

Box 301

Suffolk District Medical Society.

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REPORT OF A COMMITTEE

ON

ASIATIC CHOLERA,

IN

BOSTON AND VICINITY,

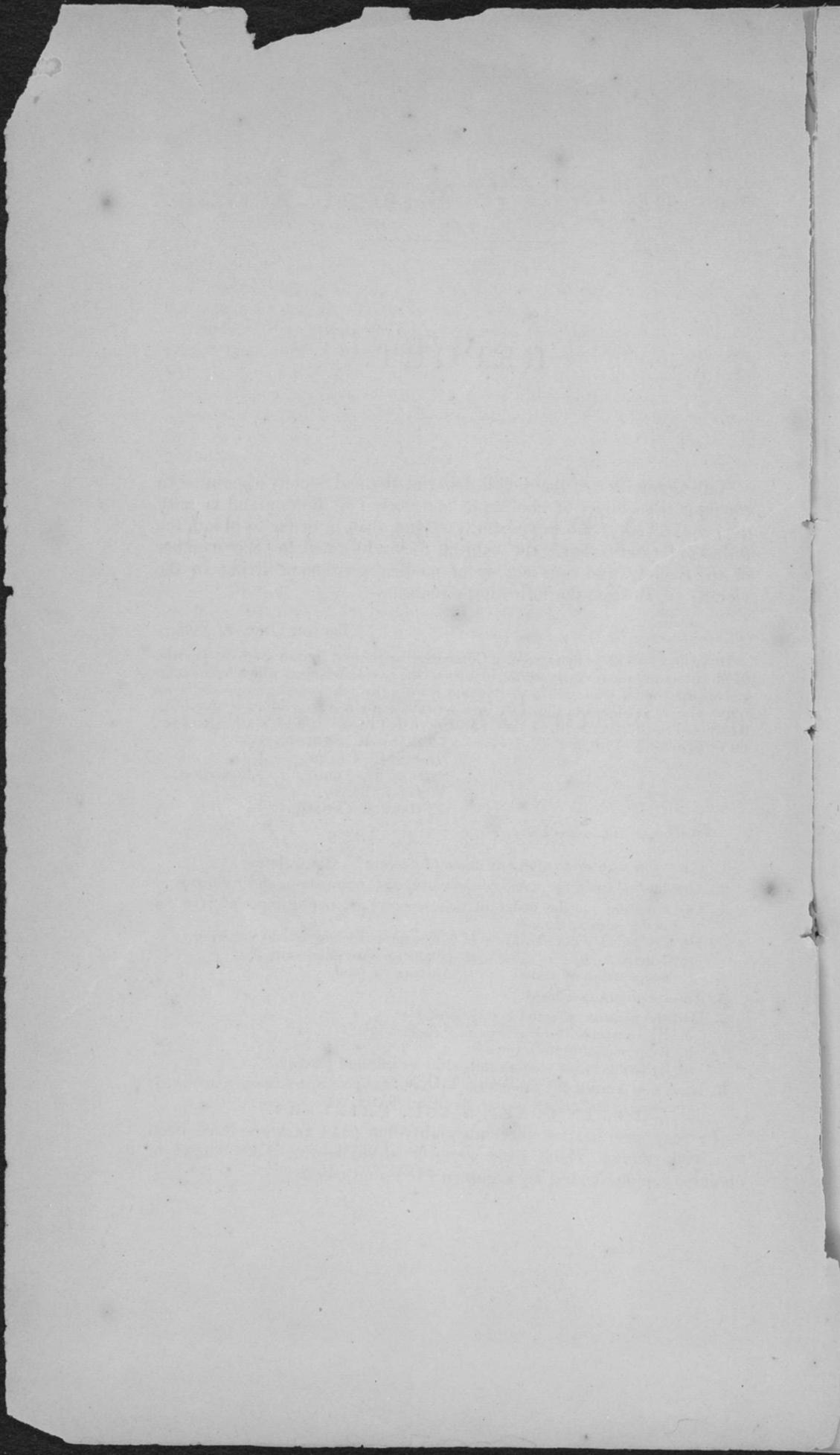
DURING THE YEAR 1866.



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1867.



## REPORT.

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THE Committee of the Suffolk District Medical Society appointed to consider the subject of cholera as it occurred in Boston and vicinity during the year 1866, respectfully report, that, in order to obtain the fullest information upon the subject, they addressed to each member of the Society, and to a number of medical gentlemen living in the vicinity of Boston, the following circular:—

BOSTON, DEC. 8, 1866.

DEAR SIR,—The undersigned, a Committee appointed by the Suffolk District Medical Society, to investigate the history of the cases of cholera which have occurred within the District and in the vicinity during the past season, respectfully request you to aid them in this duty by a written reply to the subjoined inquiries, addressed to the chairman, at the "MEDICAL JOURNAL" office, Washington St., on or before the 15th inst.

LEONARD R. SHELDON,  
HENRY G. CLARK,  
SAMUEL L. ABBOT,  
WILLIAM READ,  
J. BAXTER UPHAM, } *Committee.*

To Dr. \_\_\_\_\_

1. Have you seen or treated any cases of cholera? If so, state—
2. The date of each, the name (or initials), age, occupation, and residence.
3. The symptoms, in the order of their occurrence, noting especially the following points, viz. :—
  - a. Preliminary diarrhœa.
  - b. Rice-water discharges and vomiting.
  - c. Cramps.
  - d. Blueness, shrivelled skin, &c.
  - e. Suppression of urine.
  - f. Absence of pain.
4. The treatment and result.
5. Had the persons affected been exposed—
  - a. By contact with other cases of cholera or diarrhœa?
  - b. By personal indiscretions?
  - c. By living in, or visiting unhealthy or infected places?
6. Have you known any other case to follow exposure to those under your care; to their dead bodies, or their effects?

In response to this circular eighty-one (81) answers have been received, among which were reports of thirty-nine (39) cases of cholera, communicated by eighteen (18) gentlemen.

The reports of these cases, most of them quite full, have been carefully considered by the Committee, and the opinion of the Committee was taken upon each of them by vote. They unanimously agreed that all of them should be classed as cases of Asiatic cholera.

The following is the account of the case of Dr. A. A. Gould, by the attending physician, Dr. Cabot:—

Dr. Gould had been as well as usual and attending to his business, when about noon of Friday, September the 14th, he had two watery discharges from the bowels. During the afternoon he had three or four more copious discharges of the same character. Between 6 and 7 o'clock vomiting began, and shortly before 8 o'clock very severe cramps occurred in the feet and calves of the legs. About quarter past 8 he had a very copious discharge, more than half filling the vessel, presenting the rice-water appearance, *but having some fecal odor*, and containing some small particles of fecal matter stained with bile. In the course of an hour these symptoms were gone, and the patient seemed quite comfortable and had a good pulse. He had no more diarrhœa or cramps or vomiting, except that he vomited a dose of aqua ammoniæ. There remained an unpleasant coldness of the hands, and from that time the patient steadily failed. At 2, A.M., he was in collapse—the face and hands shrunken and livid, the skin cold and clammy, the radial pulse absent, the voice almost inaudible. He was restless and uneasy, took ether occasionally—apparently to relieve the uneasy and distressed feeling which accompanies collapse—and notwithstanding the coldness of the skin, could not bear the encumbrance of the bed-clothes, even the lightest.

All efforts at restoration by the stimulants administered, both by the mouth and per anum, were without effect. He continued steadily to fail, and died at 5 o'clock, A.M., Sept. 15th.

According to request, the Committee have examined specially the case of Dr. Gould, and in addition to the above facts would remark that he possessed a frail constitution, and had suffered many years from indigestion. He had, only a few days before his last sickness, two attacks of vertigo, the latter being so severe that he fell upon the sidewalk near his own house, and was carried in by persons who happened to be passing at the time.

The Committee are informed, also, that he had been eating very freely of pears, and that he himself attributed his attack to this circumstance. Notwithstanding his bodily infirmities, his mental powers remained intact, and his love for scientific pursuits grew with increasing years.

We can learn of no exposure to cases of cholera or choleraic diarrhœa to which we can ascribe his disease, nor of any cases that occurred subsequently to his in consequence of proximity to him during his sickness, or to his remains after death. This Society will

well remember how many friends stood mournfully around him and paid their last respects to one who while he lived was loved and honored by all who knew him, and who adorned the profession to which he belonged.

It is also a fact to be remembered, that, as the result of an autopsy made by Drs. Langmaid and Swan, the internal organs, excepting the intestines, showed an almost entire absence of fluids, and that the bladder was empty and contracted; also, that epithelium was found floating in the small amount of fluid which remained in the stomach and bowels.

In the opinion of your Committee, the history of Dr. Gould's sickness embraces all of the necessary symptoms of a case of genuine Asiatic cholera.

The case of Dr. William E. Townsend, which also possesses a painful interest, was reported at the meeting of the Suffolk District Medical Society, held Nov. 29th, by Dr. C. E. Ware, as follows:—

Dr. Townsend had, during the past summer, been less well than formerly. He had not taken his usual vacation, and had had a good deal of night-work. Friday, the 16th of November, he attended a funeral. Two days previously he had made a visit to a fatal case of "cholera." Dr. Ware was called to see him on Friday, at 5½, P.M. He had eaten his dinner as usual. He had had no diarrhœa previous to his attack, but had felt somewhat feeble. The attack began with vomiting and diarrhœa. When seen, he had had several dejections and vomiting, which did not yield to simple treatment. The discharges were watery, with marked fœcal odor and color. He vomited immediately after a dose of opium, and then got, over the abdomen, a subcutaneous injection of morphine, which gave no relief. The skin was warm and natural; the pulse accelerated—half an hour afterwards almost imperceptible. An injection of meat-tea, laudanum and brandy was administered, which was retained. Half an hour afterwards, he vomited for the last time. Coldness began half an hour before the cessation of the diarrhœa, and gradually increased, and lividity came on. Pulse almost gone. Great faintness.

At 7½, P.M., the pulse was entirely gone, and for an hour or two did not return. The patient took food and drinks—dilute sulphuric acid—and coffee, which he relished much. He was in this condition till—

9½ o'clock, when there was a slight return of warmth, but no pulse. The lividity and faintness continued, though the latter was less marked. Then the pulse began to return. Mind perfectly clear. Continued in this way through the night. Had two dejections, watery, with rice-water appearance, but having slight odor. No sleep. Pulse off and on.

In the morning at 8½ o'clock, the pulse was constant, though very slight. No dejection after 3 or 4 o'clock, A.M. No nausea. Occa-

sional cramps, not severe. Continued in this way during the forenoon. Urine not passed after 3, P.M., of the day before.

He was last seen at 11½, A.M. Complained of asthma (to which he had been subject for many years), and was using a cigarette. His condition looked then as favorable for rallying as at any time; three quarters of an hour afterwards he was dead.

The slight reaction at 10 in the evening was imperfect. In the morning there was a little more. The skin was better; lividity of face less, of hands the same. The face was shrivelled throughout the forenoon. The patient looked as if possibly he might recover.

With regard to the cases on Davis and Washington Streets, and Fellows Court, the Committee would state, that they all occurred in the immediate vicinity or directly in the midst of a large sunken area, which is nothing more nor less than a pestiferous quagmire, receiving into it a large part of the drainage of the surrounding vicinity and many of the tenements in its neighborhood, which are mostly occupied by the laboring and poorer classes. It would be hard to conceive of a combination of circumstances more unfavorable to the health of the residents in that vicinity. The fact that the greatest number of cases of cholera, in a given period of time, occurred in this locality, should receive not only the attention of medical men, but of the city authorities both of Boston and Roxbury. The Committee have reason to believe that a considerable number of cases occurred in the immediate vicinity of this locality which presented marked choleraic symptoms, but recovered, and have not been reported to them.

The Committee have not thought it their duty to enter upon the discussion of the various disputed questions connected with the subject submitted to their consideration, but have limited themselves to an examination of the cases reported, the results of which they have now laid before the Society. In order that the Society may have a definite impression of the character of these cases, they submit the following abstracts from reports of different gentlemen.

Reported by Dr. L. R. SHELDON.

Mrs. P. W. [No. 18 of the table], East Canton St., aged 43 years, and mother of eleven children. Was attacked with diarrhœa, some pain in the bowels and severe nausea, at about noon of September 2d, 1866. At about 9 o'clock, P.M., she considered herself better of the diarrhœa, and did not call for professional aid until 5, A.M., September 3d. I saw her a little before six o'clock, and remained with her about an hour.

Rice-water discharges had been frequent and profuse. A large amount of epithelium was seen floating in the vessel that was last used; did not examine it with the microscope. Cramps very severe in the left side; also in legs, but not so severe as they had been during the night previous; discharges at that time involuntary; surface

very cold and dark, and much shrivelled. The patient's mind being very clear, I asked her if she had passed any urine, and she answered, no; but the attendants gave a different report, which was that she had been passing water all the time, and had passed nothing but water. I believe both parties were right, but that the "water" was from the bowels, not from the bladder. Pulse at wrist not perceptible at 6, A.M.; at 10, I thought I could detect a slight pulsation.

The treatment consisted of external heat, friction and stimulants; beef-tea and subcutaneous injections. Opiates had been given during the night before I saw her, but were immediately rejected by the stomach. The first subcutaneous injection was made upon the left side, near the region of the heart, where the cramps were at that time most complained of. The cramps subsided in about ten minutes after the injection of one fourth of a grain of sulphate of morphia. She continued very restless and thirsty until 10 o'clock. The cold, blue, shrivelled and cadaverous appearance continued also. She died at 11, A.M.

I could not produce any effect whatever by treatment, except that the cramps ceased a little earlier on account of the subcutaneous injection. The patient was plethoric, and had, in the absence of a servant, been at work over a hot range in the kitchen for two or three days prior to her attack. She had not been exposed to any other cases of cholera or diarrhoea, nor had she lived in any infected place. She had been an unusually healthy woman, and a person of active habits. I have known her about eight years, and have delivered her of three strong children during this period. She has never had any sickness during my professional acquaintance with her, except a mammary abscess.

I advised disinfecting some of the bedding and burning the rest, which was done. The room was aired and cleansed, and was immediately occupied. No other cases occurred in the house, although the family was large and had all been in the room during the latter part of her sickness. No case followed exposure to the dead body.

Miss P. [Case No. 11 of the Table], aged 28 years. Residence in a very healthy part of Brookline. She came to visit her brother in Boston, who resides in Chester Park, and was taken with vomiting of a colorless fluid on the 5th day of September, the second day after her arrival in the city.

I saw her on the morning of the 6th, and found her quite comfortable, with the exception of weakness and occasional vomiting. Her general appearance was such as to create some alarm; but she told me that she was subject to turns of vomiting and headache. There had been no preliminary diarrhoea. There was vomiting of rice-water material. On the 7th of September cramps in legs came on, but were not severe. Blueness and shrivelled appearance of the skin were scarcely to be observed at 8, A.M., on the 7th. The urine was suppressed; the surface slightly cool; pulse feeble; no apparent occasion for alarm at 9 o'clock, A.M. I saw her in the condition

described at 9, A.M.; she was at this hour in a jocose state, and talked quite freely in that vein. At 11, A.M., I was sent for in haste, and, going immediately to her bedside, found her dead!

The treatment at first was heat to the extremities, sinapisms to the stomach, and the following powder:—*R.* Hydrarg. submur., gr. iv.; morphia sulph., gr. i. Ft. chart. No. iv. One to be given with dry sugar, and repeated if the first was rejected by the stomach. She retained the first about two hours, when it was rejected, and another given. This course was followed during the night of the 6th, each powder being retained longer than the preceding one; yet no color made its appearance in the matter vomited. A remark that she thought she should feel better if she should have a movement of the bowels, led me to examine the condition of the abdomen, where I found no distension and no tenderness; there was no desire to go to stool. I did not give a cathartic as she desired, but advised stimulants freely. This was at 9, A.M. She died at 11, A.M.

As soon as she was dead, a very large quantity of the rice-water discharge passed from the bowels—enough to completely saturate her bed. A large amount of epithelium was found in this discharge, as was shown by examination by the microscope.

I could not learn that Miss P. had been exposed to any other cases of cholera or to cases of diarrhoea, or had been guilty of any personal indiscretions. She had not lived in or visited places known to be infected.

Every precaution was taken to destroy and to disinfect clothing and bedding, and to purify the room. No other sickness of a severe form followed in this house.

Another case which, perhaps, should be classed as cholera, which fairly represents a considerable number which I have not given in detail, is as follows:—

Mr. C. W. C., aged 76 years. On September 5th came directly from State St., and arrived at his house near Chester Park at 2, P.M., feeling, as he says, perfectly well for some ten minutes after he had reached the house. He then had a sudden call to the water-closet, where he had a profuse discharge from the bowels; he felt very weak, but got to his bed, which was on the same floor. He very soon vomited a large amount of colorless material; prostration extreme. I was at this time called up to see him. I gave him at once two ounces of old French brandy, with two teaspoonfuls of the tincture of ginger.

Being obliged to leave him for half an hour, when I returned I found that he had vomited again, and had had severe cramps in the extremities. The surface was cold, shrivelled, very livid; discharges involuntary and colorless, but having a slight faecal odor. Another large portion of brandy and ginger was given immediately, and was retained by the stomach. External heat and frictions were used thoroughly. Reaction took place in about one hour.

I give this one case as typical of many that I saw at about the same time.

I ought here to state that every patient whom I saw that was attacked violently and took large doses of brandy or whiskey early, reacted sooner and invariably recovered. One patient was having very severe cramps, vomiting and purging, who at the same time was thoroughly intoxicated. In these cases subcutaneous injections of morphine generally relieved the cramps, and reaction took place in a few hours.

Reported by Dr. ARNOLD.

September 2d. Mrs. Brady [Case No. 7 of the Table], a married woman, aged about 40 years, residing on Davis St., Roxbury. She had been in usually good health. In the morning was attacked with slight diarrhoea, which at 1 o'clock had become more violent, and was attended with cramps and vomiting. For two hours or more previous to my arrival—4½ o'clock, P.M.—the cramps were represented as having been exceedingly violent, vomiting almost constant, the discharges being profuse and "like water full of floating specks." At the time of my arrival and afterwards, there was very little of either cramps, vomiting or purging. She had a peculiarly anxious expression, with sunken eyes, voice husky and sepulchral, no pulse, and a cold, clammy skin. The body, even at the pit of the stomach and in the axilla, was far below its normal temperature. The skin was shrivelled, and the tissues beneath were so shrunken that it remained in folds whenever pinched up; thirst constant and insatiable; tongue and breath cold; the whole aspect of a peculiar dusky hue, as if *post-mortem* changes had already begun beneath the skin; the fluids of the body were very much diminished. Various restoratives were administered, with only the slightest, if any effect.

This case occurred in the middle one of a block of five houses, situated upon native soil, to each of which the exposures were the same. No evidence can be obtained of the disease having been brought to the patient, or her having contracted it from any apparent cause, direct or indirect.

Cases of the second group occurred in Fellows Court. These were distinct from the first group only in being independent of them as regards exposures. There was no intercourse or communication between them, nor was there any especial similarity of circumstances.

On Sept. 3d, was called in the evening to see Miss A. [Case No. 9 of the Table], a German woman of about middle age. Not being at home, Dr. Morse was called, and afterwards Dr. Sheldon. I learn similarity of symptoms to the first case above described existed, and the case terminated fatally before morning. She had that day been to South Boston, and had been as well as usual. I mention this case because of its intimate connection with one following. In the same house, on Sunday, Sept. 9th, I was called to see Mrs.

Kolb, a sister of case preceding [Case No. 17 of the Table]. She had had profuse diarrhœa and some cramps. Algide appearance not well marked; breath, tongue and extremities cold; pulse rapid and feeble; great thirst and obstinate vomiting. Subsequently in the day the symptoms became aggravated, and were attended by great emaciation and prostration. The most powerful stimulants seemed to be of no avail. She rallied, however, and towards the close of the following day her symptoms became better. Being obliged to leave town for a day or two, the case passed from my hands. I learned, however, that reactionary fever set in, and she died.

In the treatment of these cases, stimulants, when tolerated, were wholly ineffectual. Astringents seemed to be of no use whatever. Opiates, to a certain degree, proved useful in subduing pains. In fact, of the various means tried, nothing seemed to be of especial benefit or to affect materially the progress of the disease. Five of the six cases proved fatal.

Reported by Dr. H. G. CLARK.

The undersigned reports one case of cholera, at No. 16 Bridge St. July 23d, 7, P.M. Mrs. W. [Case No. 4 of the Table], 30 years old; Irish; mother of three children. Reported to have been sick for twenty-four hours; the last twelve having had frequent watery discharges and vomiting; the last four hours cramps in the calves of the legs; no urine since last night. Now, vomiting and purging; cramps; loss of voice; pulse small, 130; skin dry, but cool, pinched and bluish; eyes sunk and bloodshot.

24th, at 8, A.M.—Vomiting and cramps ceased after midnight; has had two or three rice-water discharges; no urine; skin and pulse the same. 7, P.M.—No dejections or vomiting; five or six ounces of urine passed. Has slept half an hour, at several intervals, and expresses herself as better.

25th, 8, A.M.—More color; better pulse, 100, and has slept several hours; more urine. 9, A.M.—One small dejection, with some odor and color. Convalescing, with appetite, but feels very weak.

*Treatment.*—Hot rice-water, well peppered, and strong coffee, one ounce of each, alternating at intervals of two hours. Sulphuric acid, five drops in one ounce of water, every hour, with half an ounce of beef-tea. No other food or drinks permitted. Dry warmth to abdomen and legs.

*Locality, &c.*—Tide-water sometimes in cellar; chickens in the yard, which is small and dirty; a drain from a sink used by families up stairs discharging into it. House ill-ventilated and overcrowded.

Reported by Dr. A. B. HALL.

September 11th, 1866. M. J. L. [Case No. 21 of the Table], a girl aged 2 years. Resided in Carroll Place. This child had a

slight diarrhoea in the morning early, and appeared a little depressed; slept an hour. At 11 o'clock vomiting, purging and cramps commenced. The discharges were clearly rice-water in character, and continued, with the vomiting and cramps, till 1 o'clock, when I saw her for the first time. She was then pulseless; extremities cold; surface blue; lips livid; half unconscious; eyes sunken; in fact, she was in the stage of collapse, and died in fifteen minutes afterwards, or two and a quarter hours from the time the vomiting and active symptoms commenced. The mother thinks she passed no urine during the morning hours.

A boy, 4 years old, living in the house adjoining, died four days before, with the same train of symptoms. He was sick three or four days. The mother of the girl was with him every day during his sickness, and the last day her daughter was present, and about his bed most of the time. The houses where the children died are at the lower end of the place or court. I did not see the boy during his sickness. His death was returned as cholera morbus.

November 4th, 1866. Antoine De Silva [Case No. 36 of the Table]; Portuguese; aged 33; seaman; at No. 10 Cooper St. The patient was a stout, robust, muscular man, having been in Boston only eight or ten days. He came from the coast of Africa, where there was much sickness when he left. He was married, and the father of two children. At one time he had chronic diarrhoea for ten months; was subject to relapses from time to time.

Nov. 3d.—A diarrhoea, with copious discharges, commenced; after standing a few moments in the vessel, the discharges became frothy. On Sunday, the 4th, he had rice-water discharges, vomiting and violent cramps. The vomiting and discharges were quite frequent, and the muscular contractions of the lower limbs very painful. When I saw him he was in a collapsed stage; pulse absent; extremities cold; skin bluish; great thirst; bladder empty; mind clear. Morphia (in small doses) and bismuth checked the vomiting, but not the dejections; stimulants failed to restore the pulse.

5th.—Condition of the patient the same, except the vomiting. The temperature of the room was elevated to 96–100°. With this increased heat of the atmosphere in the room and stimulants of hot brandy and water, with external use of mustard baths, the warmth of the body gradually returned, and the patient ultimately recovered. During three days he did not pass any urine.

This man was sick about ten days. He was pulseless most of the time for the three days during the time when there was no secretion of urine. At no time was there aphonia or delirium. The heated atmosphere of the room did much to restore warmth and equalize the circulation. This man had indulged in some irregularity in eating the night previous to his attack. He resided only a few rods from where the children died in Carroll Place.

Reported by Dr. J. L. WILLIAMS.

Having suffered from a disagreeable, though nearly painless diarrhœa (which I tried unsuccessfully to check by such moderate doses of tincture of opium as would not interfere with my avocations), accompanied by lassitude and great nervous depression for ten or twelve days previous, I was taken suddenly worse on the evening of the 25th of September. [Case No. 30 of the Table.] At first, sharp purging of fœcal and watery matter, then sudden and violent vomiting, first of unaltered ingesta (a light supper of tea and dry toast), then of the characteristic rice-water fluid, which was expelled with much force, but without the slightest feeling of nausea, and without premonition. The first characteristic alvine discharge was very copious; afterwards (I think from the effect of the remedies used), though frequent (ten or twelve during the night), they were quite scanty. The cramps were not a prominent symptom, affecting principally the muscles of the calf, and slightly those of the abdominal walls. They were severe only at one time, and then for about three or four minutes. I suffered more from a sensation of burning heat and from extreme oppression at the præcordia than from any other symptom. Pulse at one time 44, thready. No secretion of urine until the afternoon of the following day. When attacked, I was in my office, and was unable to get home; and when I became aware of the danger of my condition, as no one sleeps in, or remains in the building after six o'clock, I tried to call a policeman to get me a coach, but was unable to, from complete aphonia, although I retained sufficient strength to reach the water-closet in the same room.

As to the treatment. When I became thoroughly alarmed, knowing that I was alone in this large building (Commercial Block), and remote from assistance, being convinced of the futility of trusting to small doses, I took at once tr. opii, f ʒ ij.; ætheris, f ʒ i.; tr. capsici, gtt. l.; spt. vini Gallici, f ʒ ij.; aquæ, f ʒ iss. M. This was retained for about twenty minutes, and I think had a most salutary effect. I had to repeat half the above dose four times at varying intervals, and about three o'clock the cramps had entirely left me; the discharges ceased, and I slept until nine o'clock, from which time I began to recover, but for four weeks I was quite feeble.

With regard to exposure to any exciting cause I would say, that my office is in Commercial Block—a large granite building—very favorably located for sanitary influences (with two exceptions, stated below), fronting on the water, opposite the Eastern Packet Pier; circulation of air, excellent. Office up stairs, one story, and no dwelling houses in the vicinity. The light is as good as the ventilation, the sun shining in the greater part of the day.

The two exceptions above mentioned are:—1st. In hot weather,

for about two hours at low water, the mud of the dock basin opposite being exposed, and one (and I am not certain but two) of the common sewers discharging therein, when the wind is from the east and light, the smell is peculiarly oppressive and sickening. The other exception is the fact that the water-closet, which is in the large apartment with which the office communicates, is used by the people on the lower floor, ship-chandlers, and they often send their customers and other strangers, chiefly seafaring men, up to use it; and it is consequently, at times, somewhat of an annoyance, and *might*, haply, become a focus of infection, if used by any one suffering from cholericine.

Reported by Dr. B. E. COTTING, Roxbury.

Sept. 28. P., aged about 40 years [Case No. 32 of the Table]; occupation, piano-forte-key maker; residence, Myrtle St., Roxbury; preliminary diarrhœa slight, principally on the afternoon previous to the attack in the night; discomfort in abdomen all that day. Rice-water discharges, in great quantity, from bowels; also vomited. Cramps, not very severe, in legs. Blueness and shrivelled skin quite marked. Urine suppressed forty-eight hours, or thereabouts. Pulse at times apparently gone, for hours scarcely perceptible.

*Treatment.*—Tinct. opii, heat to surface, especially the extremities; bed, good nursing.

*Result.*—Recovery; convalescence rapid; went into the country a week afterwards.

The patient had not been exposed by contact with other cases of cholera or diarrhœa, by personal indiscretions, by living in or visiting unhealthy or infected places. The patient had a good home, and lived well. I have not known any case to follow exposure to this one under my care.

In some cases I have known exposure to dead bodies and their effects *without* any ill results—for instance, I saw repeatedly many (a dozen or more) *kiss*, and otherwise handle the dead and their effects; have known soiled beds, &c., to be sent to public cleansers; and, in another case, even to be used uncleansed immediately (the same and subsequent nights) after the dead was removed therefrom, without any injurious consequences resulting from any of these exposures.

I have been informed that there was a great wake over the first of the "Davis St. cases," Roxbury, and that all who afterwards succumbed (of those cases) had either been at the wake or were intimates of the family.

Reported by Dr. W. W. WELLINGTON, of Cambridgeport, Mass.

September 17, 1866. Mr. J. P. [Case No. 24 of the Table], aged about 55; printer; residing on Brookline St., Cambridgeport. At 8, A.M., after a rather restless night, he began to have pain

in the bowels, accompanied with diarrhœa. This was followed by vomiting. What was passed from the bowels, and what was vomited, was described as having the appearance of rice-water. Vomiting and purging continued through the forenoon.

At 3, P.M., when first seen, he was in a state of collapse. Pulse was hardly perceptible; skin cold, shrivelled and blue; tongue cold; severe cramps in legs; no urine so far as known; voice reduced to a whisper; considerable thirst; mind clear; restlessness; dejections in bed and involuntary, the nature of which could not be made out, but probably of the "rice-water" character. Continued thus through the night, and died at 8, A.M., on the following morning.

*Treatment.*—Stimulants, in the form of brandy and wine whey, freely; external heat to body, especially extremities; sinapisms to epigastrium and legs. For the first few hours, thirty drops of the following, every half hour in water. *R.* Spts. *lavendulæ comp.*, f ʒ ss.; *tr. capsici*, f ʒ i.; *spts. camph.*, *tr. opii deodoratæ*, aa f ʒ ij. *M.* Afterwards, six minims of chloroform, dissolved in alcohol, mixed with water, were given every half hour. Broth, beef-tea, milk punch, were freely administered. Treatment had apparently no effect whatever, either good or bad.

This patient had no preliminary diarrhœa; had not been exposed in any way to other cases of cholera or diarrhœa: had committed no indiscretion in diet, or in anything else, so far as known; lived in a healthy locality; premises were remarkably clean and neat; cellar, &c., had been whitewashed and cleansed in the spring in view of the possible coming of the cholera; drainage was good; in fact, after diligent examination and inquiry, no cause for the disease could be discovered.

After death, the premises were thoroughly cleansed; disinfectants were freely used; all clothing and bedding, which could not be washed and disinfected, were burned.

Mr. J. P. died on Monday. On Tuesday afternoon his wife was taken sick, and died the next morning. She was attended by a homœopathic physician (Dr. H. L. Chase), and from his report of the case there can be no doubt that she died of cholera.

There were three or four other persons living in the same house at the time; none of these had the disease, or anything resembling it.

On the 30th of July, 1866, on the same street, and a few rods from the house occupied by Mr. J. P., I was called to see a patient with symptoms similar to those just described. She was a woman aged 50; had been sick several hours with vomiting and diarrhœa; discharges copious, thin, and darker than rice-water. Found her greatly prostrated; pulseless; voice reduced to a whisper; face livid; extremities cold, with cramps in legs, but no vomiting or dejections after I saw her. No previous diarrhœa; locality healthy; had been exposed to no cases of cholera or diarrhœa. Under treat-

ment, similar to that described in preceding case, she rallied, and was well in a few days. No other members of the family were affected with similar symptoms.

Reported by Dr. A. C. WEBBER, of Cambridgeport, Mass.

September 21, 1866. Andrew E. Miller [Case No. 26 of the Table], American; shoemaker; married; aged 35. Worked in Boston; boarded with Mrs. Welch, in the lower end of "Mason's Block," Main Street, near the Universalist Church, Cambridgeport. The patient has had diarrhœa five or six weeks; but having a good appetite, during the past week has eaten freely of boiled cabbage and raw cabbage and vinegar. Last night he ate heartily, and took raw turnips after supper. About one o'clock, A.M., had much pain in bowels; soon began to vomit and purge. Dr. A. P. Clarke was called to attend him at two o'clock, when he had some cramps in the extremities. In Dr. C.'s absence, I was called at 6, A.M. Found the patient in a bed in a small attic chamber, not more than twelve or thirteen feet above the ground, with one small window opening into a dirty stable-yard. He was writhing with pain in abdomen and frequent cramps in limbs; vomiting mucus and bile, and occasionally having a thin discharge from the bowels, resembling, in consistency, color and odor, the whey of milk. Pulse thready, feeble, and about 125. Skin cold, shrivelled, moist and slightly livid; eyes sunken, countenance anxious and pinched, tongue moist; voice hoarse, breathing somewhat difficult; abdomen tense and contracted. Thinks he has urinated since the attack. Has taken opium and stimulants.

To have sinapism to entire abdomen; to be rubbed with alcohol and spts. terebinth., and to take 5 to 10 drops of chloroform diluted with alcohol, and one-eighth grain of morph. sulph. in bitter almond syrup, every hour. Dry heat to be applied to body and extremities. Beef tea, milk and water, and brandy or whiskey, p. r. n. To be removed to a better ventilated room.

10, A.M. Vomiting diminished, but dejections and cramps more frequent. Skin livid, cold and moist; tongue leaden and moist; pulse very feeble and frequent; action of heart irregular, jarring.

2, P.M. Pulse at the wrist gone; voice a hoarse whisper; tongue cold and blue; skin of entire body cold, shrivelled, livid and damp; heart at times acting feebly, and then tumultuously; vomiting and dejections less frequent; cramps more severe and general. Has had no discharge of urine since 6, A.M.

This patient continued to fail till 9, P.M., when he died. At 6, P.M., was delirious, and afterwards at times seemed to sleep uneasily.

September 21, 1866. N. B. F. [Case 27 of the Table], American; carpenter; 40 years old; married. Boarded in same house as previous case. Has not been well for several days. Had some

diarrhœa, which was checked on the 20th. In the afternoon of that day ate a muskmelon which occasioned some pain in abdomen, for which he took Epsom Salts. Assisted in the case of Miller until 1, P.M., this day, when he was seized with violent cramps in extremities and abdomen, and with chills and great prostration. Took "Mist. Capsici. Comp." (?) by advice of Dr. Allen, with whiskey, &c., without relief. At 5, P.M., came under my care, when he was unable to sit up; countenance pinched and anxious; skin shrivelled, dusky and damp; pulse 140, small and thready; breathing labored, voice hoarse, action of heart confused and irregular. No dejections, vomiting nor micturition since attack. Has frequent severe cramps in abdomen and extremities—most severe in fingers and calves of legs. To take 10 drops chloroform and one-eighth grain sulph. morphine in bitter almond syrup every hour, with whiskey and spts. ammonia, p. r. n. To have dry heat externally, and to be rubbed with turpentine and alcohol freely. Beef tea, ice and milk for nourishment.

10, P.M. No improvement; no vomiting; no dejection; no micturition since last visit. Skin more shrivelled, cold and livid; pulse quick and feeble; breathing labored; action of heart swashing or churning; cramps not quite so frequent, but very severe.

Saturday, 22d, 6, A.M. Since 3, A.M., has had very little ease. The attendants becoming fatigued or frightened, left the house early this A.M. By report, has had no vomiting nor purging. Expecto- rates freely a thick tenacious fluid, resembling chocolate in color. Skin very livid, cold, shrivelled and clammy; pulse imperceptible—only one sound of heart distinguished; breathing slow and irregular. Has great thirst, and begs for whiskey in a faint whisper; cramps still severe.

9, A.M. Is failing fast. Since last visit has had involuntary dejections, at first fœcal, now thin and watery.

This patient continued to sink until 12½, P.M., when death terminated his sufferings. In his last hours he was attended by Mr. Rufus Wyman, of Roxbury, who in passing the house learned that patients were suffering for want of care, and heroically volunteered to do what he could to serve them.

Friday, September 21st, 1866. At 2, P.M., was called to attend Henry E., a little boy about 5 years old [Case No. 28 of the Table], living in the same house with the two previous cases. He has had looseness of bowels for two or three weeks; lately the discharges have contained some blood and mucus. This P.M., after dinner, vomited freely, and soon after had several copious discharges from bowels, resembling, as his mother said, thin gruel. These were followed quickly by cramps in his hands, feet and abdominal muscles. Now appears exhausted, pale, eyes sunken, nose pinched; tongue moist; pulse small and quick; abdomen collapsed, soft. Extremities cold and moist. Everything taken into his stomach is immedi-

ately rejected. Has taken a mixture of tinct. camph., opii, rhei and capsici.

To take one tea-spoonful of the following mixture every hour:—  
 ℞. Alcohol. rectific., fʒ i.; chloroform., m. v.; syr. amygdal. amar., fʒ vss.; acidi hydrocyan. dil., m. ii.; sol. morph. sulph., fʒ i. M. Brandy and milk freely. Sinapism to abdomen and legs. To be kept in dry blankets and surrounded by hot bricks.

5, P.M. Much the same. Dejections like rice water. Has had several paroxysms of cramps. Finger nails livid and whole cutaneous surface dusky. Has great thirst; no urine since first visit; very restless; pulse small. Continue the treatment, with the addition of small pieces of ice every ten minutes.

9, P.M. Has slept a little; skin not so cold; vomiting and dejections less frequent, but same in appearance.

Saturday, 6, A.M. Was very restless most of night, but had a few short naps. No vomiting since midnight; dejections smaller and said to be of a darker color. The last is watery and mixed with dark green particles. Has had slight cramps, and some paroxysms of pain in abdomen. Extremities still very cold, but heat of body increased; pulse stronger and larger; countenance pale and pinched as before; finger nails not so livid. Continue the mixture every 2d hour—with stimulants, beef tea and milk.

9, A.M. Has passed a little urine; temperature of skin increased; pulse 130, fuller than yesterday; voice stronger; tongue slightly brown and moist. Limbs can be warmed by external heat, but soon cool again. One dejection since last visit, which is small and resembles farina gruel, tinged with green. No vomiting nor cramps since last visit. Says he feels better. Replace chloroform mixture by ℞. Tinct. catechu et tinct. cinnam., aa fʒ ss.; tinct. opii acet., m. xvj. Dose 40 drops every three hours. Other treatment as before.

2, P.M. Continues to improve; dejections dysenteric, every three hours or so. Manifests some interest in surrounding objects. To have boiled flour and milk. Brandy, p. r. n.

5, P.M. Mother took him out on to the sidewalk to avoid his being taken to the Almshouse. Went to the Magazine Street Hospital.

7½, P.M. Sleeping quietly; was very cold when he first reached the house; external heat soon warmed his body, but hands and feet still cool; pulse 140, fuller, slightly irregular. Has passed water again. No lividity of skin; no cramps. Dejections small, dark colored, and of a slightly fecal odor. To take mixture after every discharge.

From this time patient continued to improve slowly, and was discharged on the 29th.

Patrick D., Irish; baker, 25 years old [Case No. 29 of the Table]; employed at Kennedy's cracker-bakery, adjoining the premises of Mrs. Welch, on Main Street, where he boards. Was in

good health up to 1, P.M., on Friday, Sept. 21, 1866. Worked in the forenoon; ate a light dinner. Soon after, had pain in bowels, large watery dejections, nausea and vomiting; and becoming too feeble to keep about, went to bed.

2½, P.M. Has had much pain in abdomen, and many dejections; the last two or three, observed by myself, were found to be like rice-water; vomits every thing he takes into his stomach. Has had cramps, during last hour, in hands, fore-arms and legs; extremities cold; skin chilly and damp, but not livid; pulse 150, small; breathing quick and labored.

To have 5 minims chloroform, one-eighth grain morphine, 1 minim dilute hydrocyanic acid, in syrup every hour. Sinapism to abdomen; turpentine embrocation to whole surface; dry heat externally; whiskey, ice, milk and beef tea, p. r. n.

6, P.M. About the same. Continue treatment.

10, P.M. Feels a little better; has retained a part of medicine and drinks. Thinks he has had micturition since attack; pulse 140, small; dejections and cramps not so frequent. Continue treatment.

Saturday, Sept. 22d, 6, A.M. Has slept some; feels better; went down stairs after the attendants left this A.M., for some ice. Dejections of same character as yesterday, occurring about once every hour; vomiting not so frequent; had a few cramps before daylight. Skin warmer; pulse 140, small, regular; breathing good. Wishes for something to eat.

10, A.M. Continues to improve; two dejections since last visit;

## SYNOPSIS OF CASES OF CHOLERA

No.	Name.	Profession.	Age.	Sex.	M. or S.	Date.	Residence.	Hygienic Influences.	Previous exposure, &c.	Premontory Diarrhoea.
1	M. H.	Laborer.	36	M.	M.	July 20th.	Davis street, Roxb'y.	Bad.	None.	Six hours.
2	H. C.	Harness Maker.	50	M.	S.	July 21st.	7 Cottage, E. Boston.	Good.	None known.	Yes.
3	Mrs. A. F.		50	F.	M.	July 23d.	96 Meridian St., East Boston.	Lives on marsh, but house well drained and ventilated.	None known.	Vomiting and purging two days before.

vomited once after drinking freely; no cramps. To keep in bed and continue mixture every two hours.

3, P.M. Improved gradually up to 2½, P.M., when his friends removed him to West Roxbury, not willing to have him go to the cholera hospital. This man was kindly cared for by Mr. Rufus Wyman, during the day.

It will be observed that all of these cases occurred in the same family, and within a few hours. Dr. A. P. Clarke attended two other cases in this house at the same time, both of which terminated fatally. The house is situated in the end of an old brick block, erected on a low, gravelly knoll, at the corner of Main and Brookline Streets, a short distance from an extensive salt marsh, and only a few feet above the high water mark. It is reported that until within a few years, the contents of the sink drains of this block of six houses were allowed to flow over the surface of the ground in the rear, and that this accumulation of filth has never been removed. Lately a "tidal drain" has been made upon the premises; but the drain of Mrs. Welch's house was not in a satisfactory condition when these cases occurred. As has been mentioned before, there was a dilapidated stable in the rear and at one side of the house, and the intervening space was in a filthy condition.

It should be remarked, that two fatal cases of cholera, as reported by Dr. W. W. Wellington, had occurred on the 17th and 19th of the same month, in a house less than six hundred feet from these premises.

IN BOSTON AND VICINITY DURING 1866.

Symptoms.	Result.	Duration.	Treatment.	Supposed exciting Causes.	Subsequent Cases.	Reported by.
Violent; of usual character. Pulse not entirely absent.	Recovery.	Reaction 4 A.M. 21st. Tardy convalescence	Friction; external heat; stimulants; injection (subcutaneous) of morphia, gr. ¼, and repeated.	None known.	None.	Dr. L. R. Sheldon.
Usual symptoms, but pulse did not fail. Urine suppressed two days; no blueness of surface.	Recovery.	48 hs.	Opii 1 gr. every h. until vomiting, purging and cramps had ceased. Whiskey <i>ad lib.</i>	None known.	None.	Dr. P. M. Crane.
Usual symptoms, but pulse could be felt; blueness of surface moderate; skin of hands corrugated.	Recovery.	Well in about 3 ds.	As above. Instead of whiskey, brandy; sinapism to epigastrium.	None known.	None.	" "

## SYNOPSIS OF CASES OF CHOLERA

No.	Name.	Profession.	Age.	Sex.	M. or S.	Date.	Residence.	Hygienic Influences.	Previous exposure, &c.	Premontory Diarrhœa.
4	Mrs. W.		30	F.	M.	July 23d.	16 Bridge Street.	Very bad.	None known.	Yes.
5	Mrs. R.		55	F.	M.	Aug. 16.	Border Street.	Favorable.	None known	Ailing several ds. ; diarrhœa 1 d.
6	M. K.	Ma- chinist.	26	M.	M.	Aug. 31.	86 War- ren St.	Fair.	None known.	None.
7	Mrs. Brady.		40	F.	M.	Sept. 2.	Davis Street, Rox- bury.	Very bad.	None known.	For a few hours.
8	Mrs. P. W.		43	F.	M.	Sept. 2.	E. Can- ton.	Favorable.	None known.	1 day.
9	Miss A.	Labor'g woman.	30	F.	S.	Sept. 3.	Fellows Ct.	Bad.	None known.	2 or 3 hours.
10	Mrs. C. S.		44	F.	M.	Sept. 3.	Washt'n Street, near Rox- bury.	Residence within 10 rods of stagnant water.	None known.	None.
11	Miss P.		28	F.	S.	Sept. 5.	Chester Park.	Excellent.	None known.	None.
12	Mr. A.	Clerk.	19	M.	S.	Sept. 6.	Chester Park.	Excellent.	None known.	None.
13	M. F.	Lab orer.	40	M.	M.	Sept. 7.	3 Rock- ingham Ct.	Lives on marsh — well drn'd, open to air.	None known.	12 hs.

IN BOSTON AND VICINITY DURING 1866.

Symptoms.	Result.	Duration.	Treatment.	Supposed exciting Causes.	Subsequent Cases.	Reported by.
Usual Symptoms.	Recovery.	36 hs.	Rice-water well peppered; sulphuric ether in min. v. doses in aq. 1 fl. oz. every hr.; beef tea; dry warmth to abdomen.	None known besides local hygienic influences.	None known.	Dr. H. G. Clark.
Usual symptoms. Urine suppressed; pulse feeble.	Recovery.	Better in 24 hs.; left chamber in 1 m.	Opiates; stimulants; external heat; and sinapisms.	None known. In '49, 7 deaths from cholera in adjoin. houses; at that time no drain, and 2 ft. stagn't wtr in cellar. In 1850 drains laid and premises thor'ly cleaned	None.	Dr. D. V. Fols.
Usual symptoms; no collapse.	Recovery.	10 hs.; well in 48 hs.	Astringents and opiates; friction with dry mustard.	Had worked unusually hard	None known.	Dr. Calvin Ellis.
Usual symptoms.	Death	7 hs.	"Restoratives," with little or no effect.	None known.	Pts. 15, 16 & 22 had visited her during her sickness.	Dr. G. J. Arnold.
Of the most violent character.	Death	12 hs.	As in case No. 1. Beef tea.	Over-fatigue during very hot weather.	None.	Dr. L. R. Sheldon.
Violent.	Death	12 hs.	Astringents, opiates, stimulants.	Perhaps over-fatigue.	Case of Mrs. Kolb. No. 17.	Dr. G. J. Arnold.
As above.	Death	11 hs.	As No. 1, except morphine by mouth instead of by injec.; sulph. acid drinks, injection of beef tea.	None known except proximity to stagnant water.	None.	Dr. L. R. Sheldon.
As above, but no abdom. evacuat'ns till after death.	Death	2 ds.	Calomel with morphia, etc.	None known.	None.	" "
Violent, but pulse not quite extinct.	Recovery.	Reaction in 12 hs. Tardy convalescence.	As in all this reporter's cases, except No. 11.	Imprudence in diet and drink. Took 4 qts. lemonade day before attack.	None.	" "
Usual symps., but no blueness or corrugation of skin; urine not suppressed, pulse not much reduced.	Recovered.	About 12 hs.	As above, whiskey instead of brandy.	None known.	None.	Dr. P. M. Crane.

## SYNOPSIS OF CASES OF CHOLERA

No.	Name.	Profession.	Age.	Sex.	M. or S.	Date.	Residence.	Hygienic Influences.	Previous exposure, &c.	Premontory Diarrhea.
14	J. W. Goutier.	Seaman.	23	M.	M.	Sept. 7.	122 Bremen St. E. B.	House in good condition.	Returned from Philadelphia while cholera was there.	4 days.
15	Mrs. Sliman, niece of No. 7.		22	F.	M.	Sept. 8.	Kemble Street, Roxb'y.	House extremely filthy, on marshy ground.	Had visited case 7 during her illness.	For a few hours.
16	Mrs. Carr.		50	F.	M.	Sept. 8.	As above, same house.	As above.	Took care of her daughter, No. 15.	None.
17	Mrs. Kolb, sister of No. 9.		26	F.	M.	Sept. 9.	Same h. as No. 9.	Bad.	Her sister's case, No. 9. Sick & died in same bed.	12 hours.
18	Mrs. S.		40?	F.	M.	Sept. 9.	Eaton Street, Roxb. near Boston.	In immed. neighb. of Davis St., where hygienic infl. are as bad as possible.	Had visited case No. 7 during her sickness while suffering fr. diarrh.	2 days.
19	Mrs. G.		35	F.	M.	Sept. 10.	Fellows Ct.	As bad as possible.	Lived next h. to two of Dr. Arnold's cases.	None.
20	James M.	Shoemaker.	40	M.	M.	Sept. 10.	Davis Street.	As bad as possible.	None.	None.
21	M. J. L.	Girl.	2	F.	S.	Sept. 11.	Carroll Pl.	Very bad.	Boy in next h. died of cholera 4 ds before. P.'s mother with him dly & p. by him last day.	A few hours.
22	Mr. Sliman.	Laborer.	25	M.	M.	Sept. 13.	As 15 & 16.	Extremely bad.	To cases 15 and 16.	None.
23	A. A. Gould.	Physician.	61	M.	M.	Sept. 14.	Boylston Street.	Good.	None known.	6 hs.
24	J. P.	Printer.	64	M.	M.	Sept. 17.	Brookln. Street, Cambr.-port.	Good.	None known.	None.

IN BOSTON AND VICINITY DURING 1866.

Symptoms.	Result.	Duration.	Treatment.	Supposed exciting Causes.	Subsequent Cases.	Reported by.
Cramps very severe; rice-w. evac. by vom. and purg. P. almost imperc.; skin cold, moist and livid; U. suppressed.	Death.	18 hs.	Chlorof. opium, capsicum, beef tea, brandy, friction.	Had passed 2 or 3 weeks in Philadelphia just before attack.	None.	Dr. B. F. Campbell.
Severe, but not fully reported.	Recovery.	Reaction in 24 hs. Tardy conval.	Astringents, opiates, stimulants.	Perhaps exposure to case No. 7.	Cases Nos. 16 and 22.	Dr. G. J. Arnold.
Severe; in collapse when first seen.	Death	16 hs.	As above.	As above.	Case 22.	" "
Violent.	Death from react. fever.	4½ ds.	As above.	Case of her sister, No. 9.	None.	" "
Of the most violent character.	Death	30 hs.	Opiates and stimulants, etc. etc.	Locality of residence and prob. exposure to Mrs. Brady's case, No. 7.	None.	" "
Violent, but pulse not quite extinct.	Recovery.	Reaction in 12 hs. tardy conval., miscarriage.	As in this reporter's other cases, and with small doses of cal. & morph.	Residence unhealthy.	None.	Dr. L. R. Sheldon.
Violent.	Recovery.	Reaction in 8 hs.; slow conval.	As above,	Residence & excessive work in very hot weather.	None.	" "
Usual symptoms.	Death	2½ hs.	Patient moribund; died in 15 min. after arrival of physician.	Contact with fatal case in next house.	None known.	Dr. A. B. Hall.
Violent.	Death	11 hs.	As in this reporter's other cases.	The case of his wife No. 15, & No. 7	None.	Dr. G. J. Arnold.
Severe cramps, copious ricewater disch. Face & hds shrunk, livid, skin cold, clammy, no pulse, voice very feeble.	Death	11 hs.	Stimulants by mouth & per anum, &c.	Eating freely of pears.	None.	Dr. Samuel Cabot.
Usual symptoms. Collapse.	Death	24 hs.	Stim'nts, brandy, ext. heat, sinap., mod. opiates, carminatives & liquid nourishment.	None known.	P.'s wife died 2d d. after, fr. cholera of 12 to 15 hs.	Dr. W. W. Wellington.

## SYNOPSIS OF CASES OF CHOLERA

No.	Name.	Profession.	Age.	Sex.	M. or S.	Date.	Residence.	Hygienic Influences.	Previous exposure, &c.	Premontory Diarrhœa.
25	G. Sargent.	Teamster.	37	M.	M.	Sept. 20.	17 Napier St.	Bad.	None known.	2 or 3 days.
26	A. E. M.	Shoemaker.	35	M.	M.	Sept. 21.	Main St. Cambridgeport.	Old house on low land near marsh. Drain out of order.	None known.	More or less five or six weeks.
27	N. B. F.	Carpenter.	40	M.	M.	Sept. 21.	As above.	As above.	Case 26.	Several days.
28	Boy.	Minor.	5	M.	S.	Sept. 21.	As above.	As above.	Cases 26, 27.	Two or three weeks.
29	P. D.	Baker.	25	M.	S.	Sept. 21.	As above.	As above.	Cases 26, 27, 28	None.
30	J. L. W.	Physician.	37	M.	S.	Sept. 25.	140 Commercial St.	Exp. daily to emana. fr. sewer open'g into dock opp. Filthy water closet.	None known.	10 or 12 days.
31	N. G.	Seaman.	26	M.	S.	Sept. 25.	308 Hanover Street.	Not bad.	None known.	2 or 3 days.
32	P.	Piano-forte key maker.	40	M.	M.	Sept. 28.	Myrtle Street, Roxb'y.	Good.	Not previously exposed.	Slight part of 1 day.
33	S. G.	Teamster.	28	M.	M.	Sept. 30.	Jeffers'n Block, North Street.	House filthy, crowded, near opening of large dr'n into dock.	Case of his brother, No. 31.	12 hs.
34	Mrs. B. W.	Widow.	45	F.	S.	Sept. 30.	Washt'n St. near Roxb'y.	Walls in r'm m'ldy fr. leaky sink in r'm above;filth	None known.	1 day.
35	C. McD.	Junk dealer.	35	M.	M.	Oct.	Rear of 93 Prince Street.	Very bad.	None known.	Yes.
36	A. de Silva.	Seaman.	33	M.	M.	Nov. 4.	10 Cooper St.	Not bad.	None known.	1 day.

IN BOSTON AND VICINITY DURING 1866.

Symptoms.	Result.	Duration.	Treatment.	Supposed exciting causes.	Subsequent cases.	Reported by.
Usual sympt's; no pulse; skin shrivelled & of a leaden hue; voice husky.	Death	About 12 hs.	Stimulants, friction & sinap to abd. Case from first regard'd hopeless	Residence.	None.	Dr. A. J. Fenn.
Vomiting, purging, cramps, rice-water discharges. Collapse.	Death	21 hs.	Sinapisms, alcohol, turpent., heat exter.; chlorof&alcoh. morph.; beef-t. brandy.	Neglected diar. crude and indigestible food.	Cases No. 27, 28 and 29.	Dr. A. C. Webber.
Watery dejections, severe cramps, suppression of urine. Collapse.	Death	12 hs.	As above. Ice.	Neglected diar. muskmelon; attendance on case 27.	Cases No. 28 and 29.	" "
Usual characteristic symptoms, but pulse not ext.	Recovery	Conval. in 8 hs. well in 8 ds.	As above. Hydrocy. acid.	As above.	Case 29.	" "
Usual symp., but no true collapse.	Recovery.	Conval. in 9 hs.	As above.	Works in bld. adj. residence; influence of above cases.	None.	" "
Usual sympt's; ext. præcordial oppress'n; complete aphonia. Urine suppressed 20 hours.	Recovery.	24 hs.	Large doses of opiates and stimulants.	None known.	None known.	Dr. Jas. L. Williams.
As usual.	Death	48 hs.	Ammonia in camph.-water; brandy & hot water.	Very intemp., attack complic. with del. trem.	Two. See below, No. 33.	Dr. James Ayer.
As usual, but cramps not very svr. No U. for 48 hs. P. abs. at tms	Recovery.	12 hs. Conval. rapid.	Tr. opii, heat to surface, rest, good nursing.	None known.	None known.	Dr. B. E. Cotting.
As usual.	Death	34 hs.	Tr. op. by mouth and inj. Alkaline mixt. brandy, eth. beef-tea, cof. &c.	Intemp. fr. boy-hood till 2m bf Ate cold veal & ox-tail soup after diarrhœa commenced.	One, that of his wife.	Dr. James Ayer.
Violent, but P. not quite extinct.	Recovery.	Reaction in 12 hs. Tardy conval.	As in other cases of this reporter.	Over-fatigue & heat after diarrhœa commenced.	None.	Dr. L. R. Sheldon.
Usual sympt's; had been in collapse 6 hours.	Recovery.	1 week.	Ext. warmth & stimulants.	None known.	None known.	Dr. A. B. Hall.
Usual sympt's severe; suppr. of urine 3 days & no pulse most of the time.	Recovery.	10 days.	Moderate opiates, bismuth, stim'nts, sinap. Temp. of room kept at 96-100°.	Imprudence in eating the previous night; lived very near Carro 1 P acc	None known.	" "

## SYNOPSIS OF CASES OF CHOLERA

No.	Name.	Profession.	Age.	Sex.	M. or S.	Date.	Residence.	Hygienic Influences.	Previous exposure, &c.	Premontory Diarrhœa.
37	V. Augur.	Mechanic.	25	M.	S.	Nov. 15.	20 Salem St.	Good.	None.	Several days.
38	W. E. Townsend.	Physician.	46	M.	M.	Nov. 16.	Beacon St.	Excellent.	Visited fatal case of cholera a few ds previous.	Had several atkks in sum'r prior to last sickness.
39	E. A. S.		38	F.	M.	Dec. 20th.	High Street, S. Malden.	Excellent.	None.	2 hs.

The reports which have been received, as appears by the cases which we have given, show beyond question that the educated and uneducated, the wealthy and the poor, the old and the young, the prudent and the imprudent, the resident and the non-resident, furnished victims to this disease. They also show that locality does not afford complete protection from this pestilence; but that the majority of the cases that occurred during the year 1866 were in the most unhealthy localities, and that the mortality was the greatest soon after the excessively warm weather in the early part of September.

Among the 39 cases reported there were 19 deaths, of which 2 were of physicians, 6 married women, 2 unmarried, 1 child, a girl, 4 mechanics, 1 tradesman, 1 laborer, 2 seamen.

Respectfully submitted by the

Committee, {  
L. R. SHELDON, M.D.  
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IN BOSTON AND VICINITY DURING 1866.

Symptoms.	Result.	Duration.	Treatment.	Supposed exciting Causes.	Subsequent Cases.	Reported by.
Usual sympt's; cramps severe; rice-water dis.; u. suppressed.	Death	17 hs.	Brandy & capsicum in liberal doses; camph., liq. potassæ.	Was in habit of visiting privies of the B. & M. R. R. Depot.	None.	Dr. Eli Thayer, Jr.
Usual sympts, rice wtr disc. with slight odor; surf. cold & livid; ur. suppr.; no p. at times, occ. faint'g	Death	About 30 hs.	Opium by mouth, subc. inj. of mor., meat-tea, laud'm and brandy, per. anum, acid sulph.	Had visited a cholera patient twice.	None.	Dr. Chas. E. Ware.
Usual sympt's; severe cramp; urine totally suppressed.	Recovery.	24 hs.	Dry heat and sinap.; brandy & capsic.; op., camph. beef-tea.	Eating fresh pork once a day for 2 weeks previously?	None.	Dr. W. G. Wheeler.

NOTE.—Dr. Webber's cases were sent to the Committee after their report had been presented to the Society. As the majority of the Committee accepted them as cases of cholera, they have been incorporated in the printed report. Brief notes of cases have also been received from Dr. Benjamin Mann, of Roxbury, and Dr. D. C. Cleaveland, of Boston. The former reports two cases, occurring Aug. 6th and 16th, which presented severe choleraic symptoms, and recovered under the internal use of chloroform in ten minim doses, tr. opii camphor. in teaspoonful doses every half hour, stimulants and external warmth. A third case, fatal, occurred early in September. The attack commenced at 2, P.M., and death took place at 8. To quote Dr. Mann, "a wake was held, and about one half of those who were present during the night were attacked in a similar manner; three of whom died, as I subsequently learned."

Memoranda of two other cases which recovered, are also given. The first of these patients was present at the above wake, and assisted in putting the body in the coffin. All of these patients were severely attacked, and are stated to have presented all the usual symptoms of Asiatic cholera.

Dr. Cleaveland gives some memoranda of a case which occurred July 21st. The patient, a German shoemaker, was in a state of collapse when he was called, and died the same night. He had left Boston for New York on the 16th of July, and returned on the 19th. Was attacked on the same night with diarrhoea, which was better next day, but returned on the following night (20th), with greater severity. "The second night after his death, two of those in attendance were attacked with frequent and fearful diarrhoea, accompanied with severe cramps of bowels, but were wholly relieved within the next twenty-four hours."

No. 11	No. 12	No. 13	No. 14	No. 15	No. 16
1870	1871	1872	1873	1874	1875
1876	1877	1878	1879	1880	1881
1882	1883	1884	1885	1886	1887

The following table shows the results of the experiments conducted during the year 1870. The first column gives the number of the experiment, the second column the date, the third column the name of the substance, the fourth column the quantity used, the fifth column the result, and the sixth column the remarks.

The first experiment was conducted on the 1st of January, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.

The second experiment was conducted on the 15th of January, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.

The third experiment was conducted on the 30th of January, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.

The fourth experiment was conducted on the 15th of February, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.

The fifth experiment was conducted on the 30th of February, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.

The sixth experiment was conducted on the 15th of March, 1870, and consisted in the combustion of a certain quantity of the substance in question. The result was that a certain amount of heat was evolved, and a certain amount of gas was produced. The remarks are that the experiment was conducted in a certain manner, and that the results were as follows.