to leave off hair dressing. The expectoration of membranous substances appears to have indicated a mild form of the disease, which may possibly have been situated in the mucous membrane: but a genuine well marked phthisis has probably never been completely cured. Bark he thinks not advisable unless there is a considerable remission of the fever: Mühry says there must be an intermission, but Portal very truly denies the occurrence of a perfect intermission in hectic. Riding he thinks beneficial in nervous consumption:

when the disease occurs during pregnancy, or after an accident, bleeding is generally of advantage: sometimes the principal pain is felt in the umbilical region, or in the neighbourhood of the kidneys: probably from pressure on the nerves belonging to these parts, as they pass through the chest; and the nerves of the voice may be affected in a similar manner: there is also frequently a pain in the larynx and pharynx, so that swallowing is difficult: the lungs themselves have less sensibility, and when a foreign body is lodged in them, it frequently occasions no pain. The black expectoration sometimes dissolves in water and colours it, sometimes is fibrous and insoluble, and in the latter case the danger is greater. Mühry thinks the tests of pus, proposed by Darwin, Salmuth, and Grasmeyer, occasionally fallacious, but considers the question as of little importance: Portal admits their insufficiency, but thinks that a better criterion would be of considerable utility. He quotes, from Wichmann's *Diagnostics*, a remarkable instance of a polypus expectorated, resembling arborescent vessels, and probably of the same kind with those which are described by Tulpus. A large calculus is also mentioned, from Nolte; after its discharge the patient recovered. Mühry has seen some cartilaginous substances resembling

the rings of the trachea: but Portal is confident that they must have been membranous secretions only. He says that the consumptive pulse has a double stroke: but he never records the absolute frequency of the pulse. He has never known the evening exacerbation of fever wanting in confirmed consumption. The patient "seldom" sleeps on the sound side; and never, if there is effusion into the cavity of the thorax: we have seen that Dr. Parr says just the reverse. The liver is often so forced down, by the disease in the chest, as to present an appearance of enlargement, which may sometimes deceive even the most attentive observer. The progress of the disease was so rapid, in the case of the Duchess de Pienne, that she died in ten or twelve days after the first alarm. The true laryngeal consumption is generally slow in its progress. The jugular veins are frequently tumid, although the whole quantity of blood in the system appears to be generally diminished: if they are not emptied during a deep inspiration, we may be sure that the lungs are obstructed. The author asserts, that if blood be mixed with pus, and kept in a warm place, it will very soon be decomposed, and lose its colour: but granting the truth of the fact, it by no means follows that the change is produced by putrefaction: for putre-

faction does not very rapidly alter the colour of the blood, as Senac appears to believe. Ferrius, and some other authors, have defined consumption as "an ulceration" of the lungs: a character which Portal justly reprobates, as depending on a fact which cannot be ascertained during the life of the patient: observing that Sauvages has adopted, in his nosology, the far more eligible method of determining diseases from their symptoms only. The author describes the bronchial bodies as having naturally no excretory ducts, though they often contain a blackish blue liquid, which extends to the bronchiae. Some lymphatic glands are mixed with them, but they are more abundant near the surface of the lungs; they are smaller and rounder than the bronchial bodies. These bodies are generally the seat of the consumption succeeding to peripneumony or catarrh, though they often remain sound in constitutional consumption. The author does not deny the existence of tubercles formed simply in the cellular membrane, such as Baillie has described: but he insists that there are also two other kinds, occupying these bodies and the lymphatic glands respectively, the latter frequently combined, in constitutional consumption, with the tubercles formed in the cellular membrane, as well as with enlargements of the

lymphatic glands in other parts of the body. The ramifications of the bronchiae are often filled with concretions of a tough substance, probably lymph, and such concretions are not confined to persons who have been breathing dusty atmospheres, though in such cases they may contain foreign particles. Portal has sometimes seen the whole trachea lined by a crust resembling bone; fragments of which may perhaps have been mistaken for the natural rings. The usual weight of the lungs in health is from a pound to a pound and a half: in consumption they sometimes weigh five or six pounds: sometimes they are much reduced in bulk, and leave a "vacant space" in the chest. Although the author disbelieves the contagion of phthisis, he takes it for granted, without any kind of proof, that the disease may be derived from a nurse. Bark, he thinks, may be of use where there is well marked atony, as in very old persons, as well as in consumptions following intermittents: among many other articles of equal efficacy, he recommends the distilled water of milk. Climate he seems to consider as of little importance: he has known consumptions, in the inhabitants of Languedoc or Provence, retarded by a removal to Paris, and others accelerated, in English persons, or those of other Northern nations, who had

gone to the South of France for a purer air: at the same time he allows that, in the early stages of scrofulous consumption, it may be advisable to seek a warm sea air, though injurious when the disease is confirmed: nor would he recommend the sea side in scorbutic cases. For diet, he thinks the mildest food the best, and particularly newly laid eggs. He has found benefit from the application of a cataplasm of soot and mustard, or of roasted garlic, to the arms; it seems to have saved a patient in imminent danger of suffocation. He thinks the inside of the arm, the axilla, or the side of the chest the best place for drains of all kinds, on account of the communication of the subjacent cellular membrane with the lungs, which he has demonstrated by the injection of water: but it is difficult to believe, that the morbid fluids, thrown out in consumption, are ever at liberty to travel through these cells, in search of an issue.

A consumption occasioned by the stoppage of a bone in the oesophagus is described, in Sédillot's journal, by GAULTIER CLAUBRY: it remained fourteen years, and was forgotten: the patient seemed in the last stage of consumption, but the chest sounded well on percussion, and

PORTAL, Obs. II. P. 404, 441, 443. Mém. sur plus mal. II. 70.

GAULTIER CLAUBRY Sédill. Journ. gén. méd. XXXIV. 1809.

P. 13. HILDEBRAND. XXXV. P. 100. MARCESCHEAU,

XXXVI. P. 56. SEDILLOT. P. 63.

the back of the mouth appeared purulent and bloody: an emetic was ordered, but before it was administered, the bone was brought up spontaneously, about the size of the thumb nail, and the patient recovered: the haemoptysis had continued for four years. Dr. HILDEBRAND of Lemberg is said to have cured four cases of consumption, out of 17, with sugar of lead and opium; in the rest, the suppuration was too far advanced. Marcescheau gives an abstract of a remarkable memoir of DE METTERNICH on the success of large doses of the extract of bark, which he gave in three cases of confirmed consumption, in the years 1780, 1784, and 1787, and all the patients survived many years: one of them took six drachms daily for several weeks, which is estimated as equivalent to six ounces of the powder, though in reality hardly more efficacious than a single ounce: the author professes to have effected several other cures, but mentions no further particulars respecting them: the remedy is supposed to have acted as a specific, without any assistance from regimen or diet. SÉDILLOT continues the discussion of the merits of bark, and relates a case, after leucorrhoea, which he saw in consultation with Dr. Crichton; they recommended bark, wine, and horse exercise, with a rubefacient application to the chest; in six months, the patient was perfectly recovered, and lived ten years afterwards.

Dr. PEARSON continues the account of his interesting researches on morbid secretions in the Philosophical transactions for 1810. His Observations and experiments on pus leave us little reason to expect much assistance, from chemical tests, in distinguishing it, although he confirms Mr. Hunter's assertion, that it is inspissated by the muriate of ammonia, forming a viscid jelly, while neither mucus, nor the mucopurulent expectoration of consumption, undergoes a similar change: nitre, and common salt, he observes, have the same effect, which he is disposed to attribute to the mere abstraction of the water, since the other properties of the substance are not changed. The immediate constituent parts of pus, as separable by analysis, are an animal oxyd, which seems to resemble the compound animal extract noticed by Berzelius, a coagulable serous fluid, and minute globules heavier than water, besides a greater or less admixture of visible curdy masses of self coagulated lymph, a small quantity of blood, giving a tinge of red, black, or brown, and some foreign particles, derived from the substance of the neighbouring parts, broken down by the process of ulceration, and sometimes of putrefaction: the foetor he finds dependent on the presence of a distinct extractive

matter, which may be separated, by washing the pus with water: the specific miasmata of contagious diseases must also sometimes be contained in pus, though not discoverable to the senses. These component parts may be present in different proportions; cream like pus consists almost entirely of the opaque oxyd, and the limpid liquid: the curdy variety contains much coagulated lymph: the serous abounds in the limpid liquid: and the viscid depends on coagulation, and perhaps inspissation, by the combination of neutral salts with the opaque oxyd.

The essential parts of pus are secreted in the form of a transparent fluid; it is rendered opaque by the spontaneous coagulation of a part of them: but even in the transparent state, the globules may be discovered by the microscope. These globules may perhaps consist of lymph, or they may possibly be those of the blood somewhat altered. The whole fluid affords by evaporation a residue nearly in the same proportion as that of the blood: it contains less of saline matter than serum, and is hence less irritative to a sore. When phosphate of lime is present in excess, it appears to be deposited in the form of calculi, which are found to consist of this substance, sometimes almost alone, but at other times united to three times as much of animal matter. The substance, thus constituted, is generally secreted

with inflammatory action; but sometimes the serous membranes secrete pus without inflammation.

The different kinds of expectorated matter may often be distinguished by the circumstances under which they appear. When a pleuritic abscess bursts, we observe of course a large expectoration of pus, mixed with some mucus: and the rupture of a vomica will necessarily occasion a sudden change in the appearance of the mucopurulent matter. In the bronchial inflammation attending catarrh or measles, a cream like fluid is coughed up, which is free from adventitious substances, and sufficiently distinct from mucus. The true mucopurulent matter seems to be rather an intimate combination of mucus and pus, than a mere mixture, as the author had formerly supposed: for the pus and mucus composing it cannot be separated. It exhibits fewer globules, than pus, and is more putrescent: it coagulates into a more uniform mass than mere mucous sputa: it generally leaves from  $\frac{1}{10}$  to  $\frac{1}{15}$  of residue; thick pus  $\frac{1}{7}$  or  $\frac{1}{8}$ , transparent mucus  $\frac{1}{20}$ . It is produced without ulceration, by various irritations, as sometimes from the nostrils, towards the end of a coryza. Mucus, in health, contains some globules, and a little lymph, which may be separated from it by agitation in water: with a greater proportion of the lymph, and more of the globules, it may easily be supposed to constitute pus; and

these different modifications may be varied, or combined, in all imaginable proportions.

Dr. Buxton has related several cases, besides those which Dr. Beddoes had published, of the benefit derived from a temperature confined within the limits of  $60^{\circ}$  and  $65^{\circ}$ : one of them, according to Dr. Jenner's report, was "on the verge of pulmonary consumption:" in two others, under his own care, there was hectic fever, but apparently no purulent expectoration: and he observes, that the warmth may be kept up in a dwelling house, with perfect convenience, by the use of a common ironing stove, of which the expense does not exceed three or four guineas. Winter cough, or chronic catarrh, he says, may sometimes be attended by haemoptysis, without assuming the character of consumption.

In the sixth volume of the Edinburgh medical journal, there is a paper by Shearman, on amenorrhoea as a cause of consumption, which he considers as not uncommon; and observes, that Griffith's chalybeate mixture has been more successful in females, than in males, on account of this connexion. There are also some remarks on this paper, by Fogo, who considers the ame-

BRERA Rapporto, 1809-10. On nausea.

J. Buxton's Essay on the use of a regulated temperature in winter cough and consumption, 12. Lond. 1810. P. 83. .5.

Shearman, Ed. med. journ. VI. 1810. P. 75. Fogo, P. 175.

norrhoea, in the case related, as probably a consequence of mesenteric disease, and of general bad health.

Mr. BAYLE's elaborate work has very lately been introduced to the English public, with no small parade, by his translator Dr. Barrow; and it must not be denied that it contains much valuable matter, although the practical importance of anatomical observations in general may have been somewhat overrated by the author. The translator talks of the propriety of some legislative measures for enforcing the keeping of registers of cases in all public hospitals, observing that, if such a regulation were adopted, France would not "long exult as at present in her claim to preeminence, either in pathological *or practical* knowledge. The admirers of her imperial glory would cease to boast that one of her physicians has done more towards establishing an accurate knowledge of diseases of the lungs, than had been effected in other countries in 2000 years." Of the kind of advantage to be derived from these investigations, we may form an idea from the author's expressions in his second chapter. "Since the state of the lungs of phthisical persons differs altogether from that which is observed in other diseases of the chest, these latter

G. L. BAYLE Recherches sur la phthisie pulmonaire. Par. 1810. Engl. by Barrow. 8. Liverpool, 1815. P. ix. 15.

ought, incontestably, *always* to be distinguished from phthisis, '*whenever,*' [although] in certain cases, they exhibit *symptoms perfectly alike.*" This is certainly an alteration, if not an improvement, of the nosological principles of Sauvages and Portal.

Upon the foundation of anatomical observations, therefore, the author divides consumptions into six species, tubercular, granular, melanotic, ulcerous, calculous, and cancerous. The tubercular species is distinguished by the usual characters: the granular depends on the presence of miliary granulations, resembling cartilage, and distinguished from small tubercles by their transparency: the symptoms of this species are sometimes an obstinate dry cough, and sometimes a catarrhal affection, accompanied by a transparent glairy expectoration: in some cases there is occasional haemoptysis, and in others a constant sense of oppression: and at a late period, ulceration sometimes supervenes. It is obvious that, during the patient's life, this species must commonly be confounded with the former; and if it generally occurred in one case out of five, as it appears to have done in the 900 dissections mentioned by Mr. Bayle, it could scarcely have been so little noticed by former observers. In the consumption with melanosis, the ulcers are quite black, and the neighbouring parts hardened, the whole lung becoming sometimes like

leather: it seldom occurs under 50; the expectoration is whitish, too light to sink in water, and generally floating in a looser substance: there is little pain or fever, but at last the patient sinks rapidly under the disease. The ulcerous consumption is not very common; it is distinguished in the lungs by the absence of the membranous lining, which is always found in the vomicae from tubercles: the cough from the first is accompanied by expectoration, and there is almost always a very fetid smell: the disease may be distinguished from a pleuritic abscess, by the greater resonance of the chest when struck. Each of these species is often complicated with the rest, so that their correct distinction during life is rendered impossible. The calculous species is denoted by the occasional expectoration of calculi, and sometimes also by the presence of nephritic symptoms. The cancerous consumption is distinguished by the presence of other cancerous affections in the system: the lungs in these cases assume a brain like appearance, of a glossy white colour, and of different degrees of hardness.

Out of 900 consumptive subjects, 624 had the tubercular consumption, 183 the granular, 72 the melanotic, 14 the ulcerous, 4 the calculous, and 3 the cancerous. The deaths by consumption at the Charité in three years were more than one

third of the whole mortality ; this is probably somewhat more than the mean proportion of the other hospitals in Paris ; but we cannot estimate the true mean at less than one fourth. The disease occurs at all ages, from 1 to 80 years : but the average, calculated from the author's table of 100 cases, is  $38\frac{3}{4}$ . The duration has varied from 25 days to 40 years, but out of 200 cases, 104 died within 9 months, which may therefore be called the mean or middle duration, though the numerical average would be much greater.

Mr. Bayle asserts that tubercles of all kinds are penetrated by capillary bloodvessels ; and whether they were originally encysted or not, the ulcers which they form are always lined with a distinct membrane or membranous substance, secreting pus, and apparently, though not really, continuous with the membrane of the bronchiae. The substance of the lungs has been supposed in some cases to disappear, but has in reality been only compressed by the tubercles or abscesses. In all stages, even of ulcerated consumption, the expectoration is chiefly derived from the mucous membrane of the bronchiae, and there is often no true pus at all mixed with it.

To the three periods generally allotted to consumption, the author adds a fourth, from anatomical evidence only, which is that of occult phthisis, existing before the occurrence of any

obvious symptom, and identified only by the observation of tubercles or granulations after death. Out of 100 cases of consumption, the larynx was diseased in 17, the intestinal canal in 67: sometimes miliary transparent granulations are found in the intestines, but more commonly miliary tubercles. The aphthae of consumption are rather scaly than vesicular, the mucous membrane becoming excoriated, while in some other cases they commence with a vesicle, which is succeeded by a little ulcer. The heart is often found marked with whitish spots, which indicate an incipient ossification: and the liver is sometimes enlarged and yellow, containing a fatty matter, which greases the knife that cuts it, or paper on which it is placed: an alteration that is also occasionally observed without any pulmonary disease.

Tubercular consumption appears in general to be intimately connected with scrofula: the tubercles are not merely swellings like inflamed glands, but there is an interstitial deposition of foreign matter, which is never rapidly discharged, like the pus of an abscess. This disease appears always to depend on a peculiarity of constitution, though sometimes excited or accelerated by fever, pleurisy, catarrh, haemoptysis, diseases of the heart, or syphilis. Haemoptysis is

a frequent symptom of consumption, and is sometimes mistaken for its cause: but it often happens that when haemoptysis has been fatal, the lungs are found full of tubercles. It must, however, be remembered that haemoptysis is much more frequently curable than it could well be, if it generally proceeded from tubercles, as Mr. Bayle seems to suppose.

The treatment commonly prescribed is calculated for the cure of tubercular consumption. The granular species requires composing and emollient medicines, blisters and issues, and occasionally bleeding; asses' milk, whey, and veal broth; hemlock, henbane, nightshade, aconite, and opium; and where the expectoration is very copious, resinous and balsamic medicines. In the melanotic species, tonics, as cinchona and lichen, may possibly prolong life. For the ulcerous consumption, medicated vapours are recommended, and drains and revulsions of various kinds. The calculous species may be treated as the granular: the concretions consist principally of phosphate of lime. The symptoms of cancer are commonly palliated by aconite, henbane, hemlock, nightshade, and poppy.

In cases of consumption complicated with chronic catarrh, the lichen is commonly beneficial, with sudorifics and balsams, if there is not

too great irritability. Bark, in extract, or in substance, should be given where there are well marked rigors. Whenever a medicine is found to relieve the cough, it is prudent to continue it for some time, in order to prevent a relapse. Narcotics may be employed every other night only, in order to avoid constipation, or increase of the sweats. Streaks of blood in the expectoration require the use of lemonade or orangeade, and bleeding, if the pulse is hard, blisters if soft. A pain in the chest is often relieved by a poultice of "oats" boiled in vinegar, by volatile liniment, or by ether. Warm bathing has sometimes checked the sweating, and sometimes bitter medicines, if the stomach has been deranged. For the aphthae, barley water, with honey, and syrup of mulberries, may be given in the first instance; if they are painful, emollient and narcotic decoctions; and afterwards detersive gargles may be required.

The diarrhoea depends almost always on ulceration of the mucous membrane of the ileum, and sometimes also on that of the great intestines; and must not therefore be considered as a melting down of the solids. It is generally aggravated by astringents and tonics, though it may sometimes be moderated by narcotics, especially when it arises merely from irritation without ulceration, and in such cases tonics and

astringents may be of use, and the decoction of simarouba, with opiate confection; and occasionally it is relieved by acidulated drinks. The diarrhoea is also frequently aggravated by obstructions of the mesenteric glands, and in this case palliatives are of little use. The oedema may sometimes be relieved by the decoction of grass with nitre; or still more effectually by oxymel of squills, continued for some time, with other diuretics and diluents: it may also be necessary to puncture the legs, the operation serving as a palliative for a considerable time.

Tubercular consumption may possibly be prevented by travelling and declaiming, by the use of nutritious diet, with antiscorbutics, tonics, alkalis, and muriate of ammonia, remedies which are often of use in scrofulous cases: and in an incipient state it may sometimes be checked by repeated emetics, bitter purgatives, and a sea voyage, and by the sulfureted waters of Bonnes, Cauterets, Bagnères, or Mont d'Or: still later in the disease, mild tonics, as the lichen, or syrup of cinchona, may be employed. When there is a complication with a cutaneous affection, sulfur, chermes mineral, dulcamara, decoction of the woods, and corrosive sublimate, are sometimes successful. The growth of cartilaginous, scirrhous, and calculous indurations in general seems to be checked by hemlock, aconite, henbane,

nightshade, digitalis, and water fennel, in gradually augmented doses, which appear to diminish the morbid sensibility. The author has carried the dose of digitalis as far as forty grains, and sometimes with good effect, in lessening the frequency of the pulse. When there are local symptoms, blisters and caustics are sometimes of material service. But of all remedies, the most generally useful appears to be exercise.

The principal part of the volume is occupied by 54 histories of cases, all accompanied by a minute account of the diseased structure observed, except the last five, which terminated favourably, and none of which the author will allow to have been genuine consumption, although several of them had every character of the disease, except its absolute incurability. In the 11th observation, an aeriform fluid was found in the left cavity of the chest, an appearance not extremely rare, and which has furnished Mr. Itard with the subject of a dissertation on Pneumothorax: there was also an effusion of serum in the pericardium, a circumstance which seems to have occurred more rarely to Mr. Bayle than is usual in this country: in the 13th, an ossification of the larynx is noticed: the 24th exhibits a tumour formed of tubercular matter, which had corroded or destroyed several of the vertebrae,

like an aneurysm: in the 28th, some enlarged mesenteric glands are described, which were softened at the centre, presenting, in this respect, a strong analogy to the pulmonary tubercles: in the next, some real tubercles were found in the centre of the bronchial glands, the whole mass of these bodies being also hardened and enlarged.

In treating of cancerous phthisis, the author quotes a case recorded by Ledran, in the third volume of the *Memoirs of the Academy of Surgery*, in which the lungs of a cancerous subject were found indurated: but he denies that this is the genuine form of cancerous consumption; and he relates four cases of his brainlike masses, somewhat like lard, found in the lungs, and sometimes also in the liver or elsewhere; in none of these, however, is there any sufficient evidence that the tumours were cancerous, or even that the persons had been subject to cancer.

In the 39th observation, some calculous matter was found in the bronchial glands, as well as in a multitude of tubercles, scattered throughout the lungs. The two concluding sections of the chapter contain observations of chronic pleurisies, peripneumonies, and pulmonary catarrhs, which, in the language of the author, had the symptoms of consumption, and which others would have

called consumption subsequent to these diseases : in some of them, the lung on one side was flattened, and pressed close to the mediastinum, so that it might easily have escaped all observation ; in one, there was air in the cavity of the empyema, but it communicated with the bronchiae, and the air might have entered from without. Mucous or pituitous phthisis in general, Mr. Bayle considers as a chronic pulmonary catarrh, and as such, he thinks, it may often have given rise to the opinion, that a genuine consumption had been cured. In the 46th observation, it is remarked, that an enlargement of the heart, and especially of the left ventricle, almost always occasions dyspnoea. A fatal case, after scarlet fever, exhibited no tubercles : it appears, that the irritation of the mucous membrane sometimes produces suffocation, without any other local disease. In a chronic pulmonary catarrh, which terminated favourably, resins, bitters, and opium, were found of advantage : in another, they were forbidden by the symptoms of plethora ; and asses' milk, with diluents, appeared to be of service. The 53rd case is that of a medical man, who was fully prepared to meet his fate, and resolved to take no medicines whatever : but a complete crisis took place in the form of a severe rigor, succeeded by sweating so profuse, that

his linen was changed two and twenty times in a night, and this was not sufficient: had the disease depended on tubercles or granulations, Mr. Bayle observes, the crisis, even if it had been possible, could not have taken place so suddenly. The last case resembling phthisis was much relieved by a change of scene, and by sea air; and it has often happened, that journies have afforded singular benefit, even in tubercular consumption. The work is terminated by a recapitulation of the principal points, which the author has wished to enforce, the most prominent of which is the originality and incurability of every genuine consumption; he admits, however, that the disease may often be protracted, even from infancy to old age, and if this be granted, the rest of the argument is of little practical importance.

DUMAS has observed, in a memoir read to the Philomathic society, that the consumptive physiognomy is marked by brightness of the eyes, prominence and redness of the cheek bones, great distance of the orbits from each other, excavation of the temples, and sinking of the cheeks. The form of the head in epileptic persons, he seems to think, approaches, in some degree, to that of the negro. We find, in Corvisart, BLACK'S three cases of consumption cured by mercury; the first was after a catarrh:

two grains of calomel were given daily, till salivation took place: the second was nearly similar: the third after a haemoptysis, which had been stopped by large quantities of salt, but left consumptive symptoms and a sore throat: the patient was cured by mercurial frictions. The author professes to have been equally successful in a great number of cases, particularly of purulent expectoration, without tubercles or ulcers, where the pus is simply secreted, as by the surface of the eye in ophthalmia: but he does not recommend mercurials in tubercular, or in ulcerated cases. It might, however, have been presumed, by those who reason from analogy, that tubercular consumption would have been the most curable by these remedies. In the same collection the essay of CAYOL, on Tracheal phthisis, is much commended. Bennet, Burserius, and Thomann, he observes, have confounded this form of the disease with the laryngeal: Sauvée first made the distinction: but Double wishes to set it aside, and with some propriety, as far as relates to the descriptions of former observers. The true tracheal consumption is not uncommon; it is indicated by fits of coughing, with dyspnoea, and a rattling respiration: the ulceration does not spread to the substance of the lungs, as has

BLACK, Med. Rep. n. 50. Corvis. Journ. méd. cont. XIX. 1810. P. 391.

J. B. CAYOL Recherches sur la phthisie trachéale. 4. Par. 1810. Corv. Journ. méd. cont. XX. 1810. P. 403.

been established by examination in three cases, which terminated unfavourably, out of six that occurred at the Charité. If Mr. Cayol's distinctions are correct, it is probable, that this variety of the disease might be identified, by Dr. Badham's test, of a power of expanding the thorax without much uneasiness.

JOBARD has related, in Corvisart's 22d volume, a case of consumption succeeding a psora, which had been cured by a quack medicine in three days: the patient felt a subcutaneous itching; she had then want of appetite, chlorosis, cough, and afterwards confirmed consumption, with retraction of the feet and toes "as usual:" blisters and goats' milk were ordered; she was reinfected with the eruptive disease, she then took sulfur, and used sulfur ointment, and was finally cured. In this country, such cases have not been much observed or credited. Mr. Jobard speaks highly of Mr. Bayle's observations: he fancies, that he had himself a "granular" consumption; at least he expectorated cineritious grains like millet, and he had observed the melanotic kind, with black lungs, but not the brainlike, or cancerous lungs of Bayle.

Mr. LAWRENCE has mentioned a case of a fatal swelling of the integuments of the arm, which appears to have been of a cancerous

nature, and which was accompanied by a great number of firm whitish tubercles in the lungs, especially near the surface, without any approach to suppuration.

The third volume of the Transactions of a Society for the improvement of medical and surgical knowledge exhibits many proofs of the learning and industry of the accurate Dr. WELLS, and particularly his examination of the nature of pulmonary consumption and intermittent fever, as diseases opposed to each other. So long ago as 1779, Dr. Wells had heard that it was common for the consumptive in Flanders to remove to the marshy parts of the country, and he then determined to undertake the present investigation. Intermittents, he observes, have decreased in London as consumption has increased; and he thinks, that the decrease of dysentery, scurvy, and pleurisy, is connected with that, of intermittents. A number of answers to his inquiries in fenny countries have agreed, that, in the words of Dr. Marshall of Lynn, intermittent fever, where it prevails, "will bear no brother near the throne." Mr. Weekes, of Hurstperpoint, in Sussex, asserts, that in his neighbourhood consumption had become more frequent as draining was extended. Dr. Harrison of Horncastle has published a similar opinion: he thinks the soft and moist air

of Lincolnshire favourable to consumption ; but the air of Devonshire and Cornwall is soft and moist, yet consumption is extremely frequent in both these countries. The Statistical account of Scotland affords many instances of the increase of consumption, as agues have disappeared. Vienna is very subject to intermittents, and the deaths from consumption seem to be generally less than one sixth of the whole : in Petersburg, according to Mr. Malthus, they are said to be about one sixth : but this estimate probably comprehends many cases of empyema after pleurisy, which is extremely common : and from the situation of the city, intermittents must be very frequent. In Minorca, according to Cleghorn, intermittents are considered as endemic, and consumption is apparently very rare. Dr. Segueira confirms the account published by Dr. Beddoes, of the rarity of consumption in the marshy country of Alentejo. In Egypt consumption seldom occurs, intermittents very commonly. From Aleppo, according to Volney, consumptive patients are frequently sent to the sea coast, where intermittents prevail. In Bengal, an aguish country, consumption is rare : Bombay is free from fevers, but apparently more consumptive. In the Western hemisphere, Rhode Island is generally healthy, but it is said to be very consumptive : Philadelphia has more fevers and fewer consumptions than New York. The Azores are

said to be infested by consumption, though the climate must necessarily be very equable. In South Carolina, the author states, from his own experience, that among the white inhabitants consumption is rare, and intermittents frequent. Bermuda is in general more healthy, but is more consumptive; and consumption sometimes occurs at Barbadoes, where there are no intermittents: in Jamaica it is rare, but intermittents are common. Sailors are perhaps less liable to consumption, from being placed in circumstances which have a tendency to produce intermittents.

The difference of opinion, respecting the age most liable to consumption, may have arisen from the difference of the classes of society in which the observations have been made: among the rich, many delicate young persons become consumptive: among the poor, they would probably have died in their infancy: but later in life, the hardships attending poverty may make consumption more common in the lower classes.

Dr. Wells imagines that the causes of intermittents induce a state of constitution, which is a protection from consumption, without actually producing fever: it has also been observed, that consumptive persons are little liable to the attacks of ague. He is persuaded that the plague might easily be propagated in England, notwithstanding any supposed improvements in the mode of life of the inhabitants: a mortal disease

of any kind soon extirpates the families which are most liable to it, so that the people of the country in which it is endemic are almost exempted from its effects, while strangers are generally more liable to infection: but during the long absence of the plague from Great Britain, the susceptibility of the disease must have been reproduced. Intermittents seem to create a disposition to pleurisy, which has a tendency to enable the constitution to resist their attacks, and which probably also fortifies it against consumption. The author is inclined to think that the danger of consumption, to the inhabitants of warm climate, coming into a colder one, is almost entirely confined to young persons; and that adults thus removing are less liable to the disease, than the natives of the cold countries. He thinks that if consumptive children were sent to schools in fenny countries, and afterwards to universities or counting houses in Holland, they might, after twenty, return to their homes with safety: and a similar change of climate might be advantageous even in incipient consumption. But Lisbon, Nice, and Naples do not appear to be eligible residences: nor can Madeira be extremely salutary. Alentejo might be preferred; and Jamaica would be very desirable, but from the danger of other diseases. Egypt appears to be unobjectionable, for the plague may easily be avoided. But late in the disease all such

measures must be ineffectual. Bristol seems to possess no advantage, and even to be in general particularly unfavourable to the consumptive: nor can Devonshire be much superior to Middlesex: at the same time, a journey may do good by amusing the patient, and by encouraging his hopes. It has perhaps been too common to be satisfied with a residence in England during the summer: but there is no reason why the summer of a warm climate should not be supposed to have its share in producing the benefit of the change; and if fenny districts are to be of any advantage, they must naturally be expected to exhibit their effects more completely in hot weather, than in colder.

The Essay of VILLIERS on digitalis is chiefly a compilation from English authors. Dr. Trousset, he says, found that the digitalis lutea was inferior to the purpurea. Schwilgué classes the digitalis, in his materia medica, with other poisonous plants, among tonics. Lettsom and Mossman agree, that its deleterious effects occasion a confusion in the perception of colours. Chrestien recommends a strong decoction to be employed, by way of enema, where the diuretic action is required; and the prescription appears to have succeeded extremely well.

F. T. B. DE VILLIERS Essai sur les propriétés medicinales de la digitale pourprée. 1803. 3. Ed. 8. Par. 1812.

We find in Sédillot a note of VALENTIN on the success of salivation, combined with tonics, acetate of ammonia, or opium, in consumptions not in the last stage: an account of Boston's curing a haemoptysis, with 25 drops of the tincture of digitalis every hour; of Ewell's giving seven grains of the sugar of lead, with opium, in haematemesis; and of the utility of an infusion of the root of the statice limonium, as an astringent, in haemorrhage and dysentery. FAUVERGE relates a severe case of consumption after peripneumony, cured, as usual, by tonics, opium, vegetable diet with eggs, exercise, and blisters. In Corvisart, SAUCERETTE describes a syphilitic phthisis, with affections of the bones, cured by mercurial frictions, without proceeding to salivation: it is supposed to have occurred in consequence of a gonorrhoea only, several years after its disappearance; and the circumstance seems to favour the identity of the two infections.

Dr. ROBERTS relates, in the fourth volume of the Medical transactions of the College, a case which appears to have resembled the true tracheal consumption, the membranous lining of the bronchiae only being found inflamed: in such

VALENTIN Séd. Journ. gén. méd. XLIII. 1812. P. 226. FAUVERGE, XLV. P. 393.

SAUCERETTE Corv. Journ. méd. cont. XXIV. 1812. P. 350.

ROBERTS Med. trans. IV. 1813. P. 119.

cases, he observes, the fever is more irregular, and the expectoration wants the pale green colour, which is common in tubercular cases, though it is sometimes streaked with blood: the pulse, in this instance, was quick and strong, with inordinate action of the heart; although this organ preserved its natural magnitude and appearance. He advises, in general, a diet of milk and vegetables, with laxatives where they are required; and a caustic between the shoulders, or a seton near the seat of a fixed pain; but he thinks that frequent bleedings can seldom be supported. Spirit of nitrous ether, and subcarbonate of ammonia, have appeared, in some instances, to lessen the tendency to suppuration. From the acknowledged inadequacy of the medicines commonly employed for the cure of consumption, Dr. Roberts has very laudably attempted to discover a more effectual remedy, among the most active substances, which have been occasionally employed in other diseases, but have not been in very general use: hitherto, however, he has not succeeded, and has only to record the failure of the experiments: the substances, which he has tried, are these: nitrate of silver; superacetate of lead, with opium; sulfate of zinc; oxyd of zinc, alone and precipitated with myrrh; arsenite of potass; white oxyd of manganese, 10 grains; black oxyd of cobalt, one to four grains; ammoniated copper; muriate of barita; nitric acid;

phosphoric acid; aconite; henbane; stramonium; belladonna; and toxicodendron.

In the Philosophical transactions for 1813, Dr. PEARSON has given an account of an examination of the colouring matter of the black bronchial glands, and of the black spots of the lungs. He considers the bronchial bodies as true lymphatic glands, and thinks the black substance, which often tinges them, consists of charcoal, derived from small particles of dust, floating in the atmosphere, which have been taken in by the absorbents, and deposited in these glands: and he has found some of the lymphatics occasionally filled with a similar substance. He supports his opinion by chemical experiments, which show the insolubility of the black substance in nitric acid, while he has been unable to find any other animal substance, the ink of the cuttle fish not excepted, that resists the action of this acid. The glands of the mesentery, he says, are also sometimes black, but their blackness disappears upon immersion in the nitric or muriatic acid. We may remember, that Mr. Desgenettes has recorded a case, in which other foreign substances have appeared to enter the lymphatics of the lungs in a solid form: and if the bronchial bodies are not lymphatic glands, they are allowed at least to contain such glands within their substance. In quadrupeds, this black matter is often want-

ing, but it is also not uncommonly observable: and a number of accidental causes may contribute to this diversity.

Dr. DUNCAN has published an essay, which is principally intended to establish the division of Consumption into three species, the catarrhal, the apostematous, and the tubercular: the purulent secretion being derived respectively from an inflamed surface, from an abscess, or from tubercles; although it appears scarcely possible, that a correct distinction can be established between the two latter forms of the disease, even after death. The catarrhal is accompanied by a general soreness of the chest, without any fixed or constant pain, the expectoration being seldom mixed with blood: in the apostematous, there is generally a heavy pain in the chest, with fits of coughing, and but little expectoration, till an abscess bursts, and discharges its contents at once: in the tubercular, the expectorated matter is generally a thin watery fluid, tinged with blood, like the discharge from a scrofulous sore, and scarcely ever like healthy pus. The haemoptysis, which sometimes leads to phthisis, is at other times perfectly innocent, and even salutary, as much so as bleeding at the nose. The falling off of the hair, and the curvature of the nails seem to depend on a want of nourishment for their support. Dr.

A. DUNCAN'S Observations on the distinguishing symptoms of three different species of pulmonary consumption. 8. Edinb. 1813. P. 6, 10, 21, 31, 69, 19.

Duncan observes that tonics and stimulants may sometimes be of use in apostematous consumption, by producing adhesive inflammation: bleeding, with low living, he thinks, has hastened death in hundreds of instances: epispastics may be employed with advantage in some cases of every kind. Emetics are of use in promoting expectoration: and have been recommended with a view of causing absorption, which they do very effectually in sarcocele; but they do not appear to have performed a radical cure of consumption. Recent vegetable acids seem preferable to the acetous, or the mineral acids, as refrigerants: they will not cure consumption, but they will sometimes prevent the degeneration of catarrh into consumption; and they appear to be more beneficial than crystals of tartar and nitre, which are, however, occasionally useful. Digitalis, in Dr. Duncan's opinion, can only relieve the frequency of pulse, which is a symptom of a symptom: but it may perhaps be answered, that the hectic is in reality the most material source of immediate danger. Asses' milk should always be recommended: it has contributed to remove incipient tubercles. In cases distinctly marked, the author has seen no benefit from sea voyages; and the unavoidable inconveniences attending them may often be very serious to an invalid: he thinks, indeed, that a change of climate has little or no power to promote a radical cure.

Bark may be of use, where the discharge is too thin, or where an ulcer is to be healed. He has seen good effects from myrrh, and considers it as having essentially contributed to recovery in an apostematous case. Alarming catarrhs have sometimes been relieved during the use of Godbold's balsam, or its imitations; but no genuine consumption: coltsfoot and lichen are little more than mucilaginous; bark and hemlock are more effectual in scrofulous constitutions: the pneumatic experiments do not appear to have effected a single cure, nor have the effluvia of tar, or resin been more successful. The ethereal vapour of conium the author has sometimes employed with advantage, as an expectorant, where the mucus has been too viscid. In diet, both extremes must be avoided: and as a residence, neither a smoky town, nor a cold and damp situation in the country should be chosen. Dr. Duncan has seen no reason to believe, with Dr. Carmichael Smyth, that the sea air is generally prejudicial. He recommends flannel or cotton, next the skin, and gentle exercise: walking he thinks the best exercise of all; and riding "perhaps the best." The diarrhoea may be moderated by mucilaginous fluids and broths, melted jelly, rice, and catechu with opium. The inspissated juice of the common lettuce is one of the best substitutes for opium: its soporific power is nearly

equal to that of East India opium; and the author wishes to introduce it into general use, under the name of lactucarium.

Dr. JOHN DAVY, in the Philosophical transactions for 1814, has published an account of some experiments on animal heat, which seem to overturn Dr. Crawford's very ingenious theory of a change of capacities, and to favour Dr. Black's opinion of an actual elevation of temperature in the lungs; the blood having been found, in these experiments, a degree and a half warmer in the great arteries than in the veins: Mr. Brodie's very important investigations have, however, shown that the production of heat does not depend on the function of respiration only: and since the venous blood, in such experiments as Dr. Davy's, must have been returning from parts exposed more than usual to the air, by the operation, the argument deduced from them is not altogether conclusive: it is also remarkable, that the temperature of the liver, where it was examined, was not sensibly different from that of the lungs.

RENARD has given an account, in Leroux's Journal, of a polypus of the bronchiae, somewhat resembling those which Tulpus has described: it occurred in the case of a stonecutter, and was hard and elastic.

J. DAVY Phil. trans. 1814. P. 591.

RENARD Leroux Journ. méd. cont. XXXI. 1814. P. 156.

Dr. SOUTHEY has collected some interesting particulars respecting the frequency of consumption in different countries. Beginning from the North, he finds some diversity in the reports respecting Iceland; Horrebow mentions the disease as prevalent there, Olafsen as common in persons about 50, and Mackenzie and Hooker only as occurring occasionally. In Russia it is certainly rare, though pleurisy is common: in Denmark too it seldom occurs: in Germany nearly as in England; one fifth of the deaths at Berlin appear to be by consumption; at the Hague somewhat more, perhaps from some local causes; at Vienna from one tenth to one sixth only. It has been observed that there are more consumptions at Caen than at Rouen, which is a closer town. In Italy consumptions are well known. Nice and Naples are said to be unfavourable to the consumptive from the neighbourhood of mountains. In Malta and in Sicily, and in other islands in the Mediterranean, the disease is rare, although its progress does not appear to be retarded by a removal to these islands. It is little known in Egypt, according to Savary, though not uncommon at Aleppo. In Bengal consumption is rare; though it appears from M'Gregor's account, that about six cases occur-

H. H. SOUTHEY'S Observations on pulmonary consumption,  
8. Lond. 1814. P. 29...

red annually in a European regiment at Bombay, which is nearly as many as would be expected in Great Britain. Chardin says that pulmonary complaints are rare in Persia. In Greenland the disease sometimes occurs: in Canada it appears to be uncommon. At Philadelphia one sixth of the deaths are by consumption: in South Carolina it is more rare. In Jamaica and all the West India islands it is almost unknown: Barbadoes and Bermuda seem the most liable to it: it occurs occasionally at the Azores and at Madeira. The author's further inquiries have not confirmed Dr. Wells's opinion, that the disease is less frequent in marshy countries than elsewhere. Butchers, both in this country and in France, appear to be less liable to consumption, as well as to other diseases, than the generality of mankind: and the fishwomen in Scotland, and the miners in Cornwall seem to possess a similar exemption. According to Sinclair's Reports, it seems to be most frequent in poor countries, where the inhabitants are ill fed and thinly clothed. Coalheavers, chimney sweepers, and dressers of flax and feathers are peculiarly liable to it. It is generally considered as contagious on the Northern shores of the Mediterranean, but without sufficient evidence. Dr. Southey relates a fatal case of consumption, in which the expectoration was purely mucous to the last. Warm clothing and warm bathing he thinks the

best preventives of the disease. The scrofulous temperament he supposes to depend not on an acrimony, but on a flabbiness and debility of all the fibres of the body, which may be obviated by proper food and exercise. In haemoptysis he fancies emetics unsafe, and thinks digitalis the most useful of remedies. Opium, in the early stages, he considers as hazardous, but says that experience must decide on the propriety of giving it. An issue with four peas has appeared to be highly beneficial in a very decided case. Removal to a warm climate is often extremely proper in incipient consumption: Valencia seems the most eligible part of Spain, and Hières of France: Lisbon is cold in winter; in Madeira the accommodations are bad; in Egypt we meet the plague and the ophthalmia; and in the West Indies the yellow fever. But a room kept at  $60^{\circ}$  or  $65^{\circ}$ , by means of Anderson's stove, will often be sufficient to relieve the symptoms very materially, especially in strumous constitutions. Riding, sailing, and swinging have however certainly been very useful, as is strongly illustrated in Dr. Currie's case. The author has known a decided instance of the benefit of a voyage, independently of any nausea, and where, on the contrary, an increase of appetite and flow of spirits was the immediate effect of the motion. Dr. Fenwick, of Durham, has found great benefit in one instance from carbonic acid; though it did not ultimately save the

patient; and the hydrocarbonate was still more successful in another case of confirmed consumption: but it invariably failed in every other trial. Dr. Southey thinks, that if marshy situations have any apparent advantage, with respect to consumptions, it is derived from the effect of the agues in taking off unhealthy children, before they are old enough to become consumptive. Dr. Cookson of Lincoln, and Dr. Hendy and Dr. Badely of Chelmsford agree in assuring him, that they have been able to discover nothing like an exemption in favour of marshy districts. Mr. Heaviside had observed, among the privates of a regiment of horse guards, that fair and light haired persons were more liable to intermittents than others. For the management of the diet, the patient's constitution must be consulted: in scrofulous cases, bleeding is highly injudicious. Dr. Badely mentions a well marked case of consumption, with a hereditary predisposition to the disease, in which a removal from Essex to Penzance was repeatedly successful; after residing for some years in Cornwall, the patient went back to Essex, and remained there, without experiencing any return of his complaints.

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OTHER authors might perhaps have been found, whose works would have afforded additional information respecting the symptoms and treatment of consumptive diseases: but the majority of the public will probably be of opinion, that what has already been collected is amply sufficient for the historical illustration of the subject, as far as it can be considered as interesting to the medical practitioner. Some anatomical appearances have also been pointed out by one of my colleagues, as occurring more frequently in practice, than seems to have been supposed by the generality of writers on consumption: one of these in the effusion of a serous fluid into the pericardium, which is so commonly observable, that it seems in some measure connected with a debility of the exhalant vessels immediately dependent on the hectic state, or with the obstacles opposed to the ready passage of the blood through the lungs. Another appearance is the consequence of the bursting of a consumptive vomica into the cavity of the chest, which has occasioned an attack of secondary pleurisy, with great pain and depression of strength, and hard, rapid, and obscure pulse, the ordinary remedies affording no manner of relief: in such cases, which have often occurred at St. George's Hospital, the whole pleura is found covered by a thick coat of coagulable lymph, sometimes concealing even the orifice of the vomica, and the cavity of the

chest is filled with a thin pus, or with a purulent fluid, mixed with serum. There is also a symptom of the mesenteric decline, which has been noticed by a celebrated teacher of midwifery, as affording a useful criterion of the disease, especially in young children; that is, the bending of the thumb inwards upon the palm of the hand: it is probable, however, that this symptom may frequently be observed, as accompanying a number of other visceral irritations and obstructions, to which infants are extremely liable.

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OMISSION IN THE ABSTRACT OF DESAULT. P. 221.

The author relates a case in which a glass of vinegar, drank daily for a month, in order to improve the figure, produced a fatal tubercular consumption. All modes of treating this disease, not tending to the absorption of the tubercles, are idle: narcotics and bark are only calculated to relieve particular symptoms; and if the bark does not overcome the fever in a week, it is useless to continue it. Mercurials were recommended, among other remedies, by Morton himself: they are of use in scrofula, and consumption is the scrofula of the lungs. Steel too, so

useful in diseases of the liver, and in asthma, must not be forgotten. Several cases are recorded, in which mercurial plasters and friction were applied externally, and chalybeates given internally, with perfect success. Consumption from haemoptysis is often mentioned, but in Desault's opinion, it ought to be called haemoptysis from consumption. Exercise was found of great use in many cases, and the author was in the habit of sending his patients to the waters of Barèges as an excuse, advising them to go on, to pay their devotions at a church celebrated for miracles, and thence to Toulouse: but where exercise could not conveniently be pursued, mercurials have succeeded, especially in cases complicated with syphilis. The author fancies that a bed or a chair, suspended on springs, so as to be capable of alternate motion like a swing, might be of great advantage. He recommends, in the second stage, a diet consisting only of new milk, skimmed milk, or tea, in order to avoid aggravating the fever: but in the earlier period of the disease, he thinks it may be of any plain nutritious substance, and is not disposed to forbid animal food, provided however that it be not too highly seasoned.

### CORRECTIONS.

- P. 26. L. 19, *for* observed and described, *read* observed by Mr. John Hunter, and described.
- P. 221. Desault. See P. 478.
- P. 287. L. 22, *for* exclusively, *read* extensively.
- P. 293. L. 11, *for* that, *read* than.
- P. 296. L. 27, *for* are, *read* is.
- P. 404. L. 13, *for* taking, *read* taken.

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