

**Practical observations on those disorders of the liver : and digestive organs, which produce the complaints denominated bilious. / By Joseph Ayre.**

**Contributors**

Ayre, Joseph, 1781-1860.

Appleton, J. H.

Webb Street School of Anatomy and Medicine  
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King's College London

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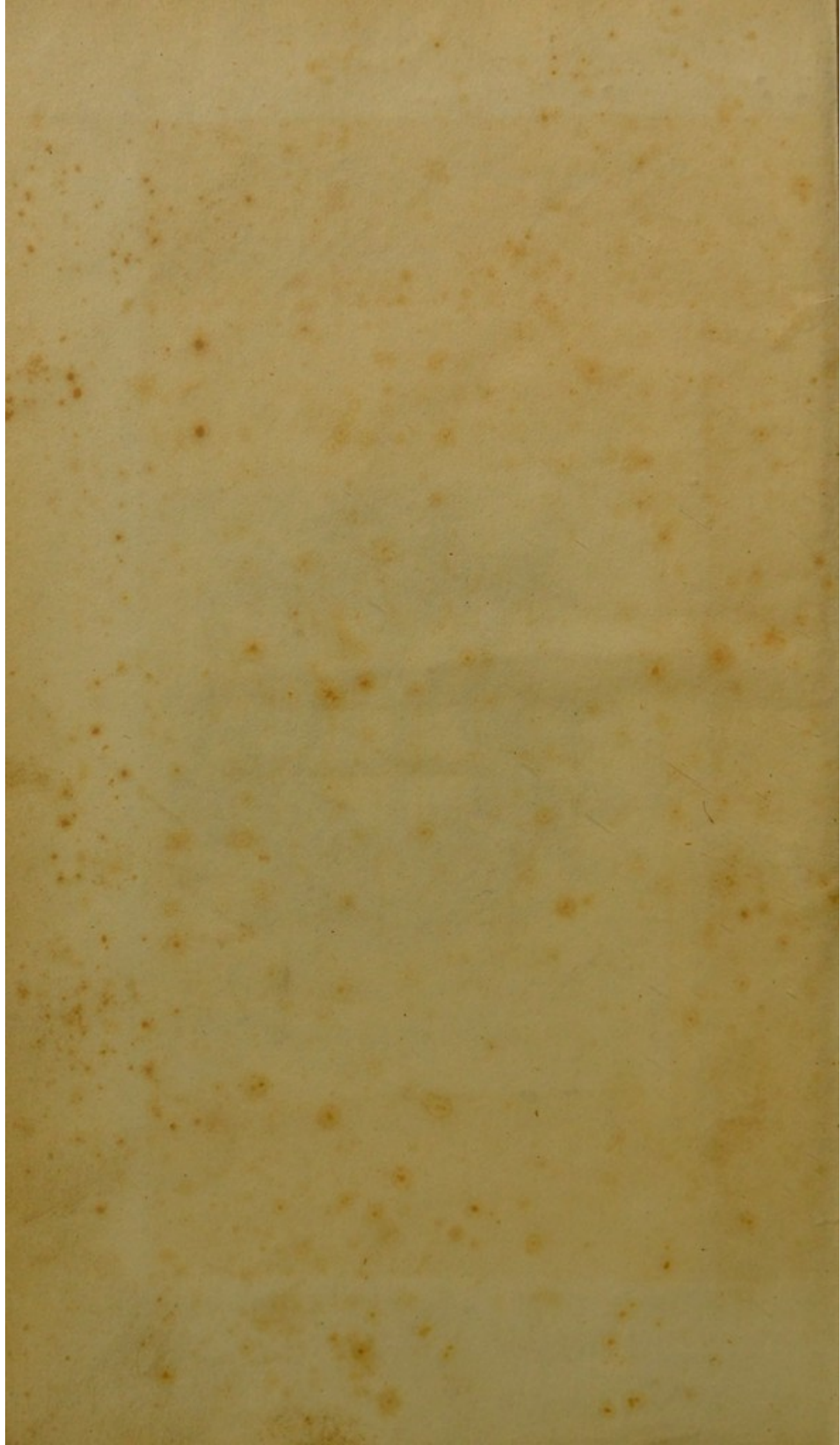
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PRACTICAL OBSERVATIONS  
ON THE  
DISORDERS OF THE LIVER,  
&c. &c.



C. Baldwin, Printer,  
New Bridge-street, London.

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J. H. Appleton

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PRACTICAL OBSERVATIONS  
ON THOSE  
DISORDERS OF THE LIVER,  
AND  
DIGESTIVE ORGANS,  
WHICH PRODUCE THE COMPLAINTS DENOMINATED  
BILIOUS.

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By JOSEPH AYRE, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, &c.

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SECOND EDITION,

*Altered and Enlarged, of the Essay on Marasmus.*

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LONDON:

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New Bridge-street, London.

# DEDICATION.

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TO

JOHN ARMSTRONG, M.D.

ONE OF THE PHYSICIANS TO THE FEVER INSTITUTION, LONDON.

MY DEAR SIR,

WERE I required to select an individual to whom, on public grounds alone, I might present a dedication, I know no one upon whom my choice could more properly fall than upon you. Yet the respect, great as it is, which I entertain for your talents and attainments as a Physician, is not superior to the regard with which I value you as a Friend; allow me, therefore, to offer these few and imperfect pages for your acceptance, as the sincere, but inadequate, testimony of both.





That you may long be spared, to promote by your writings the cause of medical science, and pursue your career of fame and usefulness, is the ardent wish of,

My dear Sir,

Your much obliged

and very sincere friend,

JOSEPH AYRE.

14, Somerset-street,  
Portman-square.

## PREFACE.

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IN the first edition of the following pages, I employed the term Marasmus as a synonym to designate the bilious affection. Its use, however, in this way has been objected to by foreign writers ; and I think justly. I have therefore abandoned it, and, with a change in the title, I have now made a considerable alteration in the arrangement, and several additions to the matter of the work.

In the view taken of the bilious disorder, it will be seen that I have identified it with the disorder of the digestive organs of Mr. Abernethy, and with the *Marasmus Infantum*, or Infantile Remittent, of other



writers ; and have considered it as consisting in an impeded biliary secretion, and in a venous congestion of the liver and other organs of digestion, and as standing, in consequence of this congestion, and the irritation arising from it, in the relation of a cause to some of the most serious morbid affections to which the human frame can be subjected. On these views is founded the practice by which the cure of the bilious disorder is directed ; and as, in many respects, they will be found to differ materially from those of several respectable writers who have preceded me on the subject, I cannot but wish it to be understood, that they have been neither recently nor hastily adopted, nor formed under circumstances unfavourable for observation. They have, in fact, regulated my plan of treating these affections during several years, and under frequent opportunities for verifying them ; and it is, therefore,

under a conviction of their truth, and of their practical importance, that I now submit them to the liberal judgment of the public.



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ERRATA.

- Page* 6, *line* 14, *for* in several, *read* in the several  
— 15, — 24, — of clayey — of a clayey  
— 32, — 8, — colleague — colleague  
— 86, — 23, — mesentericus — mesenterica  
— 93, — 1, — require — acquire  
— 160, — 9, — circumstances, its state — circumstances of its  
state,  
— 191, — 15, — with bitter — with a bitter

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ON THE  
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&c. &c.

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INTRODUCTION.

**T**HE term bilious is frequently applied in an indefinite manner to disorders of the stomach, in which the functions of the liver are undisturbed; whilst many important affections, in the strictest sense bilious, are known only by names which, by not corresponding to the phenomena they represent, convey erroneous notions of their pathology. In the bilious disorder there are essentially present, a functional change in the liver, and a deficient and morbid secretion of bile, as evidenced by the colour and condition of the stools; the symptoms which constitute the disorder remaining during the period of the fœcal discolouration, and only subsiding, and at length disappearing, as the alvine discharges progressively return to their natural state.



There are, indeed, in the several organs of digestion other morbid actions occurring, which, with those of the liver, produce the distinguishing symptoms of the complaint; but as the essence of the disorder resides in the liver, it is upon it that the other symptoms mainly depend, and it is only by the correction of this disorder that they can be removed. The following inquiry, therefore, will be limited to this the restricted sense of the term bilious; and to this the disorder hereafter to be described will be found to conform. As a disorder entirely of function, unconnected at least with any appreciable change of structure, it may be naturally regarded as of common occurrence, though it is frequently overlooked or mistaken, from its bearing different names, according as certain symptoms predominate, or from a conformity with pre-conceived and hypothetical notions of its origin and nature. When occurring in children, and under its ordinary form, it is known best by the name of Marasmus, or that of Infantile Remittent Fever; and it has by some, as the latter name indeed implies, been considered peculiar to the infantile age; though, if the views which I have taken of it be correct,



there is no essential difference between the marasmus of children, and that disorder of adults which may be strictly denominated bilious, either in the nature, or in the causes, or in the means of cure. It varies somewhat, indeed, in its appearances, and in the intensity of its symptoms, as well as in the modes of its termination; but these variations are slight, and may justly be considered as only modifications of the same complaint, originating from the influence of constitutional causes, and more particularly from the difference in the susceptibility of the whole system, and of particular parts of the system, variously acted on at the different periods of life.

But the disorder, though constant in preserving those characters of which it essentially consists, yet exhibits under circumstances and from causes hereafter to be noticed, an exceedingly diversified form, one or more of the symptoms so predominating over the rest, as to impart to this disorder a striking resemblance to some other complaint; whilst, at other times, it is met with under appearances so disguised, as to give to it something of the form of an anoma-



lous and undefinable affection. There are in truth few disorders which present a greater variety of morbid states than is afforded by this, nor concerning which there is at times more difficulty in forming an accurate diagnosis. So conspicuously, in fact, is this the case, that, exclusive of the many ambiguous symptoms arising directly from it, and belonging to it, there are others, which being indirectly produced, and pertaining only remotely to the primary affection, yet form, in the sequel, some of its most important features; thus occasioning to the practitioner the two-fold risk, either of overlooking on the one hand, its primary and proper symptoms, or on the other, of identifying the disorder itself with incidental effects, which, though often produced by it, are not essential to it, and which may originate or exist independently. Hence when occurring in infancy, it is often a cause of premature dentition, and occasions much of the difficulty as well as irritation of that otherwise natural process; and it is therefore not unfrequently confounded with it, or viewed as an effect of it. In the same manner it is erroneously attributed to the presence of worms in the intestinal canal. It is



often a cause of the enlargement of the glands in the mesentery, and at other times so strongly simulates that disease, as to require, for the sake of distinction, the most minute inquiries respecting its history and progress. It likewise assumes many of the alleged diagnostic symptoms of dropsy of the brain, and is frequently the cause of that complaint. In its common and mild form, and especially when occurring in a nervous temperament, it is liable to be viewed as an hysterical or hypochondriacal affection; and it is no unusual circumstance for it to be concealed under the name of chlorosis or green sickness in the youth of one sex, and under that of chronic weakness in the other. It is sometimes a cause of pulmonary disorders, and at other times, and much oftener, it is mistaken for them; as it may be for inflammatory affections of the liver and the other abdominal viscera. Besides these, and other morbid states to be afterwards noticed, some important disorders remain for consideration, which especially appertain to it, and which may be properly regarded as its terminations. Such are the second stage of the cholera morbus, or bilious diarrhœa, and a bleeding from the hemorrhoidal veins, which are favourable; and a hemorrhage



from the liver, constituting the idiopathic hæmatemesis, or melæna, and under some circumstances a similar discharge from the uterus, which are unfavourable, especially the latter, in the child-bed state.

These, the natural and immediate consequences of the functional disorder of the liver, form important features of it, and merit investigation; for it is upon the existence, now assumed, of these its natural terminations, resulting from the particular connexions in the venous system of the liver and some of the other abdominal viscera, that the views of the pathology, and the indications of the cure, in several forms of the complaint, will hereafter be founded. Before, therefore, proceeding to enumerate the symptoms and the several forms of this disorder, a few observations shall be premised concerning those facts which illustrate its nature; for facts, it is scarcely necessary to observe, are comparatively of little practical worth, until, by their rigid induction, general principles have been established, since it is only upon these last, that a consistent and rational method of treatment can be established, for the relief or removal of disease.



## CHAP. I.

THE NATURE OR PATHOLOGY OF THE BILIOUS  
DISORDER.

**I**N entering upon an inquiry, concerning the phenomena and causes of disordered digestion, it will be proper as a commencement, to take a slight view of that function in a state of health. It may therefore be observed that the changes which the food undergoes, from its being first taken into the stomach, until the expulsion of the fœculent part, are of three kinds, namely, digestion, chylification, and what may be termed fœculent separation.

The first part of the process of digestion, in which the food is converted into a uniform mass called chyme, is performed in the stomach, by means of the gastric juice, and the second, or chylification, is performed in the duodenum and small intestines. The biliary and pancre-



atic fluids, mix with the chyme immediately after it has passed from the stomach, and contribute in modes, hitherto but imperfectly understood, to the separation of some of its principles, and to the recombination of others in new proportions; while the colouring and other disengaged principles of the bile and pancreatic fluid serve to separate and carry forward the fœculent parts to the large intestines, where the entire process of digestion is completed.

These several processes are carried on by organs, the actions of which are rendered accordant and co-operative by means of a nervous connexion subsisting between them, which has been denominated sympathy; and it is by the agency of this sympathetic union, that the quantity of the fluids secreted, as well as the periods of their secretion, are adjusted. Thus the food, when taken into the mouth, excites there, by its own stimulus, the action of the salivary glands; and it is by the same proper and direct stimulus, that the glands, secreting the fluids of the stomach, are affected. But as the liver and pancreas lie out of the reach of direct stimulation, they are probably excited



into action from an indirect impulse, communicated by sympathy from the stomach. Indeed it is likely that the stomach receives from the digesting or digested food, that kind of peculiar stimulus, which is extended to the other organs subservient to chylication, by which the bile and other fluids may be provided at the proper period, and in the necessary quantity, to mix with the chyme, as it descends into the duodenum; where the whole, thus blended, is destined in its turn, to excite those particular actions in the course of the intestinal canal, which are required to complete the entire process of chylication, and the fœculent separation and expulsion.

If any one of these functions become disordered, it is liable to throw one or more of the others into disorder, the degree, as well as the kind of this disorder, being varied according to the sympathetic relations of the organs to each other. Thus, the stomach may be disordered in its functions, by a cause directly applied to it, and may induce a correspondent derangement in the liver; or it may become so, by means of the same sympathies, from a complaint



commencing in the latter organ. In the former instance, where the primary derangement is in the stomach, an imperfect or morbid stimulus may be given to the liver, from the stimulus communicated to the stomach by its own disordered secretions, or by the imperfectly digested food accumulated there, and then the biliary secretion will be scanty and otherwise defective; whilst in the latter instance, where the disorder commences in the liver, it may be communicated by a direct sympathy to the stomach, or by the connexion which subsists between it and the alimentary canal, whereby a series of irregular actions in the chylopoetic viscera will ensue. It is, however, difficult to determine what are the particular disordered states of the stomach which gave rise to disorder in the functions of the liver, or in what they differ from mere dyspepsia and some other affections, where certainly no such consequences are produced; or whether the stomach be constantly, or only occasionally, the first in the series of organs to be affected. It is probable, from the tough phlegm, which is always present early in the stomach of those affected with gastric complaints, that it has a considerable in-



fluence in many cases in aggravating, if not in causing, this disorder; and that partly, perhaps, by its own morbid irritation, but chiefly by the permanent interruption given to a healthful digestion by its presence, whereby the peculiar stimulus is prevented from being given to the stomach, which has been noticed as necessary to excite the liver, and other subordinate organs, into their full and proper action. This notion may be allowed to derive some support from the fact, that beneficial effects generally result from an emetic exhibited at an early stage of the complaint, when much of this phlegm is always thrown off from the stomach, and from the uniform observation, that during the continuance of the disorder an unnatural and tough slime is largely secreted by the bowels, and must be discharged from them before a cure can be effected. But upon whatever hypothesis we may found our explanation of the origin of this disorder, or of the nature of those morbid states of the stomach and bowels which lead to and accompany it, or of the precise modes of action of those remote causes, which are found to act successively in increasing or in continuing it, to me it appears indubitable, that its principal seat



is in the liver, and that the means directed for the relief of the disordered actions of this organ, are adequate to restore the other disturbed functions to a healthy condition.

It has, I believe, been generally supposed, that this disorder, as it appears in children, under the names of marasmus, or infantile remittent fever, merely consists in a loaded and constipated state of the bowels. This notion, however, of the nature of the disorder, appears to me irreconcilable with its phenomena, and with the palpable effects of its remedies. That it does not consist in a mere constipation or torpor of the bowels, appears evident from the following considerations. The acute form of the complaint sometimes comes on suddenly from cold or other causes, and sudden relapses are also common; and though mere purging is generally inadequate to relieve it, yet relief is very often afforded many hours before an evacuation takes place from the bowels: moreover, though the appearances of the motions are always unnatural, they are not always abundant in the sense to warrant the assumption of the bowels being loaded; and it is not until the



fœces have acquired their natural bilious colour, that the disorder itself is relieved. Neither can it be admitted, as it is commonly supposed, that the various symptoms of this disorder, whether occurring in the adult or in the infant, depend principally upon a morbid and specific irritation directly applied to the bowels, and thence extended to the general system; for where the fœcal matters are highly irritating, a spontaneous diarrhœa is induced, by which the offending cause should be removed, and the disorder itself is not unfrequently attended by a looseness, without being thereby materially relieved, whilst it is often cured by those means which act directly upon the liver, and during, and sometimes even several days before, the final evacuation of offensive and unnatural stools: so that the practitioner may often, by a marked abatement of the symptoms, predict an improvement in the condition of the fœces, a considerable time before they are discharged. Lastly, neither can it be allowed, that the complaint consists in a mere torpor or weakness of the alimentary canal; for this condition exists in many cases without this complaint occurring, and the medicines most suitable for it, are not among the



class of remedies that could relieve such a state since it cannot be assumed, upon any legitimate principles of reasoning, that simple purging, which removes the constipation, can be available for the removal of the debility which occasioned that state.

The following considerations, in addition to the above, are among those which more particularly appear to warrant the conclusion, that the disorder consists in a disordered condition of the biliary secretion. The colour of the motions of a person whose digestion is healthy, depends upon the tinge imparted to them by the bile, and which is too well known to require to be described. The other secretions poured into the bowels, or supplied by them, are for the most part colourless; any change, therefore, from the natural appearance which takes place in the fœces, must result from a change in the bile. This change can only be produced at the period of its secretion, or after its passage into the bowels, by the action of some morbid agent which it meets there. That the former is the mode to which this change is mainly to be attributed, may be inferred from the fact, that simi-



lar appearances of the motions are observed in cases where actual disease of the liver is present, and where a consequent disorder in its functions is evident; and that, as in the organic disease, so also in the mere functional disorder, the variation in the symptoms is attended by a corresponding variation in the appearances of the stools; for they are sometimes of the yeasty colour, thence acquiring, perhaps, a slightly yellowish tinge, changing to a light yellow, and then to the natural colour; or they may be of the dark colour of tar, or of a black green, changing, by almost imperceptible gradations, to lighter colours, and thence, in a gradual manner, to the healthy one. Now, the first of these appearances clearly attests a disorder in the secreting function, and, though the greenish tinge may be increased by an acid generated from the food in the primæ viæ, yet, it certainly does not always depend upon that cause alone, since a green, and otherwise unnaturally coloured bile, is sometimes on dissection met with in the gall bladder. In those cases, where the motions are of clayey, or of pale yeasty, and even white colour, there is incontestable evidence afforded of an interruption in the secretory pro-



cess ; for, frequently, neither the skin, nor the secretion by the kidneys, exhibits any greater signs of the absorption of bile into the system, than are manifested under other states of the alvine discharge.

But the assumption of the secretions of the bowels being comparatively colourless, may be further shown to be true, from the fact, that, where a complete obstruction is opposed to the passage of the bile into the duodenum, the stools are never black, but are generally of a colour partaking more or less of that belonging to the food : and yet it is in these particular cases, that there is often the most disorder in the bowels, and when of course their secretions might be expected to be most deranged, and consequently the darkest. About a year ago, a gentleman of this town died, who, during eight years, was jaundiced from a permanent obstruction existing in the biliary duct. During the whole of this time, the bowels were often excessively and variously disordered, yet, at no period, as I learnt from him, and as I had often occasion to observe myself, were the discharges from the bowels black.



The question, therefore, which next occurs is, what are the nature and the source of the deep brown, and sometimes exceedingly black stools, so frequently met with in this disorder? To which I would reply, that, from every observation I have been enabled to make upon the appearances of the fœcal discharges in this disorder, and from every consideration I have been able to give to the subject, I feel warranted in concluding, that whilst the deep brown colour arises from a morbid and deficient, and the yeasty or white colour from an interrupted biliary secretion, the black appearance is attributable to an admixture of blood with them, and that this blood is generally discharged from the extremities of the branches of the vena portarum.

In the account which is presently to be given of this disorder, it will be seen that there are two stages, namely, an acute and a chronic one, into which it may be divided. These states, I think, may be considered as depending upon different conditions of the liver, there being a congestive state of the vena portarum and its branches in both forms of the complaint; but in the acute



one, there is a higher degree of this congestive state, giving rise, in its turn, to a higher degree of venous congestion in those organs of the abdomen, the circulation of which is associated with that of the liver.

The circumstances under which this organ is placed, are, it is well known, of a peculiar kind, the venous blood, returning from the chylopoetic viscera to the heart, being appointed, in its passage thither, to circulate through the secretory vessels of the liver, as the pabulum of the biliary secretion. A portion of the venous blood, thus circulating, is therefore intended to be carried off from the mass, in the form of bile, by vessels destined for this purpose. Any interruption to the due performance of function, will necessarily occasion an accumulation of the blood in the vena portarum and its branches, and an impeded circulation will ensue, producing a congestive state of these vessels; and we have the justest reason from analogy to conclude, that congestion will follow in those cases where the secretion is checked or interrupted. The female breast, for instance, falls readily into a state of congestion upon any interruption oc-



curring in its functions, though the congestion in this case is arterial, and the effects inflammatory; whilst, in the instance of the liver, the congestion is necessarily venous, and the immediate effect, that of increased disorder in the secreting organ, and a similarly congestive state of those abdominal organs, which are connected, by venous circulation, with the liver.

In all cases of disorder in the function of a secreting organ, there is, however, a provision made by nature for its final relief. The congestive and inflamed state of the female breast, if not removed by the local abstraction of blood, or other artificial means, or naturally by a renewal of the secretion, terminates in suppuration, by which the congestive state of the vessels is removed, and a healthful state of them at length induced. But purulent secretion is the result of arterial action, and cannot take place in vessels the character and structure of which are venous, and which, as far as our observations go, are incapable of taking on the proper inflammatory action. The mode, therefore, by which the venous congestion of the liver can be permanently removed, is by a re-



newal of the biliary secretion. Where this does not take place, and the congestion is considerable, temporary relief may be afforded by the escape, through the *pori biliarii*, of a portion of blood, which, by passing along the *ductus communis*, will descend into the duodenum.

Of the first of these forms, we have a striking instance afforded in the cholera morbus, which, as consisting in a copious secretion of bile, is produced by those efforts which nature usually makes, and by which she often succeeds, to free herself from disorder. The symptoms of the cholera morbus, which precede the secretion and discharge of bile, are precisely, and indeed identically, those which distinguish the commencement of the acute form of this complaint. They constitute that stage in which there is the greatest danger, and which in its severest form consists of a general, and often excessive disturbance of the nervous system, the pulse becoming small and compressible, and occasionally intermittent—the extremities cold and sometimes livid—the stomach affected with nausea—the countenance sunk with a blueness, in children, about the mouth, and an oppression



of the whole system, denoting that condition of it which may appropriately be termed the state of collapse. These symptoms may continue an indefinite period, and may terminate fatally before the febrile re-action takes place. On the accession, however, of the stage of excitement they subside; for this last, relatively to the former, is to be considered as remedial, though it is only by the renewal of the biliary secretion that the congestive state of the portal circle can be finally removed.\* The secretion

\* The view here given, of the nature of cholera morbus, has been entertained and acted on by me during the ten years that I have resided in Hull; and I owe it to Dr. Curry, the distinguished Lecturer on the practice of medicine at Guy's Hospital, to acknowledge that it was from hints, derived from observations delivered by him in the course of his lectures, on the power which calomel possesses of promoting the secretory function of the liver, that I was led to form this theory of the complaint. Within these few years, a view of the pathology of cholera morbus, similar to the above, has been given in an able work on the diseases of tropical climates, by Dr. James Johnson, but which, I feel it necessary to observe, I did not see, until directed to it by a marginal note in a work lately published, and after these pages were prepared and announced for publication.

The following observations on venous congestion, written with his accustomed felicity of expression, are from the valuable treatise on chronic diseases by my much-esteemed friend, Dr. Armstrong :



in the cholera morbus is, however, in excess, and produces more or less of disorder; for the first effect of the morbid cause having been to check the secretory function, the re-action of the secretory vessels which ensues occasions it to become excessive. Appearances, somewhat analogous, for instance, are observed after taking cold, in the mucous membrane which lines the nostrils, the first effect being a sense of heat and fulness about that part, which, in a few hours, is followed and alleviated by a copious

“ Diseases of chronic excitement may arise out of diseases of chronic congestion in the veins, just as the hot stage may arise out of the cold stage of an acute fever; for in both cases the venous congestion may become an irritant to the arteries, by the stimulus of the distension applied to the right side of the heart, from the return and accumulation of the venous blood there, and in both cases the arterial excitement may be the natural cure of the venous congestion. It is indeed upon this principle we may trace the origin of several of those chronic excitements which are so common about the vital organs. For if we inquire into the primary symptoms we shall not unfrequently find, that they were those of venous congestion, produced by the operation of cold upon the skin, by the depressing passions, by sedentary occupations, by fatigue, or by some shock which retarded the arterial circulation, and made a recoil of blood towards the interior; while the arterial excitement was but an effect of that venous congestion, an action established to restore more effectually the natural balance between the venous and arterial systems.” See Practical Illustration of Scarlet Fever, &c. 2d Edition, page 379.



secretion of mucus. The same inordinate secretion of bile often occurs spontaneously even some weeks after the commencement of the bilious disorder, and always with relief. Some time since, a man brought to our Infirmary a letter of recommendation, in order to be admitted under my care. He had been ill nearly a month of this complaint in its acute form; but on the evening preceding his application, after he had procured his recommendatory letter, he was attacked with the bilious diarrhoea, and passed, as he informed me, during the night, nearly thirty motions of a pale yellow colour, and with such relief as scarcely to require from me a single prescription.

But in some cases, as we have just noticed, it happens, that instead of the congestive state of the liver being removed by a renewal of the biliary secretion, it is temporarily relieved from that state, by the escape of blood from the branches of the vena portarum. This effect I have seen in a variety of instances, since my attention became more particularly directed to the cause of fœcal discoloration, and I have traced



the changes in the colour of the fœces, from a deep brown to black, and from this last to the complete venous hemorrhage; this state yielding, as the cause was removed, to the black, and that again to the lighter shades, until the healthy colour was resumed. When the venous blood, thus discharged, passes through the bowels, it constitutes the idiopathic melæna, and where there is an obstruction to its descent through the bowels from a constipated state of them, or from other causes, it regurgitates into the stomach, producing the complaint known by the name of hæmatemesis. This hemorrhage, from its being often thus thrown up from the stomach, has been commonly, but erroneously, considered to arise from a rupture of the vessels of that organ; but when this discharge is idiopathic, it may, I believe, be justly referred to the liver, and be viewed and treated as the consequence of a congestive state of that viscus.

To the able author of the work on purgative medicines, Dr. Hamilton, of Edinburgh, we are indebted for the first hints leading to juster views of this disorder, but more particularly for



a plan of treatment that enables us to combat it with success; and though I cannot agree in the opinion entertained by that physician, as to the cause and seat of this disorder, I generally subscribe to the utility of his mode of treatment, because it has an important effect upon the functions of the liver, and owes, I conceive, its success to this cause. Indeed, if we reflect upon the comparatively unimportant connexion which the sanguineous system of the stomach holds with the other viscera of the abdomen, and the intimate union which, in this respect, subsists between them and the liver; and if, at the same time, it be considered with what facility bile in other cases is thrown up into the stomach, we may perceive the reasonableness of the notion that this hemorrhage proceeds from the liver. There does not indeed appear, from any knowledge we possess, either of the anatomy or physiology of the stomach, sufficient grounds for concluding, that mere constipation could give rise to apparently so serious an accident as the rupture of its vessels, or an exudation of blood from them; nor is it very conceivable that the stomach, under such circumstances, could be benefited by the action



of those active purgative medicines, which are so necessary and so efficient to this complaint.

But a constipated or loaded state of the bowels, which is assumed as the cause of hæmatemesis, is by no means a regular or necessary attendant upon it; and cases of long and obstinate constipation are daily falling under our observation, without giving rise to it. Neither will the supposition either of this disorder or melæna arising from constipation, explain the well known fact, of their frequently following the stoppage of accustomed evacuations, as if vicarious of them, as in hemorrhoidal and particularly in menstrual obstructions. Whereas, if we view these hemorrhages as proceeding from the liver, and arising from a congestive state of it, we have in some degree explained the nature of the connexion between them, and also why relief is temporarily afforded by the discharge, to the oppression and uneasiness about the stomach, and to the other symptoms of disorder; and likewise, the principles upon which the purgative treatment is so useful, as well as the origin and nature of those black putrid stools, which are so frequently met with in the functional de-



rangement of the digestive organs, and which, in colour and consistence, so closely resemble tar.\*

In the accounts which are given us, of the examinations, after death, of persons who have died of idiopathic hæmatemesis, it is acknowledged by many writers, that in several cases no rupture of vessels, nor other marks indicative of the seat of the disorder being in the stomach, were discoverable in it; † and where others mention appearances, that seemed to give some countenance to such a notion, they consist

\* “ I have known,” observes Mr. Abernethy, in his excellent observations on this subject, “ persons whose bowels were ordinarily  
“ costive, and whose general health was much deranged by disorder  
“ of the digestive organs, though they were unconscious of its existence, feel pleased that their bowels were in a comfortably lax  
“ state; yet in observing the stools, they resembled pitch in colour  
“ and appearance.” Surgical Observations, page 47.

† The late justly celebrated Dr. Heberden, mentions the case of a patient who laboured occasionally, for several years, under a vomiting of blood, and in whom, upon an examination after death, no marks of ruptured vessels of the stomach or bowels could be traced—*cujus tamen ventriculus et intestina, post mortem, nullum morbi indicium ferebant, quod duo expertissimi ac sagacissimi anatomici possent detegere.* Heberden, Com. p. 403.



chiefly of small discolorations in the mucous membrane of that organ, which may be justly regarded as the consequences of the irritation excited by the morbid bile that has been poured out with the blood, and which is often found so acrid in the severer forms of the cholera morbus, as to occasion dysenteric symptoms. By one writer we are told, that an habitual hæmatemesis, appeared useful and even necessary, a disorder having followed, of a bilious nature, upon attempting to stop it; and that an emetic in another, which excited a vomiting of bile, was found to be useful. It may be remarked that in the first of these two cases, there was the renewed congestion of the liver from a deficient secretion of the bile, and the hemorrhage, by relieving the congestion, removed the lassitude and other symptoms of the bilious affection; and in the last, there was the renewed secretion of the bile, which, whether produced or not by the emetic, had the usual effect of removing the congestion, and in that way curing the complaint. Some years since, I was called to attend a gentleman, who, after two or three days of indisposition, was suddenly seized with faintness, from which he



recovered so as to be able to walk a few hundred yards to his house. In a few hours afterwards, he was attacked with a slight paralytic affection of the left side, and then he immediately began to vomit very considerable quantities of blood. After a trial of the various means, usual on these occasions, for the space of twenty-four hours, without any abatement of the vomiting of blood, small doses of calomel frequently repeated, were employed, and in a few hours the discharge ceased. The paralytic affection was, after some time, recovered from, and the patient has enjoyed ever since an uninterrupted state of good health.

Two exceedingly well marked cases of biliary disorder came lately under my notice, which, terminating in a fatal melæna,\* enabled me, by means of dissection, satisfactorily to ascertain the relation which the latter bears as a symptom to the former. The first was of a young girl;

\* Of these two examples of melæna, I ought to observe that, from causes it is unnecessary to detail, I had not an opportunity of employing that particular practice in their treatment, which I invariably pursue in such cases, and which will come hereafter to be considered.



thirteen years of age, who was affected with a severe cough, which was worst during the night, attended with an expectoration of a thick, but whitish matter; she was much troubled in her breathing, retched occasionally when she coughed, and brought up from the stomach a tough and sourish phlegm. She had pain in her left side, and an increase in her cough when lying on that side, chilliness, followed by fever and thirst towards evening, profuse perspirations about the head and breast during the night, at the same time that her feet were cold. She had also much pain in her head, stomach, and bowels. The appetite was extremely bad, the pulse quick, the tongue foul and dry during the night; the bowels were alternately loose and costive, and the discharge from them exceedingly black and offensive; and her strength and flesh were so reduced, that she was unable to walk without assistance. She had been ill six months, and during the first three of them, she had a craving appetite, and the stools were dark and slimy; she was then also drowsy and listless, often complaining of chilliness during the day, sleeping unusually sound in the night, but so reluctant to get up at the usual hour in the



morning, as to weep when required to rise. The appetite afterwards failed, whilst the fever and debility increased, the cough and the unnatural appearances in the stools still becoming worse. About two months previously to my seeing her, she had a fit which continued half an hour, and during which there was a blackness about her mouth and under her eyes, an appearance often observable afterwards, though in a slighter degree whenever she was worse. She had been under medical treatment, and had lately taken twenty drops of a mixture, consisting of equal proportions, of the tincture of digitalis and the spiritus etheris nitrosi. During the three days I attended her, she continued to part with the same black stools which she had been discharging for some time before, and which I found upon examination, to be excessively offensive, and of a tar-like appearance. The cough became very much abated, but her other symptoms were not relieved, and her general appearance indicated the most immediate danger. On the fourth day there was an indistinct tinge of dark venous blood through the fœcal mass, and on the following morning I learnt that more unequivocal signs of it had appeared in the



evening; and that during the following night, the motions consisted of little else but dark venous blood, which poured from her as she laid. A few hours before she expired her complexion became blanched to a degree of whiteness, I never witnessed in any one before. On opening the body with my late friend and colleague Mr. Dunning, we found some old adhesions of the pleura on the right side, but not the least disease in any part of the lungs: the right auricle of the heart, and the large vessels leading to it, were empty. There was some nearly colourless fluid in the stomach, and a very small quantity of bile in the gall bladder. In making incisions in different parts of the liver, scarcely any blood issued from it, or from the vessels leading to it; its texture and bulk were, however, perfectly natural, but it had that blanched appearance which might be expected to be seen in an organ that had been emptied of its blood and washed. The other contents of the chest and abdomen were likewise perfectly healthy.

The second case of the same kind, which also proved fatal, occurred shortly after the last,



and was preceded by the same well marked symptoms of derangement in the function of the liver.

It occurred in a woman aged seventy-five, a patient, like the last, of the Dispensary. At my visit, I learnt that there had been two discharges from her bowels of a very large quantity of dark blood, preceded and attended by much sickness, and an oppressive weight at the stomach. The appetite had become prostrate, the tongue foul, the pulse feeble but of natural frequency: during the five preceding months, she had been weary and languid, and particularly drowsy, falling asleep at her meals, and even lying down on the floor to sleep; her appetite had been gradually growing worse, and latterly she felt the desire to eat, but was unable to do so on making the attempt; her knees and ankles had ached considerably, her spirits had been depressed, and her memory, vision, and hearing were impaired. Ten days preceding the attack she had felt a load at the pit of her stomach, with frequent nausea. The bowels had been kept regular by some pills. During the six hours subsequent to my first seeing her,



she parted with seven more discharges, each consisting of upwards of two pints of pure venous blood. The excessive debility, thus induced, rendered her situation utterly hopeless, and during the three days she survived, she had all the symptoms of the worst form of typhus.

My friend and colleague, Mr. Casson, obligingly attended to examine the body. The same appearances were exhibited in this as in the former case. The liver was completely emptied of its blood, as well as the right auricle and ventricle of the heart, and the large veins leading to it. The structure of the liver, and all the other organs, notwithstanding her age, appeared healthy. Both the liver and intestines had a blanched appearance. The latter were lined throughout with a dark-coloured slimy matter, similar to what was passed after the hemorrhage stopped. There was some bile in the gall bladder, of a darker colour than natural, and a few inches of the inner part of the duodenum were tinged with bile, which was probably owing to an escape of some of it from the gall bladder after death. The stomach contained some nearly colourless fluid, and ex-



hibited, in every respect, a natural and healthy appearance.\*

In these cases, if I mistake not, may be discovered the assemblage of symptoms, which are proper to the biliary disorder, so as to warrant the inference that the hemorrhage in them was the mere effect of the disorder. I say in these cases, for though the mucous lining of the bowels in them was free from all morbid appearances, yet I am satisfied that a hemorrhage may take place from it, since my friend Dr. Armstrong informs me, that he has met with some cases where large quantities of blood had been thus lost, and where after death the mucous membrane of the bowels was found in some places highly injected. As he could not find any distinct proof of rupture in any of these cases, he conceives that the blood had transuded through the extremities of the small vessels, in the mode which Laennec has mentioned, in his valuable work, on diseases of the heart and

\* Since the former edition of this work was published, the daughter of the above patient has been under my care in the second attack of vomiting of blood, affording an example, of what indeed is often observed, that members of the same family have a peculiar tendency to the same morbid affections.



lungs, a mode also to which Celsus plainly alludes, where he speaks of the blood sometimes passing *per ora venarum*, in attacks of hæmoptysis. In the disorder known by the name of *petechiæ sine febre*, and towards the close of some fevers, I have likewise witnessed similar discharges; yet nevertheless my own observations would authorize me to conclude that the idiopathic melæna, as well as hæmatemesis, are in general, when occurring in this disorder, only modifications of cholera morbus, arising like it from a congestive state of the secretory vessels of the liver, and differing from it chiefly in there being an escape of blood, from the extreme branches of the vena portarum, instead of the copious secretion of bile which constitutes the second stage of cholera morbus, and is the natural cure of the hepatic congestion.

In the flattering notice which the Editors of the valuable medical journal of Edinburgh, condescended to bestow upon the first edition of these pages, it was intimated, that in the foregoing views of the pathology of hæmatemesis, I had been anticipated the preceding year by a graduate of that city, and that a nearly similar view had been delivered by the




late Dr. Saunders, in his work on the diseases of the liver. Not having seen the thesis of the gentleman alluded to, I am incapable of forming any opinion of the degree, in which our opinions upon this point assimilate, but in the extract\* which is given, there is nothing, I conceive, beyond the admission that blood may escape from the *pori biliarii* into the duodenum; an admission which had been previously made by Dr. Saunders, and which I considered already so generally allowed, as to require no particular observation from me.† But there is

\* Admodum credo particulas sanguinis rubras e minutissimis venæ portæ ramulis absque mutatione detrudi, et demum in poros biliarios effundi. Ibi sanguis cum bile inguinata miscetur, et cito in canalem alimentariam transit. Color sanguinis nigerrimus huic opinioni de ejus origine haud parum favet; quia bene novimus sanguinem venæ portæ, aliarum venarum sanguine nigriorem. P. 29. Dissert. Inaug. de Dysenteriâ Regionum Calidarum, Auct. Archibald Robertson: Edinburgh, 1817.

† The following is the passage from Dr. Saunders. "It seems probable," he observes, "that from the *quantity secreted*, and the rapid manner in which it is poured into the duodenum, there is not time sufficient for perfect secretion; that the fluid therefore is somewhat of an intermediate nature between blood and bile. Perhaps, from a hurried circulation a considerable quantity of red particles escape unchanged from the capillary vessels into the *pori biliarii*, and uniting with portions of bile, are carried by the hepatic ducts into the duodenum." Saunders on the Liver, 3d edition.



no accordance (and it is chiefly with a view to this point that I have noticed the subject) between the foregoing views and those entertained by Dr. Saunders, for he considered the escape of blood to take place, at the time when the secretion of the bile is in excess, whereas it is assumed by me, that the hemorrhage arises from a diminished or interrupted secretion of it; a congestive state of the liver being the immediate result of such interruption in the secretory action of its vessels. It is not when the milk flows in copious streams from the breast, but when that secretion is suddenly interrupted, and the vessels of the breast itself are rendered morbidly congestive, that drops of blood are seen to spring from the turgid nipple, mixing with and polluting the small portion of the milk that is secreted.



#### RECAPITULATION.

The view which has been attempted to be taken of the pathology of the bilious disorder, I may here briefly repeat thus :

I. That this disorder consists in a deranged and imperfect action in the secretory function



of the liver, and a consequent deficient and unhealthy secretion of bile, as is manifested by the alvine discharges not having that colour, which is always imparted to them by it, when it is secreted in a healthy state, and in the proper quantity.

II. That this disorder in the function of the liver, sometimes arises from a disorder commencing in the stomach; for the function of digestion is performed by organs, the actions of which, by means of a nervous union established among them for the purpose, are accordant and co-operative; the healthful action of the liver in fact depending upon a stimulus imparted to it by the stomach, in obedience to this law.

III. That therefore in certain deranged states of the stomach, the precise nature of which is unknown, there is either a morbid or an imperfect stimulus given to the liver, by which its secretory function is impeded, and a bilious fluid produced, that is deficient in its quantity, and commonly of a morbid quality.

IV. That, as an interruption in the accus-



tomed actions of a secreting organ occasions a congestion of its vessels, the diminished secretion of the bile gives rise to a congestive state of the vena portarum and its branches, and to a similar state in those organs, the venous system of which is associated with that of the liver.

V. That in consequence of those efforts which nature makes to free herself from disorder, this congestive state is sometimes spontaneously removed by a copious secretion of bile, constituting the bilious diarrhœa, or the second stage of the cholera morbus; and that in other cases its force is temporarily abated by an hemorrhoidal flux, or by the discharge of blood from the loaded extremities of the vena portarum; occasioning in this latter case, and when in small quantities, the black and tar-like, and often putrid and fœtid stools, but when in excess, the idiopathic hæmatemesis or melæna.

VI. That whilst this congestive state of the liver, in its acute form, produces an assemblage of symptoms, of which the first are those of collapse, and the second those of excitement, resembling in many points an inflammatory affection



of that organ, it differs essentially from that state in many important particulars. For in the acute inflammation of the liver, it is the arterial action of the organ that is excited, and the congestion (if the expression be allowable) is arterial; the secretory function of the organ, from its being carried on by a distinct class of vessels, partaking only secondarily, and partially, in its effects; whilst in the venous congestion of the liver, consequent upon an interruption in its secretory action, the arterial system of the liver is necessarily but little affected, the congestive state in that organ being in all probability chiefly limited to the vena portarum and its branches.

VII. And lastly, that the indications for the removal of these morbid but dissimilar states, will, therefore, necessarily be different. The inflammation in the liver will demand the same treatment which is applicable to inflammation in other parts of the body, for it differs in nothing from that state in them, either in its origin or nature; whereas, in the purely functional disorder of that organ, from its having nothing in common with inflammation, it will not, as I have



repeatedly found, he benefited by venæsection alone, or by blistering, and the antiphlogistic regimen; but the principal object to be attained, will consist in a renewal of the healthy secretory action of the liver, as it is from the interruption of this, that the congestive state arises, with its immediate train of painful symptoms.



## CHAP. II.

THE SYMPTOMS OF DISORDER IN THE FUNCTIONS  
OF THE LIVER AND OTHER ORGANS OF DIGES-  
TION.

IN the introductory observations which have just been made respecting the pathology of bilious complaints, it was represented that the disorder so named of adults, and the marasmus or infantile remittent of children, are the same. In the account, therefore, which is about to be given, these shall be adopted as synonymous and convertible terms, comprehending every form and variety of the complaint. In giving a description of the disorder, it will be convenient, however, to present separate views of it, as it appears in infancy, childhood, and adult age; and I shall accordingly make use of this arrangement, limiting the period of infancy to the second, and that of childhood to the fourteenth or fifteenth year.

There are two stages into which the complaint may be divided, but which, however, are liable



to be overlooked, by their running so often rapidly into each other, or by inattention to its first, and sometimes, its seemingly unimportant stage. The characteristic symptoms of each are tolerably well defined, the chronic form of it being marked by a morbidly craving appetite, unaccompanied with much thirst or fever, whilst the acute one, besides being attended by fever and by a considerable loss, or an absolute extinction of the appetite, is distinguished by that oppression or collapse of the system just noticed, which, preceding the febrile state, is partially removed by it.

A young infant, when first affected with this complaint, exhibits a languid appearance, sleeping more than usual during the day, and passing the night with a proportionable degree of restlessness. It takes with more than usual readiness its food, which appears to have the temporary effect of soothing it. After a longer or shorter time, generally according to the age of the infant, the restlessness and crying increase, a loathing of the food succeeds the former morbid appetite—the breathing towards evening becomes quicker and louder than usual, attended



with some stupor, and frequent startings, and considerable heat about the body and head, the feet and sometimes the hands being cold. If the little patient be not quickly relieved from this state, a low degree of convulsion appears, which nurses term inward fits, and in which the countenance becomes sunken and of a dark hue, especially about the mouth; these symptoms terminating perhaps at length in strong and fatal convulsions.

If the infant be a few months old when affected, or of a vigorous constitution, and the attack be mild, its bowels will sometimes become spontaneously loose shortly after the complaint appears, and, under these circumstances, its craving appetite may continue, with occasional interruptions, for many weeks, without any considerable aggravation of the symptoms; the alvine discharges varying almost daily in their appearance, but never appearing natural, being sometimes of a yellowish green and curdy, or parti-coloured, or, as nurses term it, of all colours, and slimy; and at other times, of a yeasty colour, and in this case, often of a peculiarly offensive and unnatural odour. The



flesh acquires a flabby or loose feel, and wastes more or less quickly in proportion to the urgency of the symptoms. The tongue is white, and not unfrequently aphthous. A troublesome spasmodic cough, coming on in the evening, and recurring at intervals during the night, is not an uncommon symptom, attended by difficulty in the breathing, especially during sleep, from an apparent, and sometimes from an actual accumulation of phlegm in the throat, giving rise to that state which nurses term being stuffed. Eruptions occasionally break out about the nose, or mouth and ears, and sometimes a rash appears about the body, and under such circumstances often with a temporary relief to some urgent symptom.

After some time, the spontaneous looseness, which had hitherto carried off a portion of the imperfectly digested and irritating matters from the bowels, and thus in some degree averted the danger of considerable febrile re-action, becomes less available ; for though, perhaps, in appearance more considerable than before, yet it is more unnatural in its colour, and less productive, there being much straining with scarcely



any thing but slime, or watery stools, discharged. The craving appetite now yields to the opposite state, a considerable increase of fever ensues with only slight morning remissions, attended by restlessness, with intervals of stupor, that may be followed by convulsions. The fever, after some time, is often unexpectedly relieved by a return of the spontaneous and more productive looseness, which carrying off the irritating matters from the bowels, relieves the system, and sometimes restores the morbidly craving appetite. The relief thus afforded, however, may be only of a partial kind, for the wasting of the flesh and strength may proceed, notwithstanding the renewal of the appetite; the infant dying at length in a state of extreme emaciation and weakness, discharging the food from its stomach and bowels, during the last few days of its life, in a most offensive and putrid state.

The complaint, as it appears in children until the age of three or four years, often resembles in its symptoms, and in the rapidity of its course, the form which it assumes at the earlier periods. As we advance, however, beyond this latter age,



there is some variation observable, the chronic form of it running less readily into the acute state, from the diminished tendency to febrile and convulsive action, which is manifested by children as they advance in age.

The chronic stage of this disorder in children, commonly makes its approaches insidiously, little more being remarked at first than a craving appetite for food, which is easily mistaken for a fuller indication of health. In a short time, the countenance begins to lose something of its natural animation and blooming look, and the child reluctantly rises at his usual hour in the morning, and when risen, is importunate to be nursed, or is desirous of sitting still, and near the fire, abandoning his active amusements. He complains of being chilly and tired, of having an aching pain principally in the knees and lower part of the thighs, and which is worst after walking. He is dull, fretful, and readily weeps from causes which he would before have disregarded. The breath is foetid, and there is commonly an itching about the nose, and either an unusual dryness of it, or an increased mucous discharge from it, a slight pain or dizziness



in the head, and sometimes an uneasiness in the stomach or bowels. As the evening approaches, the child appears more languid, and is desirous of going to bed early. He falls asleep readily, and sleeps more heavily through the night than usual. The tongue is white before the breakfast is taken, and the bowels are either regular or loose, the discharge being scanty, and unnatural in its appearance.

As the disorder advances, the patient often complains of being faint, and is inclined to sleep during the afternoon, becoming watchful for the first few hours of the night. When asleep, he often perspires about the head and neck, and moans or talks, or grinds his teeth, and sometimes starts, awaking suddenly from fear inspired by his dreams. A tickling spasmodic cough, coming on in the evening, and recurring at intervals through the night, is a very common symptom. When violent, it gives rise to retching, and some phlegm is brought up into the throat from the stomach, which often excites a suspicion in the attendants of an incipient pertussis or consumption. The breathing, during sleep, is hurried and louder than usual, and the





pulse is full and preternaturally quick. The tongue is white, the bowels alternately loose and costive; the craving appetite generally failing as the looseness abates. The motions are scanty, and altogether unnatural, being dark and slimy, and often of different shades of green, and sometimes of a light yeasty colour. The appearance of the water is various, and its indications are often uncertain, though it is generally thick and whitish: the skin is harsh and dry. Through the whole progress of the disorder, the flesh and strength waste, whilst the body frequently becomes swelled. During some time, the appetite continues to be craving, for, however plentiful may have been the meal, the desire to eat again is soon renewed. The patient at length begins to throw up his food, and as the complaint advances, he becomes difficult in the choice of it, and though frequently asking for it, yet eating but little, the appetite being only good when a savoury or novel kind is offered, and a preference is often shown for that which is dry, as bread that has been some days baked, pie crust, and so forth.

Should any of the remote causes of the dis-



order be even now slightly applied, such as cold, or improper diet, &c. the acute stage becomes immediately formed. It begins with the state of collapse—the extremities become cold, the pulse compressible, and the system torpid, the child lying perhaps for several hours in a state rather of insensibility than slumber. When the re-action takes place there is thirst, with considerable quickness of pulse, and a high degree of fever during the afternoon and night, with perhaps only slight and imperfect morning remissions. The restlessness, until some hours after midnight, is often excessive—the breathing during sleep is hurried and louder than natural, and the skin hot, particularly about the head, body and hands, the feet perhaps still continuing cold. The child screams, and sometimes raves in its sleep, and awakes in such distress and fear, as to be with difficulty pacified. There is often considerable pain in the head, or stomach, or bowels, which is increased during the night. The tongue is covered with a white fur at its middle and posterior part, and the tongue itself appears redder than usual, the in-



flamed and tumid papillæ projecting through the white fur : during the night it is dry. The appetite is extinguished, and nausea is felt on attempting to eat. The urine is scanty, high-coloured, and turbid, and often discharged with pain. The bowels are commonly costive, and moved with difficulty; their contents are dark and slimy, sometimes in a fermenting state, yeasty in colour and consistence, of a sour and highly offensive and unnatural smell; the complexion of the patient is sallow, and the whole countenance appears languid, sunken, and somewhat fatuous.

The complaint, when it attacks the adult in the chronic form, generally comes on in the same gradual manner, and with nearly the same symptoms as in the child. The craving appetite is among the earliest observed. The patient complains that the food appears to do him no good, having an empty and sinking feeling at the stomach, which is only temporarily relieved by eating, for he feels shortly after a meal as if he had long fasted, and is again desirous of taking food. He is listless and drowsy, and



chilly, during the day; complains of an aching in his knees and ankles, and of slight vertigo and dimness of sight, and feels an inaptitude for mental exertion, and being dejected from no assignable cause, becomes fatigued, and readily perspires by even moderate exercise. In the early stage, the sleep is often unusually sound, but at the same time unrefreshing.

As the complaint advances, there is considerable restlessness for a few hours during the early part of the night, and the sleep is often broken by frightful dreams, which create much agitation in the mind of the patient. His complexion acquires a slightly sallow hue, which is particularly seen in the forehead and back part of the hands, and the eye loses a portion of its accustomed animation. There is constantly a loss of strength, and generally, though not invariably, a wasting of the flesh from the commencement of the complaint. The bowels are sometimes declared to be regular, though more generally they are admitted to be costive. Their contents are very various in appearance, but always unnatural, being frequently of a black green, and slimy, and often part-coloured,



sometimes of a drab colour, and also more or less offensive. The urine is commonly turbid and high-coloured, but it is sometimes clear, varying in these respects greatly, without being accompanied by any distinguishable variation in the other symptoms. The tongue differs much in its appearance in different individuals, under apparently the same circumstances, and in the same individual at different periods of the complaint. It is generally dry and likewise furred of a morning, especially at its posterior part, becoming sometimes nearly clean after breakfast. The pulse undergoes scarcely any sensible alteration, excepting in irritable habits, when it is quicker than natural. There is seldom much thirst, but there is commonly some heat about the head and breast in the early part of the night, with a ready disposition to perspire, at the same time that the feet are cold. On first rising in the morning, the patient is ready to persuade himself that he is well, and generally begins, as he terms it, to fall off towards eleven or twelve o'clock, becoming more indisposed as the evening approaches. The cough, which in both forms of the complaint is met with so commonly in infancy and youth, is of less frequent



occurrence in those of the middle and advanced age, excepting in the acute stage.

The duration of the chronic stage varies considerably. I have known it continue several months, and even years, with only an occasional abatement or aggravation of its symptoms, and at length suddenly pass into the acute state.

When the acute stage is fully formed, the appetite is commonly extinguished, the very sight and smell of meat having a sickening effect. The patient, indeed, has a great repugnance to every sort of sustenance, especially to the kind that he has been accustomed and even partial to, and finds a very particular dislike to bread, and to his hitherto, perhaps, favourite beverage, tea. There is a great tendency to fainting in the erect posture, and this as well as the other symptoms proper to the state of collapse occasionally prevail with the same intensity as it is met with in the infant. There is commonly, either an oppressive feeling, or an acute pain, in the region of the stomach, or in one of the sides, generally the left, or in the



bowels, striking to the back, which is worse towards night; where the pain is very severe, it is commonly aggravated by the recumbent posture. The patient is greatly disturbed in his sleep, awaking sometimes in considerable and undefinable terror, and rising hastily in his bed, from the influence of some accidental delusion, or under the impression that he cannot continue to breathe there. The restlessness indeed, during the night, is commonly excessive; and there is often in fact such a degree of watchfulness, and so great a dislike to lying down in bed, as not only to preclude the power, but even the desire, to sleep. There is always heat of skin, with thirst, towards evening, and during the night, and an increase in the quickness and force of the pulse. The tongue is furred, and during the night it is dry: sometimes it is complained of as hot and smarting. The water is scanty and turbid, and high coloured, frequently resembling porter, particularly in those cases where the pain in the region of the stomach is greatest. The bowels are costive, though they are sometimes believed by the patient to be regular; occasionally they are loose. Their con-



tents are of the colour of very pale yeast, or they are dark and even perfectly black, resembling tar in colour and consistence, and of an exceedingly offensive, and often putrid smell.



## CHAP. III.

OF THE SEVERAL FORMS AND VARIETIES OF  
THE BILIOUS DISORDER.

**I**N the description of this complaint in the last chapter, were included all those symptoms which accompany it in ordinary cases. So diversified however, is it in the forms which it assumes, and so varying in the intensity of its symptoms, from differences of sex, age, constitutional tendencies, and idiosyncrasies, and other causes hereafter to be noticed, that any description of the disorder under its common form, must be necessarily incomplete, and convey but a very inadequate notion of its nature. On this account I shall now proceed to notice the several disorders, of which it is sometimes the cause, and with which it is liable to be confounded, and also some of those peculiarities, which give it a resemblance to other complaints, of which the following division presents itself, viz.

I. Those belonging to the disorder, but not



commonly considered to be a part of it, or which pertaining to it, simulate other morbid states, and, II. Those which indicate the presence of a secondary complaint, as a direct effect of the primary one, a secondary complaint, which may survive the removal of its cause.

### SECT. I.

To those reflecting on the important influence which the liver exercises in the animal economy, it must be obvious, that a temporary interruption of its secretory action, must in many cases be succeeded by such a disturbance in the several organs of digestion, as to create, by the pain and other symptoms, appearances not unlike those of hepatic or enteritic inflammation; and accordingly we find, that in the acute stage of the disorder, such appearances are not unfrequently produced. The instances in which I have most commonly observed them to occur, are in those which have come on suddenly from cold joined with wet and fatigue, and particularly where these have been endured under an anxiety of mind, and with much interruption to the natural rest. In these cases often, the spirits and powers of the patient appear to be broken, and



he either makes but little complaint, or is querulous and capricious. Where the disorder has existed some time, pressure made in the region of the liver, will produce an oppressive feeling there, compelling the patient to a sudden and forcible expiration of the breath. In all other particulars the symptoms resemble those proper to the acute form of the disorder, which have been already described.

In order to assist the diagnosis, it may be observed that in the acute inflammation of the liver, there are not that excessive watchfulness and prostration of the strength and spirits, and almost entire interruption in the secretory function of that organ, nor that absolute derangement of the health, and aberration of mind, with the general disturbance of the nervous system, which are so distinguishable in this complaint. If in this disorder any uneasy feeling upon making an inspiration, be excited in the region of the liver, it is rather of weight than of pain, and where there is a cough the same remark obtains.

The state of the pulse cannot always be relied on, for its differences do not range within limits which admit of an accurate definition. The



hardness proper to inflammation is not always present in it, and a degree of fulness is sometimes met with in simple excitement, that is strongly allied to the former state. Where venesection is used, it usually affords no relief in this complaint, and the blood drawn does not exhibit buffiness, but commonly a slightly green hue.

On some occasions, as it has been before observed, the seat of the disorder appears to be in the bowels, when the complaint assumes many of the characters of peritoneal or enteritic inflammation. In these cases, the body is painful when pressed, and considerably swelled, and it is chiefly by these circumstances that it differs from that form of the complaint just noticed, in which an inflammatory affection of the liver is suspected to be present. The motions are of the same unnatural appearance, and are frequently voided in a putrefying and fermenting state. The distension and pain of the body are sometimes excessive, and from these being constantly present, by which it is distinguished from common colic, and from the high degree of febrile excitement and nervous irritability of the patient, the diagnosis becomes exceedingly difficult. In some of these cases, a correct notion



of the nature of the disorder will be often only obtainable by a due consideration of the previous state of the patient, in reference to the probable existence of the complaint in the chronic form, and especially an early and scrupulous attention to the alvine discharges; for the highly morbid appearance of these is essentially present in functional disturbance of the liver, and most conspicuously so in those examples of the complaint, which assume the appearance of enteritic or hepatic inflammation. Where, however, any doubt exists in the mind of the practitioner, it need not be suggested to him, as the preferable mode, to treat the disorder in the first instance as inflammatory, since the appearance of the blood, and the effects upon the disorder of the first bleeding, will be so many additional guides to him in forming his diagnosis. In illustration of the difficulty in justly discriminating between this disorder and inflammation, a case may be noticed which occurred to me some years ago, of a lady who, I was informed, had been affected with inflammation of the bowels, and whose disease, in the opinion of the attending physician and surgeon, had already terminated in mortification. She resided at some distance from Hull, but as the order was



absolute for my visiting her, I accordingly set out, though I could not reach her residence until the third day from the date of the letter. On my arrival, I found her living, but with still no hopes entertained of her recovery. From having seen, however, several cases of the kind before, where the same difficulties had occurred to myself of discriminating between this disorder and inflammation, and having likewise the advantage of reviewing, at this stage of the patient's complaint, all the circumstances belonging to it, I was enabled to decide upon its nature; and having explained to the gentlemen who favoured me with a meeting, my opinion respecting it, they agreed in my views, and in the propriety of the plans proposed for the relief of our patient. We accordingly gave her small doses of calomel, repeated at short intervals, following them up, after some hours, with a weak solution of the sulphate of magnesia in repeated doses, until full purging was produced. Under this treatment, in the course of twelve hours, she became much relieved, and copious evacuations were procured of yeasty-coloured, frothy, and excessively offensive motions, and with such complete relief to the tension and pain of the body, and to the watchfulness and other unfavourable



symptoms, as to leave no room for anxiety about the event of the case. In a few days, by persevering in this plan, our patient became convalescent, and was soon restored to health.

And here, as connected with this part of our subject, I may remark, that to those who have seen and attentively observed puerperal inflammation, the diagnosis between this disease and the complaint under consideration, may in most cases be easy; but where the knowledge of both is derived from description alone, there will be considerable risk of confounding them. Such of my experienced professional readers, who may honour these pages with perusal, will, I doubt not, remember several instances, in the course of their practice, in puerperal cases, where this complaint assumed so much of the appearance of peritoneal inflammation, as to make them hesitate about the propriety of employing, or regret the omission of venesection, when a brisk calomel purge has displayed to them at once the real nature of the malady, by the prompt relief which its single operation has afforded. In other cases, they will have remarked, how little relief venesection gave to the pain, and to the general, and sometimes great disturbance of the system,



though fully perhaps employed, until free bilious evacuations from the bowels were procured; purging thus appearing, in such cases, what it undoubtedly is not, a more powerful mean than venesection, for subduing puerperal inflammation.

It has already been noticed, that the remittent fever of children, as it has been named, and the bilious disorder, are considered to be the same; and it has just been remarked, that the acute form of this disorder not unfrequently occurs in the puerperal state, and exhibits many of the symptoms of puerperal inflammation. In a work, written some years ago, by the late Dr. Butter, on these complaints, an attempt is made, by that otherwise accurate observer, to identify this disorder of children with the inflammation of the puerperal state, the difference observable in the symptoms being considered to arise merely from the influence which age and other circumstances might be expected to produce. That the fever, however, here noticed, was only the bilious affection which was mistaken for it, and that, as such, it was curable without venesection, is an opinion which may be hazarded with little chance of contradiction. For, however the two complaints



may resemble each other, and sometimes their resemblance is very strong, it may be laid down as an incontrovertible truth that the true puerperal fever is in its essence inflammatory, and its most active and indispensable remedy is free and early venesection. Other means, and especially full evacuation from the bowels, are important auxiliary agents to bleeding, but they are not to be relied on, excepting as such. Every case of puerperal fever that I have seen, has been in its advanced state, and every one appeared to me to prove fatal, either from delaying the employment, or from the neglect altogether of venesection. Of the functional derangement of the liver, which resembles it, I have seen numerous instances in the puerperal state, and I have known some of these cases treated by bleeding, and the usual antiphlogistic means; and while others remained more than a week without medical attendance, some, again, were treated by stimulants; all the patients ultimately receiving relief, sometimes, under circumstances, which, to the attendants, seemed hopeless, by means which restored the biliary secretion, and evacuated freely the bowels. So frequently, indeed, have these facts come under my notice,



that there is no point I feel more anxious to press upon the attention of the younger part of my readers, than the necessity of guarding against the mistake of identifying this disorder with the true puerperal fever, and against the serious practical error, resulting from it, of believing that purging alone will be available for the cure of both. Puerperal inflammation, except where it occurs epidemically, according to my observation, is comparatively a very rare disease, whereas the functional disorder of the liver and digestive organs, occurring in the puerperal state, and which so much resembles it, and is so commonly mistaken for it, is by no means an unfrequent one. To the former, copious and early bleeding is of the first importance, and purging is only an auxiliary and subordinate agent; whilst to the latter, a free evacuation of the bowels, with those means which promote the biliary secretion, is absolutely required, and general bleeding is not only in most cases unnecessary, but may often prove injurious—so injurious, indeed, as to lead to an immediate and irrecoverable failure of the vital powers. In fact, the practical evil resulting from an error in the diagnosis, will hinge mainly



upon these points ; for to trust to purgatives in puerperal inflammation, or to bleeding in the functional derangement of the liver in the puerperal state, would, in the severer forms of the latter, be equally pernicious in both.\*

But it is not simply in its resemblance to puerperal inflammation, as that resemblance is manifested by the pain and febrile disturbance, that biliary disorder becomes entitled to consideration when occurring in the puerperal state, since it is to this as a cause in its intensest state, that we may trace that sudden, and sometimes irrecoverable failure of the vital powers, occasionally met with in the child-bed state. As a disorder confessedly distinct from puerperal inflammation, it may be said to have been hitherto undenominated, though it has been noticed by several writers, and among others, by Dr. Armstrong,†

\* I have not pointed out here any of the circumstances, by which the puerperal inflammation may be distinguished from this fever, when this last occurs in the puerperal state ; preferring to recommend the reader to study the works of Dr. Armstrong and Mr. Hey, and some other authors, who have written fully and ably concerning it.

† Facts and Observations relative to the Fever commonly called Puerperal, 2d Edition, by John Armstrong, M. D. Physician to the Fever Institution, London.



with his usual powers of discrimination; and lately in an excellent essay by Dr. Hall.\* It has, from its thus occurring in the puerperal state, been commonly considered as an affection peculiarly belonging to lying-in women; but it differs in nothing from the other forms of functional disturbance of the liver, excepting in intensity, and in the peculiar circumstances of the puerperal state, which may aid its morbid influence. For in the most severe cases of the functional disorder of the liver, there is, as it has already been noticed, a collapse of the system preceding the febrile stage, and which, on some occasions, is so intense, as to prevent that developement of fever which is termed re-action, and which relatively to the state of collapse may be regarded as remedial. Hence the whole nervous system becomes greatly, and, sometimes, excessively disturbed—the pulse is small and compressible, and often intermittent from the influence of the internal congestion on the action of the heart—the extremities are cold and partially discoloured, and the countenance sunken and peculiarly wan or sallow, the vital

\* Cases of a Serious Morbid Affection, occurring principally after Delivery, Miscarriage, &c. by Marshall Hall, M.D. F.R. S. E.



power in some instances rapidly sinking, until the scene perhaps is closed by convulsion. This, in fact, is what is daily occurring in infants labouring under this disorder; and the state of a female in the puerperal state, under the same disorder in its worst form, resembles that of an infant under the same circumstances, and it is undoubtedly to some cause connected with the puerperal state, that this assimilation of their two states is to be attributed. I have, indeed, witnessed in the lying-in woman all the symptoms proper to this disorder which are met with in the infant, even to the convulsions, and I have had the satisfaction to verify the nature and identity of both, by relieving both by the same means.

But on some occasions the danger of this form of the disorder, when met with in the lying-in state, is farther aggravated by the occurrence of a uterine hemorrhage, which, aided as it is by the exhaustion proper to the complaint itself, and sometimes unhappily by the use of the lancet, is occasionally proving fatal. That the uterine hemorrhage, thus occurring during the first two or three weeks after delivery, is generally a symptom only of this functional distur-



bance of the liver, has not, I believe, been hitherto suspected; that it is, however, to be so regarded I can venture to pronounce, from repeated observation made upon the disorder, and upon the means that are most efficient for its removal. It is now some years since I was first struck with the power, which calomel purges appeared to possess in relieving uterine hemorrhage, as met with in the women belonging to the lying-in charity, for whom they were prescribed, simply with a view to their purgative effects. At first I ascribed the effect of the purge in relieving the hemorrhage, to the evacuation of morbid matters from the bowels, but farther and more accurate observation of the colour and condition of the stools, of the course of the disorder and effects of the remedy, convinced me that the mere removal of fœculent matters from the intestinal canal, though a proper, was nevertheless only a subordinate object, and in cases of excessive uterine hemorrhage was utterly unavailing. For, independently of other considerations which militate against that conclusion, a uterine hemorrhage will often come on after the brisk operation of a purge, and even where a spontaneous diarrhœa has for some



time existed; and it will cease under the use of calomel, alone or combined with opium, when the effect is simply to change the morbid actions of the liver, and other organs of digestion, and in that way correct the unhealthy condition of the stools, and abate the frequency of their discharge. The cause, in fact, consists in a sudden interruption of the secretory function of the liver, which gives rise, in an aggravated degree, to an abdominal venous congestion, in which the uterus may perhaps participate; and the indication of cure for the hemorrhage, as well as the other symptoms, will be found to be answered fully by restoring the biliary secretion. And as the danger in all these cases is imminent, it is of the utmost importance to be prompt in the use of those means which are suited to this end. Prescribing for particular symptoms in such cases is worse than trifling. Venesection, which is so indiscriminately and perniciously resorted to by some in all cases of hemorrhage, is utterly improper in this, as are all other depletory means; but, on the other hand, the exhaustion and sometimes excessive disturbance of the nervous system, as shown by the almost incessant watchfulness and perpetual tendency



to fainting, must not be attempted to be corrected by the use of diffusible stimulants. The appetite is usually quite extinguished, and instead, therefore, of the medical practitioner having to prescribe a food for his patient, it is one of his most important, though least pleasing duties, to employ his authority to prevent her being needlessly urged to take it. For food taken when nauseated, is capable of aggravating the complaint, by the irritation which, in its undigested form, it will communicate in its passage through the stomach and bowels. The entire object of the physician must be in fact to restore the biliary secretion, and in this way remove the several morbid actions dependent upon its interruption. And without in this place anticipating farther the observations hereafter to be offered on the treatment of biliary disorder, I may here just remark, that in this, as in all the other cases of that disorder, where its symptoms are severe, and the danger imminent, calomel is the medicine which must be mainly relied on, and it must be given in small but frequently renewed doses, following them up by aperients, or combining them with minute doses of opium where a diarrhœa is present, and con-



tinuing them until some impression be made upon the complaint, even at the risk of slightly affecting the mouth. By such means, indeed, I have had the satisfaction to save several women, whose condition to the attendants appeared hopeless; and it is under the full experience and assurance of their efficiency that I venture thus in the most unqualified manner to recommend them.

The tendency of every secreting organ, when long morbidly excited, is probably to assume a certain degree of disease, though the period of its occurrence will be influenced by many circumstances, and must be necessarily uncertain. With respect to the liver, in the chronic form of this complaint, I have had frequent opportunities for ascertaining, that the functional derangement of it may continue for several years, assuming, during that period, many of the supposed symptoms of chronic hepatitis, and recover suddenly and permanently its healthy state, by means directed merely to effecting a change in its actions. Nor can it be said, that, in such cases, there may still have existed a change in the structure of the liver, constitut-



ing organic disease ; for no instance is afforded of any such healthy change taking place so early in any other organ, where the disease of structure here contemplated had been induced ; and certainly not in those cases of liver disease, where unequivocal symptoms of it existed.

From causes, perhaps not easily explained, a disposition has arisen in many practitioners to refer the origin of all disorders of the digestive organs, and sometimes even consumption itself, to some specific organic disease of the liver ; and a practice has grown out of these opinions, of employing long and severe courses of mercury, and a debilitating regimen, for its removal. Such views, when thus reduced to practice, cannot fail to exhibit their fallacy, since they are founded on the error of regarding the liver as diseased, when it is only impeded or disordered in its action ; and of employing means for reducing the force of the arterial action of the organ and of the system, instead of those which are proper for renewing and sustaining its secretory function. To such of my readers, who may have imbibed these views, I would take the liberty to recommend the instructive practice



of dissection; for from it they will soon learn for themselves to distrust such speculations. In the prosecution of their examinations, they will find comparatively but few cases of diseased structure of the liver, compared with those which they had perhaps classed as such; for, however the contrary opinion may be generally entertained, a disease of the liver, according to the observations which I have made from such repeated examinations, is not so common an occurrence as is usually supposed. It is, for instance, seldom met with, excepting where it has existed as a prominent and marked disease. I have never seen it, therefore, in those dying of phthisis pulmonalis, except in the case of notoriously hard drinkers, in whom the breast affection was only a late, and scarcely an auxiliary, cause of death; and I have found it as healthy in those dying at an advanced age, as in those cut off in youth, and even in the persons where it might have been least expected to be so, whose health had been many years declining, and in whom it might be justly said that life was "a long disease."

Some time since, I was present at the exami-



nation of the body, after death, of an individual who had been subject, during many years, to more considerable and more frequent irregularities in the functions of the liver, than I have often witnessed, as evidenced by the appearance of the alvine discharge. By some practitioners whom the patient consulted when from home, the disorder had been considered as a confirmed liver complaint, and I understood, that means had been resorted to for its removal. The examination detected the fallacy of the view previously entertained ; for, as was anticipated, not a trace of any disease appeared in any part of that organ. In illustration of the same general fact of the unfrequency of structural disease occurring from a disordered action of the liver, in its chronic stage, I might here adduce numerous instances which have fallen under my own observation. A few years since, I attended an elderly lady at Cottingham, near this town, in the acute form of the disorder, with my friend Mr. Watson, a gentleman of considerable practice and experience, in that place. Our patient had been ill in the chronic form of the complaint, with symptoms of jaundice, during most of the preceding summer. I saw her a few days



after the commencement of her acute attack, and such was its severity from the pain and distension about the abdomen, and general restlessness and fever, as to lead the lady's friends to apprehend, that all our attempts to relieve her would be fruitless, as they did not expect her to survive the ensuing night. By means, however, directed by us, merely to renew the healthful actions of the liver, this lady very soon recovered, and has enjoyed ever since an entire exemption from every appearance of liver disease.\*

But here, it must be remarked, that though I am thus disposed to consider the instances of liver disease, consequent upon this complaint in its chronic form, to be considerably less frequent than commonly imagined, and that a large

\* " I have examined a considerable number of persons, who have died of cancer, lumbar abscesses, and other great local diseases. I knew that these patients had their digestive organs disordered in the manner that I have described, and that in many of them the secretion of the bile had been suppressed for a great length of time, and, when it was renewed, that it was very deficient in quantity, and faulty in quality: yet, on dissection, no alteration was discovered in the structure of the chylopoietic viscera, which could be decidedly pronounced to be the effect of disease." Abernethy's Surgical Observations, page 43.



proportion of the supposed cases of that disease are merely those of disordered action, yet it must be conceded, that some of those intractable cases which set the physician's art at defiance, may possibly derive the first germs of their existence from this source. Where such examples occur, it is probable they depend upon local or constitutional peculiarities, favouring the operation of the common causes, or upon some obvious and habitual excess in the use of spirits; and it may be observed of them that in proportion generally as their approaches are slow and insidious, so their development is at length complete, and their nature irremediable.

The symptoms, however, of such disease, and those proper to disordered action, are often considerably alike, and it is difficult to convey, by words, a knowledge of the means by which they may be always distinguished. Much will be obtained by a careful comparison of them, and of all the circumstances about the patient, as they respect his previous habits, &c. In many cases of diseased liver, there is but little change in the appearance of the alvine discharges,



these being often surprisingly healthy up to the period even of its fatal termination ; whereas, in the case of disorder in the function of that organ, which essentially constitutes this complaint, they are necessarily and uniformly unnatural.

In the diseased state, the decrease in flesh and strength generally exceeds the pain and uneasiness ; whilst, in the simply disordered action of the liver, the case is commonly reversed. In many cases of disease of this organ, there is no pain felt in the neighbourhood of the liver, nor any discoverable enlargement or hardness of it, nor any of the other symptoms noticed as present in it. This was the case with a gentleman, whom I attended during several years until his death, and in whom there was found, upon dissection, more extensive disease about the liver and neighbouring parts, than I ever before or since witnessed ; yet, at no period up to his decease, had he ever any pain in the region of the liver, or between the shoulders, or any difficulty in lying on either of his sides. The complexion of the bilious patient is commonly sallow, whilst that of the other is either deeply



jaundiced, or of a dirty yellow, or of a pallid hue with only a tinge of that colour. In the latter, there is but little fever, and no drowsiness in the day, and the pulse is often small and uniformly compressible; and as the disease advances, there is an expression of the countenance that is peculiar and distinctive, and to those familiar with it, as significant of the fatal nature of the complaint, as the fullest assemblage of its proper symptoms could render it.

That tendency, however, in the liver to assume organic disease, which may be considered as comparatively rare in the chronic form of the bilious disorder, may be justly regarded as constituting a prominent feature in the severer forms of the acute one. The liver, in these cases, frequently acquires an increase in its bulk, so as to be very readily felt externally; and I have observed, that, in addition to its general enlargement, there is often, in the epigastric region, a distinct circumscribed swelling of great firmness, and exceedingly tender when pressed, the least pressure giving rise, in some patients, to a hurried and agitated, but involuntary, expiration of the breath. This swelling, from the position



it occupies, and from its definable and rounded form, might be thought to be a schirrus tumour, seated in some other part; but its true seat is the liver, and, generally, the left and lower part of its large lobe, which, by losing its fine edge, and being projected forward, acquires thus its apparently circumscribed and circular shape. The patients, in whom I have met with this disease, have always had it as an effect of the acute state of the bilious disorder. The symptoms of the latter complaint, in such cases, are always severe.

In all the examples which I have met with, bleeding and blistering had been employed several times, and in none with any permanent relief. In several, the complaint had existed for some months; and in one, it had commenced in South America, continuing, with little abatement of its severer symptoms, until the person arrived at Hull. The complaint, in this instance, was attributed to the offensive smell which the patient and his crew were exposed to, from their cargo of raw hides, accidentally fermenting, and becoming nearly one mass of putrid jelly. The more probable cause however was, the sleeping exposed to the cold night air,



to which the stench, in the interior of the ship, compelled him to submit.

This enlargement of the liver might be supposed to arise from the actual presence of that congestive state of the vessels of this organ, which has been noticed, as proper to the bilious disorder ; but I have, in some instances, found it continue after that state had been nearly removed, as evidenced by the renewal, in a considerable degree, of the healthy biliary secretion, and by a marked improvement in the general health. I have been led therefore to regard it as an actual enlargement of the liver, from the deposition of a serous or coagulable fluid into the parenchymatous substance of that viscus. At its early stage, and before the new matter acquires an organic structure, the removal of the disease is not difficult, as it does not at that period appear to partake of those characters which so fatally mark the other forms of liver disease, but yields to those means, as we shall hereafter point out, which promote the action of the absorbents.

From causes arising out of the greater suscep-



tibility of infants, to be acted on by irritating agents, the bowels of children are more decidedly disordered in this complaint, than those of adults, there appearing to be in the former a more copious secretion of slime, and more marked indications of a venous abdominal congestion. Hence in them the complaint often assumes the appearance of a mesenteric affection, the abdomen becoming hard and permanently swelled, whilst the other parts of the body are emaciated. In these cases, there is very often the craving appetite, and at other times a deficient one, and the bowels, though perhaps constipated, are not unfrequently thought to be regular; they have sometimes the appearance of being too loose. Generally speaking, the symptoms proper to the complaint accompany the swelling. Sometimes, however, I have seen it so free from them, as to lead me to regard and treat it as merely the effect of the disorder that had existed and been removed. The large fœcal accumulations, which along with wind give rise to the swelling, having but an inconsiderable effect upon the system, and requiring only larger, and more active, and more frequently repeated doses of purgatives for their



removal, than are usually required in cases of common constipation. In such cases, a variation of the purgative means is frequently more successful for this purpose, than a long adherence to the use of any particular one; and even chalybeates, as the solution of the sulphate of iron, or the simple carbonate, will often prove useful alone, by apparently strengthening, and thus keeping up, the action of the bowels. But in general, the other symptoms proper to marasmus are present, and in such cases the diagnosis is often difficult; for, though a considerable swelling of the body is not by any means a constant symptom in mesenteric affections, yet being more so in them than in marasmus, and many of the symptoms of both being alike, an attention somewhat minute to the previous history of the complaint, is necessary to enable the physician to distinguish them.

In the mesenteric affection, I believe it will generally be found, that the abdomen is harder and less elastic, and uneasiness is excited there by the pressure of the hand. The pains in it are likewise more lancinating, and strike from and to the back, and are commonly increased by a perfectly erect posture, and by any sudden



agitation of the body, as that from jumping, or accidentally slipping off a step, though only a few inches high. The appetite is less craving also, and the stools in the advanced stage are more abundant and more unnatural, preserving much of the appearance of the ingesta; and where there is a diarrhoea, this symptom will be always aggravated by purgatives, if repeated, whilst it is relieved by them in marasmus. The tongue in mesenteric affections is generally clean and peculiarly florid, and the tunica adnata of the eye has much of that pearly whiteness so characteristic of scrophulous atrophy. The evening exacerbations are free likewise from that drowsiness and torpor which distinguish those of the other complaint, and there is not in the latter that wiry, yet compressible pulse, which is often present in the former, and which is so remarkably the case in the scrophulous affections of important organs.

It cannot be concealed, however, that there is necessarily a great variation in the symptoms of the *tabes mesentericus*, from a great variation in the precise seat, as well as in the number and bulk of the glandular enlargements. I have inspected the



bodies of a considerable number of patients who died of this disease, from infancy to the middle period of life, and I have never found two cases alike, either in their symptoms, or in their morbid appearances; for in some instances, as I have ascertained, the disease may consist in the enlargement of only one gland, and yet prove fatal, the body never having any preternatural hardness or swelling, whilst, in other cases, the number of diseased glands may be countless, and occupy by their bulk a considerable portion of the abdomen. It also must be remembered, that derangement in the organs of digestion, is a common cause of the mesenteric disease, the latter supervening upon the former, and occasioning thus an error in our conclusions as deduced from the result; for both affections being present at the same time, the more fatal disorder may remain after the removal of the other, or both may yield to the medicine which was only prescribed for one of them.

When the functional disorder of the liver in its chronic form, occurs in a female at that period of her life, when the menstrual period should first commence, it commonly prevents it,



producing the complaint known by the name of green sickness or chlorosis; and when it attacks her at the time when the menstruation should cease, it leads to menorrhagia or uterine hemorrhage, and sometimes it is probable to uterine disease; and when existing at the intermediate periods, it renders this function irregular, the discharge being either deficient or excessive, or it obstructs it through several periods, giving rise at the same time to leucorrhœa. Indeed so uniformly does this happen, that I believe it may be relied on in females, as one guide to a just diagnosis, that a regular and healthy condition of this function is not compatible with the functional derangement of the liver, for the uterine vessels partaking, it is probable, of the abdominal venous congestion present in this disorder, become unfitted for that peculiar and, perhaps, secretory action which eliminates the menstrual fluid; and hence, when this disorder is present in females, there is either the uterine hemorrhage or menorrhagia, by which the venous congestion is temporarily relieved, or there is a partial or entire obstruction, a temporary relief being in such cases sometimes afforded, as was noticed in the introduction, by a hemorrhage



from the extremities of the vena portarum of the liver; the blood which in these cases is considered to be vicarious of the menses, being either raised into the stomach, and ejected by vomiting, or carried downwards through the bowels. When thus occurring, the disorder answers to the idiopathic hematemesis of nosologists, which, whether met with in the male or female, will be found to be preceded and accompanied by those symptoms which characterize the functional disorder of the liver.

Of the leucorrhœa, which I have just alluded to as forming a symptom of this disorder, there are two kinds, but which are often confounded, and too often attributed to either local or general debility; one being uterine, and produced perhaps by the habitually congestive state of the uterine vessels, and the other simply vaginal, and arising, it is probable, from sympathetic irritation. To this last the infant female is subject, as well as the adult, and it sometimes happens, when occurring in children, that from a neglect of cleanliness, or perhaps from the intensity of the irritation, and acrid quality of the discharge, a considerable degree of swelling and inflammation occurs, and even excoriation



of the labia pudendi, and which have, on some occasions, subjected those to unjust suspicions, to whose care the infant had been entrusted.

In some of the more strongly marked cases of uterine disorder, attendant on this complaint, the pain of the back which is proper to it, becomes excessive, and extends to the uterus, and also to the hip and groin, so that the least false step or hurried action occasions very considerable pain in these parts. It is probable in these cases that the veins of the vertebral column are in a congestive state, for there is often something like a paralytic debility of the lower extremities, and which would seem to depend upon some compression of the nerves at their origin. Some years since I had under my care, two very strongly marked instances of this modification of the complaint. The first that I saw, was from the neighbourhood of Ipswich, and had been of several years standing, and been treated with a great variety of means, without relief. I did not suspect, at first, that the uterine affection was a symptom of this complaint, and was agreeably surprised to find it yield with those other symptoms, for which I more particularly prescribed. In the other case, of some months'



standing, which likewise occurred in a married lady from a distant county, there were very considerable emaciation, and loss of appetite and strength, and so much pain and other symptoms indicative of uterine derangement as to excite a suspicion in the minds of herself and friends, of the existence of some organic disease. Having ascertained, from an account of an examination transmitted to me by an eminent surgeon, that no disease existed, I was satisfied at once concerning the real nature of the complaint, and, by treating it according to the mode hereafter to be noticed, every symptom of disorder disappeared, the lady having enjoyed ever since an uninterrupted state of good health.

In the course of this disorder, it sometimes happens that a bilious diarrhœa takes place, which becomes critical, and carries off the complaint, the renewal of the secretion of the bile being in fact its natural remedy. And hence it frequently occurs, especially at the autumnal period of the year, that this disorder is relieved a few hours after its attack, by a sudden re-action coming in in the secretory vessels of the liver, by which a very copious and even morbid secretion of bile is produced, giving rise to sickness, and subse-



quently to a vomiting and purging of that fluid, constituting thus the proper cholera morbus. For this disorder termed the cholera morbus, as was stated in the introduction, is to be viewed as only one of the modes, by which the congestive state of the venous system of the liver is relieved. From the violent and more palpable symptoms however, which attend the copious secretion of bile, it has been common to view these as forming the whole complaint. The disorder, however, commences before the discharge of bile, and there may be, therefore, said to be two stages of it.

In the first stage, there is present a congestive state of the liver, giving rise, when severe, to that condition of the system which we have already had occasion to notice, and which may be denominated the stage of oppression or collapse. When occurring in infancy and youth, especially in the former, it is not unfrequently fatal; and even in adults, it is often accompanied with fainting and other symptoms of an alarming character. In this stage, there occurs an irregularity in the circulation, and an imperfect supply of blood to the extremities. The powers of the system appear oppressed; the extremities



lose a portion of their heat, and often require a livid colour; there is a general restlessness, along with much anxiety and oppression about the stomach, attended with nausea and retching, and severe spasmodic affections of the limbs, amounting in some cases almost to tetanus. In the infant, there is frequently the fatal convulsion, which arises from the diminished energy of the brain, and which is indeed only a modified and higher degree of the general restlessness. In this stage, there is, in fact, a manifest struggle between the oppressive influence of the complaint, and the vital energies of the system; the copious secretion of bile, which is produced, being the consequence of those energies acting to excess, to repel and remove it. In many cases in infants, and in some instances, as well in adults as in children, from a want of energy, or from other causes, the natural efforts of the system do not remove the congestive state of the liver; and hence in infants are produced severe and sometimes fatal convulsions, and in adults residing in temperate climates, the common bilious fever, whilst in the Peninsula of India, and generally in all the tropical countries, from the influence of heat and other causes favouring the habitually large biliary secretion,



the violence of the attack is sometimes so overwhelming, and the congestion of the portal circle so great, as to prevent even the febrile reaction, and a copious discharge of blood is poured out, chiefly perhaps from the loaded vessels of the liver, constituting the fatal black vomit of that country.

When that secretion of bile is induced which forms the second stage, it is usually in excess, and sometimes of an acrid and morbid nature, becoming, when very considerable, the source of other disorders. Of the two stages of this complaint, the first is that in which there is most danger, and in the treatment of which the most decisive measures are required. From the exhausting and almost incessant nausea and retching, which attend the severer form of this stage, with the coldness and lividness of the extremities, and the sunk and torpid countenance, and feeble, and often intermitting pulse, it is sometimes thought that wine and cordials are imperatively called for, and that they are all that can be, in these cases, trusted to. Such a view of the case, however, I can confidently affirm, is fraught with practical evil; for the wine and cordials thus employed, as I have too often had occasion



to observe, only aggravate the cause of those symptoms which they are designed to relieve. In the first stage, the motions are always highly unnatural, and if there be a laxness, it is attended with much straining, and the discharge is watery and slimy, and sometimes of the colour of tar, or is chiefly composed of dark venous blood. The pain of the bowels, in the severe forms of the disorder, is sometimes excessive, and arises, probably in part, from their partaking of the congestion of the liver, as well as from the irritating and acrid quality of the small portion of bile secreted, and from the distension produced by the fermenting state of the undigested matters passing through the bowels. In the second stage, the motions are of a pale yellow, or yellowish green colour; and the pain, in these cases, arises from the irritation given to the bowels by the more stimulant quality of the bile, or from the natural mucous secretions of the bowels, which should have perhaps defended them, having been previously purged away. In the first stage, therefore, it is the secretion of the bile which requires to be renewed, and rendered healthy; and it is only in the second, or that in which the secretion is excessive, and when, by the



excess, the powers of the system have become exhausted, that wine and cordials are admissible or necessary.

## SECT. II.

In the last section were noticed those symptoms which essentially constitute a part of the disorder; and I will now proceed to the consideration of another class of affections, which pertain only remotely to it, since they owe their existence to the operation of that law of the animal economy which is termed sympathy. For, beside the general and local disturbance, arising directly from the disordered actions of the liver, and the other chylopoietic viscera, there are several important affections produced through the sympathetic connection subsisting between these organs and different parts of the system, whereby an irritation, present in the former, is communicated to parts of the body with which they have no local nor apparent relation. Of the effects resulting from the agency of this law, there may be said to be several kinds.

The first we may notice, is an increased action



of the serous and mucous membranes, by which a larger secretion of their proper fluids, or a morbid change in them, is produced. The most familiar example of this, is in the tongue, the secretions of which are always more or less affected by a disorder of the biliary function. The ankles are a common seat of this sympathetic irritation, being sometimes swelled from an effusion of serum; and at other times, and much more frequently, from the deposition of a lymphatic fluid. These swellings are seemingly produced by an action of the vessels of the parts, analogous to inflammation, there being pain and stiffness, with sometimes a sense of heat in the parts most strongly resembling a rheumatic affection. They are most frequently met with in females, and occasionally constitute the leading symptoms of the complaint. There is also in this disorder, sometimes situated upon the leg, particularly of females, a number of subcutaneous painful swellings, surrounded by a slight blush of inflammation, and attended by so much pain, and such appearances of approaching suppuration, as to form, in the opinion of the patient, the principal complaint. And to those, indeed,



unaccustomed to see them, or inexperienced in their management, a local treatment would seem to be all that was required for their cure, whereas the fact is, as I have repeatedly ascertained, that topical applications are unnecessary, if not improper, the local disorder being in a peculiar degree dependent upon the continuance of the distant one, and removable with it.

Those sudden attacks of anasarca, which supervene upon other disorders, are probably often of this kind, and arise from an inflammatory action of the vessels of the cellular membrane. The cases that I have seen of this description, have sometimes proceeded, especially in children, to general anasarca; and, indeed, I have seen a few instances of hydrothorax and ascites which appeared to originate from an action of this sort taking place in the serous membranes lining the thorax and abdomen. In some cases, the swellings produced by lymphatic effusion, are partial and insulated, giving rise to an apprehension of some serious disease in the part. The following is an example of an affection of this kind in the breast.



A young woman, servant to a lady at Bridlington, applied to me, on account of an enlargement of her left breast, which had been gradually increasing for several months, attended with darting pains through it. On examining it, I found that the enlargement was general, and without any perceptible hardness in any part of it, or any other change in it, than its being considerably larger, and rather more firm than the other. She had been under surgical treatment for some months, and had applied leeches, and various lotions to it, without any relief. On inquiring concerning her general health, I found that she was labouring under a considerable disorder of the biliary function, and that this disorder had preceded the affection of her breast. I therefore desired the outward applications to be discontinued, directing for her, at first, a small dose of calomel to be taken nightly, and a dilute solution of the sulphate of magnesia, the following mornings; giving her afterwards, for a short time, a slightly tonic medicine. Under this treatment, the cause was soon removed, and I had the satisfaction to learn from herself, about a month afterwards,

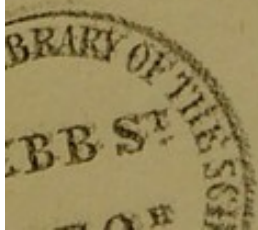


that no appearance of disorder about the breast remained. \*

Of the effect of this sympathetic irritation on mucous membranes, we have an example afforded us in the itching of the nostrils, which is among the symptoms most constantly occurring in bilious derangement. In many cases, this irritation occasions a copious discharge from the parts, attended with frequent sneezing; producing, in this respect, so strong a resemblance to a common cold, as to excite in patients the belief, that they really depend upon it. The frequency of their recurrence and brief continuance, and their not being attended with, or followed by, any other symptoms of cold, are distinguishing circumstances, however, which fully prove their nature.

The swelled, inflamed, and irritable state of

\* Since the former edition of this work was published, this patient has been under my care in a relapse of her disorder, and was cured by the same means. At this time she is again come under my care, but the irritation is not now directed to her breast, but is seated at the joint of the smallest toe, and the parts immediately around it. In every other respect her symptoms are the same as formerly.





the gums of infants, which is supposed to arise from some natural difficulty in dentition, may be likewise more generally considered as a symptom than as a cause, of this disorder ; for it has frequently occurred to me to observe, that symptoms attributed to teething have yielded readily to the remedies adapted for this complaint ; the inflamed and tumid appearance of the gums, at the same time, subsiding, without any visible advancement of the process of dentition. On these occasions, it appears, that the vessels subservient to dentition are sympathetically excited, whereby the growth of the teeth is accelerated, or otherwise deranged, and a sensibility induced in parts, which in their healthy state are free from it.

And that the connection betwixt difficult teething, and disordered states of the digestive organs, will generally admit of this explanation, must appear the more probable, if we reflect upon the numerous instances, which are daily presented to us, of aphthæ and other inflammatory affections of the mouth, originating from such disorders ; and that as dentition is most painful and most dangerous, to infants which are



reared without the breast, so, as I have had frequent opportunities of knowing, it is a simple and easy process to those, who, for the first six or eight months of their lives, are exclusively confined to it. The ease, in fact, with which the teeth are cut, depends commonly upon the healthy state of the digestive organs of the infant; and hence the prevalency of that popular notion among the peasantry of Scotland, that frequent exercise in the air will ensure their infants from all suffering in dentition.

That the pain and irritation of the parts however surrounding the teeth, rendered morbidly sensible by inflammation, will be capable of aggravating the complaint that induced it, and be, even of itself, sufficient to excite convulsive and febrile action, must certainly be admitted, as well as the propriety of relieving the inflamed and distended parts about the teeth by lancing them; but it must be remembered that the disorders, aggravated or induced by this state of the gums, and the relief afforded by the lancet, no more prove the idiopathic nature of the local complaint, than can the irritation excited by aphthæ in the mouth, or the relief procured



in that disease from topical applications, be allowed to invalidate the facts, which establish the nature of their origin. Nor is the view here entertained, respecting the relation which a derangement of the digestive organs frequently bears to difficult dentition, of little practical importance; for if, instead of being regarded as the cause, it be viewed constantly as an effect of that complaint, it will necessarily be treated as such, and those important means, medicinal and dietetic, for its removal or prevention, be consequently neglected.

Nearly similar observations are applicable to the generally supposed connection of worms with the fever, and other symptoms of this complaint; for, after several years' attention directed to this subject, I am satisfied of the justness of the opinion entertained by many, that the round long worm (the only kind that is considered capable of exciting this disorder in children) is never a direct cause of fever, for I have repeatedly known them to be passed without any accompanying indisposition, and have, comparatively speaking, but rarely met with them in this disorder; and seldom indeed,



in the instances where they were met with, have I had reason to conclude, that their removal had in any degree promoted the recovery.

When this irritation is directed to the membrane lining the larynx and trachæa, it gives rise to the cough of this disorder, which in many cases in the acute stage, and particularly when occurring in children, assumes the appearance of an inflammatory affection of the chest, whilst at other times, and when affecting adults, it strongly resembles some of the forms of phthisis pulmonalis. Indeed, so strong is sometimes this resemblance, that practitioners, the most familiar with them, may be often ready to confound them. For in both, there is with the cough, which is worse during the night, an expectoration of secretions, not much unlike in their sensible qualities—a fever towards evening, preceded by chilliness; perspirations about the head and breast in the night; great loss of flesh and strength; pain in the side, commonly the left, and often the moderately good appetite.

The condition of the breathing, and generally



of the pulse, especially in its advanced stage, may, however, be commonly appealed to as distinguishing characters of phthisis. The breathing in the cough of marasmus, if hurried in the evening from the accumulation of phlegm, or on the accession of fever, is generally calm and natural in a morning; and though the pulse is not invariably rapid in phthisis, excepting in that from tubercles, yet it is nearly constantly so; and it always has a preternatural degree of strength and wiriness in the evening, and even during the day, which is seldom met with in the same degree in the other. The discharges from the bowels in phthisis are likewise of commonly a healthy appearance; whilst, in marasmus, they are uniformly and necessarily of an unnatural colour and fætor. There is, also, in forming a diagnosis, no little assistance to be gained from observing the manner and general appearance of the patients; for, whilst the one, affected with the cough, from irritation when in the acute stage, is comparatively indifferent about himself, and gives his answers apparently with reluctance, the phthisical sufferer is more or less animated by the visit of a new



physician, and with the hope of a new remedy.

Notwithstanding, however, these seemingly distinguishing circumstances in the two disorders, this cough, as has been already observed, in some cases, particularly when occurring in youth, so strongly assumes the appearance of an incipient phthisis, as to require a greater degree of attention and discrimination than the younger part of my readers may readily believe to be necessary. The dyspnœa, which, in the symptomatic cough, arises from a morbid excess of the mucous secretion of the trachea or bronchia is sometimes found to exist independently of that cause, from the sympathy existing between the lungs, and the disordered organs of digestion, inducing a mild form of dyspnœa. The debility also produced, will, in irritable habits, render the system highly excitable by slight causes, so as to occasion, in this complaint, an unnatural quickness both in the circulation and the breathing; though the difficulty in the breathing, in this case, is, strictly speaking, only apparent; for, on requesting a person, so affected, to inhale deeply,



he does it without any of that obstruction in the chest, which is observable in the consumptive; and the pulse, though quick, has not much preternatural strength.

In general, it may be observed, where the two disorders are confounded, the error consists in considering the symptomatic cough to be of a consumptive nature. Of mistakes of this kind, I have seen several, and some of them have been my own; having been led to view the cough of this complaint as depending upon a disease within the chest, I have only discovered the real nature of the case by an examination myself of the stools (a measure never to be neglected, where a precise knowledge of their condition is required), followed up perhaps by a closer inquiry concerning other circumstances about the patient. A case of this kind, some time ago, occurred to myself and another gentleman in attendance with me. It was of a young woman, about eighteen years of age, who had been ill for some months, and whom, at my first interview, I considered to be affected with the cough from irritation; informing her friends of the opinion I entertained of her complaint, and



prescribing for it accordingly. On the occasion of my next seeing her, which was nearly a fortnight after, and when she was confined to her bed, I was informed that the alvine discharge was not unnatural; that she had not been relieved by the medicines ordered for her; and that her weakness, and other unfavourable symptoms had increased. From these circumstances, and from finding her cough and other symptoms decidedly worse, I was led to doubt the correctness of my first opinion, and to yield to the one entertained by her friends, of her being indeed consumptive. I now saw her daily, and with the exception of a distressing pain in the head, and some equivocal appearances in the pulse, there was not a symptom about this patient, which did not exhibit very strongly marked indications of phthisis pulmonalis. A necessity for some aperient medicine, having led me, however, to make a farther inquiry concerning the condition, and subsequently to an inspection myself of the alvine discharges, I found them in a morbid and unnatural state, which renewed in me the suspicion that her cough and other symptoms, apparently consumptive, depended upon a dis-



ordered biliary secretion; and means were directed for the correction of this state, and for the evacuation of the bowels, omitting the use of all other medicines. Almost immediately after the commencement of this plan, the appearances of the motions became improved; and having combined cold sponging with the other means, she soon lost her cough and other unfavourable symptoms, recovered rapidly her strength, and has had no return since of her disorder.

In some cases, this difficulty of deciding concerning the true nature of this cough, and its attendant symptoms, is further increased by these being accompanied with a hemorrhage from the lungs. A poor woman, of a strong habit of body, fifty-three years of age, a patient under my care at the Dispensary of this place, is now just recovering from the eighth attack of this kind, which she has had during the last three years. The blood coughed up has sometimes amounted, in quantity, to nearly a pint in the course of two or three days. I was present, on some occasions, when it was thus discharged,



and was convinced that it proceeded from the lungs. Her cough, at these times, was violent, and attended by a very copious expectoration, with fever, quick pulse and thirst, and impeded breathing, and very considerable emaciation and loss of strength. Her attacks were always preceded, and accompanied by, the most marked derangement of the organs of digestion, and as regularly relieved by those means which promoted the secretion of the bile, and procured evacuations from the bowels. In the interval between two of her attacks, she had menorrhagia. She is now free from the cough, her appetite is good, the secretions from the bowels are natural, and her strength sufficiently recovered to enable her to work laboriously for her living.

But this cough, which is thus observed to simulate phthisis pulmonalis, and which is generally removable with its cause, has sometimes, I have been led to suspect, as fatal a result as the disease it resembles; for where a mucous membrane has been for some time under the influence of a sympathetic irritation, it may take



on in some instances a purulent action.\* This appears to be the case in the worse forms of ozæna, and in some affections of the mouth, and I think likewise in that fatal disease of the bronchia, noticed lately by several writers, which has been thought to be allied to phthisis pulmonalis, but which, I have some grounds for believing, may originate from an irritation in the digestive organs, and be properly a termination of this cough. It consists in an ulceration of the bronchia, attended by a purulent expectoration and a hectic fever, with its concomitant symptoms. The cough is generally very severe and distressing, and the matter expectorated is usually of a whiter colour than that raised in phthisis from tubercles. The nature and seat of the disease are discoverable by the cough, it being hoarse and often harsh, varying, however, much in these respects according to the seat and duration, and consequently, the extent of the ulceration. The voice is not less peculiar than the cough, being hoarse and partly

\* See some highly interesting remarks on this complaint by Dr. Armstrong, in his *Practical Illustrations of Scarlet Fever, &c.* Third edition.



whispering, as if injured by previous long and vehement speaking. There is a pain felt at the seat of the disease, which is increased by coughing and speaking. The difficulty in the breathing, depends upon the presence of matter in the bronchia, and is sometimes inconsiderable, and at other times exceedingly urgent. Where the ulceration is in one only of the bronchia, there is usually much inconvenience in lying on the opposite side, from the aggravation it occasions in the cough, and in the difficulty of breathing. The recumbent posture is often more favourable for the cough and breathing than the erect one. The pulse is quicker and harder than natural, but it has not that peculiar sharp wiry feel, which distinguishes it in the phthisis from tubercles. The countenance of the patient is sallow and depressed, having none of that animation which is so characteristically marked in the other form of phthisis. The debility and wasting, previous to death, are usually very great, the appetite is variable throughout the disease, and the bowels are costive in its early periods, becoming regular as the disease advances, and very frequently continuing so to its close. All the cases which



I have met with, which had reached the ulcerative stage, have terminated fatally.

Since the time my attention became more particularly directed to the subject, I have observed that this disease has always been preceded, and accompanied by biliary disorder. In two instances of it, the derangement of the digestive organs was so strongly marked, as to lead me to entertain hopes of affording relief by removing that state; but this disease, like many others, may perhaps survive its cause; and though produced by sympathetic irritation, yet becomes, when once established, a distinct disease, the lungs it is probable, in some instances, at length partaking of the ulceration. In its early symptoms, as well as in its confirmed state, it bears a strong analogy to ozæna, of which I have seen several examples, distinctly arising from a disorder in the digestive organs. The ulceration in the bronchia, indeed, appears to differ only from ozæna in the importance of the part where it is seated. The irritation of the nose, and a disposition to rub or pick it, and the frequent sneezing, especially when passing into a cool apartment, and



the occasional discharges from the nostrils, resembling a cold, are the symptoms most commonly preceding both. With respect to ozœna, where the irritation in the nostrils is great, the discharge from them becomes very considerable, especially in a morning, and forms a prominent and distressing symptom. By correcting the disordered state of the digestive organs, this symptom yields with the others that are proper to it; but if the cause be neglected, it is found often to terminate in a purulent discharge, and at length in ulceration, constituting the true ozœna. And what thus takes place, after continued or severe irritation in the nostrils, appears to me likely to occur in the bronchia. There is, at first, no discharge from the cough; at length there is mucus, which may be succeeded by a purulent secretion, and this last by ulceration.

The increased secretion of mucus in the early states of ozœna and in the sympathetic cough, is the result of a chronic inflammation of the parts, and which, from being of a specific nature, and arising sympathetically from a specific irritation, is not relieved by topical appli-



cations, but requires the removal of its cause. When the disease has assumed the purulent or ulcerative form, it apparently becomes independent of its cause, and though admitting of alleviation by general remedies, yet perhaps is only curable by those of a topical kind.

For several years past, I have had occasion to prescribe at times for a person, in whom this cough is exceedingly violent. It occurs in paroxysms, which are usually brought on by entering a cold apartment, or immediately upon rising from bed, or by talking. There is commonly much soreness felt at the lower part of the trachea, and the voice is whispering, and sometimes scarcely audible. The itching of the nostrils is considerable, and there is constantly the appearance of renewed colds, from the sneezing and copious discharges from the head. The bowels, at these times, are exceedingly sluggish, and demand active medicines, and their contents are of an unnatural appearance; the appetite is weak, the tongue remarkably foul, and the complexion sallow. Some years since, this person was affected with a complaint, in



many respects, strongly resembling the one now occurring, and was then reduced to a state of extreme weakness, from which I understood the recovery was both difficult and unexpected.

About four years since, I had a young lady under my care, in whom this formidable disease appeared to be forming. Her cough was exceedingly severe, and attended by a copious expectoration and much soreness in the bronchia, with considerable wasting of the flesh and strength. Her voice, whilst in bed, was natural, but on leaving her room, or after speaking a sentence or two, it became hoarse and whispering. Considering that the cough and other symptoms depended upon the condition of her general health, I directed her, along with other means, to use horse exercise daily, notwithstanding its being then winter, and to take lodgings at a village in the neighbourhood. This plan was followed in every particular, and happily succeeded; the cough and expectoration, with the fever and hoarseness, gradually declined as the general health improved, and



she has since become the mother of several children, and continues perfectly free from the complaint.

It has been noticed, in the enumeration of the symptoms of the bilious disorder, that dispiritedness is commonly present; and it may here be observed, that sometimes this symptom acquires a sort of pre-eminence in the complaint, which gives to it, improperly, the appearance of an hysterical or hypochondriacal affection. These disorders, however, differ from that under consideration, by their becoming better towards evening, whilst every form of the other is worse at that period. The full and free evacuations from the bowels, likewise, which are so useful in every form of this disorder, are decidedly injurious in hypochondriasis; and, according to my observation, only admissible in that form of hysteria, noticed by Sydenham, which is met with in women of a firm and vigorous habit, and in whom there is the tendency to strongly convulsive action. When, however, a bilious affection is thus accompanied in a female by depression of mind, there is always some danger of regarding it as a purely nervous complaint. This



error, from the imitative nature of hysterical affections, can often be only corrected by examining the appearances of the tongue, and the fœcal discharges. The former, in pure hysteria, is clean, and the latter, though sometimes green, are in other respects natural. Much assistance will be also derived by an attention to the history of the case, for the symptoms of biliary derangement are comparatively few and definable, and will often vary but little in the same individual for several weeks; whilst those of hysteria and hypochondriasis vary almost every hour, and exhibit the semblance of diseases that differ so [widely from each other, in their nature and causes, as to preclude the possibility of their co-existence, in the same individual. The depression of mind, observable in bilious affections, proceeds, it may be also remarked, from no assignable cause, and the mind itself is rarely occupied with an object; whilst in those disorders, it is commonly in full activity, imagining every new feeling to be the prelude or the symptom of some fatal disease.

Among the symptoms of a sympathetic kind, most constant in this disorder of the digestive



functions, those relating to the head are peculiarly deserving of attention. In the chronic form of this disorder, there is always more or less of pain and dizziness, and some mistiness in the vision, with dark spots or clouds passing before the eye, and a decided failure in the powers of the mind. Where the irritation, existing in the digestive organs, is not directed to the membrane lining the trachea, occasioning the symptomatic cough, or to the skin, &c. producing eruptive or other diseases, it frequently affects the head, particularly of children in the acute stage, and gives rise to several of the symptoms usually deemed characteristic of hydrocephalus internus. Indeed, so marked is the resemblance in many cases, between the symptoms of this disorder and those proper to that disease, that I have been led, on a great many occasions, to suspect that the latter was commencing, and I have been induced to believe that it was actually present, in two or three instances, and have been gratified to find, by the result, that in these at least I had been mistaken. In two of the cases there was blindness for several days, with an unusually slow pulse in one of them. In another, a boy of



seven years of age, whose sister I had seen in that fatal disease, considerable pain and confusion existed in the head, and permanent double vision for some days, which were removed by the means which promoted evacuations of a biliary kind from the bowels. On another occasion, I attended a youth, about twelve years of age, in whom the disorder, commencing with a disturbance in the biliary system, produced, after some time, an affection of the head, which appeared in its turn to give rise to a complete rigidity of most of the muscles of voluntary motion, resembling catalepsy, and attended with an excruciating pain in the course of the spine, leaving behind, on the return of health, a permanent fatuity of mind, and the most entire relaxation and paralytic debility of the muscles previously affected. It was not until after some months, that the patient became able to support himself upright when seated, and he did not recover his natural strength until the end of nearly two years.

In reflecting upon such circumstances connected with the disorder, we cannot fail to remark that there are two important questions



suggested for inquiry; namely, whether the watery effusion into the ventricles of the brain, with the cerebral symptoms preceding it, be the effect of a derangement in the digestive organs, and whether the instances of recovery from symptoms assumed to be those of hydrocephalus internus be attributable to an absorption of the effused fluid, or to the circumstance of the symptoms being independent of any effusion, and arising only from that particular state of the brain, which leads to effusion, and which is therefore to be considered as indicating that state of the complaint, which is alone removable.

That the first of these questions may be answered in the affirmative, is a point that I conceive must be granted. The symptoms of derangement in the digestive organs, and those of hydrocephalus internus in its early stage, are to all appearance the same, and it must be often remarked, that whilst the former disorder in one patient, by timely attention, may be removed, it will in another, from neglect, acquire the fatal characters of the latter. A standing example of this fact has occurred in my practice,



in the family of a poor woman, by whom I was requested, several years ago, to prescribe on three successive occasions, for three of her children, labouring under the advanced stage of hydrocephelus internus, which terminated fatally in all. Considering the losses she thus sustained, to arise from delay, I desired her to watch in any future children she might have, the least approach of the disorder, and to procure advice for them early. She has had four since, and during the last nine years, these children have been repeatedly under my care in this complaint, which the poor woman considered, and I think justly, as the same that terminated so fatally in the others. On several of the occasions indeed in which I attended these children, I had reason to apprehend a fatal affection of the head, and in one child of three years of age, a disorder of the hip occurred, as a symptom of that complaint, accompanied with much pain on moving the limb, and an utter inability to place it on the ground. In this, as on other occasions in which I have seen it as a symptomatic affection, the complaint of the hip yielded readily to the means which were directed to the removal of the functional



disturbance of the liver. In fact it is a common circumstance with children, who are several times affected with marasmus, to have, on each of the occasions, some single symptom present, which did not appear in the former attacks of the complaint. Thus, in one attack, there may be an eruption on the skin, and in the next a cough, and in the third the cerebral irritation, which may terminate in hydrocephalus internus. Some months since, I was requested to visit a child, about two years of age, whom I found labouring under the advanced and fatal stage of hydrocephalus internus. From the intelligent mother, I learnt that the little patient, about three months before, had been affected with, and had completely recovered from, precisely the same symptoms, which preceded and attended the disease under which he now laboured; excepting, in the former attack, the irritating cough existed, which belongs to marasmus, whilst, in this attack, there had been no cough, and the first symptom of an alarming kind, which appeared after three weeks' indisposition, was in the head.

In some cases also, these several sympathetic



affections will appear in succession, even during the same illness, producing effects more or less severe, according to the importance of the parts concerned. In this way the sudden disappearance of an eruption, from the sympathetic irritation changing its seat, appears frequently to produce an affection about the head, which may be either relieved by a return of the eruption, or by those remedial means which remove the cause of both. A few weeks since, I was requested to visit a child, whose brother I had attended in a fatal case of hydrocephalus internus. In this second patient, a very general rash broke out shortly after the commencement of his indisposition. After some days, I understood it disappeared, and was immediately succeeded, as I found, by general anasarca, and with considerable stupor, and imperfection of vision, and an intermitting and remarkably slow pulse, with yeasty coloured and sometimes dark stools, and such intensely high-coloured urine, that half a wine glass full, which was sometimes all that was passed in twenty-four hours, was sufficient to give the proper colour and smell of that secretion to more than two quarts of water. After no ordinary struggle, the patient reco-



vered, and during his convalescence the original rash re-appeared.

So closely in fact do the two disorders resemble each other, as to render it no inconsiderable difficulty, and sometimes an insurmountable one, to determine where the symptoms proper to the one terminate, and those of the other begin ; and it is frequently by the result alone, that an opinion of their nature can be formed. To me indeed, therefore, I must confess, it appears probable, that many of the symptoms, reputed as proper to water in the head, may exist before the actual effusion of water into the ventricles ; and that the cases of that disease, reported to have been cured, have been cases of marasmus, which were about to terminate in that disease, having reached the line which divides the incipient and curable form of it, from that its fatal stage, where an effusion has actually taken place. For as it has already been observed, it seldom happens that children are affected with the acute form of this disorder, without there appearing some sympathetic affections, denoting cerebral irritation. The imperfection, we may repeat, in the powers



of speech and of vision, and the sometimes sudden and paralytic feebleness of the muscles of voluntary motion, and the decided imbecility of mind, which are met with in this complaint, are plain indications of this state; and, as they are accompanied with apparently the same general symptoms, which precede the hydrocephalus internus, it is reasonable to presume that they owe their origin to the same complaint, the boundary which divides the two disorders lying between that moderate cerebral irritation, which gives rise to these and to some of the other symptoms of marasmus, and that intenser degree of it, by which the watery effusion is produced. When the irritation, in fact, has reached no higher state than what is met with in marasmus, it is removable; but when it exceeds this, and rises to that point in which a fluid is poured out into the ventricles, it then becomes I believe irremediable.

And here I must observe that it is with every respect for their opinion, that I venture to differ from some late respectable writers, who incline to the notion that water effused into the ventricles is really sometimes absorbed, and that



dropsy of the brain is thus on some occasions cured. But that these have been only examples of cerebral irritation, resembling that disease, may be further shown from the fact, that the symptoms which simulate the dropsy of the brain, and are judged to belong to it, will suddenly yield to means which are directed to remove the primary cause, and of which the operation cannot extend beyond this point. Even paralysis, which may be thought to indicate most strongly the existence of watery effusion, may originate from causes acting in the brain, independently of any mere mechanical or permanent pressure, and which may either remain after, or disappear with, the other symptoms. An example of this kind occurred to my notice some years ago, in a child whom I attended in the acute form of this disorder, who had been convulsed when an infant from the irritation, as it was supposed, of difficult dentition, and whose mouth, in consequence, had become, and had continued to be, in a certain degree distorted. In the course of the illness in which I saw the child, there were several symptoms which threatened water in the head; and during the several days these symptoms continued, the distortion



entirely disappeared, showing that the contrary side of the brain had become affected, and that a temporary paralysis had been induced in the muscles, antagonists to those which were already paralysed, and that thus the distortion had become relieved. On the patient's recovering, the original distortion returned.

In this, as well as in numerous other examples of the kind which have fallen under my notice, the paralytic affection disappeared with the other symptoms, whilst in other cases, that state has been found to survive the rest, and even to become permanent. But in all these cases the symptoms accompanying the paralysis, and denoting in an equal degree with it the effusion of water, will suddenly subside upon a change being wrought in the functions of the digestive organs, and even the paralytic affection itself, though it should not immediately disappear with the other symptoms, will, in most cases of recovery, be seen to undergo some amendment at the period the disorder itself is first relieved, circumstances which demonstrate, I conceive, the fact that this and the other symptoms have one common cause, and



that this cause is not of a permanent kind, and therefore does not consist in a mechanical pressure upon the brain by the effusion of water into its ventricles. It may be stated also here, as a point equally illustrative and practical, that the period of the disorder in which its symptoms most strikingly simulate those of hydrocephalus internus is not when the excitement is greatest, but in the stage of oppression, when, through the imperfect developement of the fever, the heart and arteries become peculiarly oppressed—the pulse perhaps intermittent—the stomach affected with nausea—the sensorium disturbed—the countenance sunk and somewhat fatuous, with a general torpor of the system, extending even to the powers of voluntary motion. Should these symptoms continue with more or less severity for several days, and if to these be superadded a paralytic condition of one or more of the extremities, an assemblage of circumstances will be collected that render it almost impossible to decide whether an effusion of water in the brain has taken place, and it will be therefore only by the result as deduced in part from the operation of the remedies, that in such cases a conclusive opinion can



be formed of the true condition of the brain. The difficulty, however, which may be thus experienced in determining the condition of the brain, need not interfere with our treatment, for wherever the brain becomes affected symptomatically, it is necessary, along with the general means, to employ those of a local kind to the head, as leeches, &c. since they can in no case be injurious, and in many they are not only efficient, but indispensable.

But it is not merely to secretory and exhaling surfaces, as in the diseases just noticed, that this sympathetic irritation is limited; the cellular membrane is often the seat of it, and indeed it is probable that many of those abscesses, which take place in deep seated parts, and even many of those which are discovered in the brain, derive their origin from the same source; for there is scarcely any part of the body that seems exempt from the influence of this irritation, nor scarcely any of the various morbid actions, local or general, of the system, which it does not sometimes produce. I once witnessed mania from this cause, which continued unabated for three weeks, and which was immediately re-



moved by procuring copious evacuations from the bowels, in colour and consistence closely resembling tar. During the recovery of this patient, large phlegmons appeared, in succession, in different parts of the body, some of which became troublesome sores. In one patient, a married lady, there was a blindness which continued upwards of thirty hours, and which, after the recovery of sight, was twice renewed, for a short time, upon eating fish.

The various and changing forms of scrofula, originate, very often, from this source; and those herpetic eruptions, occurring about the ears and inner surface of the thighs of children, and sometimes of adults, are frequently to be traced to this cause. At their early appearance, they may be often removed; and they may at all times be relieved, by correcting the disorder of the digestive functions: and this I believe, not merely by the relief afforded to the general health (though this effect is, nevertheless, important), but by destroying an irritation which sympathetically excites the local disease.

I have at present a patient, under my care at



the Infirmary, who has been ill frequently during the last two years of a bilious disorder, and who, for a month previous to his applying for relief, was affected with an herpetic ulceration, which occupied a part of the cheek and the whole of the right ear. By means applied merely to relieve the disordered state of the digestive organs, and without employing any topical remedies, the principal part of this diseased state of the skin was removed in the course of a week. An instance still more strongly illustrative of this fact occurred some years since, in a farmer, whom I visited at Bewick, in Holderness, and who had been for some time affected with a pustular eruption, which covered a part of his face, extending downward under the chin, and over a part of the throat. The disease had commenced in the form of small and detached pustules, which spreading and uniting with each other, presented the appearance of a mass of newly formed substance of a granular surface, and elevated nearly one-third of an inch above the sound parts. There was no scabbing, but the whole was covered with a thin cuticle, having a thin sharp ichor discharging from different openings in it. The disease had been preceded



by a general disorder of the functions of digestion, brought on by cold and fatigue, and, at the period of my visit, this disorder with its attendant symptoms, was very great. The nature and origin of the morbid affection of the face and throat were, therefore, evident, and by correcting the disordered state of the biliary function, and thus removing the source of the morbid irritation, a check was immediately given to the disease on the chin and neighbouring parts; and, by the aid of stimulant dressings of the unguentum hydrargyri nitrati, the healthy state of the skin was in a week or two restored. It is now several years since, and he has, I understand, had no return of his disorder; a fact which, in some degree, proves, that the disease did not arise from any local cause, but from a morbid and distant irritation.

In reflecting upon these and the other sympathetic affections, just noticed, and upon those symptoms of biliary disorder which precede and accompany these states, it is difficult to consider them as standing to each other in any other relation than as cause and effect. And with respect to the cerebral affections, which



terminate in hydrocephalus internus, there appears to be as intimate a connexion between them and biliary disturbance, as there is between this latter state and some of the other symptoms which unquestionably arise from it. The cough, and the itching about the nostrils, the herpetic and other eruptions, the anasarca and lymphatic swellings, with the phlegmonous affections, and the marked imperfection in the vision and memory—symptoms so common in biliary disorder—apparently depend upon an irritation of the same kind, differing only in degree or in locality, from that which excites the hydrocephalus internus.

Of these several sympathetic affections, there are, it may be observed, a great variety; but there are also a great variety of causes, acting in the system itself, which in these, as in other cases, are capable of modifying the effects of any morbid agent. As causes for the variation in the several sympathetic affections, we may, I think, look to those peculiarities which depend upon differences in age and constitution, and previous habits, as it is probable they have all a considerable influence in modifying the effects,



or in determining the direction, of any noxious irritant ; and that thus, the same general cause may produce hydrocephalus internus in the scrofulous subject, and chorea in the merely nervous or irritable one ; or chorea in the child, and convulsions in the infant ; or the irritation may be directed to the skin, and produce herpetic or other diseases ; or to the lungs, as the most susceptible part in those asthmatically or consumptively disposed ; or it may act upon the mucous or serous membranes, and produce an increased secretion of them ; or it may act locally, and give rise to tabes mesenterica, or both locally and generally, and give rise to the various forms of scrofula.

It would be exceeding the scope and object of this essay, to enter upon an inquiry concerning the precise nature of the several diseases, thus produced by sympathetic irritation, since many of them become early independent of their cause ; giving rise, in many cases, to morbid actions of a local or general nature, which may either perpetuate the diseases after the removal of the first cause, or favour the generation of others. I shall, therefore, close this part of



my subject with merely remarking, in reference to these facts, that, in treating diseases which originate from a disorder of the digestive organs, it is important to observe, that, whilst the primary symptoms proper to it are removable with their cause, that those of a secondary kind, and which result from the first, and may survive them, demand in many cases a treatment essentially different from them; and that it is only by attention to these distinctions, that errors can be avoided in our notions respecting the nature, and suitable mode, of treating these diseases.

### RECAPITULATION.

It will have been seen in the view given of this disorder, that in addition to the functional disturbance of the liver, which is essentially present in it, there are other morbid actions of a primary and secondary kind, and also certain derangements of the abdominal viscera supervening upon it, which, by their separate and varied operation, produce the diversified forms of the complaint; and since it is by the full and just apprehension of the origin and nature



of the individual symptoms, and peculiar states of a disorder, that this last becomes understood, we may here recapitulate the several pathological conclusions, to which the foregoing facts and observations conduct us, and which are,

I. That the complaint consists of a chronic and an acute state, which have no definite duration, whilst the former, in its sensible characters, is distinguishable from the latter, by the presence of a depraved appetite, and the absence of fever and its attendant symptoms.

II. That the acute stage is made up of two states, namely, one of collapse or oppression, and the other of excitement; the former arising from a venous congestion of the liver, and of the other abdominal viscera, induced by the sudden interruption to the secretory action of that organ. That the oppression of the system may remain an indefinite period, with various degrees of intensity, and may be renewed an indefinite number of times during the continuance of the complaint, and that it consists in an oppression of the heart and arteries, and a consequent diminution in the nervous



energy of the brain, the whole system becoming either torpid or highly excitable—the pulse compressible and often intermittent, and the extremities cold and sometimes livid. That it is from the presence of this state the sudden convulsion of infancy commonly arises, and it is from this state also, that the greatest danger in every case proceeds, as is particularly seen when occurring in the puerperal state, where sudden and irretrievable failure of the vital powers may ensue. And, lastly, it is this particular state which forms a prominent feature in the cholera morbus, and which, when in its severest state, may give rise to a discharge of blood, which in temperate climates is named hemetemesis, and which, when prevailing epidemically, is known on the Peninsula of India by the appellation of black vomit.

III. That to this state of collapse or oppression, there succeeds in ordinary cases a reaction of the heart and arteries, which, though affording only a partial relief, may nevertheless be regarded as a remedial effort of nature for its removal. For the fever which ensues tends to equalize the circulation, and thus to



diminish the internal venous congestion, and the disturbance of the nervous system to which it gives rise.\* But that, besides these beneficial effects derivable from the arterial excitement, it is not improbable that an important service is afforded by the fever, in the extinction which it occasions of the unnatural and craving appetite; since on the accession of the acute stage a nausea of food, and a consequent abstinence from it, ensue, by which the farther irritation from the ingesta is prevented. For experience shows that the disorder is more quickly subdued after the accession of the acute stage, and when the appetite is extinguished, than it is where that morbid craving is present, which attends the chronic and milder form of it; and thus explaining what is often observed, that whilst the first and chronic form of the complaint will be continued for several months, through the daily renewed irritation of the ingesta, the acute or febrile state, from the ab-

\* Respecting venous congestion generally, and the arterial excitement which so commonly follows it, the reader will find many illustrations in Dr. Armstrong's work on Typhus, where the subject of venous congestion, as a pathological doctrine, was first presented to the notice of the medical profession.



sence of all such irritation, often reaches in a short time a favourable termination by the mere sanative and unassisted efforts of nature.

IV. That beside the disorder of the liver, and the sometimes structural disease induced by it, the other organs of the abdomen, whose venous circulation is associated with that viscus, become disordered in their functions—the stomach is affected with a craving or a loathing of food, and its digestive power is either depraved or suspended.—The bowels are irregular in their action, and their internal lining in a morbid state, as evidenced by the copious secretion of slime poured out from it; the discharge from the kidneys is scanty, and commonly high-coloured and turbid, and the menstruation in women is either excessive, or obstructed, or there is uterine hemorrhage, and usually in the intermediate periods, a uterine or vaginal leucorrhœa; that in the several forms of the complaint, the venous congestion appears to extend to the vertebral veins, inducing various affections of the nerves of the extremities, and of the loins and neck, as permanent spasm or rigidity, and sometimes a completely paralytic feebleness.



V. That beside the symptoms immediately arising from the foregoing causes, and which pertain to the complaint, and form a part of it, there are others which spring out of sympathies subsisting between the digestive organs and the several parts of the system, producing, when affecting the head, a simulated and sometimes a true hydrocephalus internus, and extending, at other times, to the different tissues of the body, and creating thus the semblance of almost every known disease, and sometimes the disease itself. That the symptomatic irritation, however, which is considered to arise from the stimulus of sordes in the primæ viæ, is often in a considerable degree dependent on the particular morbid actions which form this complaint, and from which the sordes themselves are derived, the power of these last upon the disorder, being probably in many cases limited to giving an unnatural stimulus, by a reverse sympathy, to the liver and stomach; for symptoms, which are commonly ascribed to the presence of irritating matters in the bowels, are frequently found to continue after the full operation of a purge, whilst, at other times, the same symptoms will disappear, by means which are solely directed



to correct the morbid actions of the liver and other organs of digestion, and before any purgative operation is attempted or produced.

VI. and lastly, that the debility attendant on this complaint, may be either, 1st, real, or 2d, apparent.—1st, Apparent, as depending on the presence of that state of oppression of the system, which results from the venous congestion of the portal circle, occasioning a derangement in the action of the heart and arteries, and a general disturbance of the nervous functions.—2d, Real, as originating from a deficient digestion and assimilation of the food, the consequences of a defective and otherwise morbid action of the organs to which those important functions belong,—from the loss of blood in hepatic or uterine hemorrhage, and from the continuance of the several irritations febrile and symptomatic.



REMOTE CAUSES  
OF THE  
BILIOUS DISORDER.

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**T**HE remote causes of this disorder are cold—irregularities in diet—excess in the use of spirits—the impure air of crowded or close situations—certain eruptive fevers—sedentary employments, &c. &c. These act, in some cases, as predisposing, and in others as occasional causes. We may notice them briefly in their order.

*Cold.*—We need not stop to consider here the hitherto unsettled question respecting the mode, by which cold acts upon the system in inducing disease; nor whether, in reference to its power in producing the complaint under consideration, its primary action be exerted on the liver or on the stomach. The modes by which, to adopt the common phraseology, it may be taken, are as various as are the morbid effects resulting



from it, these being more dependent upon the state of the system, at the period of its being received, than upon the manner in which the cold is applied; though lying on damp ground, getting wet about the feet, or drinking any cold fluid, when the body is heated and fatigued by exercise, are the circumstances which appear to favour most the production of this complaint. The autumnal season, from the predisposition induced in the system by the previous heats of summer, and from the greater variations of temperature, and probably from some unknown atmospheric influence, appears to be the season when cold received is most liable to disturb the functions of the stomach and liver. The cholera morbus, so frequent at this period of the year, originates, as it has been already observed, from precisely the same causes, and is, in fact, only a modified state of this disorder; for the symptoms which precede the biliary discharge, are the same which constitute that complaint, the copious secretion of bile being its natural and efficient remedy.

When a cold fluid is drunk, the body being



at the time heated and fatigued, the effects, where disorder ensues, are often rendered more severe if the fluid be of a digestible nature, as milk, &c. In these cases, the pain and sense of oppression about the stomach are sometimes so great, and are followed by so much faintness and sickness, and other symptoms of extreme disorder, as to excite a suspicion of something poisonous having been mixed with the drink. Such instances have several times fallen under my notice, and, in one or two cases, there appeared to require only some one upon whom the unjust suspicion could rest, to warrant judicial proceedings. And indeed it is probable, that many of those examples of death, which have occurred after drinking a cold fluid, or even after fluids not cold, when taken under certain states of the stomach, have been of this kind; and it is to be apprehended, that in some of these cases the criminal prosecutions, which have been instituted in consequence, have terminated by the conviction of the innocent. About two years since, being accidentally in that neighbourhood, I saw, with my friend, Mr. Clifford, an intelligent and experienced surgeon,



at Patrington in Holderness, a farmer who suddenly fainted away, shortly after taking breakfast with his family, having been up a considerable part of the preceding night, and actively employed in making preparations for an important trial at York, to which he was on the point of setting off. For nearly two hours, the pulse was imperceptible at the wrist, and it was for a considerable time doubtful whether his nearly extinguished animation would be restored. An illness, of a completely bilious character, followed this attack, and it was not until after two or three weeks, that he recovered his accustomed health.

*Irregularities in Diet.*—In those cases, where irregularities of diet produce the complaint, it will be found, that some of the predisposing causes, such as sedentary employments, &c. by weakening the system and the stomach, have previously laid a foundation for the complaint. Thus, it is a circumstance of daily observation, that many of the most common articles of diet, as that of bread and milk, will prove unwholesome to children, and particularly the female



part of them, when living in the centre of a crowded town, and yet prove perfectly wholesome to them in the country; and even sometimes, as I shall again have occasion to notice, food which has for some time disagreed with a child, becomes suitable for it during the employment of sponging with cold water, or the use of the shower bath, the stomach along with the general system becoming thereby strengthened.

In considering, therefore, the diet which may appear improper, we must always take into account the circumstances under which it is used; for many things will be found to disagree, under certain states of the stomach and of the system, which would have proved wholesome at another time: so that an article suitable in health, becomes often decidedly injurious under disease; and even the same dietetic regimen, which is useful in securing the system from disorder, will prove improper when that disorder is present.

But it must not be here understood, that there are no articles of diet which are capable of



themselves, unaided by other causes, of producing biliary disturbance. Rich pastry, in all its various forms, unripe fruit, and the different kinds of confectionary, are of difficult digestion with most persons, and are unfitted under all circumstances for children. In a few persons we observe indeed peculiarities of a constitutional nature, which render some of the simplest articles of food unsuitable ; but these constitute exceptions, and, generally speaking, we shall find in our refinement about the kinds of food which are injurious or otherwise, that infinitely more attention is required in a healthy person to guard against an excess in the use, than any minute discrimination in the choice of his food ; for it is more from the abuse of what is proper, than from the temperate use of that which is esteemed unwholesome, that the bilious disorder arises. Nor ought we to overlook our neglect of simplicity in our diet ; for the various unnatural mixtures, which an artificial cookery brings to our tables, have contributed much more towards the production of this complaint, than perhaps any single article of food is capable of doing, however exceptionable it may generally be regarded.



And the remark, which applies to the effects resulting from an excess in the use of food, is especially applicable to an improper use of wine and other fermented liquors, and includes, perhaps, all that is here required to be said concerning them ; for, after what has been written by professional and other writers upon the subject, there are few persons guilty of such excess, who are ignorant of the consequences likely to be entailed by it, and probably still fewer, that can be deterred from such misconduct by any considerations affecting their health.

If, however, much of the food esteemed unwholesome, may be considered to be so only as its effects are aided by an excess in its use, or by the improper modes of preparing it, yet it cannot be too strongly pointed out as being the principal cause of this disorder in infancy. Indeed, it may be laid down as an incontrovertible fact, that, during the first six or eight months of an infant's life, the only suitable food for it is the milk of its mother, all artificially prepared food having the strongest tendency to disorder it, and producing too commonly symptoms of a biliary



derangement in their most marked and fatal form.

But here I would crave the indulgence of the reader, whilst I venture to notice somewhat at length the improper plans pursued in this respect in the nursery ; for most of the disorders of this age, and many of those at other periods of life, derive their origin from this source ; it having been justly observed, “ that where mis-  
“ management in infancy does not actually  
“ destroy the life, it often very essentially  
“ impairs the health, the foundation of a future  
“ good or bad constitution being frequently laid  
“ at this period.”\* I shall, therefore, now proceed to offer a few observations, with a view to an explanation of the causes why so many mothers are found incapable of becoming nurses, or why so simple and so natural a mode of nourishing an infant, as that by nursing, is pronounced by some as unsuitable for it.†

\* Underwood on the Diseases of Children.

† “ Believe this solemn truth, almost every woman is capable of  
“ supporting her babe, and great will prove the advantages both to



Of the causes why mothers are unable to be nurses, there may be said to be three kinds, which are either, 1st, factitious; 2d, accidental; or, 3d, natural or original causes.

The first of these indeed might be suspected of having but little influence in swaying a mother from so endearing a duty, were we not acquainted with the power, which fashion is capable of exercising over human affairs. That fashion alone decides some to urge the plea of feebleness or delicacy of constitution, as a reason for neglecting this duty, it would be an excess of charity to deny; that all who urge it, however, are insincere in their belief of its reasonableness, it would be uncandid to affirm. With many, it is the result of their own unaided reflection, whilst the greater number are indebted to others for the suggestion. That any mother, however, should yield her assent to the notion, that her physical nature is so imperfect as to unfit her for a nurse, much less that she should ever

“herself and her infant. When it is confined altogether to the  
“breast, it gains strength every day, and defies disease.” Letters to  
Married Women on Nursing, Letter 7th. By Hugh Smith.



make it the subject of self-gratulation, is one of those mysteries which fashion alone can resolve. Viewed as a physical defect, it is assuredly as humiliating as such defects are commonly reputed; for, as a wife is naturally ambitious of the honour of being a mother, so a mother, freed from the shackles of fashion, should be ambitious of the honour of being a nurse; the capability of filling both these endearing relations, constituting the perfection of her physical nature. Any falling short of this argues the existence of an imperfection, which fashion indeed may gloss over by the substitution of a milder term for its designation, or may even render prizeable by the great alone being subject to it; but truth remaining immutable, this fashionable and prizeable peculiarity must still bear the obnoxious name of defect. The simple truth, however, is, that very few women, becoming mothers, are incapable of becoming nurses; for in almost every instance where it is otherwise, it will be found to depend, not upon any real or original incapacity, but upon the operation of those causes which I have called accidental or contingent, and which will be found to originate from mismanagement.



It may be affirmed, that the first and only food which an infant demands, is precisely that which nature prepares in the breasts of its mother. This is rendered evident, by the supply according with the demand, as well with respect to the quantity needed, as with regard to the time when it can be given, and when it will be required ; and this is only one among the countless arrangements, which Providence has ordered for our benefit. The obvious course, therefore, to be followed, for the mutual benefit of the child and mother, undoubtedly should be to fulfil the designs of such a provident arrangement, and to give no food to the infant until that which nature provides for it be prepared. This, however, is not the mode generally pursued. Only a few hours, and sometimes only a few minutes, are suffered to transpire, after it is born, before the infant is fed, the mother and attendants deceiving themselves into a belief that they are acting right, by the readiness with which their liberal and sugared supplies are taken. In the mean while, at the time appointed by nature, the preparation of its natural food commences, namely, in the bosom of its mother. The aid of the infant



is now to be required to solicit and receive it ; but it is objected to, perhaps, by the nurse, on the plea that it eats sufficiently, and that it will draw nothing in but wind. The necessity, however, for its aid becomes at length imperative, and now they find that the period is past for its affording it. The child has been fed with a food, the very lightest kind of which must prove unwholesome, when so prematurely given. Its stomach has become loaded and oppressed ; and instead of that active appetite, which would have rendered its sucking vigorous and efficient, it either feebly and languidly attempts it, or turns from it crying, with every appearance of disgust\*. As the only alternative,

\* “ Il demeure donc constant, qu'en considérant les avantages de  
 “ la présentation des seins faite de bonne heure, la méthode qui veut  
 “ qu'on allaite l'enfant aussi-tôt que la mère aura reposé pendant  
 “ quelques heures et aura pris un bouillon, est sans contredit la  
 “ meilleure et la mieux fondée sur la raison : la décision de Rosner  
 “ et de Van-Swieten vient bien à-propos à l'appui de cette méthode ;  
 “ car, on prévient par-là, disent ces hommes célèbres, non-seule-  
 “ ment la fièvre de lait, mais on s'oppose encore (quoique la succion  
 “ d'un enfant foible soit alors bien impuissante) à la trop grande  
 “ tension des seins, ainsi qu'à une foule de maladies.” *Traité sur  
 la Manière d'élever sainement les Enfants, par J. P. Frank, Profes-  
 seur de Clinique à Vienne, &c. &c.*



the distended bosom must be relieved by drawing. This is repeated, from time to time, with occasional, but unsuccessful, attempts to encourage the infant to draw it. The imperfect and irregular evacuations of the breasts, at length occasion some irregularity in the circulation; a fever ensues—the general system is disordered—and the milk finally disappears—the mother and her friends deceiving themselves with the result, by concluding that the milk had been either unpalatable or unwholesome in its qualities, or insufficient in its quantity, to satisfy the infant, or that her constitution was naturally too feeble to admit of her becoming a nurse.

Of the few real or original causes which sometimes render nursing impracticable, may be mentioned the imperfect evolution of the breast-head, or nipple, which is commonly occasioned by improper modes of dressing, and which precludes the infant from obtaining the necessary hold of it. The principal cause, however, is disease, and that, generally, of the consumptive kind, which, being checked by the previous pregnancy, appears to acquire a new energy



after parturition, utterly unfitting the mother to fulfil the duties of a nurse. In such cases, there are such unequivocal symptoms of disease, as to leave no room for questioning the propriety of avoiding every attempt at nursing.

Such cases, it must be remarked, however, differ very materially from those occasional indispositions, to which many women are subject, and which seem, and only seem, to countenance the notion of feebleness of constitution; for, whilst the sufferer under actual disease would be weakened by nursing, the simple valetudinarian, we may venture to affirm, would be benefited and strengthened by it. For nursing, it must be observed, is not, what, viewed superficially, it may at first seem to be, a mere drain upon the system, depriving it of so much of its sustenance and vigour. Properly conducted, it is a natural and healthful function, succeeding regularly to the state of pregnancy, as the continued, though varied, means of support appointed by Providence for the infant, and which it bountifully sustains, by the more vigorous appetite and digestion imparted to the nurse.



Upon this point, however, it may be necessary to be something more explicit. There are two modes of nursing practised, which differ very essentially in their effects, both as it concerns the infant and the mother. The one is that pursued by the majority of nurses, consisting in giving the breast three or four times in the twenty-four hours to the infant, with a liberal allowance of food in the intervals. The other consists in restricting the infant, during the first six or eight months of its life, exclusively to the the breast, withholding from it every other description of food. In the latter case chiefly, perhaps only, can we look for those striking evidences of the healthfulness of the function of nursing, as manifested in the heightened appetite and vigorous digestion of the nurse, with the regular and copious secretion of milk. In the former mode, where the infant is fed, there is frequently, on the part of the nurse, a failure in the appetite, and in the powers of digestion, and, not unfrequently, a feverish state of the system, with a sense of general feebleness; circumstances which are erroneously considered as affording a proof, that the powers of the constitution are unequal to the office of a



nurse. That the cause, however, is to be sought elsewhere, is a fact too little considered or regarded.

Now the irregularity unavoidably occurring in the quantity of milk drawn by the infant, from the varying effects of the other improper food upon its stomach, and consequently upon its appetite and health, will necessarily occasion an imperfect evacuation of the breast at one time, and an unusual, and even something like a voracious, demand upon it at another; and consequently, at one period, the system of the nurse may be thrown into disorder, by a repulsion of the milk, giving rise to head-ach and loss of appetite, and the other attendants of a disordered circulation; whilst at another time, there may be a sudden and unusual call for it by the infant, which is felt to be exhausting and enfeebling, by there not having previously existed a vigorous appetite to support it. But these, however, it must be observed, are the consequences of an irregular and imperfect performance of the function, and require to be distinguished from those which result from it, when exercised under the enfeebling influence of dis-



ease. In the former case, the beneficial effects, inseparable from the proper exercise of so important a function, are lost to the system; whilst the ill effects, equally inseparable from its mis-employment, are erroneously attributed to the nursing, without any reference to the injudicious mode in which it is conducted; thereby improperly identifying the proper and healthful effects of nursing with those causes of debility, the nature and origin of which are known.

But beside those causes, which prevent a mother from becoming a nurse, and which may properly be said to belong to herself, there is another remaining to be considered, which is often urged as a reason for her abandoning the duty, after having for a short time engaged in it, and which is regarded as applying in some degree to the infant, as well as to herself. This is the notion, so commonly and so unjustly entertained, of the milk disagreeing with it.

It has already been remarked, that nursing, viewed in its proper light, is to be considered no otherwise than as a modified continuation of the union, which subsisted during pregnancy



between the mother and her infant, and that this function is only a varying of the means of support afforded by the parent to her offspring. Now it is scarcely necessary to repeat the remark, that the milk is a nutriment sent for the sustenance of the infant, or that its properties are admirably adapted, above all artificial combinations of food, to the wants and circumstances, its state containing, as chemistry has shown, all the required materials of nutrition, without any foreign or unnecessary admixture. But if it be true, that it is liable permanently to disagree with an infant, it must in such case undergo some important change, and lose those qualities which confessedly distinguish it above the best devised preparations of food. That any such change can occur, when the nurse is in possession of health, is assuredly not to be admitted. That any ordinary indisposition is capable of inducing it, is almost equally inadmissible. The fact is, that the function of secreting milk is found to continue with no sensible abatement of its healthiness, and but little of its activity, though exposed to the influence of agents which readily affect the other secretions of the system; that even during jaundice,



the milk retains its purity and colour unaltered, whilst almost every other secreted fluid is affected by it; and in truth, that this important function appears to be placed out of the reach of all ordinary causes of derangement; the final cause of which undoubtedly is, that the most helpless period of our existence may be thereby the better secured from the accidents of want and disorder.

Were it not from the fear of extending these remarks to too great a length, I might here enter upon an enumeration of those qualities of the milk, which more particularly recommend its use. There is one property, however, which peculiarly distinguishes the first portions of it drawn, and which merits attention from the important office it serves to the infant, and from the neglect of which, the disorder under consideration is so frequently produced.

It is well known, that the bowels of a newly-born infant are lined with a dark coloured slimy fluid, termed meconium, which requires to be removed before the functions proper to them can be duly performed. Now, this needful



office is performed by the milk, which appears to be endued with purgative properties, either partly or entirely, for this purpose ; its laxative qualities continuing merely the necessary time to cleanse the intestinal canal. One evil, therefore, attendant upon the prematurely giving of solid food, will be the introduction of new matter into the bowels before the meconium has been removed, and consequently before the bowels are in a condition to execute their functions properly. If solid food be permanently substituted for the milk, then those natural purgative means will be neglected, which nature had provided for the accomplishment of her designs, and disorder, more or less considerable, will be the consequence.\*

And this leads me to remark, that the opinion commonly entertained of the infant age being highly susceptible of disorder, is not strictly accordant with the fact. Where that particular

\* " Les enfans privés des sucs nourriciers de leur mère dont l'organisation heureuse de leur corps devoit toujours dépendre, éprouvent des maux nombreux qui se terminent souvent par la mort ; on peut les assimiler à ces plantes qui transplantées de leur sol natal sur un terrain étranger, y prennent lentement et foiblement racine, se flétrissent, se desséchent et meurent." *Traité, par J. P. Frank, &c.*



management is adopted, which nature points out, the converse of the proposition is nearer the truth; for, though the organization of a newly born infant be peculiar, and of a mixed character, yet being provided with powers suited to its state, the developement of its faculties are gradually and naturally called forth by the circumstances and wants of the infant.\* If these powers are impeded in their action, by a departure from that path, disorder will then ensue, and the complaint, thus induced, will assume an importance proportioned to the necessity there was for those actions continuing free. Sensible, apparently, of this truth, it should seem to be the study of those, to whom the first periods of infancy are entrusted, to secure their little charges from disorder; but, unhappily, the methods they adopt for this purpose, are often strikingly injudicious, the diligence and the zeal employed, being exercised in interrupt-

\* "Scarcely one in four of those brought up by hand, get over the cutting of their teeth. Almost every complaint, to which children are subject, appears to me to proceed originally from an improper management of them; for the young of all other animals are full of health and vigour." Letters to Married Women on Nursing, by Hugh Smith, M. D.



ing, rather than in watching and seconding, the efforts of nature. Most of the attempts, indeed, which are thus made, partake too much of officiousness, and exhibit a blind and too confident belief in the powers of art, and too little a reliance on the efficiency of those of nature, to carry on her own work for the conservation of health.

Thus, under the influence of these erroneous views, it is a common practice with nurses to administer something to act as an aperient medicine to an infant, immediately after it is born, because a constipated state of the bowels would be injurious to it; and as griping, which is the consequence of indigestion, would be hurtful, ardent spirits, which may produce a fatal indigestion, are employed to prevent it.\* Upon

\* Few persons, indeed, not familiar with the diseases of children, can have any just conception of the extent of the practice, which now prevails amongst the lower order of monthly nurses, of giving spirits and opiates to children. A poor woman, the wife of a labourer living in the country, lately informed me, that, out of ten of her children who were born healthy, nine had died under the age of three years, and most of them under two months, and that, by the advice of her nurse, she had given spirits to them all before they were a week old. Another poor woman, also from the country, had



the same principles, bandaging the body of an infant is resorted to, as a means for preventing deformity, or of imparting strength ; and general vigour and plumpness are to be secured by the use of cold water, at its first washing, and by early and plentiful feeding. In all these cases, there is plainly discoverable an implied belief, that the ordinary processes and efforts of nature, admirable and inimitable as they are, will be unequal to the accomplishment of those ends, which the beneficent Author of our being had appointed them to produce ; and that health cannot be continued by natural means, but must be sustained and prolonged by those which are purely artificial : that the mother's arm and bosom, in fact, are inadequate supports to her infant, unaided by bandages ; and that the symmetrical beauty of the female form, can only be moulded and perfected by stays and backboards.

twins, who were healthy until they were three months old, when, being obliged to work daily for her subsistence, she endeavoured to procure herself rest during the night by giving them an opiate at bed time. The consequence was such as might have been foreseen ; the poor infants immediately became ill from it, and, in the course of a few weeks, literally perished from its effects.



That these principles actuate a large proportion of mothers and nurses, and are extensively acted on, and extensively injurious, I have had ample opportunities of knowing; and particularly as it respects the influence which they exert, in giving rise to, or in favouring, the operation of those causes which induce the disorder that has been just considered.

Of the injurious effects which will be produced by the application of bandages to the body of a child, we may form some judgment, when it is considered, that the organs, contained within the chest, fill up completely the space allotted to them; and that the ribs, as well as the other bones of an infant's body, may be prevented, by even slight pressure, from acquiring that shape or expansion, which nature designed they should take. If the natural expansion of the ribs be restrained, the expansion of the organs, seated within them, must be restrained in a proportionable degree, and the heart and lungs, and other organs, within the range of the compressing ribs, will be checked in their progressive developement. That the curtailment of the space for their full and perfect growth may



be inconsiderable, may indeed be true, but vital and important organs cannot be subjected to any limitation of their due expansion, without the most serious risk being incurred of disorder.\*

But if bandages, as it is most strangely imagined, be necessary for supporting an infant, or stays for determining and moulding the figure of a child, they must effect these purposes by pressure; but pressure, however skilfully applied, must necessarily be unequal, and of course

\* “ Spiegel dit, que le marasme et la phthisie auxquels beaucoup d'Anglais sont sujets, proviennent du trop grand resserrement de la poitrine chez ceux qui en sont attaqués.

“ Il est hors de doute, que la liberté et l'action efficace des poumons dépendent de la dilatation convenable de la poitrine, et que c'est d'après cette bonne ou mauvaise dilatation, que l'on peut augurer de la force et de la santé du corps, du moins on voit survenir des suites fort fâcheuses d'une dilatation non convenable, et de la suspension du développement du corps. Desessarz soutient que ceci peut causer une affection asthmatique, qui dure toute la vie; qu'il se manifeste de plus encore d'autres affections provenant du basventre, qui tirent leur cause d'une compression, qui se font connoître par un vomissement, attendu que le foie, qui est beaucoup plus volumineux chez les enfans que chez les adultes, comprime l'estomac, le retrécit et le secoue, lorsqu'il entre dans un mouvement spasmodique.” *Traité, par J. P. Frank, &c.*



imperfect, and the effects must be therefore imperfect and unequal, so that distortion must be the consequence, and that in the ratio of the force employed by such irrational means to prevent it. The fact is, that the best support of an infant is its nurse's arms, and as its strength will be best promoted by the healthful digestion and assimilation of its food, so the symmetry and beauty of its form, can be only evolved by the operation of those mysterious, yet unerring causes, which the interference of art may disturb, but cannot assist.

But beside the injury, which the pressure of stays is calculated to produce in a child, by permanently repressing the due expansion of the organs, situated beneath the ribs, there is no inconsiderable effects produced by the pressure which they make upon the abdomen, whereby the full and natural expansion of the stomach, following a meal, is prevented, and the intestinal canal is compressed; the peristaltic actions of the bowels being thus in some degree impeded, and a torpid and costive state of them induced. And that such are the effects resulting from the pressure of stays, I have frequently had occasion to



suspect ; and though other causes undoubtedly contribute to it, yet it may, I believe, be numbered among those which occasion the constipation, so general amongst females, compared with the condition of the other sex.

*Eruptive Diseases.*—It is often observed, that a person becomes affected with a derangement in the digestive organs after passing through an eruptive disease, and particularly after measles, and the disorder as frequently succeeds the mild form as it does the severe kind. I have seen it occur in some who had had that disorder so mildly, as scarcely to show any signs of indisposition, and it has always appeared to arise from the neglect of those laxative medicines, so generally needed in eruptive fevers. Where due attention has been given to this part of the treatment of these fevers, it frequently happens, that a person, after passing through them, becomes more vigorous than he had previously been, and which I am disposed to attribute more to those evacuations from the bowels, which nature or art had procured, than to any specific change in the constitution, which the complaint might be supposed to have produced.



*The impure air of close and crowded situations — sedentary employments, late hours, &c.—* Without detaining the reader by any observations on the precise modes by which these several causes act, it will be sufficient to observe, that by weakening the system, and thereby the stomach, they exercise an important influence in favouring the operation of those causes which produce the disorder. For the system, when weakened, is readily affected by agents, which, in a state of vigour, it would have resisted. Thus the cold, to which the children of the poor are subjected by their inadequate clothing, would have much less injurious effects if their food were nutritive and abundant; and for the same reason, the insufficient and watery diet, with which so many of them are fed, would be rendered less hurtful in a climate more temperate and congenial than ours. On the same principle, the close and impure air of a crowded city, is rendered less injurious by a careful attention to guard against the other causes of disorder; whilst, on the other hand, the pure air of the country is a means of imparting a degree of vigour to the system, which often renders it superior to the influence of ordinary agents.



Where, however, with the predisposing causes of impure air and sedentary employment, there are joined an insufficient period for repose, and perhaps an unwholesome or imperfectly nutritious diet, the most serious derangement in the digestive functions may be expected to ensue. And this is what occurs in some of our cotton manufactories, where children are exposed to all those causes of disorder, which, acting conjointly, few constitutions can resist. By reasoning concerning the influence of each of these, abstractedly from the rest, it might be readily shown, indeed, that they can have but little power in occasioning this disorder; whereas, if they are considered as acting by their aggregate force, their pernicious effects will at once be manifest. For the fatigue which is endured with impunity by the labourer who is adequately clothed and nourished, may become to him, under opposite circumstances, a source of disease; as the great art of resisting the power of one noxious agent, to which we are unavoidably exposed, is to avoid the influence of all others.



TREATMENT  
OF THE  
BILIOUS DISORDER.

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**T**HOUGH the doctrine of a *vis medicatrix naturæ* is no longer followed in the treatment of disease, it is nevertheless in many instances important, to watch those efforts which nature makes for her relief, as we may often derive from them the most important assistance, as well with regard to the nature as the cure of diseases. In the disorder the treatment of which is now to be considered, there is much instruction of the kind to be gained by a close observation of its several phenomena; and before, therefore, proceeding to detail the means for its removal, I must beg to recall for a moment the attention of the reader to a brief recapitulation of the leading parts of its pathology. The disorder, it will be remembered, consists of two stages, namely; 1st, chronic, 2d, acute, the



latter differing chiefly from the former in the intensity of its symptoms, and in the presence of fever, &c. In some cases, as in the cholera morbus, the acute stage is suddenly formed without the intervention of the chronic stage, but in general the latter precedes the former, and on these occasions, the disorder begins with a disturbance in the functions of the stomach, and, perhaps, of the bowels, the mucous membrane lining these parts, probably, taking on some morbid action which produces, by sympathy, a disturbance in the functions of the liver. The effect of the disorder in the latter organ, however induced, is an interruption in its secretory action, which leads to a congestive state of its secretory vessels, and to a similar state of the venous system of the chylopoetic organs, the circulation of which is associated with the vena portarum. An abdominal venous congestion is thus caused, by which, as must be obvious, a further irritation is occasioned in the mucous lining of the first passages, the degree of this last being dependant upon the intensity of the morbid states preceding it.\* When these are

\* I am informed by my esteemed friend Dr. Armstrong, whose authority on all practical questions is confessedly distinguished, that



severe, and the abdominal congestion, consequent upon them, considerable, the action of the heart and arteries, and, as dependant upon these, the functions of the brain, become disturbed. The system is in a state of collapse or oppression, as evidenced by a considerable torpor of its general powers—by an unusual coldness and sometimes lividness of the parts most distant from the heart, as in the extremities—and by an oppressed and often intermittent pulse. In this state it is that the greatest danger of the disorder resides, and it has, therefore, a particular claim upon our attention. It forms, indeed, under all the various appearances of the complaint, a permanent and important feature of it, and it is to be distinguished, not only as the point or acme to which various morbid phenomena consecutively tend, and from which several also emanate, but, likewise, as being that part of it in which the sana-

he has often found an inflammatory affection of the mucous membrane of the bowels, connected with the functional disturbance of the liver proper to this disorder; and that, together with leeches to the abdomen, he has long followed, with success, a plan of treatment differing but little from that which will be detailed in the following pages.



tive powers of nature, inherent in the system, are apparently first called into efficient action for its removal. In children, and in females, particularly when in the puerperal state, and generally among the inhabitants of tropical climes, the collapse of this disorder may prove suddenly fatal. An effort, however, is usually made by nature for the removal of the internal venous congestion, and of the state of collapse, which is its effect; and this she appears to accomplish by one of the three following modes; namely, 1st, either by a sudden re-action taking place in the secretory vessels of the liver, by which a copious secretion of bile is produced, and a natural and spontaneous remedy afforded, constituting in this case the second stage of the cholera morbus. Or, 2d, by a hemorrhage from the congestive vessels of the liver, as in idiopathic melæna or hematemesis, or from others which communicate with them, and participate in their congestion, and that in this, as in other cases of impeded secretion, the removal of the congestion consequent upon it, contributes to abate the force of the complaint, and sometimes to renew the healthful action of the organ. Or,



3d, and lastly, by a re-action of the heart and arteries, to which the internal venous congestion becomes an indirect stimulus, the excitement of the heart and arteries which thence arises, having a tendency in a measure to equalize the circulation, and restore an equilibrium between the arterial and venal systems. But this and the other modes, which nature is driven to employ for the removal of the state of oppression, have often only a partial effect, and though salutary in their tendency as it respects that state, may, nevertheless, be attended or followed by symptoms which may amount themselves to disease. And thus, the re-action of the heart and arteries, which removes the stage of oppression, may assume a permanent and fatal form, by the local or general effects which excessive arterial excitement is calculated to produce—the spontaneous secretion of bile, which, when moderate, is the natural cure of the venous congestion, may prove injurious by its excess; and the hemorrhage from the congestive vessels, which in small quantity is useful, may also prove speedily fatal from the same cause. It behoves us, therefore, to bear it con-



stantly in mind, in the treatment of this complaint, that whilst it is proper to imitate the beneficial efforts of nature as far as they are imitable, supplying what they fail to afford, and correcting or restraining what they afford in excess, so, at the same time, the efficient means for its cure must be sought for in those remedies, which tend most directly to restore the biliary secretion; since it is by the interruption of the secretory action of the liver, that the congestive state of its vessels, and those of the other digestive organs, has arisen. The following will be found to embrace the general indications of cure: 1st, to correct the disordered state of the liver, by renewing its secretory action, and removing the congestive state of that viscus, and of the other abdominal organs the circulation of which is associated with it; 2d, to cleanse the bowels of their morbid secretions, and the imperfectly digested matters collected there; and 3d, to lessen or avoid all those several causes which tend to keep up the complaint.

To fulfil the first two of these indications, that class of medicines is to be employed, to



which we give the general name of purgative. The several medicines, however, which are thus classed together under this name, are of various powers, and differ from each other in many important particulars. Some of them having an immediate and specific action on the liver, are chiefly purgative, by promoting the secretion and descent of the bile; whilst others act principally by the stimulus they give to the small intestines, occasioning a free secretion from their vessels; and a third prove merely aperient, and act chiefly by stimulating the larger bowels into forcible contractions for the expulsion of their contents. It is on the first two of these that we must rely for the renewal of the secretion of the liver, and for the removal of the congestion of it, and of its associated organs; though the third is often useful in continuing or sustaining their healthful actions, after their morbid states are removed.

Of the medicines of the purgative class, which have a specific action on the liver, the mild preparations of mercury are the chief, and of these calomel may be considered as the one, the effects of which in this disorder will be found



most uniform, and most constant. The property which this medicine possesses of acting upon the liver, is generally known, and various attempts have been made to explain it. In some cases, it would appear to affect the liver by an action which it excites in the stomach, by either altering its secretions, and thus renewing a healthy action in this organ, or by a particular stimulus it imparts to it, and which is communicated by sympathy to the liver; whilst in other cases, these opinions would appear to be contradicted, by the same effects being found in a certain degree to result from the introduction of it into the system by the skin. Of its precise mode of action, therefore, we must be content to remain ignorant; and, indeed, like that of the cinchona in the cure of intermittants, its operation, if precisely understood, would not perhaps be on that account the more successful.

When a patient, who labours under a disturbance of the biliary function, takes a small dose of calomel at bed-time, it commonly happens that, instead of the restlessness of former nights, he sleeps more calmly and soundly than usual,



and awakes in the morning with a conviction that he owes his rest to an opiate. This fact I so frequently observe, as to be fully satisfied that the restlessness in this complaint, depends upon the presence of some disordered actions, which the medicine relieves. And that these actions are principally those of the liver, and that the final change produced is in the functions of that organ, appear from the alteration which is observed in the motions; for, previously to the use of the medicine, they are perhaps black, or of the colour of pipe-clay, or of yeast, and of an unnatural fœtor; whilst during its use, they gradually acquire their proper and healthy appearance.

But the power, which this medicine possesses over the secretory functions of the liver, is not confined, as it is generally thought, to increasing its activity when in a sluggish state; for it is equally efficient to reduce the secretory action when in excess, its tendency, when acting, being to restore the actions of the liver, whether deficient or excessive, to their natural and healthy state. In those cases, where there is an impeded secretion of bile, this medicine has the



power of restoring it, occasioning, in many cases, at first, a very copious discharge; and where the secretion is in excess, as in the second stage of cholera morbus, its powers, in subduing the inordinate action of the liver, are equally distinguished; and where, again, the secretion is in a proper state, it appears to have but an inconsiderable effect upon the liver, though given in those doses in which it before was so active. In cholera morbus, therefore, and in the common bilious diarrhoea, it is the remedy upon which I am accustomed chiefly to rely; and its power in subduing the sickness, and in lessening the excessive secretion, is so considerable, as generally to render all other measures for these purposes unnecessary.

In administering calomel in this disorder, it is necessary to bear in mind, that the complaint consists, as we have just seen, in a derangement of the functions of the liver, giving rise to a congestive state of that organ, and that whatever irritation may be present from morbid accumulations in the bowels, this medicine is not usefully employed, if given as a purge, but that its proper action being on the liver, medicines



of a strictly purgative kind should be selected for their evacuation. The doses, therefore, of calomel should be small, and should precede, by some hours, the employment of the purgative, as it appears to be most serviceable, and to answer its specific purpose best, when it is allowed to continue some time in the stomach. In ordinary cases of the disorder, whether acute or chronic, a dose once in twenty-four hours is sufficient; but where the symptoms are urgent, it is often necessary to give it more frequently, abstaining from the use of purgatives until after the last doses of the calomel have been taken. This is particularly the case in those examples of the disorder attended by a vomiting or purging of blood, or by a uterine hemorrhage occurring from this complaint in the puerperal state—in both stages of the cholera morbus, and on every occasion where the system labours under the state of oppression, and particularly as met with in the puerperal state, and in those sudden attacks of it, to which infants are subject, where the hands and feet becoming cold and livid, and perhaps contracted, and the face sunken and discoloured, denote the approach of convulsions. And in these cases, neither the



debility, which is often apparently very great, nor the apprehension of affecting the system by the calomel, must deter the practitioner from giving it in a manner adequate to produce its proper effects in restoring the secretion of the liver. For a slight, and even a considerable affection of the mouth from the medicine, is of insignificant account, when the safety of the patient is at issue; and the debility, with its train of alarming symptoms, as being chiefly apparent, and depending on the presence of the congestive state of the liver and other abdominal organs, will be found to be only obviated by a nearly exclusive attention to the removal of this its cause. When the calomel, however, is thus given at short intervals, its doses must be minute, as the sixth, or even eighth part of a grain for an infant, and a third part for a child, with half a grain for an adult, repeated every hour or two, for ten or twelve successive hours. At the expiration of this time, aperients with glysters are to follow, and should the urgent symptoms not have decidedly subsided, after a farther period of twelve hours, the same means must be repeated, though it will be generally found, that such an abatement will have taken



place in the force of the complaint, as to render their continuance unnecessary. The calomel may then be given once or twice daily, limiting the quantity thus given to a single grain a day. Should, however, at any time the bowels become considerably constipated, and be moved with difficulty, and the general irritation and restlessness appear to be increased by the presence of a considerable quantity of sordes in the primæ viæ, it will be proper to give, on such occasions, a larger dose than usual, following it up, in two or three hours, with a brisk cathartic and a glyster. For the various morbid secretions and undigested matter collected there, may be readily believed to afford an unnatural irritant to the bowels already in a state of irritation, and these, by sympathy to the other organs of digestion, aggravating thus their several morbid states.

But the active purging thus induced, is not, however, to be repeated by means of calomel; but, if the same effect upon the bowels be considered needful, the ordinary purgatives may be used alone, giving the former separately, and in a smaller dose, and as long before adminis-



tering the latter as the circumstances of the case will admit of. In general it will be found, that active purging is rarely required to be repeated in the severest form of the disorder, the principal object in the treatment being to restore the healthful function of the liver, and to procure, once or twice daily, a regular and free, but not a purgative, evacuation from the bowels.

It sometimes happens, especially with children, that the first dose or two of calomel, given nightly, excites sickness and vomiting, whilst those which follow often produce no inconvenience. The sickness in these instances, as it denotes considerable disorder of the stomach, may lead some perhaps to consider it proper to discontinue the use of the medicine, or to order an emetic; but neither of these measures are necessary, as the stomach becomes sufficiently clear by the sickness to retain the calomel afterwards. In ordinary cases it is neither necessary nor proper to allow the medicine to affect the mouth, and therefore every precaution should be taken, by the smallness of the doses and the unfrequency of their repetition, and by preserving an open state of the bowels, to guard



against this effect. When the natural secretion of bile is restored, it is proper to discontinue the employment of the calomel, as it often, in these cases, disagrees with the stomach, and to give the opening medicine alone.

Sometimes it is found, after employing the calomel some time, and restoring the patient to a state approaching to convalescence, that the symptoms of biliary disorder become stationary, or even return, as evidenced by the unnatural appearance of the motions. In these cases, mercurial friction, employed nightly on the right side, for a short time, will answer a more valuable purpose than a perseverance in the use of the calomel; though the same precautions must be attended to here in guarding the system from its effects. To ascertain the changes which are produced upon the functions of the liver, it will be necessary to inspect personally every evacuation that is passed; or, where this is not practicable, the patient or the friends should be required to make a daily report of their appearance, as it is by these means chiefly that an accurate knowledge of the progress of the recovery can be obtained, and a rule be



afforded for the government of our practice, with respect to the continuance of the calomel; for the stomach will generally be found to suffer from it, if it be continued after the disordered action of the liver is removed. In the course of the treatment, it will often happen that a motion is found to be considerably more natural than those that preceded it, and it may be hastily assumed from this, that the secretory function of the liver is restored to its healthy state, and that a further employment of means, for this purpose, is unnecessary. These appearances of improvement, however, are often only temporary, the motions of the succeeding day being of the same unnatural colour as before; and it is not therefore adviseable to discontinue the use of the medicines, until a permanent and decided improvement in this respect takes place. It must be here remarked, however, that it is no unusual thing, especially in infants, to find the appearance of the fœces to be natural, some hours after the commencement of a sudden attack; and in the same way they will often continue to be passed in a green state after every other symptom of disorder is removed. These facts, which I have repeatedly observed, might



seem at first view to countenance the notion of the complaint being independent of any biliary disorder ; though they only serve, if duly considered, to prove this truth more fully ; for as the symptoms of disorder arise from a derangement in the actions of the liver, the morbid secretions, produced from this state, will not be seen until some hours after the commencement of the attack ; and on the other hand, by the renewal of the healthy secretion, there will be actual health, though the bowels should, for a short time, continue to discharge those morbid secretions which they had previously contained.

It has already been observed, that active purging is not desirable for the cure of this disorder, since it consists in a disturbance of the function of the liver, and other organs of digestion, the purpose in ordinary cases, that is required from opening medicines, being merely to remove the morbid matters from the bowels. There is nevertheless, however, in many cases an important office to be afforded by purgatives in this disorder ; for, independently of the stimulus which they afford to the exhalant arteries of the bowels, they promote the discharge



of their natural secretions, and thus diminish the congestive state of their venous system, and the production of that morbid slime, which is present in this complaint, and which, it is probable, not only derives its existence from this state, but contributes indirectly to prolong it. The medicines which I chiefly employ for this object, are the different purgative salts, which I prefer on account of their action being principally exerted on the small intestines, and from their having the property of increasing the secretions of the bowels. In employing these medicines, I have found it convenient to give them in small doses, largely diluted with tepid water; for when they are taken in this way, they act without irritating the stomach, and produce the required evacuations without those inconveniences which are experienced from medicines of less activity, when given in a concentrated form. In the copiously diluted state, in which I thus administer them, I consider that I am imitating, as far as it is practicable, and perhaps useful, the saline aperient springs of this country, the powers of which in relieving, and not unfrequently in curing, the various forms of this disorder, have been long and deservedly distinguished.



In giving the purging salts, it often happens that the dose taken for the first two or three mornings will produce very considerable effects upon the bowels, and afterwards the same may require to be repeated two or three times during the day, before a single effect is produced. There is, therefore, much attention required to watch the effects of the medicines during the time they are taken, so that the proper purgative operation be induced; for, in some persons, very small doses of calomel are sufficient to produce their effects upon the system, if the bowels should from any cause be confined. When, however, the medicines fail after some time to produce their accustomed action upon the bowels, it may be concluded that they are not exerting their due influence upon the function of the liver; for when their action is of the proper kind, their power of acting upon the secretions of that organ, becomes more considerable in proportion as the use of them is continued. In these cases, it will generally be found useful to give, for a night or two, a larger dose of calomel than usual, following it up on the succeeding morning with a larger draught of the aperient medicine. In some instances, however,



the saline purges are found insufficient to move the bowels, and a more active medicine is required. This from some cause not hitherto explained, but perhaps depending on a certain degree of vertebral congestion, is a common occurrence in children, and it is often surprising what powerful medicines they sometimes need to procure a movement from their bowels. Generally speaking, indeed, the saline medicines prove too inactive with them, an ounce of the common infusion of senna given daily being often barely sufficient, to procure the necessary evacuations.

It has been recommended by some to combine the purgative medicine with bitter and tonic infusion, on the supposition that the disordered condition of the digestive organs, originates from, or is kept up by, a weak and irritable state of them. I have adopted this plan on various occasions, but I have thought, in many cases, it increased the febrile irritation, where the aperient, with which the tonic was combined, did not act sufficiently on the bowels. If given, indeed, before the disorder is considerably removed, they seldom fail to aggravate



it, increasing the thirst and fever, and the pain about the stomach or bowels; and particularly so in young children, with whom, it may be observed, tonics seldom agree, and for whom they are happily seldom wanted. I therefore now defer the use of medicines of that class until the convalescent state; avoiding, by this means, the difficulty, which must be otherwise sometimes encountered, in distinguishing the natural causes from those accidental ones which occasionally increase the fever.

And here I would observe, that simplicity of prescription cannot be too much attended to in the treatment of this, as well as indeed of other complaints; for the contrary practice leads to false conclusions, and to a false experience, symptoms, as I have not unfrequently witnessed, which originate from the medicine, being sometimes classed among those proper to the disorder. In those few cases, where tonics are considered as decidedly necessary, as sometimes in the aged and in delicate females, or generally where the stomach has become much weakened by the long continuance of the disorder, it will be found of some advantage to give a diuretic



with them ; as it tends considerably to obviate those effects, which have been just noticed, as arising from their too early employment. Three or four grains of the extract of bark, or the powder of Colombo root, and the same quantity of rhubarb, with half a grain of the dried squill, given half an hour before and after dinner, will often prove useful on the approach of the convalescent period, by promoting the digestion of the food, and thus cutting off one source of hepatic irritation and derangement.

And this leads me next to remark, that, besides the medicines of the purgative class, the employment of diuretics constitutes an important feature in the treatment of this complaint ; for it is a fact known to all conversant with this disorder, that the secretion by the kidneys is deficient in quantity, and usually, though not constantly, except in its acute stage, high-coloured and turbid. This derangement in the secretory action of the vessels of the kidneys, might seem to arise from their venous system partaking of the congestion of the portal circle, and the relief afforded by diuretics, to result from the local congestion of the kidneys, and to



a certain extent that of the other organs, being reduced by the freer action of the renal arteries, whilst the general circulation, at the same time, is relieved by the more copious elimination from it of the excrementitious fluid. And indeed, as it has already been observed, the unusually large and morbid secretion of mucus into the stomach and bowels of those labouring under this disorder, afford the amplest proof of unhealthy actions subsisting there; and it is, therefore, presumable, that, exclusive of the aid afforded by calomel in restoring the secretory action of the liver, the purgatives and diuretics have indirectly the same effect; the former by their action on the vessels of the internal surface of the bowels, and the latter on those of the kidneys, contributing thus to remove, by their evacuant and joint operation, the venous congestion of the liver, and the venous or arterial fulness of other organs of digestion.

But beside the employment of medicines of the purgative and diuretic classes, the exhibition of an emetic is often found of considerable service in relieving, and sometimes in removing, the disorder. It is chiefly, however, useful



at the commencement of the attack, when, by clearing the stomach, and probably the bowels, of the phlegm or slime which is always present in them, the morbid source of irritation is thereby apparently removed. In the confirmed state of the complaint, I have rarely seen it useful; though the frequent nausea, which is often present in such cases, would appear to indicate its use. But the sickness which is observed on these occasions, is dependant upon an irritation communicated from the liver to the stomach, for it is relieved by means that have no direct action on the latter organ. And this leads me to remark, that a free hemorrhoidal discharge, occurring in this disorder, has frequently a beneficial effect in relieving the symptoms of nausea and oppression about the stomach, which it appears to do by removing the congestive state of the liver. This fact, indeed, I have remarked so frequently, that I have in many cases regretted that I could not produce this discharge artificially, since it appears capable of affording very early relief to the symptoms, and of preventing those copious discharges from the liver, which, under the names of *melæna* or *hematemesis*, are occasionally



proving fatal. To many, however, it may seem perhaps something like refinement, to contend for the utility in this disorder of these natural and local evacuations of blood whether hemorrhoidal or hepatic, whilst I decry those of a general kind ; but the fact of general venesection being seldom of service, either in the acute or chronic form of this complaint, has come so frequently under my notice, that I feel no hesitation in affirming, that it has no power in subduing the causes, and is rarely needed for the relief, of any of their immediate effects. Local bleeding, however, by leeches applied to the abdomen, will in some cases be proper, and is necessary where there is internal pain connected with considerable febrile re-action, or where, as in the chronic stage of the complaint, the glands of the mesentery appear to partake of the irritation existing in the stomach and bowels. But the occasions, I must likewise add, in which they are required, are much less frequent than is generally supposed, and in my own practice, which has necessarily been very extensive in this complaint, I seldom have recourse to them, as I find the means which are directed for renewing the biliary secretion, and



correcting the morbid actions dependant on its interruption, sufficient generally for the removal of its other ordinary effects. And here, as connected with this point, I must beg leave to remark, that the practice once advocated, and still too much pursued, of what is termed prescribing for symptoms, is perhaps in no disorder less proper than in this. The debility for instance, which is sometimes so considerable as to render the patient unable to bear the erect position, without fainting, will often be increased by those means, whether dietetic, or medicinal, which are generally considered by the attendants to be strengthening; for, until the cause which produces the indigestion, and the loathing of food which accompanies it, be removed, it will be in vain to calculate on relief from any assistance of this kind. In such cases, it is best to leave it, in a considerable degree, to the patient to determine when, and in what quantity, he shall take food; and where an absolute disgust is felt for food, it is certainly proper to abstain from it. And this rule applies with nearly equal force to those cases, where a morbidly craving and voracious appetite exists, as it is proper under certain limitations to permit the patient



to indulge it, observing only that the food be of a strictly wholesome kind ; for in some, this constant returning desire to take food is so strong, and attended by such faint depressing feelings at the stomach, as to occasion considerable suffering.

From the benefit which opiates afford in some states of watchfulness, it might be expected they would have some effect in procuring rest in this disorder. The effect of them, however, is generally unfavourable, excepting when given in minute doses along with the calomel ; for they aggravate the cause which occasions the restless state, and interfere with the operation of those medicines which are required to remove it. And indeed in the watchfulness, which forms so distressing a symptom of the acute stage of the disorder, and for which opiates would seem to be required, there is something peculiar, and meriting observation. In many cases which have come under my care it was so excessive, and so greatly disproportioned to the degree of pain or fever, as to show that it did not originate from them. On some occasions, indeed, there is the utmost horror felt at making the



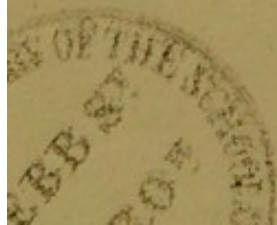
attempt to procure rest by lying down in bed ; the general restlessness, and nervous agitation, being then greatly aggravated.

And what is true in regard to the employment of opiates for procuring rest, is likewise applicable to the various means which are directed for the cough in this complaint : for many of them are sickening to the stomach, and in its disordered state are very likely to do further injury to the digestion, and are, at the same time, even of little temporary service. When no disease is induced in the trachea or bronchia by it, which I have reason to believe occasionally happens, the cough is very quickly relieved by the means which are directed for the correction of its cause, being generally one of the first of the urgent symptoms which disappears.

Sometimes there is, in this complaint, an appearance of spontaneous diarrhœa, which, though arising from the irritating nature of the morbid matters in the primæ viæ, may be mistaken for that which arises from an increased watery secretion into the bowels, and attempts



be made to check it by opiates and astringents. Such a practice will not fail, however, to prove unsuccessful; for those means have but a very limited control over this kind of diarrhœa, and all they have is injurious. A slight examination, indeed, of the motions, will convince the practitioner that the diarrhœa principally depends upon a disorder in the functions of the liver, and that the only mode to check the loose state of the bowels, will be found to consist in restoring the proper biliary secretion. The fact is, that in this state of the bowels there is, however extraordinary it may seem, the same need of purgatives, as where actual constipation exists, and that, instead of increasing, they lessen the number of the evacuations: for these repeated motions are the consequences of a stimulus, imparted to the bowels by their own morbid secretions, as well as by the food, which passes undigested through them, in a fermenting and acid, and sometimes in a putrid state. By restoring the secretion of the bile, which at once promotes the digestion and corrects this putrid and acid tendency of the ingesta, and by aiding the descent of its fœculent parts through the bowels, the morbid stimulus, which produced the diarrhœa,





is no longer given, and the diarrhœa itself is removed.

In all cases, therefore, of diarrhœa, attendant upon this disorder, it is absolutely necessary to inquire concerning the colour of the discharge; for if it be of a bilious kind, opiates will be improper and aperients unnecessary, as the discharge, in this case, is the natural remedy for the complaint, and only requiring attention upon its becoming excessive. In many cases, where improper means are employed to stop it, in its descent through the bowels, a feverish state of the system ensues, from the irritation produced by its accumulation.

In some cases, however, it should here be observed, the diarrhœa in this disorder is so severe, from the irritating nature of the secretions of the bowels, and, perhaps, from an inflammatory state of their mucous membrane, that it becomes necessary to combine a minute dose of opium, as the eighth or sixth part of a grain, with each dose of the calomel, as this last is otherwise liable to be hurried too hastily



through the bowels, and its specific operation thus prevented.

The febrile symptoms, attended with heat of skin and thirst, may, in many cases, from their urgent nature, be thought to require some of those saline and antimonial diaphoretic medicines, which formerly shared so much of the confidence of physicians; but the reasoning which applied to remedies for the cough and debility, is equally applicable here. The fever and thirst derive their origin from irritations depending on the deranged actions of the liver and other organs of digestion; and until these states are removed, no subordinate means will be available. Besides, the action of the calomel, which is designed for the liver, will be in some measure diverted to the skin if diaphoretic medicines are combined with it, and its purposed operation be lost. From observations indeed repeatedly made upon this fever, and upon the effects of medicines in subduing it, it has always appeared to me to be much more relieved by the medicine, which was directed to correct the disordered biliary secretion, than by evacuations



from the bowels; as I have found it often as intense on the evening succeeding considerable evacuations, as it had previously been. And on the other hand, there is often a marked abatement of it before any evacuation has taken place, evidently showing that its cause consists in a disordered action, rather than in an irritation from morbid accumulations in the primæ viæ; a small dose of calomel, in fact, taken at bed time, having more effect in subduing the fever and procuring rest, than any combination of those medicines, which are in the highest estimation for these purposes.

The aphthous affection of the mouth, which is so common an attendant upon this disorder in children, is not unfrequently treated with topical applications; and where the cause of the disease is not neglected, there is no objection to be offered against their use; but as it is a complaint which, when originating from gastric irritation, yields immediately with the cause that produces it, I have seldom of late had recourse to them; a few minute doses of calomel, repeated at short intervals, having generally the effect of removing it.



There is, however, on the question of prescribing for particular symptoms, an important distinction which must here be noticed ; for, as it has already been observed, the morbid affections met with in the derangement of the digestive organs, are of two kinds, some being proper to it and therefore primary, whilst others grow out of these, and frequently survive them, requiring the same local or general remedies, which, under other circumstances, would be needed. It is thus, therefore, that where hydrocephalus internus is threatened, it becomes necessary, along with the means for correcting the disordered actions of the digestive organs, to have recourse to evacuations from the head, by leeches and blisters. And this is applicable likewise to the threatened mesenteric affections, to the state of the gums in painful dentition, and generally, indeed, to all its other secondary affections ; for a disease produced by sympathetic irritation, may become early independent of its cause, and be, at length, itself the source of other morbid phenomena.

The good appetite, which attends the early and chronic stage of this disorder, frequently



leads the friends of persons affected with it to believe, that the listlessness, and inactivity, and dispiritedness depend upon some moral causes, and they are importunate with them to shake them off. The fretfulness of temper, likewise, which is a symptom of the complaint, and which is observable in children and infants while labouring under it; and that dulness also which children exhibit in this disorder when appointed to get their tasks, are improperly considered in the same light, and punishments, as undeserved as they are unprofitable, are improperly resorted to for their correction.

In directing the treatment of this complaint, it is of considerable importance to be scrupulously precise in the rules which are given respecting the food, for it is no unusual thing, for the patient to abandon the use of the accustomed and proper kind, and choose some other decidedly injurious. In general, children in this disorder, dislike their accustomed meal of bread and milk in a morning, and it is proper to substitute some other one in its place; but on the accession of the febrile stage of the complaint, they often demand cold milk with avidity,



for the purpose of allaying the thirst, by which they considerably increase the disorder. In every stage of this complaint, the milk of cows appears to act unfavourably; the prevailing acidity in the stomach and bowels in this complaint, having the effect of changing the cheesy part of the fluid into a strong curd, so that portions of considerable hardness, are often thrown up from the stomach, or passed from the bowels, in an undigested state, and presenting an appearance not unlike the white of an egg that has been boiled and minutely divided. As a general rule, with respect to the diet for children and adults, it may be stated, that, where the appetite is good or morbidly craving, too scrupulous care cannot be taken to allow nothing that is not of a perfectly plain kind, as well in regard to the nature as the culinary preparation of it; and that where the appetite is impaired or extinguished, it is better to wait for the natural appetite than to tempt it by an improper diet. For if the plentiful appetite for plain food, which attends the first stage, be inadequate to strengthen the system, there can be little hopes entertained, in its second stage, of benefit from a food that is unwholesome in its



nature, and which, though taken in but small quantities, is swallowed with disgust. And here it may be remarked, that, generally speaking, that food may be accounted plain which is cooked plainly; and that those articles of food which are accounted improper, are principally so by the unnatural combinations which the cook or confectioner forms with them; nor forgetting, at the same time, that we may render the simplest unwholesome, and the compounded food poisonous, by the manner in which we indulge in their use. It is proper to notice, however, that beef, and likewise most young meats, are often found to be difficult of digestion, and malt liquor will seldom agree with the patient; whilst wine frequently produces a distressing acidity in the stomach. To children, indeed, these last are inadmissible at every stage of the disorder; and to adults they are rarely required, and may be often injurious, particularly malt liquor, if they be given before the healthy secretion of the liver is in a considerable degree renewed.

But on these points, an important principle must be attended to. The reason for which a cautious, and somewhat abstemious regimen is



recommended, is founded on the imperfect powers of the stomach, and not upon the notion of there existing any structural derangement of the liver, which is too commonly considered as the cause of this disorder; for, when the stomach becomes equal to the digestion of a plain but nourishing diet, with an allowance of two or three glasses of wine daily, there is a positive advantage attending it; since it seems to strengthen, in a very material degree, both the stomach and the system, thereby more readily confirming the recovery of the patient.

It has been stated, that the most common cause of this complaint in infants, is the improper food with which they are fed, some being incapable of digesting any artificial preparations of it, and becoming, where the attempt is made to bring them up by what is termed the hand, so severely affected by this disorder, as to require an immediate return to the use of their natural sustenance. For the fact is, that though an infant, under these circumstances, may be temporarily relieved for a day or two from its disorder, it often relapses again to its former state; and if not carried off by convulsions,



gradually wastes under, what is supposed, some internal organic disease, but which, in reality, is a congestive state of the liver, as I have several times ascertained by examination after death, and which is the consequence of an indigestion habitually renewed in the stomach, from the improper nature of the food.

To attempt, therefore, to relieve an infant from this disorder, whilst the cause of it is permitted to remain, will prove as fruitless as it must appear irrational. So often, indeed, have I witnessed the infants of the poor perish, notwithstanding every attempt to save them, solely from their being deprived of the breast of their mothers, that there is no fact upon which I can speak more confidently than upon this, nor which I feel more anxious to press upon the attention of the reader. The justificatory plea, which is sometimes set up for neglecting this duty, and which, I regret to add, is countenanced by some practitioners, that nursing is weakening to the mother, or unsuited to the infant, is an error of vital importance, and deserves the most unqualified reprobation. For where an infant is confined exclusively to



the breast, I am authorised by observations long directed to the subject to declare, that, with respect to the mother, there is none of that debility which an erroneous view of the subject leads so many to expect; but that, on the contrary, there is a feeling of the highest health, the appetite and digestion being vigorous, whilst the supplies of milk are both regular and abundant; and that, with regard to the infant, the process of dentition being neither premature nor difficult, it enjoys, as far as it depends upon the food, an absolute exemption from disorder; the thin, and seemingly spare, diet afforded by the milk, satisfying its utmost wants, and invariably imparting to it a degree of vigour and firmness, which no artificial mode of rearing can bestow.

Among the means that may be accounted most valuable, as auxiliaries to the strictly medical treatment of this disorder, there is no one upon which I so much rely as on the use of the shower bath, or on what is perhaps as useful and more acceptable, the practice of sponging the body with cold water, upon first rising in a morning. The power which this possesses



of strengthening the system, and of improving the digestion, and of imparting a feeling of health and vigour to a convalescent in this disorder, is often remarkable; the invalid frequently being enabled, under its use, to digest food, which on all former occasions had disagreed with him, and to resist the influence of many of those causes, which had before either produced or aggravated his complaint. In this disorder, it seems, indeed, to answer all the valuable purposes for which sea-bathing has been distinguished; and, where change of air is not required, it appears fully suited to accomplish them. Vinegar or salt is sometimes added to the water, and probably with the advantage of increasing its activity.\* The substitute, however, which sponging is capable of becoming for sea-bathing, is not to be understood as rendering a removal to the sea-side, or a change of air, undesirable; for, in many cases, it is of the utmost consequence as the means for establishing the health.

\* As a good substitute for-sea water, I am accustomed to advise the napkin, with which the patient is wiped dry, to be rendered salt, by dipping it the preceding day in water containing some common salt.



But of them all, it must be observed, that the advantage which they afford consists chiefly in confirming the recovery, being seldom of service until the principal cause of the complaint is removed, or in the course of removal; for, where they are employed early in the disorder, there is not that glow upon the surface, which is at once the proof, and perhaps the cause of its usefulness: and where a change of air is employed, under the same circumstances, the patient is seldom rendered better by it.

It is usual for patients, in the early stage of this disorder, to feel better when walking out; and afterwards, as the complaint advances, to feel a repugnance to every species of exercise; the wind in particular being rarely agreeable to them, however warm may be the weather. In these cases, I have seldom seen advantage in urging them to take exercise, having generally found them ready to take it as they became better, and were able to enjoy it. And this rule applies, likewise, to indulging the desire, which is sometimes manifested by patients, to continue late in bed in a morning; for, in general, it will be found proper for them to remain there,



as it is often only at that time they are able to sleep, or to be refreshed by it. The cause of the debility which is observed, in those who lie much in bed, is in a majority of cases improperly referred to the bed ; the attendants in this, as in many other cases, erecting an effect into a cause. Where, indeed, a patient has been much disturbed in his sleep during the night, the refreshing sleeps of the morning afford him strength ; for I have known many labouring people complain, that, in consequence of their dreams relating to their work, they have felt more fatigued on their rising in a morning, than they usually did from a common day's work in health. The clothing of patients in this complaint should be warm, particularly about the feet and legs, which, especially in females and children, are peculiarly liable to become cold, even when the other parts of the body perhaps are preternaturally hot.

In the course of a patient's recovery from the acute form of the complaint, in which the secretion of the bile had been scanty in quantity and inert in quality, it is a very usual and a very favourable symptom, to find the pain, which had been



previously fixed about the stomach, complained of as affecting the bowels; as such pain is at once the proof and the effect of a more healthy and active biliary secretion passing through them. From the occurrence of this pain, and sometimes from the copious evacuations which take place at first from the bowels, there is often a suspicion entertained of the patient's becoming worse; and in many cases the young practitioner will feel his confidence waver from the slow decrease, or occasional aggravation of the symptoms of the complaint. In all such cases, the surest guide that can be offered is the appearance of the tongue and of the alvine discharge; for as long as these present unnatural appearances, and there is no organic disease to account for them, he may assure himself that there is no path that will lead him so surely to the result he desires, as a steady, but temperate, employment of the means which correct the deranged condition of the biliary function, and unload the primæ viæ of their morbid contents. It not unfrequently happens, indeed, that the patients in this complaint, are reduced to the last state of emaciation and weakness, and yet, by a steady perseverance in these means, the health and



strength are perfectly, though sometimes only slowly, restored. So great indeed, in some cases, is the weakness, that I have seen adult patients regaining their strength so slowly, as to be unable to walk alone at the end of a month after the commencement of their recovery. In fact, this disorder has no period, if organic disease be not induced by it, nor any degree of weakness or irritation, whether of the general system, or of the stomach and bowels, proper to it, which should discourage the practitioner from attempting its removal; for there is no state of suffering and weakness in it, which may not be lessened by correcting the biliary function, and by unloading the bowels of their slimy secretions, or of their otherwise morbid and often putrid accumulations.



## CASES AND OBSERVATIONS.

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**T**HE following cases are selected, with the view to illustrate the nature and some of the more important varieties of the bilious complaint, and the treatment adapted for them. In the appearances of the disorder in different persons, and under different circumstances, a great disagreement, as we have already seen, is observable, but in the treatment, there is a greater uniformity than is commonly admissible in other complaints. A selection of cases, therefore, whilst it renders the previous description of its varieties more intelligible, will tend, by the conformity apparent in their general plan of treatment, to strengthen the assumption of their common nature and origin.

I have arranged the cases under the two states of chronic and acute, separating again those



of the latter, into its two states of febrile re-action and collapse. The chronic and acute forms of the disorder, we may repeat, appear no otherwise to differ in their primary cause, than in degree; there being in the former an interruption, whilst in the latter, there is probably a cessation, of the secretory function of the liver. But on the accession of the acute form, when severe, there is a considerable disturbance given to the action of the heart, and intermediately of the brain, which produces that state of the system denominated collapse or oppression; and which is distinguishable from the febrile stage, by the coldness of the surface, and by those symptoms severally denoting an abeyance of the vital powers. The febrile stage, which succeeds to this, is one of its natural remedies; for the re-action of the heart and arteries that ensues, removes that venous congestion which before oppressed them, and renews the healthful functions of the brain.

The febrile re-action, however, has no definite period for its appearance after the accession of the attack, and when this last is made in its severest form, and under circumstances of the



system favourable for its influence, the vital powers may be so overwhelmed as to sink before the occurrence of the re-action. This happens often with children, and not unfrequently with puerperal women, and it may take place with any one in whom a previous state of weakness favoured the operation of the exciting causes. But besides the disturbance given to the heart, and intermediately to the brain, there is much disorder produced in the stomach, by which the action of retching or vomiting is excited, that often serves as a useful stimulus to the liver, and renews its biliary secretion. The renewal of this secretion is the natural cure of the venous congestion. When in excess, it forms the second stage of the cholera morbus of authors, the previous congestive state of the liver, and the collapsed condition of the system, having been its first one. Lastly, in those cases where the biliary secretion is not renewed, and the venous system of the liver is in a highly congestive state, a partial relief may be afforded to it, and to the system, by an escape from it of blood, which will be discharged by vomiting or by stool. If by the latter mode, and in small quantity, the blood will be only discoverable by



the tar-like appearance of the fœces; whilst in other cases it will retain its sanguineous characters, and the disorder will then correspond to the idiopathic hæmatemesis or melæna of nosologists.

In conformity with this view, the cases may be arranged in the following order, viz. 1st, the chronic; 2dly, the simply febrile; and 3dly, the collapsed or oppressed state, with its occasional morbid excess of biliary secretion, which succeeds to and cures it, and its hepatic hemorrhages, which accompany and relieve it.

## SECTION I.

Of the chronic form of the bilious complaint I shall only offer three cases. The first is an exceedingly well marked instance of the disorder, as it is found to run on its course when neglected or mismanaged; beginning first suddenly in the acute, and terminating in the chronic form. This case, when it came under my care, had existed eighteen months, and had been treated sometimes as an inflammatory affection of the liver, by bleeding and active purging, and at other times by the cinchona, as



a case of debility of the stomach; and though none of these modes were calculated to remove the complaint, yet it is worth observing that the latter plan appeared to the patient to afford him the most relief. In this, and in most of the following cases, I have contented myself with giving the symptoms, together with a general account of the treatment, and its result, considering any detailed report of their progress unnecessary. There was in all of them, some occasional variation in the doses that were first ordered of the medicine, as the circumstances of each demanded; and this I have likewise omitted to note, as the treatment of these cases is given rather to illustrate the general principles upon which it is to be conducted, than to determine the doses of a medicine that may be needed, under the ever-varying circumstances of patients.

### CASE I.

Thomas Jackson, aged 37, from the country, a patient of the Dispensary, was affected with great weariness, listlessness and dizziness, and with an aching of the knees and ankles. His



appetite craving, but he felt no better for the food eaten, having always a sinking feeling at the stomach—tongue foul—bowels costive—pulse full, but of natural frequency—complexion sallow—urine of a pale colour—sleep much disturbed and broken by dreams, he being seldom able to sleep after having been awake by one. He was very much reduced in his flesh and strength; felt himself best in a morning, becoming more unwell as the evening came on. He had been ill eighteen months, and was seized suddenly, at first, when in bed, feeling as if, to adopt his own language, all his passages were stopped, and was obliged to rise and walk about the chamber during the rest of the night. He was seldom in bed for the period of three months, and rarely slept or felt the inclination for sleep. The appetite during that time was bad, and he had much thirst, and his bowels were costive. He applied for advice immediately, and was attended for three months. He was bled once during that time, and purged very much, but without relief. He was never regular in his bowels but when taking physic, and then open to excess. The alvine discharge was al-



ways black. Finding that he received no benefit from his first medical attendant, he consulted others, and was blistered five times, and bled from the arm four times, and once in the temples for the dizziness, but always felt himself worse after these evacuations. By one practitioner, he was ordered bark, and he thought himself a little relieved by it. Had not done any work for the twenty weeks preceding his admission, and before that period seldom worked more than one or two half days in the week.

Having ordered him a dose of calomel at bed-time, with an aperient draught on the following morning, and given the necessary directions for his increasing or lessening the doses of his medicines, as circumstances should require, he returned into the country, only coming to see me once a week. After some time, a tonic medicine was given, along with the other medicines, and, at the expiration of seven weeks, he was so well, that his medicines were discontinued, and he came at the end of another month to inform me, that he had continued free from



complaint since the time of my last seeing him, and had been able regularly to follow his work as a labourer.

## CASE II.

This case is an example of a mild form of the cough from hepatic irritation, which is sometimes met with in this complaint, and which, with the pain in the left side and other symptoms attending it, occasions a strong resemblance between it and an incipient phthisis pulmonalis.

Alfred Pullan, aged 15, admitted June 4th, an out-patient of the Infirmary, was troubled with a severe cough, which was worse towards evening, attended with an expectoration of a tough phlegm. The pulse was quick—the bowels were stated at his admission to be regular—sometimes they were too loose—the tongue was foul—the complexion sallow, and the appetite craving—he was drowsy, dispirited, listless,—perspiring much during the night, and often in the day under exercise—had some thirst and fever, and a pain in the left side, and the flesh and strength were much reduced—had been ill se-



veral weeks. Having taken a small dose of calomel nightly, and an aperient draught on the following mornings, this patient was dismissed cured on the thirteenth day after his admission.

### CASE III.

This next case is a well marked instance of the chronic form of the disorder, when about to pass into the acute stage.

John Jackson, aged 12, admitted June 4, a patient of the Infirmary, complained of pain in his back and loins, extending to his groin. His bowels were alternately loose and costive—appetite craving, without feeling benefited by his food. Had much pain in passing his water, which was thick and high-coloured, felt listless, and indisposed to walk from a weariness and aching about his thighs and knees, and the middle of his back. Was best in the morning—perspired much during the night, and felt unrefreshed by his sleep—flesh and strength much reduced—complexion sallow—tongue foul. He had had these complaints a year, and they began



shortly after his return from the West Indies, where he was born. A small dose of calomel was ordered for him nightly, and his bowels were kept open by a mixture, consisting chiefly of the infusum sennæ. On the 17th, his medicines were discontinued, and the decoctum cinchonæ was ordered for him; and on the 24th he was discharged cured.

## SECTION II.

The next series of cases are those of the febrile stage, and the first of these is one in which there was a permanent strabismus, from cerebral irritation, this last having been succeeded, and most probably relieved, by a transfer of the sympathetic irritation to the mouth, producing a tumid state of the gums, and an aphthous ulceration of them and of the tongue, with a carious condition of the teeth. In the affections of the head, arising sympathetically from biliary derangement, a slight and temporary strabismus is by no means an uncommon symptom; though perhaps the affection, most commonly occurring from cerebral irritation, is deafness. This symptom is met with in differ-



ent degrees of severity, and of various duration. In some, I have known it to continue permanently; though, generally, it yields to the means directed for the removal of its cause.

### CASE I.

Mary C. aged 3, from the country, had generally been ill from the time of her being six months old, sleeping very badly, and having commonly some thirst and fever in the night, with profuse perspirations. The appetite had been either good or craving—bowels alternately loose and costive; their contents of a yeasty colour and foetid. She had been always better in the morning, becoming worse towards the afternoon, and had frequently had fits until she was two years and a half old. In one of these, a strabismus was produced, which continued. She had lately become so much reduced in strength, as to be unable to stand. The gums were very much swelled—teeth black, and the tongue covered with aphthæ. She had taken much medicine without relief, and the mother, who had five other children all healthy, was advised, by the last practitioner who attended,



to try no further means.—A small dose of calomel was directed by me to be given nightly, and a draught, consisting of the infusum sennæ, the following morning.

During the first week, three and four discharges took place from the bowels daily, which were dark and slimy; the appetite became good and yet not craving; she slept better, and had less fever and less perspiration; the mouth got quite well, and the child was able to stand a few minutes at a chair. At the end of the second week the stools had become more natural, the appetite good, there was little thirst, and she sat up through the day, and was able to walk, with assistance given to both hands. These favourable symptoms continued; and the child, at the expiration of five weeks, when her medicines were discontinued, had nearly perfectly recovered the flesh and strength usual to her age.

The next is an instructive instance of the complaint, in which the cerebral irritation leads to a complete hemiplegia. The child, who was the subject of it, is of a scrophulous family, and had been, during the space of two years, nearly



constantly afflicted with the disorder, under the chronic form; and in the last attack, before my seeing her, a violent purging had for some time been induced by a vermifuge nostrum, without however affording relief. Having, in the course of a few days, been relieved from the disorder, a relapse is suddenly brought on by an improper indulgence in diet; giving rise to so much irritation about the head, as to induce the hemiplegic affection. The renewal of the healthy secretion of the liver removed again the irritation from the head, and the child was restored to health; the state occasioned in the brain having, in this instance, had no influence on the general health, nor produced any visible diminution in the vigour of the intellectual faculties.

## CASE II.

E. Burton, aged 3 years and a half, admitted May 3d, a patient of the Dispensary, was affected with a considerable degree of fever, particularly during the night—with profuse perspirations and frequent screaming—much thirst—no appetite—stools dark, slimy, and fœtid. She had a



troublesome cough, and was much reduced in her flesh and strength. When a year old, she was ill in the same manner, and very much reduced. After a short recovery she relapsed, and her body became hard, and the stools were loose and unnatural; she had much listlessness, a pale and sunk countenance, occasionally thirst, and often a craving appetite. She had a great propensity to eat chalk and sand, and there was itching about the nose. These symptoms continued three or four weeks, with occasional short intervals of amendment. She was the fifteenth child, and one of the family had died of a scrophulous disease of the hip. She had been ill in this last attack about two months, and had been taking a nostrum for worms, which operated very powerfully upon her bowels, but without bringing away any worms.—Half a grain of calomel was ordered to be given nightly, and a draught of the infusum sennæ every morning.

For five days, there was little visible improvement, but very offensive motions were discharged; at length the fever and thirst



abated; she slept well, the stools acquired a natural colour, the appetite returned, and the little patient sat up and played about as usual. Having discontinued my visits, I was requested a few days afterwards to see her, and was informed that she had had a relapse of her complaint in the night, and that she had been out a part of the preceding day at the house of a friend, where she was, contrary to my strict injunctions, indulged in some very improper food. At my visit, I found her in convulsions, and her right leg and arm completely paralysed, with a considerable dragging of her mouth in the same direction. Pulse quick, but regular—bowels costive. A common purgative glyster was ordered, with leeches and a blister to the head, and the former medicines were directed to be resumed as soon as they could be given.

On the following day I found that the convulsions had continued uninterruptedly, and that neither food nor medicine had been taken. Pulse quick, and preternaturally strong—bowels costive. In the evening she took one of the powders, and a dose of the mixture in the morning,



and had had some dark slimy stools. The convulsions were less severe, and she was occasionally sensible.

On the following days she took her medicines regularly, and continued to improve, and the motions became at length of a natural colour; she sat up and assisted herself to food, eat and slept well, and became soon perfectly free from her complaint. The paralytic affection, however, was not relieved; and I was prevented shortly afterwards from knowing the further state of my little patient, by her embarking with her family for America.

### CASE III.

This is a case in which an inflammation of the liver had been suspected to exist, and where copious bleedings had been ineffectually employed for the relief of the patient.

John T. aged 62, a sailor, admitted May 14, a patient of the Infirmary, was affected with an acute pain at the pit of the stomach and on the left side, which was worse towards evening and



during the night. He was troubled with a severe cough—loss of appetite, throwing up the little food which was taken—profuse perspirations when in bed—excessively disturbed sleep, a sense of great weariness and aching of the knees and ankles during the day, and was much reduced in his flesh and strength. Pulse of natural frequency, but feeble—tongue foul—bowels costive—waterhigh-coloured, scanty, and turbid—complexion sallow, and countenance depressed. He had been ill during four months, and bled, under the direction of a medical attendant, five times, but thought himself worse for it, and was blistered four times, with only slight relief to the pain. The blood had a slightly greenish tinge. He had never enjoyed good health after having been shipwrecked eight years before. Having ordered a dose of calomel to be taken nightly, and a draught containing the sulphas magnesiæ each succeeding morning, I learnt on the third day, that he had passed four copious, black, and slimy stools—that the cough, and pain at the pit of the stomach were better, that the vomiting and perspirations had ceased, that his nights were passed with more sleep and less disturbance from dreams; and that the ap-



petite was also better. On the five following days he had two or three stools daily, which were very black and foetid. The appetite was much improved, but the cough was still troublesome during the night, and he had some thirst. The medicines were continued, and twelve drops of the elixir vitriol, in water, were also ordered to be taken twice a day. During the next eleven days he passed two or three motions daily with some slime; the cough ceased, the digestion and other functions became progressively improved, and at the termination of the third week from his admission, he was discharged free from complaint.

The venesection which had been employed upon this patient before his admission was considered by him to have aggravated his complaint. In this, it is probable, he was mistaken. It is, however, by no means a common error to regard and treat this disorder as an inflammatory affection of the liver. But the bilious complaint is of frequent occurrence, whilst the acute inflammation of the liver, according to my observation, is comparatively a rare disease. When occurring, it demands for its relief,



among the other strictly antiphlogistic means, the most active depletion by the lancet; for it differs in nothing from the inflammatory affection of other internal organs. And here I must differ in opinion from those, who esteem the exhibition of calomel to be useful in frequently renewed doses, in the treatment of inflammation of the liver, from the power it possesses of promoting the secretion of the bile. The practice is avowedly founded on the well known benefit which is derived from evacuating the female breast, when affected with an inflammatory congestion. But there is very little analogy between the cases. The congestive vessels of the breast are those whose office it is to secrete, and the direct evacuation of which, therefore, is produced by a renewal of secretion. But the vessels, engaged in the inflammation of the liver, have no secretory office to perform, and can be only very partially relieved from their congestive state by the freest secretion of bile. In the inflammatory state of the breast, the secretion is stopped, whilst this is by no means necessarily the case in that of the liver. In those cases, in which calomel has been employed with the particular view of promoting biliary secretion, and where



it was thought to be so successful, as to render the employment of frequent venesection unnecessary, I cannot help suspecting, there may have been some error, the symptoms attendant on a venous congestion of the liver having, as in this case, been probably mistaken for those of inflammation. Under such circumstances, the practice would indeed be efficient, and would prove the means of rendering all other evacuations unnecessary. But should calomel be exhibited in actual inflammation of the liver, and, at the same time, be in any degree trusted to, on account of its property of promoting the secretion of that organ, there can be little hesitation in affirming that the event would be disastrous.

But on this point I could desire to guard against misconception; and I must therefore add, that, though I cannot regard calomel to be useful in acute hepatitis, by its promoting a secretion of bile, yet it has a powerful effect upon the inflammatory affections of internal organs, and among others of the liver, when combined with opium and the tartrate of antimony, and given to act upon the system, according to the mode first recom-



mended by that excellent practical physician, Dr. R. Hamilton, of Lynn Regis. When given in this form, its power, in subduing these affections, is often striking, as I have frequently witnessed. Its operation, however, is never beneficial in these cases, until the medicine has slightly affected the mouth ; when almost at the instant this latter affection occurs, it appears to act like a charm, the inflammatory affection becoming at once subdued by it. But, though thus powerfully acting in removing inflammation, it is not to be relied on, or recommended as a general remedy in their treatment ; for these diseases demand an immediate remedy, and the ptyalism, which the medicine is required to produce before it acts upon them, cannot always be early, and at the same time safely brought on, and any delay might be fatal.

#### CASE IV.

This case is an example of the disorder, accompanied by the symptomatic cough, assuming so much of the appearance of a pulmonary complaint, as to lead the gentleman who preceded me, to regard and treat it as such.



William D. aged 37, complained of a most acute pain in the region of the stomach, which was worse in the recumbent posture, and was slightly relieved by bending forward. He had a troublesome cough, attended with a slight degree of dyspnœa and some little expectoration. Pulse preternaturally quick—bowels stated to be regular—the tongue furred, and the water thick high-coloured, and scanty—appetite entirely gone, and the smell of food sickening. The nights were passed in the chair and without sleep, as his sleep, to use the patient's own expression, was quite gone from him, for when not in pain, he was still unable to rest. He had become much reduced in flesh and strength, and had much pain and aching about the knees and ankles; the complexion was sallow, and the countenance languid. He had been indisposed during two months, and particularly worse for about ten days. He had been taking an opiate for the cough, and an aloetic pill to keep the bowels regular. A dose of calomel was ordered for him at bed-time, and a draught of the sulphate of magnesia on the following morning.



On the first two days, the bowels were but little acted on, and the symptoms were not relieved. The aperient draught was substituted for one containing the infusum sennæ.

On the fourth day the bowels were relieved, the alvine discharge was dark and very foetid—cough and other symptoms abated, but he was still sleepless, and spent much of the night in his chair.

On the fifth day the bowels were plentifully moved—the fœces very dark and foetid—pain abated—the water clear—the disgust at the smell of food less considerable, and the cough gone.

On the sixth day the pain had removed considerably lower down—the bowels were freely moved, and the fœces of a better colour. Had taken some food—and spent much of the night in bed—the looks much improved.

On the seventh day he was very considerably relieved in all his symptoms—had no pain at the stomach, but some little still in the bowels—slept well in the night.



On the eighth day he was not so well, having had a bad night, which he attributed to some improper food taken the day before. In the evening he took a larger dose of calomel, and the next and five following days he continued to improve. On becoming convalescent, he discontinued his calomel, and took for a short time the decoction of bark.

In a few instances of paralysis, arising from, or, perhaps, accidentally combined with this disorder, I have seen the watchful state proper to it become so considerable, as to be accompanied with a nervous irritability, bordering on mania. In an example of this kind, which I had under my care some time since, there were symptoms of biliary derangement previous to an attack of hemeplegia, and which so increased after this last complaint, that the patient was never in bed for twenty-three nights, and was said to have rarely slept during that period; but to have exhibited, as each night returned, the most distressing symptoms of nervous, and almost maniacal agitation. Having tried the effects of powerful doses of the tincture of opium to procure rest, and find-



ing them not only unavailing but injurious, I was led to inquire more particularly concerning the appearance of the alvine discharge; and learning that though passed regularly, it was of a light yeasty colour, I examined his body, and was for once gratified by finding a distinct circumscribed tumour seated in the epigastric region, and considerably tender on pressure. The cause of the excessive watchfulness and nervous agitation, which I had erred in overlooking, was now explained, and was happily within the reach of a remedy. By correcting the disorder of the liver, the patient, in fact, was enabled in a few nights to lie down; and, though subject occasionally to restlessness, he never afterwards either required an opiate, or was absent a night from his bed. Whether in this case the paralytic affection, like the nervous irritability which attended it, derived its origin from the biliary derangement, it is difficult to decide. In another part of this essay, I have noticed a case where such a connexion appeared to exist, and in children they confessedly thus stand to each other in the relation of cause and effect. But it is not necessary, in these cases of extreme



disorder of the nervous system from biliary derangement, to attempt an explanation of its cause, by having recourse to the supposition, that the paralytic affection itself originated from it ; for it may be reasonably concluded, that to those diseased, though not always discoverable states of the brain, existing in paralysis, a morbid and sympathetic irritation will prove unusually injurious, and give rise to a degree of nervous irritability, which would not have been produced under a more healthful or more vigorous condition of the brain.

#### CASE V.

This next is an example of the complaint, as preceded and brought on by measles, exhibiting the symptoms usually met with in it, and affording, at the same time, an instance of the power which calomel possesses of subduing this disorder, by correcting the biliary secretion ; for in this case, it will be seen that calomel was the only medicine taken, and there was no purgative effect from it, the changes produced having consisted in a renewal of the healthy secretions.



Thomas Cox, aged 2, admitted July 15 a patient of the Dispensary. Was affected with much pain in the body and head—sleep much disturbed—appetite bad—bowels sometimes loose, and at other times costive—the fœces white and slimy—had much fever and thirst—was listless—tedious—never standing on his feet—perspired, and often started in his sleep. Had been affected with these complaints during six weeks, and latterly was worse. They began immediately after a mild attack of measles—was very well before.—A small dose of calomel was ordered to be taken nightly, with magnesia the following mornings.

On the fifth day I learnt that the bowels had only been slightly moved—that the alvine discharges were dark—and that he passed his water with difficulty. In all other respects was much better. Had not taken the magnesia, having resisted the attempts made to give him it.

On the tenth day the stools had become of a much better colour—appetite good, and not craving. Had still some pain in his body. Was playful, and frequently on his feet. And has



been in all respects much better during the last five days.

On the fourteenth day he was reported free from all complaints.

The next case is an example of the disorder, in which there was so much cerebral irritation, as to induce not only a paralytic state of some of the muscles of voluntary motion, but such a degree of rigidity in others, as to render the back and lower extremities inflexible. Indeed, the rigidity was so considerable, during a month, that the patient was unable at any time to be bent into a sitting posture, and he could be lifted in a perfectly stiff and extended state, by merely raising at the same time his ankles and head. A partial rigidity of this kind, is not very unusual in this complaint. I have seen it continue, uninterruptedly, for several days, in the flexor muscles of the toes of children, and in the muscles which turn the head. In this patient, the tongue was slightly paralysed; and this is a symptom which, if I mistake not, is often present in the severe forms of the disorder,



for few children have that distinct utterance whilst labouring under it, which they possess in health. And this state, as well as the marked imperfection in the memory, &c. which is observed both in children and adults, and the feebleness and trembling in the knees, may be considered as originating from an irritation of the same kind, differing only, perhaps, from the other in intensity.

#### CASE VI.

James T. aged 12, a patient of the Dispensary, was affected with considerable pain in his head and bowels, and a sense of a load at his stomach, or, as he expressed it, at his heart; answered questions by monosyllables, and in an utterance scarcely intelligible; was confined to his bed, and, from an unyielding rigidity in the muscles of the body and lower extremities, was unable to be bent into a sitting posture, being so stiff as to be held extended straight, when supported only by the back of his neck and by his heels. This rigid state had existed for a fortnight. Tongue foul—



bowels obstinately costive—pulse about 100, and of moderate strength—appetite bad, especially for meat—slept seldom more than two hours during the night, and became feverish towards evening, the feet being often at the same time cold. Took scarcely any notice of any thing passing, and seldom spoke, but moaned loudly and literally unceasingly, whilst awake. Was attacked first on the 6th of January with sickness and fainting, and threw up a considerable quantity of phlegm. On the day following his attack, he was better, but continued listless for three weeks, taking very little support, and constantly complaining of uneasiness in his head and bowels, and of a sense of a weight at his stomach; his bowels were very costive, and his sleep was much disturbed. During five weeks, he was attended by two medical gentlemen in succession.

Having prohibited the use of milk, of which he had lately drank considerably, I ordered four grains of calomel to be made into six pills, of which one was to be taken nightly, with an ounce of the infusum sennæ every morning. The following is the report. Had an evacuation



which was lumpy, but reported to be not of a bad colour. On the second day had another discharge from his bowels, consisting of half a pot full of figured, lumpy, and dark fæces. He moaned incessantly, and was in all other respects as before. On the third day had one slight and slimy stool, the rigidity and moaning, &c. as before. The fourth day was passed without his having a stool, and he had not taken any medicine, from some error in the procuring of it. A dose of the purgative mixture was directed to be taken every two hours, until a movement was procured. On the three following days the rigidity, and moaning and other symptoms, underwent no change, and his bowels continued costive. Ten grains of the compound colocynth pill were ordered to be given every two hours, and with the effect of procuring two copious and lumpy stools, which were reported to be not of a bad colour. The appetite became improved, having asked for food, which he had not done for some time before. The moaning and rigidity, however, continued unabated. The following night was restless, he having awoke as usual, at two, and been unable to sleep afterwards. He complained more of his head, and



of sickness, and had had only one motion, which was scanty and lumpy. The moaning was still as loud and unceasing as ever, and his utterance as imperfect, and the rigidity of the trunk and lower extremities was still unsubdued. On the six following days the medicines were continued, by which the bowels were kept open, the discharge from them being usually both dark and copious. There was however no distinguishable improvement, and the moaning and rigidity were as usual. On the following day he had three stools, which, for the first time, were mixed with slime. One of the motions was copious, and of a yellowish green appearance; the slime in it was quite tenacious, and admitted of being separated and washed in one undivided mass—he had taken his food better, and the moaning was less loud, but the sleep was still disturbed. On the succeeding night he slept well, and he moaned less the next day—had three stools, which were of a better colour but slimy. In the evening he was enabled for the first time to be bent into a sitting posture. He passed an indifferent night, but he did not moan after he awoke, and he acknowledged himself to be better—had one stool of a black green



colour and slimy. On the two succeeding days he had stools of a better colour—sat up for an hour or two in the day, and assisted himself to preserve his seat in the chair, but still took little interest in the objects around him.—The following night was restless, and in the morning he passed, after much straining, a dark and green loose motion, highly offensive. He acknowledged himself to be better, and his utterance was decidedly improved. From this time his recovery was rapid. He had two or three stools daily, some of which were offensive and lumpy, whilst the colour of the others were much improved—the functions of the stomach and other organs of digestion recovered their healthy state. The speech, however, though much improved, continued a considerable time imperfect, his indistinct utterance arising, as he assured me, from his tongue feeling heavy, and from his thus being unable to move it. During the next month he so far regained his strength, as to be able to walk out unassisted, and after some further time he re-acquired the entire possession of his speech and faculties, and became perfectly strong and healthy.



## SECT. III.

The next series of cases comprehend those in which the collapsed or oppressed state of the system prevails, as the effect of excessive venous congestion, together with others illustrative of the morbid excess in the biliary secretion, and of the hepatic hemorrhages, as the spontaneous results of that congestive state. The first case is an example of the collapsed form in an infant, in whom an inflammatory affection was suspected to exist, as the cause of its alarming symptoms. The cough and stuffing, which seemed to give countenance to this notion, is a common attendant in biliary disorder in children, and in this case, though it was urgent like the other symptoms, yet it became so inconsiderable in the course of twenty-four hours, as to be no longer complained of, or even spoken of by the attendants.

## CASE I.

The infant child of Mrs. J. had been ill ten or twelve days, of what was supposed by its me-



dical attendant to be an inflammation in the bronchial passages. I found it lying on its nurse's knee in a state of complete torpor, its countenance and lips of a death-like pallidness, and its feet cold and of a slightly livid hue. It had been in this state for some hours, and had had several slight convulsions, and at these times a darkness appeared about the mouth. The coldness of the feet and legs was constant, and resisted all the means tried for warming them. The stools were curdly, and of a most unnatural colour and smell, and the water was voided with pain and difficulty. It was likewise affected with a troublesome cough and was somewhat stuffed, and it had passed several nights without sleep. Having ordered a minute dose of calomel to be given every hour, and a purgative glyster to be administered, I repeated my visit in the evening and found it greatly revived from its torpid state—it had passed a very morbid stool, and the warmth was returned to the feet. The calomel was continued through the night every two hours, and small doses of magnesia, with squills, were given at intervals. The child had some sleep in the night, and through the next five or six following days it progressively improved. The calo-



mel was given in less quantity during a part of this time ; and at the end of the following week the little patient had perfectly recovered.

## CASE II.

In August last year, I was called to visit a child, four years of age, the daughter of a tradesman of this place. She was thought by her friends, and she appeared indeed to me, to be expiring, being stretched out in a half inanimate state, her countenance sunk and pallid, and the general surface of the body cold. She had been ill several weeks, and latterly had refused all sustenance, and was frequently affected with retching, and her stomach rejected every kind of drink. She had become speechless, and the upper and lower extremities so paralysed, as to deprive her of the power of giving the least motion to them. Her countenance had also acquired a decidedly fatuous look, the pulse was small and quick, the body greatly emaciated, the bowels were costive, and the discharge from them of a tar-like appearance. The nights were exceedingly restless—the body was swelled, particularly at its lower



part, and the water was voided with pain and difficulty. The child had been under medical treatment for some weeks, and, among other things, I understood, a bath of water gruel was ordered for it nightly.

I directed small doses of calomel to be given to it every four hours, and occasional glysters, with warm fomentations to the body. This plan was continued during three days, and with the effect of bringing away stools of the colour described, of relieving the sickness, and restoring the warmth to the surface. The calomel was then given nightly for the next fortnight, but with no further distinguishable improvement in the symptoms. The calomel was therefore given twice a day, and an ounce of the infusion of senna in the mornings. After some time the mouth became sore, and an evident improvement immediately took place in the colour of the stools, and expression of the countenance. Until this time, scarcely any food had been taken. It was now eagerly received by the child, and she became able in a few days to move her arm, by sliding it along the trunk. The calomel was now given only once a day; and on



the stools regaining their natural colour, it was wholly discontinued. The recovery from that time was rapid, though progressive. She recovered her faculties apparently at the time when the stools resumed their healthy state. The use of her limbs came to her more slowly, and the speech is not yet recovered, although it is now some months since the general amendment began.

To many persons reflecting on the foregoing case it will, doubtless, appear probable, that effusion had taken place into some part of the brain, and that the recovery from the paralysis was attributable to an absorption of such effusion. But it is deserving of remark, that the paralytic state remained unaltered during nearly the space of a month, and that a distinguishable improvement of it, and of the expression of the countenance, began precisely at the time in which the other symptoms abated of their intensity. That the changes in the brain towards health, with those of the disordered functions of the body, may proceed together without the one being essentially an effect of the other, is certainly admissible; but it is difficult, on the principle



of the paralysis depending upon mechanical pressure within the brain, to account for the improvement which suddenly took place in the paralysed limb of this patient, consentaneously with the change which occurred in the functional disorder of the digestive organs. The slow recovery of the limbs to their entire strength, might seem indeed to countenance the notion of effusion, if we did not know that paralysis may exist without it, and that patients have died affected with it, in whose brain no cause producing mechanical pressure was discoverable. Of the nature of the changes in the state of the brain in these cases, it would be hazardous to offer a conjecture. In some cases of apoplexy, and in numerous cases where that disorder is strongly threatened, as indicated by a slight paralysis or numbness of the fingers, &c. a mere congestion of the vessels of the brain is alone the cause. I am disposed, therefore, to conclude, that a state analogous to this may be induced and kept up in the vessels of the head, when acted on symptomatically by a distant irritation, and that the case just detailed is an example of this kind.



## CASE III.

This next case is an example of the congestive form of the disorder in the puerperal state. I have seen several such cases, and have heard and read of many others, where, from a misconception of the cause, a treatment by bleeding was pursued that speedily sunk the patient.

I was called in haste to visit a poor woman of the Lying-in-Charity, of the name of M<sup>c</sup>Dougal, who had been delivered ten days before, and whom I found surrounded by her friends, under the immediate expectation of her expiring. She had been in convulsions several times during the preceding twelve hours, and at my visit I found her gaping every few seconds for breath, lying on her back in a scarcely animate state—her pulse quick and compressible—her complexion strikingly sallow and pallid—the legs and general surface cold, the body swelled and painful. I learned also that the nights were excessively disturbed, the appetite extinguished—the lochial discharge had been scanty—the bowels were loose—and the discharge from them dark,



watery, and highly offensive. Several weeks previous, it appeared, to getting her bed, she had been affected with symptoms of a biliary derangement, and, among others, with an aphthous affection of the mouth, and for which she had been under medical treatment, but without receiving relief. The plan of treatment necessary to be pursued in this case, was evidently that of speedily restoring the biliary secretion, and thus relieving the venous congestion of the liver. I ordered her, therefore, small doses of calomel every half hour for several successive hours, and they had fortunately the effect of relieving the urgent symptoms under which I found her labouring. They increased, however, the griping and the number of stools; and these effects were even produced when the dose was lowered down to one eighth part of a grain. Opium therefore was joined with the calomel, and this last along with diuretics, and occasional doses of the *mistura cretacea*, was continued until the mouth became slightly sore, when it was stopped. After some days it was again resumed, and its use was continued once or twice daily, for the space of three weeks, and until every symptom of disorder was removed.



In some cases, as I have noticed in another part of this work, an uterine hemorrhage takes place, and particularly in the puerperal state, as a direct effect of the highly congestive state of the liver. Such a case of the most alarming kind, fell under my care some months ago, along with my friends Messrs. Saner and Sleight, gentlemen of considerable practice of this place. The hemorrhage came on about three weeks after delivery, and was most profuse—the complexion of the patient was sallow and death-like—the stools of the colour of coffee grounds and very foetid—the mind timid and highly excitable, and occasionally indistinct—she frequently fainted as she laid in bed, and impatiently demanded to be fanned, and to have cold drink. Our treatment was directed exclusively to the correction of the congestive state of the liver, by restoring the biliary secretion, and we gave calomel in small doses frequently renewed. The hemorrhage became inconsiderable, and the other symptoms were much less urgent after some doses of that medicine had been taken; but it was not until after two or three weeks had elapsed, and when the mouth had become slightly sore, that the biliary secre-



tion was fully restored, and that the lady could be considered as convalescent.

#### CASE IV.

This case is an example, like the former, of the collapse from congestive irritation, there being likewise an hepatic hemorrhage, as evidenced by the state and colour of the stools.

T. W. aged 14, was affected with a considerable degree of pain and oppression about the region of the stomach, and with an almost incessant retching and vomiting, and a death-like coldness and lividness of the hands and feet, and blackness about the mouth; the countenance expressing much anxiety and restlessness—the pulse quick and compressible—the bowels confined—the surface of the body and head covered with a cold perspiration—the matter, discharged by vomiting, sour and greenish. Was seized in the night, suddenly, with these symptoms, after a fortnight's indisposition under the chronic form of the complaint. Wine had been given to him, under a persuasion that he was at the point of death, and various means



were employed to restore warmth to the extremities without effect.—A third part of a grain of calomel was ordered to be given every half hour, during six hours, unless the sickness were previously stopped.

On visiting him on the following morning it was found that only a few of the pills ordered had been taken, as he was considered by his friends to be dying, and that no means could be useful. The coldness and discolouration of the extremities continued, and the sickness and oppression were unrelieved. Had had no stool.—One of the pills was ordered to be taken, punctually, every half hour, during six hours, unless the sickness were previously relieved.

On the following morning the report was favourable. He had taken all his pills, and the warmth and natural colour of the extremities had returned, and the sickness, and pain and oppression, very much abated. The bowels were confined, and he was ordered to have a draught, consisting of a weak solution of the sulphate of magnesia, every four hours, until an evacuation was procured. The pills to be omitted.



On the fourth day the sickness and other symptoms were found to have returned, in a considerable degree, during the night, and he passed on that morning several stools, which were said in colour to resemble soot; the extremities, however, were warm, and of their natural colour.—To have his pills again every half hour, during six hours, if the sickness and other symptoms were unrelieved.

On the fifth day at my visit he had taken all the pills, and had had several discharges from his bowels of a better colour. Had no sickness, and the oppression and pain were very much relieved. Had taken also some food.—To discontinue the pills—to continue the use of the aperient mixture.

The alvine discharge, on the succeeding day, was much improved in colour, and the other symptoms, likewise, were further relieved. Had, however, still some pain in his bowels. On the following days he gradually got relieved from the pain, and was able to sit up and to take some food, and became shortly afterwards convalescent.



## CASE V.

This next case is an example also of high congestive irritation, and there was likewise present a hemorrhagic discharge from the liver; but it differs from the last in the early occurrence of a copious secretion of bile, by which the hepatic congestion was at once removed, and the patient speedily restored to a state of convalescence.

Mary Brown, aged 70, a patient of the Dispensary, became affected the night before her admission, and on her return from gleaning, with great pain and oppression at the stomach, with slight delirium and frequent fainting, and a vomiting of an intensely green fluid, and a purging of fœces of the colour of soot. On the following morning, and that on which I first saw her, she passed a stool consisting chiefly of dark venous blood. The sickness was nearly incessant—the mind of the patient quite indistinct, and the pulse intermitting and feeble. Having ordered her to take a third of a grain of calomel every half hour, I saw her again at



the expiration of eight hours, when I found that the vomiting and purging had ceased after taking the sixth pill, but that she still suffered from some little pain in the bowels. The pills were directed to be stopped, unless the sickness should return. She passed a good night, took some food, and had no return of sickness—the bowels were confined, and had still some pain in them. A carminative and cordial mixture was ordered, and on the following day she made no complaint but of weakness.

#### CASE VI.

The case of the following patient is a very instructive one, as it illustrates strongly the connexion subsisting between the cholera morbus and hepatic hemorrhage, and the relation which they both bear to a congestive state of the liver. There is also well exemplified in it, the power which calomel possesses of renewing the biliary secretion when interrupted, and in lessening it when excessive, and in allaying the sickness consequent upon these states. To those accustomed to consider this medicine to be only useful when administered in large doses,



the minute quantities here given may be thought perhaps unlikely to be efficient; but to such it may be observed, that until we know something more of the manner in which this medicine acts, it is impossible to determine by any other rule than actual experience, the dose required to render it available for any specific purpose. In several instances since the former edition of this work was published, I have conjoined minute doses of opium with the calomel in the treatment of this complaint in its second stage; and in some of those which occurred in the autumn of 1819, and which were peculiarly severe, I had reason to think it highly useful.

Thomas Carr, of Mytongate, aged 73, admitted a patient of the Dispensary, had been sick nearly constantly during eight days, throwing up, with little interruption, a yellowish green and bitter fluid. The looseness and pain in his bowels, and the sickness and vomiting, continued to be very urgent. Had much thirst—tongue foul—pulse feeble and irregular. Had been ill during the last three months, with pain at the stomach and loss of appetite; with weariness, and an unusual aching in the limbs, and drowsiness in



the day, and great watchfulness in the night.— A third part of a grain of calomel was directed to be taken every half hour, during six hours, or until the sickness should be subdued.

At the visit on the following day, I found that he had had no sickness after taking the fourth pill, and only one stool—that he continued free from sickness, but had some pain in the bowels, and great weakness. Pulse regular—tongue nearly clean.—The pills were discontinued, and a cordial mixture ordered.

As this patient was considerably relieved, he was not visited on the following day, and on my calling on the succeeding one, I found he had had a severe return of his complaint, and that after suffering much pain and oppression about the stomach, he had passed several loose stools, which the attendants stated were of the colour of soot, and of a nauseous and death-like smell, and that afterwards he had had two other discharges, consisting chiefly of dark blood. Had much pain about his stomach and bowels, and had no sleep during the night. Tongue very foul—pulse feeble and irregular—countenance



considerably sunk, and the answers very indistinct.—To resume the use of the pills, taking them as before.

During the night he passed several stools, of the colour of coffee grounds. Pulse and other symptoms were found in the morning improved.—The pills to be taken every hour.

The next day the fœces were of a much better colour, having a slight yellow tinge. Had had a good deal of sleep during the night; there was still, however, pain in his bowels. All the symptoms, with the exception of the appetite, became decidedly better.—Pills to be taken every four hours, with a dose of the *mistura cretacea*.

The appearance of the motions, on the following day, were quite natural, and in a few days he became, in every respect, well, and had no return of his complaints.



## CASE VII.

The next and last case is an instance of hemorrhage from the liver, resulting, like the last, from its congestive state. The blood in the first instance ascended from the duodenum into the stomach, and was ejected by vomiting, whilst another portion descended through the bowels, giving to the stools a treacle-like appearance. This patient was subject to the complaint, and it is a common circumstance for persons to have returns of it. The tendency to it, indeed, is apparently hereditary, an instance of which occurred to me some time back, in the case of a young woman, who has been several times severely affected by it, and whose mother died in the complaint, and is the case noticed in a former chapter on the pathology of this disorder.

Charlotte Turner, admitted a patient of the Dispensary, October 14. Three days before her admission, began to be affected with a vomiting up of blood, having thrown up from a quarter to nearly half a pint each day. The quantity



discharged was commonly brought up at once. Was constantly sick at other times, and threw up whatever she took, but without an admixture of blood. The bowels were costive—appetite extinguished—perspired much during the night—had thrown up a quarter of a pint of blood on the morning in which I first saw her—had some difficulty in passing her water, which was high-coloured and turbid—had considerable pain in the head—sleep very much disturbed—the feet particularly cold—tongue foul—pulse rather quicker than natural. About three months before, took cold when the catamenia were present, by which they were stopped, and she became immediately ill. During three weeks, she was troubled with a looseness, and after that period she became costive, having for a short time a craving appetite, with constantly a sinking feeling at the stomach; was listless, and languid, and spiritless, and so drowsy as to fall asleep over her work. Her knees ached, and her sleep was unrefreshing, and she was much disturbed by dreams. Was always worse towards the afternoon, and frequently chilly in the day. Had wasted in her flesh and strength, and about three weeks before her symptoms



became worse, she felt constantly sick. She had been afflicted in a similar manner eleven years before, with a vomiting of blood, and was ill for ten months—was repeatedly bled during that time for her complaint, and on one occasion three times on the same day. She took also a preparation of lead, which occasioned a temporary paralysis of the bladder—the fœces were always black at those times in which she vomited blood. Having directed for her the medicines which I have already noticed as employed by me in *cholera morbus*, and ordered an aperient draught to be taken some hours after finishing her pills, I resigned her, for the following day, to the care of the apothecary to the Dispensary. At my visit on the next day, I learned that she had not taken her pills regularly, having taken only four or five on the day they were ordered, and the remainder on the following one. She threw up some blood each day, and on the morning of my second visit, the quantity was considerable—the nausea and retching, and other symptoms continued, and she had had a considerable stoppage in her water, and no movement from her bowels. She was ordered a bolus, composed of two grains of calomel, and fifteen of jalap,



which produced in the night considerable evacuations from the bowels, of the colour of soot. The sickness, however, and the other symptoms were unrelieved, and she had thrown up considerable quantities of blood in the morning. Half a grain of calomel was now given every two hours. At my visit on the following day she had taken nine doses of calomel, and her vomiting and sickness had ceased, and her night had been much better than she had latterly passed. The oppression about the stomach and other symptoms were also very much relieved. Had had two stools, which were quite black. The calomel was ordered to be taken every four hours. Towards the evening she took some food, which she relished and retained on her stomach, and which she had not been before able to do in the preceding three weeks. Her mouth had now become slightly sore, and the calomel was directed to be taken only night and morning, and the bowels, which were rather costive, to be kept open by a solution of the Epsom salts. During the following day she passed three stools of an improved appearance, and without any admixture of blood. She had also slept well, and had taken and relished her



food, and her stomach was free from all nausea and oppression. The calomel and aperient mixture were continued. She had some pain in her bowels during the following night, and had several motions, which were of a much better colour, but slimy. Her mouth having become sore, the pills were omitted, and the mixture was given for a few days alone, when on the fourteenth day of her admission as a patient to the Dispensary, she was dismissed free from complaint.

THE END.





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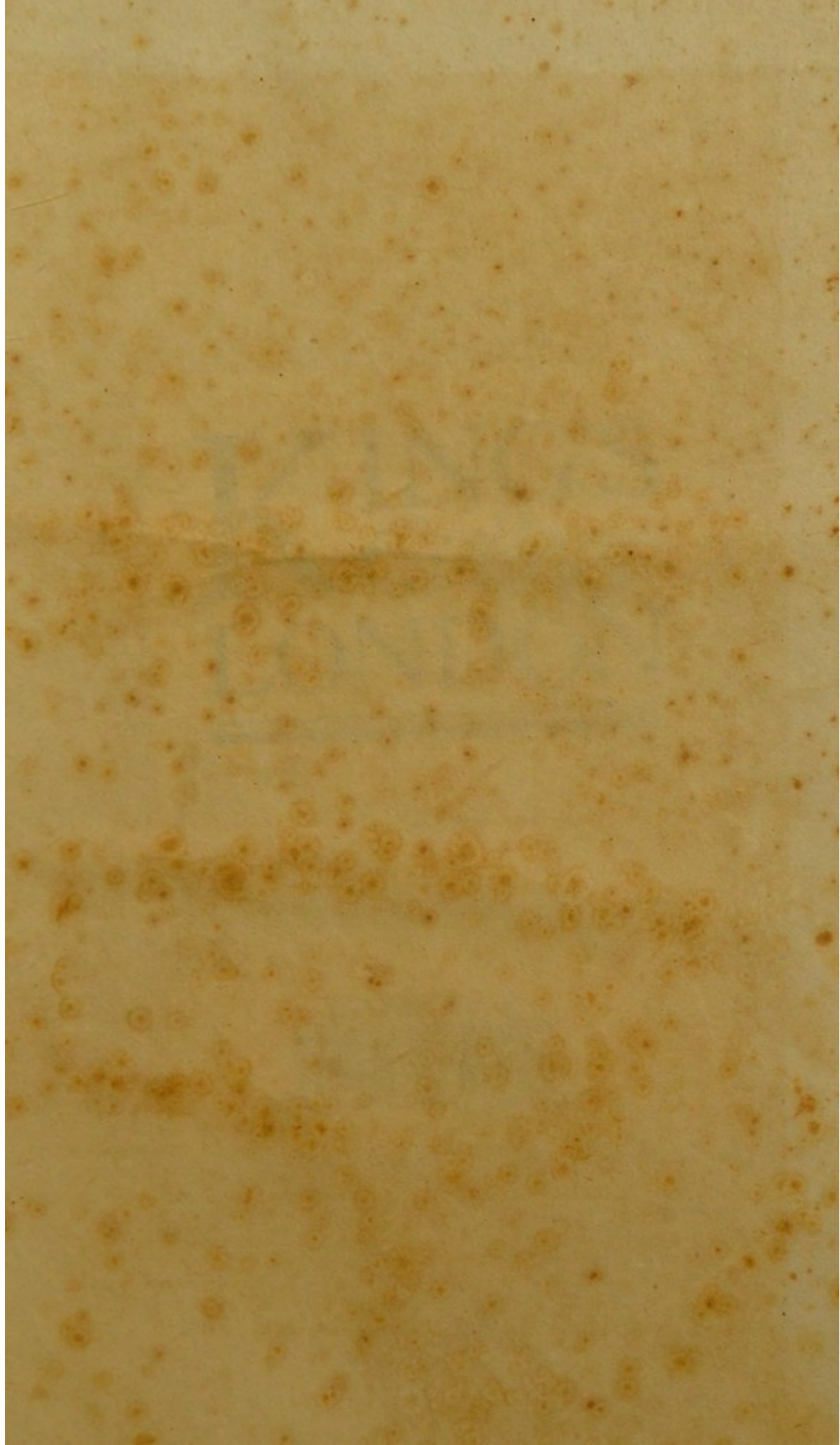
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