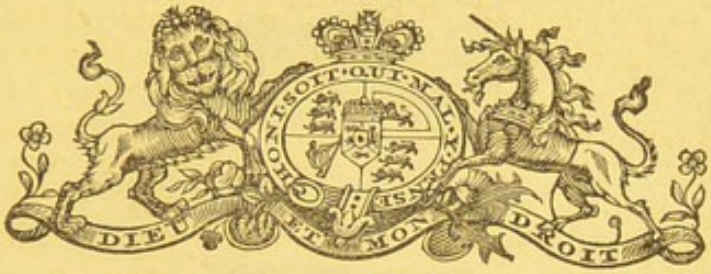
The Cholera gazette : consisting of documents communicated by the Central Board of Health, with intelligence relative to the disease, derived from other authentic sources.

[No. II.] [Jan. 28.]

By Authority.



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THE CHOLERA GAZETTE,

CONSISTING OF

DOCUMENTS

COMMUNICATED BY THE

CENTRAL BOARD OF HEALTH,

WITH

INTELLIGENCE RELATIVE TO THE DISEASE,

Derived from other Authentic Sources.

SECOND EDITION.

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By Authority.

THE CHOLERA GAZETTE.

No. II.] LONDON, JANUARY 28. [1832.

TREATMENT OF CHOLERA—SELECTION OF CASES REPORTED TO THE CENTRAL BOARD OF HEALTH, &c. &c.

CASE I.—COMMUNICATED BY MR. BALFOUR.—DETAILS OF THE FIRST CASE OF CHOLERA WHICH OCCURRED AT DURHAM—SYMPTOMS SEVERE—DEATH IN 37 HOURS.

Durham, 10th January, 1832.

At 10, A.M., *7th January,* I was requested to visit instantly, Matthew Ingram, at the Market-place work-house, where I found him seated in a chair apparently inanimate; he was in a state of perfect asphyxia, the pulse imperceptible, face cold and pallid, eyes closed, and the mouth wide open— a slight movement of the lower jaw was the only visible proof that vitality had not altogether vanished; in a few moments, respiration was observable, but the respirations were feeble and at long intervals.

Upon making enquiry respecting the cause and continuance of the patient's alarming condition, I learnt that he had been harassed by a severe purging since two o'clock; cramps had preceded the discharge, and were very severe, his feet were cold, and his fingers of a blue colour. I immediately assisted in having him removed from the fire-side to his bed; and whilst carrying him along the room, there took place an involuntary alvine discharge of a stream of pale-coloured fluid. A small quantity of brandy and mint water, with 25 drops of laudanum, was administered; a bottle of hot water was applied to his feet, and he was closely enveloped with heated blankets. In the course of a few minutes, animation became more evident, he raised his eyelids and moved his limbs; soon after he was able to speak in a low tone of voice, and complained of cramps in his hands and feet; the pulse beat

feebly, 120 in a minute; perspiration now flowed profusely from the whole surface of his body, and he was shortly after able to take some sago, with two or three tea-spoonsful of brandy.

The pulse, during the day, varied from 100 to 120, feeble; skin moist, but cold; cramps continued, affecting the left side more severely than the opposite; diarrhœa severe, and accompanied now with vomiting—he was ordered an astringent anodyne cordial, every three or four hours, and a stimulating embrocation. The cramps, vomiting, and purging, were afterwards occasionally troublesome, though not violent, thirst considerable, yet not excessive; the alvine evacuations were of a greyish colour; the matter vomited was mixed with food, as sago, coffee, &c.; voice husky, has not voided any urine since an early hour in the morning—ordered anodyne enemata, and pills of calomel, opium, &c.

Sunday, 10, A. M.—Vomiting and purging abated; has not voided any urine; cramps less severe, skin moist and partially cold; voice husky and weaker, pulse 108; eyes sunken and surrounded by a dark areola, tongue very slightly furred, moist and warm; ordered cordials, anodyne mixture, &c.

At 2, P. M.—Found the patient comatose, and sinking rapidly.

At 3 o'clock he expired. The deceased was 67 years of age, and had been intemperate.

(Signed) W. BALFOUR, *Surgeon*.

CASE II.—COMMUNICATED BY MR. WILLIAM GREEN.—PRELIMINARY SYMPTOMS WELL MARKED—COLD STAGE PROTRACTED—APPARENT RELIEF FROM VARIOUS REMEDIES—DISEASE PASSING INTO THE CONSECUTIVE FEVER.

Durham, January 17, 1832.

On the 15th of January, at eight o'clock in the evening, I was sent for to visit Mr. A. Hopton, Deputy Governor of the Gaol at Durham. ætat. 58, of rather free habits, and his general health not very good.

He stated that he had not found himself well on the previous day; that he had felt oppression at his stomach, with occasional nausea, and a sense of epigastric heat, and uneasiness. At two o'clock this morning he was attacked with violent purging, attended with most distressing cramps in his limbs.

As soon as I saw him, I was instantly struck with his altered appearance. His countenance was blanched and anxious, and his features sharper than natural. He says, that the evacuations from the bowels have been very frequent, indeed almost incessant, during the day, and that the discharges have all been very thin and watery, and of a very pale white colour, and almost without any smell. He says, that he has not passed any urine, except when at stool. His skin feels rather cold, certainly below the natural temperature. His pulse slow, weak, and labouring. His breathing oppressed. The tongue white and moist, and rather cold to the touch: complains of most distressing thirst. The hands and fingers appear much smaller than natural, and the latter look corrugated, and as if they had been steeped in water. The

cramps are not constant, but recur at intervals, and are most violent in the legs and feet, and occasionally extend to the muscles of the thigh. When free from the spasms, he feels much inclined to sleep. The hands and feet are not blue, the skin was covered with a cold clammy sweat.

I have not been able to get any inspection of the discharge from the bowels, but, on inquiry, Mrs. Hopton says, that they all resemble gruel, or rice-water, and that they were flakey and had no smell.

Ordered to take strong coffee, with mustard and brandy, and to have immediately a bolus, formed of powdered opium, one grain; cayenne pepper, camphor, and carbonate of ammonia, of each two grains; with two drops of oil of peppermint. At eleven o'clock in the evening of the same day, I visited Mr. Hopton a second time, when I found the symptoms were more favourable. The violence of the purging had somewhat abated, since he took strong coffee and brandy; the bolus had produced more warmth on the surface, and the skin had become more moist. I now left him for the night, with directions that he should take two tablespoonsful of the following mixture, every two hours:—Aromatic spirit of ammonia, and spirit of lavender, of each two drachms; laudanum, one drachm; peppermint water, one ounce.

January 16th, at nine o'clock, I visited Mr. H. again. He now says that he is better, and that he has passed a tolerably good night, until towards this morning, when the purging and cramps returned. His skin is now very warm, and he is covered with a warm perspiration. His countenance is hot and flushed; his tongue more dry, and rather brown, and still complains of great thirst. His pulse is more firm, and rather more quickened; and he says his hands and fingers feel more natural, larger, and plumper; has passed about one ounce of dark coloured urine since last night. The stools are now more of a brown colour, and evidently contain bile.

WILLIAM GREEN, *Surgeon.*

EXTRACTS FROM A LETTER FROM MR. BULLEN TO THE CENTRAL BOARD, PREFATORY TO THE DETAILS OF TWO CASES.

Houghton-le-Spring, January 5th, 1832.

"I AM glad to say, that since my arival, the Cholera has considerably diminished, both at Newcastle and Gateshead; but still I have too frequent opportunities of watching the disease. I have seen here, as well as in Poland and Germany before, that the proportion of cases in which the disease makes its invasion suddenly, without any premonitory symptom, and the cases which are ushered in by previous diarrhœa, are about equal. I have little doubt but that the iesser mortality of the disease in England may be accounted for by the fact, that proper importance is bestowed on attacks of diarrhœa, and other incipient marks of Cholera, that they meet with early treatment, and become arrested in their progess to the more hopeless stage. The treatment

of the disease, as far as I am able to judge, is improved by Dr. Gibson's recommendation of the mustard emetic. Since I have been here, I have certainly witnessed its superior efficacy to the salt and water emetic, which I had been in the habit of using in Warsaw; it effects a more full vomiting; it produces a greater stimulant effect on the stomach, and does more towards inducing the re-active stage. In one or two cases, after its use I have felt the pulse become more perceptible, and have seen other signs of re-action about to take place. I have never seen any feculent dejections produced by it, but am told, on good authority, that this is another of its good results."

Case III.

PATIENT ADVANCED IN YEARS—PREMONITORY SYMPTOMS OF LONG DURATION—CURE.

The following case was admitted in the Gateshead Hospital, January 10th, 1832.

Catharine Wind, aged 80: had, some few days previous to her admission into the Hospital, been attacked with purging and vomiting: had felt considerable uneasiness in the epigastric region, and had complained of feeling cold, and shivered. These symptoms increased in intensity every day till she was brought to the Hospital, in a hopeless condition. The house surgeon found her in a bad state of collapse. The eyes had become sunken; the countenance, hollow and deathly; the surface, cold and livid, and the pulse scarcely perceptible; the vomiting and purging continued, the evacuations being of a light colour, and watery consistence; the urine was scanty; the extremities cramped. Under these circumstances, the house surgeon prescribed an emetic of common salt, and an opiate injection; after these remedies had been administered, she evidently improved, the pulse becoming more perceptible, and warmth appearing at the surface. Two or three hours after, she complained of great pain in the præcordial region, and the re-active stage took place. She was now ordered to take five grains of calomel every hour. She continued gradually improving under this plan, and on Wednesday (the next day) was considered as in a state of recovery, the consecutive fever not being of a bad description. From the age to which this woman had attained, and from the length of time that she allowed the symptoms to run on without treatment, her recovery was unexpected.

Case IV.

NO PREMONITORY SYMPTOMS—DEATH IN TEN HOURS.

Gateshead, January the 12th, 1832.

Henry Sibbeth, living in Church-street, at Gateshead, was a seaman lately returned from America. He had come from London about a fortnight since, in a vessel, to Sunderland, and immediately afterwards proceeded to Gateshead, the residence of his friends: was thirty-nine years of age, addicted to intemperate habits, and within the last few

days had frequently become intoxicated. At two o'clock, a. m., on the 12th of January, he became attacked with sudden purging and extreme coldness. A surgeon attended him at nine in the morning; the eyes were then sunken; the countenance had assumed the deathly character, and was changed to a blue colour; the pulse could scarcely be felt, was seventy in number; the tongue was cold; the extremities cramped; and he had considerable pain in the epigastric region. Opium and carbonate of ammonia were prescribed for him. He was bled to about six ounces, which quantity was obtained with considerable difficulty. A large enema of warm water was administered, but all in vain. He died at twelve o'clock the same morning, retaining his senses to the last. This was a marked case of Cholera; no essential symptom of the disease was wanting. I have brought it forward as one of those cases which is sudden in its attack, taking place without any premonitory symptom. The other case I have made out, to show that sometimes, on the contrary, an ample warning is afforded.

SIMEON BULLEN, *Surgeon.*

CASE V.—COMMUNICATED BY MR. CATON. CARBONATE OF AMMONIA INEFFECTUALLY GIVEN—DEATH IN THE COLD STAGE.

Newcastle, Jan. 10.

HENRY ALLEN, ætat. 25, labourer, was seized yesterday morning, *Jan.* 8, 1832, with violent pain in his stomach and bowels, with purging of a watery fluid. Cramps in the legs and thighs soon succeeded this state, followed by nausea and vomiting, and at eleven o'clock this morning he was brought to the hospital.

8th.—The vomiting, purging, and cramps had ceased; pulse imperceptible at the wrist; skin cold and moist; eyes fixed and glassy, and deeply sunken; cheeks and lips of a livid hue; countenance collapsed, and expressive of great anxiety; tongue cold and moist; extremities apparently lifeless; has passed no urine since yesterday.

Twelve o'clock.—To have immediately calomel fifteen grains, opium powder two grains and a half, an enema of three pounds of warm water, with a drachm and a half of laudanum; cupping glasses applied to the abdomen.

Half-past twelve p. m.—No pulse; ordered to take a draught containing carbonate of ammonia ten grains, and camphorated spirits half a drachm. The enema was rejected immediately.

One p. m.—No pulse in right arm, perceptible in left, surface warm; feels easy, but complains of being very hot. The draught was repeated, and an injection of warm water, containing half an ounce of spirits of wine, was administered. Immediately after taking the draught, the pulse became perceptible in both arms.

Jan. 9th, half-past one o'clock.—Feels easy; tongue and surface warm; pulse 100 in both wrists. To take of calomel five grains every hour.

Three o'clock p. m.—Voice husky; complains of great thirst; annoyed if spoken to; pulse scarcely perceptible; cramps of the legs returned; tongue and surface dry and cold; no return of the vomiting and purging. To take warm brandy and water every half hour. No reaction took place after this; his whole body became perfectly cold, and he died about seven o'clock.*

Treated by Drs. White and Baird.

COMMUNICATION FROM DR. MACANN, RELATIVE TO THE ADMINISTRATION OF TOBACCO CLYSTERS IN CHOLERA.

Newcastle, Jan. 22, 1832.

Sir,

Having had an opportunity in the course of my visits to the Gateshead Hospital this week, of seeing and inquiring into the particulars of a case of Cholera, in which a tobacco enema or clyster had been successfully administered under the direction of Mr. Baird, a resident surgeon here, I thought it my duty to call upon that gentleman, and have been enabled by his kindness to draw up from the original minutes, the memorandum I have now the honour of transmitting for the information of the Board.

I hope in a few days to be enabled to forward full details of the cases themselves, and, perhaps, of the *fifth* case alluded to in the memorandum, in which, as I am informed, death took place very soon after the injection was administered.

I have the honour to be, Sir,
Your very obedient Servant,
FRS. MACANN.

To the Secretary of the Central Board of Health.

MEMORANDUM, &c.

For the Central Board of Health, &c. &c.

It appears that a tobacco injection, or an enema of the officinal infusion of tobacco, has now been given in this town or neighbourhood, in four decided cases of Cholera, under the eye of Mr. Baird, a resident surgeon here, and by whom it was introduced as a remedy in the disease.

Of these cases, three were men, and one a woman; and in all, at the time of administration, the skin was cold and livid, and vomiting,

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* The man took twenty grains of the carbonate of ammonia in less than half an hour, but with very little effect on the pulse. He several times expressed himself free from pain, and continued to smoke his pipe till within half an hour of his death, without any apparent impediment to the mechanical action of the lungs; although from the coldness of his breath and the smoke which he respired, it is probable the functional power had ceased some time.

purging, and cramps, were present, marking the stage and character of the disease.

In each also, symptoms of reaction, (increased temperature, and distinct pulsation) are stated to have appeared almost immediately after the administration of the medicine; and in one, which I myself saw and examined on the following day, in the Gateshead Hospital, this appears to have taken place under circumstances, which render it manifest that the *action of vomiting* had nothing to do with this result; for no such act or effort followed the exhibition of the medicine, as is shewn by the notes taken at the bedside of the patient at the time.

Of the four cases here referred to, three recovered, and one died; in stating this, however, it is proper to mention, that death is also known to have taken place in *a fifth* case, in which the remedy was exhibited; but with this case Mr. Baird had nothing to do, nor have I yet been able to ascertain all the particulars of it.

As Mr. Baird has been good enough to say he will favour me with the details of his own cases, as referred to above, for transmission to the Board, I do not think it necessary to extend this memorandum further than to add, that the injection was prepared by simply infusing half a drachm of the common tobacco, in half a pint of boiling water, for a short time; and that, in two of the cases, this quantity was exhibited twice, the first portion not having produced the desired effect.

FRS. MACANN, M.D.

Newcastle, Jan. 22, 1832.

SUMMARY OF THE TABULAR REPORTS ADDRESSED TO THE CENTRAL BOARD, FROM TWO DISTRICTS OF NEWCASTLE-UPON-TYNE.

No. I.

1. WILLIAM KENT, printer, of Drury Lane, Newcastle, of good health and sober habits, was seized Dec. 16,—returned cured Dec. 23.—He was a printer of broad sheets and ballads, much sought after by the poor, from the low neighbourhood where the disease then prevailed. The office was sometimes full of these poor people.

2. WILLIAM HOLDER'S WIFE, husband a smith, of Hillgate, Gateshead, supposed sober habits, was seized on Dec. 29,—cured Jan. 4.—Two people died of Cholera Morbus in the same house, in the room over her's.

3. STEPHEN HEW'S DAUGHTER, father an engineer, she a spinster, same house as No. 2, was seized on Dec. 30,—cured Jan. 4.—Resided, as also, Nos. 4 and 5, in the same infected house as No. 2, four individuals having died in it since Christmas day.

4. STEPHEN HEW, engineer, father of No. 3, was seized on Jan. 1, 1832, and died Jan. 5.

5. STEPHEN HEW'S WIFE, husband an engineer, residing with No. 4, was seized on Jan. 2,—cured Jan. 4.

6. EUPHEMIA BURRELL, WIFE of WILLIAM BURRELL, husband a labourer in a ship-chandler warehouse, of Newcastle Chare Quay, Newcastle, health not permanently good, habits sober, was seized on Jan. 9, 2 A. M. and died Jan. 9, 10 P. M.—The "Chare" in which this woman resided had been infected with

Cholera Morbus for ten days previously to her attack; a woman having been buried out of it on the day before, and on the day of her attack and death, a man died there at 11 A. M. of the same disease.

The whole of these six patients were bled in the first instance, but in the cases of those two that died, blood could not be procured, the patients having been too late in sending for aid, and having sunk into a complete state of collapse, from which no medicines or applications could bring about re-action.

(Signed) JOHN JOPLING.

Jan. 11, 1832.

SUMMARY.—No. II.

1. JOHN MAULE, hair-dresser, of the Gallowgate, healthy and sober, was attacked on Dec. 10, cured Dec. 12. Very mild case: vomiting and purging, no cramps. Exposure to cold the night previous.

2. CHARLES CARR, keelman, in Keelman's Hospital, asthmatic and intemperate, was attacked on Dec. 12,—cured Dec. 16. Mild; no cramps. Cholera in the Hospital at this time.

3. JOHN CARR, mat-maker, of Sandgate, intemperate, was attacked on Dec. 12,—cured Dec. 14. Mild; living in a house where the Cholera has been fatal.

4. JANE FLEMMING, widow, of Sandgate, very infirm and sober, was attacked on Dec. 12,—cured Dec. 16. Mild; living in a house were Cholera has been fatal.

I considered these two cases more like diarrhœa, having no vomiting or cramps, but purging frequently reddish-coloured water, with great weakness.

5. JANE DONNISON, widow, of Sandgate, very infirm and sober, was attacked on Dec. 12,—cured Dec. 16. Mild; purging, sickness, but no vomiting; cramps in both legs; same house as Carr and Flemming.

6. FRANCES HOBSON, widow, of Sandgate, very infirm and sober, was attacked Dec. 12,— cured Dec. 14. Mild; similar case to Donnison. Nursed a young woman who died of Malignant Cholera.

7. ANN CURRY, married, of Sandgate, intemperate, was attacked on Dec. 12,—cured Dec. 14. Mild; a few days afterwards, from exposure to cold, had a relapse, and *died* in the hospital.

8. ELIZABETH WALKER, spinster, of Sandgate, girl of the town, was attacked on Dec. 13,—cured Dec. 20. Had been labouring previously under phthisis.

9. JOHN RUTHERFORD, scullerman, in Keelman's Hospital, infirm, intemperate, was attacked on Dec. 14,—cured Dec. 15. Face and extremities livid: previously in a very infirm state of health; an old worn-out man.

10. MARGARET MAC GREGOR, spinster, of Sandgate, health and habits good, was attacked on Dec. 14,—cured Dec. 18. Can assign no cause but alarm.

11. THOMAS GIBB, pitman, in Keelman's Hospital, health and habits good, was attacked on Dec. 17,—cured on Dec. 19.

12. SARAH DAY, widow, in Keelman's Hospital, very old, was attacked on Dec. 17, and died on Dec. 19. Her husband died of Cholera on the 16th.

13. JOHN MARSHALL, keelman, in Keelman's Hospital, very old, and often ill, was attacked on Dec. 19, and died on Dec. 20. His age, 80, and he had been labouring under dropsical complaint previously.

14. MARY CLARK, married, of Craig's Alley, dropsical two years ago, and sober, was attacked on Dec. 22,—cured Dec. 29. Mild: aged 60.

15. HANNAH MITCHELL, widow, of Sandgate, weakly and sober, was attacked

on Dec. 22, and died Dec. 24. Had been several days ill of a bowel complaint, before Cholera: in a state of the utmost poverty.

16. Ann Gibb, widow, in Keelman's Hospital, very old, was attacked on Dec. 23, and died Dec. 24. Sister of the above John Marshall. Extremities and countenance very much discoloured.

17. Susannah Gibson, married, in Keelman's Hospital, very old, was attacked on Dec. 23, and died Dec. 24. Another sister of John Marshall. Extremities and countenance very much discoloured.

18. Ann Wilkinson, married, of Pandon Bank, health impaired and sober, was attacked on Dec. 23, and died Dec. 24. Very poor, almost destitute of the common necessaries of life and clothing.

19. Isabella Dixon, widow, in Keelman's Hospital, diarrhœa previously, was attacked on Dec. 24, and died Dec. 27. Refused medical aid at first.

20. Sarah Halliday, widow, of Blythesnook, dyspeptic and rather intemperate, was attacked on Dec. 31,—cured Jan. 5. Mild; A girl of the town had died of Cholera a few days before in this house.

21. Catharine M'Kie, married, of Pandon Dean, good health and sober, was attacked on Dec. 31,—cured Jan. 5. Mild. Miserably poor.

22. John Briggs, coachman, of Budding Chare, good health and intemperate, was attacked on Dec. 30,—cured Jan. 7. Mild.

The above are all the cases I recollect of having attended, from the origin of the Cholera up to the present date.*

(Signed) J. WILKIE, jun.

January 7, 1832.

QUERIES ISSUED BY THE CENTRAL BOARD OF HEALTH.

Central Board of Health Council Office,
16*th Jan.* 1832.

The Central Board of Health beg to call the attention of medical practitioners to the subjoined Queries on the subject of Spasmodic Cholera, and hope that all who may have the opportunity of actual observation, will contribute, by their replies, to elucidate the history of the disease.

Communications to be addressed thus:

To

The Clerk of the Council in Waiting,

Council Office,

Central Board of Health. } London.

1. Has Diarrhœa been a frequent preliminary symptom in the cases under your immediate observation? If so, describe the character of the evacuations from the commencement.

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* Total number of deaths in preceding cases, 9. Total of recoveries, 13. Females attacked, 15; died, 7. Males attacked, 7; died, 2. Of the persons deceased two were of decidedly intemperate habits; four very old; and three sober, but previously ill or of infirm health.

2. Has any change in the quantity of the urinary discharge been noticed as a preliminary symptom ?

3. Have any second attacks occurred in your practice, distinguishing such cases from relapses ?

4. Have any of your patients recovered from the state of collapse, without having passed through a subsequent febrile stage ?

5. State the comparative mortality in the collapse, and fever stages.

6. Note the occurrence or absence of eruptive or cutaneous diseases ; specify or describe the disease, if observed.

7. Has Syphilis, in any form, been present in persons attacked by Cholera ?

8. Note whether any persons under mercurial salivation have been attacked by Cholera.

9. Note the presence of any other malady at the time of the attack by Cholera.

10. Note the occurrence or absence of the disease in persons not vaccinated.

11. Note whether the patients have previously passed through Pertussis, Meazles, Scarlatina, Swine Pox, or Small Pox.

12. Note particularly the appearance produced by any wounds casually received during post-mortem examinations—whether vesicles have formed on the wounds ; and if so, describe their progress, and period of duration. State also, whether the person wounded had any attack of Diarrhœa or Fever subsequently to the wound.

13. State whether turmeric or litmus test paper is altered in colour by immersion in the dejected matters, in the urine during the premonitory symptoms, or by application to the skin during the period of collapse accompanied by cold clammy exudation, or of re-action, with warm diaphoresis.

14. Had any, and what epidemic, such as Typhus Fever, prevailed shortly before, or at the moment of the appearance of Cholera in your district ?

15. Have those who passed through such epidemic disease, been observed to enjoy an exemption from Cholera ?

16. Have particular localities, exposures, elevations, or the direction of currents of the atmosphere, been noticed to have had any effect on the spread of Cholera ?

17. On what day did the first case of the present epidemic occur in your district ?

18. Were there any remarkable circumstances, which have come to your knowledge, connected with the seizure of the first person attacked, as to communication with suspected places, persons, or things ?

19. Has the disease in your district been observed to spread from known points slowly, or regularly ; or did it break out at many distinct points at the same time ?

20. Have any precautionary measures been adopted with a view to

the avoidance of contagion, by separation of the sick and the suspected from the healthy; by purification of dwellings, bedding, and clothes?

21. Were any unusual meteorological phenomena, or changes of wind or weather, observed shortly before, or during the epidemic?

22. What class of persons, what trade or profession, age, sex, temperament, suffered most?

23. Has a greater proportion of the following than of other classes suffered from Diarrhœa, or been attacked by Cholera; viz.

Medical men,
Clergymen,
Attendants on the sick,
Persons employed about hospitals, poorhouses, and gaols,
Washerwomen?

24. What treatment have you chiefly pursued in the preliminary symptoms, more particularly in Diarrhœa; in the cold, and the fever stages of Cholera?

25. State the appearance as to colour, consistence, &c., of the blood drawn in each of the above stages, and the effect produced upon turmeric test paper when immersed in the colourless serum only.

26. Describe the pathological appearances after death in the several stages of the disease.

27. Have any diseases been particularly noticed among the lower animals, either immediately before the occurrence, or during the prevalence of the Cholera?

28. State in your reply the description of animals, if any, affected; and if domestic, whether the epizootic disease occurred in houses wherein Cholera existed. Describe, finally, the symptoms under which the animals laboured.

W. MACLEAN, *Secretary.*

ON THE NECESSITY OF THE STRICTEST ATTENTION BEING PAID TO THE TREATMENT OF PRELIMINARY DIARRHŒA, —MEASURES FOUNDED THEREON, BY THE LOCAL BOARDS OF GATESHEAD AND TRANENT,—FORM OF HANDBILLS RECOMMENDED BY THE CENTRAL BOARD, &c., &c.

Gateshead, January 18, 1832.

No. 1.—*Report by* Dr. MACANN.

WITH reference to the questions which have been lately addressed to me, from the Central Board on the subject of Diarrhœa, as connected with Cholera, I have now to state, that my observations and enquiries, in this part of the country,

Sunderland, Newcastle, and Gateshead, all concur in leading me to adopt the following conclusions on that subject.*

1st. That the appearance or invasion of the proper Choleric symptoms, viz., the vomiting and purging of fluids, neither feculent nor bilious, with cramps and prostration, was preceded, in a great majority of the cases which have hitherto occurred, by a marked relaxation of the bowels, that is, by frequent fluid dejections, constituting the complaint denominated simple Diarrhœa.

2nd. That this Diarrhœa, in a great majority of cases, presented for a time no peculiar character, so that no man could tell, when called early to a patient labouring under it, whether an attack of Cholera was impending or not.

3rd. That in many cases, however, the dejections were, from an early period, more analogous to those which take place in Cholera than in Diarrhœa; that is, were more fluid, whiter, and less feculent than they usually are in the latter complaint; and that in many† of the other cases they assumed more or less of that character before the invasion or appearance of the proper Choleric symptoms already referred to.

4th. That cases of disease (as in paragr. 2) have been met with in all classes of society, and been successfully treated as simple Diarrhœa, by the ordinary remedies, viz., mild laxatives, astringents, opium, &c. &c. &c., but I have not, as yet, been able to ascertain in a manner quite satisfactory to myself, whether such cases have been more frequent this year, in any particular class of persons, than during the corresponding portions of former years.

5th. From the preceding observations it would appear, that in this country hitherto, an attack of Cholera has, generally speaking, been preceded by a relaxed state of the bowels; and that the dejections connected therewith have, sooner or later, presented to the careful observer, some indications of the danger to which the patient was exposed.

6th. For this reason, an early and assiduous attention to bowel complaints of all kinds, even the most trifling, must, as a measure of precaution and safety, be of the highest importance to all persons residing in or near infected districts; and with this view, the establishment of Dispensaries where the poor

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* I limit myself at present to those places, as I can speak positively with respect to them, but have reason to believe, that the observations which follow, are equally applicable to most, if not all the other places in the counties of Durham and Northumberland, in which the disease has hitherto appeared.

† If the character of the dejections had been more assiduously attended to instead of "*many*," we might perhaps have been enabled to say, that in *m* of the other cases, the changes referred to in the text had taken place.

might obtain prompt and gratuitous assistance, when attacked with such complaints—and the circulation amongst them of some short notice, pointing out the dangers to which they lead, would perhaps be amongst the most effectual measures which could be adopted, to arrest the progress, and mitigate the severity, of the present epidemic, wherever it may appear, in this country.*

Newcastle, Jan. 15, 1832. FRS. MACANN, M. D. *Staff Surg.*

No. II.—*Resolutions of the Board of Health, Gateshead, respecting the Treatment of the Preliminary Diarrhœa.*

The Board of Health, at Gateshead, are induced to forward to the Central Board of Health the Copy of a Resolution adopted at Gateshead, on the 16th of January, at the instance of Dr. Macann. It is a resolution in furtherance of previous exertions of this Board of Health, made to induce the people to apply for medical assistance, without loss of time, on the first attack of diarrahœa.

Extensive experience has been obtained of the constancy with which a diarrhœa has in this town preceded attacks of Cholera; of the great danger of neglecting the former complaint; and of the excellent effects which have lately followed exertions to procure a general and immediate application for advice in such cases. Under these circumstances, the Gateshead Board of Health respectfully submit the result of their experience to the Central Board, in order that facts, which appear to be important, should be available when required for the information of other local Boards of Health.

(Copy.)

At a Meeting of the Gateshead Board of Health, held this 16*th January*, 1832.

It appearing from the reports of the medical members of this Board, that, in a large majority of cases, attacks of Cholera have been preceded in this town by a simple relaxation of the bowels, as purging—

Resolved, That in order to afford relief to persons in that state, and thus, perhaps, prevent an actual attack of Cholera, arrangements be made under the direction af the medical gentlemen of the Board, *to open the Cholera Hospital daily for the treatment of external patients.*

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* That is, so long as the epidemic preserves its present character, for I am well aware, that change of place, and change of season, may give rise to new combinations and connexions.

No. III.—*Caution against Cholera.*

Tranent, January, 1832.

The Medical Board of Health, established for *Tranent* and *Prestonpans,* beg leave to draw the attention of the inhabitants to the following precautions against that disease :—

" So soon as they feel any symptoms of bowel complaint or purging, they ought to apply for medical aid, but, before the surgeon shall arrive, they are recommended to take a vomit of a table-spoonful of mustard, in a cup of warm water, and to avoid the use of ardent spirits, which are highly prejudicial."

The inhabitants are strongly recommended to go to the hospital, on the first symptoms of the disease appearing.

H. F. CADELL, *Chairman.*

J. D. Morries, M.D., Medical Secretary.

No. IV.—Form of Handbills recommended for Circulation in the Infected Districts.

Central Board of Health, Council Office, January 26, 1832.

With a view of impressing, in the strongest manner, upon the minds of all, but more particularly of the poorer classes, the very great importance of attending to the first and slightest warnings of the approach of an attack of Cholera, the Central Board recommend, that, in the infected districts, handbills to the following effect should be exhibited in conspicuous places.

In many of the districts affected, this salutary caution has been already published, and with the best effects.

CHOLERA DISTRICTS.

" *Looseness of the bowels* is the beginning of Cholera.

Thousands of lives may be saved by attending in time to this complaint, which should on no account be neglected by either young or old, in places where the disease prevails.

When cramps in the legs, arms, or belly, are felt, with looseness or sickness at stomach, when medical assistance is not at hand, three tea spoonsful of mustard powder in half a pint of warm water, or the same quantity of warm water, with as much common salt as it will melt, should be taken as a vomit; and after the stomach has been cleared out with more warm water, *twenty-five drops* of laudanum should be taken in a small glass of any agreeable drink. Heated plates or platters to be applied to the belly and pit of the stomach."

REPORT

FROM HOUGHTON LE SPRING, BY DR MACANN.

SIR,

AGREEABLY to your letter of the twelfth instant, I yesterday proceeded to *Houghton le Spring*, (there are several *Houghtons* in the counties of Durham and Northumberland) and thence to *Hetton le Hale*, a village about three miles further, towards the south; and having seen and conversed at these places, with the Rev. Mr. Sheppard, Curate of the parish of Houghton le Spring, Mr. Wood, director of the Hetton Colliery, Messrs. Green, Edger, and Robinson, surgeons, and other persons resident in the neighbourhood, I was enabled to collect the following particulars on the subject to which your letter relates.

The parish of Houghton le Spring is of great extent, and contains many distinct townships, from each of which Reports of Cholera cases occurring, or under treatment, are, or ought to be, sent by the resident practitioners to the parish Board of Health at Houghton. From an abstract of these Reports, kept by the Secretary to the Board, I ascertained that a very large proportion of the *new cases* reported from Houghton, since the first of the present month, had occurred in the *Hetton* township, and the prevalence of the disease there was confirmed to me by every one I conversed with. Thus of about *eighty-five* new cases reported from the 1st to the 14th of January, *sixty-two* are set down as from Hetton township, of whom twelve are reported to have died.

Medical aid.—On getting to Hetton Colliery I found that Mr. Wood, the director of the works, a very intelligent and active man, had on the preceding day brought up from Newcastle, and then retained in his house, *Mr. Kennedy*, author of a well-known work on Cholera, for the purpose of enabling the resident practitioners to avail themselves of his advice and assistance in the treatment of their patients; and as almost all the male population of this township, and through them their families, are more or less connected with the great works under Mr. Wood's care, there can be no grounds for apprehending that in this district, at least, there can be any want of additional medical assistance—that is, in the Hetton district.

But considering that much alarm existed around, which the presence of one familiar with the disease might tend to allay, and that it was of importance also that the Central Board should receive accurate accounts of what was going on, and from a person on the spot, I thought it prudent to station *Mr. Bullen* at Houghton le Spring, having placed him in communication

with Mr. Sheppard, and given him instructions as to the nature of the information he was to forward to the Central Board, with the daily report which he is himself to prepare.

It is very difficult to carry any sanitary arrangements into effect, amongst a population living in detached houses, or villages, and those scattered over an extensive district—and such difficulties must be increased, if, as in Hetton township, the people possess a certain degree of independence, arising from constant employment and good pay.

Measures had, however, been taken before my arrival, to impress upon the minds of the people the importance of paying attention to cleanliness and ventilation in their houses, and the danger of constant and intimate intercourse with the sick.

Some efforts had also been made to induce them to abstain from some of the usual ceremonies observed with respect to the dead, and I had reason on the whole to be satisfied, that the recent change in the state of the public health in Hetton, has not arisen from want, nor been aggravated by neglect or inattention.

It may not be improper, also, to notice, or advert to, the remarkable fact, that during the present week, a sudden and striking change took place in the health of the people employed about the *Walker Colliery*, within a few miles of this town, as the Board must have observed by the daily reports; a change, in like manner, totally unconnected with any thing like want or negligence, and not accompanied by any atmospheric alteration of the least importance.

I have the honour to be,
Sir,
Your very obedient servant,

To the Secretary,
Central Board of Health.

FRS. MACANN, M.D.

LETTERS FROM MR. CATON TO A MEMBER OF THE CENTRAL BOARD.

NO. I.—SCARLATINA SUPERVENING ON CHOLERA—TOBACCO ENEMATA—MUSTARD EMETICS, &c.

Newcastle, Jan. 16, 1832.

My dear Sir,

I am very sorry it will not be in my power to give you a clear detail of the cases of scarlatina which I mentioned in my last letter, as I only saw them for the first time three days after the consecutive fever was established, and one after the eruption appeared, which was at that period of a bright scarlet colour, spreading over

the arms and legs, and in patches upon the body, with slight efflorescence extending as far as the mouth and fauces. These appearances in the elder sister were attended with considerable heat of skin, frequency of pulse, and furred tongue; in the younger, the febrile symptoms were of a much milder form, and the eruption less vivid and diffuse; in both cases it disappeared altogether about the fourth or fifth day. These persons, named Wishart, were from 12 to 16 years of age, and are now convalescent. I have drawn out some cases, which Dr. Macann will do me the favour to forward to the Central Board of Health. One is that of a man, named Allen, who took large doses of the carbonate of ammonia, but without success: he died on Sunday, the 8th. The nurse that washed his blankets died on the Wednesday, and her mother is now on her death bed after attending her daughter. These two last cases occurred in private practice, but I will endeavour to obtain notes of them. A stout young man, previously attacked with vomiting and purging, was admitted into hospital yesterday, in a state of collapse, with violent spasms of the extremities, coldness of surface, and total want of pulse, which symptoms continued unaltered under the external heat, the mustard emetic, and the usual stimulants. An enema of a dram of tobacco to 8 oz. of water, was given under the directions of Mr. Baird. The countenance became flushed, the skin moist and warm, and pulse perceptible. He continued to amend, and is now doing well. Similar treatment has been tried with success in two or three cases. I was prevented writing to you on Saturday, in consequence of being sent to Walker's Colliery, where the disease has re-appeared with great virulence, but is again lulled, after carrying off six or seven persons on the morning of Friday last.

I am,

My dear Sir, &c. &c.

NO. II.—HOUGHTON EPIDEMIC—GREAT PREVALENCE OF PREMONITORY DIARRHŒA.

Newcastle, January 21, 1832.

My dear Sir,

During the present week I have been engaged in visiting, for three or four days, Houghton, and the adjoining Townships, in which Cholera has made its appearance, viz., Penshaw, Newbottle, and Hetton; the latter appears to have been the principal seat of the disease, whilst in the others its ravages have been comparatively light, 150 cases, out of about 180, having been reported in the Hetton returns. The premonitory diarrhœa, attended with nausea and headach, still continues to prevail in a large proportion of the houses throughout the district.

The remedies by which the diarrhœa is met, are the mustard-emetic, small doses of calomel and ginger, and bleeding, from ten to twenty ounces. The blood, which I had an opportunity of seeing in a few

cases, presented, after a short time, a large flabby coagulum, perfectly flat on its superior surface, of a dark colour, and floating in *a scanty proportion* of serum.

One very severe case of Cholera, shewing the blue and corrugated skin, occurred during my stay in Hetton; no remedial measures were had recourse to, and the person died in fourteen hours, proving the insufficiency of the *vis medicatrix naturæ*, unaided, in this disease. I have obtained the notes of the case, and shall have the honour to detail them to the Central Board.

Yours,

Very faithfully,

THURSTON CATON.

ESSAY ON THE PERIODS OF INCUBATION OF THE VARIOUS MORBIFIC GERMS: ADDRESSED TO THE CENTRAL BOARD OF HEALTH. BY GEORGE GREGORY, M.D., Physician to the Small Pox Hospital.

Many observations will be found dispersed through the writings of Pathologists, upon the interval which elapses between the application of any morbific agent to the human body, and the subsequent development of symptoms; and it cannot be doubted that in all ages this subject has been considered as meriting attention. It does not appear, however, that the authors of the last century devoted themselves particularly to its investigation. For obvious reasons, little could be expected from the writers of antiquity. But even in modern times, it has been comparatively neglected. I know indeed but of one author who has made it the subject of specific inquiry. In the fourth volume of the Dublin Hospital Reports, there is a paper by Dr. Marsh, entitled, "*Observations upon the Origin and Latent Period of Fever.*" In this Essay Dr. Marsh has advanced many very profound and philosophical views regarding the origin of disease generally; and no one can rise from its perusal without a conviction of the advantages which may be expected from a more diligent attention than has hitherto been paid to the laws which regulate the interval between the reception and the development of morbific germs. With reference to sanitary or police regulations, this subject is obviously of the highest importance. It assists also materially in the study of diagnosis; and it will be found to involve many questions of *general* interest, and not a few of a directly practical tendency.

That this branch of study has not hitherto been more diligently pursued, need not surprise us. To establish the many minute details which it requires, investigations must be entered into for that specific object, and continued for years with a

degree of assiduity, such as few men engaged in actual practice could afford to bestow upon it. But it must also be confessed, that the experience of one individual, though devoted exclusively to this object, would be insufficient; and the glory of discovery, therefore, must be shared with many fellow labourers.

Under this impression, I do not venture to offer myself as a guide to the profession, on a topic requiring such extended research, and such accurate and varied personal experience. My aim is only to make a beginning in so important a work, by contributing the few results of my own observation, and collecting the recorded opinions of others, so far as they are known to me. The experience of some of my cotemporaries may serve to fill up many of the blanks which I may leave, while to other points hitherto unexplored, the labours of posterity may be advantageously directed. One principal object, in fact, which I had in undertaking this task, was to direct the attention of observing physicians to this neglected branch of pathology—the ascertaining, with all reasonable accuracy, the usual periods of incubation of the various morbific agents or germs, as well as the anomalies which they present.

To the general subject of investigation, I have given the title of the "*Period of Incubation.*" This term was originally suggested by the French; and it appears well deserving of admission into the nomenclature of English medicine. The terms "latent" and "dormant periods," which will be found in most of our standard works, carry with them this objection,—that they presuppose the absence of all symptoms during the incubative stage; a position which, though true in some cases, is far from being of general application. Indeed, the kind of symptoms present during the incubation of the several diseases propagated by infective germs, is a legitimate subject of inquiry. Dr. Marsh has several useful observations on this topic.

There is every reason to believe, that the interval between the application of the exciting cause of a disease, and the manifestation of its peculiar phænomena, must be liable to many variations. The *causes* of these variations, and the *extent* to which they go, are points which it is of importance to determine. This subject has also been touched upon by Dr. Marsh, in the Essay above referred to. "From numerous observations," he says, "I have been led to think that the latent period may be shortened, and the accession of constitutional symptoms accelerated by the occurrence of what are technically called the *exciting* causes of disease." To illustrate this he cites the following case:—"A boy, twelve years old, was playing with a favourite dog, and was bitten by him on the nose. The injury was slight. A few days afterwards the dog died rabid. The wound soon healed, and the circumstance made no impression on the boy's mind, and was wholly forgotten. Four weeks afterwards he

was thrown by his companions into a ditch; he went home wet, chilled, and complaining that he felt ill. That very night, unequivocal symptoms of hydrophobia manifested themselves, which proved speedily fatal." In this case the usual period of incubation of the hydrophobic germ was (probably in consequence of this accident) *anticipated* by twelve days.

By a comparison of numerous cases with each other, the pathologist endeavours to ascertain the *average* periods, and the *maximum* and *minimum* periods. To the maximum period it is difficult to attach any precise limit; yet common sense teaches that some such must be set. Tales are gravely told of hydrophobia occurring twelve *years* after the infliction of the wound. These cases are undoubtedly fabulous. It may indeed reasonably be questioned whether any infective germ whatever can exist in the body *twelve* months, retaining the power of producing disease. The utmost limit to which my own experience, and that of the professional friends on whose accuracy I can rely, would warrant me in extending this period, is *nine* months. In the case of the late Mrs. Duff, who died in Edinburgh of hydrophobia, under the care of the late Dr. Gregory, nine months elapsed between the bite and the development of disease. A physician of great eminence in this town related to me the case of an officer, who first suffered from severe ague nine months after leaving the island of Walcheren, the interval having been passed in the healthiest parts of London.

The diseases in which it appears of most importance to determine the periods of incubation of their respective germs, are the following:—

1. AGUE AND REMITTING FEVER.
2. TYPHUS.
3. PLAGUE.
4. EPIDEMIC YELLOW FEVER.
5. CHOLERA SPASMODICA.
6. SMALL POX.
7. MEASLES.
8. SCARLET FEVER.
9. HOOPING COUGH.
10. HYDROPHOBIA.
11. GONORRHŒA.
12. SYPHILIS.

I shall offer a few cursory reflections upon each of these topics of inquiry.

1. *Ague and Remitting Fever.*—I am indebted to the kindness of Sir William Franklin, Principal Inspector of the Medical Department of the Army, for the following document, illustrating the incubative period of Malarial or Endemic Fever.

"Notes relative to the movement of a detachment of De Roll's Regiment in Sicily, in the year 1810.

"On the 12th July, 1810, the regiment of De Roll marched

from Milazzo, and encamped on the heights of Curcuraci, near Messina. A detachment was subsequently sent to occupy a large house called the *Casa del Corso*, at a short distance from the body of the regiment. The mansion is situate on an eminence, between which and the sea there is a swamp, distant from the house at least half a mile. The north and north-westerly winds, very prevalent in Sicily, blow, often very strongly, over this swamp, directly on the Casa del Corso. During the prevalence of these winds, no one ever slept there, or in the open air near the house, without afterwards suffering from intermittent or remittent fever." This information Sir William Franklin obtained from a man who had managed the vineyard belonging to the farm, for fifteen years, and who had himself contracted fever, from sleeping with open windows.

At this house the troops took up their quarters on the 7th July, 1810. They consisted originally of eighty-three men, who were subsequently joined by eight others, making a total of ninety-one, exposed to the germs of disease. On the 31st July, (thirteen days after exposure to the malaria), the first case of remitting fever was sent to hospital. On the 1st August five others were reported. The following day the detachment moved from the Casa del Corso, and encamped near the rest of the regiment, which was then healthy. Yet the men continued to drop; and the admission into hospital from this detachment took place in the following order:—

Number of Sick sent to Hospital.	When sent to Hospital.	Date from first Exposure to Malaria.
1	July 31, 1810.	13 Days.
5	Aug. 1,	14
1	2,	15
8	3,	16
5	4,	17
6	5,	18
7	6,	19
11 * *	* * 7, * *	20 * (Average.)
12	9,	22
4	10,	23
8	11,	24
2	12,	25
3	13,	26
1	15,	28
2	20,	33
1	26,	39
Total, 77 men.	27 Days.	
Strength of the Detachment, 91.		

From this return it appears, that the *average* period of incubation of the paludal febrific miasm is twenty days, the *mini-*

mum thirteen, and the *maximum* thirty-nine. Of the whole number exposed (for a fortnight) to the action of the morbific germ, fourteen only escaped an attack of the disease. Whether a further exposure would have brought those fourteen men under the influence of fever, must remain a matter of doubt. I am inclined, however, to think *not*, and that the chief danger, *in all cases*, is from *first* exposure. As a proof of the *intensity* in which the poisonous effluvium existed in this instance, it may be remarked, that of the total number attacked (77), twenty-three died, being in the exact ratio of thirty per cent. This is the usual rate of mortality in small pox, and it approximates also to that of the Epidemic Cholera, as it has recently shewn itself in Northumberland.

Dr. Marsh remarks, (p. 493), that many of the Irish labourers who are employed during the harvest in the fenny counties in England, have their *first* fit of ague *after* their return from Ireland. This assertion is established by numerous cases of ague, which, at certain seasons of the year, are admitted into the ward of Steevens's Hospital. The period of incubation is thus extended to several months. The maximum I would venture to place at nine months.

2. *Typhus Fever.*—Frequent as is the contagious typhus in this country, it is by no means easy to meet with cases so circumstanced, as to offer determinate data for fixing the period of incubation of its infective germ. The commonly received opinion, I believe, is, that such period is subject to great variety. Dr. Haygarth, from his own observations, deduced the conclusion, that the minimum period was seven days, and the maximum seventy-two days. Dr. Bancroft's opinion coincides very nearly with this. From observations made on the hospital attendants, on occasion of the return of Sir John Moore's army from Corunna, he inferred that thirteen days formed the minimum, and sixty-eight the maximum period. Sir W. Burnet, in his "Account of a Contagious Fever at Chatham," relates the history of a party of men belonging to the St. George, at Spithead, sent on the 3d July, 1811, to assist in navigating the Dolphin troop-ship, whose crew were affected with typhus. On the 10th January, (seven days after exposure), fourteen cases of fever were sent to the hospital-ship from the St. George, and many subsequently, up to the 21st January, (the 18th from exposure), after which period no cases occurred.

Dr. Marsh has made it one principal design of his paper, to shew, that in the Irish epidemics, the apparent period of incubation of the typhoid germ was very short indeed. In several instances which he relates, the febrile rigor succeeded so *immediately* to the application of the contagious effluvium, that it is scarcely possible to conceive that the germ of disease could have operated through the medium of the absorbents. He

adopts, therefore, the notion of its *direct* agency on the sentient extremities of the nerves. An obvious objection, however, is open to all the cases cited by Dr. Marsh. During the prevalence of epidemic fevers so widely diffused as those adverted to by this author, there is every probability that the infective germ had *previously* been received into the system.

The following series of cases which are not open to this source of fallacy, occurred under my own observation in the year 1819; and to those who have doubts on the subject, they may be adduced as undeniable proofs of the spreading of typhus fever *by infection* in private houses, with every advantage which ventilation, personal cleanliness, and all the comforts of domestic life can afford. The cases were all seen by my friend Mr. Johnston, of Mortimer-street, and they occurred in the family of a medical gentleman residing in that neighbourhood.

Case 1.—A. B., maid-servant, recently received into the family, sickened with typhus fever, May 16, 1819. Died May 21.

Case 2.—C. D. The mistress of the house, (whose attention to her servant during her illness had been unremitting), sickened with typhus, May 24. Died June 3rd, under the care of the late Dr. Latham.

Case 3.—E. F., maid-servant, who had attended A. B. during her illness, sickened with typhus, May 30. Came under my care June 7. Died June 9.

Case 4.—G. H., sister of A. B., residing in Clare Market. She visited her sister during her illness. Sickened with fever, May 26. Was delivered of a dead child, June 2nd. June 11, seen by me, and found convalescent, though still in bed.

Case 5—J. J., cook in the same family. Sickened with typhus, May 29, and removed to her own home. I found her on the 10th June, convalescent, under the care of Mr. Smith, of Red Lion-street.

The periods of incubation in these cases, may be stated at seven, nine, twelve, and thirteen days from *first* exposure to the infective germ. I have every reason to believe, that this may be viewed as the *average* period in the case of the typhoid miasm.

3. *Plague.*—From the concurrent testimony of numerous authors, we are warranted in saying, that the period of incubation of the true pestilential germ is very short. We may even lay it down as a maxim in the pathology of fever, that the more malignant the disease, the shorter is its period of incubation. Two days have been stated as the minimum, and fifteen as the maximum period. Five days may be looked upon as a fair average.

When the plague has been received by inoculation, constitutional symptoms begin on the 4th day.

4. *Epidemic Yellow Fever.*—I am not now in possession of

any series of facts, by which to determine the period during which the infective germ of this disease lies dormant. From the inquiries, however, which I had formerly the opportunity of making, through the kindness of W. W. Fraser, Esq., Inspector-General of Hospitals, I was led to believe, that the interval between exposure to contagion, and the development of symptoms, varies from *two* to *ten* days.

5. *Cholera Spasmodica.*—The Central Board of Health have given the following as the results of their extended inquiries into the incubative period of this singular disorder.

1. Out of 171 cases of Spasmodic Cholera at Berlin, 159 occurred within five days from exposure to the infective germ.

2. At St. Petersburgh, in the cases where *single* exposure to infection was best ascertained, the period of incubation ranged between one and five days.

3. In the Austrian territory, according to the reports of the Genoese Medical Commission, it was observed, "that those who had absorbed the germs of the disease, were generally attacked before the third, and not later than the fourth day."

6. *Small Pox.*—At the Small Pox Hospital, abundant evidence has been afforded that the period of incubation is usually about twelve days. I select a few cases in illustration.

Case 1. Mary Argent was discharged convalescent from the Small Pox Hospital, July 6, 1830. She slept that night with her sister, Susan Argent, who sickened for the small pox, July 19: the eruption showed itself, July 21: she was admitted into the Hospital, July 22. The period of incubation, (counting, as I always recommend should be done,) from exposure to the *appearance of eruption*, was in this case twenty-one days.

Cases 2 *and* 3. Elizabeth Hall, aged 3 years, residing in Field-place, St. John's-street, was attacked with small pox, Oct. 25, 1829, and left that house for the Hospital, Oct. 28.

Henry Hall, aged 5 years, (brother of the above,) was, after two days of fever, attacked with small pox, Nov. 5, and received into the Small Pox Hospital, Nov. 7: period of incubation, *eleven* days.

Alfred Taylor, aged 5 years, living in the same house, was, after three days of fever, attacked with small pox, Nov. 14: period of incubation, (presuming that he took the disease from the second child,) *nine* days.

Cases 4, 5, 6, *and* 7. Sarah Harman, seventeen months old, left Clerkenwell Workhouse (having had the small pox for five days) on Jan. 28, 1828.

Feb. 6. Another child in the same Workhouse, after three days of fever, took small pox: period of incubation, fourteen days.

Feb. 7. Another child attacked with small pox, after six days of fever: period of incubation, fifteen days.

Feb. 8. A fourth child attacked, after two days of fever: period of incubation, sixteen days.

Feb. 10. A fifth child attacked, after four days of initiatory fever: period of incubation, eighteen days.

All these cases were received into the Small Pox Hospital.

Case 8. Elizabeth Foster was attacked with small pox, Nov. 26, 1830, after four days of fever. She was exposed to small pox, Nov. 14, when her sister, Lucy Foster, sickened with it, and was sent to the Small Pox Hospital: period of incubation, twelve days.

Case 9. A young medical friend, some years ago, accompanied me to the Small Pox Hospital on a Thursday. On leaving the wards, he expressed to me his firm conviction (from the peculiar feelings he experienced at the moment) that he had received the germ of small pox. He soon after became languid, and his appetite fell off. On Saturday, in the ensuing week, rigors supervened, and two days afterwards, the eruption of small pox.

In this case the period of incubation was twelve days. I once attended a case, where the latent period did not appear to exceed six days. I would place the maximum period at twenty-one days.

It is worthy of note, that in the last of these cases, a peculiar sensation was perceived at the moment of imbibing the infective germ. I have heard of the same thing occurring in many instances, and the patient often expresses himself as being *frightened*. Dr. Marsh has alluded to the circumstance of a highly disagreeable and peculiar odour, as characterizing the reception of the *typhoid* miasm, and founds upon it a train of very ingenious reasoning concerning the *modus operandi* of the infective germ. I would beg leave to point attention also to the *languor*, loss of appetite, and impaired rest, which attended the incubation of the variolous germ, in the same case. This sometimes proceeds to so great an extent, that, in the patient's judgment, six or seven days, instead of two, elapse between the attack of disease and the appearance of eruption. Hence arises the necessity of counting the period of incubation, from the reception of the germ, to the *occurrence of eruption*.

It is worthy of remark, that, of the numerous cases received into the Small Pox Hospital, not one in twenty is ever able to trace the disease to any source of infection; but it is believed to arise from cold, fatigue, change of air, or some similar circumstance. While so much difficulty is thus experienced in tracing the origin of a well-known disease, which spreads, I believe, only by infective germs, it needs not create surprise, if we encounter similar difficulties in developing the origin of a disorder so little known to us as the Spasmodic Cholera.

When the small pox is received into the sytem by inoculation' seven days elapse, between the insertion of the virus, and t h establishment of the fever. In this case, the appearance o eruption is cotemporaneous with that of the fever. An opinion has long prevailed, that, from the difference of the incubative periods, the inoculative small pox would take precedence of the natural disease. I believe this notion to be destitute of all foundation. My reason for saying so is, that, with very few exceptions, it will be found, when small pox is "*in the blood,*" that vaccination will not advance.

7. *Measles.*—My own experience furnishes me with no precise data for determining the period of incubation of the rubeolous germ. It is, I believe, generally understood to vary from eight to fifteen days, counting from the reception of the germ to the first attack of rigor. Dr. Bateman says, "from ten to fifteen days." But as the catarrhal fever ought undoubtedly to be viewed as constituting part of the incubative stage, so this period will be found to extend, in many cases, to twenty-one days. Dr. Marsh relates the following case.* "A *single* exposure to measles took place on the 23d March. On the 3d April, the catarrhal symptoms began: on the 5th the eruption showed itself." Here the *full* period of incubation was *thirteen* days.

8. *Scarlet Fever.*—The latent period of this miasm has been the subject of frequent inquiry. Dr. Withering's words are, "I have repeatedly had reason to observe, that it is upon the third or fourth day after exposure to contagion, that the patients begin to complain." Dr. Heberden extends the period of incubation to five days. Dr. Blackburn says it varies from four to six days. Dr. Willan gives six days as the *maximum* period.

Dr. Maton has described, in the Transactions of the College of Physicians, (vol. 5, page 161,) a peculiar variety of scarlet fever, in which the latent period varied from seventeen to twenty-six days: average, twenty-one days. The difference in the periods of incubation constitutes one of the strongest diagnostic marks between this and the *common* scarlet fever. Dr. Maton mentions the cases of eight members of one family, attacked by this disease. They all terminated favourably.

9. *Hooping Cough.*—I have never been able to ascertain, by any facts, the period of incubation of the germ of this disease; nor do I know that any author has hitherto directed his attention to it.

10. *Hydrophobia.*—Some years ago I made notes of a series of cases of hydrophobia, (taken indiscriminately in the course

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* Dublin Hospital Reports, vol. 4, page 495.

of my reading) with the express object of determining the minimum average, and maximum periods of incubation of the hydrophobic virus. The cases were thirty-one in number. The following was the result.

Case.	Period of Incubation.	Authority.
1	21 days	Mr. Gray, Duncan's Comment. vol. 12.
2	26 "	Dr. Dickson, Med. Obs. and Inq. vol. 3.
3	31 "	Marshall on Hydrophobia.
4	35 "	Dr. Chambers, St. George's Hospital.
5	36 "	Dr. Pinckard's Cases of Hydrophopia, (seen by myself.)
6	36 "	Dr. Plummer, Ed. Med. Essays, vol. 6.
7	38 "	Dr. Babington, Med. Comment. vol. 1.
8	38 "	Mr. J. Scruton, Duncan's Com. vol. 17.
9	38 "	Mr. Johnstone, Memoirs Med. Soc. of Lond. vol. 1.
10	39 "	Attended by myself. Med. Chir. Tr. vol. 13.
11	40 "	Mr. Sawrey, Marshall on Hydrophobia.
12	40 "	Dr. Lister, in Dr. Bardsley's Reports.
13	40 "	Dr. Munckley, College Trans. vol. 2.
14	42 "	Mr. Parkinson, Marshall on Hydrophobia.
15 (Average)	44 "	Dr. Pinckard's Cases of Hydrophobia.
16	47 "	Dr. Babington, Medical Records.
17	60 "	Mr. O'Donnell, Med. Comment. vol. 2.
18	60 "	Mr. R. Simmons, Med. Facts, vol. 5.
19	60 "	Dr. Marcet, Med. Chir. Trans. vol. 1.
20	63 "	Dr. Wavell, Medical Records.
21	72 "	Duncan's Commentaries, vol. 17.
22	73 "	Dr. Pinckard. (Case of W. Waters.)
23	74 "	Ditto. (Case of W. Rogers.)
24	77 "	Mr. A. Battue, Duncan's Com. vol. 3.
25	3 months	Dr. Satterley, College Transact. vol. 4.
26	4 "	Dr. Fothergill's Works.
27	4 "	Dr. Dickson, Med. Obs. and Inq. vol. 3.
28	4 "	Ditto. (Two cases, bitten by the same dog.)
29	8 "	Acta Norimb:
30	9 "	Dr. James Gregory of Edinburgh.
31	9 "	Mr. Gaitskell, Memoirs Med. Soc. Lond. vol. 5.

From this Table it appears that the average period of incubation of the hydrophobic germ is forty-five days. The minimum, twenty-one days;—the maximum, nine months.

In the largest proportion of these cases (that is to say twenty-four out of thirty-one), death took place within three days from the manifestation of symptoms. Six died between the fourth and seventh day. One, only, lived eight days.

From this document we may learn to distrust those alleged cases of hydrophobia occurring *within* three weeks from the infliction of the wound, and which ended favourably.

11. *Gonorrhœa.*—According to Mr. John Hunter, the latent period of gonorrhœa is subject to as great variety as the diseases strictly constitutional. He believes that in some instances the complaint has shewn itself within a few hours from exposure to

infection; but he acknowledges that the interval usually ranges between six and twelve days. He states the maximum period at six weeks. In almost all the cases which have fallen under my own observation, the urethra being previously healthy, the latent period was one week. How far we are justified in adopting John Hunter's notions regarding the maximum and minimum periods, I am not prepared to say.

12. *Syphilis.*—The same distinguished author was of opinion that the interval between the application of the syphilitic poison and its *primary* effects, was *very uncertain*, but on the whole longer than in the case of gonorrhœa. He considered that the variations of the latent period depended, in some degree, upon the kind of structure implicated. In some instances he believes that chancres have appeared twenty-four hours from exposure to the virus. But he admitted of a latent period extending even to two months. This, probably, is very wide of the truth, but I speak diffidently, not knowing the opinions of our best surgeons on these points.

The period usually assigned for the development of secondary symptoms is six weeks, corresponding closely with the latent period of the hydrophobic poison.

EXTRACTS FROM CORRESPONDENCE AND REPORTS RELATIVE TO THE CHOLERA AT TRANENT. N.B.

Cockenzie, Sunday evening, 15th January, 1832.
By Prestonpans.

Sir,

Having heard this forenoon that a boy had died in the village of Tranent, after a short illness, this morning, I wrote to Mr. Cunningham, surgeon there, requesting to be informed of the nature of the complaint; and have now the honour to enclose a note from Messrs. Cunningham and Seton, surgeons, stating, "that there can be no doubt but that Cholera had made its appearance in Tranent."

Since receiving the note above alluded to, I have been at Tranent, and seen Mr. Cunningham, who informed me, that a sister of the boy who died in the morning, is also dead, and that another almost hopeless case is at present going on.

The boy and young woman are children of John Reid, a collier, (in my employment); the lad Peter, aged 12, went to his work as usual, below ground, yesterday morning, and while there, was taken ill; he fainted twice before reaching home; his strength became prostrated; the symptoms of Cholera, so often described, followed, and he expired this morning. His sister Helen, aged 25, was also at work below ground yesterday, during her usual hours; she was quite well last night, and sat up till about twelve o'clock, (preparing a dress for a procession, which she intended to join in to-morrow) when she also was seized with the complaint, and died about two this afternoon.

The supposed hopeless case I have mentioned, is that of Andrew Mustard, aged about 40, whose mother died on Thursday morning, after a short illness, but as she was above 70, and had been complaining, more or less, for several years, no particular notice was taken of her complaint. Now, it is likewise supposed to have been Cholera she died of.

Tranent is about seven miles west from Haddington, on the great post road to Edinburgh; it contains about 1,700 inhabitants, and, with the exception of some respectable shopkeepers and tradesmen, they are chiefly composed of colliers and other labouring people.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) H. FRAS. CADELL, *J. P.*

Cockenzie, Monday Evening, Jan. 16, 1832.

SIR,

THE death since yesterday, is that of Andrew Mustard, whose hopeless case I mentioned in my last. One of the new cases is John Reid, father of the boy and young woman who died yesterday; the other is a beggar, at present residing in a low lodging-house in Tranent.

Prestonpans and Tranent are contiguous parishes, the former is distant from the latter about two miles. An hospital is to be forthwith established at Tranent.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) H. FRAS. CADELL, *J. P.*

Cockenzie, Jan. 20, 1832, *Half-past Eight,* P. M.

SIR,

DOCTOR Morries arrived here last night about 7, P. M. I immediately accompanied him to Tranent, where, with Mr. Seton, he visited many of the Cholera patients: he again visited them this morning. The local Board, at their Meeting to-day, approved of what had been done, and appointed him to take charge of an hospital now nearly ready for receiving patients, and nominated him Medical Secretary to the Board: as such he has signed this day's Report.

On account of regulations formed by different Burgh Towns, for the expulsion of vagrants, a more than usual influx of that description of people, has taken place at Tranent for some weeks past: one beggar has died; two are included in the remaining cases.

It may be worth while to mention, that last Monday, being the first Monday of the year, old style, or, as it is called "Old handsel-Monday," was a day of great festivity and rejoicing amongst the lower orders of

society in this part of the country; and many of the unfortunate cases which have occurred yesterday and to-day, may, I fear, in a great measure, be attributed to intoxication, and exposure to the atmospherical air while in that state.

The disease has hitherto been confined to the dirtiest part of the town, with a few exceptions, and the most dissipated and irregular-living people have been its victims. There are several striking instances of two, three, and four members of the same family being taken ill in succession.

H. FRAS. CADELL.

Cockenzie, 21st January, 1832.

SIR,

MR. Alexander Campbell, surgeon in Edinburgh, clerk to Dr. Christison at the Infirmary, has been engaged as hospital surgeon, under Dr. Morries.

Soup has been served out of the kitchen at Tranent this afternoon.

Enclosed is a handbill, numbers of copies of which have been circulated throughout the parishes of Tranent and Prestonpans.—(*See Diarrhœa Papers, p.* 51.)

I am extremely sorry to state, that three cases of Cholera have taken place at the western extremity of Prestonpans last night and this morning, and two of them have already proved fatal.

The first case was that of James Renton, at Prestongrange Colliery. He became unwell about 9, P. M., yesterday; he continued working until about 12; medical aid was called about 4 this morning; he died this afternoon; age about 30.

The second case is a child of James Renton, mentioned above. It was seized about 11 last night, and died about twelve hours after, age about two.

The third case is Mrs. Oxley, wife of a miner, now going on.

A soup kitchen was completed in Prestonpans this afternoon. Soup will be distributed from it on Monday.

(Signed) H. FRAS. CADELL.

W. MACLEAN, Esq.
Sec. Central Board of Health, London.

Cockenzie, 22d Jan. 1832, *Half-past Eight,* P. M.

SIR,

PRESTONPANS not being yet sufficiently organized, I cannot send you a regular report of the disease in that place; but I am authorized by Dr. Morries to say, that he has visited some of the cases, and has no doubt of the existence of Cholera.

The new cases I have heard of, after being twice at Prestonpans to-day—are,

1*st*. ——— Copeland, a carpenter, who made the coffin for Renton and his child, (the fatal cases of yesterday.)

2*nd*. A woman named Shaw, who was seized this forenoon, while looking from her stair-head, at the assemblage of people at Renton and child's funeral.

3*d* & 4*th*. Two children of widow Bolton, who attended Renton's family when in distress.

5*th*. Robert Smith.

6*th*. Name unknown.

I am engaged in correspondence regarding an Hospital at Prestonpans. I hope that an eligible house will be procured there to-morrow.

The hospital at Tranent is now fitted up, and furnished with attendants; this day I have arranged for an addition to it.

Soup has been liberally served out at Tranent, yesterday and this day.

(Signed) H. FRAS. CADELL.

[The daily reports received from Tranent, by the Central Board, include a nominal list of the patients, specifying their name, age, occupation, and habits, with the event of the illness. Beggars and dissipated persons form the majority of the fatal cases.]

OFFICIAL COMMUNICATIONS FROM THE BOARD OF HEALTH OF MUSSELBURGH, N. B.

No. I.

TO THE PRESIDENT OF THE CENTRAL BOARD OF HEALTH, LONDON.

Musselburgh, Jan. 20, 1832.

Sir,

I am requested by the Medical Practitioners, who have formed themselves into a local Board of Health for the parish of Inveresk, to communicate to you that a case of Cholera Asphyxia occurred here, on Wednesday, 18th instant.

It was followed yesterday (Thursday, 19th) by nine other cases, three of which died in the course of the day. At this date, Friday, three o'clock afternoon, seventeen fresh cases are reported, and six deaths: making in all, since the appearance of the disease on Wednesday, twenty-seven cases, and ten deaths.

Before the disease had reached East Lothian, Sir John Hope, the Vice-Lieutenant of the County, assisted by the Magistrates and gentlemen of the place, had a public Meeting, portioned out the parish into districts, and resident inspectors were appointed to make a general survey, and compel such steps as were necessary to ensure general cleanliness, and provide for the public safety, by reporting on the poverty or the disease therein. Subscriptions were subsequently made for the establishment of a soup kitchen, and three hundred messes of excellent soup have, for the last fortnight, been distributed to the

necessitous, three times a week. Wine has been allowed from the public funds, for the cases of Typhus, which has been prevailing among the families of the poor; the more filthy dwellings have been ordered to be lime-washed, and coals and blankets have been distributed, as necessity has pointed out.

Last night, the Medical gentlemen practising, or resident in the parish, held a Meeting, at which it was agreed to divide the town and suburbs into districts; each taking superintendence of a part.

From these a local Board of Health was then selected to conduct correspondence, and collect, daily, the reports of the cases, and of such modes of treatment as have been found most efficient in their results.

Resolutions were also passed regarding the steps most necessary for preserving the public safety, and checking the spread of the disease.

We have deemed it, Sir, necessary to transmit you this communication without loss of time; and beg to be favoured with your answer and instructions.

Until such time, we shall continue to transmit a daily report.

I have the honour to be,

Sir,

Your most obedient servant,

D. M. MOIR.

No. II.

Musselburgh, Jan. 21, 1832.

Sir,

From its being post hour, and some of the Schedules not yet sent me from the different districts, I have only time to say, that from those given in, the state of Cholera with us is as follows:

Remaining yesterday, 17. New cases to-day, 17. Deaths to-day, 5. Remaining, 29.

I enclose a hand-bill which I caused to be thrown off to-day and distributed; and have every reason to hope that our cases will become daily more mild.—(See No. IV.)

To the Chairman of Central Board.

No. III.

Musselburgh, 22d January, 1832.

Sir,

I enclose the schedules and numbers, which I have been able to obtain for this day, up to hour of post, for the different districts of

this parish. From these it would appear, that from the last night's

(21st)	Number remaining	29
	There have been discharged, cured . .	3
	Remaining . .	26
	Cases of to-day	19
	Total . . .	45
	Deaths	8
(22d)	Total remaining	37
	Total number of deaths , . . .	23
	Total number of cases from commencement	63

I have the honour to be, Sir,
Your obedient servant,
D. M. MOIR.

No. IV.

NOTICE CIRCULATED BY THE MUSSELBURGH BOARD OF HEALTH.

"NOTICE is hereby given to the public, that the parish of Inveresk has been divided into districts, for the speedier and more certain relief of persons attacked with Cholera; and that application for attendance must be made as follows:—

[The Districts and names of the Medical Inspectors are here specified.]

The Board of Health, however, wish it to be distinctly understood, that families will continue to be visited by their regular Medical Attendants. In cases of urgency, or where such are not immediately to be had, the nearest Resident Surgeon will be glad to take charge in the mean time.

The Local Medical Board wish particularly to impress on the community the necessity of avoiding every species of dissipation, as such particularly predisposes to attacks of this disease. At the same time they would recommend a comfortable and nutritious diet, strict attention to cleanliness, and regular hours.

As the attack is generally preceded by a degree of sickness at the stomach, and looseness of bowels, they beg to caution against the use of severe purgative medicines; and recommend, on such symptoms making their appearance, that a little brandy and water be taken, to which laudanum has been added, in the proportion of twenty or twenty-five drops to a grown person, and so downwards according to age. Ten drops may be given to children of from ten to twelve.

Should these means prove ineffectual, and vomiting supervene, application should be made to the nearest Medical Practitioner, as directed in this advertisement.

Caldrons of hot water are kept for the public use in Market Place, Musselburgh, and at the head of Bridge Street, Fisherrow."

Signed, D. M. MOIR, *Sec.*
Local Board of Health.

ORGANIZATION OF CHOLERA HOSPITALS IN LONDON.

Central Board of Health Council Office,
Whitehall, 25th January, 1832.

SIR,

THE Central Board of Health having taken into consideration the uninterrupted and steady manner in which the Spasmodic Cholera has continued to extend its influence in the north of England during the last three months, in defiance of winter; its appearance in the neighbourhood of Edinburgh; the approach of warmer weather, so favorable on many accounts to the more rapid propagation of the disease; and the unprovided state of many of the parishes as to hospital accommodation for their poor, should the disease suddenly break out in this Metropolis; are decidedly of opinion, that the time is now arrived, when each parish and district of this Capital and suburbs should, without delay, provide—

One or more houses to be used in case of necessity, as Temporary Cholera Hospitals;

Six beds complete in each;

A resident nurse and assistant;

A mode of conveyance for Cholera patients, in which they may be carried in a *horizontal posture;*

And make such arrangements as to be able to command the services of a medical gentleman in each Hospital, as soon as required.

I am therefore directed to recommend the immediate adoption of the above-named suggestions, which, when carried into effect, will serve as a nucleus for an establishment more commensurate with the population and circumstances of your district.

I have the honor to be, Sir,
Your most obedient sevant,

(Signed) W. MACLEAN,
Secretary.

To the Chairman of the Board of Health at

TREATMENT OF VAGRANTS AND REMOVAL OF PAUPERS.

Board of Health, Sunderland, Jan. 12, 1832.

SIR,

IN reference to the recommendation from the Central Board, relative to the removal of paupers, and to the treatment of vagrants, which appears in the public journals, I beg to state, that the magistrates here have, from the commencement of the disease, adopted the principle as to paupers, therein suggested, and have invariably suspended the execution of orders of removal, in all cases where the slightest suspicion of disease has appeared.

With regard to vagrants, I beg also to add, that the Board have, for some time past, acted upon the plan now recommended by the Central Board; and that comfortable lodgings (apart from others) and food have been afforded to all persons coming under the denomi-

nation of vagrants, and that they have been in all other respects properly attended to previously to their being taken before the Magistrates.

I am, Sir,
Your most obedient servant,
GEO. STEPHENSON, *Sec.*

W. MACLEAN, ESQ. &c. &c. &c.

DAILY REPORT OF CHOLERA CASES.

Central Board of Health, Council Office, Whitehall, Jan. 28, 1832.

Place.	Date.	New Cases.	Dead.	Recovered.	Remaining.	Total Cases from commencement of Disease.	Total Deaths from commencement of Disease.
Sunderland - -	26th Jan.	..	..	..	1	536	202
Newcastle - -	..	9	3	10	50	855	270
Gateshead - -	..	2	..	3	3	390	139
North Shields and Tynemouth	..	5	1	1	23	110	39
South Shields and Hepburn Colliery	..	..	..	1	1	6	2
Newburn - -	25th	17	1	15	13	274	65
Earsden Colliery -	26th	10	..	8	31	42	4
Scottswood - -	25th	1	..	..	1	Not	stated.
Elswick and Benwell	26th	1	..	..	3	Not	stated.
Hetton, &c. - -	..	14	2	6	59	311	66
Haddington and Vicinity, N. B.	25th	1	..	..	5	55	24
Tranent, N. B. -	..	10	..	..	31	61	26
Preston Pans - -	..	5	1	..	15	18	3
North Berwick -	..	..	1	..	..	3	3
Musselburgh - -	24th	16	5	2	55	107	34
	Total .. .	91	14	46	291	2,768	877
Total from places where the Disease has ceased, and from which no returns have been this day received.						180	56
					TOTAL	2,948	933

N. B. Five fatal Cases are reported to have occurred at Westbarns, Stenton, and Whittingham, N. B.

Supplement

TO

THE CHOLERA GAZETTE.

LONDON, SATURDAY, JANUARY 28, 1832.

REPORT ON THE TREATMENT OF CHOLERA,

By W. R. Melin, *Surgeon to 9th Queen's Lancers,*

ADDRESSED TO LIEUT.-COLONEL LORD LOUGHBOROUGH, COMMANDING OFFICER, Q. R. L.

Hounslow, 11th January, 1832.

My Lord,

In compliance with your Lordship's request, I shall endeavour to give you an account of the more successful remedies I have seen exhibited in the treatment of Cholera at Sunderland and Newcastle, although, as I mentioned in my former letter, owing to the unwillingness of the sick, from various causes, to be removed to the hospital prepared for their reception, but little opportunity was afforded of carrying any one plan systematically or satisfactorily into effect. I shall be enabled, therefore, only to present to your Lordship generally, the plan of treatment which I consider likely to be most successful, deduced from the opportunities I had of observing the disease in all its stages.

Much mischief has arisen, I am convinced, by writers on the subject, and other professional authorities, recommending certain remedies in this disease, without pointing out, at least distinctly, at what period they should be exhibited, thereby not only leading the public to have recourse to them indiscriminately; but some professional men, (on first meeting so new and appalling a malady), to employ them throughout its course, and not pursue, as in ordinary diseases, a varied treatment according to its different stages.

Thus, some depend principally on bleeding, others on calomel; others again place all their reliance on opium, brandy, certain essential oils, and various internal and external stimuli, &c. &c.;

all of which are of use, when employed at suitable moments of the complaint, and all equally injurious when misapplied.

To avoid this error, and render my detail of the treatment more easily understood, I shall consider the disease as consisting of three stages; the first, excitement; the second, collapse; the third, re-action: generally in this country ending in a fever of a low type, resembling typhus. In the aggravated form of the attack, the first is frequently absent, or is so very short, as not to come under the observation of the medical attendant, so that the disease may be said, then, to commence with the second stage, which, however, does not alter the indication of practice to be pursued. The first stage is ushered in with occasional giddiness, a sense of weight and heat in the stomach, vomiting, purging, and slight cramps in the toes, or any two or more of these symptoms; this in many cases rapidly passing into the second stage, viz. prostration of strength, increase of the previous symptoms, particularly the cramps, which extend to the legs, thighs, superior extremities, and muscles of the abdomen, diminished action of the heart and arteries, coldness of the surface. Should these be happily arrested, the third stage, re-action, sets in by an increased circulation, particularly perceptible in the external vessels, the pulse is felt at the wrist, the lips gradually change from a livid hue to their natural redness, bilious evacuations take place, the other secretions become restored, and, as I before stated, the patient ultimately falls into a low fever, not to be discriminated from one arising from any other cause.

In the first stage, an emetic to produce full vomiting will be very beneficial, and in general will stop the spasmodic vomiting so characteristic of the disease, and, if administered at the very *outset*, may arrest its further progress. The one I prefer, and which is to be met with in the humblest habitation, is about a table-spoonful of common salt dissolved in half a tumbler of tepid water, followed by drinking plentifully of the same fluid; or, if it can be conveniently obtained, of an infusion of chamomile. If the first dose does not act fully, a second should be given, in the course of ten or fifteen minutes. When the effect has ceased, and that a decided remission of the symptoms does not take place, bleeding from the arm will be necessary, the extent to be alone regulated by the state of the pulse, which should be carefully watched, and the moment it becomes weak, no more should be taken; immediately after this, or the emetic, should bleeding be considered unnecessary, calomel with opium, or, if the cramps are severe, the acetate of morphine, should be given and repeated every four or six hours, or longer, according to the severity of the symptoms, so as to act on the liver, and thereby restore the biliary secretions which will be gradually followed by that of the other organs. In the more advanced period of this stage, which

approaches the second, a mustard emetic given in two drachm doses every five minutes, until it produces full vomiting, will be preferable, as, besides its emetic effect, it acts as a warm stimulant, and appears to have a most active and favourable effect on the biliary ducts and the diaphragm. In the second stage, even when so far advanced as that all external circulation has ceased, this remedy is the best with which I am acquainted, and should be immediately administered. If the stomach has not lost its sensibility, (and if it has, all remedies are powerless,) the mustard will cause copious evacuation of its contents, and, by its stimulating effects on the diaphragm, a fresh impulse is given to the heart. The blood is propelled through the lungs, and flows through the external vessels; a full and soft pulse is at once felt at the wrist, the lips become red, and, in a word, the general circulation becomes restored, and shortly after bilious evacuations from the intestines will follow. In very severe cases a fresh accession of cramps will probably occur, and again destroy the balance of circulation; in a moment the pulse sinks and cannot be felt; a repetition of the mustard emetic will generally however produce the same beneficial effects, and should be had recourse to in all such relapses. As soon as the stomach becomes settled, calomel and opium, as recommended in the first stage, may be given, and also small doses of infusion of mustard every fifteen or twenty minutes, for a few hours, to keep up the stimulus, and preserve the restored action of the heart and biliary organs; and now is the time also, if the practitioner conceives that there still remains any venous congestion, and that bleeding is necessary, to have recourse to it, always bearing in mind to stop its flow the instant the pulse flags; for, in my opinion, there cannot be a more fatal error than to abstract blood in this stage of the complaint, after the pulse sinks in the least degree as the blood flows, or even when it does not rise or increase in strength.

Indeed, one of the most intelligent and experienced advocates for blood-letting in this disease, told me, on stating this point, that although he had immediate recourse to it in all stages of his cases in India, and placed his principal reliance on it, yet, that this *principle governed him*, and that whenever the pulse sunk on the abstraction of the smallest quantity of blood, he drew no more; yet, owing to this point not being particularly and clearly insisted on, I have seen and known blood extracted at the most unseasonable periods, and all chance of recovery thereby destroyed.

Several other stimulants, such as carbonate of ammonia, the aromatic spirit of ammonia, camphor, æther, some of the essential oils, brandy, &c., I have seen used with some advantage in this second stage, but none were attended with the decided and immediate benefit that marked the mustard emetic; indeed I did

not see a single case of complete collapse in which the general circulation was restored by any of the other various remedies employed.

I feel therefore warranted in strongly recommending it in preference to all others, in this most formidable stage of the complaint; during this cold stage it is almost superfluous to point out the necessity of employing dry heat to the surface, and endeavouring to restore its natural temperature: the patient should be placed in bed between heated blankets, if possible near a stove or fire, when warm flannels can be readily changed, and the legs and arms rubbed with them beneath the bed-clothes, without exposing the body to currents of cold air; bags filled with hot sand retain the heat for a long time, and may be laid along the spine and limbs with great convenience; stomach warmers, containing warm water, may be applied over the abdomen and stomach, besides which there are several ingenious inventions for surrounding the patient with heated air. Moist heat does not answer, and in my opinion, for many reasons, is inadmissible, but all these attentions and labour can only assist our internal remedies when they begin to act on the circulation, for unless this is accelerated, all the heat that can be applied externally can avail nothing. I have seen a patient enveloped in blankets before a large stove, his feet and legs surrounded with warm water, &c., &c., and yet the thermometer, when placed beneath his tongue, fell to forty-five degrees, when the surrounding atmosphere was upwards of sixty;—Great care should be taken to keep the patient in a horizontal position during the whole period of the enfeebled action of the heart, as even the effort to sit upright in bed may be attended with fatal consequences.

When, by these means or any other, the collapse is happily overcome, and the third stage, re-action, is fully established, our efforts should be directed to moderate its course; stimulants should be given, if at all, with a very sparing hand, for, in proportion to the excess of the re-action, may we calculate on the severity of the consecutive fever, which, presenting the same symptoms as low fevers of an ordinary type, will require the same treatment. The only peculiar feature is the general tendency to congestion of the brain, which heretofore was wholly exempt from any participation of the disease; this, therefore, should be assiduously watched, and early met by local bleeding, either by leeches or cupping, blisters, cold applications, &c.; or, if the state of the pulse will warrant it, by general depletion.

Having thus considered the disease, and its treatment, throughout its different stages, it will be obvious to your Lordship, that the greatest benefit would be derived from attacking it, at its very onset; and that if the patients could be induced to go into

hospital, or seek for proper medical aid, as soon as they are seized, that the proportion of mortality would not have been so great as it has unfortunately been in this country; and it is deeply to be lamented, that the prejudice of the poor, and other causes, should have defeated the benevolent intentions and efforts of the Government and the Central Board of Health, to afford them prompt and experienced medical assistance in arresting the fatal course of the disease, and in preventing its extension.

But it is to be hoped that in a short time these prejudices will be overcome, and that the poor will with gratitude accept the humane assistance prepared for them, and submit with a proper feeling to whatever sanitary regulations may be adopted for their benefit, should the appalling malady spread through the country.

The new remedy to which I alluded in my former letter, as likely to prove so beneficial, was the mustard emetic, of which I have spoken so favourably. It was first suggested by Dr. Gibson, at Sunderland, a man of great intelligence and extensive experience in the disease, in India, who heard, when at Newcastle, that it was always immediately employed by the miners, and generally with success, in restoring animation in the asphyxia caused by what they term the fire damp, which produces a stagnation of the circulation very similar to that in Cholera.

My friend, Dr. Lindsey, who arrived in Sunderland a few days afterwards, entertaining the same favourable expectations from the remedy, we anxiously looked out for an opportunity of carrying it into execution. In the first trial, in a case of complete collapse, its instantaneously beneficial effects far exceeded our most sanguine expectations, and have since been confirmed by further trials. The result of these cases, Dr. Lindsey communicated to the Central Board of Health, on his arrival in town, with some further interesting observations which we conjointly made on the subject of the disease, particularly as regards the general prevalence of diarrhœa for some days, and the great importance of attending to this symptom.

Dr. Kerr, in his Report on the Disease at Moscow, in the years 1830 and 1831, made the same remark; but it does not appear to have attracted the notice it deserved, at first, but it has, I am glad to find, been acted on since my departure from Newcastle, where, I hear, placards are posted about the town, calling the attention of the public to this important fact, and urging the poor to apply for medical assistance as soon as they perceive any tendency to diarrhœa, or other bowel complaints, which I am certain will be the means of diminishing the number of victims to this fatal disorder.

So convinced were Dr. Lindsey and I of the truth of this observation, that we omitted no opportunity of impressing it on the minds of the poor, whom we visited, and, in many cases, thus saved them from the complaint in the most fatal form.

I met with a well marked case of Cholera in the first stage, soon after my arrival at Sunderland, in which drachm doses of carbonate of soda every hour produced, in a few hours, the most marked relaxation of all the distressing symptoms, and, by continuing it regularly throughout the night, the woman was convalescent the next day.

The difficulty of meeting another case in the same state, owing to the attacks coming on generally about two o'clock in the morning, deprived me of an opportunity of giving it a further trial, which I should be now inclined to do, from the result of some late experiments made on the blood, taken from persons labouring under the disease; but I have been informed by the person who suggested it, that he found it equally successful in other cases.

I believe that I have now touched on all the important points connected with the treatment of Cholera, as far as it fell under my observation. I should add, that particular attention should be paid to the diet of the convalescent; the least excess or irregularity causing the most formidable relapses, and often death. For several days after perfect recovery, the most digestible food should be given, and in small quantities at a time.

In submitting these observations to your Lordship, I have endeavoured to be as brief as possible, and to avoid all professional technicalities. If, in so doing, any part appears obscure, or requires further explanation, it will give me much pleasure to afford it; and I only regret that my practical opportunities were not more extended, so as to enable me to speak with more confidence on the subject.

I have the honour to remain,
My Lord,
Your Lordship's most obedient servant,
W. R. MELIN,
Surgeon, 9th Queen's Royal Lancers.

To Lieut.-Col. Lord LOUGHBOROUGH,
Queen's Royal Lancers.

DR. GIBSON'S REPORT.

DR. GIBSON, recently in charge of the districts of Sunderland and Newcastle-upon-Tyne, has laid a report of his views regarding the treatment of Cholera before the Central Board. An ample analysis of the document will be published in the next Gazette.

SECOND IRRUPTION OF CHOLERA IN CRONSTADT.

Several interesting details relative to the recent recurrence of Cholera in Cronstadt, are contained in a letter from the Rev. Mr. Blackmore, Chaplain to the Russian Company, to his brother, Mr. S. Blackmore, surgeon, of this city, who has laid the communication before the Central Board. It appears from the Rev. Mr. Blackmore's statement, that the first irruption ceased on the 5th of August, and the second occurred on the 25th of September, and terminated on the 30th of October. The first persons affected were a soldier and peasant from St. Petersburg, where the malady still lingered. During this period 192 were taken ill, 138 recovered, and 54 died. We subjoin the following extract:—

"The principal remarks made were, that, with trifling exceptions, (eight or ten are mentioned,) no one who was exposed to the first irruption suffered by the second. In the interval between the two, a line-of-battle ship and a corvette, containing about 800 men, had arrived from England, and had been laid up in dock, and the men taken up their lodgings on shore,—those became the first victims. Almost simultaneously with the second appearance of the Cholera, two line-of-battle ships and a frigate came from the Mediterranean, and two frigates from Lisbon, and anchored in the roads, and very soon after having had communication with the shore, the disease appeared amongst them. The Admiral of the Mediterranean squadron told me himself, that two days after he sent his first boat ashore the disease broke out in his ship, but not amongst the boat's crew, but others; none of those who went on shore having been attacked on its first appearance in the ship. Drs. Russell and Barry cannot fail of being struck with this remarkable fact, which coincides so exactly with what they themselves learned on board the frigates which came from Dantzic."

EFFICACY OF BARK AND CAPSICUM, AS PREVENTATIVES AGAINST EPIDEMIC DISEASES.

We extract the following passages from an unpublished letter, recently addressed to the Governor of Greenwich Hospital, by Sir William Beatty, M. D., Physician to that institution.

Royal Infirmary, Greenwich Hospital, 4th January, 1832.

"Having formerly experienced, on several occasions, the salutary effect of Peruvian bark and capsicum, (cayenne pepper,) exhibited together, as a preservative medicine, to numerous individuals, forming considerable parties of men, employed on

detached services, at different places on foreign stations, where either malaria, typhus, or remittent fever, was known to be then prevalent; and that the practice was uniformly attended with their exemption, for the time being, from either of those diseases; I am now impelled by these recollections, to express my opinion decidedly in favour of a like efficacy in this medicine, as a preventative of Cholera, particularly with reference to the security of the attendants, nurses, as well as others having intercouse with the Cholera patients; and to be extended, likewise, to individuals generally, whose health may have been reduced below its usual standard, by previous indisposition, intemperance, or by other causes of debility. The proportions in which these medicines were usually combined, were, one ounce of Peruvian bark, with half a drachm of capsicum, (both in powder,) a drachm or small tea-spoonful of which was given twice a day to each person, in two table-spoonsful of any kind of spirit, with an equal quantity of water.

"Many exceptions, however, must of course obtain to the indiscriminate use of this medicine, and chiefly in the cases of invalids with chronic affections of the lungs, other viscera, or organs. Should occasion, therefore, present itself, in this Institution, for submitting this medicine to the test of exhibition against Cholera, I would deem myself warranted in recommending forthwith its adoption; and with so much confidence in its conservative influence, as to entertain but little doubt of its success in general, when duly administered; strict attention being paid at the same time to temperance, proper clothing, and free ventilation."

CASES OF CHOLERA AT HAWICK.

SINCE the official part of this day's Cholera Gazette was sent to press, a lengthened statement has been received by the Central Board of Health, from a medical gentleman, respecting two cases of Cholera which have recently occurred in Hawick, and in which a close chain of connection seems to have been completely traced,—first, between the first individual affected and a traveller, who died of the disease in Morpeth, and whose case is detailed in the last Gazette; and, secondly, between both the subjects of the Hawick cases. A private communication from Lord Minto fully confirms the medical report, and strengthens the gratifying conclusion, that the prudent measures pursued in Hawick, with reference to the prevention of extensive intercourse with the persons there attacked, have, for the present, arrested the progress of the disease in that quarter.

REPORTS BY DRS. BARRY AND RUSSELL RELATIVE TO THE ST. PETERSBURGH EPIDEMIC.

The detailed Reports by the British Medical Commission to Russia, are published this day. They are replete with curious and valuable information, especially with regard to the medical statistics of the disease; a department of its literature for which Russia is, beyond all other countries, the best calculated to afford accurate, authentic, and complete materials, owing to the highly organised and effective system of its sanitary police, and the military strictness with which *all* medical practitioners are compelled to make reports of epidemic diseases. We shall perhaps return to the consideration of this work on another occasion.

LITERATURE OF CHOLERA—BIBLIOGRAPHICAL NOTICES.

In order to render the Cholera Gazette as extensively useful as possible, the Editor has made arrangements for the publication of *analytic* notices and reviews of new works on this disease, in the various European languages. Authors desirous of having their publications noticed, must forward copies to the office of the Cholera Gazette.

WORKS RECEIVED FOR REVIEW.

Uber die Cholera, oder die Brech-Ruhr, aus der en Behandlung und Berutung, fur Richt-Aertze.—Von P. V. Pohl, &c. &c. Translated from the Russian, by Dr. Markus. 8vo. pp. 48. Moscow. 1831.

Observations faites sur le Cholera Morbus, dans le quartier de la Yakimanka à Moscow, &c. &c, par B. Zoubkoff, &c. &c. 8vo. pp. 54. Moscow. 1831.

Quelques Reflexions sur le Cholera Morbus, par le Dr. Jaenichen, &c. &c. 8vo. pp. 130. Moscow. 1831.

Pensées sur le Cholera Morbus, par F. C. M. Marcus. 8vo. pp. 55. Moscow. 1831.

Mitheilungen über die Cholera-Epidemie zu St. Petersburgh in sommer, 1831.

Protocoll-extracts, &c. Riga. 8vo. pp. 152.

Ueber die Cholera, &c.—Verfatsh Von Dr. Silesius, &c. 12mo. pp. 374. Nuremburgh. 1831.

Topographie Medicale de Moscow. 8vo. pp. 51.

Cholera, its Character and Treatment, &c. &c., by Charles Turner Thackrah, Leeds. 8vo. pp. 60. London. Longman. 1832.

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