

tose than he has yet been; discharge from the ear increased. Mr. Hilton saw him, and desired some of the fluid to be collected, as he considered it to be cerebro-spinal, and the case to be one of fracture of the base of the skull through the petrous portion of the temporal bone, and intersecting the internal auditory canal. Half an ounce was collected in an hour. This fluid corresponded with cerebro-spinal fluid in every respect, except in being a little more coagulable by heat, and containing a few minute flocculi. — Seven P.M.: Much more comatose; motions passed in bed; breathing labouring; paralysis and loss of sensation increased. From this time the patient got rapidly worse, and, after a few slight convulsions, he died at half-past one, P.M.

Post-mortem examination, sixteen hours after death.—Countenance livid; teeth and hands firmly clenched; the wound of the head is quite healed. Upon removing the calvarium, a small clot of blood was discovered between the dura mater and the skull, just at the anterior and inferior angle of the right parietal bone. The vessels of the dura mater were much congested, as were also those of the brain. Upon removing the brain, and examining its sections, its bloodvessels were found to be much filled with blood, principally upon the right side and anteriorly, where there was also a great quantity of sub-arachnoid purulent effusion. The ventricles of the brain did not contain more fluid than natural. Upon lifting up the right cerebral hemisphere, a fracture was seen extending from the middle of the right lambdoidal suture, passing directly forwards, and perfectly bisecting the sub-arachnoid and bony canal extending to the foramen auditorium internum. The dura mater itself covering the bone had not been torn.

You may now convince yourselves, by examining this preparation, that my description of it is quite correct. We shall proceed with this important subject when we next meet.

AN ACCOUNT OF YELLOW FEVER,

AS IT OCCURRED ON BOARD THE R.M.S. SHIP "LA PLATA," IN THE MONTH OF NOVEMBER, 1852.

By JOHN WIBLIN,

FELLOW OF THE ROYAL COLLEGE OF SURGEONS, AND OF THE ROYAL MEDICO-CHIRURGICAL SOCIETY;

AND

ALEXANDER HARVEY, M.D., EDIN.,

LATE LECTURER ON THE PRACTICE OF MEDICINE IN THE UNIVERSITY AND KING'S COLLEGE OF ABERDEEN, AND PHYSICIAN TO THE ABERDEEN ROYAL INFIRMARY.

MEDICAL SUPERINTENDENTS OF QUARANTINE FOR THE PORT OF SOUTHAMPTON.

On the morning of the 18th November last, the Royal Mail Steam-packet Company's ship *La Plata* arrived at Southampton from the West Indies, with the loss, from yellow fever, on the homeward passage, of her commander, Captain Allan, together with six of the crew. She had left Southampton on the 18th of October, (exactly one month previously,) and gone no further than the island of St. Thomas, which she reached in thirteen days; and, remaining there between four and five days, she sailed again on the 4th of November on her return to Southampton.

One of the largest and newest, and, it may be added, one of the best of the well-conditioned ships belonging to this company, the *Plata* went from England, on her second voyage, with a crew in perfect health, and continued up to the day of her leaving St. Thomas' without a case of sickness on board. Yellow fever, however, was then, as it has been for some time, prevailing both in the town of St. Thomas' and among the shipping in the harbour; and during the time she lay there, various of the officers and of the crew communicated freely as well with the people on shore as with the crews of some of the adjacent ships. Moreover, just before taking her departure from St. Thomas', she received on board a considerable number of invalids from the *Great Western*, the *Thames*, and the *Essex*—ships belonging to the company, as likewise from H.M.S. *Highflyer*, all of which had been suffering from the fever. Of these invalids, one (Charles Southwell) was ill of fever at the time he came on board, had black vomit the next day, and died on the day following.

Within twelve hours after the *Plata* set sail from St. Thomas', on the 5th November, the second engineer fell ill of yellow fever. The captain sickened of it on the 8th. The same day three other persons on board were seized; and each of the five days following furnished fresh cases of the disease. In all, at least fourteen cases of it occurred during the passage, of which seven proved fatal.

These particulars having been communicated to her Majesty's collector of customs at Southampton, the quarantine officer of the port, and by him to the Privy Council, the *Plata* was placed in quarantine till the morning of the 20th, when she was released.

The distressing intelligence thus conveyed by the *Plata*, and the fact that yellow fever was through her brought to our doors, created an intense excitement, as well in the kingdom at large as at Southampton. And this feeling had scarce begun to subside when it was, if possible, heightened by the occurrence, in the town of Southampton itself, eight days after the release of the vessel from quarantine, of an unequivocal case of yellow fever, affecting and proving fatal to Mr. Napier, fourth engineer of the *Plata*.

It was impossible to be without misgivings as to the condition in which the steamers next in succession from the West Indies might arrive at Southampton, and accordingly their arrival was looked forward to with the greatest anxiety. Unfortunately, the worst fears have been realised, the *Medway*, the *Orinoco*, the *Magdalena*, and the *Parana*, which have successively come in, having all suffered more or less from the fever. Not to go into details respecting them, it may be observed that, including the *Plata*, the several steamers furnish an aggregate of about 124 cases, of which about 50 have ended fatally.

It having devolved upon us, as the quarantine and deputy quarantine medical officers for this port, to go alongside those vessels on their arrival in the river, in order to report to the collector of customs as to their sanitary condition, we have endeavoured, in the discharge of that duty, to procure as much information as possible regarding the disease from which they have so severely suffered. Our inquiries, indeed, have in a great measure been directed to the circumstances connected with the origin and spread of the disease on board the vessels, and in the prosecution of them we have been much aided by the medical and other officers of the vessels, while, through the obliging courtesy of the directors of the company, we have had access to all the official papers bearing on the subject in their possession.

In now giving to the profession, in compliance with solicitations from several quarters, the results of our inquiries, we have to acknowledge that our information as to the origin and diffusion of the disease in most of the vessels is as yet far from being either so complete or so precise as we could desire. For the present, we feel ourselves compelled to restrict the communication to the facts furnished by the *Plata*. Nor do we regret that this necessity is meanwhile laid upon us. Absent but one month from England on the voyage, having touched at one only of the West India islands, (St. Thomas,) her crew healthy up to the day of her leaving that island, and a new ship—the *Plata*—was perhaps more favourably circumstanced than any of the other vessels for the prosecution of a satisfactory investigation; the circumstances under which the fever appeared on board of her being of a less complex character, and having, it may be presumed, fewer sources of fallacy attaching to them. For this reason, we think the history of the disease as occurring in that vessel deserving of a separate record.

The table on the opposite page contains the names of the persons attacked on board the *Plata*, their quality, together with the dates at which they were respectively seized, and the results of the seizure, &c.

The leading features of those cases, so far as we have been able to ascertain them, may be said to have been—fever of a continued type, preceded, or at the outset attended, by severe frontal and orbital headache; pains in the back and limbs; injection of the conjunctiva; intense thirst; marked diminution or suppression of urine; vomiting, generally nearly incessant and very distressing—bilious or mucous in the first instance, but after a time, in a large proportion of the cases, of the well-known black matter; hæmorrhage from the mouth and nostrils in a few; extreme restlessness, with more or less of delirium in the worst cases—in which, also, at an early period, the pulse became small, weak, and rapid, the skin cool, and other indications of general prostration presented themselves. Three of the cases were exceedingly slight, the patients not having been confined to bed above a couple of days; and as they did not exhibit any marked or characteristic symptoms, their real nature may be looked upon as somewhat doubtful. They were, however, regarded by Mr. Bacon Philipps, surgeon of the *Plata*, as mild cases of the prevailing disease, and as such it is but reasonable to consider them.

The chief point of interest connected with these cases is, doubtless, that relating to the origin and spread of the disease on board the vessel. And with reference to this, the following particulars have been accurately determined as matters of fact:—

1. The first case that presented itself occurred in the person of Charles Southwell. This man (one of the invalids from the *Thames*) was received on board the *Plata* on the morning of the 4th of November; and he is described by Mr. Philipps as being

Name.	Quality.	Date of Seizure.	Result.	Remarks.
1. Charles Southwell.*	Seaman	Nov. 4	Died, Nov. 7.	Black vomit.
2. James Donaldson .	Second engineer...	" 5	Recovered.	{ Black vomit (?) Hæmorrhage.
3. Mr. Bent	Second officer	" 5	Recovered.	Fever, slight.
4. Captain Allan	Commander	" 8	Died, Nov. 11.	Black vomit.
5. Clement Poole.....	Coal-trimmer	" 8	Died, Nov. 12.	Black vomit.
6. William Elliot.....	Purser.....	" 8	Died, Nov. 14.	Black vomit.
7. Benj. Symonds* ...	Coal-trimmer	" 8	Recovered.	Fever.
8. Matthew Valentine	Seaman	" 9	Died, Nov. 12.	Black vomit.
9. Charles Danton*...	Waiter.....	" 10	Died, Nov. 14.	Black vomit.
10. Henry Reid	Engineers' servant	" 10	Recovered.	Fever, slight.
11. — Grant	Master-at-arms ...	" 11	Recovered.	Fever.
12. Mr. Mitchell	Fourth officer.....	" 12	Recovered.	Fever, slight.
13. Alex. McGrigor ...	Third engineer ...	" 13	Died, Nov. 17.	Fever.
14. John Lizard*	Seaman	Not stated.	Recovered.	{ Fever, severe. No black vomit.

Those marked thus * were invalids from the *Thames*.

at the time he came on board, "in a highly feverish state." On the 5th (on which day the *Plata* left St. Thomas' for Southampton) he had black vomit, and died on the 7th.

2. The next case was that of Mr. James Donaldson. He fell sick within twelve hours after leaving St. Thomas', and in the course of twenty-four hours was quite disabled from fever. His case was well marked and severe.

Donaldson was not on shore at St. Thomas'. But one evening, three or four days before his seizure, he went on board the *Esk*, and remained there three hours. All this time he was in company (below in the cabin) with the chief engineer of the vessel, Mr. Whitehair, who had that day come from the hospital at St. Thomas', convalescent from an attack of yellow fever; and, as the *Esk* was to sail the next day, had probably left the hospital sooner than was altogether expedient.

Again, on the night of November 4th, Mr. Donaldson spent some time in the fore part of the *Plata*, in company with the invalids received on board of her on the morning of that day, and of whom Charles Southwell was one.

3. The next case on the list is that of Mr. Bent, (the second officer,) who first complained on the 5th. The febrile symptoms were slight, and he was ill only two days. Supposing his case was of the nature of yellow fever, it may be remarked that he was one of a boat's crew of six men, that went ashore with the mails on the arrival of the *Plata* at St. Thomas'.

4. Captain Allan was taken ill on the 8th. It has been stated to us that he was on shore several hours every day that his ship lay at the wharf, superintending the coaling of her. But it has been as confidently affirmed that he never left the vessel. Be this as it may, it is certain that on the 6th of November, at the request of the surgeon, he visited Southwell, then in the height of his attack, going into the cabin where he lay, and remaining some time with him. It is equally certain that on the mornings of the 6th, 7th, and 8th, he visited Donaldson, then ill of the disease also.

5. Henry Reid, servant to the engineers, who had the disease in its slightest possible form, was frequently in Mr. Donaldson's cabin during the illness of the latter, and was seized in the course of the fifth day of his attendance upon Donaldson.

6. Alexander McGrigor, (third engineer,) who was taken ill on the 13th, and died on the morning of the 17th of November, was daily in Mr. Donaldson's cabin during his illness, generally passing a third part of the day with him, and occasionally sleeping in his (Donaldson's) cabin up to the 12th.

7. The history of the other cases has not been traced. But it is important to state that Southwell, Valentine, Poole, Denton, and Elliot, all of whom had the disease in its worst form, and died of it, were all congregated together in the same part of the ship, lay together under the same roof, and had the freest and closest possible intercourse together.

With regard to the condition of the *Plata* on her arrival at Southampton, in respect of her bilges, ventilation, and cleanliness, we have this only to remark, that, while different and even conflicting opinions were expressed to us by persons connected with the ship, we were ourselves unable, after a minute personal inspection of her, to discover anything faulty. And we feel it due to the company to say, on authority which we think unquestionable, that in everything relating to ventilation and cleanliness, their vessels are unexceptionable, and not surpassed by any trading vessels in the world.

As to the state of matters in the town and harbour of St. Thomas', and in the island generally, in relation to the fever, we have learnt nothing of any importance beyond the fact that for some time past the disease has been extensively prevalent both among the shipping and in the town,—so much so among the former, that few, if any, vessels that have had occasion to come into the harbour have escaped it. It may be not immaterial, however, to observe, as a point deserving of special inquiry, that about the time that H. M. steam-ship *Dauntless* lay there, (the melancholy history of the ravages of which by yellow fever is still fresh in the public mind,) another of H. M. ships, the *Devastation*, was at St. Thomas', but did not come into the harbour, keeping, however, only about a mile off from the town, and that this vessel remained intact. It would be interesting to know wherein the circumstances of the two vessels differed, in relation to intercourse either with the shore generally, or with persons ill of the disease whether in other vessels or on shore.

The harbour of St. Thomas', of small extent comparatively, is nearly land-locked, and for the most part closely surrounded by precipitous high grounds. And it has been stated to us, that for some time past, the atmosphere in the harbour has been generally still and sultry—whether more so than ordinarily we have not learnt, but that there is no locality in the neighbourhood of the harbour entitled to be regarded as marshy.

In proceeding to offer some remarks on the details now given, we beg to observe, that we have no intention to enter at large on the question of the contagious or non-contagious nature of yellow fever. That *questio vexata* has within these few years been so fully and so ably discussed in the pages of the *British and Foreign Medico-Chirurgical Review*, and elsewhere, as to make any lengthened consideration of it on our part superfluous. Neither do we intend to dwell upon the co-relative question of the expediency or in expediency of quarantine. Both these questions, however, have at this moment, and in reference to this kingdom, a *practical* interest, and it is impossible, therefore, altogether to evade consideration of them.

How did the fever originate, and subsequently spread itself on board the *Plata*? Only, as far as we can conjecture, in some one of these three ways: first, in being brought on board by Charles Southwell, and through him communicated to those subsequently seized; perhaps also by Donaldson, who may have got it from Whitehair in the *Esk*; secondly, in some foul state of the vessel herself; or, thirdly, in some pestilential miasm pervading the atmosphere in the harbour of St. Thomas'.

We have no hesitation in expressing our belief, that the first of those suppositions furnishes the most satisfactory explanation of the fact; and we think that the details given as to the circumstances under which most of the cases occurred, taken in connection with the history of the disease as occurring in other vessels,—the *Eclair*, for example, and likewise at Boa Vista, and elsewhere,—go far to make it probable that the fever had its origin in contagion or infection, and owed its extension subsequently to that cause. We do not say that they furnish an absolute proof of this, but only a *probability*—such a probability, however, as to warrant a line of conduct in respect of the steamers presently arriving here from the West Indies, the same as if it were a matter of positive certainty that the disease did originate in the way supposed.

The history of the disease on board the *Plata* answers, in fact, to most, if not all, of the *criteria* on which we rely in ascribing a

contagious property to small-pox, scarlatina, and typhus. Thus, taking those criteria, as laid down by Professor Alison,* we have—

1. *Successions* of cases of the disease in question, within narrow limits both of space and time; first, in one part of the ship, (the fore-castle, where Southwell lay some time,) and afterwards in others, (*e. g.*, the cabin of the second engineer, and that of the commander;) while other parts of the ship, similarly circumstanced, (*e. g.*, the cabins of various of the officers and of the passengers,) remained wholly unaffected. And we have the successions extending from the 4th to the 13th November inclusive, and contrasting strikingly with the nearly *simultaneous* occurrence of attacks of influenza—a disease which, if occasionally contagious, is for the most part clearly dependent on atmospheric causes.

2. On inquiring into the circumstances of these successions of cases, we find them, though for very obvious reasons occurring chiefly in the fore-castle, yet by no means *confined* to that or any one part of the ship, as might have been expected had they been owing to want of proper ventilation merely, or to the foul state of some one part of the ship—*e. g.* bilges.

3. We have evidence of the fever having been *imported* into the ship, (till then free of all disease,) certainly by Charles Southwell, perhaps also by Mr. Donaldson, who had gone into the *Essex*, and visited Mr. Whitehair, recently recovered from it.

4. In tracing the succession of cases, we find that those on board that had the earliest and closest *intercourse* with those sick of the fever were those first and chiefly *affected* by it, as instanced in Donaldson, (who, besides his intercourse with Whitehair in another ship, had been in company in his own with Southwell, the day that the latter was received on board;) in the commander, (who at an early period visited both Southwell and Donaldson when ill;) in the engineers' servant, and in the third engineer, (both of whom had been in close and frequent attendance on Donaldson during his illness;) and in four other persons, (Valentine, Poole, Denton, and Elliot,) who were congregated together, and for a certain period were associated with Southwell also, in the fore-castle.

5. Absolute *seclusion* from all intercourse with those ill on board no doubt obtained in respect of the passengers, of almost all of them at least, and among them there was a complete *immunity* from the disease.

But the evidence in favour of contagion as the cause of the fever does not end with the cases that occurred *on board* the vessel. The case of Mr. Napier, to be given in the sequel, supplies another link to the chain of *succession*, and another instance of *intercourse*. He was attacked with yellow fever *on shore*, eight days after he had landed from the *Plata*, thus making the time comprised in the successions of cases to extend from the 4th to the 28th of November; and during the whole period of Donaldson's illness in the vessel, he was daily with him in his cabin, remaining there often an hour or longer. Moreover, after the vessel came into port, Donaldson (still an invalid) and Napier lodged in the *same house*, and were in frequent communication with one another.

That *concurrent* or *accessory* causes—a less thorough ventilation in the fore-castle than elsewhere, (merely *concentrating* the poison, however,) intemperance, fatigue, or such like—probably lent their aid in the production of the disease in all or certain of those attacked—*i. e.*, gave efficacy to the contagion—may very readily be allowed; as likewise that some—it may have been a considerable number—that had intercourse with the sick escaped. But all this proves only that the specific cause of the disease is *contingent* in its action, or that every one is not susceptible of its influence. They do not in the least, however, affect the inference to be drawn from the observation, if resting on a sufficiently wide basis, as to the result of intercourse between the healthy and the sick.

To suppose that some foul condition of a part of the ship, or inadequate ventilation, had much or any very special relation to the fever that broke out in the *Plata*, seems to us very improbable. Those, at least, that seriously think so must, as best they may, account for these two facts: first, that not the *Plata* alone, but every one of the numerous vessels belonging to the Company, have within the last few months been suffering severely from the same disease; and secondly, that from the formation of the Company in 1840, up to a recent period, during which period their vessels have made some 250 voyages between England and the West Indies, the vessels in question have been singularly (although not absolutely) exempt from the disease. The only circumstance, in fact, obviously belonging in common to those vessels at present, is their calling at an infected port, (St. Thomas';) and we would humbly submit, that any explanation of the sick-

ness on board them that does not turn on that circumstance cannot be satisfactory.*

As to the notion of the fever on board the *Plata* having had its source in some pestilential miasm pervading the atmosphere in the harbour of St. Thomas—implying that, during the four or five days, the vessel remained there, she lay immersed in that atmosphere, or at least was everywhere pervaded by it—we will only say that, declining to hazard a confident opinion on the subject, there seem to us difficulties attaching to it. In particular, if that were the source of it, it appears difficult to understand either why the passengers should have so entirely escaped, or why the attacks should not have been nearly simultaneous, instead of occurring, as they did, in marked successions. And we will venture to suggest, whether, had the whole passengers and crew lain down together on a pestilential marsh ground, and been as fully and uniformly exposed to its influence, as they must have been to the supposed pestilential atmosphere in the harbour of St. Thomas', the attacks of ague would not have been nearly simultaneous, as well as much more numerous and indiscriminate?

On the whole,—admitting, however, as we readily do, that the facts of the case are comparatively limited in their range—that they are not sufficiently numerous and varied to justify an absolute conclusion,—we think the *probability* is, that the disease owed its occurrence in the *Plata* to some circumstance arising out of intercourse between the sick and the healthy—*i. e.*, to *contagion*. And this probability, strengthened as it is by many others of a like kind, seems to us too strong to be lightly set aside. "*Probability*" (as Bishop Butler has well observed) "*is the very guide of life.*" If, in the prevention, as in the treatment of diseases, we wait till we have positive knowledge of their actual nature or their real cause, we may wait till incalculable mischief has been done, and preventive or curative measures are unavailing. And, accordingly, resting on that probability, we do not hesitate to express our conviction, that, with the view of preventing the possible introduction of yellow fever into this country, the measure which, under existing circumstances, ought to be regarded as of the *first* importance is, to place in quarantine all infected vessels arriving here or elsewhere from the West Indies—a measure which, since the arrival of the *Plata* up to the present time, has been carried into effect, at this port, in respect of the R.M.S.P. Company's ships.

The detention to which these vessels have thus been subjected has, we are aware, been strongly animadverted upon in certain quarters. But, except on the part of those more or less incommoded thereby, and of some besides, who deny that quarantine is of any efficacy, we do not believe that any general exception has been taken to it. There may be differences of opinion as to certain of the details of quarantine, as to allowing mail-bags to be landed, for example, while the passengers and crew are kept on board, as to the length and mode of detention, &c. But we have no doubt that the very general feeling, as well in the profession as in the community at large, is, that the *principle* of quarantine is a sound one, and that precisely the same line of conduct that *individuals* would adopt for the safety of themselves and their families should be taken for that of the community by the *government*. "S'il s'agissait de la préservation de la maison que j'habite ou de la famille dont je suis le chef, je prendrais les mêmes mesures de précaution pour éviter la peste que pour éviter la *fièvre jaune* ou le cholera. Et chacun de vous, messieurs, en pareil cas, imiterait ma conduite. Je ne vois donc pas quelle raison il peut y avoir de ne pas appliquer la même règle lorsqu'il est question de préserver une ville, qui n'est que l'ensemble de nos maisons particulières, ou une population, qui n'est que la réunion de toutes nos familles."†

If, in a matter so important, we are to be guided by *authority*, it may not be amiss to refer to one that seems entitled to the highest respect. We allude to the "International Sanitary Conference," which met at Paris the end of the year 1851, and was composed of representatives from twelve of the states of Europe. On the subject of yellow fever, and in relation to vessels similarly circumstanced with the West India steamers, they not only sanctioned the principle of quarantine, but went much further in their recommendations than at this cool season of the year has been deemed necessary here. Nor is it unimportant to remark, that the representative of the English government, Dr. Sutherland, gave his vote in favour of the resolutions adopted by the Con-

* If it be supposed, from the circumstance of three of the engineers (including Mr. Napier) and two of the coal-trimmers having been attacked with the fever, that something in the coals, or that the heat of the engine-department of the vessel, was the cause of it, it may suffice to set against that notion the fact, that in more than one of the other steamers that have suffered even more severely from the disease than the *Plata*, no cases have occurred among the engineers, the coal-trimmers, or the firemen.

† Extract from a speech addressed to the "International Sanitary Conference" in Paris, by Dr. Monlau, of Madrid.

ference.* Those resolutions, embodying formal quarantine rules for vessels arriving at a European port from any part where yellow fever is prevailing, were three in number, and are as follows:—

I. "Traversée heureuse; minimum [of quarantine], cinq; maximum, sept jours.

"Le minimum de cinq jours pourrait être abaissé à trois jours, si la traversée avait duré plus de *trente* jours et si le bâtiment était dans de bonnes conditions d'hygiène."

II. "S'il y a eu des accidents pendant la traversée; minimum, sept jours; maximum, quinze jours."

III. "Pour les cas extraordinaires, d'une gravité exceptionnelle, et en dehors de toute prévision; les mesures seraient établies d'après ce principe supérieur à toute règle. *Salus populi suprema lex*—et laissés au jugement de l'autorité sanitaire, sous sa responsabilité."†

The second of these rules, specifying a quarantine of fifteen days, if not the third, more stringent still, is that which, in the view of the conference, ought to have been acted on in the case of the *Plata* and other West India steamers arriving in England, (as some of them did,) not in thirty, but in thirteen or fourteen days; and having, at the time of their arrival, cases of yellow fever of recent occurrence actually on board; whereas the rule followed by order of the privy council has been to detain them for ten days only, counting from the onset of the last case on board.‡

We will only add, in reference to this subject, that the circumstances in which this country now stands in relation to yellow fever are widely different from what they were in former years. For, while formerly the passage from the West Indies to England occupied from five to six weeks or more, from twelve to seventeen days may now be looked upon as its ordinary duration. The *Plata* made both the outward and the homeward passage on the last voyage, each in thirteen days; and the *Parana* her last homeward passage in fourteen. And, if a temperature above 60° Fahr. be favourable to the spread of yellow fever, who can say what may not happen to us next summer, supposing the disease to be then prevalent at St. Thomas', and quarantine in this country abolished? For several years malignant cholera was known only as occurring under the tropical sun of the East. Who will now be bold enough to affirm that yellow fever may not also take root and prevail as widely and as fatally in this country as cholera has twice done. Possibly quarantine may be unavailing to ward it off, but it must surely commend itself to the plain sense of every one as an important means of prevention.

It is right that nothing should be left undone that can reasonably be accomplished in respect of ventilation, a proper construction of dwellings, drainage, and such like. We would not underrate their importance, but we think their comparative efficacy is often greatly exaggerated. We believe, with Professor Christison,§ that the specific poison of typhus may, by means of ventilation, be so *diluted* as to be rendered nearly, if not quite, innocuous. But the same cannot be said of scarlatina and measles, which, when they find their way into the well-conditioned dwellings of the rich, spread freely among the inmates. No more may it hold good in respect of the specific cause of yellow fever. In the West Indies we know that this disease often attacks the higher classes. It may be questioned, moreover, whether, in a densely populated country like this, it will ever be possible so to improve the dwellings and condition generally of the lower classes, and so to elevate their habits as to accomplish all that the advocates for sanitary reform deem *essential* to prevent the prevalence of zymotic diseases among them. At all events, we would submit that the proper time to consider whether quarantine may safely be done away with will

be *when* that reform has been carried out, and nothing further remains to be done for the maintenance of the public health.

The case of Mr. Napier, fourth engineer of the *Plata*, formerly referred to as occurring and proving fatal in the town of Southampton, seems properly to form part of the history of yellow fever in that vessel. Mr. Napier, who was attended by Mr. Ware, surgeon, of this place, was first seen by that gentleman on Sunday, Nov. 28, eight or nine days after he had landed from the ship. He was then complaining of severe general headache, particularly in the back part, and likewise of pain in the back. He had hot, dry skin, dry brown tongue, delirium, restlessness, and a pulse at 120. On the 29th he had, besides, vomiting of glairy matter, relaxed bowels, and high-coloured urine. Very little or no bile was to be seen in the motions, which had the appearance of gruel, and were without smell. The fever was unattended with remissions. The vomiting, from the time it first began, continued throughout, the matters ejected assuming, on the evening of Friday, Dec. 3rd, the character of "black vomit." The day following, yellowness of the skin made its appearance; hiccough and subultus tendinum came on, while the vomiting of black matter continued. He died early on the morning of Sunday, Dec. 5th.

Mr. Napier was seen by us on the evening preceding his death, and was then in a state of great general prostration. There was lying in a basin at his bedside a considerable quantity of the black matter recently vomited by him. This we carefully preserved, transmitting the greater part of it to Sir William Pym, who recognized it as genuine "black vomit."

No reasonable doubt, we think, can be entertained as to the real nature of Mr. Napier's case, or its main cause. On board the *Plata*, he had daily had intercourse with Mr. Donaldson during the illness of the latter, passing often an hour or more with him in his cabin. Subsequently, after the vessel came into port, he lodged in the same house, and was much in company with Donaldson, who, on coming ashore, was still an invalid; and in all its essential features, his case exactly resembled the cases of yellow fever that had occurred on board the ship. An attempt, indeed, has been made to represent it as one of ordinary, though unusually malignant fever; and likewise to ascribe it to a faulty hygienic condition of the house and street that Mr. Napier lived in. Sir William Pym, however, having occasion to be in Southampton the day following Mr. Napier's death, made careful inquiry, conjointly with Mr. Ware and ourselves, into the whole facts of the case, and unhesitatingly pronounced it one of yellow fever. As to the street, it is a comparatively wide one, (forty-two feet,) and has a common sewer passing through the middle of it. The house has at least the aspect of being well built, well ventilated, and every way well conditioned. Though low-lying, neither the street nor the locality have been at all unhealthy heretofore, and, what is deserving of special notice, were remarkably, in fact wholly, exempt from cholera during the prevalence of that disease in Southampton. The more probable explanation, therefore, of the occasion of Mr. Napier's illness, considering its nature, seems to be that he got it in the way of contagion or infection, either on board the ship, or subsequently, from Donaldson.

Fortunately, no extension of the disease in this place has resulted from Mr. Napier's case. An argument, however, has been raised, on the strength of this solitary negative fact, against the contagious nature of yellow fever. Had a cannon-ball been fired against the town, and done no harm to life or property, it might as well be affirmed that the common belief in the destructiveness of such projectiles is fallacious. "A man might say, 'I was in the battle of Waterloo, and saw many men around me fall down and die, and it was said that they were struck down by musket-balls; but I know better than that, for I was there all the time, and so were many of my friends, and we never were hit by musket-balls. Musket-balls, therefore, could not have been the cause of the deaths we witnessed.' And if, like contagion, they were not palpable to the senses, such a person might go on to affirm that no proof existed of there being such things as musket-balls."*

Southampton, Feb. 1, 1853.

Report by DR. HASSALL relative to a Specimen of "Black Vomit" forwarded to THE LANCET by MESSRS. WIBLIN and HARVEY, and referred to in the preceding communication.

I have subjected the sample of black vomit which you gave me to careful and prolonged microscopical examination.

The fluid is strongly acid, and slightly albuminous. On standing for some hours, it deposits a sediment of a blackish-brown colour, the supernatant liquid being light brown.

* To avoid even the appearance of any injustice to Dr. Sutherland in thus referring to him, we shall extract the material part of his speech to the Conference, as reported in their printed proceedings:—

"Je voudrais donc proposer à mes honorables collègues de faire une distinction dans les règlements entre les passagers arrivant en patente brute, mais sous de bonnes conditions hygiéniques et sans accidents pendant la traversée, et ceux qui arrivent dans un bâtiment malsain et avec accidents. Dans le dernier cas, on doit, sans doute, prendre des précautions, mais dans le premier cas vous pouvez, si vous voulez, soumettre les effets et les hardes à la purification, mais en même temps laisser aller les voyageurs, parce qu'il n'y a rien à craindre."

Dr. Sutherland does not state *what precautions* he would recommend in the event specified; but it may be presumed they were those sanctioned by the Conference, and for which he voted.

† Of twenty-two members of Conference present, there voted, for the first proposition, 16; against it, (as being too lenient,) one; while five declined voting. For the second proposition, nineteen; against it, (for the like reason as above,) one; two declining to vote. The third proposition was unanimously adopted.

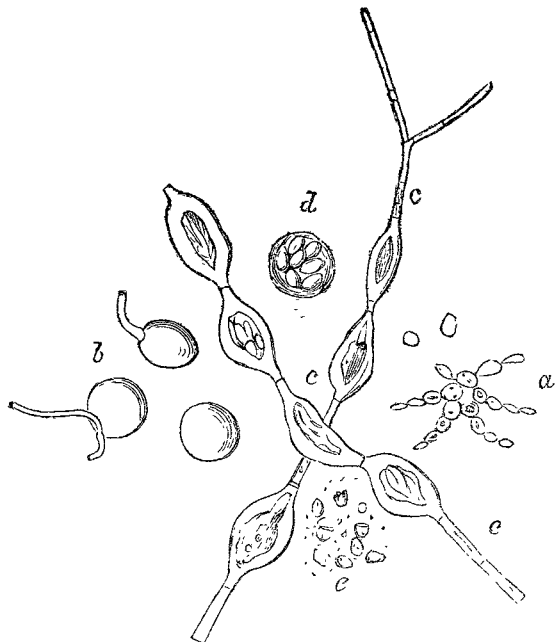
‡ In point of fact, the period of detention has, with every one of the vessels, been much shorter than this—the longest, five days.

§ Library of Medicine, vol. i. p. 159.

* Watson, Lectures on the Principles and Practice of Physic, vol. ii. p. 700, 701.

Using an object-glass of one-eighth-inch focus, I detected in the sediment—

- 1st.—Ramosse branches of the sporules of a fungus, (*a.*)
- 2nd.—Large circular sporules, usually single, but sometimes ranged in rows, and giving origin to slender threads or filaments, (*b.*)
- 3rd.—Branched and moniliform threads of a fungus, usually occurring in bunches, (*c.*)
- 4th.—Many compound cells, having the appearance of *sporangia*, (*d.*)
- 5th.—Vast numbers of irregular bodies, frequently of a brown colour, and resembling somewhat blood-discs, shrivelled and discoloured, but into soluble in acetic acid, (*e.*)
- 6th.—Multitudes of molecules and amorphous masses, of a brownish or blackish colour.
- 7th.—Starch corpuscles and hairs forming the down of wheat.



There were no animalcules of any kind; nor, from the acid character of the liquid, was it likely that any would be present, except as the result of decomposition. The sporules and threads *a, b, c*) probably all represent different stages in the growth of the same fungus. This is certainly the case with *b* and *c*. This fungus is different from any with which I am acquainted as occurring in the fluids of the human subject, and it is very possible that its development may have taken place subsequent to the ejection of the liquid.

I regret that I have not been able to determine positively the nature of the bodies resembling altered blood-corpuscles, and which formed the most abundant and peculiar element of the fluid, and upon which its colour to some extent depended. It is possible that they are the sporules of a fungus; at all events, their insolubility in strong acetic acid is opposed to the opinion that they are altered blood-discs.

Supposing the fluid, while within the stomach, really to contain the sporules of a fungus, which is very probable, then there is much reason to believe that they would be important agents in keeping up the obstinate sickness which is so distressing a symptom of yellow fever. That the sporules of the fungus *Sarcina ventriculi* do really give rise to vomiting is certain; and with a view to check the sickness, I would recommend the treatment which has been found so surprisingly efficacious in cases of sarcina—viz., the systematic administration of alkalies, with especially repeated doses of sulphite of soda. An acid liquid is one of the conditions essential to the development of most fungi; by the exhibition of alkaline remedies this condition is destroyed; while the sulphur of the sulphite would exert a most destructive effect upon the sporules of any fungus which might be present.

APPOINTMENTS.—Mr. Henry Charles Johnson has been appointed Surgeon, and Mr. G. D. Pollock, Assistant-Surgeon to St. George's Hospital.—Dr. William Munk has been appointed Physician to the Small-Pox Hospital, in place of Dr. George Gregory, deceased.—Dr. Septimus Gibbon has been appointed Medical Examiner to the Lancashire Insurance Company.—Dr. Pickford has been elected Physician, and Mr. Lowdell, Surgeon to the Sussex County Eye Infirmary, Brighton.

CLINICAL NOTES.

By MARSHALL HALL, M.D., F.R.S., &c.

(Communicated by J. RUSSELL REYNOLDS, M.D.)

NOTE XV.—HINTS FOR THE TREATMENT OF HYDROPHOBIA.

MANY years ago I had the opportunity of watching the course of a case of hydrophobia. It occurred in a little boy; and I scarcely left the room during the eight-and-forty hours that he survived. But I need not detail the series of symptoms which occurred, and which I have described elsewhere, on the present occasion.

It has appeared to me that there are *three* modes of death in this disease:—1. Sudden death from asphyxia. 2. Sudden death from secondary asphyxia. 3. Sudden death (for in all the cases I think the death is sudden and unexpected at the precise moment at which it occurs) from nervous exhaustion.

Either of these modes of dissolution would be averted by the timely institution of tracheotomy. Indeed, if this measure were adopted, the frightful seizures which occur from trying to take liquids would be obviated. These seizures consist in fearful attacks of laryngismus, and of convulsion of the neck and pharynx, but chiefly of laryngismus, with threatening of instant suffocation. These seizures would be disarmed of their force and terror by tracheotomy.

Tracheotomy thus obviating the effects of laryngismus—1. The sudden death from asphyxia, the immediate result of asphyxia, could not occur; and 2. The sudden death from secondary asphyxia, the more remote result of many attacks of laryngismus, could not occur!

There remains the sudden death from exhaustion. It is a question whether this would occur necessarily from the poison of hydrophobia. Why should it occur *necessarily* from this poison? No reason can be given for this; and we are not to be misled into a conclusion unsupported by facts, since though all cases of hydrophobia have proved fatal, they have proved fatal by a mode by which they would not occur if tracheotomy were performed.

Could any measures be adopted to check the violence of the spasm,—laryngismus and its effects being obviated,—such as the hydrocyanic acid, and so to prevent the subsequent exhaustion? Or could any remedies be adopted to remove this exhaustion more directly, as wine or cinchona?

These hints I throw out for the consideration of my professional brethren, in the hope of good.

ON THE TREATMENT OF ANEURISM BY COMPRESSION.

By W. REEVES, Esq., M.R.C.S., L.A.C., &c., Carlisle.

FROM what I have seen of the treatment of aneurism by compression, I cannot but feel assured that such treatment must become the rule of practice,—if it be not already the rule,—especially where the disease occurs in the extremities. The present case, which I send for your perusal, was cured—that is, the disease ceased to be active aneurism after the application of my compressor for the short period of four hours. The instrument I use admits of easy application, (vide THE LANCET, Jan. 3, 1852.) When once applied it does not shift its place, it is under the control of the patient himself, and affords means of alternate compression at the groin and lower down, without change of instrument. The one instrument can be used for a double purpose; it possesses the quality of *multum in parvo*, a quality so much to be admired wherever to be met with.

W. C.—, a bookbinder by trade, and delicate appearance, enjoyed good health till within the last two years or less. He thinks his habits have not been very bad, “as he only got drunk occasionally like other working people.” About May, 1851, while on tramp, his leg, near the hough, used to feel painful and numb, and the foot swelled very much. Besides bathing the parts occasionally, when they troubled him more than usual, he paid no attention to the leg. When at rest the pain was not severe, but on any exertion the pain and swelling got worse. Within the last three months, the swelling near the hough obliged him to notice it, as it became considerable, and caused his knee to be very stiff and painful. He had a club-doctor to attend him, who thought it was an aneurism. The patient said it throbbed and caused so much pain that he could not move about. I saw him on the 1st of April, 1852. Over the tumour the thigh measured sixteen inches and a half; round the sound leg only