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OBSERVATIONS

ON THE

HEPATITIS OF INDIA,

AND ON THE

PREVALENT USE OF MERCURY

IN THE

DISEASES OF THIS COUNTRY.

BY WILLIAM SAUNDERS, MD. FRS. & SA.

Fellow of the Royal College of Physicians;

AND PHYSICIAN EXTRAORDINARY TO THE PRINCE OF WALES.

LONDON:

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1809.

OBSERVATIONS

HEPATITIS OF INDIA

AND OF THE

HEPATIC FEVER OF MERCURY

IN THE

WEST INDIES OF THIS COUNTRY

BY WILLIAM SANDERS M.D. F.R.S. & C.

OF THE ROYAL COLLEGE OF PHYSICIANS

AND FELLOW OF THE ROYAL SOCIETY OF LONDON

LONDON:

PRINTED BY WILLIAM SANDERS
AT THE SIGN OF THE ROYAL COLLEGE OF PHYSICIANS

1800

OBSERVATIONS
ON THE
HEPATITIS OF INDIA.

WHAT has been mentioned in the different editions of my book on the Liver, relative to the cure of acute hepatitis, is to be considered as applicable chiefly to the disease in the form in which it appears in Europe, where indeed it is comparatively rare; but in the East Indies, where it is so frequent as to be the endemic of that country to European constitutions, a different practice is required.

Medical writers, till of late years, have usually recommended such a treatment of acute hepatitis in India, as is chiefly applicable to the state of the disease as it occurs in this country ; that is to say, by a very vigorous use of every part of the antiphlogistic regimen, till either a resolution is effected, or till suppuration is established. But the ill success attending this treatment in India, led some practitioners (who had the courage to emancipate themselves from the trammels of long established custom) to resort to the use of mercury, not merely as a purgative, or as a deobstruent, after the disease had assumed a chronic form, but at the first attack, and in such doses as to excite salivation, and even whilst

the symptoms commonly termed inflammatory were still considerable. In fact, the tendency to suppuration in the Indian hepatitis is so great, and the interval between the first accession of inflammatory symptoms and the full establishment of the suppurative stage is so short, that unless the use of mercury is begun *very early*, no time is left for the interposition of its salutary action.

This practice has now been pursued in India for more than half a century, and with the happiest effect; so that, with judicious and early treatment, this disorder proves more tractable than most other visceral inflammations with which we are acquainted.

It is however found, that the usual antiphlogistic means cannot be altogether dispensed with, and that the good effects produced by the subsequent mercurial course are much promoted by previous evacuations ; so that, the mode of cure now adopted by the most judicious and successful practitioners in India, is the following.

When the accession of the disorder is attended with much fever, and local pain, (which is not always the case) the lancet is resorted to immediately : but some caution is required in the use of this powerful evacuant. Purgatives are always essential, and although calomel is chiefly recommended, yet every species of purgative is of service ; nor are

the practitioners agreed, whether any preference is due to any one over others.

Blisters also are invariably serviceable when the local affection is severe. After these means have been used for about two days, the mercurial course is begun without delay, and without regard to the state of the bowels, even where there is a constant flux, with bloody stools, and even before the thirst and general heat have subsided, provided the pulse has softened, and the local pain become moderate.

The mode of exhibiting mercury is generally by inunction, and it must be used in considerable quantity and with unremitting perseverance, till the disease is subdued, unless the actual formation

of matter anticipates the constitutional effect of mercury. But in by far the greater number of cases, when the symptoms of the disease are distinguished at their first accession (which it is not always easy to do) and the above plan of treatment is carefully pursued, the suppuration is prevented, and the patient is brought into a convalescent state.

This great improvement in the treatment of the East India hepatitis, by the early introduction of mercury into the constitution, leads me to notice at some length, the opinion, which has for some time prevailed among the generality of practitioners, of the powerful and specific action which this valuable metal is supposed to exert, even in the cure of almost

every hepatic disease that is seen in this country ; an opinion which has in consequence led to a very general recurrence to this remedy in all liver cases, often with very little discrimination, as to the period of disease, its diagnostic symptoms, or the general habit of body of the patient,

As the evidence in favour of the efficacy of mercury, even in the inflammatory stage of hepatitis in India, and of the comparative safety of the remedy under symptoms which certainly would forbid its use in this country, is perfectly decisive, being founded on the actual experience of enlightened practitioners, for more than half a century ; and that totally unconnected with, and even in

hostility to ordinary theoretical reasoning; it becomes of considerable importance to shew also from experience, how far it is safe to transplant the India practice into Europe, and to guard against the abuse of a remedy, which, in all visceral diseases, ought only to be employed with the most guarded caution.

I am perfectly willing to admit, that the reports which have been given of the powers of mercury in removing the East India hepatitis, are not exaggerated; and also that the term of a specific may perhaps be as justly applied to its action in this disease as in the syphilis; but it should never be forgotten, that the idea of a specific is peculiarly flattering to

the patient, for whilst it encourages an implicit reliance on a single remedial process, it tends strongly to shake his confidence in the slow and silent operation of a guarded diet and regimen, and to lead him to throw off those habits of regularity and temperance, which experience shews to be of peculiar importance in all diseases depending on a derangement of organs connected with the digestive functions.

It should also be remembered, that the liver diseases of this country are, generally speaking, much slower in their growth than those of India ; and numerous instances might be adduced, in which an invalid labouring under the more chronic form of liver disease, who

by prudent management and unirritating medicines (such as dilute solutions of saline purgatives, Cheltenham water and the like,) might have retained for many years a share of health amply sufficient to render life desirable, had by a rash application of so active a remedy as mercury, been hurried to his grave in a few months.

In judging of the danger of transplanting the India practice into this country, without great caution and discrimination, two important circumstances are to be noticed; the one, that the Indian hepatitis is actually a disease peculiar to that continent, and different in many essential particulars from the liver complaints of either Europe or America;

and the other, that the constitutions of natives of a climate like ours, have a stronger inflammatory tendency, and will by no means bear the use of so stimulating a remedy as mercury, under circumstances in which experience shews it to be perfectly safe in the Indian constitutions. First, though the leading symptoms and the termination of hepatitis, are very similar in Europe and in India, it appears, from its great frequency at peculiar times and places, to be the principal endemic of the continent of India to European constitutions, often amounting to a third, or even more, of the aggregate number of diseases of all kinds ; as appears from the most accurate registers kept by the most careful practi-

tioners. In England, on the other hand, the genuine acute hepatitis, or that which directly tends to suppuration, is very rare ; and even when it does appear in this island, it is most commonly in persons who have been the subjects of it in India, or who, by a long residence in that climate, have acquired a strong tendency to congestion in the hepatic circulation.

Besides, the East India hepatitis is not merely a disorder of a tropical climate, but it appears to be almost entirely confined to the Indian continent. It is altogether unknown as an endemic in America, or any part of the West Indies, where all the circumstances of diet, temperature, exposure, and the like, are

nearly the same to Europeans, as under the same latitudes in the Eastern Continent.*

The symptoms too of the East Indian hepatitis, shew somewhat of a peculiar character: the inflammatory diathesis which is marked by acute and local pain on pressure, rigor, high febrile pulse and heat, and in particular, the extension of pain to the point of the scapula, all appear with much less intensity in the Indian disease than in this country; and many of those symptoms are even frequently

* "It is a remarkable thing that in the East Indies, under the same latitude nearly as Jamaica, that is, at Madras and Bombay, the disease known in those countries by the name of Liver or Hepatitis, shall be the most prevailing disorder among Europeans, and that the same should not be known in the Island of Jamaica."—Hunter, on the Diseases of Jamaica.

almost entirely wanting, though the rapidity of the subsequent suppuration, and speedy destruction of the whole substance of the liver, if not checked by the timely use of mercury, shew the internal mischief to be of the most formidable kind.

At the same time it is also obvious, that the hepatitis of India is in all similar stages a milder disease than the sporadic hepatitis of this country. The phlogistic symptoms are less violent, and local inflammation attending the suppuration, whenever established, is less liable to extend over the cavity of the abdomen, owing to the constitutional irritation being much milder, and recoveries from such extensive

visceral diseases are much more frequent.

Another very noted peculiarity of the Indian hepatitis is, the tendency it shews to assume the appearance of other diseases, which in this country are usually unconnected with hepatic affection : or, in other words, it may be stated, that by far the greater number of diseases which affect Europeans in India, are connected with, and depend on a morbid state of the liver and other biliary organs, in whatever symptoms they shew themselves, and consequently are only to be cured by the same means which have been found essential in the treatment of the more marked cases of hepatic disorders.

Thus it appears that there is hardly such a disease known in India as simple diarrhœa, simple remittent fever, and the like; but, when the symptoms usually indicating such disorders are present, the liver is the primary seat of disease; and hence they yield neither to bark, nor astringents, nor opiates, but generally to saline evacuants, blisters, and especially to *mercury*.

This tendency of hepatitis to imitate in its symptomatic affections the primary diseases of Europe, is remarkably shewn in the *liver cough*, so well defined by Dr. Paisley.* This disorder commences like a common obstruction in the lungs, the local inflammation and pain are sel-

* See Dr. Paisley's Letter.

dom acute, and sometimes are entirely absent ; so that it requires the *tact* of an experienced practitioner, to discover the real seat of the mischief. In the mean time, unless vigorous and proper remedies are early employed, the liver proceeds to suppuration, the matter finds its way frequently to the diaphragm and lungs, a purulent spitting succeeds, and the whole parenchymatous substance of the liver is gradually discharged by expectoration. But even where this disease proves fatal, the lungs are seldom found tubercular, but the suppuration begins in the liver, and is principally confined to this organ. The exclusive efficacy of mercury in liver diseases of the continent of India,

may perhaps be explained by supposing they arise from an indigenous, and local poison, or miasma, peculiar to that country, unlike any thing known in any other part of the world, even under similar latitudes and temperatures; and for which mercury is as much an antidote as to the syphilitic poison.

OBSERVATIONS
ON THE
PREVALENT USE OF MERCURY,
IN THE
DISEASES OF THIS COUNTRY.

HAVING, I hope, established the point of the peculiar nature of the East India hepatitis, as one argument, against the propriety of implicitly following the Indian practice, in the acute inflammation of the liver of this country, I shall proceed to state the mischievous effects, which a long and extensive experience, has taught me to apprehend from the use of mercury in many of the other visceral diseases of this country; especially

when attended with general fever, and decided marks of constitutional irritation. This I am particularly led to state, as I am convinced that the abuse of mercury has extended equally with its use, that the administration of this powerful remedy is frequently confided to very unskilful hands, so that even in the nurseries, we now hear of calomel being resorted to on all occasions, as a familiar medicine, with as little reserve and discrimination as magnesia or rhubarb.

It may be laid down as a pretty general rule, for the guidance of medical practice in this country, that any preparation of mercury that acts upon the gums, inflames the fauces, and produces salivation, is in itself injurious in most constitutional

diseases, where febrile excitement is present, whether original or symptomatic.*

This observation will apply equally to that hectic fever which is symptomatic of external or internal suppuration, and to fevers with exacerbations, where there is no obvious local cause, either of disorganization, or diseased structure, and more especially when the body becomes emaciated under profuse and colliquative discharges.

* One exception however to this rule is in the case of a symptomatic fever, which sometimes arises from nodes, or an inflamed periosteum, as generally combined with syphilitic poison. I have likewise seen the *liquor hydrargyri oxy-muriatis*, or that preparation of mercury better known by the name of corrosive sublimate, do good in confirmed head-achs, with recurrent symptoms of ophthalmia, not symptomatic of the stomach, but probably arising from some morbid state of the periosteum or bone.

The action of mercury to a healthy person is that of accelerating the pulse, producing buffy blood, or that appearance of it which indicates inflammation, increasing the secretions, and giving them a peculiar character of what has usually been termed acrimony; and which, whatever theoretical term we adopt, obviously deviates from the healthy state, by having a peculiar tendency to emaciate and weaken the body, and even to dispose it to dropsical effusions. These being the ordinary effects of mercury, it must be admitted that its use is peculiarly contra-indicated in these constitutional diseases, which have a strong tendency to produce symptoms similar to those arising from the mercurial

action. On the other hand, those habits either of health or disease, admit best, the use of mercury, where there is little general fever, or tendency to profuse and debilitating discharges.

The very exception which might be adduced to this general rule, in the decided benefit obtained by mercury in the East Indian hepatitis, does, however, in some degree, confirm this statement; since it is admitted by the East Indian practitioners, that salivation is excited with some difficulty in this disease; that the hectic fever, profuse sweats, emaciation, and symptoms of general irritation, which so generally attend the vigorous use of mercury in our own country, are much less in degree in India;

and that in the midst of mercurial courses for the cure of diseased livers, patients often recover their health, and grow fat, and strong.

The disease which most frequently calls for the use of mercury in this country, is syphilis, and this is perhaps of all constitutional maladies, that, which produces the least general fever and irritation, and which has seldom any tendency to attack the viscera of the body; and accordingly, in originally healthy constitutions, syphilis may extend its ravages for a vast length of time, before it extinguishes life.

In habits of body naturally irritable, and liable to internal, and suppurative inflammation, with its concomitant hectic

fever; syphilis, as a disease, is much less mischievous than the mercurial fever; it is therefore a matter of daily observation, that in such patients the syphilitic ulcers grow foul and phagædenic, under the use of mercury, and the local disease increases till this remedy is discontinued and a different plan of treatment adopted. This observation applies especially to strumous habits, in which mercury is almost invariably prejudicial, and can only be exhibited with extreme caution, and at considerable intervals; and indeed so injurious is this powerful metal to such constitutions, that if we were required to produce struma by artificial means, the action of mercury would probably the soonest accomplish the purpose.

The general, and indefinite term of bilious, as applied in popular language, to almost every affection of the stomach or intestines, and even of the nerves, producing irritation, and symptoms of hypochondriasis, has given rise to a very general and indiscriminate use of mercury in this country. This has been done under a false impression, that all those symptoms originate and are connected with a diseased, or obstructed liver: the same term is applied, whether the secretion be too copious, or too scanty, whether the organ be too hard or too soft, too large or too small: in all cases, mercury, as a specific, chiefly on the authority of the East Indian practice, has been recommended, and is now in very general use.

My own experience however has furnished me with the means of ascertaining, that even calomel, which is the most manageable preparation of mercury, cannot be employed with safety or success in a great variety of cases in which it has been recommended ; it is, however, frequently preferred from having neither taste nor smell, and from its acting in a small bulk ; but it ought seldom to be used by itself as an habitual purgative, or laxative, as its operation in that case is extremely uncertain ; sometimes it produces mucous and bloody stools, accompanied with tenesmus and prolapsus ani, irritating and exhausting the power of the intestines, and laying the founda-

tion of painful and dangerous strictures of the rectum. It is generally improper in dyspeptic complaints, especially in delicate and irritable habits; at other times, instead of acting on the bowels, it forcibly determines to the mouth, and produces all the inconvenience of a salivation, when not expected, or wished for. It enters into the composition of most of our worm medicines, which are advertised for sale, and from the free and unskilful use of such in the hands of ignorant people, considerable debility, emaciation, and even convulsions in children, are induced.*

* It is proper to observe here, that stools procured by calomel, in the most healthy constitutions, have a *fætor* which are peculiar to the operation of that medicine; they do not arise from disease, but are considered by nurses and unskilful persons, as depending on the existence of fever, acrid bile, or even

Calomel appears to me to be hurtful in gouty, and nervous affections, with very irritable bowels, except in very small doses. The action of mercury on the system is that of exciting an artificial fever, with chilliness and shivering, succeeded by a hot stage; the pulse becoming frequent, full, and strong, and afterwards quick and weak, terminating in colliquative sweats, so analogous to the hectic fever of this country as to forbid the use of this remedy in similar symptoms, arising from some local affection of internal organs. *

worms; on this account the calomel has been persevered in, to the great injury of the patient.

* Calomel however, as combined with rhubarb or jalap, or both, is more uniform and certain as a purgative, and especially in children, where it frequently carries off morbid bile, and foetid excrement, but if taken by itself and not followed by a purgative draught, it often gripes and irritates the bowels.

I should not have entered so fully into the subject of mercury, if I had not perceived a dangerous tendency to extend its application to diseases, in which my own experience assures me it does mischief.

It generally aggravates every symptom of phthisis pulmonalis, either as induced by the strong action of any exciting cause, or the spontaneous and progressive constitutional and morbid action of tubercles, producing hæmoptoe, and consequent suppuration.

So far should we be from considering mercury, as a safe and effectual deobstruent in such cases, that I am persuaded suppuration, and the formation of bad pus frequently follow its use. Calomel how-

ever as purgative united with jalap, will relieve catarrhal coughs, but not from any specific power as a mercurial, for other purgatives will do the same.

In the cavity of the abdomen, where corresponding changes, to those which take place in the thorax occur, mercury will be found equally injurious, independent of its power of acting on the biliary and pancreatic system, or, on the intestines as a purgative.

When exhibited by unction, or such other means as to invite its action on the circulating system, it will be found in strumous affections of the mesenteric glands, or of the spleen, or under the formation of tumours of every description, accompanied with fever, to increase

the disease. I wish however, it should be understood, that I only refer to the mercurial action on the general system, and not to cases in which its power as a purgative, especially in the form of calomel, may be employed. Calomel combined with jalap, or scammony, as a purgative in mesenteric habits, and in children with large hard bellies, will excite the action of the intestines, so as to give a more copious evacuation of indurated fæces than can be done by other purgatives, but even under such circumstances it should be given with much guarded caution.

In hepatic diseases, where scrophulous tubercles are formed, and, in other affections of the liver, where the struc-

ture has been destroyed by interstitial deposit, with adhesive inflammation obliterating organization ; where the absorption of parts has taken place, diminishing the bulk of the organ ; with a structure both spongy and loose ; if the jaundice accompanying these appearances be fixed and unremitting, I have never seen any advantage from the use of mercury. On the contrary, I am persuaded, that life, which under all these unfavourable circumstances, might have been prolonged by other means, and by such, as a well-regulated diet, and the moderate use of gentle, mild, opening medicines, has been shortened by mercury.

And I have known many cases of confirmed dropsy, with diseased viscera,

where the believers in the specific power of mercury, have promised a cure, and where they have so committed themselves by their confidence in its power, as to have been disgraced by their temerity.

In the morbid state of the kidney, and urinary passages, the scirrhus state of the prostate gland, or similar diseased conditions of the uterus ; in the ulcerated and cancerous state of these parts, the mercurial action shortens human life, notwithstanding ignorant and credulous practitioners are every day restoring to it, as the infallible specific of deeply seated diseases.

Any increase in the bulk of organs, leading to a diseased structure, is best prevented by diminishing the quantity of

nutritive matter in the system, and increasing the secretions; the surplus of nutritive matter of the best quality is particularly and severely felt, on the hepatic system, and occasions congestion and oppression, with an impeded secretion of bile, the vena-portarum becomes loaded, and the pressure of surrounding parts produces a factitious deposit, inducing obstructions of the abdominal viscera. I have known ascites from surrounding pressure and enlarged viscera often alleviated, and sometimes cured, by a diet of bread and water. I believe there is a disease which may be called infarction of the viscera, where intestinal hæmorrhagy takes place, proving a temporary remedy. The liver is subject to hæmorrhagy,

rendering the bile of a very black colour, and producing dark coagula, on adding water to such bile, the black powder of red globules falls down to the bottom; in such a diseased state of the organ I have never seen mercury useful.

This does not indicate any abrasion or rupture of vessels; the organ may be as yet, sound and entire, it is rather a defect in the action of the secretory organ; and may arise from pressure, infarction, or effusion. It is a state of congestion, not of inflammation, and is best cured by gentle purging, which will diminish the quantity of blood returned by the vena-portarum, and the liver will thereby be relieved, by an artificial diarrhæa, acting on the extremities of the exhalants of the intestines. In such

cases, jalap and salts, are preferable to calomel. The pancreas, from a similarity of structure, and office, to the salivary glands, may be acted upon by mercury, and from that circumstance, act upon the extremities of the hepatic ducts. When a viscus is enlarged, painful, and diseased, nourishment should be abstracted or lessened. Bad viscera are often cured by low living, and even by debilitating means. The spleen is very subject to hæmorrhagy; and grumous coagula becoming encysted, and surrounded by membranous inflammation, increase its bulk, with loss of structure, producing discolouration without jaundice, and with the urine of a straw colour. Tumours in the abdomen in a stationary

state, frequently do harm only by their bulk. I have frequently known the strumous constitution in the abdominal viscera, as well as the thoracic, especially the spleen and liver, aggravated by mercury, and mercury pushed too far, frequently induces gangrene, and renders ulcers foul and phagædenic.

Calomel combines best with rhubarb or jalap as a purgative; and in strong constitutions, accompanied with visceral congestion, and in sedentary habits, under circumstances of high living and full diet, such combinations occasionally taken, will be found useful; but, in delicate, and pallid, and irritable habits, where vitiated bile is improperly supposed to prevail, mercurial purgatives are frequently too

violent in their operation. It is too common a practice for females and sedentary persons, to have recourse to laxative pills, which are chiefly composed of resinous purgatives; their frequent repetition weakens the tone of the bowels and induces piles: costiveness is best obviated by exercise and diet; it is chiefly seated in the rectum, and easily removed by emollient glysters. Many constitutions do not require the alvine evacuation oftener than every two or three days; and, in such, laxative medicines do more harm than good.

It is a matter in dispute among those who recommend calomel as a specific in liver complaints, whether it acts by purging or exercising any local opera-

tion on the biliary ducts, or, by acting on the general system, and ultimately by salivating.

Of the former opinion is my friend, Dr. James Curry, Physician to Guy's Hospital, who has favoured me with his ingenious observations on the subject, which I have given in a subsequent note.* In cases where calomel is too rough or stimulating, he recommends principally *HYDRARGYRI OXYDUM CINEREUM* of the London Pharmacopœia, nov. edit. This preparation of mercury, was first proposed by me many years ago, and is a milder mercurial, than calomel, on the bowels, but perhaps more apt to salivate on that ac-

* See Dr. Curry's Letter.

count. Other practitioners seem to think that mercury makes the most favourable impression on diseases, when the mouth becomes sore: I am disposed to believe that where its action is specific, as in syphilis, hepatitis, and the hepatic fluxes of India, the inflammation of the gums with a slight salivation, is the best criterion of its salutary operation. My experience however assures me, that mercury will very seldom salivate in the violent visceral diseases of this country; and, in the fevers of children, it very seldom affects the mouth; in not above one in an hundred under hydrocephalus, can mercury be made to salivate: perhaps it is only under the most favourable state of fevers that mer-

cury salivates, so that, it is difficult to determine how far the cure should be attributed to the use of it. We are assured that in India, it will seldom or ever salivate after an abscess is formed in the liver. The doses of calomel which have been given to persons in the yellow fever, is astonishing, without acting on the mouth or bowels : * such is the torpid state of the body in that disease, perhaps from some affection of the brain.

It does not appear that, if we except the hepatic diseases of India, the mortality of the endemic fevers of other countries has been diminished by ex-

* The state and influence of the brain on fevers, is well explained by Dr. Clutterbuck, in his " Enquiry into the Seat and Nature of Fever ;" a book which conveys much practical and useful observation.

tending the use of mercury, except as uniting mercury with other purgatives.* I wish however it may be understood, that I do not mean to condemn the use of mercury generally, in the cure of diseases, but only that it should be employed with circumspection and caution, so as to confine its use within proper limits; and, not upon the weak foundation of a mere hypothesis, in opposition to the evidence of observation and experience, to put an active

* "Of twenty-seven recruits for the Royal Artillery, who arrived in Grenada in July, 1793, twenty-six were seized with the fever, and of those twenty-one died before the middle of August ensuing, that is, in six weeks."—Dr. Chisholm had satisfied himself of the great virtues of mercury at least four months before, yet this is a mortality never exceeded in any fever.—Vide Dr. Chisholm's Essays, p. 97.

remedy into the hands of nurses and old women, as a panacea for the cure of all diseases. The abuse of mercury, even in India, has been admitted by the writers of that country,* and we have daily opportunities of observing the number of debilitated constitutions who return from India to Europe, from the use of mercury, considered, as so necessary to check the liver diseases of that continent. Many recover their strength in their passage home; others arrive in a mere convalescent state, and require the aid of medicine and diet perfectly to restore their health. One very common effect of the excess of

* See Dr. Duncan's Letter.

mercury is, mental derangement ; both in India and Europe. It must however be admitted, that mercury can be used with more safety in warm, than in cold countries ; perhaps from the inflammatory diathesis, and the tense fibre being more prevalent in the latter than in the former.

I desire here to repeat, that what I have advanced is not to be understood as a disparagement of the virtues of mercury, but only as that excellent and true maxim, that the best things are the most liable to abuse, and a proof among many others of the mischief arising from the injudicious and indiscriminate use of active remedies.

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 the institution and the perfection of the

Copy of a Letter from Mr. PAISLEY,
formerly Head Surgeon at Madras.*

SIR,

“ I HAVE been favoured with yours by Ensign G——. As your letter shews a candid inquisitiveness that merits information, I shall be somewhat explicit in answer.

“ Mr. G——’s is one of those cases which occur every day in this country, and oftener than is imagined in other hot climates; not seldom I believe in camps, and in particular seasons in Europe, when bilious disorders prevail. But it is generally overlooked, on the supposition that fluxes are simple diarrhœas, arising from miasmata, putrid bile or crudities, or something acrimonious in the first passages; and of course are treated with emetics, laxatives, antispasmodics, and bitters. Indeed, if they were only produced by such simple causes, we might generally expect speedy and effectual cures, by a perseverance in the above remedies, properly adapted.

“ But on the contrary, we see them often run on to a great length; and often of precarious issue:

* This letter is taken from Mr. Curtis’s Account of the Diseases of India; a Book containing many valuable observations.

and to our 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 this 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 till this is removed.

“ A want of attention to this circumstance, allows fluxes to go on to the second and third stages as they are called; but which in reality are no more than different stages of duration and weakness; for the disease has been uniformly the same from its commencement, viz. An obstructed liver and mesentery; but chiefly the former, with some degree of inflammation: the flux itself being little more than a symptom of the disease, and the effect of diseased secretions.

“ We have seldom reason to be doubtful of this cause; for if we have not pain to direct us, an experienced touch will discover the obstructions, the tenderness or enlargement of the liver. I say an *experienced touch*; because it requires frequent practical examination, to satisfy one with respect to the different degrees of hardness, firmness and sensibility, that constitute a disease of this bowel.

“ However, appearances are seldom so equivocal,

as to puzzle practice in general. I venture to affirm, that the grand source of health and disease, is connected with the natural or diseased condition of the liver; and that every chronic or lingering illness, arises 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, without having a strict eye to it.

“ The flux he has laboured under for fifteen 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.

“ His case, from the beginning to this time, has been an obstructed liver; and could have been at no time effectually cured, but by mercurial deobstruents. A strict diet, exercise, palliative and laxative medicines, to blunt and evacuate bile disordered in its secretion, when the inflammatory tendency had ceased, might have relieved for a time; and even produce a temporary cure. But they never could restore him to that health, or the vivid clearness of countenance peculiar to health; nor even prevent the relapses he has been subject to, during so protracted an illness, at so 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. For I find by his own account, his case has been in the beginning a great deal inflammatory. At present, his liver is only enlarged and hard, but no pain there. His flux is accompanied with gripes and tenesmus, and his look is bloated and sallow. His urine too, is very high-coloured. This appearance, by the bye, never fails to attend liver-disorders of any standing; though it now and then happens in nervous habits, and in diseases of the bile itself. 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 indication in this case is, to clear the bowels of phlegm, and other causes of irritation. The second, to remove the obstructions of the liver; also to restore the lost tone of the intestines, and to strengthen the system in general.

“ In recent cases where tenesmus is troublesome, castor-oil is a good purge; it operates effectually, and discharges much gelatinous stuff, from the flexures of the duodenum and colon; and as it enters not the blood, it creates little disturbance in the system. It is therefore in recent cases a good purge. But in this case, where the bowels have been much relaxed and weakened, rhubarb, quickened with calomel, or soluble tartar, is better to answer the

first intention ; repeated once, or oftener, according to the nature and complexion of the excretions.

“ Proper evacuations being made ; the second indication of removing the obstructions of the liver, is to be answered by mercury, administered but slowly ; as his complaints are of long standing, and his habit much relaxed. A drachm of mercurial ointment may be rubbed into his side daily ; and ten grains of a pill composed of equal parts of rhubarb and calomel may be given, one night and morning, or the following :

Rx. Species aromat. gr. iv.

Vitrei Antim. cerat.

Calomel. præp. utriusque gr. iij.

Confect. Alkermes, q. s. ad bolum, man. et vesp. sumendum.

This is to be continued till the mercury fixes in his mouth ; and by this means the obstructions will be gradually removed, and the load of serous humours that flow to his guts, in their present relaxed and irritable state, will be diverted to his mouth ; whereby his bowels will gain a truce from evacuations.

“ As the obstructions remove, the urine and stools will grow more natural, and every secretion less diseased. In these chronic obstructions, the friction

in the application of the mercurial ointment, is also not without its use.

“ As you desire my opinion of opiates and astringents, I shall give it you from experience, in a few words.

“ Opiates are dangerous medicines in fluxes, and always to be used with fearful caution. Early in the disorder, where the disease is putrid or inflammatory, they should be given in no situation. Suspending evacuations for a night, may bring on a fatal inflammation. In chronic cases, freedom from gripes, the smell and nature of the evacuations by stool, are the only criteria to direct their use ; for no retentions are to be made of any thing acrimonious. In short, in a climate where all the capital disorders arise from putrid bile, or obstructions, nothing must be shut up.

“ As to astringents, they are often dangerous medicines in fluxes, and always precarious. They can be used with no kind of safety, till all kinds of obstructions are removed, and with them every thing that is putrid and diseased. In the acute cases they have fatal effects. In the more chronic, they pamper and protract the disorder, with all its concomitants, gripes, tenesmus, &c.

“ When the disease becomes a simple diarrhœa without gripes ; or these originating only from wind, equal parts of *Prunorum Sylvest.* and the *Conserv.*

Aurantior. or Confect. Cardiacæ, is an elegant and safe astringent. The Tinct. Cascarillæ, cold bathing, and exercise, recover the constitution from relaxation.

“ Having made these remarks on opiates and astringents, I come next to the second indication in the case of Mr. G——; the obstruction of his liver being removed, and the other complaints abated, it is to be answered by mild bitters of the least astringent kind. Bark, which in most cases of weakness and irritation, is an invaluable medicine, is in liver diseases a poison. The Flor. Chamæmel. Sem. Carvi, Sal Polychrest. of each, ℥i., will make a couple of cups of bitter tea, to be drunk before and after noon. This, with proper diet and exercise, will be sufficient to restore him.

“ Captain Long, whom you may know, laboured under a disorder of the same kind, but worse, being complicated with much weakness, and the loss in a great measure of the use of his extremities. The source and cause of his complaint had also been overlooked, and he had also trifled with the usual medicines for fluxes, till he was reduced to extreme weakness. After reducing the obstruction of the liver by mercury, putting the patient in a proper train for the use of astringents, his cure was effectually completed, with

℞ Cons. Aurantior. ʒi.
 Pulv. Cort. Per. ʒſſ.
 Pulv. Rad. Serpent. Virg. ʒij.
 Tart. Vitriol. ʒi.
 Syr. Aurant. q. s. ad electuar.

Of this he took ʒſſ in the day, and continued it some time. And every night when his excretions were not free, he took ten grains of a pill composed of aloes, soap, and calomel.

“ These are two instances of liver fluxes which you have seen. I have met with numberless unfortunates in camps, and different parts of the country, in the very same predicament; who have with great difficulty survived this wreck of constitution.

“ But it is impossible in a letter to enumerate the different varieties of complicated bilious disorders, that practice daily presents to observation. Nor can in this way convey a proper idea of the nice and particular treatment, diseases arising from putrid bile and obstructions require. Different circumstances and constitutions diversify prescription. Capital diseases require the most circumspect attention. Omissions or mistakes are not to be remedied by any future efforts; especially where putrid bile lurks in the habit. Disturbing it suddenly by evacuations, putting it in motion before it is well diluted and corrected, proves often like poison, suddenly

fatal. Of this I have seen instances in men who were not at the time confined to their beds. As a striking instance also of the attention necessary in the most trifling complaints arising from bile, I can assure you, I have known what are called *trifling medicines*, prescribed for ailments which were considered equally trifling, productive of very serious disorders.

“ For example, I have seen a course of bitters, ordered for what was imagined a windy relaxed stomach, produce obstructions; and in inflammatory habits, a real inflammation of that bowel. Such accidents as these awaken a man’s caution. But it is a practical fact, that no strong astringent bitter can be used here with impunity, unless the case is really simple relaxation. Mixing the gentlest kinds with neutral salts is only safe. Indeed, it is perhaps a problem in physic, how long the use of astringents may be continued with safety, or without danger of inducing some other disorder.

“ Before I conclude this letter, though somewhat foreign to the subject of yours, I cannot avoid putting you on your guard against a disorder of the liver, which, from its being overlooked, I have once seen in Europe, and several times here, attended with fatal consequences. The complaint I mean, is what is called the *liver-cough*. The obstruction in this case, is pretty generally accompanied with

some degree of inflammation and pain; though seldom acute, unless pressed with the fingers; or when the external membrane is also affected. But it often happens without pain or inflammation. The cough is entirely a symptomatic complaint, and 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 a mass of irrecoverable obstructions. In every irritable or inflammatory habit, any mistake at the commencement of the disease, is of the most dangerous consequence. The liver, diaphragm and lungs, adhere and suppurate. A purulent spitting succeeds; and instead of a pure uniform pus, the substance of the liver is expectorated with a deep hollow cough, in form of glandular membranes, of a purplish bloody parenchymatous look. This disease, like all other inflammations 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 this advanced stage.

“It is to be observed, in all disorders of the lungs of any standing, the liver is always affected; but in this case the lungs are but secondarily so, and never

give any trouble, if the obstruction of the liver is removed.

“ In them there are neither tubercles nor infarctions. The breathing, except in inflammatory cases, is never affected, and the symptomatic complaint of cough and pain in the shoulder, may always be mitigated by lying on the back, with the head low, and the legs raised.

“ To the above I shall add another disorder, which is entirely of the liver kind.

“ Agues are by no means frequent in the dry sandy soil of this coast; but quotidian remittents often happen here, from inflammatory obstruction 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 he has got the fever and ague, with a pain at the pit of his stomach. But his report is not to be trusted without farther examination; both in the standing and lying posture. On pressing with your fingers towards his right side, he will complain of much pain and tenderness; and his urine will be very high coloured. Sometimes he will have a pain in his right shoulder; and generally he has a liver cough. This is a complicated case; though there is in reality no contra-indications in the cure of it. The inflammation and obstruction

of the liver, are the proximate cause of the disease, and all its different symptoms. Venesection is immediately necessary; and if the stomach seems loaded, an emetic may safely be administered after it; but it should be such as will operate easily, and open the belly. Such I found the following in all bilious cases:

Vin. Ipecac. et Antimon. utriusque 3 ℥.

Oxym. Scillit. 3 vi. M.

“Notwithstanding the continued fever, a drachm of mercurial ointment may be rubbed into the side, morning and evening, after fomenting it. Saline draughts with nitre, or tartar emetic, ought to be given every three or four hours; and the bleeding repeated if necessary. The ague and cough require no attention. They will diminish as the mercury takes effect; and entirely cease when a spitting comes on. Any bilious attacks that happen during the interval, are to be relieved by emetics, castor-oil, or soluble tartar and glysters, as circumstances may require. We meet here with quotidians of two years standing, attended with a very irregular state of the bowels, and on every accession of the fit, such an astonishing secretion of bile, as to produce a real cholera morbus.

“ On the subject of agues I shall observe to you, that bark is seldom necessary in the cure of them, and often unsafe; except in cases of great weakness and relaxation, or where the nervous system is much affected. On the contrary, evacuants, neutral salts, and deobstruents are seldom ineffectual. However, where the indications are not sufficiently marked, and where difficulty arises about the propriety of exhibiting particular medicines, the following criteria, with restrictions, may serve as a guide.

“ When the bark does not succeed in stopping the fits, and preventing relapses, deobstruents, neutral salts, and relaxing medicines, with evacuants, according to circumstances, are more likely to answer. But whether in agues, or in diseases induced by obstructions of the viscera, if the urine is high coloured in the intervals of the fit, or during the course of the disease, astringents of every kind are to be avoided, as infinite mischief may be done by them, especially if the diathesis be inflammatory, or if putrid bile lurks in the *primæ viæ*; from which often arises wonderful and astonishing effects in the system. Sudden fevers are lighted up, and all the variety of nervous affection, according to the degree of its acrimony, and the peculiar idiosyncrasy of the patient.

“ The case of a gentleman who was under my care not many days ago, will exemplify this. He was

young, healthy, and florid, when he was suddenly taken ill with fever, dry skin, and his tongue as white as a sheet; his urine like porter, with a highly alkaline smell. Great heat and fulness about the præcordia. Pulse sometimes high, sometimes low, but always as quick as possible. Great restlessness and agitation of the whole frame. Sometimes the deepest dejection of spirits, even to crying; sometimes raving, horrors, and general spasms. Sometimes crying for wine to support him; sometimes crying for water to allay an unquenchable thirst. All these transitions were displayed during my first visit, which happened in a few hours after his being first seized.

“ This appears clear enough to be a case of putrid bile, operating in the system; and is one of those cases where the patient is either out of danger, or extinguished in a few hours.

“ The whole indication of cure in such cases is, to dilute and evacuate the irritating cause; by attenuating medicines, to quiet the disturbance in the system occasioned by it.

“ Stimulants have no place here, notwithstanding the variety of nervous affections. They unavoidably aggravate every symptom. Emetics ruffle too much to be ventured on, when the whole system is disordered; besides the danger of their setting in motion at once, a deluge of putrid bile, which is never done without instant risk.

“ For this gentleman I ordered a purging glyster immediately ; and his legs to be fomented in salt and water ; till a solution of one ounce of manna, and half an ounce of soluble tartar, in twelve ounces of water, could be sent him.

“ Of this he was directed to take four table-spoonfuls every hour, till it should operate four times ; which brought away some frothy bile of an intolerable stench, like the workings of a beer cask in its appearance. This was far from being sufficient to produce any considerable effect. He was however 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 effect of the laxative was over, I directed him to take every three hours, a table-spoonful of the following :

R. Camphoræ gr. x.
 Mucil. Gum. Arabic. ʒi.
 Amygdal. dulc. decorticat. ij.
 Terantur optimè simul, et adde
 Julap. Salin. ʒ x.
 Tart. Emetic. gr. j.
 Syr. Sach. ʒ j. M.

This to be continued in the intervals of purging, and to use clear Rhenish whey as common drink. He passed a more tolerable night, less restless, less oppressed, and his head less affected. The day fol-

lowing he was indeed worse. Another and more active purge was prescribed, composed of

Fol. Sennæ ʒj.
 Mannæ ʒij.
 Tart. Solubil. ʒiij.
 Sem. Carvi. ʒʒ.

Infused in eight ounces of boiling water, one half to be taken early in the morning, and the other two hours after.

“ This operated five times. The stools were of the same nature and smell, but plentiful, and every symptom abated considerably. After the operation of this purge, his urine and tongue remained the same; but he was much more composed, with fewer spasms, and fewer attacks of the depression of spirits. His skin was moister, and his pulse regular and less frequent.

“ It only remained now to prepare the remainder of the bile for expulsion. He was therefore directed to drink frequently, and 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 half a drachm more of senna. This operated very effectually, and brought away much gelatinous stuff and bile; and the evening of that day his urine became natural and clear. His com-

complaints all vanished, though his tongue was but little altered. Nothing further was necessary, but to leave a purge with him, to continue the Rhenish whey, and to use light diet until he recovered more strength. But as these disorders, with many others of the putrid bilious kind, originate in the liver, relapses cannot be prevented, nor perfect recoveries made, without removing every obstruction, and restoring the secretions to health. For though all acrimonious and putrid accumulations, arising from diseased secretions, are removed by well-timed evacuations, yet indigestion and frequent collections, may soon occasion the same scene to be acted over again, if obstructions are not removed, and healthy bile restored, to perform nature's first and greatest operation in the animal economy. We therefore should never think it sufficient to save the patient from immediate and present danger. It is incumbent on us also to remove the latent defect, which is the principal source of all; the obstructed state of the liver and mesenteric glands. The excretions and urine are minutely to be attended to; and as circumstances require, gentler or stronger mercurial deobstruents, with mild bitters and neutral salts, with occasional evacuants, are to be exhibited; and strict diet is to be recommended, till the health and constitution be perfectly restored; otherwise our services are flattering rather than useful,—if I may

be allowed the comparison, like the splendid actions of the general, which often acquire to him reputation and honour, but are productive of no real advantage to the state.

“I could furnish you with a variety of such cases, and a multitude of such histories, of other complicated bilious disorders which came daily under my notice, but they would swell this letter to a volume, though it already exceeds the bounds I had prescribed to it. I shall therefore only further observe to you in general, that bile, in different states and conditions, produces the appearance, and apex almost every other disorder, and of consequence, much attention and experience are required, to distinguish properly its operation and effects. In this country there are but few simple fluxes, simple agues, or coughs, or indeed simple disorders. And you may be assured, that when the liver or primæ viæ are not considered as the grand sources of disease, continual and serious blunders will be committed. Mercury, in judicious hands, is a safe and tractable medicine; and as it is the only powerful and effectual deobstruent in glandular obstructions, it is of consequence the only medicine that can be depended on, in the latent defects of the system, which entail diseases or impede recovery. However, it often requires assistance from other medicines; such as are antispasmodic or aqueous to wash the glands,

and increase the secretions in general. And it also requires assistance adapted to the effects the disease has produced on the constitution. For example, in venereal and other habits, where the solids are much relaxed, the blood poor and flimsy, mercury without bark will spread every ulcer, induce fibrillæ, and increase every symptom. In acute diseases, evacuations, neutral salts, and relaxing medicines, render it safe and effectual. In irritable habits, it requires management, as its operation is chiefly on the solids. But the idea of its injuring the constitution, by destroying the crasis of the blood, is without foundation. On the contrary, it is but too apt to leave behind it an inflammatory diathesis: so much so indeed, that I would recommend to you a general rule in all severe attacks of disease, where mercury has preceded, to bleed early and freely. For, watching, fatigues, and bodily exercise of the severest kinds, have not greater effects in wasting the thinner parts of the blood, and producing a density of it, than mercurial courses. The mild air of this country is very favourable to the operation of mercury, and there are many diseases here, for which it is infallible, with fair play and judicious management.

“ You may observe, I have been somewhat general on my answer to yours. But I was willing to throw into it as much information as the compass of a letter

would admit of. Upon the whole, it contains a few remarks which you may improve to your advantage. To have been circumstantially minute was impossible, it being rather a subject for a whole volume, than for a few sheets. Hospitals and practice can only realize these hints; and if I can at any time render you any assistance, I shall be ready to do it.

I am, dear Sir, &c.

“ J. PAISLEY.”

“ P. S. I have added the state of our hospital (Military) at Madras, to shew you the prevailing diseases along the Coast for this month.

Venereals	50
Quotidian remittents	2
Simple bilious fevers	30
Bilious fevers, with visceral obstructions	15
Simple fluxes	20
Liver fluxes, and fluxes from visceral obstructions	98
Chronic visceral obstruction from impaired habit	69

The following Remarks were communicated
by DR. JAMES CURRY, Physician to
Guy's Hospital.

“YOUR observations on the employment of mercury in acute hepatitis, are extremely just, as far as respects its operation on the system at large; which is the view usually taken of the remedy in hepatic affections whatever their nature may be. But, from the general and comprehensive term *mercury*, an exception must be made in favour of calomel, in acute inflammation of the liver. Indeed when we consider the violence and rapidity of the disorder in many instances, it does not seem possible to excite a general mercurial action, sufficiently soon to overtake and arrest its progress; and if it were, it would not appear adviseable to make the attempt lest the suddenness and violence of such action might ultimately be productive of greater mischief than would attend the original disease under any other mode of treatment. From this objection, however, calomel is entirely free; as the good effects from it may be obtained not only more speedily than in the other way, but without occasioning any *general* operation, and, consequently, without that injury which certain constitutions experience from mercury when carried to that degree.

Whether from the greater tone of fibre in temperate and cold, than in hot climates,—from the increased action of the liver as a *secretory* organ in these last,—or from both of these circumstances,—certain it is, that hepatitis in Europe partakes much more of the nature of simple inflammation, than hepatitis in India; and of course, the simple antiphlogistic plan of cure will of itself be oftener successful in the former than in the latter variety of the disease. From my own practice, however, in this country, as well as from comparing it with that of others, I am as firmly convinced as I can be of any medical fact, that, by the early and free administration of calomel, I have saved many a pound of blood which must otherwise have been taken away, to alleviate the urgent symptoms of hepatic inflammation. In proof of this I could adduce a great number of cases; but some have occurred to me lately, both in the Hospital and in private practice, which are particularly illustrative of the benefit derived from calomel in all inflammatory affections in which the liver is any wise concerned;—as in the cases alluded to, from the pain being seated in the *left* side of the thorax, and no symptom present which clearly indicated hepatic affection, they were at first considered as peripneumonic or pleuritic, and treated accordingly, by local and general blood-letting, purging with infusion of senna, blisters to the part, and the use of antimonial

diaphoretics. Notwithstanding these remedies, however, no considerable or permanent relief was obtained, until their failure led me to suspect, that the *liver* was the primary seat of the complaint, and the remote thoracic pain only symptomatic. Upon this impression, I immediately put in practice the mode which I had before employed with success in obvious cases of hepatic inflammation,—of giving three or four grains of calomel every four or six hours, as the urgency of the symptoms required;—and with the effect of entirely removing the pain and difficulty of breathing in the course of the night.

As in most other cases, calomel given in such doses and at such intervals proves considerably purgative, it might be concluded, that its good effects here were entirely owing to its cathartic power. This is in a great measure true, but is so only in a particular sense of the term *cathartic*, and therefore requires explanation. The bowels may be repeatedly cleared by other purgatives without much relief; and even calomel is often attended with little if any more advantage, if it pass very speedily through the intestines. The mode in which alone it proves effectual, is, by emulging the biliary ducts; and the evidence and measure of its salutary operation is, the quantity of bile which it evacuates by stool. Though its effects then, be ultimately that of a cathartic, yet it is not simply as such that it is useful, but by acting

specifically, and being (if I may be allowed an antiquated expression) a *cholagogue*, or evacuant of bile. Why a medicine possessing such a property should be especially serviceable in hepatitis, must I think be pretty obvious; but if it should be thought to require illustration, we have a very familiar one in the instance of another glandular organ; I mean the female mamma. Practitioners have daily opportunity of seeing the immediate and great relief afforded by drawing out the milk where this gland becomes inflamed after lying-in, or during the period of lactation: indeed, in many cases of inflamed breast, little else is necessary than emptying the lactiferous ducts at the beginning, and repeating it from time to time as the milk re-accumulates;—the inflammatory action of the vessels often subsiding spontaneously, when this cause of distention and irritation is removed. Though the means employed in hepatitis are necessarily different, yet the effect is the same;—the general distension of the liver is lessened by emulging it of its bile, which, at the same time that it is secreted in larger quantity from the increased action of the vena portæ, prevented from passing freely into the duodenum, in consequence of the hepatic and common ducts partaking of the inflammatory state. The general cholagogue power of calomel, is well known to all those who have practised in hot climates, and particularly in India; and it now begins to be admitted by practitioners in this country, who are attentive to its

operation. But its having this effect in acute hepatitis, can only depend on its lessening or removing in the first instance, that inflammatory constriction of the ducts which occasions the bile to be retained in the liver; for (as I have already observed) other medicines, the general cathartic effect of which is much greater than calomel, are by no means of equal service. It amounts, I think, to a proof of this opinion, that even calomel fails if it pass through the bowels quickly; and that I have often been obliged to assist its relaxing power on the biliary ducts, by joining it with opium and antimonial powder, especially the former, which I give to the amount of a grain or more every six hours, or as often as the urgency of the pain renders necessary. Under this management, I have repeatedly found the urgent symptoms abate considerably, many hours before any alvine evacuation took place, and of course before the calomel could be said to act as a cathartic: in some cases too, where no evacuation followed, it became necessary to give cathartic medicines afterwards, in order to secure the relief which the calomel had procured, and to prevent the pain and dyspnœa from returning; which they were apt to do, if the liver was not emptied while under the relaxing influence of the calomel and opium. It not unfrequently happens, that the stomach partakes so much of the inflammatory condition of the liver,

and becomes in consequence so extremely irritable, as to reject every thing by vomiting almost as soon as swallowed. In this state of continual retching, which greatly aggravates the disease, and increases, the pain almost to agony, the effervescing draughts, and other means usually employed, were of no avail, nay even calomel united with opium, proved too irritating. Under these circumstances, instead of the calomel in its ordinary state, I have with the best effects prescribed calomel, freed from its muriatic acid, by carefully triturating it with lime water; whereby it is converted into a dark slate-coloured oxyd, virtually the same with the Hydrargyrus præcipitatus cinereus of the Edin. Pharm. and with that formed in making Plenck's Solution, which you yourself first employed and recommended in this country. It is so much less irritating to the stomach and bowels than calomel, that when joined with opiates, it will be retained with ease; and the effects of it in allaying pain, retching, and other urgent symptoms in hepatic inflammation, have been often not less astonishing to myself, though long in the habit of using it, than to a number of gentlemen who have had an opportunity of investigating a practice which was altogether new to them. This *local* mercurial operation of calomel is not solitary; we have a similar instance of it in the effects which were observed to attend the practice recommended by the late Mr.

Clare, for the cure of venereal complaints: by rubbing two or three grains of calomel upon the gums daily, the salivary glands were very quickly affected, and a ptyalism induced; while the system was so little affected, that chancres either remained as before, or if they healed, soon broke out again.

I have had repeated opportunities of knowing that your practice exactly accords with what I have said upon this subject; but I was induced to be more particular in my detail, lest those who have not had such advantage, might misapprehend what you have said respecting the use of mercury; and apply to *calomel* what was only meant with regard to mercury when employed so as to operate on the system at large."

Dr. DUNCAN's Letter,

On the Effects of Mercury in India.

I SHOULD have greater pleasure in complying with your request, if what I have to communicate were in itself more worthy of your attention. In the mean time it is a great satisfaction for me to know, that the opinion which I had been led to adopt of the prejudicial effects of mercury, in India, wherever it is improperly administered, and without sufficient precaution, is conformable to the observation and experience of a person so eminent in the profession as yourself. In fact, I have long thought that this medicine is far more hurtful in India, than it is in this country, and that greater care and precaution are required to guard against further mischief, particularly in cases not connected with liver complaints.

I have certainly found that mercury given in hepatitis, is much seldomer succeeded by injurious consequences, than when given in other disorders. One cause of this may be, that persons labouring under hepatitis, are obliged from the severity of the disease, to observe a stricter regimen, and in all respects to take more care of themselves, than those who take mercury for syphilis and some other complaints can be induced to do. It may, however, be doubted, whether this circumstance will of itself

account for the fact of mercury agreeing so well with the constitution in cases of hepatitis, and being so seldom followed by any ill consequences, but on the contrary, with an amazing increase of appetite, health and spirits.

The event, however, is far different with respect to the syphilis, or supposed syphilis, and some disorders unconnected with the liver, where the use of mercury is productive of the most serious and irremediable mischief, and this in almost every instance where the patient is exposed to cold or wet, either during the mercurial course, or too soon after it has been laid aside. The number of soldiers who are obliged to be invalided on account of the incurable pains, swellings, and loss of power in their limbs, occasioned by mercury, would appear incredible to you; and it is melancholy to think how many officers lose their lives from the same cause, and under symptoms the most painful and lamentable, where the nose and great part of the face is destroyed, the bones rendered carious, and the surface of the body covered with ulcers. I have seen many fatal cases of this sort, and in none of them had mercury the least effect in removing or even mitigating the symptoms which were thus brought on from exposure to cold during the mercurial course, or after it was laid aside, and the cure supposed to be completed. Indeed I always thought that mer-

cury aggravated the symptoms, and the patients themselves were sometimes sensible of this, and earnestly entreated that the medicine might be discontinued. Mercury was generally tried on the idea that these symptoms arose from some lurking remains of the venereal virus. But I was soon convinced that this was a mistake, and that the above symptoms, however nearly allied to those of the venereal disease, were occasioned by mercury itself. I shall briefly mention two cases in confirmation of this opinion, which was not hastily embraced, nor without due deliberation. Ensign St——n, of the Company's service, had taken what was considered as a sufficient quantity of mercury for the cure of a slight venereal affection, every symptom of which had disappeared, and he was discharged by his surgeon as perfectly cured. He set out to join his corps, which was two hundred miles off. On the road he was overtaken by the monsoon rains, which he had not the means of sheltering himself from. On reaching his station, his joints were much swelled, his throat very sore, and somewhat ulcerated. He was immediately put under a course of mercury, but got worse and worse. He lost the palate, nose, and greater part of the face, in which miserable state he lingered upwards of two years.—The other case was that of Lieutenant B——m, of the King's service. After a mercurial course he

overheated himself by dancing, and then sat in the full draught of the land wind, the immediate consequence of which was, pains and swellings all over his body, and almost the whole surface became ulcerated, so that there was scarce the size of a crown piece from head to foot free from a sore. He lingered in this state till he died. Mercury gave no relief.—These are only two of a great many instances of the same kind.

From a view of such cases as the above, I was led to adopt the opinion, that the use of mercury requires more caution, and is apt to produce more pernicious effects in India, than in more temperate climates, and it has long appeared to me that this medicine, unless when administered with propriety and due caution, is a poison of so fatal and extensive operation, that no organ or function, either mental or corporeal, is at times exempted from its deleterious effects. It has been known to destroy the memory, and even to produce madness. One case I saw, where its long continued use was followed by total and incurable deafness.

A gentleman well known to an eminent medical friend of yours, was after frequent courses of mercury, affected with most severe head-achs, which yielded to no remedy that was tried in India. He returned to Europe, in hopes of finding relief in a colder climate: but he did not long survive his arrival in England. After death his head was

opened, and a considerable portion of water was found in the ventricles of the brain. I have seen a case of amaurosis to all appearance brought on by mercury. Dropsy is a more frequent consequence of the abuse of this remedy. I speak only of what happens in India.

The more ordinary ill effects of mercury shew themselves in pains, swellings, and weaknesses of the extremities, and in the impaired tone of the stomach and bowels; and they sometimes leave behind them an extreme morbid irritability of the whole system, which is followed by nervous and hypochondriac complaints. A gentleman in the Company's civil service, whose constitution had been long and repeatedly drenched with mercury, fell into a train of nervous affections of the most distressing kind, and to which at last he fell a victim. I could not easily convey to you in words an idea of the sufferings of this gentleman. The nerves were brought to such an extreme degree of morbid sensibility, that the unhappy patient used often to mention (sometimes with tears in his eyes) that even in the simple act of washing his hands, if he happened to drop the soap-ball, it produced a shake, an agitation and horror, which he wanted words to describe. This is the case of a young man who had naturally a very good constitution, which to use the words of a

great medical authority, "cito et crudeliter absumpsit nervorum distensio."

From what I had seen of the mischief arising from mercury, when given in circumstances where the patient may be unavoidably exposed to cold or wet, I determined while I was in the field not to run any risks, and thought it more advisable to leave all syphilitic cases *for a time*, to themselves, until I had an opportunity of giving mercury with safety and advantage. I thought that syphilis in all its stages might admit of a cure, but I had seen that some of the consequences of mercury were without remedy. In this way I found that the venereal virus is much more slow in its progress, than has been generally supposed, and that there was but little danger in leaving it *for a time* to itself. After a lapse of ten months, I could not trace any symptom of it beyond the groin. I did not find that the throat, bones, or skin, were affected; although in the early stages of the disease where mercury had been given, and the patient exposed to cold, all the worst symptoms soon made their appearance. Indeed every case that I saw in India, tended more and more to convince me, that it is only in combination with mercury that syphilis produces all the worst symptoms, and that the progress of the disease when left to itself, is extremely slow. This opinion I

adopted with great hesitation, but it was confirmed by facts which appeared otherwise inexplicable.

From what I have stated, you may naturally ask me how I managed with hepatitis in the field, when I was so cautious of giving mercury in syphilis? But here, in fact, I had no choice; the urgency of the disease admitted of no delay. I gave mercury with all the care and precaution that circumstances would allow. I cannot affirm that the patients were not sometimes affected with pains in their limbs afterward, but I do not recollect having seen any worse consequences. The cases of hepatitis in the field were not numerous. The dysenteric flux was the common disease. I have met with the hepatitis more frequently in garrison than in the field, and at one period (July, 1792) I had under my care twenty-two men labouring under this disease. The weather was excessively hot and dry, and the soldiers had received a large dividend of prize-money, which led to great excesses in drinking. This is one of the most common causes of hepatitis, and there are more opportunities for indulgence in this way in garrison, than in the field.

Though I have seldom observed that the hepatitis in India, when it is taken early and treated properly, proves fatal; yet a case now and then does occur, in which there appears so strong a tendency to supuration from the very commencement, that this

event cannot be prevented by the speediest and most efficacious means hitherto known ; and when suppuration takes place, mercury seems of no further use. Some cases I have met with where abscesses were formed in the interior of the liver, notwithstanding the use of mercury, bleeding, &c.

There is one severe disease in India, in which the liver seems to suffer partial inflammation from sympathy. This disease is an inflammation of the colon, attended with a high and burning fever, fixed acute pain above the pubes, suppression of urine, and a violent discharge from the bowels of a peculiar kind. On opening the bodies of those who died of this disease, I have sometimes found portions of purulent matter of the size of a bean, dispersed through the whole substance of the liver. Yet there had been no preceding symptom of hepatitis, and the primary disease was inflammation of the colon, the whole of which was generally found corroded and gangrenous. It appeared to me that the affection of the liver in this case was purely sympathetic. Every medical man in India has frequent opportunities of observing how the liver and bowels act and react upon each other ; and how any morbid affection of the one is extended to the other. These are indeed the principal organs which suffer from disease in that climate, there being very few diseases of any other description.

I might add some other remarks on this subject, but am unwilling to extend this letter to a greater length, lest I should become tiresome. I am afraid you may have reason to think me so already.

Believe me to be with much regard,

Dear Sir,

Your faithful humble Servant,

FRANCIS DUNCAN.

24th March, 1809.

F I N I S.