

The Middlesex Hospital : report on the cholera patients admitted into the Hospital during the year 1854 / by S.W. Sibley.

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The Middlesex Hospital.



REPORT

ON THE

CHOLERA PATIENTS

ADMITTED INTO THE HOSPITAL
DURING THE YEAR 1854.

By S. W. SIBLEY, REGISTRAR.

London :

PRINTED BY JAMES TRUSCOTT, NELSON SQUARE.

1855.

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The
Weekly Board

San Francisco Hospital

REPORT

CHOLERA PATIENTS

ADMITTED INTO THE HOSPITAL

DURING THE YEAR 1855

BY S. W. CHILDS, M.D.

A PAPER has already been circulated among the Governors, stating briefly the great demands which were made upon the Hospital for admission for cholera patients during the alarming outbreak of that epidemic in Golden Square, and other neighbourhoods of the Hospital, in the autumn of 1854; and giving an account also of the measures which were deemed necessary for the purpose of meeting those demands in the most effectual manner, and so carrying out the great and benevolent objects aimed at in the establishment and liberal support of this and other kindred institutions.

The Weekly Board, acting in compliance with a suggestion from the Medical Committee, have decided also on circulating amongst the Governors, and, to some extent, the public at large, the following Report of the Registrar of the Hospital. It will be found to contain many useful facts relating to cholera, derived from the experience of so many cases of the disease occurring at the same time, with the same causes probably in operation, and under pretty nearly, if not precisely, the same conditions in all respects. More especially will it be found interesting in regard to the efficacy of the different modes of treatment recommended in the late and the two former epidemics.

The general experience as to the inefficiency of any mode of treatment in the worst cases, and, on the contrary, its almost certain power of arresting the disease in its early stage, are fully borne out in this Report.

It is to be regretted that but few *post mortem* examinations could be made, and that no chemical or other observations of the blood, and of the excretions, were carried out. But it was found that neither of these important inquiries could be efficiently conducted, in consequence chiefly of the crowded state of the dead-house, and *post mortem* examination rooms, and the exertions of the whole medical staff, and of the small number of pupils then in London, being exclusively directed to the alleviation of the sufferings of the living.

But, with regard to the facts dwelt upon in the Report, the Weekly Board are of opinion that the publication of them may be of general interest, and more especially so to the Governors and Supporters of the Middlesex Hospital.

The tables in the Appendix will be found to contain much valuable information, and reflect much credit on the Registrar.

MICHAEL SMITH,
Chairman.

MIDDLESEX HOSPITAL, *January, 1855.*

R E P O R T.

THE number of cases of cholera, and of the more severe forms of diarrhœa admitted into the hospital during the present year, is—

Males -	-	-	-	-	-	143
Females	-	-	-	-	-	135
						<hr/>
Total	-	-	-	-	-	278

The present Report will be confined to a consideration of the cases of cholera, and under this head are included only those cases which passed into a state of complete or incomplete collapse. In drawing the distinction between cholera and choleraic diarrhœa, the rules laid down by the Medical Council of the General Board of Health have been commonly followed. When, however, a question has arisen as to whether a case should be recorded as cholera, or as choleraic diarrhœa, it has been settled by a consideration of the general symptoms of the case, rather than by the presence or absence of any one individual symptom. According to this view, the number of cases of cholera was,—

Males	-	-	-	-	-	121
Females	-	-	-	-	-	110
						<hr/>
Total	-	-	-	-	-	231

The first patient admitted into the hospital with cholera, during the present year (1854), was on July 25th, and the

last on Nov. 14th. The epidemic, therefore, as regards the Middlesex Hospital, was confined to a period of 113 days.

The following table exhibits the number of admissions and deaths from cholera each week during the persistence of the epidemic :—

	Males.		Females.		Total.	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
In the week ending July 29...	2	...	2	1	4	1
„ „ Aug. 5...	2	1	2	1	4	2
„ „ „ 12...	3	1	1	1	4	2
„ „ „ 19...	...	...	...	...	...	...
„ „ „ 26...	1	1	3	2	4	3
„ „ Sept. 2...	48	35	29	18	77	53
„ „ „ 9...	36	17	39	22	75	39
„ „ „ 16...	11	6	19	6	30	12
„ „ „ 23...	10	4	7	...	17	4
„ „ „ 30...	5	3	3	2	8	5
„ „ Oct. 7...	2	...	2	...	4	...
„ „ „ 14...	1	...	1	1	2	1
„ „ „ 21...	...	...	1	1	1	1
„ „ On Nov. 14...	...	...	1	...	1	...
Total.....	121	68	110	55	231	123

From this table it will be seen that an immense majority of the cases was admitted in the weeks ending Sept. 2nd and Sept. 9th; that before September there had been only 18 admissions; and that during the first four days of that month, 120 were admitted.

During the months of July and August, the patients were brought from various localities in the neighbourhood of the Hospital, without a seeming preponderance in any one district; and they may be considered as scattered cases of the epidemic, owing their origin probably to some confined and special local conditions, rather than to any more general agency affecting the neighbourhood.

Of the cases admitted during the first week or ten days

of September, however, nearly all came from the district of Golden Square; and it is singular that out of the large number of patients received from that locality, none had been attacked with cholera prior to the evening of August 31st. It is also to be observed, that in no case admitted had the diarrhoea been observed prior to August 30th.

After the first week in September, the cases from the neighbourhood, of which Golden Square may be said to be the centre, became less numerous; but about that time considerable numbers began to be admitted from the neighbourhood of Upper Rathbone Place. So far as can be judged from the records of the Hospital, the outbreak in the latter place appeared to be contemporaneous with the decline of that in Golden Square. The outbreak in Rathbone Place lasted with some violence for a few days, and after it had subsided, the cases received at the hospital came, as in the months of July and August, from different localities in about equal numbers.

In the following Report such facts in the causation, pathology, and treatment of cholera will be noticed, as may be illustrated by the cases.

Age.—The youngest patient admitted was sixteen months old, the oldest 68 years. The following table exhibits the number of patients at various ages, and the result :—

	Males.		Females.		Total.		Rate of Mortality about
	Cases.	Died.	Cases.	Died.	Cases.	Died.	
Under 5 years	5	4	6	4	11	8	73 per ct.
Over 5 and under 15	27	8	14	4	41	12	29 —
— 15 — 30	40	18	41	18	81	36	44 —
— 30 — 45	32	25	26	12	58	37	64 —
— 45 — 60	14	10	18	12	32	22	69 —
— 60.....	3	3	5	5	8	8	100 —
Total ...	121	68	110	55	231	123	

It will thus be seen that the number of deaths at various ages is nearly in the same proportion as that observed among similar numbers representing the deaths from cholera in England, in 1849. As no case was admitted under sixteen months of age, and the cases under five years were only eleven, it may not be just to draw any conclusion with regard to that early term of life; but above that age, the cases were spread in their usual proportion over the various periods of life.

The table indicates the extreme rate of mortality in children under five (73 per cent.), and in persons over 60 (100 per cent.), whilst the extremely small mortality (29 per cent.) of those between the ages of five and fifteen stands out in striking contrast. After the age of fifteen a steady increase may be observed, and it is an interesting fact that this increase takes place far more rapidly in males than in females. This is the more remarkable as the Registrar General states (speaking of course only of fatal cases)—“At the child-bearing age the mortality is rather greater among women than among men.” Assuming that the conclusions drawn from the cases treated in the hospital are correct, it follows that women are *attacked* with cholera in a far greater proportion than men between these ages.

If we compare the per centage of mortality at different ages, as observed in this hospital, indicated in the table marked A, below, with a table marked B, in p. 9, of the deaths from cholera in England in 1849 to every 100 per-

(A.)

From	1—5.	5—15.	15—20.	30—45.	45—60.	Over 60.
Mortality per cent..	73	29	44	64	69	100

sons living of each age, we find that the two series increase and decrease much in the same ratio; that they both show a progressive diminution from infancy till the *minimum* is reached between the ages of five and fifteen; that after that age the rate of mortality increases together in a somewhat similar proportion.

Now it is clear, that if the per centage of mortality at different ages increased and decreased *exactly* in the same ratio with a similar series representing the deaths to each 100 living, then the proportion of those *attacked* with cholera to every 100 living at every age must be equal.

It would of course not be right to attempt to establish a point in the pathology of cholera from the consideration of so small a number of cases as that before us; but, should further investigation, or a more extensive series of cases justify the conclusion already implied, the extraordinary result would be arrived at, that cholera, unlike all other diseases, attacks persons of every age in the same proportion, and that no one age can be said to be more prone to the attack than another.

Sex.—Among the males the mortality was 56 per cent.; among the females 50 per cent. This result, obtained from a comparatively small number of cases, tends to bear out the conclusion generally entertained, that the mortality amongst females is somewhat less than in males.

Previous Health.—The state of previous health was

(B.)

Under	1 year.	5 years.	10 years.	15 years.	25 years.	35 years.	45 years.	55 years.	65 years.	75 years.	85 years.
Deaths from Cholera and Diarrhoea to 100 living at each age ..	·828	·255	·144	·159	·317	·423	·528	·705	·981	1·187	1·227

recorded in 157 cases. Out of these, 126 were attacked while in good health, and it was more or less impaired in 31. Of the latter three were labouring under phthisis, and one under chronic ulcer of the stomach.

Food and Living previously to attack.—With reference to these conditions, it was found that out of 158 patients, 106 had been living as well as most persons in the same class of society, whilst 52 had been more or less in want of the necessaries of life.

Temperance.—The habits of the patients with regard to alcoholic liquors were noted in 98 cases. Of these, as many as 22 were in the habit of indulging to excess in alcoholic stimulants.

Cleanliness.—The degree of cleanliness of the patients was noted in 191 cases; the result is given in the table below. In this they are divided into three classes:—1st, those who were either clean, or as clean as most people of the class usually are; 2nd, those who were dirty; 3rd, those who were in an extremely filthy state.

	Males.	Females.	Total.
Cleanliness good.....	35	47	82
„ defective	34	33	67
Extreme dirt	22	20	42
	91	100	191

Or we may state, that in 57 per cent. of the cases, the degree of cleanliness was below the average, and of these, 22 per cent. were in a state of extreme dirt.

It may be here remarked, that the want of cleanliness in the cholera patients was a fact obvious to all who saw them, for low as the “average cleanliness” of hospital patients may be, that of the persons admitted with cholera was far

below it. The fact may admit of a partial explanation in the circumstance, that cholera attacked certain streets and courts in which the inhabitants were of extremely dirty habits.

We cannot but attach some importance to this want of cleanliness, which was remarkable in so large a proportion of the cases as a predisposing, if not as an exciting cause of the disease, acting as it must do not only in checking the healthy action of the skin, and so interfering with various vital functions, but also in polluting the atmosphere in which the patients lived. This pollution of the atmosphere, taking place in the crowded dwellings of the lower order, must act in a similar manner to bad drainage, in both instances leading to the respiration of air more or less largely charged with foul emanations injurious to health.

Drainage.—It is much to be regretted that the state of drainage has been recorded only in 19 cases. Out of these, 15 complained that the drains, water-closets, or cess-pools in the house from which they had been brought, emitted foul smells. It was an almost constant report of the relations, who accompanied the patients to the hospital, that the drainage of their residences was ineffective.

The stage of the disease at which death took place may be seen in the following table :—

	Males.	Females.	Total.
In the first stage of collapse	61	49	110
From relapse	1	2	3
From consecutive fever with uræmia	1	1	2
From consecutive fever without suppression	3	3	6
From epilepsy.....	2	0	2
	68	55	123

From the above table it is seen that out of 68 males,

seven died from relapse or secondary affection, and of the 55 females, six died in a similar manner; or, of the whole number of males and females, 123, who recovered from the stage of collapse, 13 ultimately died and 108 recovered. In other words, nearly 11-12ths of the deaths took place during the first stage of collapse.

Two patients died with symptoms resembling those of epilepsy not connected with affection of the kidney. The first case (No. 74),* a man aged 50, was admitted on September 4th, in a state of complete collapse; he recovered slowly from this state, and for several days had most obstinate vomiting. The vomiting also ceased; after which he appeared to be going on favourably, passing more than two pints of healthy urine daily till the 10th, when, at 8 A.M., he had a most violent epileptic fit, which lasted several minutes: after this he recovered completely, and the rest of that day made no complaint. He continued to pass urine freely, but at 8 A.M. the following morning (11th), he was again seized with epilepsy, and the fits continued with very little intermission till he died at 11 A.M. This patient never had epilepsy before.

The second case (No. 95)* was that of a man aged 35, who was admitted at 6 P.M. on September 11th, in a state of slight collapse; he rallied from this in the course of two or three hours. At 11 P.M. he was seized with violent convulsive movements of all the extremities, which lasted about half an hour, the pulse being very feeble, and the pupils much contracted. After this he remained in a state of partial unconsciousness for several days, sometimes not taking notice when spoken to, at other times being very violent. During this period urine was passed copiously, and uniformly of a perfectly healthy character,

* Appendix I.

except on the 13th, when it contained a trace of albumen; the pupils remained contracted. On the 15th he became much quieter and more conscious. From this date to the 20th he remained much in the same state of partial unconsciousness, lying on his side, with his hand raised to the head: pupils less contracted; urine passed freely. At 3 P.M. he was attacked with a fit similar to the first, and after a constant succession of them, he died at 5 P.M.

It is to be regretted that we were not able to make *post mortem* examinations of these cases. Both are of interest, from the obscurity of the connection between the epilepsy and the cholera. In the first case, the patient, it is seen, was actually convalescent from cholera when attacked. The second case, it must be confessed, has much the character of a case of meningitis; and if this really were the case, the patient must have been suffering from meningitis and cholera at the same time.

The tendency to head affection after cholera (irrespective of uræmia) was also observed in a case which terminated in mania. *This has not been inserted among the cholera patients, as it was probably only choleraic diarrhœa.

Amount of Collapse.—In general, the severity of the collapse was in proportion to the amount of the discharges; but there were several exceptions to this. No. 121, in Appendix I., may be cited as an exceptional case. In this instance, a child, aged $3\frac{1}{2}$ years, was admitted in a state of complete collapse, having had only one motion, and had vomited but slightly, from the commencement of the disease. In this, as in many similar instances, it may be asserted that the flux had already taken place into the bowel, but had not been discharged per anum, for soon after admission the child was profusely purged.

The degree of relationship between the flux, collapse,

and cramps, respectively, is shown in the general table of cases. (Appendix I.)

Relapse.—The occurrence of relapse in a considerable number of cases was one of the most remarkable and interesting features of the past epidemic, more particularly as we had no examples of it either in the epidemic of 1832 or in that of 1849. It should be understood that under the head “relapse,” only those cases are placed, which, having fairly recovered from the stage of collapse, and having passed into a state of more or less severe consecutive fever, were again attacked with the symptoms of cholera,—such as the rice-water evacuations, cramps, and collapse. The cases stand as follows:—

On the 2nd day, one case, which recovered.

„ 3rd „ two cases, both recovered.

„ 4th „ one — recovered.

„ 5th „ two — one recovered, one died.

„ 7th „ two — both died.

„ 13th „ one — recovered.

These days are reckoned from the date of the attack of cholera.

The following may be cited as a characteristic example of relapse:—D. S., aged 50 (vide Appendix I., No. 153), was admitted on September 2nd, at 6 30 P.M., in a state of extreme collapse. She had been attacked, at 3 P.M., with vomiting, purging, and cramps, but up to that time was perfectly well. Complete reaction was established in about twenty-four hours.

September 4th.—Is going on well; skin warm; pulse accelerated; bowels relaxed; motions contain bile.

7th.—Some slight fever continues. The purging has ceased, but occasional vomiting persists. Says, that she “feels getting quite strong.”

8th, 9 A.M.—Continued progressing favourably till 4 A.M. this morning. Since then has suffered from extreme purging, vomiting, cramp, and collapse. Motions and vomited matters resembling rice water.

She is now nearly pulseless; the countenance sunk; surface blue.

9th, at noon.—Has continued in the same condition since yesterday. Profuse purging continues, with severe paroxysmal cramps. Skin and surface cold and sodden; pulse absent; complete suppression of urine; voice not quite gone.

Died at 2 P.M. on the same day.

Consecutive Fever.—In the appended table of cases, it will be seen that a large number are put down as having had secondary fever; but the majority of those noted as having “slight consecutive fever,” had little more than the natural amount of reaction. The number of cases in which the fever was distinctly marked was,—

	Slight.	Severe.	Deaths.
Males	15	13	6
Females	25	11	4
	40	24	10

Even in the majority of the above cases the febrile symptoms were not severe, and in all they were of an extremely adynamic character. Vomiting was the principal symptom in a large majority; and the remedies found of greatest use in checking this, were hydrocyanic acid, milk and lime-water, and creosote.

From a careful examination of the general table (Appendix, No. I.), and also of the tables A and B, it would

appear, as a general rule, that the presence of consecutive fever bore a direct relation to the extent of the collapse, but that this was not invariably the case.

The following are the principal conclusions arrived at on the subject:—

1. That in nearly all the cases in which collapse was complete and purging profuse, more or less of consecutive fever supervened. (See Table, Appendix I.)

2. That many cases passed into the most extreme stage of collapse, and remained in that condition many hours, yet recovered, with consecutive fever in its least severe form. (Table A, Appendix II.)

3. That of those cases which did not pass into a state of complete collapse, several were followed by a slight, and two by a severe, form of consecutive fever. (Table A and B, Appendix II.)

An objection may perhaps be made to one of these two last-mentioned cases. The particulars of the case are given at page 12. (No. 95.)

4. That all the cases of severe fever, with the two exceptions above mentioned, were preceded by severe collapse, and considerable discharges. (Table B.)

5. That the degree of fever appears to have generally borne some relation to the duration of the stage of collapse, but that there were numerous exceptions to this rule. (Appendix II.)

Treatment.—On admission, nearly all the patients were subjected to certain remedial measures in common. In the first place, they were put into a hot bath (104°), in which they were kept a few minutes, according to circumstances. Secondly, an emetic of mustard and salt was administered, and in some, in whom the vomiting was slight, the emetic was repeated once, or oftener. Thirdly,

hot applications, hot bottles, and turpentine fomentations were applied. Fourthly, the front of the chest and abdomen was covered with a large sinapism. Fifthly, in those cases where cramp was severe, turpentine liniment was rubbed on the painful part.

A large number of cases slightly rallied after the bath, emetic, and hot applications; but in the majority this improvement was only transient.

Subsequently, they were subjected to the various modes of treatment, as shown in the following table. In cases where brandy was administered, it was given to an adult in doses of half an ounce every half hour.

	Males.		Females.		Total.	
	Cases.	Death.	Cases.	Death.	Cases.	Death.
Salines alone	34	16	39	15	73	31
Mixed Saline and Calomel	48	24	40	25	88	49
Calomel	3	2	5	3	8	5
Saline with Cajaput oil..	1	1	4	2	5	3
Chloroform, Camphor, &c.	3	0	1	0	4	0
Castor oil.....	10	7	6	1	16	8
Sulphuric acid.....	10	7	11	6	21	13
Acetate of Lead	0	0	1	0	1	0
Hyposulphite of Soda ...	3	3	0	0	3	3
Quinine	9	8	1	1	10	9
Nitrous Oxide gas	0	0	1	1	1	1
Stimulants alone.....	0	0	1	1	1	1
	121	68	110	55	231	123

In order to obtain a correct estimate of the comparative value of different modes of treatment, it is necessary to have precise information of the severity of the disease in each example. For that object it is proposed to divide the cases into three groups. This division, it should be remarked, refers to the condition of the patient at the time of admission.

Group 1. Those cases which appear completely hopeless.

2. Medium or doubtful cases, in which the immediate prognosis is uncertain.

3. Cases in a state of incomplete collapse, in which the disease does not appear to be in its most malignant form, and in which there is every probability that the patient will recover.

On the Saline Plan.—These cases were treated nearly on the principles recommended by Dr. Stevens. A saline mixture, composed of the chlorate of potash and carbonate of soda, and of the chloride of sodium, was given every half hour. Injections of broth, salt, and turpentine were administered every three, four, or six hours. The following table exhibits the result of this plan of treatment:—

	Alone.			With Brandy.			Total.	
	Cases.	Died in Collapse.	Died subsequently	Cases.	Died in Collapse.	Died subsequently	Cases.	Deaths.
1. Most severe cases:								
Males	9	9	—	1	1	—	} 17	16
Females	6	6	—	1	—	—		
2. Medium cases :								
Males	15	4	1	—	—	—	} 37	14
Females	20	9	—	2	—	—		
3. Favourable cases :								
Males	8	—	1	1	—	—	} 19	1
Females	10	—	—	—	—	—		
	68	28	2	5	1	—	73	31

Of the two cases (both males) which rallied, but died subsequently, one died of epilepsy, the other of secondary fever.

Mixed Saline and Calomel.—In these cases the saline mixture last spoken of was ordered every half hour, and in addition, 10 grains of calomel were given after the

emetic had acted, and in the majority a dose of 3 grains was repeated every two hours. In some, half a grain of opium was given with the first dose of calomel. The injections also, previously mentioned, were given in a considerable proportion of the cases. The result is exhibited in the following table:—

	Alone.			With Brandy.			Total.	
	Cases.	Died in Col-lapse.	Died subse-quently.	Cases.	Died in Col-lapse.	Died subse-quently.	Cases.	Deaths.
1. Most severe cases:								
Males	1	1	—	17	16	—	} 39	36
Females	4	4	—	17	15	—		
2. Medium Cases:								
Males	10	4	—	16	2	1	}	13
Females	5	—	—	11	4	2		
3. Favourable cases:								
Males	3	—	—	1	—	—	} 7	—
Females	2	—	—	1	—	—		
	25	9	—	63	37	3	88	49

The male patient alluded to in the sixth column of the above table died of epilepsy. One female died of relapse, the other of uræmia.

Calomel.—Eight cases were treated on this plan. Ten grains of calomel were given after the emetic, and two grains every half-hour subsequently. No brandy was given in any of these cases.

	Males.		Females.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Most severe cases	2	2	1	1	3	3
Medium cases.....	—	—	2	2	2	2
Favourable cases	1	—	2	—	3	—
	3	2	5	3	8	5

It should be remarked, that all the deaths took place in the stage of collapse. The number of the cases is, of course, too small to draw any conclusion from them, as so little encouragement was obtained from the results of this treatment, that the plan was soon abandoned.

In none of the cases did the calomel appear to exert any influence in restoring the bile in the evacuations, and in none did it affect the gums.

Cajaput Oil.—In five cases half drachm doses of this oil were combined with each dose of the saline mixture ; they were treated in other respects as on the “saline plan ;” the result was—

	Males.		Females.			Total.	
	Cases.	Died in Collapse.	Cases.	Died in last Collapse.	Died in Relapse.	Cases.	Deaths.
Most severe cases	1	1	2	—	1	9	2
Medium.....	—	—	2	1	—	2	1

It was a curious fact, that one of the worst cases that recovered was treated on this plan ; a second nearly as bad recovered from the stage of collapse, but subsequently died of relapse. It would not, however, be just to affirm that this result was owing to the cajaput oil.

It was noticed in the majority of the cases in which the oil was given, that although the collapse was complete, and it might therefore be supposed that the stomach had lost all power of absorption, the odour of the oil was very obvious in the breath of the patients. This, of course, was by no means positive evidence that the oil had been absorbed and had entered into the blood, as it is natural to suppose that part of the medicine had remained in the

mouth, and had imparted its powerful odour to the expired breath.

Chloroform and Camphor.—A solution of camphor in chloroform was administered in four cases; they all recovered, but none of them were of the worst class. Two males may be placed as belonging to the most favourable group, and one male and one female to the medium group.

From what was observed in these cases there was nothing to recommend the employment of the remedy in any of the more severe cases. It was, however, singularly efficacious in removing the distressing sense of epigastric constriction complained of by some of the patients who were suffering from the milder forms of cholera.

Castor Oil.—Sixteen cases were treated on the castor oil plan; in all, the oil was given in half-ounce doses every half-hour.

	Alone.		With Brandy.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Most severe cases :—						
Males	1	1	3	3	} 5	5
Females	—	—	1	1		
Medium cases :—						
Males	1	1	4	2	} 5	3
Females	—	—	—	—		
Favourable cases :—						
Males	1	—	—	—	} 6	—
Females	4	—	1	—		
	7	2	9	6	16	8

All the deaths took place in the stage of collapse. No difference was observed in the effect of the remedy when given alone, or when combined with brandy, except

that in the latter case it was found less apt to cause distressing vomiting.

Although several of the patients took large quantities of the oil, we did not observe any increase in the amount of purging as compared with other cases; on the contrary, in all, except the worst class of cases, a gradual diminution of the diarrhœa took place.

On a careful review of the cases, the following conclusions were arrived at:—

1. That in the worst class of cases death took place quite as soon, or even sooner, under the castor oil than under other modes of treatment.

2. In the most favourable group recovery was quite as rapid, perhaps more so, than in cases under other remedies.

3. In several cases of the medium group it was believed that the oil did serious injury; and two cases which, on admission, had appeared as almost belonging to the most favourable group, proved fatal.

It follows that, in the cases treated by castor oil, there was evidence of the injurious effects of the remedy, whilst there was little or none of its beneficial qualities. These considerations, of course, prevented a more extended trial of the remedy being made.

Acetate of lead was given in one case, which recovered. Tedious and imperfect convalescence took place, which was followed by relapse, and rapid recovery under salines.

Hyposulphite of Soda.—This salt was administered in three cases. The remedy was of course suggested by the theory which ascribes the symptoms of cholera to a parasitical fungus or vegetable, the acid of the salt being a powerful agent in destroying vegetable life. The salt was given in drachm doses every half-hour, the treatment

being commenced by an emetic of sulphate of copper. Enemata containing the hyposulphite were also administered. All three cases were of the worst class, and death took place in the stage of collapse; the treatment did not appear to produce the least effect on the symptoms.

Diluted Sulphuric Acid.—This was administered in 21 cases; it was given in doses of from 30 to 80 minims of the dilute acid, the first six or eight doses being given every half-hour, and subsequently every hour. In three cases stimulants were administered along with it. The following table gives the result of those cases in which the remedy was given alone:—

	Males.			Females.		
	Recovered.	Died in Collapse.	Died of Cons. Fev.	Recovered.	Died in Collapse.	Died of Cons. Fev.
Of the worst class.	—	1	—	—	3	—
Of medium cases...	3	3	2	2	—	1
Of favourable cases	—	—	—	2	1	—

The three cases in which brandy was administered with the acid may be arranged as follows:—

	Recovered.	Died in Collapse.	Died in Fever.
Of the worst class	One female.	...	...
Of medium cases.....	...	One male.	One female.

Or, adding these numbers together, it will be seen that—

	Cases.	Deaths.
Of the worst class there were	5	4
Of medium cases	13	8
Of favourable cases	3	1
Total.....	21	13

In regard to the action of sulphuric acid in cholera, the remedy does not appear to have had any power in rousing the patients from the condition of collapse. Again, although we assign considerable power to the acid as an astringent in checking ordinary and choleraic diarrhœa, it appears to have been completely powerless in restraining the rice-water evacuations of cholera. If the general table of cases be examined, it will be seen that the majority of patients who took sulphuric acid were much purged after admission. Dr. Hawkins noticed that in one of his patients (No. 8),* who had taken about 3 oz. of dilute sulphuric acid, the alkaline reaction of the evacuations was not changed.

It will also be seen, under the column "Previous treatment," that the administration of sulphuric acid, in the stage of diarrhœa, did not prevent several cases from passing into developed cholera.

Quinine.—The treatment by quinine was not commenced in any of the following cases immediately after their admission. They had all been placed for a few hours on the mixed saline and calomel plan. Brandy was administered in all. The quinine was given in five-grain doses every one or two hours.

	Cases.	Died in Collapse.	Died of Relapse.	Died of consecutive Fever.	Cases.	Deaths.
Most severe cases:						
Males	8	6	1	1	8	8
Females ...	1	1	—	—	1	1
Medium cases:						
Male	1	0	0	0	1	0
	10	7	1	1	10	9

Two patients, it is seen, in the most severe form of the

* Appendix I.

disease, rallied out of the stage of collapse ; but these ultimately died,—one of consecutive fever, the other of relapse. The only patient that recovered under quinine passed through a most severe consecutive fever.

Inhalation of Gases.—One patient was made to inhale nitrous oxide gas. The principal features of the case may be noticed. The case is that of a woman, aged 45. (No. 180.)* She had been suffering from cholera eleven hours when admitted, and was in the state of extreme collapse, pulse barely perceptible, and there was great lividity of surface. On commencing to inhale the gas the pulse was reduced from 140 to 120, and became much fuller ; this improvement in quality of the pulse, however, was only temporary, as it again became scarcely perceptible, but still remained at 120. The inhalation was frequently repeated during the twenty-four hours after admission ; and during this time she inhaled ten gallons of the gas, each time with similar effects,—that is, with only very transient benefit. After this, she was put on the saline treatment and slowly rallied from the state of collapse. She ultimately died, however, of consecutive fever.

Another patient (No. 44),* which had been treated on the hyposulphite of soda plan, was made to inhale oxygen ; the result was somewhat similar to that produced by the laughing gas, but was less striking ; the patient died in the state of collapse.

Injection of Fluids into the Veins.—In two cases (Nos. 201 and 205)* injections were used, and although both of these terminated fatally, a few remarks on them may be admissible, considering the great importance of the subject.

The injections principally used during the epidemics of

* Appendix I.

1832 and 1839 consisted of water, holding in solution various salts, and forming a fluid the specific gravity of which only slightly exceeded that of water. This fluid, on mixing with blood in the veins, would, of course, tend to swell out and distort the red-blood corpuscles, and probably cause the impaction of some in the capillaries of the lungs. In order to prevent this result, Dr. Rees employed a saline fluid of a specific gravity approximating to that of blood. This fluid would, however, also alter the form and size of the blood corpuscles, although perhaps less so than those first spoken of.

Now many of the principal symptoms of cholera met with an explanation in the diminished bulk and tar-like condition of the blood; in fact, there is some analogy between the symptoms of cholera and those of a profuse hæmorrhage.

Moreover, the recent researches of Dr. Garrod have cast doubt on the doctrine of the diminution of the saline constituents of the blood. He also found that the proportion of corpuscles was increased.

It is clear, then, that the fluid that would supply these defects in the composition of the blood, and at the same time, when injected, would not materially alter the corpuscles, should be closely analogous to the serum of healthy blood, but should not, however, be of equal density with it. An "artificial serum" was accordingly employed, which contained only half the quantity of albumen found in healthy blood. The composition was as follows:—

Water	- - -	2 pints.
Albumen	- - -	1½ oz.
Chloride of sodium	- - -	90 grains.
Chloride of potassium	- - -	9 „

Phosphate of soda	-	-	5 grains.
Carbonate of soda	-	-	21 „
Sulphate of soda	-	-	7 „
Oxide of iron	-	-	12 „

The fluid was used at a temperature of 105°. In both the cases about a pint was injected, at the rate of about an ounce a minute. The immediate effect of the injection was much the same as has been noticed with other injections.

The first case (201)* was admitted 8.30 P.M., in a state of complete collapse, having been suffering from cholera for 5½ hours. She was placed on the saline plan of treatment. The injection into the basilic vein was made on the following day, at 2 P.M., at which time she had been quite pulseless for four or five hours, and had been purged most profusely. After the injection of a few ounces of serum the pulse became perceptible, and finally became steady and regular, but small, and 112 in a minute. Respiration 36. On the injection being completed the expression of the countenance was much improved, pulse steady, heat of surface considerably restored, no dyspnæa, breathing easy, and the patient expressed herself much relieved. The improvement, however, was only temporary; she continued much in the same state till about 5 P.M., the pulse, however, gradually becoming more feeble. After this time she relapsed into her former condition, again became pulseless, and the purging, which had never ceased, continued unchecked, until she gradually sank and died at 7.30 P.M. The surface, however, continued warm up to a short time before her death.

The second case (No. 205)* was that of a woman, aged 28, who was admitted 5.45 P.M. on September 13th, in a

state of complete collapse, and had had cholera two hours. She was put on the saline plan of treatment; the injection was used at 8.30 P.M. She was then quite pulseless; respiration very laborious, numbering 56 in the minute. After ten ounces of the artificial serum were injected the pulse at the wrist became just perceptible, 108. She expressed herself relieved. The injection being completed, the pulse ceased to be felt, and did not again return, the dyspnœa was somewhat increased, the respiration, however, remaining at 56. She died at 11 P.M. The heat of surface was considerably restored after the injection.

The temporary benefit in both these cases was well marked, and there can be little doubt that in the first case life was prolonged several hours.

On looking over the tables showing the mortality after different modes of treatment, and at the same time making due allowance for the unequal severity of the cases, it will be seen that but little difference was observed in the results. Under every mode of treatment, nearly all the cases of the worst class died, whilst nearly all those of the most favourable recovered. It is only in the medium group of cases that the real value of the respective modes of treatment is to be sought.

ER ADMISSION.		Physician.	No.
	Vomit ere ulants istered?		
	..... No	Dr. Stewart	1
	..... No	Dr. Stewart	2
r	Rice W. - Yes	Dr. Thompson	3
	Rice W. No	Dr. Thompson	4
	..... - Yes	Dr. Hawkins	5
r	..... No	Dr. Thompson	6
r	Rice W. No	Dr. Hawkins	7
	..... es	Dr. Thompson	8
r	Rice W. No	Dr. Hawkins	9
r	Rice W. No	Dr. Hawkins	10
r	Rice W. No	Dr. Hawkins	11
r	Rice W. No	Dr. Hawkins	12
r	Rice W. No	Dr. Hawkins	13
r	Rice W. es	Dr. Hawkins	14
r	Rice W. es	Dr. Hawkins	15
r	Rice W. es	Dr. Hawkins	16
r	Rice W. es	Dr. Hawkins	17
r	Rice W. es	Dr. Hawkins	18
r	Rice W. No	Dr. Hawkins	19
r	Rice W. es	Dr. Hawkins	20
r	Rice W. es	Dr. Hawkins	21
r	Rice W. es	Dr. Hawkins	22
r	Rice W. es	Dr. Hawkins	23
r	Rice W. es	Dr. Hawkins	24
r	Rice W. es	Dr. Hawkins	25
r	Rice W. es	Dr. Hawkins	26

Physician.	No.
Hawkins	40
Hawkins	41
Hawkins	42
Hawkins	43
Hawkins	44
Hawkins	45
Hawkins	46
Hawkins	47
Hawkins	48
Hawkins	49
Hawkins	50
Hawkins	51
Hawkins	52
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Hawkins	54
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Hawkins	62
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Hawkins	64
Hawkins	65
Hawkins	66
Hawkins	67
Hawkins	68
Hawkins	69
Hawkins	70
Hawkins	71
Hawkins	72
Hawkins	73
Hawkins	74
Hawkins	75
Stewart	76
Stewart	77
Stewart	78

OMISSION.	its red?	Physician.	No.
Vomit.			
Rice Water		Dr. Stewart	81
Rice Water		Dr. Stewart	82
Rice Water		Dr. Stewart	83
Rice Water		Dr. Stewart	84
Rice Water		Dr. Stewart	85
Rice Water		Dr. Stewart	86
Rice Water		Dr. Stewart	87
Rice Water		Dr. Stewart	88
Rice Water		Dr. Stewart	89
Rice Water		Dr. Stewart	90
Rice Water		Dr. Stewart	91
Rice Water		Dr. Stewart	92
Rice Water		Dr. Stewart	93
Rice Water		Dr. Stewart	94
Rice Water		Dr. Thompson	95
Rice Water		Dr. Thompson	96
Rice Water		Dr. Thompson	97
Rice Water		Dr. Thompson	98
Rice Water		Dr. Thompson	99
Rice Water		Dr. Thompson	100
Rice Water		Dr. Thompson	101
Rice Water		Dr. Thompson	102
Rice Water		Dr. Thompson	103
Rice Water		Dr. Thompson	104
Rice Water		Dr. Thompson	105
Rice Water		Dr. Thompson	106
Rice Water		Dr. Thompson	107
Rice Water		Dr. Hawkins	108
Rice Water		Dr. Thompson	109
Rice Water		Dr. Hawkins	110
Rice Water		Dr. Hawkins	111
Rice Water		Dr. Hawkins	112

APPENDIX (I.)—FEMALES.

		AFTER ADMINISTRATION					TELEPHANT							
Cramp.	Area of Cramp.	Collapse in Abdomen.	Furling.	Yawning.	Cramp.	Medicines.	Vitals.	Recovery from Collapse.	Comminuted Fract.	Religion.	Total Duration of Disease.	Early or Late in Disease.	TREATMENT.	
													Before Amputation.	After Amputation.
Severe	7	Complete	None	Slight	Moderate	Black Water	Black Water	Four Hours	None	....	2 Days	Recovery	....	Mixed Saline
Complete	11	Complete	20 Motions	Considerable	Intense	Black Water	Black Water	....	.....	....	14 Hours	In Collapse	....	Mixed Saline
Complete	17	Complete	Profuse	Profuse	....	Black Water	Black Water	20 Hours	.....	....	5 Days	In Collapse	....	Mixed Saline
Complete	8	Complete	Profuse	None	Severe	Black Water	Black Water	40 Hours	.....	....	13 Hours	In Collapse	....	Mixed Saline
Complete	7	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	....	Slight	....	10 Days	Recovery	....	Sulphuric Acid
Complete	9	Extremes	Considerable	Slight	....	Black Water	Black Water	....	....	....	10 Days	In Collapse	....	Sulphuric Acid
Complete	4	Extremes	Considerable	....	....	Black Water	Black Water	....	....	....	5 Days	Recovery	....	Sulphuric Acid
Complete	6	Complete	3 Small Motions	Considerable	Considerable	Black Mecon and Blood	Black Water	5 Hours	Very Slight	....	11 Days	Urinary	....	Sulphuric Acid
Complete	24	Complete	Profuse	Profuse	Extreme.	Black Mecon and Blood	Black Water	Four Hours	Slight	....	14 Days	Recovery	....	Sulphuric Acid
Complete	10	Extremes	Profuse	Considerable	Severe	Black Water	Black Water	60 Hours	.....	....	17 Hours	In Collapse	....	Mixed Saline
Complete	12	Extremes	Profuse	Profuse	Severe	Black Water	Black Water	....	.....	....	14 Hours	In Collapse	....	Mixed Saline
Complete	6	Extremes	Profuse	Considerable	Severe	Black Water	Black Water	....	.....	....	10 Days	Recovery	....	Saline
Complete	10	Incomplete—Complete	Considerable	Considerable	Moderate	Black Water	Black Water	24 Hours	Slight	....	7 Days	Recovery	....	Chloro—Cannula
Complete	10	Extremes	Moderate	Profuse	Severe	Black Water	Black Water	....	.....	....	12 Days	Recovery	....	Mixed Saline
Complete	2	Extremes	Slight	Profuse	Severe	Black Water	Black Water	20 Hours	Moderate	....	8 Hours	In Collapse	....	Mixed Saline
Complete	2	Extremes	Profuse	Considerable	....	Black Water	Black Water	....	.....	....	23 Hours	In Collapse	....	Mixed Saline
Complete	For	Extremes	Considerable	Severe	....	Black Water	Black Water	....	.....	....	Under 24 Hours	In Collapse	....	Mixed Saline—Quinine
Complete	7	Extremes	Slight	Profuse	Severe	Black Water	Black Water	....	.....	....	17 Hours	In Collapse	....	Mixed Saline
Complete	7	Extremes	Profuse	Considerable	Slight	Black Water	Black Water	....	.....	....	7 Hours	In Collapse	....	Mixed Saline
Complete	4	Extremes	Considerable	Slight	Severe	Black Water	Black Water	....	.....	....	17 Hours	In Collapse	....	Mixed Saline
Complete	4	Extremes	Considerable	Extremes	Severe	Black Water	Black Water	....	.....	....	Under 24 Hours	In Collapse	....	Mixed Saline
Complete	For	Extremes	Considerable	....	....	Black Water	Black Water	20 Hours	Slight	....	13 Hours	Recovery	....	Mixed Saline
Complete	3	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	....	.....	....	Under 24 Hours	In Collapse	....	Mixed Saline
Complete	For	Extremes	Considerable	Considerable	Extreme	Black Water	Black Water	4 Hours	.....	....	7 Days	Recovery	....	Mixed Saline
Complete	14	Extremes	6 Motions	Considerable	Slight	Black Water	Black Water	....	Slight	....	Under 24 Hours	In Collapse	....	Mixed Saline
Complete	20	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	24 Hours	Slight	....	7 Days	Recovery	....	Mixed Saline
Complete	For	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	4 Hours	Slight	....	30 Days	Recovery	....	Saline
Complete	8	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	3 Hours	Slight	....	2 Hours	In Collapse	....	Mixed Saline
Complete	4	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	....	.....	....	5 Days	In Collapse	....	Mixed Saline
Complete	8	Extremes	Considerable	Considerable	Severe	Black Water	Black Water	....	.....	....	2 Hours	In Collapse	....	Mixed Saline
Complete	2	Complete	None	Once	Extreme	Black Water	Black Water	6 Hours	Slight	....	4 Days	Recovery	....	Cann

* Aborted on the 3rd day at the 7th month.

No.	Name	Rank	Regt	Company
1	John Smith	Private	1st	A
2	James Brown	Private	1st	B
3	William Jones	Private	1st	C
4	Robert Taylor	Private	1st	D
5	Thomas White	Private	1st	E
6	Charles Black	Private	1st	F
7	George Green	Private	1st	G
8	Henry Lee	Private	1st	H
9	Samuel King	Private	1st	I
10	John Adams	Private	1st	J
11	James Wilson	Private	1st	K
12	William Moore	Private	1st	L
13	Robert Clark	Private	1st	M
14	Thomas Evans	Private	1st	N
15	Charles Hall	Private	1st	O
16	George Young	Private	1st	P
17	Henry Scott	Private	1st	Q
18	Samuel Green	Private	1st	R
19	John Baker	Private	1st	S
20	James Miller	Private	1st	T
21	William Davis	Private	1st	U
22	Robert Hall	Private	1st	V
23	Thomas King	Private	1st	W
24	Charles Lee	Private	1st	X
25	George Scott	Private	1st	Y
26	Henry Adams	Private	1st	Z
27	Samuel Wilson	Private	1st	A
28	John Moore	Private	1st	B
29	James Clark	Private	1st	C
30	William Evans	Private	1st	D
31	Robert Hall	Private	1st	E
32	Thomas King	Private	1st	F
33	Charles Lee	Private	1st	G
34	George Scott	Private	1st	H
35	Henry Adams	Private	1st	I
36	Samuel Wilson	Private	1st	J
37	John Moore	Private	1st	K
38	James Clark	Private	1st	L
39	William Evans	Private	1st	M
40	Robert Hall	Private	1st	N
41	Thomas King	Private	1st	O
42	Charles Lee	Private	1st	P
43	George Scott	Private	1st	Q
44	Henry Adams	Private	1st	R
45	Samuel Wilson	Private	1st	S
46	John Moore	Private	1st	T
47	James Clark	Private	1st	U
48	William Evans	Private	1st	V
49	Robert Hall	Private	1st	W
50	Thomas King	Private	1st	X
51	Charles Lee	Private	1st	Y
52	George Scott	Private	1st	Z
53	Henry Adams	Private	1st	A
54	Samuel Wilson	Private	1st	B
55	John Moore	Private	1st	C
56	James Clark	Private	1st	D
57	William Evans	Private	1st	E
58	Robert Hall	Private	1st	F
59	Thomas King	Private	1st	G
60	Charles Lee	Private	1st	H
61	George Scott	Private	1st	I
62	Henry Adams	Private	1st	J
63	Samuel Wilson	Private	1st	K
64	John Moore	Private	1st	L
65	James Clark	Private	1st	M
66	William Evans	Private	1st	N
67	Robert Hall	Private	1st	O
68	Thomas King	Private	1st	P
69	Charles Lee	Private	1st	Q
70	George Scott	Private	1st	R
71	Henry Adams	Private	1st	S
72	Samuel Wilson	Private	1st	T
73	John Moore	Private	1st	U
74	James Clark	Private	1st	V
75	William Evans	Private	1st	W
76	Robert Hall	Private	1st	X
77	Thomas King	Private	1st	Y
78	Charles Lee	Private	1st	Z
79	George Scott	Private	1st	A
80	Henry Adams	Private	1st	B
81	Samuel Wilson	Private	1st	C
82	John Moore	Private	1st	D
83	James Clark	Private	1st	E
84	William Evans	Private	1st	F
85	Robert Hall	Private	1st	G
86	Thomas King	Private	1st	H
87	Charles Lee	Private	1st	I
88	George Scott	Private	1st	J
89	Henry Adams	Private	1st	K
90	Samuel Wilson	Private	1st	L
91	John Moore	Private	1st	M
92	James Clark	Private	1st	N
93	William Evans	Private	1st	O
94	Robert Hall	Private	1st	P
95	Thomas King	Private	1st	Q
96	Charles Lee	Private	1st	R
97	George Scott	Private	1st	S
98	Henry Adams	Private	1st	T
99	Samuel Wilson	Private	1st	U
100	John Moore	Private	1st	V

1

No.	Name	Age	Sex	Religion	Marital Status	Occupation	Education	Literacy	Signature	Date
1	John Smith	25	M	Anglican	Single	Farmer	Primary	Yes	John Smith	1890
2	Mary Jones	22	F	Anglican	Single	Housewife	Primary	Yes	Mary Jones	1890
3	Robert Brown	30	M	Anglican	Married	Teacher	Secondary	Yes	Robert Brown	1890
4	Elizabeth White	28	F	Anglican	Married	Teacher	Secondary	Yes	Elizabeth White	1890
5	William Black	35	M	Anglican	Married	Merchant	Secondary	Yes	William Black	1890
6	Ann Green	20	F	Anglican	Single	Housewife	Primary	Yes	Ann Green	1890
7	Thomas Grey	27	M	Anglican	Single	Farmer	Primary	Yes	Thomas Grey	1890
8	Isabella Hall	24	F	Anglican	Single	Housewife	Primary	Yes	Isabella Hall	1890
9	James King	32	M	Anglican	Married	Farmer	Primary	Yes	James King	1890
10	Charlotte Lee	26	F	Anglican	Married	Housewife	Primary	Yes	Charlotte Lee	1890
11	George Miller	29	M	Anglican	Married	Farmer	Primary	Yes	George Miller	1890
12	Frances Nelson	23	F	Anglican	Single	Housewife	Primary	Yes	Frances Nelson	1890
13	Edward Oliver	31	M	Anglican	Married	Farmer	Primary	Yes	Edward Oliver	1890
14	Emily Parker	21	F	Anglican	Single	Housewife	Primary	Yes	Emily Parker	1890
15	Richard Quinn	33	M	Anglican	Married	Farmer	Primary	Yes	Richard Quinn	1890
16	Elizabeth Reed	27	F	Anglican	Married	Housewife	Primary	Yes	Elizabeth Reed	1890
17	John Scott	25	M	Anglican	Single	Farmer	Primary	Yes	John Scott	1890
18	Mary Taylor	22	F	Anglican	Single	Housewife	Primary	Yes	Mary Taylor	1890
19	Robert Turner	30	M	Anglican	Married	Farmer	Primary	Yes	Robert Turner	1890
20	Elizabeth Walker	28	F	Anglican	Married	Housewife	Primary	Yes	Elizabeth Walker	1890
21	William Young	35	M	Anglican	Married	Merchant	Secondary	Yes	William Young	1890
22	Ann Adams	20	F	Anglican	Single	Housewife	Primary	Yes	Ann Adams	1890
23	Thomas Baker	27	M	Anglican	Single	Farmer	Primary	Yes	Thomas Baker	1890
24	Isabella Clark	24	F	Anglican	Single	Housewife	Primary	Yes	Isabella Clark	1890
25	James Evans	32	M	Anglican	Married	Farmer	Primary	Yes	James Evans	1890
26	Charlotte Fisher	26	F	Anglican	Married	Housewife	Primary	Yes	Charlotte Fisher	1890
27	George Hall	29	M	Anglican	Married	Farmer	Primary	Yes	George Hall	1890
28	Frances Hill	23	F	Anglican	Single	Housewife	Primary	Yes	Frances Hill	1890
29	Edward Jones	31	M	Anglican	Married	Farmer	Primary	Yes	Edward Jones	1890
30	Emily King	21	F	Anglican	Single	Housewife	Primary	Yes	Emily King	1890
31	Richard Lee	33	M	Anglican	Married	Farmer	Primary	Yes	Richard Lee	1890
32	Elizabeth Miller	27	F	Anglican	Married	Housewife	Primary	Yes	Elizabeth Miller	1890
33	John Nelson	25	M	Anglican	Single	Farmer	Primary	Yes	John Nelson	1890
34	Mary Oliver	22	F	Anglican	Single	Housewife	Primary	Yes	Mary Oliver	1890
35	Robert Parker	30	M	Anglican	Married	Farmer	Primary	Yes	Robert Parker	1890
36	Elizabeth Quinn	28	F	Anglican	Married	Housewife	Primary	Yes	Elizabeth Quinn	1890
37	William Reed	35	M	Anglican	Married	Merchant	Secondary	Yes	William Reed	1890
38	Ann Scott	20	F	Anglican	Single	Housewife	Primary	Yes	Ann Scott	1890
39	Thomas Taylor	27	M	Anglican	Single	Farmer	Primary	Yes	Thomas Taylor	1890
40	Isabella Turner	24	F	Anglican	Single	Housewife	Primary	Yes	Isabella Turner	1890
41	James Walker	32	M	Anglican	Married	Farmer	Primary	Yes	James Walker	1890
42	Charlotte Young	26	F	Anglican	Married	Housewife	Primary	Yes	Charlotte Young	1890
43	George Adams	29	M	Anglican	Married	Farmer	Primary	Yes	George Adams	1890
44	Frances Baker	23	F	Anglican	Single	Housewife	Primary	Yes	Frances Baker	1890
45	Edward Clark	31	M	Anglican	Married	Farmer	Primary	Yes	Edward Clark	1890
46	Emily Evans	21	F	Anglican	Single	Housewife	Primary	Yes	Emily Evans	1890
47	Richard Fisher	33	M	Anglican	Married	Farmer	Primary	Yes	Richard Fisher	1890
48	Elizabeth Hall	27	F	Anglican	Married	Housewife	Primary	Yes	Elizabeth Hall	1890
49	John Hill	25	M	Anglican	Single	Farmer	Primary	Yes	John Hill	1890
50	Mary Jones	22	F	Anglican	Single	Housewife	Primary	Yes	Mary Jones	1890

APPENDIX II.

TABLE A.

Table of those Cases in which the Consecutive Fever was slight or trivial.

MALES.					FEMALES.				
No.	Hours in Collapse.	Intensity of Collapse.	Amount of Purging.	Result.	No.	Hours in Collapse.	Intensity of Collapse.	Amount of Purging.	Result.
15	80	Extreme	Profuse	Death from Relapse	127	47	Extreme	Considerable	Recovery
23	48	Extreme	Considerable	Recovery	130	11	Complete	Profuse	Recovery
30	15	Extreme	Considerable	Recovery	132	12 (?)	Complete	Profuse	Death from Uræmia
32	78	Complete	Profuse	Recovery	137	34	Complete	Moderate	Recovery
41	9	Complete	Considerable	Recovery	148	42	Complete	Considerable	Recovery
50	18	Complete	Profuse	Recovery	151	16	Complete	Slight	Recovery
51	83	Complete	Profuse	Recovery	153	28	Complete	Considerable	Death from Relapse
55	—	Incomplete	Profuse	Recovery	156	13	Complete	Considerable	Recovery
58	49	Complete	Considerable	Recovery	158	8	Complete	Profuse	Recovery
60	28	Extreme	Profuse	Recovery	161	9	Incomplete	Considerable	Recovery
78	28	Complete	Profuse	Recovery	168	12	Complete	Profuse	Recovery
85	19	Incomplete	Moderate	Recovery	170	17	Incomplete	Profuse	Recovery
98	10	Incomplete	Slight	Recovery	175	28	Incomplete	Profuse	Recovery
101	20	Incomplete	Moderate	Recovery	186	25	Incomplete	Slight	Recovery
121	27	Complete	Profuse	Recovery	187	32	Incomplete	Profuse	Recovery
					196	45	Complete	Considerable	Recovery
						12	Incomplete	Slight	Recovery
					203	8	Incomplete	Moderate	Recovery
					204	53	Extreme	Profuse	Recovery
					206	46	Extreme	Slight	Death from Relapse
									Recovery
					214	12	Complete	Slight	Recovery
					215	18	Slight	Considerable	Recovery
					217	10	Extreme	Moderate	Recovery
					221	24	Extreme	Profuse	Recovery
					230	12	Complete	Considerable	Recovery
					231	6	Complete	Profuse	Recovery

TABLE B.

Table of those Cases in which the Consecutive Fever was either well marked or severe.

MALES.					FEMALES.				
No.	Hours in Collapse.	Intensity of Collapse.	Amount of Purging.	Result.	No.	Hours in Collapse.	Intensity of Collapse.	Amount of Purging.	Result.
26	53	Extreme	Profuse	Death	131	48 (?)	Complete	Profuse	Death
36	31	Extreme	Severe	Death	133	30	Extreme	Profuse	Recovery
39	26	Considerable	Profuse	Recovery	136	39	Complete	Considerable	Recovery
47	70	Extreme	Moderate	Recovery	139	24	Extreme	Profuse	Recovery
62	82	Complete	Profuse	Recovery	154	24	Extreme	Considerable	Recovery
63	50	Complete	Profuse	Recovery	155	11	Extreme	Considerable	Recovery
69	72	Complete	Profuse	Recovery	169	60 (?)	Extreme	Profuse	Recovery
70	72	Extreme	Profuse	Recovery	173	50	Complete	Profuse	Death
74	48	Complete	Moderate	Death from Epilepsy	177	29	Complete	Moderate	Recovery
77	36	Extreme	Profuse	Death from Uræmia	181	72	Extreme	Severe	Death
81	58	Complete	Considerable	Recovery	195	30	Extreme	Profuse	Recovery
95	19	Incomplete	Slight	Death from Epilepsy					
97	12	Complete	Slight	Death					
112	68	Complete	Profuse	Recovery					
116	26	Incomplete	Slight	Recovery					

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