

An account of the epidemic and sporadic disorders which prevail this year, 1818, at Rochester, and near it / by Walter Vaughan, M.D.

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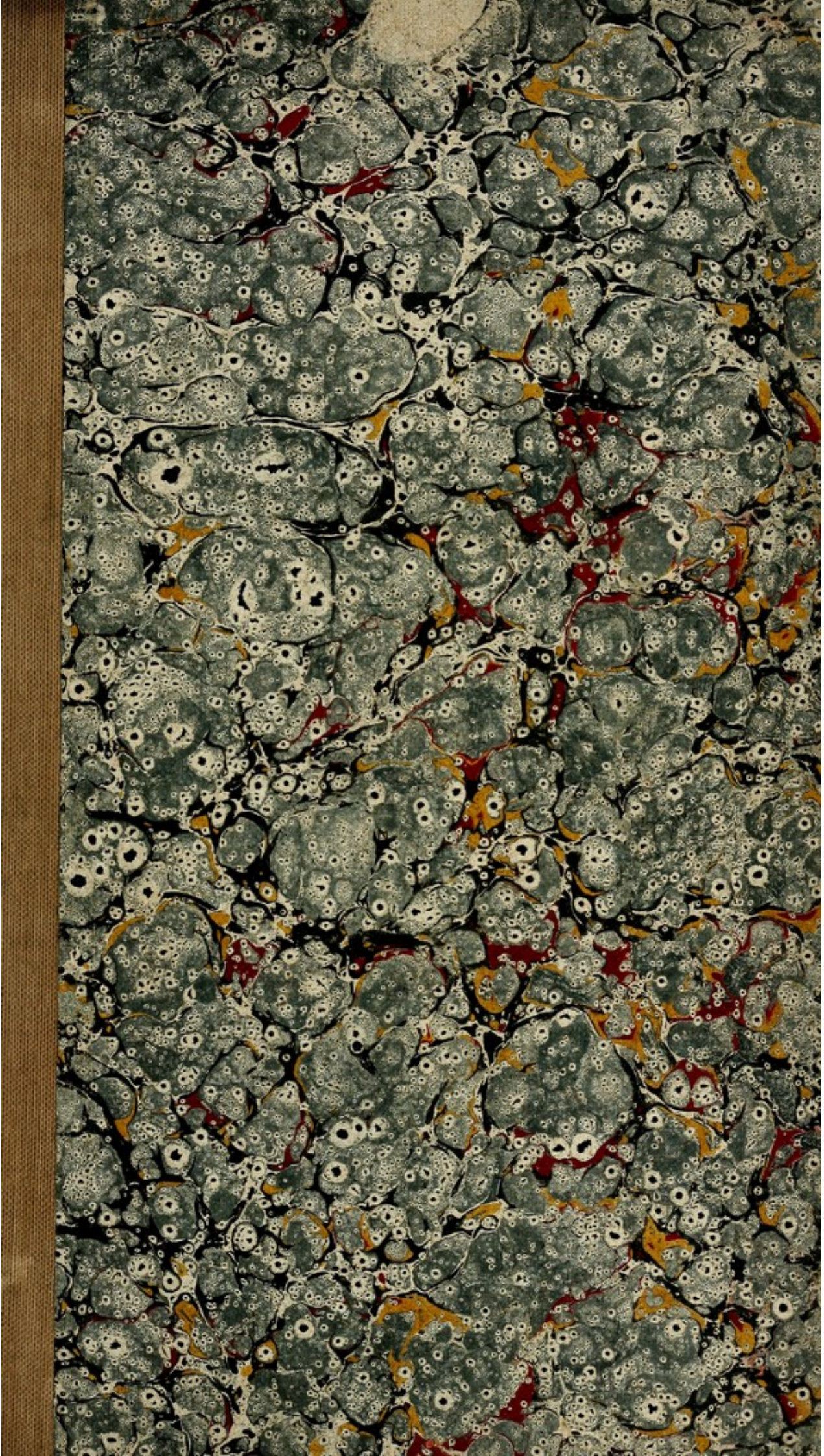
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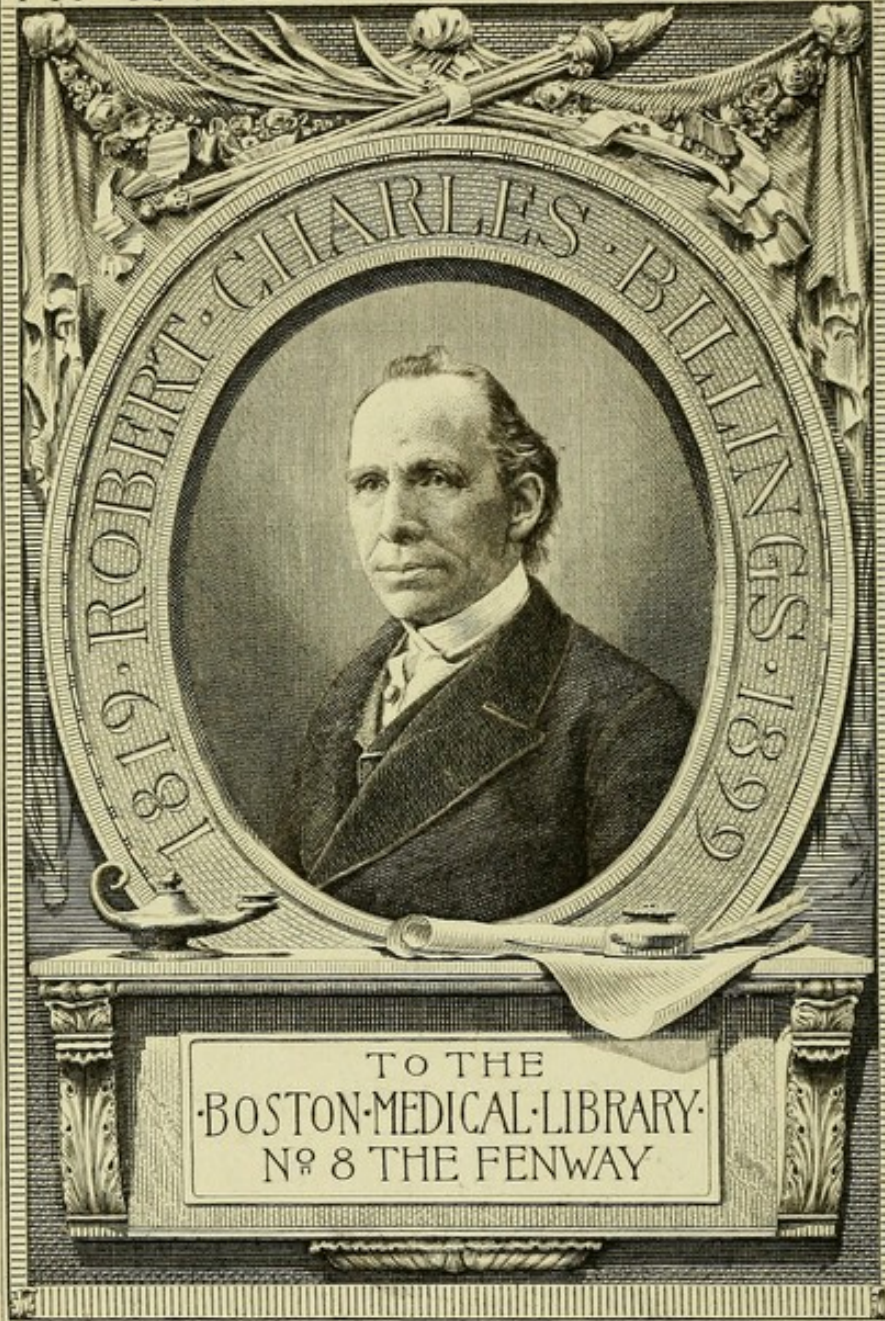
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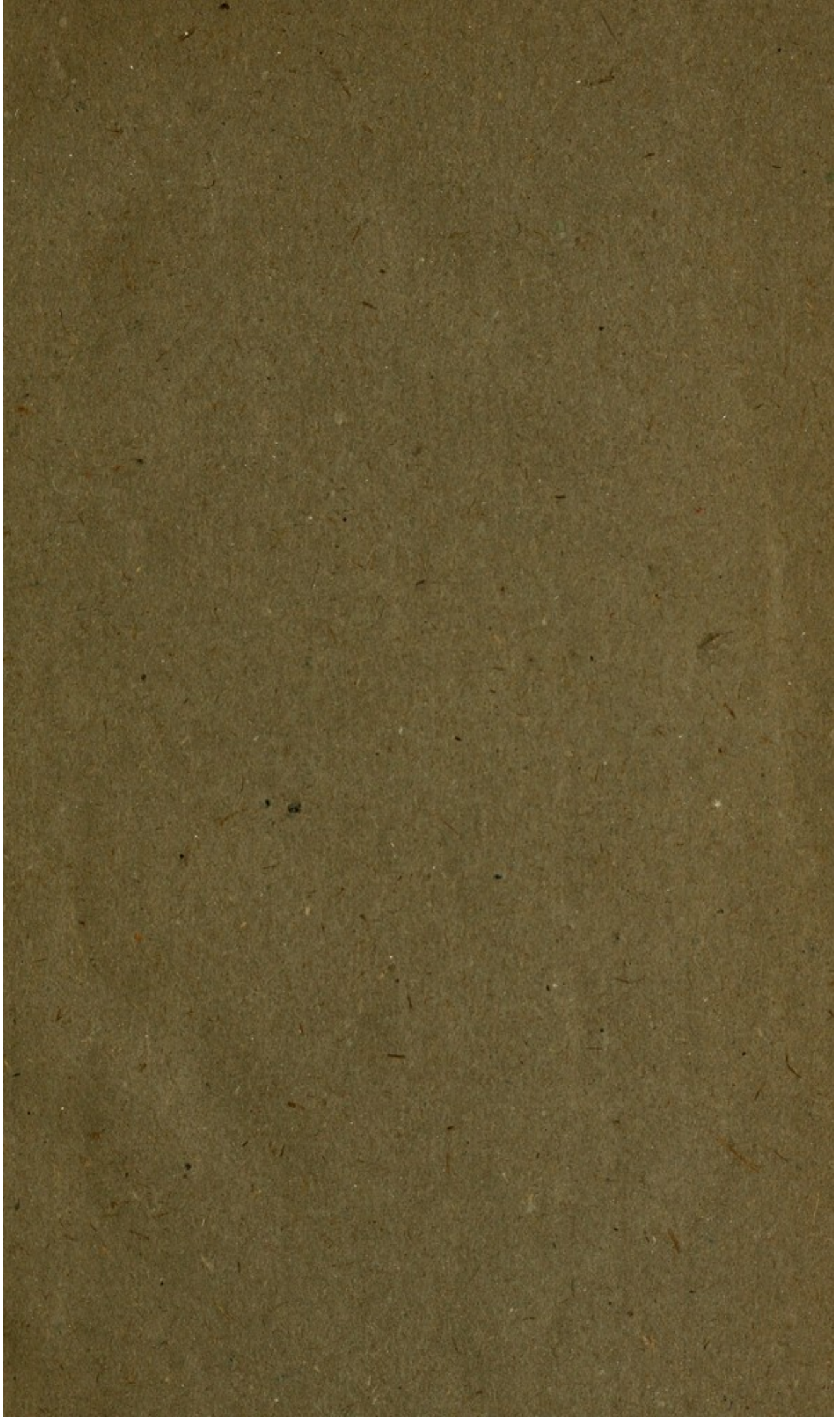
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AN ACCOUNT
OF THE
EPIDEMIC AND SPORADIC
DISORDERS

WHICH PREVAIL THIS YEAR, 1818,

AT ROCHESTER, AND NEAR IT.

BY WALTER VAUGHAN, M. D.

LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Quot THEMISON ægros *Autumno* occiderit uno.—JUV.

LONDON :
PRINTED FOR THOMAS AND GEORGE UNDERWOOD,
FLEET-STREET.
1819.

20237 Bi.50

‘ WHEREVER it shall appear to the Reader that I am mistaken in point of
‘ theory, I ask his pardon ; but with respect to practice, I declare that I have
‘ faithfully set down all particulars, and have nowhere proposed any thing
‘ which I have not thoroughly experienced. And, in truth, when I come to
‘ die, I trust I shall have the satisfaction of being inwardly assured that I have
‘ endeavoured with the utmost diligence and integrity to recover the health of
‘ all those who have been my patients, of whatever rank or condition they were,
‘ none of whom have been otherwise treated by me, than I desire to be, if I
‘ should be seized with the same distempers.’—*Sydenham, sect. ii. chap. 2,*
Swan's Translation,

11.A.283



PREFACE.

THIS is a little work, the several parts of which were unavoidably put together at accidental and sometimes at distant intervals, respecting the disorders which first appeared in June, but have ever since most frequently occurred at Rochester and in its neighbourhood. The minds of many are now warm with the contemplation of the sufferings of their relations and friends: nor will I conceal, that my earnestness to publish this essay, while it might be most beneficial, rendered me careless of giving it those advantages, in point of continuity, which might have prejudiced the candid critic in its favour. For although a practice which was not successful, has in a great measure been abandoned, for I seized every opportunity of making the rules of my own practice known

to those who attended patients with me; yet I also thought it my duty and interest to lose no time in submitting the principles, such as they are, of those rules to the medical world.

Because I here mention my practice during this most uncommon year as successful, I may possibly be charged with the foolish love of vain praise. But I shall not mind what may be said of me by such as can affect an indifference or an insensibility to honest fame. If I am so fortunate, through the providence and power of the Almighty, as not to have lost a single patient, to be proud of it is natural to me*.

* This little production was ready for the press, on the 7th of December; till which day, every patient whom I had attended, had recovered. But I have since had most bitterly to regret the loss of an amiable child, whose fever terminated critically on the fourteenth day, but who had a relapse on the twenty-fourth, and died on the twenty-fifth. It is unnecessary to state the particulars of her case. *In medicina, ubi perpetuum est id quod fieri debet, non tamen perpetuum est id, quod consequi convenit.* Celsus, lib. vii. cap. 12. If any thing could add to my sorrow for the loss of one patient out of so many, it is that I have since attended twelve others, who are recovered.

I have taken, from a vast number of cases, my short description of the cholera, and of the cholera fever, as I call it, whether right or wrong is of little moment; and, referring to the high authority of Sydenham, I have shown how wonderfully the epidemic constitution influences the inter-current diseases.

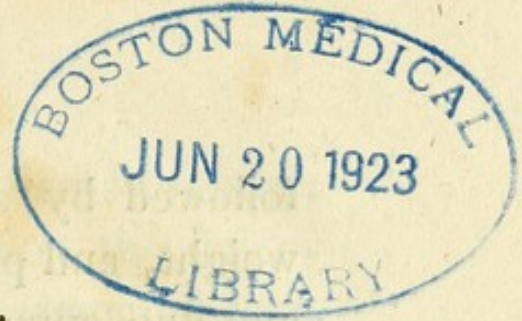
It is impossible perhaps not to aim at a generalization of facts by induction, when those facts are repeatedly and hourly before our eyes. However, as we cannot always avoid the arbitrary assumption of a general law, so if we employ this law as nothing more than a connecting principle between the facts for which it is to account, we cannot do much harm.

Rochester, December 1, 1818.

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It is impossible perhaps not to find in a
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 general law,
 between the facts, for which it is to be
 sought, we cannot do much more.

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CHOLERA*.

THIS most acute disease first made its appearance here early in June, 1818, and has raged ever since. Even at this time, November, it is more violent, although not more general, than I ever knew it. But as it will hereafter appear that it reigns the sole epidemic, the reason of its unusual violence may possibly be found in its doing so.

At its first appearance, it began suddenly with a pain in the head, extending from temple to temple, and with a pain in the loins and in the limbs, with constant anxiety, and with great lassitude. The patients compared the pain in the head to what they fancied it would be if a heavy bar of lead were resting upon the brain. There was no throbbing at the temples, but an unceasing dread of falling forwards. The pain in the head was sometimes in less than an hour

* "Qui metuunt ne cholera cum iracundia gallice dicta confundatur, vocant *cholera morbum* ac *cholericam passionem*." Sauvages, Nosol. Method. There is therefore no reason that we should call it *cholera morbus*; and indeed both Sauvages and Cullen call it simply *cholera*.

followed by a sensation of heat, distension, weight, and pain in the region of the stomach and duodenum, and by nausea, with chilliness and trembling, which soon ended in violent and repeated vomiting and purging, somewhat as if a poison had been swallowed. Sometimes the patients vomited only at first, but sometimes the matter to be evacuated was expelled upwards and downwards at the same time. There was generally at the same time a great discharge of flatus by the mouth and by the anus. The matter ejected by vomiting was at first fluid and like water, or greenish and mixed with substances half-digested; but it was afterwards of a thicker consistence, and yellow, or of a bluish green, or of a cineritious colour, or black: it was free from odour. The matter discharged from the bowels was from the first very bilious and very fetid, but not as healthy fæces are. The urine was, as might be expected, in small quantity, and of a deep orange colour. The thirst was intense. The pain in the head, and that in the epigastric region, were relieved by the vomiting and purging; but for some time alternated with them. In the very short intervals of purging and vomiting, the patients complained of griping pains, and the pain in the stomach after vomiting was some-

times so excruciating, that the patients sweated, and were disposed to faint; when the dejections ceased, the patients were tormented by a tenesmus. I never saw this cholera unattended with pain, as the disease is said by Aretæus to be in the beginning. There was frequently giddiness and hiccup, and generally cramp of the muscles of the legs, often of the arms and of the abdomen, and in some, a convulsive motion of the whole body. The urine was frequently retained, Aretæus says, by a spasm of the bladder*; but there was sometimes an ardor urinæ, Lommius says, depending upon the peccant matter being turned to the bladder. Notwithstanding the burning heat referred by the patients to their stomach, their extremities were often cold, and their nails livid, even before vomiting and purging began; but they were exceedingly so after repeated evacuations, as if their heat were added to that naturally belonging to the stomach. The debility at length became alarming: the patients were covered with a cold sweat; their face was pale, contracted, and cadaverous; and their eyes were dull and sunk inwards. Their respiration was

* Petit comments thus: "causa est humorum μεροχέτευσις." Comment. et Animad. in secundum Aretæi Cappad. librum.

short and irregular; their pulse was, as it is in inflammation of the bowels, frequent, weak, unequal, and sometimes scarcely perceptible; and they seemed as if fainting: had they fainted, they had probably died. A slight delirium at times attended, when the abdomen was much distended. All these symptoms occurred in one day, and were not extended beyond it, that is, twenty-four hours.

Such was the disease when it first appeared; and such it is at present: but it is not always so sudden in its attack, or so short in its duration. Thus in most patients, the pain in the head, the loins, and the limbs, and the pain and heat in the epigastric region, continue for six or eight hours before vomiting or purging takes place; but are all that time accompanied with inexpressible anxiety, lassitude, and inability to keep the erect position, restlessness, borborygmus, sour and nidorous eructations, and as *Cœlius Aurelianus* expresses it, “*per podicem venti fluor non relevans;*” with a bitter taste in the mouth, and a total loss of appetite; and with short, quick, and oppressed respiration, a pale and dejected countenance, dull and hollow eyes, frequent, weak, and sometimes irregularly intermittent pulse, chilliness, &c. In most cases, before there is sickness, the abdomen is

swollen and tender; and there are griping pains, attended with spasm of the muscles and of the limbs. But the sickness is soon followed by vomiting and purging, the matter brought upwards seeming to scald the throat, and that carried downwards to excoriate the anus. The heat referred to the stomach, and the extreme thirst, oblige the patients to call continually for cold water, which I never refuse them *. But after swallowing, there is generally vomiting or purging, or both; and the fits of vomiting, in some cases, continue three whole days. The purging remains after the vomiting has ceased, especially if the patients be prevailed on to drink freely of mild diluting liquors: and if they drink nothing, it seems for some days to occur, as often as fresh bile is poured into the duodenum: for one may then trace the pain in the abdomen, from the seventh or eighth rib, but very deeply situated, probably from the opening of the bile-duct into the duodenum, throughout the whole intestines, as when a purge is taken, which occasions both sickness and griping. When the evacuation of the matter is suspended, then the griping pain, the in-

* *Cœlii Aureliani Acutorum Morborum*, lib. iii. cap. xxi. *Hoffmanni Medicina Rationalis. De Febre ardente nec non cholericæ.*

flation and tenderness of the abdomen, with cramps and spasms, return; and, if not soon relieved by a discharge downwards, are sometimes followed by a violent rigour, with vertigo or headach, and by vomiting only. Then the bowels become costive, in proportion as the vomiting increases; and in one case of an adult, I am assured that the matter brought up was stercoraceous:—I was scrupulous and inquisitive as to this fact; and from the several witnesses of it, who agree as to the colour, the odour, and the consistence of the matter, and from lemon juice having been employed to cleanse and purify the patient's mouth, there can be no doubt of it. I have, I think, had another case of stercoraceous vomiting in a boy. Stercoraceous vomiting in cholera is not unheard of: Hippocrates notices it in the case of Eutychides, and Lommius mentions it. It is not, however, in the beginning of cholera that such vomiting occurs; but by consequence of the continuance and violence of vomiting; as Sydenham observes, it sometimes does in the beginning of fevers. Nay, the dejections are sometimes bloody, and chiefly consisting of blood. I saw what came from a very delicate lady, who had had the cholera for several days, and it seemed to be pure blood, which had no

doubt come from the liver into the duodenum, by the ductus communis choledochus. Morgagni found bloody bile in the gall bladder*; and I can see no reason that the bile should not be mixed with blood from the liver, as urine sometimes is with blood from the kidneys. Some might have thought that the cholera was converted into a dysentery; but to me nothing more was denoted than that blood was hurried out of the liver before its change into bile was begun. Others might have suspected a conversion of the cholera into the melæna of the ancients†; but no such thing came into my mind. Throughout the whole disease, the patients make very little water, but often complain of a pain in the urethra, at its orifice especially. The disease, in this form, generally runs its course in two or three days, its termination being by a painful discharge of urine, or by a profuse sweat.

When the cholera is protracted, a malignant fever is said by Sydenham to accede to it. But a cholera has no proper fever; nor can I find that it observes the tertian type, as Ettmuller asserts that it does‡.

* De sedibus et causis morborum, &c. Epist. iii. § 2.

† Portal, Mémoires sur la Nature et le Traitement de plusieurs Maladies, &c. ‡ Allen, Synopsis Medicinæ.

When the cholera, which I have described, continues some days, there is sometimes an itching of the skin, which I do not recollect that any author has noticed among its epiphenomena or epigenomena. Cleghorn says that, at Minorca, a rash or *essere* was once frequent and epidemical, about the time that the autumnal tertians and cholera morbus began*; but here there is nothing like it. Yet I have seen some patients, in whom after the cholera had continued several days, not a rash, but an eruption resembling what is called miliaria rubra appeared; and I am persuaded that this eruption was always occasioned by brandy, by port wine, by tent wine, or by opium, which is frequently administered by the ignorant, in order to prevent exhaustion, and is frequently taken secretly by the patients themselves.

In the progress of the cholera, some patients complain of a pain in the side, which comes on without a cold stage, followed by a hot stage, but with a sweat; and the patients often feel cold, and shiver in this sweat. At this I was for some time alarmed; but I am now convinced that it means nothing more than an imperfect crisis. There is nothing in the pulse,

* Observations on the Epidemical Diseases of Minorca from the year 1744 to 1749, &c. Edition 4th, page 133.

singly considered, during the pleurodyne, to indicate venesection, although the pain is increased by inspiration, by pressure on the intercostal spaces, and by the cough. The patients cannot lie on the affected side, but choose rather to lie on their back; so that their throat is always loaded with mucus.

And some patients labouring under the cholera, who have no thoracic affection, cannot move a single limb without pain, as in rheumatism. I visited a young woman at Bobbing, near Sittingbourne, who had for several days been confined to her bed, her cholera being *extended*; and she was so tender, in every part, as scarcely to bear her pulse to be very gently felt at the carpal extremity of the radius.

CHOLERA FEVER.

WHILE some are seized with the cholera, others are attacked by a fever which begins with a horripilation, which is succeeded by a hot stage of very considerable duration. But the cold stage is never repeated, although there is an exacerbation every afternoon at nearly the

same hour, and a remission early every morning. The periods of this fever are completed in twenty-four hours: the paroxysms in from eight to ten. I could never discover any crisis of the paroxysms by urine, purging, or sweat. The perspiration is certainly not sensibly increased while the remission takes place. I cannot find that there is any difference between the paroxysm of one day and that of another day next succeeding it, as to the hour at which they come on, as to the time they last, or as to the concomitant symptoms. But what is most remarkable in this fever is, that exactly the same symptoms as precede it, the sudden muscular debility, the constant anxiety, the pain in the head, in the loins, and in the limbs, the intense heat in the epigastric region, &c. precede the cholera; and that exactly the same symptoms as accompany the intervals of its paroxysms, the small, weak, frequent, and irregular pulse, the quick and unequal respiration, the tumefaction and tenderness of the abdomen, the coldness and cramp of the extremities, the clammy sweats, &c. accompany the cholera. A pain in the side is by no means uncommon some hours after the fever is begun, when, if blood be taken from a vein, it shows little or no buff:

and I believe that respiration is then performed by the diaphragm only, no motion of the chest being perceivable; inspiration being short, quick, and cautiously made, and the patient remaining silent, or speaking rather by monosyllables: but this pain seldom lasts more than a day. However, although the abdomen be swollen and tender, yet there is no vomiting, except sometimes at the height of the first paroxysm, or except the patients be at any time exposed to cold: neither is there any expulsion upwards or downwards of flatus. I have been called to two patients, one of whom had for more than fourteen days, the other for more than seven days, laboured under this fever, when considering their apartments as too small, I expressed a wish, which was instantly complied with, that they should be removed into more airy ones. But both were seized with a violent vomiting, not however a bilious vomiting, and could retain nothing in their stomach; therefore I did not order them to swallow any thing, but took care that they should be well covered with bed-clothes, expecting the vomiting to cease as soon as a sweat should be thus produced: nor was I disappointed.

And there is no diarrhoea in this fever: on the contrary, the peristaltic motion of the in-

testines seems to be suspended; at least, the discharge of fæces, which are of the consistence of pap, requires something more than mere diluents. The fæces are generally black like tar, or of a brown colour like chocolate, or of a green colour like verdigris, or of a greyish white like mortar; but are without the least tincture of bile: even water poured upon them, when black, produces no yellowness. After about twenty-four hours, if all go on well, the fæces become for the most part fluid, and of a dingy yellow colour, with a dark green sediment which, in appearance, is something like the green fecula of plants*. This powdery sediment falls immediately to the bottom of the pot, and seems to be insoluble in the supernatant fluid; nay, so great is its specific gravity, that none of it is ever suspended in the fluid portion, after quickly inclining the vessel containing it in different directions. Is this sediment any of the constituent parts of the bile? From some experiments, not only of MM. Fourcroy and Vauquelin, but also of Mr. Brande, I am inclined to believe that the powdery sediment is the red particles of the blood, and that the supernatant fluid is the

* Journal de Physique, tom. lvi. p. 97.

serum:—the red particles, however, separated from fibrine, as the menstrual fluid is, and having the colouring matter of their surface altered; and the serum differing from that of healthy venous blood, from that which is spontaneously separated in about twenty-four hours from chyle taken out of the thoracic duct of an animal four hours after a meal, and possibly from that taken out of the thoracic duct twenty-four hours after a meal, when it resembles the fluid contained in the absorbents. But I neither examined it with litmus, or turmeric, or syrup of violets, nor either placed it in the voltaic circuit, or submitted it to destructive distillation; and I have not heard that the gasses so abundantly discharged in cholera have ever been collected and examined. The fetor of the fæces, before there is any yellowness in them, is peculiarly offensive, and is the same in all cases; but as soon as bile is seen, flatus is discharged both upwards and downwards, the bowels then having their natural stimulus restored to them, and being in course rendered more active by consequence of their past torpor. Thus, such as have the jaundice are not troubled with flatulence. But bile appearing, the fetor of the fæces diminishes; and in proportion as the

powdery sediment disappears, and healthy bile is secreted, the internal heat and the fever go off. Sometimes, however, the powdery matter disappearing a diarrhœa follows, and the fæces are voided involuntarily of a black colour, and resembling the blood, not coagulated, in an echymoma. But these last black fæces accompany a diminution of all the symptoms, and are followed by fæces which by degrees become of the natural colour. I am therefore disposed to believe, that the powdery fæces with a supernatant fluid are a critical evacuation: for critical dejections are generally fluid; and, if I be not egregiously mistaken, the tormina and borborygmus preceding such dejections are in most patients attended with a pulse in which two strokes rapidly made are succeeded by a distinct pause (*διχροτός*). It is a remark of Quarin's, that a crisis by dejection is more frequent in autumn. The urine is clear and not high coloured in the beginning of a paroxysm, and it is only of a deeper colour at the height: but it seldom deposits a sediment till the seventh day; and I have frequently known no sediment appear till the fourteenth, after which it is generally opake, and, as I should think, from its soon becoming alkaline and fetid, loaded with animal matter. It frequently

resembles a mixture of milk and decoctum cinchonæ, which I take to be merely symptomatic, and indicative of nothing more than a deranged state of the chylopoietic organs. Does it contain chyle, as we read of a chylous diabetes, and as the curdy part of milk is found in some particular cases mixed with the urine of females? What subsides from this urine seems to be glutinous. The discharge of urine is often accompanied with a degree of strangury. There is no sign of jaundice in the countenance. The tongue in the beginning is generally whitish, parched, and rough, but afterwards becomes of a bright scarlet, and moist, with an enlargement of its papillæ. The cheeks are often flushed. There is no delirium in this fever, unless the urine or the fæces, while they are black, be retained, and the abdomen be enlarged; or unless the patient have taken camphor mixture, aromatic confection, wine, brandy, or something heating; but in the remissions during slumbering, and at first waking, there is often a confusion of ideas, which the patients lose as soon as they are spoken to. There is no coma; but almost all the patients may be thought to be comatose by a careless observer, because they lose their hearing. I never saw this symptom in the beginning, or

in the increase of the fever, but always in the decline; and from the first I pronounced it a good sign. Some patients, however, do not lose their hearing, but their taste; and others neither of these senses, but their speech: both these deprivations, therefore, I considered by analogy as omens of a favourable issue. I saw a little boy in Chatham, whose loss of speech was so entire, that he cried incessantly till I assured him that he would recover it in a day or two; and he recovered it in two days.

Hiccup is very common in the beginning, increase, and height of this fever; but is of no consequence, since it ceases spontaneously, and may be checked by cooling diluents. Another consequence of this fever is, that it universally suspends menstruation.

As to the number of days this fever lasts, I have seldom known it to exceed the fourteenth, unless neglected in the beginning, or treated improperly; but then I have witnessed its extension to the fortieth day, with almost the same symptoms, but sometimes with muttering delirium, stigmata or petechiæ, vibices, aphthæ, and other epiphenomena of equal violence and malignancy. I never knew more than two convalescents relapse, nor have I once seen swelling and suppuration of the parotid glands,

or boils, which are small carbuncles. But one patient, during his convalescence, had an excruciating pain fixed to the middle of the spine of the tibia of his right leg, which was accompanied with a sensation of coldness there. There was no discoloration, no soreness of the part, and it ceased in a few days, without the aid of any other remedy than a grain of opium every four hours.

This fever seizes far more children, and some under two years old, than adults; men and women equally; but I have not been called to one patient with it who had passed his grand climacteric.

In proportion as the cholera becomes rarer, the fever becomes more predominant and *stationary*; but I have not yet (November 21) met with a single instance of the latter in a person who has had the former.

Mr. Wilcox had laboured under the fever twenty-eight days before I saw him (October 5), and it was then late in the evening. His paroxysm appeared to me to be at the height: his face was flushed; he was slightly delirious; and there was a trembling of his hands; while his abdomen was distended, and his upper and lower extremities were cold and livid up to his body. They remained so for seventy-two hours,

and appeared to those about him, to use their own words, as if washed with elderberry wine. It was supposed that they were dead; but their lividity depended upon their coldness. Wilcox's chief complaint had for several days been of a burning heat in the præcordia, and of heat and dryness in his mouth. His tongue, although his mouth was not constantly open, was dry, rough, contracted, and of a colour approaching to that of the red oxide of lead*: but I could not find by diligent inquiry that any thing was given him, which could have imparted to it so singular an appearance. His fæces were of the consistence of pap, and yet their discharge was slow and seldom. His pulse was exceedingly quick, frequent, and irregularly intermittent; and I could not detect any remission in his fever, although I endeavoured to do it for some days: a circumstance at which, considering that he had been fourteen days confined to his bed, I did not wonder. Yet (November 21) I met Wilcox more than a mile from the place where I had attended him; and he was without a great coat, and with his waistcoat over his breast unbuttoned. On that day, the mercury in Fahrenheit's thermometer

* Stoll says that the face is very often of this colour in bilious persons. *Ratio medendi*, tom. ii. p. 243 and 277.

was stationary at 42 degrees, and there was a brisk easterly wind. I desired him to button his waistcoat and his coat; but smiling, and assuring me that he was quite well, he passed by me.

Many call this fever typhus: but the heat, the pulse, the tongue, and the urine, are not at all as they are in typhus; in short, considering the diurnal return of the paroxysms, the absence of apyrexia, and the duration of the disease, it seems to me to be very like the remittent fever of hot climates; that fever which occurs on the coast of Africa, on the banks of the Ganges, in Jamaica, &c.; and, I may add, that Sir John Pringle describes a bilious or autumnal remittent, as a camp fever*; and expressly says, that, if the matter of cholera have not vent, it is retained, and produces a remittent fever †. But there are so many points of resemblance between the fever now prevailing here, and the *amphimerina Hungarica*, the *amphimerina biliosa*, the *tritæophya leipyria* Galeni, and the *tertiana cholericæ* Torti ‡, that I leave it for others to dispute concerning its proper

* Observations on the Diseases of the Army, edit. vii. part iii. chap. iv. sect. 1.

† Ibid, part i. chap. i.

‡ Sauvages, Nosologia Methodica.

type, while I consider it as having the same relation to the cholera of this year, as the dysenteric fever of Sydenham had to the dysentery of 1669. That fever, which was without mucous dejections, and the consequences of them; that fever, which raged more generally in proportion as the dysentery ceased at the approach of winter; that fever, which was cured by the same means as the dysentery, Sydenham called the dysenteric fever. The cholera-fever is, perhaps, vicarious of the cholera; or it is, perhaps, a disease of the same nature as it, and arising on the same occasions as it, but in only those persons whose liver has not for some time secreted healthy bile. It is for this reason that I speak of the cholera as reigning alone, and that I regard the fever as the cholera in disguise*.

I am continually asked, whether the fever be

* I give it the name of *cholera-fever* for a reason somewhat like that for which *cholera* is called by the French *cholera morbus*. The genius of the English and of the Greek languages allow such names; for the former has *wine-glass*, *rain-water*, *house-dog*, &c. and the latter ἑλλὰς φωνή, Κουριδίη ἄλοχος, Μανία σποδός, &c. I shall scarcely be blamed for not distinguishing this fever by a more scientific or technical term: for as Sydenham took the liberty of calling an epidemic disease by any name which pleased him best, so also may I.

contagious? whether it may be caught by approaching those who are confined by it to their bed? whether the contagious matter do not float in the atmosphere, and be not ready to be attracted by some persons and not by others? whether I may not myself so carry about the contagious matter in my clothes as to infect persons? &c.—It is plain, that these different questions may be asked by those who mean the same thing; but it is also plain, that they cannot all receive the same answer. Yet I shall endeavour, without formally showing their precise import, to give such an answer as may not be unsuitable to them all. An epidemic disease depends upon a condition of the atmosphere, which is not to be detected by the senses or by the eudiometer; upon a secret and inexplicable alteration of the air, as Sydenham says; and, as simply an epidemic, it is perhaps not contagious. But every fever may, under certain circumstances, generate infectious matter, which gives rise to a fever like itself; so that an epidemic fever, which is not contagious at its rise, may afterwards become so. The circumstances alluded to are not heat and cold: for where places are hottest, and where they are coldest, provided that they be frequently perflated by winds, there they are alike free

from contagious fever. It has never been shown, that the heat or the cold of a climate has any influence on the generation of contagious matter: but it is a law of nature, of animal nature, I mean, at least among the mammalia, that the exhalation from living bodies in a healthy state becomes productive of fever by accumulation, stagnation, and some chemical change; and the circumstances, under which a fever may become contagious, are uncleanness and want of ventilation. Where febrile patients are confined to their beds in small rooms, or are in any place crowded together, so that their atmosphere remains unchanged, there their effluvia may become infectious: where their foul linen or bed-clothes are heaped together, there their effluvia may become infectious. But a patient may not become infectious if he be kept clean; if his skin be frequently washed; if his mouth be frequently rinsed; if his linen be frequently changed; if all things impregnated with his excretions, and his excretions themselves, be frequently removed from his apartment. For the matter, which might become infectious, is thus so diluted, divided, or dissolved in the air, as to be perfectly innocuous.

It is a common opinion, that heat favours the

generation of infectious matter ; but it is without foundation. The truth is, that where persons are too warm, they are instinctively led to the means of cooling themselves, the chief of which are exposure of themselves to the open air, and to air in motion or wind ; and as to cold, although it has no direct influence on contagion, yet it is an erroneous supposition, that the winter is unfavourable to the progress of jail or hospital fever. The testimony of that most humane man, Mr. Howard, is this, that the jail or hospital fever is always observed to reign more in our prisons during winter than summer ; which doubtless arises, Dr. John Hunter says, from the same causes that produce the fever in the apartments of the poor. For the prisoners being badly clothed, in want of fuel, and crowded together, will endeavour to defend themselves against the cold, by excluding the open air. In this way the distemper originated in the winter of 1783 and 1784, in the jails of Maidstone and Gloucester.

SCHOLION I.

Debility of a peculiar kind in fevers, spasm of the extreme vessels, and reaction of the heart and arteries, are supposed by Cullen to

follow one another in the series of cause and effect. That the debility in fevers is peculiar in kind, is clear from its sudden occurrence: and Bianchi considers this debility (*subita arbitrii motus imbecillitas*), and a special painful lassitude of the whole body, concurring with an alteration of the pulse, as constituting the pathognomonic sign of fever. Nay, the learned Baron Van Swieten tells us, that in the weakness and faintness felt in the beginning of acute disorders, blood-letting is sometimes the greatest cordial.

Sydenham relates, that the plague at London penetrated like lightning the inmost recesses of the body; and that during the first months of it persons died every day suddenly, purple spots, which announced instant death, appearing upon them even while they were following their business; but that in the following months nobody died without a fever: so that those who died during the first months of the plague did not survive the debility which preceded the cold stage of the fever.

Again, the debility antecedent to the cold stage of intermittents cannot be like that which precedes fevers: for, although those who die of an intermittent die in the cold stage, yet in the intervals of the paroxysms the strength returns;

and persons have been known to possess a readier wit in every succeeding hot stage.

And again, the debility which attends different diseases in their increase, but which suddenly ceases after a time, when they are properly treated, cannot be of the same kind as that which precedes fevers, the plague, and intermittents.

Lastly, the debility consequent to excessive evacuations of blood, of sweat, of urine, &c. to a defect of nourishment, to large suppurations, to long watching, to grief and the depressing passions, to chronic diseases, &c. must be a debility differing in kind from all those before mentioned.

It was long since known, that the debility in the beginning of cholera is of a peculiar kind: for Riverius says, “*Quidam practici in ipso insultu, etiam valde prostratis viribus, venam secare audent, quas dicunt esse oppressas, non exsolutas**.” And in the progress of the cholera-fever the debility is so alarming, that in more instances than one I have known the nurse to announce recovery impossible, and presumptuously to cease to administer either medicine or food. Yet, although the eyes ap-

* *Opera omnia, cap. de cholera morbo.*

peared sunk and pulverulent, the caruncula lacrymalis pale and ensanguine, and the face Hippocratic, the patients became stronger and livelier after every evacuation from the bowels, provided that the fæces were of a morbid colour, odour, and consistence. It is a shocking mistake, which did not escape Van Helmont, that clearing the bowels of a load of noxious matter increases debility in fevers*.

But if all these debilities differ one from another, and require a different cure, they ought to be distinguished by different names. Nothing perhaps has been more prejudicial to the sciences than the use of vague and ambiguous terms. However, not to dwell on this subject, I have known cinchona, wine, brandy, and meat-broths given to remove the debility ushering in cholera and the cholera fever, to remove the debility attending pneumonia, &c. nor can I persuade myself that such absurd practice will ever cease, till every man who gains a livelihood by medicine shall be rendered accountable for the loss of a patient, as a captain is for the loss of his ship.

* Tr. Potestas Medicam, §. 34.

SCHOLION II.

Having spoken of a pain in the side sometimes occurring in the cholera and in the cholera fever, and also of pains in the limbs resembling those of rheumatism, I shall now remark that those pains are, in my opinion, a sign of the primary affection in those diseases being in the liver, and not in the stomach and intestines. And in confirmation of this opinion, I would allege, that pains like rheumatic pains generally accompany diseases of the liver*; that most of Dr. Fothergill's little patients, who had a dropsy of the brain, had previously complained of a pain somewhere below the head†; and that the rheumatism itself was once attributed to a disorder of the liver‡.

The next remark I would make is, that I often see patients labouring for some days apparently under a pleurisy or a peripneumony, with a brown fur on the tongue, while their pale

* A Treatise on the Structure, Economy, and Diseases of the Liver, by William Saunders, M.D. &c. Edition 3d, pages 193. 269. Observations sur la Nature et le Traitement des Maladies du Foie, &c. par A. Portal, M.D. &c.

† Medical Observations and Inquiries, vol. iv.

‡ Lazari Riverii Opera omnia Medica, cap. de Rheumatismo.

and cadaverous countenance, anxiety, internal heat, cold extremities, profuse and clammy sweats, and frequent, weak, and indistinct pulse, evince plainly, that the treatment of pleurisy in general is not applicable to them. In such cases, I suspect that the cholera fever is advancing under the mask of a pleurisy; and the subsequent vomiting and purging of bilious matter, or the dejections alone, consisting of a fluid and of a green fecula-like matter, prove that my suspicion is not unfounded.

Another remark is, that a pleurisy is sometimes so much an epidemic, that it is thought to depend upon a specific contagion; and this for two reasons: first, because its occurrence is so frequent when it could not be suspected; and, secondly, because a contagious fever, with a disease of any organ, accidentally occurring in one individual, is often known to carry with it the local disease to another individual.

The last remark to be here made, is on the frequent dejections in the intercurrent pleurisy. For when a diarrhœa is an epigenomenon in a violent pleurisy or peripneumony, it is pronounced by Hippocrates to be a bad sign. But in this pleurisy, the diarrhœa does not supervene to the pleurisy, but attends it from the very beginning, and concurs, as it were, with it

to form a disease. Then it is to a violent pleurisy or peripneumony, and not to every slight inflammation of the lungs, that Hippocrates alludes; for a diarrhœa, which supervenes to a violent pleurisy or peripneumony, must be unfavourable, because it, as well as the pleurisy or peripneumony, is a cause of debility. Lastly, it is plain, that Hippocrates supposes the pleurisy or peripneumony to be in its increase; for it is not very uncommon to see an inflammation of the lungs after its acme go off favourably by a critical diarrhœa, although it is very common by expectoration, by urine, or by sweat. Therefore, the diarrhœa in the sporadic pleurisy, although bilious, is not to be judged of by the Coan's aphorism.

It may not be amiss to add, that the pleuritic patients, whose respiration is most difficult, and who have a deep-seated pain in the region of the heart, may, by some, be supposed to have an inflammation of this organ, or of the pericardium. But I am not certain, that it is possible to distinguish *carditis* or *pericarditis* from *pneumonia*, when there is no palpitation, no syncope, no great distress on changing the position, and no extraordinary irregularity of the pulse. I am rather inclined to believe with Cullen, that “an acute inflammation of the

heart or of the pericardium is almost always a part of pneumonic inflammation, and is not always to be distinguished by any different symptoms; or if it be to be distinguished, that it does not require any different treatment*.”

SCHOLION III.

Another affection, which appeared with the cholera, and which continues frequent, is a head-ach, in which the pain is precisely, if I be not mistaken, like that in the beginning of the cholera†. It is attended with great and sudden imbecility, and with a sensation of

* First Lines of the Practice of Physic; also his Synopsis Nosol. Method. Tom. ii. Genus, carditis. Nota *

† I take this head-ache to be the *Καρηβαρλη* of Hippocrates; as is also, perhaps, the *cephalalgia* of the nosologists Sauvages, Vogel, Sagar, and Macbride. But the reader may consult Hippocrates' ΑΦΟΡ. and his ΠΡΟΡΡ. for the substantive; and his ΠΡΟΡΡ. his ΚΩΑΚΑΙ ΠΡΟΓ. and his ΑΦΟΡ. for the adjective *καρηβαρικός*.

Sauvages places the *Ἐκπληξις* of Hippocrates, as if it were synonymous with his own *cephalalgia*: but I think he is mistaken. Fœsius interprets it *stupor, obstupescencia*. Œconomia Hippoc. ad vocem: and Hippocrates himself notices it as the consequence of a blow on the head. ΑΦΟΡ. I suspect that the English terms *concussion* and *commotion of the brain* and *ecplexis* are convertible. See the Œconomia Hippoc. at the words *Σφάκελος* and *Σφάκερος*.

numbness in one arm, or in one leg, or in some other part, or in the whole body; and the very great coldness of the part, or of the surface of the whole body, while its inside feels hot, greatly alarms the patient. The bowels are costive. There is anorexia, but neither nausea nor fever; the pulse is generally the same as in health, or smaller, weaker, and less frequent. The tongue is covered with mucus, and the fauces are loaded with it. Evacuations produced by cathartics are dark coloured, and only then, when diluted with water, show the yellowness of bile. The urine is of greater specific gravity, and I suppose, for I have not ascertained it by experiment, abounding in urea; as in all cases where the system of the vena portarum is disordered, and where the alimentary canal has at the same time its secretions altered. I never knew this head-ach end in cholera or the cholera-fever, and therefore I consider it as an intercurrent disease, totally different from either, but yet participating of the nature of the reigning epidemic. An epidemic catarrh, commonly called an influenza, generally begins with a head-ach; and some who are said to escape the catarrh, suffer the head-ach and many other symptoms, which are peculiar to it.

CURE OF CHOLERA.

If the diseases which prevail during autumn in this climate approach by their nature to those of the hot climates, it is not improbable that the late longer continuance than usual of very hot and dry weather has rendered the hepatic system peculiarly irritable. I shall accordingly consider the *predisposition to cholera* as consisting in an irritable state of the liver, by consequence of which it is ready, on certain occasions, to pour out an abundance of fluid, which is very unlike common bile; or of bile which is very dilute, but very acrid; or of bile mixed with more or less blood. I am the more persuaded, that the predisposition to this cholera consists in an irritable state of the liver, because the removal of this state has in many instances prevented that disease.

The French translator of Dr. Saunders's excellent Treatise on the Structure, Economy, and Diseases of the Liver, asks if cholera do not depend upon something more than a merely increased activity of the hepatic system*?

* "N'est on pas autorisé à croire que le cholera morbus presente quelque chose de plus qu'un excès d'activité du système hépatique?" This translator has fallen into a sad

alludes to the *cholera sicca*, of which I cannot aver that I have ever seen an instance; and asserts, that the matter discharged in the *cholera humida* is not always bilious; as does also Alexander Trallianus, who, therefore, derives the term cholera, not ἀπὸ τῆς χολῆς but ἀπὸ τῶν χολάδων, that is, *from the intestines*, which the ancients called χολάδες. Monsieur Thomas, however, does not even conjecture what the something more is; and for my own part, I do not see that any thing more is necessary than such a condition of the liver as consists in its being liable to have its secretion increased beyond measure by the usual irritation of the orifice of its excretory duct. Surely the matter discharged in the common cholera being not always of a yellow colour, is no reason that any thing more is necessary than an increased activity of the liver: for, as Dr. Saunders remarks, “It seldom happens, when a secretion is hurried by

mistake, which I shall here notice, although it is foreign from my subject. Dr. Saunders says, that persons subject to the sick head-ache should keep their bowels regularly open “by small doses of rhubarb with natron,” page 223. And Monsieur Thomas renders it “par des petites doses de rhubarbe et de nitre.” Now, it is plain, that by *natron*, Dr. Saunders does not mean *nitre* or *nitrate of potass*, but *sodæ subcarbonas*, which in the Pharmacopœia of 1787 is called *natron præparatum*.

excess of action, that the fluid secreted possesses its natural and healthy properties *.”

The chief of the *occasions on which the cholera arises* is, perhaps, the sudden exposure of those to cold, to rain especially, who are heated and fatigued by exercise. And I cordially agree with Sydenham, that more are annually destroyed by sudden alternations of temperature than by war, pestilence, or famine.

As for mushrooms, they are very plentiful; and some which are moist and porous are to be bought in the streets; but I know no case of cholera depending upon them. And as to fish, oysters and muscles especially are here during the autumn in great abundance; but I cannot learn that the cholera has once been excited by them.

A surfeit of fruit, as it is called, some have considered as the most common occasion of cholera; but Sydenham never found that the ingurgitation of fruit produced cholera at the end of September, nor have I, that fruit occasions it in the middle of August. And very certain I am, that summer-fruit, eaten moderately, is at all times as beneficial in cholera, as it is grateful.

* A Treatise on the Structure, Economy, and Diseases of the Liver, &c. page 236.

I cannot learn even that the cholera is more frequent among those who indulge in eating of every dish set before them, and in drinking early and late of vinous and spirituous liquors.

The *cure of cholera* is very simple, and is, as Cullen says, established by long experience. He refers to the cure, as this is taught by Sydenham; and indeed it is so circumstantially described by this excellent author, that all those who have come after him have scarcely done more than copy him. For which reason, as I have nothing new to offer from my own experience, I shall only point out such instances of bad practice as have fallen under my observation, and as may occur again. This is not a pleasing task; but I feel myself justified in performing it, because cholera is, of all diseases, the most acute, that is, the shortest in duration, and attended with danger.

First, then, it is bad practice to begin the cure of cholera with an emetic, or a cathartic*. Cullen says, "all evacuant medicines employed either by the mouth or by the anus, are not only superfluous, but commonly hurtful;" and Dr. Saunders, "that every thing which has a tendency to vomit or to purge actively, should be avoided." The following advice of the latter

* *Cœlii Aureliani Acutor. Morbor. lib. iii. cap. xxi.*

of my ever to be respected masters is so replete with good sense, so conformable to the concurrent experience of the ancients and moderns, and so luminously expressed, that I shall make no apology for giving it entire. “In all cases, where bile is secreted in too large a quantity, the use of emetics is improper; they increase the irritable condition of the hepatic system, and divert the bile from the intestines. In almost all cases, where vomits are given, bile is forced, during their action, from the duodenum into the stomach, which would otherwise have been carried off by the intestines. Indeed nausea and vomiting increase its secretion. In general, bile is a purgative sufficiently stimulating for its own evacuation, requiring the assistance of only warm water for facilitating its discharge. If, however, in some cases it irritate without purging, I should recommend the use of small doses of the neutral salts, such as potassæ tartras or magnesiæ sulphas, and the like; and in all cases they do most good under dilution.”

That emetics divert the bile from the intestines, when it is too copiously poured into them, is clear from the fact that they are apt to produce jaundice*: and cathartics do the same.

* *Aurigo accidentalis*. Sauvages Nosol. Method. Por-

Sydenham condemns the custom of beginning the cure of cholera with cathartics, by comparing it to the attempt to extinguish a fire by throwing oil on it. No doubt they must then increase the irritation of the bowels, and may lock them up by exciting either spasm or inflammation. So enteritis is increased and sometimes rendered incurable by purgatives, if venesection be not premised; for in enteritis, costiveness is no more than a symptom, and he who prescribes for symptoms, must often increase the cause of them. If, however, it be absurd to irritate the stomach with emetics when it is inflamed, it must be equally so to irritate the mucous membrane of the intestines in a state of erethismus. Who in his senses would begin the cure of gastritis with an emetic?

But Dr. Saunders gave small doses of those neutral salts, which purge, when in cholera, the bile irritates without purging; and those salts dissolved in a considerable quantity of water. His object was not to raise new tumults, not to increase the action of the liver, but only to dilute the irritating bile, and to wash it away

tal says, " la jaunisse a été occasionée par des violens vomitifs et par des purgatifs drastiques où administrés sans raison." *Obs. sur la Nature et le Traitement des Maladies du Foie.* Pag. 139.

from the surface of the bowels. He thought that the bile so irritated the bowels as to stop their peristaltic motion; and that by diluting it, and by employing a different stimulus, the too great irritation of the bile might be counteracted, and the peristaltic motion restored. How consonant is this practice to the advice of Aretæus, that the spontaneous evacuation of what the suppression in cholera is injurious, should be permitted; and that the evacuation, if not spontaneous, should be excited*! I believe that Hippocrates had before taught the same †: for as to the fifth book of epidemics, which is ascribed to him, many regard it as apocryphal. It may not be superfluous to add, that the neutral salts which are purgative, act differently when dissolved in a large, and when in a small quantity of water. In the former case, their effect does not extend beyond the intestines, which they evacuate without weakening; but in the latter case, when the neutral salts are given in a saturated solution, then they violently irritate the mucous membrane lining the intestines, and occasion so sudden and extraordinary an abstraction of fluid from the blood, as

* ΟΞΕΩΝ ΝΟΥΣΩΝ ΘΕΡΑΠ: Βιϛ: δευτ: Κεφ: δ.

† ΑΦΟΡ. Τμήμα τέταρτον. ιξ. κ.

to be extremely dangerous in diseases of great debility.

Secondly, it is bad practice to begin the cure of cholera with narcotics or astringents, in order to suppress the evacuations. Sydenham says, that we thus lock up the enemy, the vitiated bile, so that the patient is cut off by an intestine war. And what can be more irrational than to stop a spontaneous evacuation, which takes place where it should take place, which is always beneficial, and which is easily borne?

But there are times, when it is necessary to administer narcotics: one time is when the patient has received and discharged all the broth made by boiling a chicken in three gallons of water, so that this may scarcely taste of the flesh. Then Sydenham would give some such paregoric as his liquid laudanum, in the dose of sixteen drops. It may be thought that a rich soup or meat broth would be better than Sydenham's chicken water; but it is a mistake. Nothing can more effectually dilute and obtund the acrimony of the matter of cholera than chicken water taken warm, unless it be mere water taken cold. Soups and broths soon ferment, and are very hard of digestion. Besides, a weak stomach can digest solid food only; and the stomach in cholera cannot perhaps digest at all.

But there is another time, when a physician should, omitting all other remedies, fly to laudanum as a sheet-anchor: and that time may be when he is first called in. It is when the vomitings and purgings having continued ten or twelve hours, the patient's extremities are cold, and he is almost exhausted. Sydenham would then have laudanum given, not only while the symptoms are urgent, but also when there is no longer any vomiting or purging; and he would have it repeated every day, morning and evening, till the patient's health and strength are restored.

At all times, if the abdomen be tumid and tender, and the extremities be cold or affected with spasm, fomentation of it with warm water is an excellent auxiliary; so is the linimentum ammoniæ subcarbonatis, gently rubbed on the abdomen with the hand, or the emplastrum cumini spread upon leather laid over the abdomen.

When inflammation is apprehended, then blood should be taken away topically and generally; and a blister should be applied to the abdomen.

CURE OF THE CHOLERA FEVER.

THIS fever seems to have acquired fresh violence from every rainy or foggy day in September, October, and November, and to have assumed a type more like that of a quotidian intermittent. But its paroxysms are in the afternoon; and there is no complete intermission. Intermitments, however, of which I had not seen a single instance for some years, did appear in November; one case, a tertian, occurred in my own house. But I cannot agree with those who maintain, that remittent fevers and intermittents arise from the same cause, acting at different times, with more or less violence. Fevers and intermittents are, I think, diseases totally different from each other. Remittent fevers often become continued; and intermittents are sometimes superseded by typhus; but I never saw a remittent fever converted into an intermittent; and when it has been supposed to be so, I conceive that the remittent fever had ceased, and left behind it a condition of the system predisposing to the intermittent. It is thus that I would account for intermittents arising where typhus prevails. For the most continued fevers have more or less obvious re-

missions and exacerbations; and remittent fevers, as they are called, arise where there is no noxious exhalation from the earth. To me it seems a most unwarrantable assumption, that the remittent fevers of Italy, of different parts of the continent of Asia, and of America, are degenerated intermittents.

I am inclined to believe, that in the cholera fever, even when it is not attended with pain or tenderness in the region of the liver, the blood of the vena portarum actually stagnates in its extremities, because the pori biliarii do not admit it; and that bile is at the same time locked up in the branches of the hepatic duct which are in the substance of the liver. For it is favourable to a stagnation of blood in the branches of the vena portarum, that it has no anastomosing and collateral vessels; and it is a proof of an erethism, if not of inflammation being past, that bile flowing into the duodenum, the fever ceases*. Then the flow of bile being accompanied with a powdery matter,

* Neither serous nor mucous membranes, if inflamed, discharge any thing. Bichat, Anat. Generale. Pinel, Nosographie Philosophique. And Portal says, "les organs de la bile affectés d'inflammation sont moins disposés à se-cerner et excerner la bile." Obs. sur la Nature et le Traitement des Maladies du Foie. Pag. 138.

which resembles nothing so much as the red particles of the blood, it is highly probable, that these particles pass directly from the extreme terminations of the vena portarum through the pori biliarii, as soon as they are relaxed and pervious, because exhausted of their proper sensibility by the preceding erethism. As for the subsequent discharge of black and grumous or rather inspissated blood, it is perhaps no more than a final depuration of the extremities of the vena portarum. And this opinion is not unfounded; for considering how it comes away seven, eight, or nine times in the day, and as many times in the night, for two or three days, while the patient is regaining his strength, nothing can be more certain than that it is not a discharge from the aortic system. I might perhaps compare it to the extraordinary flow of blood which sometimes occurs after the separation of the placenta: a flow which is not felt by the constitution, because it depends upon the contraction of the uterus; and which, as it is not followed by any disorder during child-bed, is so far from striking terror into the bystanders, that they too generally augur from it the most happy issue. It is sufficient to say, that the vena portarum has no pulsation, although it performs the office of an artery, because it is beyond the influence of the heart's

systole. But it is the proper sensibility of the pori biliarii, which during perfect health prevents the blood, because it is blood, from passing through them. Lastly, that the blood of the vena portarum, in a state of health, undergoes some change before its admission into the pori biliarii; and that it undergoes the same or a similar change, when its admission there is prevented, are not at all improbable conjectures. For Dr. Nesbitt, in his first lecture on human osteogeny, says that gritty particles, which he takes to be bony, may be felt with the point of a knife in the blood entering the ossifications of epiphyses.

When the cholera fever first began, I resolved, in imitation of Sydenham, to employ no powerful medicines, but to ascertain its type or form, its procedure, and its manner of ending. For it is generally allowed, I believe, that superior skill in physic consists more in observing, than in acting: and hence the maxim, *interdum optima est medicina, medicinam non facere*. But till I had diligently watched the progress of this fever, and discovered what are the juvantia in it, and what the lædentia, what is its usual duration, and what is the way by which it terminates, when left to itself, I was incessantly harassed with the dread of losing a patient; and yet thought it better that he should

die, than that I should kill him. The result of my observation is, in a word, that what is in general unnecessary or prejudicial in the cholera, is equally so in the cholera fever. Not one patient in the beginning, increase, or height of this fever have I ordered to be blooded*, not one to be vomited†, not one to be purged; and although in the decline, I never objected to the exhibition of the bark (*cinchonæ lancifoliæ cortex*), yet I am of opinion, that it is of no real service; but that strength is sooner restored by keeping the bowels free from peccant matter, and by the frequent supply of nourishment easily digested, and affording as little fæces as possible. As soon as I perceive the green fecula-like matter, I incite its discharge by small doses of *magnesia sulphas*, or of *potassæ tartras*, and by as large draughts as I can get the patient to take of thin chicken broth. And I am not deterred from this practice by the proportion of the fluid part of the fæces, however considerable it may be. For I find that if this critical discharge be accidentally stopped, the disease seems to begin again. Besides, I hold, that all purging, after the final

* Stoll, *Rat. medendi*. Finke, *de Morbis biliosis anomalis*. Selle, *Pyretologia*.

† Hunter on the Diseases of the Army in Jamaica.

disappearance of the fecula-like matter, is prejudicial; but that the retention of the least of it should be scrupulously guarded against. Accordingly, at this period, I add from three to five drops of tinctura opii to every dose of the neutral salt; and then gradually substitute food for medicine, till the patient ask for meat, and cease to have any further need of my assistance. Some may accuse me of inert practice: but I shall not consider myself as bound to make them a reply. I have heard and read of cutting diseases short; and I by no means deny, that it is sometimes done. But till I shall have obtained far better information on this subject than I yet possess, I shall continue with the persuasion, that if I know the history of a disease from a careful comparison of a number of cases, I can in a very inferior degree permit the continuance of nature's operations, when salutary; favour and incite them, when languid; restrain them, when impetuous; and direct them, when going wrong. *Exhaustio*

I have been told of some, who begin the cure of the cholera fever with an emetic: but when I am called to a patient, who has taken an emetic, I always find his stomach rendered more irritable by it, and his fever aggravated and attended with delirium. And I have been

informed, that one gentleman cures this fever with mercury; a fact which I cannot deny, although believing, as I do, that the liver in this fever secretes no bile, my present opinion of the disorganizing process of adhesive inflammation, which is induced by mercury, does not allow me to prescribe it.

Wine, wine diluted with water; brandy, brandy diluted with water; beer, camphor-mixture, &c. I never order in this fever. For, however great the debility may seem to be, cordials increase it: they also increase the head-ach, the internal heat, and all the symptoms. Nay, subsultus tendinum, and petechiæ, in the decline of the fever, such is my consideration of them, would rather lead me to order venesection than stimulants. One patient labouring under this fever, whose sensorium was much disordered, whose mouth and throat were so clogged with aphthæ that he could scarcely breathe, and who was for seventy-two hours tormented with a hiccup, recovered, although no other remedies were employed than those of cholera. Aphthæ were certainly not critical in his case, but accidental; for they aggravated and extended the disease.

As for the delirium, I take it to be symp-

thetic; for I never meet with it, after the distension and tenderness of the abdomen are removed, and the intestines are freed from irritating matter, unless camphor-mixture, or other such heating things, have been administered. But as a part may become diseased by sympathising, so, if a delirium be extended beyond the fourteenth day, I find that the most efficacious remedy is cold water applied with a sponge to the whole head, while blisters are laid on the calves of the legs. I have never ordered the head to be shaven and blistered; and I have known the delirium and the fever both increased by it.

The patient's internal heat prompts him frequently to call for cold water as a beverage: and it is given him with the most decided advantage. Nay, his head while it aches, and his face while flushed, are frequently bathed with cold water; and he generally solicits a repetition of it. But this ablution was oftener performed when his apartment was so hot, that the mercury in Fahrenheit's thermometer stood at 72 degrees, and could not be brought lower by setting open the doors and windows, and by sprinkling the floor with vinegar, or by wetting it with a mop.

I am persuaded, that the frequent administra-

tion of food is highly necessary in this fever, but that it should be confined to the remissions only. My patients live principally on milk, rice, arrow-root, panada, chicken-broth, apples, pears, grapes, and things of the same sort: and I never order them meat till they ask for it.

CURE OF THE PNEUMONIA.

For the pain in the side, which is an epigenomenon in the cholera and the cholera fever, for the pains which resemble those of rheumatism (Scholion II.), and for the pain in the head (Scholion III.), although some employ the lancet, leeches, rubefacients, and blisters, I do not learn that they effect a cure the sooner. All those disorders cease when the cholera or the cholera fever ceases.

As for that pulmonic inflammation, which is sporadic (Scholion II.), and which is sometimes without a previous cold stage, the patient being at once seized with heat and moisture of the skin, to which soon succeed a pain in the side, with nausea or bilious dejections, and a difficulty of breathing, a single venesection, or a dozen leeches to the part, and afterwards a

blister, are all that I generally prescribe. But where the pleurisy having been preceded by a violent cold stage, and being latent*, the patient's fever has been attacked with an emetic, or camphor-mixture, wine, &c. have been administered, and I find him afterwards unable to lie down, but obliged to sit up, with a suppressed cough, a sensation of constriction in the fauces and an increase of fever, there venesection does little good, and the repetition of it does harm. Where there is a disposition to sweat in the night, there venesection is most injurious. Of the giving of emetics in the beginning of a pleurisy, I shall state the opinion of Cullen, in his own words: "To excite vomiting by emetics, we judge to be dangerous practice in this disease." And, in confirmation of this opinion, it may not be superfluous to

* "La péripneumonie *latente* est un des exemples les plus frappans d'une grande alteration d'un organe important qui n'es annoncée par aucune signe. La lésion se fait lentement, le poumon s'engorge peu à peu, et devient incapable de remplir ses fonctions, sans que la sentiment de la plus légère irritation se manifeste: quelquefois même le malade périt sans que l'observateur le plus attentif ait pu reconnoitre l'affection du poumon, le siège de la maladie." *Séméiotique, ou Traité des Signes des Maladies*, par A. J. Landré-Beauvais, Professeur de Medecine Clinique, &c. edit. ii. §. 759, not.

add, that six grains of emetin occasion vomiting, sleep, and death, which is found to depend upon inflammation of the lungs*.

Of the pleuritic patients whom I have attended this year, one in June, and another in September, had been bled; but they had been vomited before they were bled: so that it is a question, whether their pleurisy was excited by the vomiting, or was only increased by it.

But granting that the condition of a patient requires both venesection and vomiting, then the correct practice is to bleed first and to vomit afterwards: this is a rule laid down by Sydenham, and observed by even men of experience, as they are preposterously called; men, who having no general principles to guide them, are not qualified to act on new or uncommon occasions.

The intercurrent pleurisy is sometimes ushered in by an actual vomiting of bile; or a vomiting of bile accedes to a fever after some hours, together with a pain in the side, which is increased by every inspiration. But the stomach is not disordered in the beginning of the fever; therefore, there is no reason for the

* Ann. de Chimie et Phys. tom. vi. p. 172.

exhibition of an emetic. Indeed, it has been observed by several excellent physicians, that there is an inflammation of the lungs, in which the liver and the stomach are disordered by sympathy; and that this inflammation is peculiarly liable to end in purulent expectoration.

Of venesection in the pleurisy, which does not depend upon the reigning epidemic, but is an intercurrent disease, all that Sydenham says of that pleurisy in 1675, which did not occur in the proper season of pleurisy, that is between spring and autumn, but at the end of October, I find to be strictly true; and all that Dr. Gilchrist says, on the same subject, in the Scots' Medical Essays, I find to be strictly true: therefore, I do not order venesection to be repeated, merely because there is a buff on the blood.

But all physicians agree, that a pleurisy is not always to be cured by blood-letting. When persons of a gross habit of body, middle-aged, or in the decline of life, who have been addicted to spirituous potation, are seized with a violent catarrh, the peripneumonia notha of Sydenham, which is in the beginning attended with coughing, vomiting of fluids, a quick fluttering pulse, great wheezing and dyspnoea, obtuse pain or only oppression of the chest, headache in-

creased by coughing, vertigo on the least motion, and slight delirium, the cheeks being at first red and flushed, but presently becoming livid and bloated, so that effusion into the cavity of the chest and pericardium is to be dreaded, then venesection seldom fails to kill the patient. Dr. Willan could not recollect a single patient so affected, who survived blood-letting.—But young persons, females especially, are sometimes so affected with this peripneumonia notha, that they cannot lie down in bed, or enjoy any sound sleep for many nights in succession, their pulse being all that time feeble, and beating a hundred and forty or a hundred and sixty in a minute. To these Dr. Willan found venesection to be as prejudicial as to those of an advanced age.

I shall say nothing of the distinction of hepatitis from pleurisy: but it seems to me, that Celsus had sufficient reason for the assertion, that we trust too much to the pulse*. For nothing is more certain than that, if we rely on it alone, we often kill those whom we are called on to cure. I suspect that some, in their very attempt to remove

* Venis maxime credimus, fallacissimæ rei: quia sæpe istæ lentiores celerioresve sunt, et ætate, et sexu, et corporum natura, lib. iii. cap. 6.

a frequency of the pulse, often overlook the other symptoms. But a reduction of the pulse is not always, perhaps, desirable in a fever. It is only then, perhaps, desirable when it and the other symptoms depend upon a common cause, and both admit and require the same remedy. For it is dangerous to diminish a naturally frequent pulse in a fever, when it exactly corresponds with the other symptoms, and these do not indicate danger. At Cobham, March 1817, I was led, by comparing a very frequent pulse with the other symptoms of pneumonia, to conclude that it was exactly proportional to them, and that there was no danger. But I have met with more persons whose pulse beat in health fewer times than seventy-five in a minute, than whose pulse beat more. Suppose, then, that the pulse of a pneumonic patient beats so few times as eighty-four in a minute, an accurate analysis of his disease, and a careful comparison of its symptoms, may lead to this conclusion, that his pulse in health beats only fifty-six times; and, therefore, that $56 : 75 :: 84 : 112.5$.

THE END.

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