

A  
P A P E R  
ON THE  
PREVENTION AND TREATMENT  
OF THE  
DISORDERS OF SEAMEN AND SOLDIERS  
IN  
*B E N G A L.*

PRESENTED TO THE HONOURABLE COURT OF EAST-  
INDIA DIRECTORS, IN THE YEAR 1791.

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By JOHN PETER WADE, M. D.

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L O N D O N:  
PRINTED FOR J. MURRAY, N<sup>o</sup> 32, FLEET STREET.

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M.DCC.XCIII.

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## Typhus Fever

It cannot be too widely known, that nitrous acid gas possesses the property of destroying the contagion of the typhus fever, and certainly preventing its spread. By the following simple method the gas may be procured at a very trifling expence.

Take a little saltpetre in a saucer, pour on it as much oil of vitriol as will just cover it: a copious discharge of acid gas will instantly take place, the quantity of which may be regulated by lessening or increasing the quantity of the ingredients.

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Loadrum 3 grains Balsam  
be rubb'd in the part affected and  
is apply'd in Red flannels, for  
the lumbar region.



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# DEDICATION.

A 2

TO THE HONOURABLE  
COURT OF DIRECTORS  
OF THE

*EAST-INDIA COMPANY;*

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STEPHEN WILLIAMS, Esq.

HONOURABLE SIRs,

**P**ERMIT me to intreat your  
favourable acceptance of the  
following pages, and to express an  
humble hope, that they may be an  
additional, though inconsiderable,  
proof of the attention of the Me-  
dical Department to the interests of  
the service.

I have the honour to be,

With great respect,

HONOURABLE SIRs,

Your most devoted

And most obedient humble servant,

JOHN PETER WADE.

Sept. 17 92.



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## E R R A T A:

Page 6. line 6. *After decks, add*—Little deference, however, should be paid to the testimony of a single instance, although it afforded even a more positive evidence than the present against the existence of contagion in ship fever. It does not seem prudent or possible to speak with much assurance on either side of the question. The same facts will suggest opposite conclusions to the reasoning faculties of different persons; and circumstances, which failed to afford the writer a conviction of the presence of contagion, would probably furnish other practitioners with the strongest possible proofs of the reality of its existence.

Page 45. l. 9. Fevers, *add as a note*—The following observations on Fevers, with some alterations, were presented to the Government of Bengal, in the year 1788.

ON THE  
PREVENTION AND TREATMENT  
OF THE  
DISORDERS OF SEAMEN AND SOLDIERS  
IN BENGAL.

**T**HE numerous observations on the preservation of the health, and the cure of the diseases of seamen, which have been published by navigators of the medical profession as well as others, have by no means exhausted this important subject. They have undoubtedly superseded the necessity of long details, or regular treatises, which would unavoidably prove, for the much greater part at least, a mere repetition of former publications. The information however to be procured from books, respecting the health and diseases of Europeans in Bengal, is neither ample nor satisfactory. One or two authors only have written any thing material in this line; and it were perhaps to be wished, as far as regards the treatment, that still less had appeared.

B

## 2 PREVENTION OF DISORDERS.

peared. In reality, the tendency, as well as the scantiness, of many of the observations which have been hitherto communicated to the public, affords not only the best apology, but the best argument also, for obtruding on the attention of the honourable company's medical servants a few cursory remarks on this subject, previous to the departure of the ships for the ensuing season. It was hoped, that the press would have anticipated the necessity of this address. Although circumstances have occurred to retard the publication of a more ample communication; yet the reader of this paper may be assured, that no assertions shall be admitted into it, except such as are founded on facts, and of this the press will soon furnish undeniable proofs.

The subject of prevention has a natural title to precedence. Under this head a few observations will be suggested on the subjects of contagion, marsh effluvia, excesses, drink, diet, cleanliness, exercise, ventilation, exposure to open air, posture recumbent and erect, and intestinal evacuations, with a concise recapitulation of the whole. Many of the remarks under the article of prevention will necessarily prove applicable to the treatment also. Under the article of treatment, the disorders, which chiefly prevail in Bengal, and in  
similar



similar latitudes, will be noticed in as concise a manner as the nature of the subject will admit. The principal disorders in voyages to Bengal, or on shore in tropical latitudes, are, fevers, dysentery, affections of the liver, and some other of less frequent occurrence.

## PREVENTION OF DISORDERS.

### C O N T A G I O N .

DURING the course of a pupil's medical studies at the university, no part of his reading, or of the opinions of professors, makes so forcible and serious an impression on his mind as that fatal and impalpable agent in the excitement of fevers, which is called **CONTAGION**. On his first entrance into practice he will expect to trace its footsteps wherever fevers or dysentery appear, particularly in warm climates, which are supposed more favourable to its reception. A long voyage to India, and a long residence in Bengal, quieted the writer's apprehensions, and shook his faith on this subject. During the whole course of an assiduous practice there, he had not observed, to the perfect conviction of his own judgment, either in or out of hospitals, a

#### 4 PREVENTION OF DISORDERS.

single instance of contagion. Fevers and dysentery were often epidemical, but never exhibited any appearance to his faculties, which could excite a suspicion of contagion. Numbers of men afflicted with fevers, or with dysentery, of the worst characters, were almost every season sent from on board Indiamen to the hospital at Calcutta; yet they were not thought to communicate contagion to the neighbourhood, to the attendants, or to the other patients. The Houghton East Indiaman, on board of which the writer was favoured with the charge of the sick during the homeward-bound passage, had sent a great many of her men, a very short time before it's departure, to the Calcutta hospital. These were deemed, by medical gentlemen who had recently arrived in India, to afford instances of nearly the worst stage of contagious ship fever; yet it does not appear that this violent contagion had been communicated by those men to a single person in the hospital, although it contained numbers ill of fevers and other epidemical disorders at the time. Where a considerable number of persons are seized with the same complaint, in the same place, and nearly at the same period, contagion is generally suspected, particularly if the disease be febrile. During the voyage of the Houghton from Bengal to Madras, the fevers which prevailed

prevailed on board would certainly have been deemed such by most of the European faculty; and many of the circumstances, according to the usual modes of reasoning and thinking, might have warranted the suspicion. He could not, however, persuade himself that contagion had much agency in the general prevalence of the fever on board. It seemed natural, that the most perfect similarity of diet, air, accommodation, constitutions of individuals, habits of life, &c. should excite the same disorder in numbers of different persons independently of contagion. As the ship was deeply laden, the port holes and skuttles were obliged to be kept shut. The weather too was variable, often wet, and generally hot between decks; yet the number of patients who laboured under fever did not appear to increase to any considerable degree after we left the Broken Ground. This most probably would have been the case had contagion possessed much share in the excitement of these fevers. While at anchor, the lower deck must have been better aired, and drier, as the port-holes could be kept open, than after our departure; and on this account the contagion, if any existed, should have operated with more activity afterwards, in the rapid increase of these complaints.

## 6 PREVENTION OF DISORDERS.

Change of air indeed is on all occasions in India the most powerful enemy to obstinate diseases, particularly to fevers, but in the present instance the latitude alone, and not the air, was changed; certainly not the confined air between decks.

As every means in use to obviate or destroy contagion is equally applicable, and indispensably necessary, in every instance of the prevalence of fevers or other disorders amongst a body of men, such reflections on the subject might prove superfluous, were not the general suspicion of contagion prevailing in a ship of considerable inconvenience to the service. On an emergency, when seamen might be wanted, they would naturally be deterred from engaging by such fears; and an alarm of the kind, spread amongst a crew, might tend to make them desert the service, dispirit them in it, or render them at least more liable, in reality, to be affected by the epidemic disorders which happened to prevail at the time. With respect to those already afflicted with fevers, an opportunity was afforded on board the *Houghton* to observe, that the terror attending the idea of a contagious disease has contributed much to that depression of spirits, which often accompanies fevers, and renders them not only  
more

more troublesome to the patient, as well as the practitioner, but has often a very fatal tendency in its own nature. The surgeon, therefore, should be particularly cautious how he encourages an opinion fraught with such detriment to the service, as well as to the crew, unless on the most positive evidence, which is possibly not furnished by any combination of circumstances whatever that can occur on board an Indiaman. Another inconvenience naturally results from a suspicion of contagion in a ship. The patients messmates, who are often found destitute of humane attention, to their comrades in sickness, will assiduously avoid exposure to a supposed contagion, by attendance on their persons, and by rendering them innumerable little offices, which, after all, may prove of more consequence in the cure of their disorders than medicine itself.

A ship under the stigma of such a suspicion could not be permitted to take in refreshments at the Cape of Good Hope, should this be deemed eligible, on any occasion, as the ship is visited by a physician from the shore, to ascertain the existence of any contagious distemper on board. A surgeon, who was credulous with respect to the doctrine of contagion, would scarcely think



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himself in conscience warranted to deny it, as long as a single case of the fever still remained on his list. So prevalent were the apprehensions of contagion on board the *Houghton* at first, that the surgeon was frequently importuned, during the passage from Bengal to Madras, by the passengers and others, to declare whether the fever on board was contagious; and the prepossession in this respect was so strong, that he was not by any means credited when he ventured to assure them of the vessel's exemption from infection. He was however so well convinced of it himself, that he never thought of taking any precaution for the security of his own health. The sick were always examined before breakfast, with an empty stomach and an open skin, and with a constant feverishness, the remains of a former fever and affection of the liver. In this state of indisposition, the fatigue attending the daily visitation of the sick was completely exhausting to the remains of strength. An hour's repose, however, generally removed the great sense of fatigue and weakness; so that, notwithstanding all these predisposing circumstances, he had the most unequivocal personal evidence of the absence of contagion.

## M I A S M A.

IN the production of fevers, and similar diseases on board of Indiamen, on their first arrival in Bengal, or during their term of anchorage there, miasma, or marsh effluvia, may be supposed to have a less doubtful share than contagion. In the season of the periodical rains, or at their termination, which is perhaps the only unhealthy part of the year in any place in India, the environs of Diamond Harbour are very swampy, and much crowded with wood. These circumstances alone might be deemed adequate to the excitement of the diseases in question; but there are others, of even a more active nature, which contribute largely to favour the general sickliness of a crew. After a voyage of considerable length from Europe, during which, although positive indisposition may not have been very common, a tendency to scurvy and other diseases must unavoidably prevail. The elevation of spirits, on first landing in Calcutta, and emancipation from every restraint of diet, &c. lead the people into every possible excess in the gratification of all their appetites. The very change of

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air, though possibly for the worse, has a powerful effect in raising a temporary increase of appetite for food, which is indulged to its utmost extent. But this perhaps will be thought trifling in comparison with the dreadful effects of strong liquors; from an early access to the largest quantity of which it is impossible to restrain those who are permitted to land in Calcutta, or in its vicinity. These spirits are in general of the very worst and most inflammatory kind. Few circumstances, perhaps, possess more activity in disposing the people to disorders of every kind, than an unrestrained indulgence of the passions with women. This generally encourages a total neglect of personal cleanliness, which, combined with profuse sweating from the great heat, and a suppression of the insensible perspiration by an alternation or coincidence of hot and of wet weather, renders it a matter of great astonishment, not that so many should be afflicted with fevers, but that any should escape the operation of such powerful causes.

## L I Q U O R.

It is with great diffidence that an individual can presume to suggest a doubt re-

pecting the propriety of a practice which has received the sanction of years in this service. By some unhappy influence of custom, sailors view their drams as almost the only object in existence worthy a sailor's care. They eat their drams, and they drink their drams. Such is their attachment to this object of their affection, that they will remain for many days extremely ill, and perhaps dangerously so, rather than be deprived of their liquor, by having their names enrolled on the sick list. Nor is it very certain that any extensive alteration in the regulation of their drams would be entirely exempt from troublesome consequences. It appears from the voyages of Captain Cook and others, that sailors with the greatest reluctance admit of any alteration whatever in their established habits and allowances. If any innovation prove a matter of such difficulty, where subordination is so complete, and where coercion has the sanction of law, it may be esteemed impracticable on board of Indiamen, where both are in a great measure defective. The writer takes the liberty, notwithstanding, to declare his humble belief, that the daily allowance of liquor on board of Indiamen, in its most favourable view, is at least unnecessary and useless ; that it gives the ship's

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company a habit, which they might not otherwise have acquired ; a habit which generally in the end destroys more seamen, than are probably lost in any other way ; that in cold climates, strong liquors are so far from proving a protection against cold and wet, the consequent inflammatory diseases of the season, or even the scurvy, that their ultimate effects are to furnish a disposition to be affected by all these. To supply temporary strength, or spirits for an occasional exertion, they may prove of some use ; but never without a subsequent depression of both, in proportion to the previous excitement : that in lieu of promoting the cuticular discharges, they have a manifest tendency, perhaps both in their immediate and ultimate effects, to check them. In warm climates they become still more deleterious. Their immediate action is to increase the prevailing distress from the heat ; to induce or confirm a costive habit, the fertile source of most of the diseases of warm climates ; to create a disposition to be affected by bad air, by marsh effluvia, or by contagion, if such be supposed to exist. These are their mischievous effects, when taken in what is generally esteemed moderation, but when used to a degree of intoxication, which is very often the case with



seamen on shore, particularly in Calcutta on their first landing, their fatal consequences need not be enumerated. Reasoning alone might afford a conviction of the justness of these sentiments; but these opinions are in reality the result of decided experience, and a long attention to this subject, during an extensive practice amongst the soldiery of Bengal, and occasional opportunities of observing the same circumstances amongst the seamen of all nations in the East Indies.

Strong liquors, indeed, become less mischievous in proportion to the quantity of water with which they are mixed; and they may serve a good purpose occasionally by mixture with water of a bad taste, which substitutes the stronger impression of spirits on the palate to the other. But whether, in combination with water, they have ever any considerable tendency to correct the other bad qualities of that element, is a subject of great doubt from every observation the writer has had occasion to make in many parts of India. Allowing them however their utmost use in mixture with bad water, yet it will never be asserted that they improve either the taste or other qualities of good water. In reality, they would prove of very unfrequent use, were they allowed only in the instances  
of

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of bad water, for water of this description is not often found on board of Indiamen, where provisions of every kind, especially this very article, are always esteemed excellent. In the vicinity of the various places where Indiamen lay during their anchorage in the mouths of the Ganges, the very best water may not be always procurable in any considerable quantity, as the only provision of this essential article which the natives possess, is the accumulation of the rain water of the season in tanks constructed for that purpose; but it has been always understood, that the most abundant supplies of water, taken from the River Ganges beyond the reach of the tide, are sent on board of all Indiamen. No water in the world can excel that of the River Ganges, when collected and preserved with due attention. The water of Madras and St. Helena, and, as far as my recollection enables me to decide, the water likewise of Bombay, are probably superior to any in Great Britain. One might venture to suppose that such beverage as these would scarcely require the aid of spirits to render them either wholesome or palatable.

In the royal navy they seem very sensible of the mischief resulting from the use of pure spirits; and it is accordingly their practice to dilute

dilute the liquor before distribution with a very large proportion of water. This improvement, it is presumed, might take place in the honourable company's military, as well as shipping service, in which the daily allowance of spirits is served out unmixed, and the mixture left to the discretion of a class of people so deficient in self denial, that where their own health and future comfort are concerned, they scarcely appear endowed with the instinct of brutes. The additional allowance of what is termed grog, on board of Indiamen, is perhaps seldom more diluted than with equal parts of water, which still affords a dram of considerable strength. In reality, were an allowance of spirits in any instance indispensably necessary to sailors, foreign ships would labour under very great disadvantages. This allowance is probably unknown to many of them. An opportunity has occurred of ascertaining the exemption from sickness which foreign Indiamen enjoy. In one striking instance, during a voyage of nearly ten months, one case only occurred of any disorder, a slight intermittent fever. Towards the end of the ninth month, after the crew had been for some time on a short allowance of provisions and water, the scurvy commenced its ravages; but it was very extraordinary that it had not

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made its appearance much sooner, as the vessel had not touched any where for refreshments, except at the beginning of the voyage at Madeira. During the short passage from Madras to St. Helena, in the finest possible weather, several of the Houghton's people were afflicted with scurvy; a strong and instructive contrast!

## P R O V I S I O N S.

THIS immunity, which characterises the foreign commercial service, may be also attributed in a great measure to the more sparing allowance of salted provisions on board of their ships, especially of animal food. Farinaceous vegetables form the greatest part, and indeed almost the whole of the diet of their people. This must operate, not only to the prevention of scurvy, but of all febrile disorders, particularly of that description which is generally denominated putrid. The allowance of salt meat on board of the honourable company's ships is so liberal, that a sailor may reserve a very competent share for every meal of every day in the week. The other articles of diet appear very insipid to palates habituated to the impression of spirits

spirits and salt meat. They are consequently led to the use of their salt provisions at all their meals.

A vulgar error very generally prevails, that the allowance of salt provisions, as well as of spirits, furnishes strength for the performance of the severe duty of seamen; but it does not require a detail of arguments to prove, that the article, which is best subdued by the powers of digestion, and affords the largest proportion of good nutriment, is that which supplies the greatest strength and spirits, and enables the people to undergo the greatest fatigue; nor can it possibly be denied, that farinaceous aliment has greatly the advantage of salted provisions in these respects.

It is easy to conceive the benefit that might accrue from the substitution of other articles of diet to those of spirits and salt meat, at least from a considerable diminution of the latter in the warmer latitudes, where large quantities even of the best and freshest animal food are in the highest possible degree inimical to health, and dispose, with an extraordinary power, to costiveness, to all bilious complaints, to affections of the liver, to dysentery, and to the whole train of deadly disorders to which seamen are obnoxious in warm climates.

Providence seems to have directed the na-  
C tives



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tives of all warm climates in an especial manner to the use of vegetable diet ; but its prevalence is by no means confined to them. It may be asserted with confidence, that the most athletic part of mankind, the peasantry all over Europe, excepting England, in some ; measure live, thrive, and grow strong on a diet almost entirely exclusive of animal food, and that probably two thirds or more of the inhabitants of the globe live for the most part, or entirely, on vegetable food. Those uncivilized nations are thinly populated where vegetation is not abundant, and where animal food affords the only source of half-starved existence.

## C L E A N L I N E S S.

SUCH are the most powerful causes of the diseases of seamen. But another exists scarcely of less activity, and of a prevalence as general as the former. If inattention to cleanliness prove a source of scurvy and other complaints in cold climates, what must its pernicious tendency be in warm regions, where the cuticular discharges are so much more profuse and acrid ; of course their retention must become much more detrimental

The salutary effects of unremitted attention to the personal cleanliness of a crew have been evinced by the experience and testimony of many navigators. The powers entrusted to commanders in the royal navy enable them to enforce every regulation, which their prudence may deem necessary for the preservation of a healthy crew; but the case is far otherwise on board of Indiamen, where a commander might expose himself to the vexation of eternal prosecutions on his arrival in England, were he to exercise that authority, which is absolutely necessary to compel the people to pay any attention to this indispensable preservative of health. Perhaps there is not a class of persons in existence so devoid of every attention to cleanliness as British sailors, when abandoned to their own guidance. The foppery of some foreign seamen has a most useful tendency in this respect; but a true British tar would seldom, I believe, dream of a change of linen, were he not occasionally compelled to it by being wetted to the skin; their heads remain long strangers to the comb; their beards to the razor, and their faces to cold water. The only bath they use is that which heaven sends them occasionally in heavy showers.

It is not to be doubted that the sea-water

bath, independently of its other excellent effects, which are allowed to be numerous, would prove highly useful with respect to cleanliness alone. The general use of the cold bath amongst the natives of warm climates, more general even than the prevalence of vegetable diet, both of which have become objects of religious observance in many places, affords unequivocal proofs of its great utility in the preservation of health. Sea-water has not probably a decided superiority for the purposes of bathing over any other kind of cold water.

If instinct alone can teach the brute creation those means of self preservation, which are best adapted to the regions they inhabit, it cannot be supposed that the general prevalence of vegetable diet and frequent bathing amongst rational creatures in tropical countries is the mere effect of accident, and not the result of reason and experience, operating slowly perhaps and almost imperceptibly, but with ultimate certainty, on the habits of nations, in the earliest conditions of society; but neither the prevalence nor utility of bathing and vegetable diet is by any means confined to the natives of warm climates; to them indeed the habitude of such practices would seem more essentially necessary;



but they cannot be deemed useless even in the frozen regions of the north. The greatest and most sudden changes of weather can scarcely be expected to affect, even in a trifling degree, the persons of Russians, who can plunge from the warm bath into water whose temperature is nearly at the freezing point.

Circumstances of such importance may possibly merit the attention of the honourable court of directors. Commanders, if that degree of regard to the subject be deemed expedient, might be furnished with orders and powers to compel the seamen to wash their whole persons once or oftener during the course of every week. This has been found of difficult execution, even when prescribed medicinally by the surgeon; and there is not perhaps any medicine, the most nauseous, but what they would prefer to it. They would almost rather take a pint of salt water internally than externally.

## E X E R C I S E.

INDOLENCE would scarcely be expected to prevail in a ship, where it is generally presumed the duties of the vessel afford sea-

men constant or sufficient occupation. This in reality may be the case in voyages to colder climates, on more boisterous and inconstant seas, and in more variable weather, during which incessant work and fatigue may prove as inimical to the health of a crew, as the most torpid inactivity ; but in voyages to the East Indies, during the prevalence of trade winds, and nearly on all occasions, a ship's crew may indulge in very enervating habits of laziness, and it requires the encouragement, persuasion, or compulsion of authority, to induce them to take the degree of exercise which in all situations would be deemed essential to the preservation of health. In this respect we might submit to be taught a lesson by the French, and other foreign nations, who practise those means of exercise on board of their ships, that contribute as much to hilarity of mind as to personal vigour. Dancing is the most obvious and the most general of these, and this, or any other modification of exercise, may be deemed so much the more necessary for British sailors, as their diet is infinitely grosser than that of foreigners, and renders them more obnoxious to the depression of animal spirits, which favours the approach of diseases, as well as to the diseases themselves, from the immediate effects

effects of such aliment. The various modes of exercising the people is necessarily referred to the discretion and ingenuity of the commander and his officers. It is very well known, that this custom has been introduced by some commanders in the honourable company's service, with very obvious benefit to their crews, and there is ample testimony in its favour in the printed voyages of various navigators.

The exercise of dancing is one great instrument of the preservation of the slaves on foreign ships. Their commanders of vessels employed in the slave trade are most punctiliously attentive to it. Ocular proofs have occurred to what a degree their endeavours are crowned with success. Their attention also to the personal cleanliness of the slaves, as well as to the neatness of their accommodations, is truly admirable, and probably much superior to what is practised on board any mercantile ships whatever. It is not exaggeration to declare, that every part of the deck appropriated to the accommodation of the slaves is kept as clean as an officer's cabin on board of an Indiaman. It will be found that exercise and cleanliness are generally associates; that the one naturally leads to the other, and is seldom neglected, unless where



the former is deficient. Exercise may not only be considered as a grand preservative of health ; but in gentler forms, as a very material agent in its restoration. I shall however refer the consideration of it in this point of view to the subsequent article.

## V E N T I L A T I O N.

THOSE leading circumstances in the preservation of the health of seamen, which appear most obviously useful, and most within the scope of practice, have been noticed in the preceding pages. We may now proceed to such as are by no means less essential, but not always equally practicable. Of these, ventilation, including exposure to the open air, is of the first importance.

A constant ventilation between decks would prove by far the best security against disease. But this is not very easily procured to a proper degree. Indiamen are sometimes so deeply laden that the port-holes cannot be opened even in moderate weather, and never perhaps when the sea is rough. Although the air be not admitted with sufficient freedom, yet the water oozes in great abundance. The deck has therefore least

ventilation when it requires its assistance most, to evaporate the dampness occasioned by the water. On all occasions when it may be deemed necessary to shut the port-holes, it ought surely to be executed in such an effectual manner as to exclude the water completely, if possible. This, it is imagined, is seldom the case. But independently of the dampness from the admission of sea-water, the people shew much negligence in wetting their *birtbs*, or the share of the deck allotted to the use of each mess. The attention of officers might undoubtedly obviate this inconvenience, by enquiring on all occasions into the cause of the nastiness, and inflicting proper punishment, such as a stoppage of drams, on the authors. Each mess might easily be compelled to keep their allotment of the deck very dry, and clean in other respects. Water should never be allowed to remain on the lower deck for a moment, although the swabs should furnish employment for a great proportion of the ship's crew. In the worst weather, a person might suppose the deck would be kept pretty clean by these means. It scarcely comes within the writer's province to observe, that it would be fortunate if the port-holes of the honourable company's ships were so

much above the level of the water as to admit of being opened on nearly all occasions during a voyage to India. A deck crowded with chests and hammocks must necessarily prove very unfavourable to ventilation. The latter should never be allowed to remain below in fair weather; and as few as possible of the former should be admitted. In reality, the people themselves, unless at the periods of regular rest and meals, should be compelled to remain on deck as much as possible, except during rain; nor should this be omitted, even in very hot weather, when they can enjoy the protection of an awning. Indisposition itself should not exempt them from constant exposure to the open air. A seaman, when his name is once enrolled on the sick list, thinks himself entitled, if inclined, to lay in his hammock, or on his chest, or at least to remain below, all day. Nothing can be more pernicious than such an unwarrantable indulgence to the sick. The error in this respect is very prevalent, and perhaps fatal, even in the royal navy. A part of the deck is allotted as an hospital for the sick, surrounded in general by canvases. Although every attention is bestowed on its cleanliness, it is doubtful whether the greatest severity of weather would prove so

detrimental, even in the worst cases, as allowing the sick to swing perpetually in their hammocks in so confined a situation. Under alarming (may we venture to call them for the most part imaginary) apprehensions of infection, the collection of the sick in one spot, and their separation from the rest of the crew, may be deemed a measure highly prudent, independent of its expediency with respect to attendance and care of every kind. But what object of convenience, or of a salutary tendency can an enclosure of canvass effectuate, even in the worst circumstances of disease or infection? Can there be a variety of opinions on the deleterious effects of a momentary confinement, on such air? especially when the more feeble patients are indulged with the use of the bucket, which cannot be removed with sufficient expedition to prevent its contaminating in a considerable degree the unwholesome atmosphere within the canvass. Whatever the disorders may be, which happen to be imprisoned in this manner, they cannot fail to be much aggravated. But if unfortunately dysentery prove of the number, what must be the result of a frequent recurrence to the bucket, and of the duration of efforts, productive in reality of small but highly vitiated dis-

charges. Under such circumstances, will the renewal of air be sufficiently rapid to afford protection to the sick against the operation of the putrid effluvia.

If such a formidable host of objections arise to the confinement and enclosure of the sick in the predicament already described, what motives of utility can be suggested in favour of the plan, when the terror of contagion is not suspended over the imagination, and when the greatest part of the sick will be found capable, on a spirited trial, of attendance on the surgeon, instead of requiring his very imperfect attentions in their hammocks? A person might naturally suppose, that nothing could have a more salutary tendency in the revival of a patient's spirits, than a participation in the cheerfulness, and as much as possible in the amusements, of their companions in health, and that few circumstances, on the contrary, would contribute more effectually to depress the spirits, and to aggravate the distemper, than the exclusive society of the diseased, the dying, and the dead.

We may suspect that cases do not exist, at least the writer has not witnessed any, which require the indulgence of the hammock, wherever it may be permitted to hang. In

the last stages of expiring existence, whatever its inutility may be on other occasions, it would be cruel, as it is impossible, to refuse it; but in circumstances of less positive necessity, even in those febrile disorders which are characterised by the greatest sense of debility, the most particular care should be taken to compel the sick to expose themselves to the open air, and to use as much motion as their condition will allow.

This degree of gentle motion may naturally enough come under consideration in the present article. In these diseases it will be found, that the power of motion increases with the frequency of the attempt. During the voyage of the Houghton from Madras to England, many, and perhaps all of the sick, afflicted even with fevers, in the intervals of the paroxysms, were persuaded to do more or less duty on deck, and there was reason to suppose, with considerable benefit to their complaints. This attention to some degree of exercise, as long as a muscle in the body retains the power of motion, is universally allowed to be of the utmost consequence in retarding the worst symptoms of scurvy. It does not appear that a sufficient reason exists for its prohibition in many other disorders. That set of symptoms, which are generally  
denominated



denominated the *nervous fever*, is acknowledged to exhibit the most frequent as well as the most fatal form of fever which prevails in ships, yet the enlightened experience of a physician, who published a treatise on the nervous fever, has placed it beyond the possibility of doubt, that gentle motion and broad exposure to the open air prove the most essential requisites in the treatment of this disease.

• Directions, which recommend exercise or motion, ‘as far as the patient be capable of using them,’ are too vague to be of much use; for a sailor, who is disposed to indulge habits of indolence, will scarcely scruple to declare that he has not strength for the purpose. In reality they are themselves greatly deceived in this particular. In these, and nearly in all disorders, the patient is frequently oppressed with such a sense of debility, that he would think the practitioner very unreasonable, if not mad, who should attempt to persuade him, that his feelings deceived him; that the weakness was not real or permanent; and that a resolute perseverance in gentle exercise, and exposure to the open air, would tend greatly to remove it. A person in the highest vigour of health will experience some inconveniences, a degree of languor, a little nausea, and per-  
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haps a slight head-ach, at least in warm climates, if he prolong in the morning his imperfect slumbers in bed for two or three hours beyond the usual time; but if the same person should extend this indulgence to the expiration of twenty-four hours, I may venture to assert, that two days would scarcely prove sufficient to restore him to the same sense of all his faculties which he possessed before.

If a mind and person the most healthy suffer so readily by too long indulgence in an horizontal posture, is it consistent with common sense or with reasoning to suppose, that a man already under the pressure of those symptoms, perhaps in their worst stages, should not only not fail to be injuriously affected by it; but should even derive much benefit from a circumstance which would deprive him of strength, if he possessed it in a healthy degree. There is certainly an absurdity in the supposition; but it rests not altogether on supposition; for the writer may truly declare that the whole course of his experience in Bengal, as well as on board the *Houghton*, militates strongly against all confinement to a bed, an horizontal posture, and even to a room or a lower deck; most perhaps in the disorders in which the ability to  
abandon

abandon those indulgences is least apparent to the practitioner or the patient.

During the progress of the Houghton's voyage, it was a constant endeavour to deprive the sick of every description of the use of their hammocks in the day-time, unless while the violence of a febrile paroxysm lasted, and even on these occasions exhortations were not spared to persuade them to quit their hammocks, and remain as much as possible in an upright posture, from a thorough conviction that although an horizontal position might prove less uneasy to them at the time, yet the violence of the fit would terminate sooner, and leave much less affection of the head and stomach, as well as less prostration of strength after it. Neither exhortations however, nor threats, used to avail in many instances, without recourse to the authority of the officer of the watch to compel them to relinquish their hammocks, with the risk of being rendered obnoxious amongst the people to the imputation of inhumanity. The symptoms which seem to result from indulgence in a recumbent posture, especially in a confined atmosphere, are principally a languor or greater sense of debility ; a perpetual drowsiness, but no refreshing sleeps ; a great increase of heat, or excitement of profuse and pernicious

cious perspiration; a decay of appetite; a costiveness, or retention of stools and urine; a sense of oppression about the præcordia, or accumulations in the cavity or the vicinity of the stomach, liver, and other bowels; a nausea; a weight, pain, and particularly giddiness of the head on rising, accompanied with a suffusion or muddiness of the eyes, and even of the skin, which are pretty clear proofs of a morbid absorption from torpid bowels. These are pretty certain consequences of confinement for any length of time to an horizontal posture, even where the previous indisposition has been very trifling; but we may repeat, that they are also the very symptoms which characterise most fevers, and particularly the worst. If the indulgence in question be deemed useful during the prevalence of those symptoms, it will be necessary to allow that a cause not only does not produce its natural effects, but that it operates to the removal of those effects when excited by any other cause. To the writer's comprehension this appears to involve a monstrous absurdity. It may be presumed that very little doubt will remain, after what has been stated, of the impropriety attending this mistaken indulgence to the sick, merely as it regards their own recovery, independent of

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its pernicious effect on the air below, and consequently on the rest of the crew, or at least on their more healthy messmates. To them it must always prove a great inconvenience, if not a positive mischief. It is in reality a general nuisance, but in a most particular manner to the surgeon and his assistants. A surgeon may often acquire more knowledge of the state of his patient from a view of his countenance, and his general appearance, than from the most distinct answers to the most sagacious questions he may propose. Much information is to be procured from seeing the patient sit, stand, or walk.

This intuitive knowledge, which a practitioner receives from the general appearance of a patient at first view, affords him perhaps more light in the treatment, than the utmost exertion of reflection and reasoning on the more obvious symptoms. It is here where a practitioner's sagacity and experience appear to operate imperceptibly even to himself. A surgeon, who is obliged to visit a number of patients in their hammocks, cannot enjoy the benefit of such instructive impressions, nor can his attention to each case be so minute in other respects as he could wish. Daylight, as it frequently has no access, can furnish no assistance; and the appearance of a patient in his

his hammock by the light of a lantern is extremely different from what it would be on deck in broad daylight; nor can the surgeon, under such circumstances of inconvenience, particularize at the greatest length on his diary every trifling appearance which can tend to throw light on the case. Every patient, therefore, who can possibly move his limbs, should be compelled to quit his hammock and his birth at the hours of attendance, and to wait on the surgeon in the part of the ship appointed for that purpose. It may be affirmed once more, that notwithstanding every appearance of debility, a patient will scarcely ever be entitled to the enjoyment of his hammock in the day-time.

## I N T E S T I N A L E V A C U A T I O N S.

MANY of the preceding observations are of more importance in the treatment than in the prevention of disorders; but they will be found useful in both. The scene, of which the writer became an anxious observer on board the Houghton, has convinced him that it is of the utmost possible consequence to consider every means which may tend to obviate the dreadful effects of an unhealthy



neighbourhood, in an unhealthy season, on the seamen of the honourable company's ships, on their arrival at Diamond Harbour in Bengal. It is scarcely necessary to notice, that the arrivals often occur during the periodical rains, or immediately after their cessation. It is much to be regretted that the task is easier, to suggest than to enforce a compliance with the necessary precautions. That there do in reality exist such as will seldom fail to prevent the fatality of diseases resulting from those situations, we may be persuaded. Many of them have been already enumerated; but one of the very first importance still remains, which to many will appear insignificant or ridiculous, although it undoubtedly affords by far the most certain protection against all diseases in warm climates, especially such as persons on their first exposure to an unhealthy situation are most likely to experience. Early intestinal evacuations on the slightest approach or suspicion of indisposition, or previous even to an intimation of this kind, will, I may almost say infallibly, procure an immunity from danger, if not from disease. However obnoxious to ridicule a proposal of this nature may seem, we need not hesitate to declare, that a general application of these means to a whole

crew, immediately before their arrival in harbour, and a frequent repetition afterwards, would be attended with the most salutary consequences. It is not the writer's province to judge how far this may be practicable in the honourable company's ships. Sailors would universally think the proposer of such a precaution insane. But as long as men indulge in excesses of diet, or do not reduce considerably the quantity of their usual food in those situations, the frequent necessity of intestinal evacuations is not to be doubted. Amongst the officers, however, there are reasonable men, to whom this precaution is recommended in the strongest terms, with a positive assurance, that they will never be deceived in the confidence they may repose in it; for they must be of an original conformation, widely different from their fellow creatures of the military establishment in Bengal, if they be not affected by precautions, which, during the whole course of an attentive experience, have uniformly succeeded with the latter.

The unhealthiness of Diamond Harbour, and perhaps of every part of the mouths of the Ganges in the periodical rains, or more properly about their termination and the commencement of the cold weather, is to be

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greatly lamented, but, I fear, not remedied. However, more stress may possibly have been laid on the effects of an unwholesome vicinity, considered abstractedly, than they merit, if it be allowed that there do exist real means of obviating to a certain extent those effects, and that consequently the mischief is generally as much the fault of inattention as of the climate.

## RECAPITULATION.

WE may now review, in as concise a manner as possible, the principal precautions which may be used to obviate the baneful effects of an anchorage in Diamond Harbour, at the season of the usual arrival of the honourable company's ships. The following are the most material. A very considerable reduction of the quantity, and alteration of the quality of their food, which should consist as much as possible of vegetables, ought immediately to take place. These are easily procurable in Calcutta and the environs, to any extent of demand, in the season in question. European vegetables may not always be found in sufficient quantity; but the esculent plants of the country are, in the estimation

estimation of many, by no means less salutary, or even less agreeable to the palate. The honourable company's hospital at Diamond Harbour, which was erected at a large expence, has not as yet proved of much utility to their service; but a garden for the provision of fresh vegetables, on a very adequate plan, in the same neighbourhood, would demand no very considerable sum; and might prove of infinite advantage. It is proper to observe that vegetables, which are peculiar to the soil, require very little culture in those seasons.

With respect to drink, we should not doubt the universal superiority of pure water over all other beverage in every situation. This article, with some trouble indeed, may be always procured of a good quality, and easily cleared from the muddiness by sprinkling the smallest quantity of powdered allum into the jar or cask, and allowing it to remain at rest for a day or two. It would shock the prejudices of people greatly, to assert that wine or spirits, taken in great moderation, must necessarily prove hurtful; but it may be safely asserted, that the less of any fermented liquor which is used, the greater probability there will be of preserving health in Bengal. One plausible argument occasionally sug-

gested in favour of the continuance of the allowance of drams, not only to the sailors in general, but likewise to those whose names are enrolled on the sick list. It seems that drams are the current coin of the ship, particularly at sea. Sailors, destitute of reflexion, and slaves to their senses, are scarcely sensible of the value of any object which has not an immediate use. A dram is consequently of more consideration to them than a piece of coin, which would procure them a number of drams at a remoter period; nor is coin of any kind, at least of the smaller denominations, very common on board of a ship. Hence every little office is repaid in this currency; and as the sick stand most in need of the assistance of others, they should not be deprived of the means of purchasing or rewarding it. The tendency, however, of this practice would naturally be, that the most useful persons on board would soon become the greatest drunkards, and in a short time consequently the most useless, as their supplies of liquor would be unlimited. This argument therefore operates decidedly against the allowance of drams, at least to the sick.

The next article recommended for the preservation of health, is the most particular attention

attention to cleanliness in all its branches. This obviously includes a constant ventilation and frequent scouring of the decks, as well as a prohibition against the number of chests, which are generally allowed to crowd the lower deck. The hammocks should never be permitted to remain below during the day, if it do not rain, and the people should be occasionally compelled to wash them. Soap might be furnished to them for this purpose; for what is generally called Bombay soap lathers well with salt water, and is extremely reasonable in price. Clean clothes are perfectly in the power of the poorest individuals in Bengal, as well from the cheapness of the materials as of the washing; but the most essential article of cleanliness is fortunately also the most accessible. The general bath is attended with advantages, even independent of its cleansing effects. Seamen should be compelled to wash their whole persons as often as possible, and officers will experience the advantage of its daily use. Authors who have written large treatises on the diseases of warm climates, from the warm climate of a chimney corner in Europe, have given the most positive prohibition against the use of the cold bath in the prickly heat and other cutaneous eruptions; but these are the mere



effusions of speculative men, and deserve no manner of credit. The cold bath should not be interrupted on this account. It has not been observed of the smallest disservice in great numbers of instances, under every variety of constitution, age, and sex.

No further notice may be taken of the other heads of prevention, except that of intestinal evacuations, which is by far the most important of any. These indeed, even as prophylactic, must often be used to an extent that would surprise European practitioners, if given in those disorders in which they are by them deemed most necessary. Castor oil, or a combination of calomel with resin of jalop, scammony, cathartic extract, and other purgative medicines of a small bulk, are best adapted to this purpose.

In the preceding pages, the writer has endeavoured to suggest such hints respecting the preservation of health in the honourable company's ships, as a long experience in India, joined to the opportunities which occurred during the Houghton's voyage, enabled him to communicate. He is sensible that so small a share of experience in the sea line would give but little claim to attention, if a residence of nearly ten years in India, and a constant employment in professional duties during

during that period, may not be thought to counterbalance in some measure the disadvantage. Under the article of prevention, the observations of others may possibly have been sometimes repeated ; but the remarks that may be made on the treatment of the most frequent disorders in Bengal, will contain few opinions perhaps, but several modes of practice, of which the faculty are less generally apprised. Some of them must necessarily appear of a nature the most extraordinary to European judges, as well as to most medical gentlemen in India ; and if the decision on their merits be abandoned to the former, they will infallibly experience an immediate condemnation. He deprecates a trial by incompetent judges, and submits the merits of the cause to the determination of the tribunal of facts alone.

To oppose, or even to controvert, the doctrines and the practice of the most eminent writers, teachers, and practitioners of the present age, is a service of danger, in which no man whose livelihood depends on the extent of his practice, and consequently on the recommendation and protection of his senior brethren, will venture to engage. The attempt would prove vain, and ruinous perhaps to his future success in Europe. The slight-

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est punishment would probably be the derision of the faculty, and the neglect of all the world. But the happy predicament of the faculty in Bengal, which renders their income independent of the opinions of their brethren, or of the public at large, allows them a liberty of thinking and talking on professional subjects, and gives scope to the exertions of their own judgment in deviations from common practice. These are advantages which the former do not possess, or dare not exercise, under the dreadful apprehensions that any secession from common routine might expose them to the imputation of rashness, and operate to their utter exclusion from lucrative practice.

With such advantages in favour of medical gentlemen in that country, it is very surprising that more improvements have not originated amongst them. It is true, they first introduced the proper treatment of obstructed liver; and although this improvement is not of a very recent date, yet few practitioners in Europe, and those perhaps only in England, have as yet acquired any distinct idea of the nature of that disorder, with the present mode of treatment.

The proper management of fevers, and of other diseases, is not perhaps equally general; for

for there are, no doubt, some medical gentlemen, both in the honourable company's settlements and ships, whom judgment and experience have not as yet taught to relinquish the doctrines of universities, and the practice from books so little calculated for any meridian but their own, in favour of means that are obvious, simple, and natural.

## F E V E R S.

A VERY few general observations shall be first offered on the fevers which generally occur in the honourable company's ships, and in Bengal; next, some cursory remarks on the principal medicines in use amongst their medical servants; and conclude with a concise statement of the method of cure, which has seldom, if ever, on a fair trial, failed.

Doctor Pally, at Madras, was probably the first who ventured to confide in his own observation, and to deviate from the destructive practice of the times \*. The few who have had opportunities of observing the methods

\* The name of another gentleman of eminence was originally introduced here, but is now omitted, as the author was informed he had expressed dissatisfaction on the occasion.

which this gentleman pursued with success, are not sufficiently numerous, active, or communicative, to afford them general currency. Two years ago, an improper method of treating fevers was thought to prevail in many parts of the country, not altogether from a neglect of the proper means, but in general from a timidity, which deterred gentlemen from the exercise of those means to an extent that would have ensured success. Relinquishing the task of subverting old, and establishing new theories, it may be asserted in general, that the ideas entertained of the origin of fevers in warm climates, at least in Bengal, are probably erroneous; that the truth of this assertion will principally appear from a mode of treatment which has been attended with invariable success; that, to the degradation of spasm, and other ingenious hypotheses, with the practice founded on them, the order of pyrexiaë, under the general denomination of fever, may be deemed universally to originate, in those latitudes, from the bowels and their contents; that the indications should consequently arise from this source, and the curative means be derived from such medicines as operate on those parts by evacuation or otherwise, but particularly by *purg-*  
*ing.*

As the symptoms, amongst nosological writers, constitute the disease, and these as effects are not generally removable without the previous removal of their cause, we must search for the cause of these symptoms in the circumstances which attend their removal. If the circumstances which accompany or effect the removal of disorders, according to prevalent notions, diametrically opposite, be exactly similar, it is reasonable to conclude, that the cause which these circumstances evince must be the same, notwithstanding the variety and apparent contrast of the effects. If the removal of all that variety of symptoms, which have been supposed to constitute the distinct fevers, inflammatory, putrid, nervous, &c. has been attended by the same circumstances, and effected by the same means, it will be equally reasonable to infer, that the cause of all these fevers is one. That instances of such appearances as are said to attend different species of fevers have originated from similar causes, have yielded to similar means, and that these means have been chiefly purgatives, a comparison of a large collection of cases, which have occurred in Bengal, and on board a ship, with those appearances, will prove to the satisfaction of every person, whose judgment is unbiassed by prejudices



prejudices acquired at the university, or in the shop, or by the respect which is due in a certain degree to great names.

It should not prove a subject of wonder, that bowels oppressed by vitiated bile, mucus, or other offensive matters, must necessarily occasion such a variety and direct contrariety of symptoms, when it is acknowledged, that an affection of those parts is capable of exciting the motley tribe of symptoms which exist and succeed one another in the hypochondriac disease. There cannot be a doubt, but that the same disorder may disguise itself under appearances exactly the reverse of one another. The whole train of what are usually called nervous affections stands in direct proof of this, and affords the strongest suspicions of a derivation from a source somewhat similar to that of fevers. The venereal disease and the gout personate a variety of disorders; the latter would also seem to have some connection with the cause of febrile complaints. Many arthritics of various descriptions have fallen under my observation, but in no one instance without those symptoms which characterise vitiated accumulations in the bowels. In whatever manner the gout of Bengal be supposed connected with appearances of prevailing bile, whether

as cause or effect, it has never occurred to the writer, on any occasion, exempt from an obvious connection with that secretion; and it will be found that, in those climates at least, the proper management of gout fully warrants this judgment respecting its nature. Even in England opportunities have occurred of observing symptoms, which have been deemed gout by attending physicians, vanish immediately after very large evacuations of bilious fordes had succeeded the operation of purgatives. All the complaints of children, without an exception, have either the most intimate connection with, or derive their very existence from, the bowels; and possibly a similar connection, with a similar source of existence, pervades most of the disorders to which every age and sex are obnoxious.

When cases, therefore, occur in those regions, which exhibit the appearances of an inflammatory, or of a low nervous fever, should the physician, according to the best knowledge he may have acquired from lectures or from books, pronounce them distinct disorders, and opposite in their nature and treatment, the patient would, in general, have a very unfair chance for his life. But the error is more fatal in the latter, in which sudorifics, strengthening medicines, and cordials,

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dials,

dials, are generally prescribed. In the former, indeed, intestinal evacuations are allowed, in a limited manner, by practitioners in Europe.

An opinion generally prevails, that the diseases of warmer latitudes differ very materially from such as afflict the inhabitants of cold climates, and that the methods of treating them should consequently vary; under this impression, the best practitioners in India have ventured to deviate in some measure from the practice of Europe, or have rather exercised the means sometimes recommended by authors to a greater degree.

• Few medical gentlemen, unless on their immediate arrival in the East Indies, confine intestinal evacuations, at the commencement of many disorders, particularly of fevers, within the limits of European practice; but fewer still possess experience and courage to exert those means with the energy which is absolutely necessary for the preservation of a patient on many occasions.

Authors have recommended more considerable evacuations in fevers purely bilious, than in those of a putrid, nervous, or inflammatory character. A gentle vomit, and a laxative, perhaps one repetition of these with occasional glysters, constitute the whole of the  
evacuations

evacuations from the stomach and intestines; but in cases supposed to be of the true bilious kind, these evacuations, though procured by the gentlest means, are recommended to be repeated oftener, and prolonged, perhaps, until an intermission or a remission take place, when the bark is exhibited without loss of time, or a scruple respecting the quantity, to obviate a return of the symptoms, but in reality a recovery from the disease. When the nature of the disorder is very obvious in bilious fevers, most individuals of the faculty will not hesitate to promote those evacuations to a degree beyond European practice; and the means are only defective in celerity and vigour; still, however, with a prejudice in favour of the bark in the first, or amongst the most intrepid and intelligent in the subsequent remissions or intermissions of the fever. But when the bilious fever is disguised under doubtful appearances, or, to speak more properly, when the foul contents of the stomach and intestines excite appearances which personate the inflammatory, the putrid, or the nervous fever, and their several modifications, the evacuations are generally restricted to a vomit and a laxative medicine, perhaps a single repetition of the latter with occasional glysters, succeeded by diaphoretics,

vigorous antiseptics, corroborants, cordials, stimulants, opiates, and death ! A reference may be made to the diaries of hospitals, and to the journals of surgeons of the honourable company's ships, for incontrovertible proofs of the reality and frequency of these modes of practice ; and it would perhaps be strictly within the truth to add, their fatality also. On the first establishment of the purveying system in the Bengal hospitals, the enormous expenditure of wine, that favourite antiseptic, corroborant, cordial, and stimulant, is alone sufficient to place this assertion beyond a doubt.

Authors, but not of the first eminence, have occasionally confined their practice to evacuations from the bowels in fevers of different descriptions. Tissot endeavours to enlighten the faculty with respect to the treatment of certain fevers, by very considerable evacuations downwards. It is, however, observable, that amongst many instances of success attending these, the cases of an unfortunate termination which he produces, though treated during their whole course by evacuations both ways, proved fatal after all, from a deficiency of those very means. Doctor Lyffons, at Bath, had practised on principles of a similar tendency in fevers of different

denominations. Doctor Glas, sensible of the general prejudices against purges to any extent in these diseases, asserted their efficacy with great zeal. Sir William Fordice, whose extensive practice in London, during the greatest part of a long life, entitles him to every possible degree of credit, has dedicated a considerable treatise to the recommendation of incessant purging in the putrid fevers of that place; in those of the inflammatory kind, Doctor Moore has testified the utility of these discharges. If a mind enlightened by original thinking, an intuitive spirit of observation, and a sagacity which discovers the finest lineaments of diseases, as well as of characters, demand our confidence, no opinion whatever should be allowed to stand in competition with the sentiments of this gentleman. Doctor Duncan is an authority of great respectability, in favour of purging in the nervous fever of children. We may omit others for the present; none of them, however, are to be found, if it is necessary to except the latter, amongst the ingenious inventors of systems, or eminent professors of universities, who, unfortunately, in this instance, are the authorities that influence the practice of most gentlemen, until a larger or smaller share



of experience, according to the proportion of understanding which each may possess, displays such glaring truths, in direct opposition to the practice of those great men, as necessarily forces conviction on their minds.

In the opposite scale, Doctor Cullen, and most of the professors of that university, Doctor George Fordyce, and other lecturers in London, preponderate, as well from their number as from their celebrity. The generality of French physicians are more liberal of intestinal evacuations; but a true British spirit pervades the faculty, and compels them to view foreign practice with very little veneration.

It must be confessed, that Dr. Cullen's method of exhibiting antimonials in nauseating doses, to promote the cuticular secretions, is not only perfectly calculated to excite, but unavoidably productive of large discharges from the intestines; nor can they effect the former, exhibited in this manner, without a previous determination of the latter; scarcely any medicine operates with such violence downwards, as nauseating doses of antimonials; yet the relaxation of the feverish spasm on the skin is not, according to this gentleman of real genius, a secondary effect, immediately resulting from the removal of the contents of

the bowels, but a direct and primary effect of the medicine, independent of them, as the same cuticular spasm is supposed to be the direct cause of the fever. With a perfect reliance on this hypothesis, as purging is thought to lessen the determination to the skin, he declares himself inimical to it beyond a degree that must be deemed in general very trifling.

As these pages are intended for the meridian of Bengal, no further notice need be taken of the variation which climate may cause in the nature and treatment of these disorders, than to observe, that the writer's individual experience, particularly during the passage of the Houghton, through every variety of climate, has given him the strongest suspicions, and perhaps no mean proofs, that the difference of the former is not so material as to require any peculiarity in the latter, unless in the degree which is admissible in the treatment of the same disorders in cold climates, according to their violence, and the various circumstances of age and situation in particular instances.

REMEDIES.—We now proceed to the consideration of the particular means usually employed in the treatment of fevers. It may first be premised, that from the nature of this paper

it is necessary to claim indulgence for an apparently presumptuous rejection of the theories of others, without the proposal of a better; for some obscure hints without illustration, and many assertions without their concomitant proofs; but it may again be repeated at present, that there are ample materials to answer these objections, and to supply these deficiencies, to the satisfaction of the public, it is hoped, at no great distance of time.

Diuretics may be neglected without any interference with the prejudices, or risk of the displeasure of the faculty; they now claim little or no attention in the practice. It may just be observed here, that the urine in fevers does not exhibit any circumstances predictive of the event, until other and more obvious appearances have yielded less fallible sources of conjecture.

A numerous class of antispasmodics, corroborants, and cordials, may be treated with similar neglect; some of this class, however, demand a degree of attention, which they cannot receive at present beyond the very narrow limits prescribed to this paper.

Blisters do not possess, amongst the generality of practitioners in Bengal, that eminence which they have held in European practice; even in that country they experience

undeserved support : that they have any other influence on the general system, except what proceeds from the pain they occasion, is very doubtful ; that their beneficial effects have at any time exceeded the temporary suspension, or the entire removal of a morbid effect, or a local action, is still more improbable ; but that they have ever contributed in any other manner, either as antispasmodic or stimulant, to the general removal of fever, appears utterly impossible, from a consideration of the causes assigned to fevers in Bengal, as well as from experience. On the other hand, their pernicious effects have been equally trifling, unless where the misapplication has occasioned pain, and a consequent increase of the febrile symptoms. In this manner they have often been the instruments of much mischief, but have proved more frequently pernicious by their insignificance, and the blind confidence of the practitioner in such means, to the neglect of others. Upon the whole, they may be excluded entirely from the treatment of fevers with safety, though their application may sometimes procure ease to a patient, and in this way facilitate the removal of the cause, by the operation of other medicines, or contribute to the completion of a cure by their action on local effects, during the existence of

of the cause, or on morbid habits after its removal.

The exhibition of bark on its first introduction was confined to complete intermissions; after a considerable trial of its powers in that instance, some daring men ushered it into fashion during remissions, when it soon procured admittance into continued fevers of every character, excepting those denominated inflammatory, and it reigns at present with a sway equal, if not superior, to antimonials. It must be acknowledged, however, to the credit of the honourable company's medical servants in Bengal, that it holds not such unbounded possession of practice in its improved state in that country; yet the prejudices in its favour are still such, as to render it on many occasions an active poison, to the destruction of numbers. That it is a medicine occasionally applicable to the various modifications of fever, in the form of intermittent, remittent, and continued, as they occur in Europe, shall not at present be denied; but that those occasions, even in the first, are very unfrequent in warm climates, we may religiously believe. During the first stages of every kind, before evacuations, powerful in proportion to the violence of the symptoms, have taken place, it is

bition is in direct contradiction to the nature of the appearances, and to every indication of cure, and consequently must always be improper, and often fatal; but in no one instance, under any number and quality of symptoms, does its early exhibition appear so pregnant with destruction, as during the first appearance of those symptoms, which are deemed highly putrid, and which, according to the general opinion of the medical world, demand its instantaneous use in the largest possible quantities. It is in vain to remonstrate against the absurdity of attempting the correction in lieu of the expulsion of putrid matters. The patient's weakness, they will affirm, evinces the impossibility and the fatality of the latter; and experience, universal experience, has proved the efficacy of bark and wine. An obscure individual opposes such prejudices in vain; in vain he asserts, that the general putrescency cannot in any instance arise, unless from the putrid contents of the stomach and intestines; that supposing putridity to exist sometimes in the general system, it can only arise from a course of absorption in the bowels; that, consequently, symptoms evincing the existence of those matters must always precede general putrescency; that in reality the putrid appearances are in

general

general, and always in the beginning, referable to this cause, without any general taint; that the most obvious indication is the evacuation of those matters, where it can be effected by any means the most powerful; that the general taint may invariably, in every instance, be prevented by early and vigorous evacuations; that the strength will ultimately be found to increase in proportion to these, until the cause be removed; and that then the bark, in lieu of a poison, may become of some use as a medicine.

Instances, however, have occurred, sometimes in the most violent cases, when no means whatever of procuring that evacuation have been found to succeed. From whatever cause this inert state of the bowels may be supposed to proceed, bark and other powerful medicines have either occasioned those evacuations, or have rendered the part susceptible of the operation of evacuant medicines. These instances, however, are very rare; they seem occasionally to have arisen from the use of large quantities of spirituous liquors, which, according to prevalent notions, should have occasioned that inflammatory state of the bowels which is deemed absolutely prohibitory of the bark.

What has been advanced with respect to the



the exhibition of this drug in putrid cases is applicable, in a certain degree, to all fevers, to the nervous in particular, in which it can seldom, if ever, be prescribed with advantage, or without detriment. Intermitents of the worst kind do not always require it, and remittents still less frequently. It may possibly possess strengthened virtues, valuable in proportion to its exemption from the heating qualities of other medicines of this class. It frequently exerts a power by no means equivocal, in stopping the paroxysm of a tertian; whether it be proper, or otherwise, to accomplish that object by such means is not the question at present, and, perhaps, no medicine, excepting opium, so effectually operates to the suppression or destruction of an effect, after the removal of its cause; or to the correction and prevention of the return of a diseased action become habitual.

Notwithstanding the opinion has of late years been nearly exploded, we must forego decisive experience, and renounce the evidence of facts, could we divest ourselves of a firm belief, that the bark has often directly or indirectly occasioned those obstructions, and other inconveniences, in warm climates, which on its first introduction were ascribed

Opium has been exhibited in various stages of different fevers. To assuage the violence, and to shorten the duration of a tertian paroxysm, it was recommended with all the authority of Doctor Lind, whose opportunities of ascertaining its effects were unlimited. But one might be led to suppose, that personal experience of its effects was by no means requisite, previous to the liberal commendation of a medicine, since a late unfortunate gentleman of uncommon genius, but of a very inadequate share of practice to enable him to ascertain the virtues of medicines, ventured to extend the exhibition of opium to almost every stage of every fever. In particular circumstances of fever, however, it has been noticed by several authors, particularly as of frequent utility in the nervous fever. So many more authors write *for* practice than *from* it, all affecting experience, that it is difficult to know the degree of credit which is due to their assertions. It has come within the scope of one individual's practice to afford its powers the fairest possible trial in the tertians and other fevers of Bengal, as well as in the ship fever; and he can venture to give a pretty positive assurance, that its exhibition will, with the exception of very few instances, be found extremely mischievous, even in com-

not rest entirely on assurance, as the public shall be soon in possession of the proofs.

Of all articles of medicine or diet in diseases, wine has been the greatest favourite, as equally suitable to the prejudices of the practitioner and the palate of his patient. Physicians in Europe, from choice or necessity abstemious, have not acquired such an extensive personal acquaintance with the virtues of this juice, as their brethren in those distant regions; the sagacity of the latter has long deemed a liberal use necessary, as a prophylactic, in the preservation of their own health and spirits in such oppressive climes, in the counteraction of a relaxed system of nerves, to which their companions are deplorably exposed, and in the recovery of their patients from disease; so that in every predicament of life wine becomes a panacea. With these advantages it would have been very extraordinary indeed had the exhibition been confined to moderate potions. It required the hand of government in Bengal to restrain the libations in the hospitals within narrower limits. It would be invidious to dwell at present on the former existence of such a monstrous evil in the hospitals of Bengal, since it has already received a check from the spirit (certainly an enlightened spirit in this instance at least) of public retrenchment. It

is probable the abuse of wine never did exist of such a magnitude, in the honourable company's ships; but as it may still be supposed to exist in private practice to its utmost extent, and, notwithstanding all restrictions, to a very considerable degree in hospitals, the subject cannot be dismissed altogether without further notice.

In all fevers, in which appearances of debility prevail, without further reference to the cause, wine is prescribed immediately, consequently those symptoms, which have been called the nervous fever, have at all times procured for the patient a large supply; but whenever putridity has been supposed to characterize the fever, no quantity of this antiputrescent cordial, which the stomach could retain, has been deemed excessive; accordingly the patient has been gorged, until the violence used has, in some instances, forced the most copious and most salutary evacuations by vomit or stool, but in general an increase of costiveness, fever, delirium, &c. has ensued. If the abuse be such during the prevalence of symptoms of this character, what must be the magnitude of the error, when it is exhibited during any period, but particularly at the commencement of fevers, which the practitioner himself calls bilious, though some doubtful symptoms of putrescency

treescency should be thought to accompany them ?

Experience has afforded the fullest conviction, that wine is very ill adapted to any period of any fever in those latitudes, when the treatment has been proper in other respects. The general exhibition of a medicine, whose merits depend on the misapplication of other means, is no evidence of an improved state of practice. While the character of a medicine saves the practitioner the trouble of observing and prescribing after nature, it possesses no such saving powers for the patient. Were the virtues of this article on any occasion, or in the smallest quantity, essential to the cure, or to a recovery from a state of convalescency, the native soldiers of Bengal would have very little chance of either ; for their religious prejudices compel them very generally to consider wine with sentiments of the utmost abhorrence, even under the palliating appellation of a medicinal mixture. Of the unconquerable obstinacy of this prejudice ample proofs were afforded on the writer's first arrival in India, in hospitals containing nearly three hundred natives, at a time when he had not as yet divested himself of the prepossession in favour of wine, which he had imbibed in Europe ; at this period, conse-

quently, he prescribed it on all occasions with great liberality.

It will probably be found a vulgar and pernicious error, that persons who have been accustomed to the free use of wine during health, require a greater proportion under the pressure of sickness ; the very reverse may possibly admit of proof.

He may venture to declare, that in a wide field of instruction from cases, he has not observed one, in which he could pronounce the exhibition of wine as a medicine at all eligible, and not many which appeared to require it as an article of diet ; but that he has witnessed innumerable instances of its dangerous and fatal effects in fevers. No doubt, the mischief occasioned by wines is in proportion to the quantity of spirit in each ; the weakest, consequently, will prove the most innocent. Claret may possibly have the advantage of port and madeira, and hock may be still less detrimental than the first. Wine of every kind would seem to deserve a preference to bark and opium, as it is not attended with effects equally permanent in suppressing the secretions of the bowels. Some wines are even thought to possess a laxative power ; bark also, when it operates by stool, as it sometimes appears to do with

confi-

considerable activity, cannot perhaps be accused, with justice, as the author of much mischief.

These observations on bark, opium, and wine, are indeed very repugnant to the doctrines of the late Doctor Brown; but it is hoped, that the number of his disciples, or the prevalence of his methods of treatment, is entirely confined to those gentlemen, who, like Doctor Brown, have had little opportunity of exercising the practice on any but themselves. To such, however, whose minds are more susceptible of the impressions of novelty, without adequate proofs, the most positive assurances may be given of the dangerous consequences that would inevitably result from such a liberal and indiscriminate use of those powerful medicines in the fevers of hot climates. Doctor Brown's practice may possibly apply to some circumstances of low fever in Europe; but the occurrence of such fevers will be found very rare in the meridian of Bengal, particularly in the upper provinces, where most acute disorders have, what would be deemed in Europe, and according to Doctor Mosely, in the West Indies, an inflammatory aspect, and are also characterised by larger secretions of bile. Whether these secretions be deemed a cause or a



consequence of the disorder, they will surely be allowed to require active means for their immediate discharge. We may submit to the determination of any considerate practitioner, the merits of Doctor Brown's system, under such circumstances as these. This gentleman's tenets demanded particular notice here, as several addresses, attributed to surgeons of the honourable company's ships, and recommendatory of Doctor Brown's practice, were published in the news-papers at Calcutta, during the years 1788 and 1789.

Doctor Robertson's late publications furnish a recent and broad contradiction to the sentiments expressed in this paper on the subject of these medicines, particularly of bark. With what degree of confidence can a tyro in the practice of physic peruse such a variety of contradictory methods of treating the same diseases? Is it not extraordinary that patients, who are perfectly aware of this distraction of medical opinions influencing practice, should place any dependence whatever on the efficacy of the science, or the skill of its votaries? Doctor Robertson's extensive opportunities give him a just claim to pronounce a pretty positive judgment on this subject; others arrogate a title of equal respectability in favour of their peculiarities.

Expe-

Experienced physicians, as well as the youngest members of the faculty, must be confounded with this great variety of contending atoms in physic. What opinion can possibly be entertained of this chaos? I can only aver, that it has contributed to render me extremely diffident of the accuracy of my own senses, and of the evidence of the most stubborn facts. It is in vain to say, "*Medio tutissimus ibis*;" that the point of perfection, or of safety, is exactly in the middle of this circle of extremes. From the days of Hippocrates to this hour, that imaginary point has not been ascertained; the advice has been often repeated, the declaration often made, but promptitude of assertion, and facility of proof, are often entire strangers.

Is a fever, like a nuisance in the street, which may be equally well removed in every opposite direction of the compass, removeable from the constitution by a contrariety of means? Physicians seem to think, that it can make its exit in every direction, through the skin and other outlets, whose sites are the reverse of one another. Will the means of expulsion be allowed to be as various and opposite as the channels? This view of the subject is by no means ludicrous. Our knowledge of first causes and effects in

medicine is so limited, that we cannot deny with propriety, but what remedies of an opposite operation may have the same ultimate effect in the restoration of the constitution to its natural habits; and perhaps the ways which lead to this object may be as various as the high roads to a metropolis.

A conjecture of this extraordinary nature can alone reconcile the contradictory merits of Doctor Cullen's, Doctor Brown's, and other methods of treating fevers. But we may be more rationally inclined to think, from this mass of positive assertion, and apparent and plausible, if not certain proof, that it is extremely difficult to kill in fevers; and that, when death is not the consequence of the patient's own efforts, the practitioner must be endowed with the most uncommon powers of destruction to accomplish this purpose.

**VENESECTION.**—Perhaps a general division of remedies into such as promote and oppose evacuation, would form a tolerably accurate outline of distinction; most of those which have been noticed are of the latter class; and we may enter on the subject of the former with the article of venesection.

Symptoms, which attend the commencement of fevers in Bengal, will appear on a comparison with the symptoms of inflammatory fever, in many instances exactly similar; yet the inflammatory fever, independent of local affections, is generally acknowledged not to have existence either in ships or on shore in that country. The full, strong, rapid pulse, red eyes, bloated and florid countenance, burning skin, high-coloured urine, parched tongue, &c. are frequent attendants, particularly on the first attack of fevers, which occur chiefly in the season of the hot winds, and in constitutions habituated to excesses. In these fevers the usual effects of venesection appear at first very favourable, by a total remission of the excessive heat, through the means of a profuse sweat; if fortunately of an intestinal evacuation, which sometimes occurs, the benefit may be permanent, though the patient is unnecessarily weakened. It is not often, however, that the intestinal discharge, in this instance, proves permanently beneficial. The practitioner's mind, rivetted on other means, overlooks the benefit occasioned by this discharge, or attributes it entirely to the bleeding; and although he may not be intrepid enough to repeat this, yet his whole attention is directed to the support of

its effects by perspiration, which he deems the natural and happy crisis of these disorders. The sweat which flows after venesection is very profuse, and of course debilitating. This discharge is supported with unremitting assiduity, to the great diminution of the patient's strength, and the increase of an obstinate costiveness. Tyfot, Doctor Paisly, and others, have observed, that venesection in certain fevers occasioned delirium at some future period of the complaint. Instances have occurred, in which delirium did really appear to follow the venesection. The deceitful interval of ease, which succeeds this operation, soon vanishes; the fever rekindles, probably with redoubled fury, and finds the patient much less capable of resistance to its violence, exhausted by the bleeding, and by the excessive discharges from the skin, which have been imprudently prolonged by various means.

These fevers frequently commence with every symptom of a high degree of inflammation in the region of the liver, which, as they arise from the foul contents of the stomach, duodenum, &c. subside immediately on the evacuation of these. It is obvious, that the use of the lancet on such occasions is unnecessary, if not pernicious; yet it often  
proves

proves the first resource of medical gentlemen on their arrival, as well as of those who have had more opportunities of observing, and have acquired a greater share of experience. Many cases of real inflammation in the substance, membranes, or appendages of the liver, are attended by symptoms of considerable fever; but on these occasions the fever will seldom be perceived to precede the local affection, as in the former, and the pulse will suggest an idea of hardness, not equally striking in the other. The discrimination is not very difficult to an experienced person, and cannot be discussed to a greater extent in this paper. The operation of purgative medicines will afford the best proofs of the nature of the complaint, and may, in all doubtful instances, precede venesection with safety and propriety.

When symptoms of incipient putrid fever occur, the cautions against this remedy are so pointed and numerous in authors, that few gentlemen will venture to prescribe it; but it is not always a very easy task to the inexperienced to form a decisive opinion on the nature of the symptoms under their inspection. Instances of the use of the lancet, in almost every variety of fever, have occasionally come within observation. It has not

only been known in acute cases, but also in chronic fevers of great obstinacy, in which it has been used by gentlemen of real experience, when they have appeared totally at a loss how to proceed, after the failure of other means; but on no occasion, to the best of my judgment, has this remedy been attended with ultimate success. Fevers sometimes occur in those latitudes, which, after one or two regular returns of cold and hot stages, assume the continued form, and preserve it very obstinately, notwithstanding intestinal evacuations, with symptoms nearly resembling the inflammatory. On such occasions, venesection will, no doubt, sometimes procure an immediate remission, but with a risk of a fatal termination on a return of the symptoms.

This remedy is never so likely to be misapplied, as in puerperal fever, on the inflammatory or putrid nature of which the most respectable authors are divided. It has probably often proved fatal in this disorder, sometimes of uncertain effect, but very seldom advantageous, where no obvious local affection has prevailed. It may be affirmed, that as even this fever, in warm climates, originates from a source which venesection cannot affect, the vitiated contents of the stomach



stomach and intestines, its use should be exploded, or greatly restricted, in the puerperal as well as in all other fevers of Bengal. There is some reason, however, to fear that the influence of an authority, such as Doctor Mosely's, might tend to introduce into Bengal practice a remedy which he has declared himself to have found extremely successful in the West India disease, which he calls the *causus*, or ardent fever. The same form of fever is by no means unfrequent in Bengal; but it is to be hoped, that the same remedy will always remain of very unfrequent use in that country.

The violent affections of the head, chest, and other parts, which frequently attend fevers, seem to indicate the instantaneous use of the lancet; but as these arise from a similar source, they readily yield to similar means.

**SWEATING.**—The excitement of sweating, at the commencement of fevers, by violent means, with few exceptions; is now universally exploded. But the practice of raising and prolonging the cuticular secretions by remedies, which are gentle and gradual in the production of their effects, is adopted as generally. Antimonials are made principally subservient to this purpose; and notwithstanding the erroneous, though prevalent mode

mode of reasoning on their effects, it will readily be allowed, that they are perfectly calculated to answer this indication, by their powerful and sometimes violent action on the stomach and intestines, the consequent removal of vitiated contents, and ultimate restoration of the cuticular discharges. But it is equally evident that, if this be the progress of their operative powers, the affection of the skin, under its various and favourite names of spasm, &c. &c. will be degraded from the rank of a powerful proximate cause to that of a secondary effect; from the proud eminence of the principal object of a physician's attention, to total or nearly total neglect; and that sweating will sometimes even require a strenuous counteraction; that, as it does not appear consistent with reason to insist on the exit of an unwieldy mass of corrupted matters, by the labyrinths of the circulation from the bowels through the skin, sweating, though in some instances it may afford a temporary palliation, at the expence of strength, cannot remove the cause of the disorder, and must consequently prove often useless, in some cases egregiously trifling, and in many others dangerous and fatal. What authors are pleased to call the *low nervous fever* forms no exception to this decision. As the diaphoretics

used in this disorder exert their activity more on the general system, and less on the particular secretions of the bowels, they become, proportionally, more destructive.

To avoid prolixity at present, a chain of assertions may be offered, of which the connection and validity shall appear in a future publication. He may therefore affirm, that the foul contents of the stomach or intestines are capable of exciting the cuticular secretions morbidly; that in the instances of spontaneous sweats described by authors, which have not proved beneficial, these have probably been the exciting causes, and, in conjunction with mal-practice, have had a share in all forced sweats; that from the entire expulsion of these from the body, or their removal from the neighbourhood of the stomach, all sweats of a favourable termination, and such as have been esteemed critical, have flowed; that sweats afford not any conjecture respecting the event, which may not previously be formed from an observation of the progress, or the actual predicament of the exciting causes in the bowels; that, in the increase and diminution of the oppression about the præcordia, and other symptoms, which appear to accompany sweating, authors have uniformly mistaken the cause for the effect.

effect, and the effect for the cause ; that the most powerful means to promote perspiration consist in the removal of the cause of the fever, by evacuating the foul contents of the stomach or intestines, principally by purging ; that as an effect may continue to operate for some time after the removal of its cause, or a diseased action may become habitual, perspiration will not always succeed immediately to the expulsion of the offending matters, nor the fever cease ; that in a protraction of this nature, medicines which do not evacuate the bowels, may be possibly adapted to the counteraction of those effects, and the restoration of natural habits to the skin ; that all diaphoretics, not direct evacnants, whenever they have proved serviceable, have operated in this way ; that on these principles, attempts to excite perspiration in any other way, during any period of fever, than such as promotes evacuation from the stomach and intestines, are always to be avoided, and a spontaneous tendency that way to be checked by cool air and other means, until evacuations have taken place ; and that, consequently, almost the whole tribe of sudorifics should be exploded from practice in Bengal.

VOMITING.—Perhaps there does not exist

a single species of fever in which vomiting is

omitted by practitioners and authors of every class. It is generally, indeed, the very first resource, and in reality appears, at first sight, the most eligible and effectual means of expelling the matters which excite fever. Antimonials are, or ought to be, the only medicines employed for this purpose. These are commonly administered in such doses as produce and support a tendency to vomit for some time before the actual evacuation takes place. This is the form of exhibition most approved by the whole body of the faculty, but, particularly by the Cullenian school; and it is presumed that the honourable company's medical servants, as well in their India settlements as on board their ships, have, with very few exceptions, conformed at last to this safe, and often efficacious practice. We may pass over the doctrines, which attribute the immediate effects of emetics to antispasmodic, mechanical, or other virtues, and in few instances to their evacuating power, either directly affecting the stomach, or, ultimately, the intestines, and promoting fresh and healthy secretions from all the bowels; and we may assert, in general, that it is by the exertion of these primary properties alone they prove sometimes of such extraordinary efficacy in fevers. In a former article we have antici-

pated the nature of their operation as sudorifics; and we may now venture to suppose, that they possess not any specific charm to fascinate and destroy fever, although they must be acknowledged well adapted, powerful, and successful instruments of health, in the hands of persons even of common skill in these disorders; yet frequent trials have long afforded a conviction, that their exhibition is generally premature, sometimes altogether unnecessary, and not unfrequently attended with danger; that their use should not precede evacuations of the grosser matters, lodged as well in the lower intestines as in the vicinity of the stomach, unless in cases of impending fate, when the former cannot be speedily accomplished, or when spontaneous vomiting and violent retching render their exhibition eligible; on these occasions, even the antimonials should be joined with some purgative medicines, principally in a liquid vehicle, to give the matters a final tendency downwards, through their natural channel; that the action of vomiting, before the neighbourhood of the stomach and the intestines have been in some degree unloaded by purgatives, may force into the stomach matters more pernicious in quantity as well as quality, than those which had a previous existence

existence there ; that, consequently, the distress and danger may be aggravated by such means ; that intestinal evacuations will frequently supersede the necessity of using antimonials in that way ; that, in many instances, at the beginning of violent fevers, antimonials, particularly in the nauseating form of exhibition, prove too feeble, and ultimately fatal, from the blind confidence reposed in them, to the exclusion of means as powerful and rapid in their operation as the fever they are intended to oppose ; and that, at certain dangerous periods of fever, when nothing but the most active purgatives will save the patient, subdue the disorder, and restore strength, antimonials in any form, or emetics of any kind, even when they operate in the most favourable manner, as intestinal evacuants, are generally deficient in the vigour of this very operation, while they contribute, in a more particular manner than mere purgatives, to destroy the remaining strength of the patient.

The action of the stomach, which accompanies nausea, is admirably calculated to promote the discharge of its contents into the intestines, and so far may prove the very best means of cure. But this action gives a great sense of debility to the stomach, as well as to



the system at large, and medicines merely purgative ~~do~~ exist, which answer the same purposes, unattended by similar inconveniences. It is acknowledged, however, that in many instances their assistance becomes indispensable, in slighter attacks perhaps adequate to the total removal of the distemper, and always necessary at some period or other of fevers of considerable duration.

Although the writer disclaims every wish to depreciate the value of these medicines, either in the form of active emetics, or of nauseating doses, while he endeavours to procure precedence to more natural and more powerful means, yet the apparent disrespect, which he may be thought to have shewn to these favourite indications of cure, may possibly excite the reprobation of very enlightened and experienced practitioners, even in Bengal; he shall trust to a very early publication of the proofs, and to a more general diffusion of the practice recommended in this paper, for his complete justification.

PURGING, or, THE CURE.—As the method of treating fevers depends principally, if not entirely, on the use of proper purgatives, it will naturally be contained in this article. The consideration of glysters may with pro-

priety have place here; but this paper has already so far exceeded the limits which were at first prescribed to it, that the whole of this important article of purging must be treated with much more conciseness than could have been wished or intended. We may only observe, with respect to glysters, that they can seldom be expected to evacuate more than the contents of the rectum; that by their assistance in this particular they facilitate the operation of purgative medicines, which they may always be allowed to precede or accompany, until the grosser matters have been discharged; that, after this period, though their operation is seldom productive, yet a languor and degree of weakness will generally be found to ensue; that their virtues, during a state of convalescence, are too trifling to remove or to obviate costiveness, and prevent a relapse; that their administration is allowable only at the commencement of fevers, unless the vicinity of the rectum be loaded with grosser feces during any other period; but that the reliance, which practitioners have misplaced on their evacuating powers, has often rendered them instruments of destruction, notwithstanding their general insignificance in these complaints.

We may now proceed to the principal ob-

ject of these sheets, the treatment of fevers by active purges. In confirmation of the validity of the writer's remarks on other medical means, the proofs are chiefly negative, as he has not often experienced the necessity of their application; but such as he shall adduce on a future occasion, in support of the indispensable necessity and extensive use of purgatives, are of such a positive nature, evinced in such a variety of instances, and corroborated by such striking contrasts in the modes of treatment, that they cannot fail to force conviction on the most bigotted minds. At present, however, he must confine himself to general assertions.

It has already been observed, that the practice of gentlemen in Bengal, at least in some fevers, is deficient rather in the extent than in the nature of the means. This reflection, however, may be restricted to the most experienced. Those who trust to information acquired from books and lectures will naturally crawl on in a blind routine, proceed greater lengths in error, and misapply means altogether. The difference between these two classes consists in the gentle exhibition of intestinal evacuants, and in the total, or nearly total, omission of them. The former have added to their own experi-

ence the authority of authors, to whose writings the latter have not had access, or whose opinions, unsupported by a glare of reputation, they have despised.

From the earliest periods, decided opinions in favour of the exhibition of purgatives may be detected in authors of every class, as far as opportunities of consulting them have offered. Some amongst the less illustrious of modern writers, it has been already mentioned, recommend them to a considerable extent; but not one, as far as reading serves on this subject, to the degree and in the form which becomes indispensibly necessary in most instances.

The necessity of purging is not restricted to any species of fever, but affects every set of symptoms usually denominated fever, in proportion to the multiplicity and dangerous tendency of those symptoms. In that country, many modifications of symptoms, supposed to constitute distinct fevers, particularly the putrid nervous, derive their very existence from the neglect of those means at an early period. We may suspect, that what is generally understood by the appellation of putrid fever, under the various forms and circumstances of ship, hospital, jail, puerperal, and in Bengal, jungle, pukka, and hill fever, would never have existed the

terror of mankind, had nature been diligently watched, and those means of prevention used. By the acknowledgment of all authors, putrid fever seldom assumes its characteristic symptoms on the first notice of the indisposition. In situations and circumstances of those climates, in which fevers of every kind might be deemed most liable to degenerate into that form, such putrid appearances have not been known of any degree of violence, during the successful treatment of some hundred cases.

Purging, therefore, on the first hints from nature, will generally obviate the access of all fevers in every predicament. On the first attack of these, purging will infallibly prevent the approach of dangerous symptoms, particularly those called putrid, and, at their height, will always save, and generally cure, the patient. It is not to be expected, that in every instance they shall answer this character without some assistance from other remedies, particularly emetics. Cases have occurred, in which the immediate and rapid exertion of every power, productive of vomiting as well as purging in their utmost vigour, seemed scarcely sufficient to rescue the patient from almost certain death; and it was deemed very fortunate when these effects could be produced by any means the most powerful.

In slight cases, the quality as well as the quantity of the purgatives in common use may suffice. The saline and the oily, in whatever vehicle, do not appear to operate much beyond the expulsion of the grosser contents of the intestines. The former very seldom contribute to convey any impurities of the stomach into the intestines; and their operation, after the first discharges, is considerably debilitating. The action of the latter, it must be acknowledged, is often productive of large bilious discharges, and their efficacy, after the first evacuations, superior to the former. Castor oil does not appear to increase the feverish heat as much as the others; nor have those pernicious qualities, which are attributed to oily medicines in fevers, been perceived. That they may not, however, ~~remain~~ too long in the bowels, their operation should be rendered certain and early by a repetition. This is a precaution that should never be neglected after the exhibition of any purgatives; the action also of this oily medicine may be pretty considerable in the stomach. The peculiarities of these classes of purgatives may probably render each applicable to particular periods and circumstances of the disease. The saline purgatives possess one very great advantage over the other kind;

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kind; their activity may be greatly increased by the addition of various proportions of tartar emetic. By this combination, their action on the stomach and the secretions at large prove very considerable. The saline and oily combine with advantage.

Very few of the other orders of purgatives deserve any attention in these disorders, or perhaps in any others in that country. The symptoms sometimes yield altogether, or abate considerably, after the operation of these medicines; in all cases they should certainly be allowed precedence. But as the disease does not always arise from the quantity or quality of grosser matters in the stomach and intestines, or from any proportion of vitiated bile and other secretions, which the utmost power of these purgatives can affect, we must have recourse to such as are more active and better calculated to remove the cause of the complaint, which may frequently be supposed to arise from the quantity, deficiency, vitiation, or immobility of certain secretions of the stomach and intestines, particularly the mucus adhering to the latter. That the cause of the protraction of fevers is often connected with the state of the mucus, as well as of the other secretions, appears from the immediate cessation or alleviation of all the symptoms



toms on a copious discharge; and that the mucus is often vitiated in a most extraordinary manner, the senses of the observer will afford ample testimony. There are practitioners, to whom these cannot prove a source of information. The extreme delicacy of some gentlemen will not permit them to carry their researches so far; yet it is from this source, and this alone, that any precise knowledge respecting the nature, probable duration, and other circumstances of the disorder, but particularly the necessity of further evacuations, can possibly be acquired. It may be deemed particularly fortunate, that the purgatives which prove most successful in fevers are as mild in their operation as they are certain and powerful; that they are not subject to the inconveniences attending the other classes, for from their want of bulk they are more retainable in the stomach; and that from their specific gravity they may be supposed to reach more readily the sources of the evil, and to combat these with more success. Mercurial purgatives, particularly calomel, possess these advantages in the trifling quantity of two or three grains; but such small doses are seldom of much efficacy after the first and second, and a repetition would be esteemed rash by the generality

generality of practitioners. They have frequently, however, in the smallest proportion, an operation so extensive, as to remove the complaint altogether, in slighter cases, by copious evacuations. But other occasions require their exhibition in such quantities, and after intervals so short, as would terrify most of the faculty, even in India, and appear to practitioners in Europe necessarily fatal. The most trifling detriment, however, has not been observed in any one instance, though a discharge from the salivary glands has not unfrequently ensued. It is always, however, proper, as well to obviate these inconveniences, as to render their evacuating powers more certain, to urge their operation by other cathartics, especially in a liquid form. It may be received as a general rule, that the calomel, either alone or in conjunction with cathartic extract, resin, or extract of jalap, scammony, gamboge, elaterium, or the mass of laxative mercurial pills, should be exhibited at night, and the medicines necessary to promote its effects early the ensuing morning, as well as during the course of that day, according to circumstances. From two to ten or more grains of calomel, with a greater proportion of any of the other articles, may form a dose with the utmost safety; for these medicines,

medicines, as evacuants, do not act with a disturbance, nor perhaps with an efficacy, in the exact proportion of their quantities. These doses may and should be repeated every second night, or, according to the pressure of the symptoms, every night, as long as any thing offensive shall remain to be discharged from the bowels, in the form of grosser excrement, vitiated bile, mucus, &c. Forty or more grains of calomel, with a larger quantity of the laxative mercurial pill, have been exhibited with innocency, and with great benefit, in this manner, during the course of five or six days. Laxatives alone, or with additional efficacy from an union with antimonials, should be administered, not only in the mornings after the calomel, but in smaller quantities during the whole of the intervals; a very dilute solution of tartar emetic alone generally answers this purpose extremely well.

As symptoms called putrid, nervous, &c. indicate the excess in quantity and vitiation of the offending matters, and consequently the greater obstinacy and danger of the disorder, notwithstanding the general prejudices against the use of mercurials in putrid cases, this course of purging by calomel is more essentially necessary when such symptoms pre-

vail, than on any other occasion whatever.

There is little doubt but that puerperal fever, which a celebrated professor of midwifery in the university of Edinburgh deemed absolutely incurable, may be prevented invariably by effectual evacuations from the intestines after delivery; when it does supervene, it will be found to admit of a pretty certain cure by purgatives, given in quantities proportioned to the violence of the symptoms, with very little attention to the apparent weakness of the patient.

Fevers which resist this mode of treatment when they have been neglected or ill treated for some time, and degenerate into, or have originally assumed the different forms of slow fever, whether the cause be obstruction or otherwise, will generally yield to mercury in its various preparations, exhibited in frequent and small doses with occasional purges. Mercurial inunction has been attended with very general success, not only in these slow chronic fevers, but also in the violent, acute, burning fever, which has been denominated by a variety of appellations in the West Indies, such as yellow fever, black vomit, &c. as particular symptoms seemed most prevalent to each practitioner. This fever, with every

every symptom by which Doctor Lind and other authors have characterised it, has occurred in Bengal. In some unfortunate cases, the dissections exhibited proofs of a violent affection in the liver and spleen. After this discovery, mercury, exhibited so as to affect the mouth as soon as possible, with occasional laxatives, proved uniformly successful. In this instance, the disease is so rapid in its progress to destruction, that the exhibition of mercurials should be equally rapid and vigorous. But the happy effects of a more gradual course of mercury are just as striking in those slow fevers, which would be called hectic, nervous, &c. by European physicians, but which in that country should be esteemed the consequence of neglect or mal-treatment of preceding fevers in the continued, remittent, or intermittent forms. It will generally be found that these chronic fevers, whether they afflict the constitution without any sensible periods of absence, or only return in occasional relapses of more severity, will yield equally to the operation of mercury on the secretions, with the intervention of purgatives; they will also be found, during their first attack, to have resisted the utmost efficacy of the bark, and other medicines in common use. It may be necessary, however,

to suggest a caution to the practitioner, that he should not think himself disappointed, if the operation of mercurials do not always appear to be attended with decisive effects, though the salivary glands should be considerably affected; for the ultimate benefit from this course may not be very evident for one or two months after its cessation; at last, however, returning health and embonpoint will convince the practitioner of the success of his efforts. During the treatment, the restoration of the secretions of the bowels, particularly of the liver, is sometimes attended with such apparently disagreeable symptoms, that the practitioner may be led to form an unfavourable judgment of the plan. The formation or the discharge of bile, which has been suppressed, deficient, or irregular for a long time, will not unfrequently be attended with severe symptoms of dysentery and fever. To a person of experience these will afford the most favourable omen of the ultimate success of his remedies. Nothing, however, assists the salutary agency of mercury with such power, as frequent changes of situation and air, with a diet of mild vegetables and water only, and frequent exercise of the gentler kind. In reality, a sea voyage, with a strict adherence to this

diet, would alone prove sufficient, in most instances, for the entire recovery of the patient, and would consequently supersede the necessity of mercurials.

These are the fevers in which the lunar influence is most observable; particularly when they are accompanied by any local complaint. The operation, however, of this influence is by no means equally remarkable through all seasons of the year. The unhealthy seasons are of course those in which it is most apparent; and it has already been noticed, that the season of the rains, or the termination of the periodical rains, is particularly favourable to the production of fevers, fluxes, and other disorders. This influence is consequently very evident at those periods, and suggests the necessity of precautions to counteract it. The principal prophylactic is intestinal evacuations before the different periods of the moon. In recent fevers, it is imagined, this influence will be very obscure at all seasons of the year; nor is any particular attention to it necessary during the cure. In fevers of great length, which never occur, perhaps, but from mismanagement, it might possibly be improper to treat it with entire neglect. But what will the most scrupulous observance of those periods avail, if the treatment



ment be in other respects erroneous?—As the merits of this long-depending cause will be allowed to speak for themselves in a body of evidence which is now in the press, with an entire indifference to the opinion of the public, and perfect exemption from all prejudice on this subject, no attempt shall be made to influence the minds of others, but the ultimate decision shall be abandoned to such readers, as may esteem the subject of sufficient importance to deserve a particular scrutiny.

In all varieties of fever, no doubt, other remedies, of a nature very different from evacuants, may occasionally have place during these courses. But we cannot enter into a minute discussion of every part of the treatment in this paper, the principal object of which is to inculcate the indispensable necessity of intestinal evacuations by any means, but especially by large doses of calomel.

With respect to diet, we may only observe, that it is not, in general, sufficiently restricted; and that fish of every kind, as well as all animal food, to the utter exclusion of chicken broth, should be prohibited during the existence of any lurking symptom of fever, however trifling it may appear. Even  
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fresh vegetables are frequently inapplicable to the purposes of diet in fevers; so that farinaceous aliment alone, or with mild and ripe fruits, would seem to be the best adapted to every period of these disorders.

It will scarcely be understood, that the whole of the practice recommended in the foregoing pages should be extended to patients reduced by ill treatment or neglect to the last degree of emaciation and debility.

As it will appear in a very short time, that the observations contained under the article of fever, are the result of a successful mode of practice, what sentence shall we be compelled to pass on doctrines and practices nearly the reverse, though promulgated by men esteemed the greatest lights, but in this instance the "*ignes fatui*," of their profession, when those opinions are deemed applicable to the treatment of fevers in Bengal? What can we say respecting authors, who have written on fevers in climates and situations somewhat similar to the one which has just been mentioned? Shall we permit our judgment to be blinded, our experience to be entirely discredited, and our lives to be sacrificed to the fame which blazons the volumes of several authors, whose treatises are in every gentleman's possession, and whose practice, of course,

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course, prevails as generally as their names are known? Some have written on the diseases of those latitudes, who have never approached them, except in contemplation. Others have deemed the residence of a month or two on the spot sufficient to give a stamp of authority to their writings. Their ingenuity has fascinated the medical world in those parts, to the destruction of thousands. Shall we treat such abilities with respect, or even with lenity? or shall we venture to oppose the evil by a rashness which will be deemed very extraordinary, and to declare, that those who possess the best claims to our attention, by a temporary residence in the East Indies, do not appear to deserve credit for more than a good intention, industry, and stone-blind experience? May we not allow a very small share of judgment and sagacity to those, who have appeared uniformly to mistake the salutary efforts of nature for the morbid effects of the disease; to oppose those efforts with the most fatal pertinacity; and, finally, to recommend a practice, the mortal tendency of which will appear from the broad evidence of their own writings?

When the observation and experience of such men are arraigned, we may be permitted to suspect that experience is not the necessary

sary appendage of age, or the result of even an extensive employment in the discharge of professional duties; nor inexperience invariably the portion of youth, and a more recent initiation into the mysteries of practice. God knows, it is not necessary to proceed the length of India in quest of instances to corroborate this suspicion; for without attention to benefit, by frequent opportunities, and judgment to direct that attention, a person of extensive practice and the most advanced age will remain for ever an infant in the practical knowledge of his profession; but, on the contrary, a practitioner of any age, who possesses those qualities in a much more confined sphere of practice, will become an experienced physician without a wrinkle.

The writer is sensible, that the freedom with which he has treated those respectable authorities (by no means respectable when they influence practice in India) may render him obnoxious to the general reproach of presumption, until the proofs which warrant that freedom shall be brought forward. As far as this opinion may interfere with the general adoption of the practice recommended in these sheets, he will sincerely regret it; in no other respect can it possibly affect him.

## D Y S E N T E R Y. \*

As the subject of fevers has been treated much more diffusely than was intended, and, probably, than the nature of this address will warrant, the remarks on the subsequent articles must be as concise as possible; the writer will not therefore obtrude on the attention of gentlemen, in any part of these remarks, the hypothetical suggestions of others, or the speculations which have sometimes occurred to himself. Not only the limits of this paper, but the opinion entertained of the ingenuity as well as the leisure of medical gentlemen in the honourable company's service, must preclude such discussions, and oblige him to confine this article to the exposition of a few practical facts. From these, indeed, gentlemen who have been more recently conversant in the systems of universities and books, are competent to derive plausible theories with superior advantage.

\* This article, with some trifling alterations, was published in Bengal, at the commencement of the year 1789.

It is observable, that although the climate of Bengal be deemed extremely conducive to the production of fevers and fluxes, yet the higher orders of Europeans experience an extraordinary immunity, in the early use of intestinal evacuations, and immediate recourse to medical advice, on the slightest appearances of disorder. It will, no doubt, afford every medical gentleman, on his first admission into the honourable company's service, as his emoluments do not depend on the number of his patients, the most sensible pleasure to be informed, that, with the advantage of proper treatment, dysentery, as well as fever, is marked by a particular exemption from danger in those regions, and that both these disorders are of very trifling duration, unless the inattention and ignorance of the practitioner, or the negligence and obstinacy of the patient, prolong their existence.

In that climate, every description of recent intestinal flux may be esteemed to arise from similar causes, and to require similar means of cure. Notwithstanding the great Doctor Cullen's view of this subject, and the opinions of many celebrated practitioners, any distinction between diarrhœa and dysentery will in general be found unnecessary, if not pernicious. If a similarity of causes and of

treatment may be deemed to constitute diseases of the same kind, gentlemen must receive, from their practice in India, ample testimony in favour of Sydenham's observation, that the dysentery is a fever of the intestines, and that the observation is by no means confined to any one particular kind, but affects every species of the disorder. The influence of this opinion should consequently pervade the practice of medical gentlemen in Bengal, as well as in the honourable company's ships, and should suggest an argument in favour of the little diversity of treatment requisite in fevers and fluxes.

It is remarkable to what a degree of simplicity the farrago of European prescription has been reduced by the general practice of gentlemen in that country, in all disorders. In this particular complaint, although the remedies are simple, yet the indications of cure are often erroneous. To very few of them, however, has venesection, on the bold presumption of the existence of an inflammatory affection in the intestines, appeared of probable advantage, or exempt from danger. The commencement of these disorders is not unfrequently attended by fallacious symptoms, indicative of inflammation; yet a positive assurance may be given, that venesection



is utterly inapplicable to any stage of this distemper, under any appearance or pressure of symptoms.

Sudorifics, in direct contradiction to their boasted effects in the West Indies, have sometimes proved greatly detrimental, even under the favourite form of antimonial anodyne draughts; but towards the termination of the disorder, if it prove very obstinate, after the use of evacuations from the bowels, they may be allowed a trial in Doctor Mosely's method.

The efficacy of ipecacuan, to the exception of its emetic powers, is too questionable to authorise any reliance on its virtues in these complaints. It has also, on all occasions, appeared to possess less activity in India than in Europe, on a comparison of its effects in practice with the accounts and commendations contained in authors.

The solution of white vitriol, which has received such lavish encomiums from Doctor Mosely, will often be found of considerable service: although it must seldom be expected to effect a complete cure, it has generally operated with efficacy one or both ways, and in this manner has proved beneficial. As an astringent, like all other astringents, it deserves the most pointed reprobation; but it

will not easily be perceived to act in this manner; for the agitation of nausea, by this or any other means, is generally calculated to promote the natural evacuations from the bowels.

It is scarcely necessary to apprise gentlemen, that alexipharmacs, as expressive of those multifarious compounds of dispensaries, are a word of little meaning, and medicines of little use; that they cannot be supposed to retain any degree of preservation in warm climates; that in cases which may be thought to require their fancied powers, substitutes of a less fallible operation are greatly preferable, from their simplicity; and that, in the disease under consideration, they will generally aggravate the symptoms.

Medicines, of effects somewhat similar, combined with ipecacuan, have proved fashionable in Europe. Perhaps no part of European routine deserves, in most instances, such decided rejection. The high character of these medicines renders the most particular cautions on this subject necessary. Their exhibition may be pronounced fatally trifling in the first stage, and of very doubtful agency during any other period of the complaint.

The general prejudices in favour of bark, in a very numerous body of diseases, should  
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make the writer express himself with peculiar hesitation on this subject. To speak, however, with a degree of doubt which he does not entertain, and a diffidence which he cannot feel, may be a plausible refinement of scientific hypocrisy, but would prove a very imperfect declaration of his real sentiments; yet a confidence, which naturally results from the testimony of a most successful practice, might appear to border on empiricism. Most authors have recommended bark in some stages of the disease, and many have deemed its use indispensable, if not infallible, in certain imaginary tendencies to putrescency. But we need not scruple to believe that bark is inadmissible under any circumstances, or during any period of the actual existence of this distemper. Technical expressions of undeterminate, or of no meaning, have at all times proved the resource of ignorant men, and may have occasionally misled the most enlightened. When a vague suspicion of *relaxation, atony, putridity*, has glanced on the practitioner's imagination, a ready expedient has presented the numerous lists of *corroborants, tonics, antiseptics*. In this strange nomenclature, bark has always obtained the first place, and has consequently been exhibited by some practitioners, if not the generality, in

India, with a liberality not inferior to the utmost scope of European favour, though not with equal felicity, if we may trust our reading on the subject of its success in Europe. Nature, with her usual sagacity, has on many occasions pertinaciously rejected this favourite drug, and has been soothed into a temporary acquiescence by the addition of opium.

The retention of other medicines is not the most important purpose for which opium has been prescribed. The suspension of pain must ever prove an object of the first consideration and consequence to the practitioner as well as to his patient, when it can be accomplished without an ultimate aggravation of all the symptoms. The operation of opium, although it may often prove a momentary alleviation, will not be found in the event to possess this immunity; practitioners should consequently refrain, as much as possible, from its exhibition in any form.

A similar restriction is equally necessary in the article of wine. Although the nature of this disorder exhibits itself frequently under deceitful appearances of great weakness and depression of spirits, yet it will soon be perceived, that unless the stomach reject this remedy early, it will excite or increase a concomitant fever, and that its use is utterly inadmissible

inadmissible in the treatment. During a course of practice in the military hospitals for European soldiers in Bengal, there are frequent occasions to observe, that patients of every denomination crave an allowance of wine with the utmost earnestness; that the mere name of wine, or liquor of any kind, is so cherished by them, that they will drink it with avidity, under a certainty of its immediate rejection; that the most sober and prudent will conceal and reserve their allowances, until an opportunity occur, to dispose of the accumulated treasure to their own pecuniary advantage, and the great detriment of the purchaser, who is generally a less prudent patient; and that scarcely one man in one hundred possesses the resolution or the honesty to acknowledge that it has proved in any degree prejudicial to his disorder.

The exhibition of these fatally vigorous medicines has been the offspring of a jargon (excuse the term) which has long filled the pages of authors. *Relaxation* has been uniformly pronounced the associate of most disorders in warm climates, and methods of treatment, adapted to counteract this, particularly recommended, with what degree of sagacity or knowledge the unprejudiced perusal of the *Select Evidences*, &c. which are

now in the press, may determine. In the private practice of Bengal, as wine is perceived frequently to grow sour and return from the stomach, or to occasion cardialgia and other disagreeable sensations, spirits diluted with various proportions of water are often substituted in the place of wine. This mischievous beverage is also dictated by a fancied relaxation. The writer may here venture to advert to the very pernicious error of an allowance of spirits which formerly prevailed in hospitals. Although the practice has been, with the greatest propriety, abolished in Bengal by authority, yet it may possibly still exist in the hospitals of the honourable company's other establishments, and may be thought to deserve the notice of their governments. That the existence of such an evil should continue to have the sanction of hospital practice in Europe, or that it should be permitted to form a regular part of the diet of European soldiers, as well as sailors, in India, is a subject of astonishment, and of the most serious condemnation. But this is not the place to exhibit the expediency and impropriety of that allowance in its true colours.

The method of treatment, which has proved most successful during a course of practice

practice in Bengal, and on board the *Houghton*, may be comprised in a very few words. Experience, fatal in many instances at the commencement of the writer's career, at last compelled him to insist on intestinal evacuations with the greatest freedom, and to confine his practice, ultimately, to a repetition of purgatives and emetics. Solutions of salts, however, unless at the very beginning, to evacuate, as in fever, the grosser contents of the intestines, or, in very slight and recent cases, will seldom be found adequate to the removal of the disorder; and a frequent reiteration may be attended with great detriment. Castor oil is certainly a medicine, in this disease as well as in fever, of more efficacy in the discharge of bilious, glaucous, and other vitiated matters, and occasions less disturbance and debility. But no medicine whatever, perhaps, is in any degree comparable to calomel in the copious results of an operation equally mild and certain. The griping occasioned by greatly vitiated and acrid secretions in the bowels, and perhaps by the action of the intestines, to free themselves from this load, has commonly been attributed, possibly from superficial observation only, to medicines which possess the power to disengage



disengage and discharge them. The exhibition of calomel should always be followed by other purgatives in a liquid form. The sense of weakness, which immediately succeeds these evacuations, and possibly all intestinal evacuations, even the most natural, should not deter the practitioner from a bold repetition of the same means; for the patient will be ultimately found to acquire strength. The occasional interposition of emetics will, in all obstinate cases, prove absolutely necessary.

On the subject of chronic fluxes, which are always, like slow fevers, the consequence of neglect, or mismanagement, little may be said at present. It may be declared very positively, once more, that they are, in almost every instance, occasioned by neglect, or, what is still more pernicious, the unskilful treatment of preceding disorders; even these, unless in the very last stage, admit of most relief from intestinal evacuations. In some rare instances, opium has been thought to prove serviceable, in combination with a large proportion of calomel; by which means the qualities of each, that might be supposed most inimical to tender, yet torpid, bowels, would appear to be reciprocally corrected.

An alterative course of mercury (we need not vouch for the accuracy of the term) has succeeded very often in these fluxes, especially in cases which have been supposed to proceed from obstructions in the liver, or other bowels, and in which the secretions of those parts are always greatly deranged. The success of this course is greatly promoted by an occasional exhibition of emetics and purgatives.

Proofs of the success of these methods cannot be added in the narrow compass of this paper; yet such is the conviction the writer entertains of the deleterious agency of wine, bark, opium, and astringents, in the fluxes, as well as in the fevers of those climates, that, however unusual or absurd an appeal to the feelings of surgeons may seem, he will venture to intreat them, in the most earnest manner, as they regard the lives of those entrusted to their care, and their future reputation, in that country at least, to refrain altogether from the exhibition of those medicines, until they shall have perused the public proofs of the success, or shall have experienced the inefficacy of the means, recommended in the foregoing pages.

## L I V E R.

THE successful treatment of this disorder, or rather variety of disorders, has long been understood in the honourable company's settlements in the East Indies, and perhaps there only. This fortunate circumstance might seem to render a minute discussion of the subject unnecessary, especially in an address of this nature. However, though the great outline of practice in the liver is equally well known to the medical gentlemen in India, and in the honourable company's ships; though it is not a secret to any European of any profession in those climates, that mercury, in almost every form, is a pretty certain cure in complaints of this viscus; and though, in many instances, the symptoms described in books are so evident as to render a misapprehension of the nature or the seat of the disease nearly impossible, yet some errors in the conduct of the cure, some mismanagement in the exhibition of this admirable remedy, prevail so generally, as frequently to retard the completion of the former, or to render the operation of the latter utterly abortive. While it is acknowledged, with great satisfaction, that

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the treatment of this disorder, during its early stages, and in its most obvious forms, proves almost always successful in that country, it may be asserted, that the liver gives birth to an infinite variety of symptoms, the source of which is entirely unsuspected by the generality of medical men; that the diseases formed by various combinations of those symptoms are much more numerous than the more obvious affections of that part; that, as the causes are mistaken, the diseases themselves are mal-treated; and that, consequently, no disorder whatever of those latitudes would seem to demand more attention, and more minute investigation, than those which, by the nomenclature of the east, may be collectively denominated *The Liver*.

It is not possible, in the scope of this paper, to do any manner of justice to such an extensive subject. It well deserves a separate and enlarged treatise. Very cursory and general remarks are the utmost that can possibly find admission here. The writer, however, will attempt to make these include what is most essential and useful, in the materials which are at hand. The subject may be arranged under two general heads; the symptoms which afford a suspicion of, or decidedly characterise, an affection of those parts, and

the remedy, which stands foremost and almost alone in the treatment, or mercury. The former is by far the most important, at least generally known. Although much remains to be discussed in the latter, yet, as it generally succeeds under any circumstances of exhibition, it may be allowed a smaller share of attention here.

SYMPTOMS.—The annals of physic, or the medical fashions of various periods, afford sufficient proof, that particular terms, sometimes expressive of some meaning, but much oftener of none, have each been in universal vogue for a time, and, during their reign, have been supposed to give character to almost every distemper that occurred. In this manner, a race of inflammatory, bilious, putrid, nervous monarchs succeeded one another. To render this strange succession consistent with the writings and reputation of physicians, who lived under the different reigns, and to reconcile the apparent contradictions of them all, later writers have sought for the cause of this diversity, in the variety of diet, modes of exercise, and other habits of life, which were deemed to characterise each period. Thus the maids of honour in Queen Elizabeth's court, from their breakfasts of  
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beef-steaks and porter, were naturally supposed more obnoxious to inflammatory and putrid disorders, while those of Queen Charlotte's, from their excessive use of tea, prove equally liable to nervous affections. It is at present the reign of nervous; and this term, notwithstanding Fontana's inimical experiments, is so unintelligible, so perfectly well calculated to puzzle and to please the vulgar of all degrees, and to impose on the too inquisitive patient, that its dominion is not likely to prove of short duration. Far be it from us to disturb its peaceable reign over countries in which we have no experience, and patients in whom we have no concern. But as this unmeaning term has been observed fatally influencing practice in Bengal, and exhibited as characteristic of symptoms, which certainly originated from a source connected with liver, we ought to contribute our best endeavours to exclude it entirely, or with very little reservation, from all share in the treatment of disorders in that country.

It would scarcely be exaggeration to declare, that not only the tribes of nervous symptoms, but those of almost every other character, appear, in some manner or other, either as cause or effect, to be unaccountably connected with liver, in the most enlarged



acceptation of **that** word, in India. This appellation is, therefore, by no means confined within the limits which the name of the viscus would seem strictly to require. It was formerly, in Europe, pretty much the practice to suppose every disease, curable by mercury, connected with a venereal taint. In this respect, liver has supplanted the lues venerea in India, and with great propriety, for every purpose of practice. It may be plausibly alledged, that while the European extension of a term to all disorders is condemned, we incur a similar charge by the very general application of liver to the complaints of other latitudes. It is certainly no very uncontrovertible argument to say, that because mercury has been found of almost certain efficacy in affected liver, and has proved equally successful in a great variety of other diseases, that these diseases must necessarily have been the liver. On all occasions of success, precarious conjecture alone must decide the nature of the distemper; and in this view, the best practitioners will necessarily have the fewest opportunities of forming a just judgment. But as the very best are not always infallible in their practice, frequent occasions will occur of ascertaining the real nature and source of the previous symptoms,



almost beyond the possibility of deception, by luminous dissections. In this consists the advantage over the European application of general terms. Dissections, it is apprehended, afford very fallacious information, notwithstanding all that has been written on the subject, respecting the existence of nervous causes exciting the previous diseases. They may not be altogether decisive, even in bilious, putrid, or inflammatory cases. But when dissection exhibits the viscus in question, deranged in its form, substance, size, or even offices, beyond all expectation, and almost beyond conception, when the other bowels, or contained parts of the body, are either entirely exempt from morbid appearances, or seem affected in a trifling degree, will it be possible to refuse our assent to the conclusion, that an affection of the liver was the cause, the consequence, or in some manner connected with the symptoms, which seemed to put a period to the patient's existence? Such, therefore, is the nature of the evidence on which the general connection of liver with all complaints in those countries is indisputably founded. Dissections are not sufficiently numerous, perhaps, in any country; certainly not in that. The heat of the climate, and consequent rapidity of the putre-

factive process in bodies, prohibit the frequency of dissections. Favourable opportunities, however, have not often been neglected; and these, as far as the writer's assiduous enquiries have extended, have invariably afforded testimony of the existence of morbid appearances in all livers, which have undergone examination, whatever the preceding disorder may have been supposed. His individual observation has not extended to very many instances of ocular evidence; but no proper occasion of consulting the experience of others has at any time been omitted, and all confirm the reality of this connection. Thus it appears, there can be no great impropriety in the application of this term to a great variety of disorders, as the viscus is found so generally affected. But for the useful purposes of practice, the term, as influencing the method of treatment, should include a larger class of disorders of very doubtful origin, or of no obvious affinity whatever to that viscus; and provided the method of cure be successful, it will not, perhaps, be deemed a matter of very great consequence to ascertain the exact seat and nature of the late distemper.

On all occasions, when the secretion of bile is morbidly increased, diminished, or irre-

gular, it is clear, that the viscus has not its natural action, and does not perform its proper offices. These instances alone would affect almost every disorder in that country, but especially fever and dysentery, most particularly in their chronic forms. The secretions, however, of the other bowels, are very generally deranged in a similar manner, and often at the same time as the former; and it would be as difficult as unnecessary to give each its particular share of symptoms in the disorder; but the liver should be suspected under every derangement of the secretions of any of the bowels. These appear to have a concern in all chronic complaints in that country; in old pains, general or local, that are not decidedly venereal; in most, or in all, cuticular affections; and in all obstinate complaints of the head, chest, and abdomen.

The writer will here enumerate, without attention to order, such symptoms, affecting each of those parts, as occur to his recollection at present. Head-ach, in every kind of form, is by no means an uncommon effect. Those which are called nervous will be always found connected with the source in question. Periodical head-achs are frequent; those which recur with obstinacy on rising in the morning are very suspicious. Obstinate or

periodical pains in either or both ears are by no means of rare occurrence. Frequent and severe thirst, if this be referable to the head; a bitter, or other unpleasant tastes in the mouth; foetid breath, especially in the morning; various discolouration of the countenance; sometimes yellow, sometimes extremely free from all yellow tinge, pale, but not clear, often of a deadly leaden colour, sometimes of a copper tinge, on some occasions a kind of mixture of all these in various proportions; frequent flushings of the whole face, or of particular parts only, especially of a circumscribed spot in one or both cheeks; partial sweats of the head, sometimes of the forehead only; frequent giddiness, or confusion, on stooping particularly; sense of weight in the head, sometimes approaching to a degree of pain, especially on moving suddenly, or on rising on the toes, and falling on the heels again with a jerk; frequent drowfiness; mouth generally foul and covered with viscid secretions; the fauces particularly foul, and often foetid; the gums and other parts of the mouth liable to frequent ulcerations, which are extremely painful when touched, but not otherwise; the gums sometimes sufficiently firm, at other times apparently deficient in firmness and colour; the teeth also less white,

and

and much more difficult to keep clean, subject to frequent aching, and to become carious; the salivary secretions irregular; the tongue very seldom perfectly clear, but of all degrees and complexions of foulness, though generally moist, sometimes, however, very dry after sleeping, and subject to ulcerations like the other parts of the mouth; a remarkable degree of inaptitude to continued motion in the lower jaw, particularly evinced in chewing; the eyes sometimes yellow, generally muddy, and on some occasions perfectly free from all tinge, clear, but not vividly clear as in health, and sometimes of a slight bluish cast; vision not quite so perfect as in health, especially after looking for any time at one object; in some instances, a general greasiness of the face, and a glassy appearance of the eyes; stuffing of the nose, and other catarrhal symptoms, sometimes a discharge of blood, without any apparent cause. All the symptoms, which I have just noticed, will be found to attend affections of the liver in various proportions and modes of combination on different occasions; but they are in general more decidedly characteristic of that state of the secretions of the bowels, which, in Bengal, and probably all over India, is termed *The Bile*; an appellation which includes

cludes the morbid increase, diminution, or alteration of any of the secretions of those parts, consequently the state of the digestive powers, producing unpleasant sensations, more or less severe, according to the degree of deviation from their natural state. *The Bile*, then, although frequently unconnected with any permanent affection of the liver, or any other part, and consequently curable by less active means, such as laxatives, diet, and exercise, is almost always a pretty certain attendant on fixed derangement of the liver, even when this does not appear to form the smallest quantity of its peculiar secretion.

As *The Bile* will be noticed occasionally under the general title of *The Liver*, we may dismiss it for the present, and proceed to the enumeration of symptoms affecting the thorax.

Perhaps there is no variety of derangement in the functions of the lungs, but what may, and does occasionally, originate from the liver; but this is not the proper place to take notice of acute cases. All denominations of asthma, dry, humid, nervous, have often proved symptomatic of the liver, both in the strict and extended application of the term. Every alteration of the offices of the lungs, from the natural state of respiration, from a slight sense of



of impediment to a condition not far removed from suffocation, increased, sudden, quick, difficult, laborious respiration, are all generally characteristic of the liver. To these are added a greater difficulty of breathing after any effort; a sense of suffocation occasionally; a perception of heavy weight pressing on the lower parts of the lungs; a cough in all its varieties, generally dry, for a length of time at least, frequently constant, often recurring only at intervals, sometimes very slight, sometimes the principal and only symptom, when moist accompanied by excretions of every colour and consistence; pain in one or both sides, or in other parts of the chest, sometimes permanent and apparently pleuritic, at other times intermittent or periodical, often of a peripneumonic character; difficulty of laying on one or both sides, and sometimes of a recumbent posture altogether, though not often in chronic cases, chiefly, however, in the last stages; a sense of stricture about the pharinx, or of weakness there; sometimes a slight degree of difficulty in swallowing; a degree of hoarseness, and various changes in the voice; a palpitation of the heart is by no means uncommon. When any number of the preceding symptoms prove obstinate, it will always be prudent to have the liver in view.

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Those, which would seem to originate from the abdomen, are much more decisive as well as more numerous; they may be mentioned under general heads.

Dysentery stands foremost, in all its varieties, from a slight diarrhœa to its worst forms of gripings, strainings, and discharges of blood and other matters. The appearances of the stools are as follow: slimy, glareous, green, yellow, bloody, black, clear and watery, brownish yellow, sometimes thinner, sometimes thick, frothy, windy, deep yellow, fœtid and watery, yellow slime deposited in thinner stools, thick mucus tinged with blood, dark brown fœtid mucus, a diffusion of blood and bile, a little white matter with blood, often pretty natural, sometimes thick and brown, sometimes great costiveness, sometimes frequent alvine dejections, scarce and small without scent and discolouration, white like cream and liquid, sometimes like the washings of raw meat, sometimes mixed with black blood or black bile, grumous blood mixed with various matters, particularly filaments, bloody stools without pain or fibrous matters occurring, after long intervals, in large quantities, sometimes purulent, colliquative diarrhœa, attacks of cholera, large and irregular discharges of bile, and a total or nearly total deficiency in the intervals.

The stomach is also affected in a great variety of ways. The discharges by vomit, either spontaneous, or excited by medicine, are equally various; sometimes of mere phlegm, sour and saltish water, dark green nearly black with pieces of a blue substance like tenacious mucus, acid, bitter, sweetish, tasteless; sometimes pure bile of various colours, from a bright yellow to black, frequent or incessant nausea, frequent or incessant vomiting, wind accompanying other matters or alone, pains in a great many forms attack the stomach; sometimes a gnawing at the orifice, often a fixed pain at the pit of the stomach, uneasiness and soreness about the lower part of the stomach and sternum, unpleasant heat in the stomach on swallowing wine, spices, and other things; sometimes entirely free from all pain or uneasy sensations, fulness at the pit of the stomach, with or without pain, shooting pain through the regions of the stomach and spleen, or from the epigastrium to the back, pain from wind occasionally, cardialgia, and numerous other pains, apparently of the stomach itself. It is very remarkable, that in the most decided affections of the liver, there is often neither pain nor uncommon sensation of any kind in the part itself. In very

acute cases indeed, both pain and swelling commonly make their appearance to a great degree. Pain, however, in this part, is seldom very severe; but it is of very various characters when it does occur. It is most generally obtuse, and very obscure, sometimes recurring after brisk motion, or after meals only, sometimes permanent. It attacks every part of the liver, consequently the pain is occasionally pretty high up under the ribs, at the edge of the false ribs on either side, extending sometimes from the pit of the stomach in the course of the false ribs of the right side to about the region of the kidney. A sense of some fulness and an uneasy sensation, constant or occasional, is much more common than positive pain; but it is still more usual to have no extraordinary sensation whatever in the part itself to point out the seat of the disorder. The pain is not uncommonly felt only on the left side; and indeed the liver, in a morbid state, extends far on that side sometimes. A general soreness inside is not unusual, without much pain; in many instances, no pain whatever is felt, even on pressure, in any part of the abdomen. It attacks the neighbourhood of the cartilago ensiformis, in the form of an insupportable stricture sometimes; and sometimes severe

pains

pains are felt, as if the bowels were wrung or pulled down with a hand. They are sometimes extended externally over the abdomen, and sometimes internally, or round the umbilicus; excruciating, and shooting in every possible direction, from the lower belly up to the right shoulder, the whole abdomen being tense, hard, and extremely painful to the touch, as well as much inflated; the belly at other times soft, though swelled, with pain on pressure, and hardness round the navel. Weight, without pain, occurs in various parts of the belly, but most frequently in the region of the liver, often accompanied by different degrees of oppression of the præcordia, especially after food. The belly in many instances is considerably sunk, and often apparently of a natural form, without a single circumstance that indicates disorder there. The region of the bladder is often much affected, and the urine exhibits every variety of condition; it is sometimes exactly as in health, or of a beer colour, or pale, clear, in small quantities, white, muddy, experiencing sudden alterations, like Madeira wine, difficult, hot with straining, suppressed, like muddy porter, greatly tinged with bile, or totally free, and all the intermediate stages, thin and watery, sometimes foetid, sometimes apparently

apparently purulent, much sediment or none, perfectly clear or much clouded, depositions of various kinds, sometimes bloody. The spleen is often very obstinately enlarged, but seldom with any considerable sense of pain. Prolapsus ani, but particularly the piles in every state of them are very common; and violent hæmorrhages, sometimes unconnected with the piles. Dropsy, in all its forms, is very frequent. Flatulencies both ways occur often, and hiccough sometimes, as well as violent eructations. These are the principal symptoms that affect the three cavities; there are many others, no doubt, which do not at present occur to his recollection. There is scarcely any local complaint whatever, but is occasionally imitated by the liver; and all old local complaints are very apt to be affected by this disorder. The gout is sometimes connected with it; the jaundice, in slighter degrees, very frequently, although a violent jaundice is not, probably, a very common disorder in India. Temporary suffusions often occur, but the permanent jaundice is rare. Chronic rheumatism would appear to have a considerable connection with liver complaints. Local pains are, indeed, very common. The pain, however, in the shoulders, in one or both, though it often occurs, parti-

particularly in acute cases, is much more frequently absent. But he would never come to a conclusion, were he to enumerate every symptom that has been found to proceed from, or to be connected with the liver. He must not, however, dismiss the subject of the symptoms, without a few observations on fevers as connected with this viscus.

There is no one form of fever in Bengal, but what has occasionally been found connected with the liver; the most violent and continued kind would seem to accompany the acute affections of the liver, and the slow and intermittent fevers, chiefly the chronic diseases of that part. The writer has observed before, that liver very often proceeds from the mal-treatment of preceding fevers; and, no doubt, it is often the original disease, and the cause of fevers of great obstinacy. It will be highly proper to pay great attention to the state of the liver in all fevers of warm climates. But we may conclude these cursory remarks on the subject, with some account of its connection with the yellow fever, or black vomit, of the West Indies. During the rainy season of the year 1789, several cases of the yellow fever, as described by West India practitioners, and by Doctor Lind, occurred in the general hospital at Calcutta.

The patients, previously to the attack, had inhabited the low, damp, arched ways of the fort. Amongst other symptoms, the skin was particularly suffused with yellow, and lumps of black bile, apparently, were discharged by vomit. The stools were black and putrid. On the first appearance of this disorder in the hospital, a medical gentleman intimated, that during one of his voyages to the East Indies, he had thirty patients at one time afflicted with this disease. He opened the first who died, and found the liver so particularly affected, that he immediately exhibited mercury, in various forms, to the others; all of whom recovered. On opening the first patient who died in the hospital at Calcutta, the liver was found astonishingly enlarged, ascending as high as the second or third true rib, and replete with matter. The lungs, in the right cavity of the thorax, were compressed by the enlargement of the liver, into a very small and hard mass; the cavity itself, consequently, almost obliterated; yet it is observable, that this patient had not been affected with any difficulty of breathing. The spleen was also greatly enlarged, and full of matter. The medical gentleman, who had treated the cases on board the ship, observed, that in the former the spleen was also greatly



enlarged, and, on dissection, a large quantity of blood flowed from it. On this discovery, the other patients in the hospital at Calcutta were immediately put under a course of mercury internally and externally, with James's powders. The mercurial inunction, without intermission, was applied to every part of the skin where absorption could be expected to take place, and continued until the mouth began to be affected, when every symptom of the disorder vanished; constant purgatives or laxatives were used during the whole course of the disease, and emetics were occasionally exhibited, with great relief to the patient; nor did they, in any instance, induce that excessive irritability of the stomach attributed to them by practitioners in the West Indies. This exemption may reasonably be supposed the result of previous purgatives, which had evacuated the contents of the duodenum and neighbouring parts, and had given the putrid bile and other acrid matters their natural tendency downwards. The violence of the fever was soon subdued by the purgatives; but the disease did not entirely disappear until the mercury took effect. Wine, exhibited after the fever had been reduced, was thought to relieve very effectually the oppression and anxiety about the præcordia, to enable the

patient to support the constant exhibition of purgatives, and to prove greatly restorative in other respects. The good effects of wine appeared such to all the gentlemen who attended those cases. The bark was entirely neglected, unless as a strengthener after every symptom of the disease had vanished. It appeared highly proper to introduce this circumstance here at more length than the limits of the paper would seem to admit, as there has scarcely at any period occurred a more important fact in the records of physic. How many lives may be saved in the West Indies by the knowledge of this fact may be conjectured from the opinion of the great fatality of the yellow fever amongst the soldiers and sailors in that part of the world.

Women and children are very liable, in those countries, to obstinate derangements of the secretions of the bowels, which give rise to a variety of peculiar complaints, such as marasmus, atropia, &c. all curable by the same means. This, however, is not the place to enter on the subject of their disorders; we may therefore only observe, that it is incredible what a quantity of mercury may be given to both women and children in those climates, and in how great a variety of their complaints, not only with perfect innocency, but with great benefit. It

It will be proper to exhibit here some few of the appearances on dissection. In these there is no regularity or constancy. The same state of the liver does not, by any means, seem to occasion, invariably, the same set of symptoms; and, consequently, any particular combination of symptoms will seldom lead to the knowledge of the particular condition of that viscus. In reality, this accurate knowledge would appear quite unnecessary in the general treatment; for every set of symptoms arising from this source will be found to yield to similar means. Nothing can be more various than the size of diseased livers. They are often swelled in an enormous manner, occupying the left as well as the whole of the right side, and extending upwards in such a way, as almost to annihilate the lungs and the cavity of the thorax; and, on these occasions, it is very extraordinary, the breathing will sometimes remain apparently natural, while on others, when the size of the liver is astonishingly diminished, which is often the case, the breathing is uncommonly affected, even when the dissection can discover no traces of disease in the lungs themselves. In both the morbid enlargement and diminution of its size, the texture will sometimes appear

perfectly natural. The variety of morbid appearances, which take place in the texture of the liver, is very great. Sometimes one large abscess, sometimes a number of smaller abscesses occur without any other marks of disease. These are occasionally combined with others. Livid spots, a total confusion of texture, coagula of blood, blood in a liquid and perhaps putrid state, white firm substances like scirrhous glands, are amongst the number of appearances. The colour is very various, often perfectly natural, and often directly the reverse. No particular number of these are constantly found combined. The combinations occur in every possible variety; and these, which have been enumerated, are, indeed, a very small part of that variety. The liver alone is often affected, when no other part of the body exhibits signs of disease; although various local pains, during the course of the complaint, may have led to a suspicion of particular parts being affected. The lungs are often in this predicament, as well as the stomach. The former are sometimes much reduced in size, or of the natural size, but with their texture more or less deranged on one or both sides; sometimes they are marked with livid spots only, sometimes with bloody extravasations; on

other occasions, abscesses take place of various extent, or of schirrosities of a whole lobe, or of a number of little spots, or a total deviation from the natural colour and texture. The various appearances of the lungs, on dissection, which in Europe are deemed characteristic of different stages of consumption, will be found to attend liver complaints, and, in general, would seem to be curable by the same means, as far as a judgment can be formed from successful cases. Although the functions of the stomach are generally deranged in every variety of way, during the existence of the disorder, yet it does not often exhibit any considerable morbid appearances on dissection. It is sometimes much distended, and sometimes reduced extremely in size; its coats are occasionally thickened, and at other times shew spots of extravasated blood; the colour also is various, and it will not always be found in its natural situation. The spleen is often not at all affected, but occasionally its texture, colour, situation, and size, are as considerably and as variously deranged as the liver itself. Sometimes it has been found a mere collection of putrid blood, and other matters. It is sometimes enlarged to a great degree, without any other morbid appearance; and has occasionally abscesses,

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schirrosities, and other marks, which at any time occur in the liver. The gall bladder, as well as the ducts, undergo a great many changes. The former is often turgid, with viscid black bile, sometimes greatly enlarged, sometimes empty, and much smaller than natural. The ducts are enlarged or diminished in size, their coats thickened, or their channels entirely obliterated. The intestines do not often exhibit very positive signs of disease; extravasations of blood, however, occur in their coats; they are sometimes much collapsed, and sometimes much distended; the colour is often not perfectly natural, and the inside is sometimes lined with tenacious mucus, or viscid bile of various colours. The mesenteric glands are sometimes greatly diseased in chronic cases. The omentum is either entirely in its natural state, or much reduced in substance, or entirely obliterated. The heart is generally found, though extravasations of water, generally bloody water, take place in the pericardium, the cavity of the thorax, or the abdomen; extravasations also of blood and matter are found in the two latter. Although, during the course of the preceding disorder, both the kidneys and the bladder may have seemed considerably affected, yet it is not often that any signs of disease

disease

disease are discoverable in them. From this short and general sketch of the appearances, on dissection, we may proceed to the method of treatment, which will be made as concise as possible, after noticing that adhesions of various parts are of frequent occurrence.

**TREATMENT.**—On all occasions of apparent liver and bile, where there is no fixed derangement, regimen will be found of sufficient efficacy. In great numbers of cases, accumulations of putrid bile, and other vitiated matters, will at first give the strongest suspicions of a permanent affection of the liver, or of some of the glands of the abdomen; but as the treatment of these and of the liver is exactly the same at first, the mistake cannot, in general, be attended with any bad consequences. These vitiated accumulations in the vicinity of the stomach, sometimes, as was before observed, excite a violent fever, with every symptom of an acute affection of the liver. Blood-letting, on such occasions, is quite unnecessary, and may be very pernicious; so that it should never be used, until the real nature of the complaint shall have been ascertained by purgatives. In this, therefore, and in all cases of the bile, or incipient liver, the first step is to evacuate the  
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the bowels completely, first with gentler saline medicines, and then with the more active purgatives, until every appearance of fordes vanish from the stools. These will in general be found to carry off all, or nearly all, the symptoms; and then a mild vegetable diet, with water for constant drink, accompanied by the most regular course of exercise, principally on horseback, will commonly restore the patient to his usual health, or protect him, with the assistance of occasional laxatives, from any very violent attacks of the disease in future. After the first operation of the purgatives, the occasional intervention of emetics may be often necessary. If the symptoms continue obstinate after these evacuations, the case must be considered as an *affection of the liver*, and treated accordingly with mercurials. Whether it be merely a collection of bilious fordes, or a real disease of the liver, the purgatives and emetics will be infallibly found to diminish the violence of the complaint, and to carry off many of the symptoms. If the more violent local symptoms do not abate considerably after the first copious evacuations, venesection is then admissible; a repetition will scarcely ever be found necessary, where the intestinal evacuations have proved abundant. Blisters are

generally applied over the seat of the pain, where this is at all acute\*. Practitioners may be very easily deceived with respect to the abundance of the discharges by stool. They may be assured of the necessity of further purgatives, as long as fordes of any kind appear in the stools, or as long as they are considerably tinged with bile of any colour. After the operation of a medicine, the last stools may be pretty free from both; but on these occasions, other secretions, other accumulations, will immediately form, and the next purgative will often produce the most copious discharges of bilious matters, vitiated mucus, &c. which do not always appear to be formed of secretions which are perfectly fresh. On the least recurrence of the symptoms, such as weight, pain, fulness, or oppression about the liver and stomach, the purgatives should be repeated, not only in mere accumulations, but during the whole course of treatment for a confirmed affection of the liver. When, from the obstinacy of the symptoms, there is reason to suppose a morbid state of the liver itself, or of the spleen, mesenteric glands, or other glandular

\* It was thought necessary to repeat some of these observations in the Remarks on the *Instructive Failures*.

parts of the bowels, or that the secretions of any of these are permanently deranged in any manner whatever, recourse should be immediately had to mercurials.

In the slower and chronic forms of liver, a course of mercury in any way answers, perhaps, equally well. The common mercurial pill is often employed, but mercurial inunction much more frequently. By the generality of practitioners these are used in nearly the same manner as for the venereal disease. Opium is by many given with the internal mercurials, but, probably, with great impropriety. We should always prefer the use of calomel in such doses as to procure occasional discharges downwards during the whole of the treatment. In reality, mercury has always been found to succeed best, when managed so as to evacuate the intestines very considerably during the greater part, if not the whole, of the course; and experience has the sanction of reason in this instance. No medicine whatever possesses the power of mercury in the excitement and extraordinary increase of all the secretions, particularly those of the bowels. If the secretions, which certainly take place during the exhibition of mercury, are allowed to accumulate, to stagnate, and to become acrid in the bowels,

much mischief must unavoidably prove the result; a fever, perhaps a dysentery, but certainly an exacerbation of all the previous symptoms must be the consequence. On these occasions, the bowels do not, in general, appear to possess activity sufficient to evacuate themselves to a proper degree, and, therefore, require the assistance of art. In the exhibition of mercury for the venereal disease, it is the unanimous opinion of the faculty, that every precaution should be taken to prevent the tendency of that medicine to the bowels, as a circumstance very unfavourable to its general effect on all the secretions of the system, by which it may be supposed to operate in the cure of the venereal disease. This, no doubt, is extremely just, but has not the least analogy with the use of mercury in the liver, as the secretions of that viscus and the other bowels are alone concerned in the treatment, at least in a primary view; nor does it appear that the excitement of an increased action in the other organs of the bowels is at all inimical to that of the liver. Even in the soundest state of this viscus, from whatever source the bile may immediately flow, very copious discharges generally follow the exhibition of a purgative; and it may be presumed, that it does sometimes come from

the liver on such occasions. Too much, in reality, cannot be said against the use of opium during the mercurial course; nor does the common, and undoubtedly the best, excuse for the exhibition of opium ever exist to any insupportable degree in chronic affections of the liver. Some degree of pain generally does affect various parts in these disorders; but it is never such as requires the alleviation of opium; nor would opium, on most occasions, afford any relief whatever to these pains. Another caution is indispensibly necessary here. Instances do occur, in which the largest quantities of mercurials have been used without sensible effects of any kind. Should the mercurials, on such occasions, have been allowed to (what is called) *pass off* by the intestines, its failure will be very readily attributed to that circumstance, or to its combination with a purgative medicine, when this may have been used. It is certainly an extraordinary circumstance, that very large quantities of mercury, exhibited in the various forms of ointment, calomel, and mercurial pill, should sometimes not only make no impression whatever on the seat of the disorder, but should fail to affect even the salivary glands, and every other part, in the slightest degree. This apparent inertness of the medicine,

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dicine, in venereal cases, has often been attributed to the infirm state of the patient; but although, in such habits, it may fail in its general effects on the system, its operation on the salivary glands has been favoured by those circumstances of debility. It is possible, though not very probable, that in the liver cases in question, the patients may have deceived the practitioner. For this mode of failure, indeed, there is no remedy. These deceptions, however, are very frequent in Bengal, where the practitioner's attendance is held of less value, as of no expence to the patient.

It has been already observed, that the affection of the mouth, in venereal cases, is justly thought to be unnecessarily, if not perniciously, retarded, by a combination of laxative medicines; and that although this effect is as certainly retarded by similar means, in affections of the liver, yet it is not of equal prejudice in the cure, for the reasons which have been stated before. We should inculcate this, as one of the most important circumstances in the treatment of the disease, and a circumstance that does not always receive the attention which it deserves. Authors have supposed that mercury is not adapted to every stage of these complaints; and

and to those, who have not been much conversant in affections of the liver, the use of mercury, after the supposed formation of matter, would appear an unwarrantable practice, and in direct contradiction to the testimony of many writers, but particularly of Doctor Clarke. Were the validity, however, of this opinion granted, yet the difficulty would still be as great as ever; for how is the existence of abscess to be ascertained? We may venture to say, not beyond precarious conjecture. The hectic heats and partial sweats, not to mention the less important symptoms, which have been received as indicatory of abscess or absorption, afford no criterion for the regulation of our practice in this respect; for these may, and generally do, occur in every species of affected liver, at one period or other of a disorder of any duration, and yield as readily to mercury as any other obvious form of the liver. Hectic heats, partial sweats, a general decay of embonpoint, colour, and strength, are often the very first symptoms of a disease in that viscus. But, independent of the inutility of such a distinction, as far as it relates to practice, it cannot in reality be allowed, that mercury is useless, much less prejudicial, in those cases where matter has certainly been formed. Af-



sections of that viscus will seldom be found partial: while one part has advanced to the stage of abscess, another may have arrived to within some degrees of it, and a third may be only in an incipient stage; both the latter, however, avowedly curable by mercury. The mischievous effects of this medicine in real cases of abscess should, one might suppose, be ascertained, beyond all possibility of doubt, before a practitioner would venture to proscribe its use, when the earlier stages of the disorder may still be supposed to exist in other parts of the liver. It may be asserted very positively, that experience combats such prejudices against the use of mercury, and that they have not even the sanction of any plausible theory. It has been imagined, that the absorption of the matter creates all the general mischief in the habit, which results from internal abscess; yet it is obvious, that the matter must form a passage for itself through some other channel, if it should not be absorbed. The consequence of this may prove of either a more or less favourable termination than that by absorption; and it will be allowed, that the evacuation of the matter, through the means of absorption, is not necessarily fatal, but will often cure the patient. In what manner can mercury, under any of

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these circumstances, prove of disservice? If the matter should have a tendency to make its way through the biliary ducts into the intestines, which is probably the most favourable course, will the action of mercury direct its progress through the diaphragm and lungs; or promote its discharge still more deleteriously into the cavity of the abdomen? No theorist will torture reasoning into such a conclusion. On the contrary, mercury, from its powerful action on the absorbents, may be reasonably expected to favour the cure of abscesses through their means, at the very time that it prevents the formation of more matter, or fresh abscesses, by its general effects on other parts of the liver: and next to the efforts of mere nature, we may believe the only chance of the patient's salvation is to be sought for in the use of mercury. It may be said that this drug will increase the debility, and tend to render the salutary efforts of nature less powerful; but those who have had much experience of its use in warm climates, are well assured that its effects on no occasion are so considerable in this respect, as have been generally apprehended; that it has even a contrary tendency, if fulness and strength of pulse may be allowed to stand as proofs of it; and that, although there may be one pe-  
riod

riod after the cessation of the stimulus, when a proportional collapse is supposed to take place, yet, that it is innocuous in its remote and ultimate consequences, may be presumed from the rapid embonpoint and sense of health, which take place sooner or later in most instances. It will result from these observations, that it is not easy to ascertain the exact period of the formation of matter in that viscus ; and that under the utmost certainty of its existence, the curative indications must still continue nearly the same, unless in cases where the lancet may be supposed capable of reaching the seat of the abscess. No doubt, on such occasions, a bold incision will often rescue the patient from inevitable death. Mercury, therefore, is applicable to almost every stage of every affection of the liver. In chronic cases, it may be proper to use it only in the *alterative* course, as it is called in Europe, until the mouth is considerably affected, resuming it some time after, if the symptoms should not vanish. It is immaterial what medicine is combined with the mercury, provided it be not opium, or any other that may have a tendency to check the secretions. Perhaps antimonials form a favourable combination ; we should, however, give the preference to

purgative medicines, such as cathartic extract, resin of jalap, scammony, &c. Medicines, which are calculated for the relief of particular symptoms in other disorders, will answer equally well, when such symptoms occur in affections of the liver, but need not be enumerated here. The generality of practitioners allow too much latitude in diet. Dyspeptic symptoms are very usual attendants on all affections of the liver, and are sometimes the only obvious appearances. In such instances it is not difficult to conceive the probable fatality, or at least inutility, of the medicines generally prescribed in those cases. But with respect to diet, certainly no means whatever could save the patient under the course of porter and beef-steaks, not only allowed but strongly recommended by one of the oldest professors in the university of Edinburgh. Such a diet would inevitably increase every form of disease in that viscus. Surely there are physicians who would esteem it very extraordinary, even in mere dyspepsia, in Europe. The liver, in every form, requires the strictest confinement to a spare and vegetable diet. The drink should not contain fermented or spirituous liquor of any kind; and this diet should be continued for a long time after the cure of the disorder; in reality, during

during life, if the patient be subject to relapses, as they often are. Exercise in the open air, as well as a change of air, is of the utmost importance in these cases.

Such are the outlines of the treatment in chronic cases. The means are nearly the same in acute attacks, but used with infinitely more vigour, in proportion to the suddenness and violence of them. The most acute forms of liver happen less frequently in Bengal than at Madras; but they do sometimes occur in the former. Sometimes a sudden swelling, pretty much circumscribed in the region of the liver, is the first intimation which the patient receives. On all these occasions, mercurial ointment should be rubbed into the part, and over most part of the surface of the skin, without the loss of a single moment, and continued without intermission, and without any scruples respecting the quantity, until the mouth be decidedly affected. If the symptoms do not remit or vanish, when this takes place, it is probable that an abscess, or some permanent and perhaps fatal affection will ensue. The purgatives are equally necessary in these instances, as well as the diet. Farinacea, however, are

better calculated for these forms of the complaint, than the fresh vegetables.

The writer is necessarily compelled to conclude this article, which contains hints perhaps too general, and certainly too confused. He cannot expect much reliance on his individual authority in these cases, until the proofs be published; but he will close this paper with some remarks from an authority that was as much respected as a man and a physician in India, during his useful life, as any medical man, perhaps, in any part of the world. Doctor Paisly, surgeon-general at Madras, enjoyed such an extensive fame, that he was consulted and even visited by sick Europeans from every part of India. Medical practice in that country is much indebted to his judgment, sagacity, and original practice, for the most important improvements. The following is a letter, which he wrote to a young gentleman of the Bengal medical establishment, who has since risen to eminence as a practitioner in Calcutta.

## Copy of a Letter from Doctor PAISLY.

“ SIR,

Fort St. George.

“ I HAVE been favoured with yours by  
 “ ————; and as your letter shews a  
 “ candid inquisitiveness that merits informa-  
 “ tion, I shall be somewhat explicit on the  
 “ subject. Mr. ———’s case is one of those  
 “ that occur every day in this country, of-  
 “ tener than is imagined in other hot cli-  
 “ mates, and I believe frequently in camps;  
 “ also at some particular seasons in Europe,  
 “ when bilious disorders prevail; but is ge-  
 “ nerally overlooked, on the supposition that  
 “ fluxes are simple diseases, arising from in-  
 “ fectious miasmata, putrid bile, something  
 “ acrimonious, or crudities in the primæ viæ,  
 “ and of course are treated with emetics,  
 “ laxatives, antiseptics, and blunters. In-  
 “ deed, if these were only such simple causes,  
 “ we might generally expect effectual cures  
 “ from a perseverance in such medicines,  
 “ properly adapted. But on the contrary,  
 “ we find them run on to a great length,  
 “ and often a precarious issue; and to our



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“ mortification find that such treatment  
“ proves palliative only for a day. This  
“ being evidently enough the case, we ought  
“ naturally to conjecture, that the source of  
“ their obstinacy must be looked for beyond  
“ the intestinal canal. Such is really the  
“ fact. A deep-rooted obstruction generally  
“ supports the disease, in spite of unwearied  
“ evacuations; and all assistance becomes  
“ only palliative, until that is removed. A  
“ want of attention to this circumstance  
“ allows fluxes to run on to their second or  
“ third stages, as they are called, which in  
“ reality are no more than different stages of  
“ duration and weakness: for the disease has  
“ been uniformly the same from the begin-  
“ ning, an obstructed liver and mesentery, but  
“ chiefly the former, with some degree of  
“ inflammation; the flux itself being no more  
“ than a symptom of the disease, and an  
“ effect of diseased secretions.

“ We have seldom occasion to be doubtful  
“ of the existence of this cause; for if we  
“ have not pain to direct us, an experienced  
“ touch will discover the obstruction, the  
“ tenderness and enlargement of the liver.  
“ I say an experienced touch, because it re-  
“ quires a frequent practical examination to  
“ satisfy one respecting the different degrees  
“ of

“ of hardness, firmness, and sensibility, that  
“ constitute a disease of that bowel; how-  
“ ever, appearances are seldom so equivocal  
“ as to puzzle practice in general. I will  
“ venture to affirm, that the grand source of  
“ health and disease is centered in the natu-  
“ ral or diseased condition of the liver; and  
“ that even chronic and lingering illnesses  
“ arise, in a considerable degree, from some  
“ defect there. In many acute disorders it  
“ has also its share. But in every kind of  
“ sickness, whether local or general, that is  
“ peculiar to this country, it is material to  
“ examine it; for no perfect cures can be  
“ made, nor relapses prevented, without hav-  
“ ing a strict eye to it. The flux he has la-  
“ boured under for thirteen months might  
“ originally have been cured in as many  
“ days; and even now will give but little  
“ trouble, as he has strength enough left to  
“ bear the operation of medicines.

“ This case, from the beginning to this  
“ time, has been an obstructed liver, and  
“ could at no time have been effectually  
“ cured, but by mercurial deobstruents:  
“ though a strict diet, exercise, palliative and  
“ laxative medicines, when the inflammatory  
“ tendency ceased, to blunt and evacuate  
“ bile, diseased in its secretion, might have

“ given relief for a time, and produced a  
 “ temporary cure. But these never could  
 “ restore him to health, nor that vivid clear-  
 “ ness of countenance peculiar to it; nor  
 “ even prevent the relapses he has been sub-  
 “ ject to during so protracted an illness; at  
 “ many different periods of which, had his  
 “ feelings been questioned, they would have  
 “ been sufficient to have pointed out the  
 “ source and cause of his disease. I find, by  
 “ his own account, that his case in the be-  
 “ ginning was a good deal inflammatory.  
 “ At present his liver is only enlarged and  
 “ hard, but no pain there. His flux is ac-  
 “ companied with gripes and tenesmus, and  
 “ his look bloated and fallow; his urine too  
 “ is very high-coloured; this appearance,  
 “ by the bye, never fails to attend liver dis-  
 “ orders of any consequence; though it now  
 “ and then happens, in nervous habits, in  
 “ diseases of the bile itself, or according to  
 “ the situation of the obstruction, that it is  
 “ either pale, or but little discoloured; but  
 “ in general it is a material index to diseases,  
 “ where bile prevails. When obstructions  
 “ of the liver exist, the first digestion goes  
 “ on very imperfectly; therefore the first in-  
 “ dication in his case, is to clear the bow-  
 “ els of bile, phlegm, and other causes of irri-  
 “ tation;

“ tation ; the second, to remove the obstruc-  
“ tion of his liver ; and lastly, to recover the  
“ lost tone of his intestines, and to strengthen  
“ his system in general.

“ In recent cases, castor oil, where a tenes-  
“ mus is troublesome, is a good purge, and  
“ effectually disengages much glutinous bi-  
“ lious stuff from the duodenum and the  
“ colon ; and as it enters not the blood, it  
“ creates little disturbance in the system.  
“ It is, therefore, I say, in recent cases,  
“ an eligible purge ; but in this, where the  
“ bowels have been much relaxed and weak-  
“ ened, rhubarb, quickened with calomel or  
“ soluble tartar, is better to answer the first  
“ intention, repeated once or oftener, ac-  
“ cording to the nature and complexion of  
“ the excretions.

“ Proper evacuations having been made,  
“ the second indication is to be answered by  
“ mercury, administered but slowly, as his  
“ complaints are of a long standing, and his  
“ habit much relaxed. However, one dram  
“ of mercurial ointment will be rubbed into  
“ his side daily, and ten grains of a pill  
“ composed of the mucilage mercurial pill  
“ and ipecacuan, equal parts, will be given  
“ him night and morning ; or the follow-  
“ ing :

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“ R Spec. aromat. gr. vi. vitr. cerat. antimon.

“ Cal. opt. evigat. āā gr. iii. Conf. al-

“ kerm. q. f. f. bolus m. et v. Sumend.

“ These are to be continued till the mer-  
 “ cury fixes in his mouth. By these means  
 “ the obstruction will be gradually removed,  
 “ and the load of ferous humours that flow  
 “ to his guts, in their present relaxed and  
 “ irritable state, will be derived to his  
 “ mouth; by which means the bowels will  
 “ gain a truce from evacuation. As the  
 “ obstructions remove, the urine and stools  
 “ will grow more natural, and every secre-  
 “ tion less diseased.

“ In those chronic obstructed cases, the  
 “ friction used in the application of the oint-  
 “ ment is not without efficacy.

“ As you desire my opinion of opiates and  
 “ astringents, I shall give it you from expe-  
 “ rience in a few words. Opiates are dan-  
 “ gerous medicines in fluxes, and are always  
 “ to be used with the most fearful caution.  
 “ Early in the disease, where the case is pu-  
 “ trid or inflammatory, they should be used  
 “ at no solicitation whatever. Suspending  
 “ the evacuations for a night may bring on  
 “ a fatal mortification. In more chronic  
 “ cases, a freedom from gripes, the smell  
 “ and nature of the evacuations by stool, are

“ the only criterions to direct the use of  
“ them; for no retentions are to be made  
“ of any thing putrid or acrimonious. In  
“ short, in a climate where all the capital  
“ diseases arise either from putrid bile or ob-  
“ struction, nothing must be shut up.

“ As for astringents, they are often dan-  
“ gerous medicines in fluxes, and always  
“ precarious, and can be used with no kind  
“ of safety, until all obstructions are re-  
“ moved, with every thing that is putrid or  
“ diseased. In acute cases they have fatal  
“ effects; in the more chronic cases they  
“ hamper and protract the disorder, with all  
“ its concomitants, gripes, tenesmus, &c.  
“ When the disease becomes a simple di-  
“ arrhœa, without gripes, or with them  
“ arising only from wind, equal parts of  
“ conf. prun. silv. and the conf. aurant. or  
“ confect. cardiac. is an elegant and safe  
“ astringent. The tinct. cort. cascar. cold  
“ bathing and exercise recover the constitu-  
“ tion from a state of relaxation.

“ Having made these remarks on opiates  
“ and astringents, I come next to the third  
“ indication in the case of Mr. ——. After  
“ the obstruction in his liver is removed,  
“ and other complaints abated, the third  
“ indication is to be answered by gentle  
“ bitters



“ bitters of the least astringent kind. Bark,  
 “ which on most occasions of weakness and  
 “ relaxation is an invaluable medicine, in  
 “ liver cases is a poison. The flor. cham.  
 “ sem. cam. and sal polychrest, each one  
 “ drachm, will make a couple of cups of  
 “ bitter tea, to be drunk forenoon and after-  
 “ noon. This medicine, with proper exer-  
 “ cise and diet, will be sufficient to re-  
 “ establish him.

“ ———, whom you may have seen,  
 “ laboured under a disorder of this kind, but  
 “ worse, being accompanied with much  
 “ weakness, and the loss, in a great mea-  
 “ sure, of the use of his extremities. He  
 “ is now in perfect health. The source  
 “ and cause of his complaints had also been  
 “ overlooked. He had, like Mr. ———, tri-  
 “ fled for many months with the usual me-  
 “ dicines in fluxes, until he was reduced to  
 “ extreme weakness. These are two instan-  
 “ ces of liver fluxes, which you have seen.  
 “ I have met, within these few years, with  
 “ numberless unfortunates from camps, and  
 “ different parts of the country, in the very  
 “ same predicament, who have with diffi-  
 “ culty survived this wreck of constitution.  
 “ But it is impossible to enumerate the va-  
 “ riety of complicated bilious disorders, that  
 “ practice



“ practice daily presents, with observations;  
“ nor can I in a letter convey a proper idea  
“ of the nice and peculiar treatment diseases,  
“ arising from putrid bile and obstruction,  
“ require. Different circumstances and con-  
“ stitutions diversify; but all capital diseases  
“ require the most circumspect attention,  
“ and a conscientious attendance on them.  
“ Omissions and mistakes are not to be re-  
“ medied by any future effort; especially  
“ where putrid bile lurks in the habit.  
“ Disturbing it suddenly by evacuations, or  
“ putting it in motion before it is well di-  
“ luted and corrected, often proves, like poi-  
“ son, suddenly fatal. Of this I have seen  
“ instances in men, who were not at the  
“ time bed-ridden. As a striking instance  
“ also of the general attention that is neces-  
“ sary in the most trivial complaints arising  
“ from bile, I can assure you I have known  
“ what are trifling medicines prescribed in  
“ ailments which were considered as equally  
“ trifling, productive of very serious disor-  
“ ders. For example: I have seen a course  
“ of bitters, ordered in what was imagined a  
“ windy relaxed stomach, produce liver ob-  
“ structions, and, in inflammatory habits, a  
“ real inflammation of that bowel. Such  
“ circumstances awaken a man’s caution;  
“ but

“ but it is a practical fact, that no strong or  
 “ astringent bitter can be used here with im-  
 “ punity, unless the case is simply relaxation.  
 “ In mixed disorders, the gentlest of the kind,  
 “ with neutral salts, are only safe. Indeed it  
 “ is still, perhaps, a problem in physic, how  
 “ long the use of astringents may be conti-  
 “ nued with safety, or without danger of en-  
 “ tailing some additional disorder. Before I  
 “ conclude this letter, though somewhat fo-  
 “ reign to the subject of yours, I cannot avoid  
 “ putting you on your guard against a disor-  
 “ der of the liver, which, from its being over-  
 “ looked, I have once seen in Europe, and  
 “ several times here, attended with fatal con-  
 “ sequences. The disorder I mean, is what  
 “ may be termed a liver cough. The ob-  
 “ struction, in this case, is pretty generally at-  
 “ tended with inflammation and pain, though  
 “ seldom acute, unless pressed with the fin-  
 “ gers, or when the external membrane is  
 “ also affected; but it oftener happens with-  
 “ out pain or inflammation. The cough,  
 “ though only a symptomatic complaint, is  
 “ the *misleading symptom* of the disease. The  
 “ patient pronounces his own case a cold, and  
 “ is put on a course of ineffectual pectorals,  
 “ takes exercise, and shifts his situation for  
 “ health, until his liver either suppurates, or

“ becomes an indolent mass of irrecoverable  
 “ obstructions. In very irritable inflammatory  
 “ habits, any mistake at the commencement  
 “ of the disease is of the most dangerous con-  
 “ sequence. The liver, the diaphragm, and  
 “ the lungs adhere and suppurate, and a pu-  
 “ rulent spitting succeeds; though, instead of  
 “ a smooth uniform pus, the substance of the  
 “ liver is expectorated by a deep hollow  
 “ cough, in form of glandular membranous  
 “ appearances, mixed with purplish discoloured blood, of a parenchymatous look.

“ This disorder, like all other inflammatory disorders of the liver, is very tractable in the beginning, by evacuations, relaxing antiphlogistic medicines, and mercury. Such cases as the above I have met with, and have been happy enough to effect some cures, even in that advanced stage.

“ It is to be observed, that in all confirmed diseases of the lungs of any standing, the liver is always affected; but in this disorder the lungs are only the secondary object, and never give any trouble, if the obstruction of the liver be removed, as in them there are neither tubercles nor infarctions. The breathing, except in inflammatory cases, is never affected; and the symptomatic complaints, cough and pain in the shoul-

“ der, may always be mitigated by lying on  
 “ the back, with the head low and the legs  
 “ raised.

“ To the above I shall annex another dis-  
 “ order, which is entirely of the liver kind.

“ Agues are not frequent in the dry sandy  
 “ soil of this coast; but quotidian remit-  
 “ tents often happen here from inflammatory  
 “ obstructions of the liver; I say remittents,  
 “ because the fever never goes entirely off,  
 “ though the quotidian ague fits are very  
 “ regular in their attacks. The patient in  
 “ such cases tells you only that he has got a  
 “ fever and ague, and a pain at the pit of the  
 “ stomach; but his report is not to be trusted,  
 “ without further examination of him, both  
 “ in a lying and standing posture. On pres-  
 “ sing with your fingers, from the stomach  
 “ to the right side, he will complain of much  
 “ pain and tendernefs, and his urine will be  
 “ very high-coloured; sometimes his right  
 “ shoulder is affected, and generally he has  
 “ a liver cough. Here is a complicated  
 “ case, though there are no contra-indica-  
 “ tions in the cure of it. The inflammation  
 “ and obstruction of the liver are the proxi-  
 “ mate causes of the disorder, and its dif-  
 “ ferent symptoms. Venesection is imme-  
 “ diately necessary, and, if the stomach seems

“ loaded, an emetic may be safely given after  
“ it; but it should be such as will operate  
“ easily, and open the belly. Such I have  
“ found the following in all bilious com-  
“ plaints:

“ R Vin. antim. v. ipecacuan. āā ʒss.

“ Oximel. scil. ʒvi. M.

“ Notwithstanding the continual fever,  
“ ʒi. of mercurial ointment must be rubbed  
“ into the side morning and evening, after  
“ fomenting it. Saline draughts, with nitre  
“ and tartar emetic, every two or three hours,  
“ and bleeding repeated if necessary. The  
“ ague and cough require no attention; these  
“ will diminish as the mercury takes effect,  
“ and entirely cease when the spitting comes  
“ on. Any bilious attacks that may happen  
“ during this interval are to be relieved by  
“ emetics, castor-oil or soluble tartar, and  
“ glysters, as circumstances may require.

“ We meet here with quotidians and ter-  
“ tians, arising from obstructed livers, where  
“ bark is never necessary, but to prevent re-  
“ lapses. Some time since I met with a  
“ quartan of two years standing, attended  
“ with a very irregular state of the bowels  
“ on every accession of the fit, with such an  
“ astonishing secretion of bile as to produce  
“ a severe cholera morbus. After reducing

“ the liver obstructions by mercury, and the  
 “ patient in a proper train for astringents,  
 “ his cure was effectually compleated with.

“ R Conserv. aurant. ʒi.

“ Pulv. cort. peruv. ʒss.

“ Serpent. virg. ʒii.

“ Tart. vitr. ʒi.

“ Syr. aurantior. q. s. ut f. elect.

“ Of this he took half an ounce in the  
 “ day, and continued it for some time; and  
 “ every third night, when his excretions  
 “ were not free, he took ten grains of a mass  
 “ of pills, composed of equal parts of soap,  
 “ aloes, and calomel.

“ On the subject of agues, I shall observe  
 “ to you, in general, that bark is seldom ne-  
 “ cessary in the cure of them, and often un-  
 “ safe, except in cases of great weakness, re-  
 “ laxation, or where the nervous system is  
 “ much affected: on the contrary, evacuants,  
 “ neutral salts, and deobstruents, are seldom  
 “ ineffectual. However, where the indica-  
 “ tion is not strongly marked, and when dif-  
 “ ficulties arise about the propriety of exhi-  
 “ biting particular medicines, the following  
 “ criterion, with restrictions, may serve as a  
 “ guide.

“ When the bark does not succeed in

“ deobstruents, neutral relaxing medicines,  
“ with evacuations according to circumstan-  
“ ces, are more likely to answer. On the  
“ other hand, if they fail, bark, bracing me-  
“ dicines, and nervous, will become more  
“ necessary; but whether in agues, or in dis-  
“ eases induced by obstructions of the vis-  
“ cera, if the urine is high-coloured in the  
“ interval of the fit, or during the course of  
“ the disease, astringents of every kind are to  
“ be avoided; for infinite mischief may be  
“ done by them, especially if the disease be  
“ inflammatory, or if putrid bile lurks in the  
“ primæ viæ, from which alone wonderful  
“ and misleading effects on the system are  
“ often produced. Sudden fevers are lighted  
“ up, choleras are induced, convulsions,  
“ spasms, and all the variety of nervous  
“ affections, according to the degree of its  
“ acrimony, and the particular idiosyncrasy  
“ of the patient.

“ The case of a gentleman, who was un-  
“ der my care not many days since, will ex-  
“ emplify this. A healthy florid young man  
“ was taken suddenly with fever. A dry  
“ skin, his tongue as white as a sheet; his  
“ urine like porter, and of a strong alkaline  
“ smell; great heat and fulness about the  
“ præcordia; his pulse sometimes high, some-



“ times low, but always quick ; great and  
 “ restless agitations in his whole frame ;  
 “ sometimes the deepest dejections of spi-  
 “ rits, even to crying ; sometimes ravings,  
 “ horrors, and general spasms ; sometimes  
 “ calling for wine to support him under these  
 “ depressions, at other times for water to  
 “ allay an unquenchable thirst. All these  
 “ symptoms, and the transition of them, were  
 “ displayed during the first visit I made him,  
 “ which happened a few hours after his  
 “ being seized. This appeared clearly enough  
 “ to be a case of putrid bile, operating on  
 “ the system, and is one of those cases,  
 “ where the patient is either out of danger  
 “ or extinguished in a few hours. The whole  
 “ indications of cure, in such cases, are to  
 “ dilute and evacuate the irritating cause,  
 “ and by tempering medicines to quiet the  
 “ disturbances raised. Stimulating medicines  
 “ have no place here, notwithstanding the  
 “ variety of nervous affections ; they unavoid-  
 “ ably would aggravate every symptom.  
 “ Emetics ruffle too much to be ventured  
 “ on, when the whole system is distracted,  
 “ besides the danger of their setting in mo-  
 “ tion, at once, a deluge of putrid bile, which  
 “ is never without instant risk. For this  
 “ gentleman I ordered a purging glyster im-

“ mediately; and his legs, &c. to be fomented  
“ with salt water, until a solution  $\mathfrak{z}$ i. of  
“ manna, and  $\mathfrak{z}$ ss. of soluble tartar, in  $\mathfrak{z}$ x.  
“ of water could be sent him. Of this  
“ he was directed to take four spoonfuls  
“ every hour, until it operated three times,  
“ and brought away some frothy bile, of an  
“ intolerable stench, and like the workings  
“ of a beer cask. This was far from suffi-  
“ cient to produce very considerable effects;  
“ however, he was sensibly relieved, and it  
“ was no small satisfaction, from the nature  
“ of the excretions, to find the disease in my  
“ power. As soon as the effects of the laxa-  
“ tive were over, I directed him to take,  
“ every three hours, four spoonfuls of the  
“ following

“ R Camphor. nativ. gr. x.

“ Amygdal. dulc. decort. dr. ii.

“ Mucilag. gum. arab. salin.  $\mathfrak{z}$ x.

“ Pulv. nitr.  $\mathfrak{z}$ ss.

“ Tart. emetic. gr. i.

“ Syr. facch.  $\mathfrak{z}$ ii. M.

“ This to be continued in the interval of  
“ purging; and to use clear rhenish whey as  
“ common drink ad libitum. He passed a  
“ more tolerable night, and less oppressed,  
“ less restless, and his head less affected. The  
“ day following he was ordered another more

“ active purge, composed of *sena* ʒi. *manna*  
 “ ʒiii. *soluble tartar* ʒiii. *sem. camin.* ʒfs,  
 “ to be infused in ʒviii. of boiling water;  
 “ one half to be taken early in the morning,  
 “ the other two hours after. This operated  
 “ five times, the stools of the same nature  
 “ and smell, but plentiful. Every symptom  
 “ abated considerably after the operation of  
 “ the purge; his urine and tongue remained  
 “ the same, but he was much composed;  
 “ few spasms, few attacks of depression of  
 “ spirits, his skin moister, and his pulse regu-  
 “ lar and less frequent. It only remained  
 “ now to prepare the remainder of the bile  
 “ for expulsion; he was therefore directed to  
 “ drink plentifully, to take his medicines  
 “ regularly for a couple of days, and the  
 “ third day in the morning the same purge  
 “ was repeated, with the addition of ʒfs. of  
 “ *sena*. It operated very effectually, and  
 “ brought away much glutinous stuff and  
 “ bile, and the evening of that day his urine  
 “ became natural and clear, his tongue but  
 “ little changed, and every complaint va-  
 “ nished. Nothing further was necessary,  
 “ but to leave a purge with him, to direct  
 “ him to continue the rhenish whey, and use  
 “ light diet until he recovered some strength.  
 “ But as this disorder, with the *mort de*  
 “ *chiens*.

“ chients, and many others of the putrid bilious kind, originate with the liver, relapses cannot be prevented without removing every obstruction, and restoring the secretions. For, although all acrimonies and putrid accumulations arising from diseased secretions may be removed by well-timed evacuations, yet fresh collections and indigestions may soon occasion the same scene to be acted, if obstruction is not removed, and healthy bile restored, to perform nature’s first and greatest operation in the animal œconomy. We should therefore never think it sufficient to save the patient from immediate and pressing danger. The latent defect, the original of all, it is also incumbent on us to remove. The state of the stomach, the visceral glands, secretions, and urine, are to be nicely attended to, and, as circumstances may require, gentle mercurial deobstruents, gentle bitters, with neutral salts, are to be administered, and occasional evacuations, with a strict diet, to be recommended, until the constitution and health are perfectly restored; otherwise our services, rather flattering than useful, if I may be allowed to use the comparison, are like the splendid actions of the statesman or the general, which acquire them reputation and eclat,

“ but are productive of no solid or lasting  
“ advantage in the system.

“ I could furnish you with a variety of  
“ such cases, and with a multitude of histo-  
“ ries of other complicated bilious disorders,  
“ which come daily under my notice here;  
“ but they would swell this letter to a vo-  
“ lume, which has already, indeed, exceeded  
“ much the bounds I intended; I shall there-  
“ fore only further observe, in general, that  
“ bile in different states and situations, and in  
“ different constitutions, puts on the appear-  
“ ance of, and apes, almost every disorder;  
“ and of consequence much experience and  
“ attention are requisite to discriminate pro-  
“ perly its effects and operation in this coun-  
“ try, where there are but few simple fluxes,  
“ simple agues, or simple coughs, or, indeed,  
“ but few simple diseases; and you may be  
“ assured, that where the liver and primæ  
“ viæ are not considered as the grand sources  
“ of diseases, continual and serious blunders  
“ will be committed in practice.

“ Mercury, in judicious hands, is a safe  
“ and tractable medicine, and as it is the only  
“ safe and powerful deobstruent in glandular  
“ obstructions, it is of consequence the only  
“ medicine to be depended on in those latent  
“ defects of the system, which entail diseases

“ or impede recovery; however, it often re-  
“ quires assistance from other medicines, from  
“ exercise, from spas, or from medicated  
“ aqueous medicines, which wash the glands  
“ and increase the secretions; or, in general,  
“ it requires assistance consistent with the  
“ effects diseases have had on the constitu-  
“ tion. For example; in venereal and other  
“ habits, where the solids are much relaxed,  
“ the blood poor and flimsy, mercury, with-  
“ out bark, will spread every ulcer, induce  
“ febricula, and aggravate the symptoms. In  
“ acute diseases, evacuations, neutral and re-  
“ laxing medicines, render it safe and effec-  
“ tual. In irritable habits it requires ma-  
“ nagement, as its operation is chiefly on the  
“ solids; but the idea of its injuring the con-  
“ stitution, or dissolving the crasis of the  
“ blood, is without foundation: on the con-  
“ trary, it is too apt to leave behind an in-  
“ flammatory diathesis.”

*Note.*—Part of the copy is illegible here.

“ You may observe, I have been somewhat  
“ general in my answer to your’s, but I was  
“ willing to throw into it as much informa-  
“ tion as the compass of a letter would admit.

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“mit. Upon the whole, it contains a few  
“ hints, which you may in future improve to  
“ your advantage; though to have been cir-  
“ cumstantially minute was impossible.”

*Note.*—The copy is again illegible here.

F I N I S.

