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GENERAL BOARD OF HEALTH.

# R E P O R T

ON THE

RESULTS OF THE DIFFERENT METHODS  
OF TREATMENT

PURSUED IN

## EPIDEMIC CHOLERA.

ADDRESSED TO

THE PRESIDENT OF THE GENERAL BOARD OF HEALTH

BY THE

TREATMENT COMMITTEE OF THE MEDICAL COUNCIL.

Presented to both Houses of Parliament by Command of Her Majesty.



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## REPORT.

IN drawing up the present Report the "Committee on Treatment" have thought it right neither to depart from, nor to exceed, the strict limits of the duty assigned to them by the General Board of Health.

However they might feel disposed to offer their carefully digested opinion through a medium so authentic, they do not forget that the object of their labour is simply the commencement of a system of national medical statistics—a system which is intended to produce not opinions, but materials on which philosophical deductions are hereafter to be based.

They propose, therefore, to restrict their work to an analysis of the records placed before them, and to an arrangement of the results of that analysis, concluding with such deductions only as are plain and unequivocal.

The Committee have to report that the application made by the Board of Health to the various metropolitan hospitals, and to medical practitioners, requesting returns of cholera cases, with details of the circumstances, treatment, and issue, has been answered by the filled-up records of 2749 cases, all of which have been transmitted for their examination.

By means of a most careful but difficult classification, these 2749 cases have been arranged under various heads, and the treatment analysed, and its issue reduced to averages.

The Committee have proceeded to compare the results of different modes of treatment obtained by this analysis of the tabulated records, and they have added such inductive reasoning from these results as appear to bear practically on the mode of meeting any future visitation.

The cases are arranged in three classes.

- 1st. Those which have occurred in metropolitan hospitals, amounting to 1104.
- 2d. Those which have occurred in the metropolitan districts (not in hospitals), amounting to 1645.
- 3d. Those which have occurred in the provincial districts.

These classes have been subdivided according to the most

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prominent character of the treatment pursued, and the cases are arranged under the four heads—

1. Alterative.
2. Astringent.
3. Stimulant.
4. Eliminant.

Of the whole 2749 cases, there have been, in metropolitan hospitals,

689 treated by Alteratives.  
231     "     Astringents.  
84     "     Stimulants.  
100    "     Eliminants.

In the metropolitan districts (not in hospitals), there have been

977 treated by Alteratives.  
426     "     Astringents.  
196     "     Stimulants.  
46     "     Eliminants.

Of the 689 cases treated by Alteratives in metropolitan hospitals, it is shown by a careful analysis of the tabulated records, that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 52 cases calomel was given in small doses frequently repeated - - -	34	8	26	50*	76*1
in 16 with emetics.* - - -					
15 salines.					
27 external stimulants.					
40 ice water.					
23 hot baths.					
In 381 cases calomel was given, larger doses, at longer intervals - - -	324	94	184	48*2	56*7
in 205 with salines.					
165 emetics.					
135 external stimulants.					
43 ice water.					
24 castor oil (small doses).					
107 hot water baths.					
100 turpentine glysters.					
In 105 cases calomel, with opium, was given in 63 with salines.	70	22	44	41*9	62*8
4 emetics.					
9 external stimulants.					
80 { internal stimulants.					
ice water.					
castor oil.					

\* It will be understood that in this and the following tables more than one of the accessory remedies were given in some of the cases.

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Deaths in Collapse Cases.
In 20 cases other preparations of mercury were given in 5 with salines.	14	3	13	65*	92*8
14 external stimulants.					
14 ice water.					
3 internal stimulants.					
9 solution of soda.					
9 hot baths.					
In 131 cases salines were given - - -	103	25	66	50*3	64*
in 96 with emetics.					
96 hot water baths.					
96 external stimulants.					
15 ice water.					
1 injection into the veins.					

Of the 231 cases treated by Astringents in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 170 cases sulphuric acid was given - - -	123	27	98	57*6	79*6
in 141 with emetics.					
8 calomel.					
5 opium.					
35 external stimulants.					
121 internal stimulants.					
11 ice water.					
28 hot baths.					
In 36 cases chalk and opium were given - - -	17	10	11	30*5	64*7
in 8 with calomel.					
9 internal stimulants.					
9 external stimulants.					
9 hot baths.					
14 ice water.					
In 9 cases iron alum and alum mixture were given	5	1	4	44*4	—
In 9 cases acetate of lead with opium were given -	6	2	5	55*5	—
in 5 with emetics.					
8 salines.					
9 external stimulants.					
9 hot baths.					
8 ice water.					
In 6 cases cinchona and quinine were given -	2	1	—	—	—
In 1 case gallic acid, stimulants, hot bath, and ice water - - -	1	1	1	—	—

Of 84 cases treated by Stimulants in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 8 cases ammonia was given in 6 with emetics. 4 calomel. 8 brandy. 2 turpentine enema.	7	1	6	—	—
In 39 cases brandy was given, with hot baths and ice water	38	16	25	64.1	—
In 4 cases ether was given in 1 with emetic. 3 brandy. 2 opium. 2 nitrous oxyde. 2 hot baths.	3	1	3	—	—
In 3 cases camphor and chloroform were given, with external stimulants, and emetics, hot baths	1	—	—	—	—
In 5 cases "cordial tonic mixture" was given	4	1	3	—	—
In 7 cases cajeput oil was given, with emetics, salines, and external stimulants (turpentine)	7	3	4	—	—
In 18 cases emetics, external stimulants, hot baths, and ice water	6	1	6	—	—
	66	23	47	55.9	71.2

Of 100 cases treated by Eliminants in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Death.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 78 cases castor oil was given in 48 with emetics. 34 external stimulants and hot baths. 15 capsicum, ginger, &c. 11 calomel. 2 ice water, 2 turpentine.	74	13	59	75.6	9.7
In 21 cases emetics were given in 3 with ipecacuanha, in small doses. 10 potass. tartr. of antimony. 21 ice water.	21	1	17	80.9	—
In 1 case olive oil was given	—	—	—	—	—

Of 977 cases treated by Alteratives in the metropolitan districts (not in hospitals), the analysis of the tabulated records shows that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 532 cases calomel was given in small doses, frequently repeated - in 270 with salines. 98 emetics. 62 opium. 44 internal stimulants. 34 external stimulants. 21 chloric ether. 19 solution of soda.	338	72	249	46.8	73.6
In 201 cases calomel was given in larger doses, longer intervals - in 102 with salines. 27 chalk and opium. 47 chloric ether. 52 mineral acids. 74 external stimulants. 5 hot air baths.	104	25	77	38.3	74.
In 196 cases calomel, with opium, was given - in 120 with salines. 39 chloric ether. 5 soda solution. 17 external stimulants. 8 internal stimulants. 4 ice water.	114	24	65	33.1	57.
In 13 cases other preparations of mercury were given in 5 with salines. 7 opium.	6	2	8	—	—
In 35 cases salines were given - in 9 with soda solution. 11 opium. 5 emetics. 1 chloric ether. 6 external stimulants. 2 injection into the veins.	21	9	12	34.2	57.1

Of 426 cases treated by Astringents in the metropolitan districts (not in hospitals) it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 238 cases sulphuric acid was given in 92 with opium.	119	24	93	39·	78·1
22 calomel.					
4 catechu.					
18 cinchona.					
5 gallic acid.					
6 emetics.					
40 external stimulants.					
29 internal stimulants.					
61 ice water.					
In 57 cases chalk mixture was given in 32 with opium.	20	4	13	22·8	65·
12 calomel.					
11 catechu.					
In 59 cases chalk and opium were given in 3 with emetics.	12	2	7	11·8	58·3
9 cinchona.					
28 catechu.					
5 calomel.					
In 37 cases acetate of lead was given in 30 with opium.	29	11	18	48·6	62·
13 calomel.					
5 castor oil.					
4 chalk mixture.					
In 3 cases tincture of the sesquichloride of iron was given in 2 with calomel.	3	1	5	—	—
1 opium.					
In 2 cases catechu was given	—	—	—	—	—
24 " opium	8	9	5	—	—
2 " extract of logwood	1	—	—	—	—
1 " sugar	—	—	—	—	—
2 " gallic acid	—	—	—	—	—

Of 196 cases treated by Stimulants in the metropolitan districts (not in hospitals) it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 94 cases ammonia was given in 4 with emetics.	73	16	55	58·5	75·3
52 ether.					
5 chloroform.					
20 calomel.					
14 opium.					
9 camphor.					
5 salines.					
25 external stimulants.					
10 brandy, &c.					

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 25 cases ether was given in 1 with chloroform.	24	3	20	80·	83·3
15 opium.					
4 camphor.					
6 capsicum.					
4 external stimulants.					
2 brandy, &c.					
In 31 brandy, &c. was given in 6 with emetics.	23	2	12	38·7	52·1
6 calomel.					
12 opium.					
1 nitrous oxyde.					
1 internal stimulants.					
1 capsicum.					
In 23 chloroform was given in 13 with opium.	17	4	13	56·5	76·4
6 external stimulants.					
7 camphor.					
3 capsicum.					
4 creosote.					
1 turpentine enema.					
In 2 creosote with calomel and opium was given	—	—	—	—	—
2 capsicum with calomel and opium	1	—	1	—	—
19 camphor	5	—	5	—	—
in 1 with chloric ether.					
1 opium.					
1 camphor.					
10 capsicum.					

Of 46 cases treated by Eliminants in the metropolitan districts (not in hospitals) it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 46 castor oil was given in 24 with calomel.	38	5	30	65·2	78·9
4 opium.					
1 croton oil.					
2 other aperients.					
5 salines.					
4 emetics.					
7 internal stimulants.					
3 ice water.					

For the purpose of facilitating comparison, Tables are appended in which the results of the prominent treatment are brought into view by the omission of accessory remedies.

Of 1,104 cases treated in metropolitan hospitals—

689 cases were treated by alteratives,					
	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 52 calomel was given, small doses	34	8	26	50*	76*1
381 calomel, larger doses	324	94	184	48*2	56*7
105 calomel and opium	70	22	44	41*9	62*8
20 other preparations of mercury	14	3	13	65*	92*8
131 salines	103	25	66	50*3	64*

231 cases were treated by astringents,					
In 170 sulphuric acid was given	123	27	98	57*6	79*6
36 chalk and opium	17	10	11	30*5	64*7
9 iron alum, and alum mixture	3	1	4	44*4	—
9 acetate of lead and opium	6	2	5	55*5	—
6 cinchona and quinine	2	1	—	—	—
1 gallic acid	1	1	1	—	—

84 cases were treated by stimulants,					
In 8 ammonia was given	7	1	6	—	—
39 brandy, &c.	38	16	25	64*1	—
4 ether	3	1	3	—	—
3 camphor and chloroform	1	—	—	—	—
5 cordial tonic mixture	4	1	3	—	—
7 cajepout oil	7	3	4	—	—
18 internal stimulants	6	1	6	—	—

100 cases were treated by eliminants,					
In 78 castor oil was given	74	13	57	73*	77*
21 emetics	21	1	17	80*9	80*9
1 olive oil	—	—	—	—	—

Of 1,645 cases treated in the metropolitan districts (not in hospitals)—

977 cases were treated by alteratives,					
	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 532 calomel, small doses, was given	338	72	249	46*8	73*6
201 calomel, larger doses	104	25	77	38*3	74*
196 calomel with opium	114	24	65	33*1	57*
13 other preparations of mercury	6	2	3	—	—
35 salines	21	9	12	34*2	57*1

426 cases were treated by astringents,					
In 238 sulphuric acid was given	119	24	93	39*	78*1
116 chalk and opium	32	6	20	17*2	62*5
37 acetate of lead and opium	29	11	18	48*6	62*
3 tincture of the sesquichloride of iron	3	1	1	—	—
2 catechu	—	—	—	—	—
24 opium	8	9	5	—	—
2 extract of logwood	1	—	—	—	—
1 sugar	—	—	1	—	—
2 gallic acid	—	—	—	—	—

196 cases were treated by stimulants,					
In 94 ammonia was given	73	16	55	53*5	75*3
24 ether	24	3	20	83*3	83*3
31 brandy, &c.	23	2	12	38*7	52*1
23 chloroform	17	4	13	56*4	76*4
2 creosote	1	—	1	—	—
19 camphor	5	—	5	—	—

46 cases were treated by eliminants,					
In 46 castor oil was given	38	5	30	65*2	78*9

The following Table, a combination of the two preceding shows the General Per-centages of the various modes of Treatment.

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
<b>ALTERATIVES.</b>					
In 584 cases calomel was given, small doses - -	372	80	275	47·	73·9
582 " calomel, larger doses - -	428	99	261	44·8	60·9
301 " calomel and opium - -	184	46	109	36·2	59·2
33 " other preparations of mercury - -	20	5	16	48·5	80·
166 " salines - -	124	34	78	46·9	62·9
<b>ASTRINGENTS.</b>					
In 408 cases sulphuric acid was given - -	242	51	191	46·8	78·9
152 " chalk and opium, and chalk mixture with catechu - -	49	16	31	20·3	63·2
46 " acetate of lead and opium - -	35	13	23	50·	65·7
24 " opium - -	8	9	5	—	—
9 " iron alum, and alum mixture - -	3	1	4	—	—
6 " cinchona and quinine - -	2	1	—	—	—
3 " sesquichloride of iron - -	3	1	1	—	—
2 " extract of logwood - -	1	—	—	—	—
3 " gallic acid - -	1	1	1	—	—
1 " sugar - -	—	—	1	—	—
2 " catechu - -	—	—	—	—	—
<b>STIMULANTS.</b>					
In 102 cases ammonia was given - -	80	17	61	59·8	76·2
29 " ether - -	27	4	23	79·3	—
70 " brandy, &c. - -	61	18	37	52·8	—
26 " chloroform, &c. - -	18	4	13	50·	—
5 " cordial tonic mixture - -	4	1	3	—	—
19 " camphor - -	5	—	5	—	—
7 " cajeput oil - -	7	3	4	—	—
18 " internal stimulants - -	6	1	6	—	—
2 " creosote - -	—	—	—	—	—
2 " capsicum - -	1	—	1	—	—
<b>ELIMINANTS.</b>					
In 124 cases castor oil was given - -	112	18	87	70·1	77·6
21 " emetics - -	21	1	17	80·9	—
1 " olive oil - -	—	—	—	—	—

The evidence of these tables condemns the eliminant treatment altogether as a principle of practice.

It testifies against the stimulant principle, excepting as a resource in extreme cases.

It displays a decided advantage in the alterative principle, especially as carried out by calomel and opium; and it shows a still superior advantage in the astringent principle as applied through the means of chalk and opium—the general per-centage of deaths following each plan of treatment being,

Of Eliminants - - - - 71·7 per cent.  
 Stimulants - - - - 54·  
 Alteratives, calomel and opium - 36·2  
 Astringents, chalk and opium - 20·3

In order to judge correctly of the value of this evidence, it is necessary to examine, as far as may be possible, the degree of severity of the cases brought beneath this test. The only means at our command (on the present occasion at least) to make this examination is to consider the relative proportion which the cases of collapse bear to the number of deaths of their own classes respectively. Examining, therefore, the collapse cases with the number of deaths, we find that calomel and opium stands highest in the scale of success, and the order of preference appears as follows:

Calomel and opium - 59·2 per cent.  
 Calomel (larger doses) - 60·9  
 Salines - - - - 62·9  
 Chalk and opium - - 63·2  
 Calomel (small doses) - 73·9  
 Castor oil - - - - 77·6  
 Sulphuric acid - - - 78·9

According to this result the superior success of calomel and opium in severer cases appears as a distinct fact, elicited by the present inquiry. It is accompanied by other facts, viz., the relative advantages of those other modes of treatment which follow in their order of success. This order marks the use of calomel in small doses, of castor oil, and of sulphuric acid, as actually to be deprecated in severe cases.

Chalk and opium, as shown above, stands at the head of the list in the general per-centages both in hospitals and in private practice, but in the comparison of the collapse cases with the number of deaths the average declines to the 4th rank.

In the hospital returns, though the cases of collapse are



much fewer, those of consecutive fever exceed the general average under this form of astringent. The deductions which might be made from these facts would be more valuable were a greater number of cases recorded. From the present limited amount the Committee are not disposed to generalize, but to reserve the evidence for comparison with future returns. It may, however, be briefly suggested that an obvious method of accounting for the discrepancy between the success of this form of astringent remedy, in the general and in the severer cases, would be to use the further testimony of the excess of consecutive fever in the severer cases; the inference would consequently remain that this treatment had checked the passage to the collapse stage, and increased the number of cases which survived to pass into that of fever.

It is apparent, from the returns, that the success of various modes of treatment in the hospitals follows the same ratio as those in private practice. As far as it goes, this is a valuable and interesting testimony that there is something real in the result arrived at.

Another rule obtains, showing throughout a greater mortality in hospital than in private practice.

Many reasons may be adduced for this excess. The cases in hospitals are almost always severe; they must all have undergone the process of removal, by which the patient is placed in the most unfavourable position of the body for a period, which, however short, bears a large proportion to the whole duration of the attack. They are at the same time exposed to loss of vital warmth, which tends to induce collapse. These incidents might be considered sufficient to counterbalance the relief from bad air, bad accommodation, and want of nursing in the dwellings of the poor. On the other hand, a large number of the private cases occur amongst the affluent or in the middle classes, amongst whom the disease is seldom left to its severer stages before treatment is had recourse to. That the favourable results should, in the aggregate, preponderate in private practice is therefore to be easily accounted for.

It is not to be doubted, besides, that the records of private cases are highly anomalous, and that the want of precision in the use of terms describing the various stages of the disease hinders, to say the least, the authenticity of the deductions from this class of returns. The mode of registration, as lately instituted in most hospitals, ensures a certain degree of uniformity; and for the present, at least, it

is obvious that these returns are the most reliable sources of information within reach.

It is no matter of surprise that these reports display no very decided relative per-centage of cures under any particular modes of treatment, because such a per-centage would have run counter to the experience of every practitioner, viz., that the disease is, for the most part, unmanageable in its severer forms and in the more advanced stages. But a certain advantage in any one plan of treatment, traced throughout the tables, is a fact as comprehensive as it is tangible, and one which will be received with greater confidence because it has no unreasonable pretensions; a fact which may safely be regarded as a real instalment of practical knowledge.

Although it is difficult, where several remedies have been employed, either simultaneously or in succession, to show the respective influence of each, yet some knowledge of the value of particular measures may be proximately arrived at by taking a large number of cases and reckoning the results of those in which they have and those in which they have not been used; such, for instance, as emetics, turpentine enemata, or ice water.

In 1,100 cases in metropolitan hospitals,

643 had emetics at the outset;  
of these, 410 had collapse,  
140 had consecutive fever, and  
344 died;  
or, 53·4 per cent.  
or, of collapse cases, 83·9 per cent.

457 cases were treated without emetics;  
of which, 303 had collapse,  
106 had consecutive fever, and  
226 died;  
or, 49·4 per cent.  
or, of collapse cases, 74·6 per cent.

It appears that out of 1,100 cases, there are

102 which, together with various other treatment,  
had turpentine enemata administered;  
of these, 87 had collapse,  
59 died;  
or, 57·8 per cent.  
or, of collapse cases, 67·8 per cent.



998 were treated without turpentine enemata,  
 626 had collapse,  
 511 died;  
 or, 51·2 per cent.  
 or, of collapse cases, 81·6 per cent.

It appears that out of 1,100 cases, there are,  
 496 in which, together with various other treatment,  
 ice water was given;  
 of these, 404 had collapse,  
 248 died;  
 or, 50· per cent.  
 or, of collapse cases, 61·1 per cent.

604 cases in which ice water was not given;  
 of these 309 had collapse,  
 322 died;  
 or, 53·3 per cent., and more  
 than the number of  
 collapse cases.

Before concluding these observations on the returns which record treatment in the several stages of cholera and collapse, it is impossible not to express regret that medical practitioners are not more agreed in the accurate use of the terms to be employed in statistical returns, a defect which has hitherto impaired the accuracy of the documents and the certainty of the inferences.

Of all the essential aids to the success of statistical inquiry, none is so important as a careful revision of the nomenclature, together with a scrupulous accuracy in the use of terms when defined; and at a future visitation, practitioners, in recording their cases, will perceive the importance of aiming at a higher object than the advocacy of any peculiar plan of treatment.

According to the filling up of the present returns, no definite information can be obtained on the subject of "Consecutive Fever," because the duration of the attack exceeding so much that of the acute stage, it is impossible to ascertain at what period of the fever the various remedies have been administered, or whether they have been used successively or simultaneously; all that can be recorded from the evidence is, that of 272 cases of consecutive fever, rather more than two thirds had salines, one fifth had calomel, and eleven were treated by nourishment alone.

Local depletion was used only six times, general depletion only twice, and counter irritants (blisters) in twelve cases. One fifth part of the number had tonics.

The amount of deaths is 73, or 26·8 per cent. Fifty-four cases are reported to have gone into consecutive fever without having been in collapse.

In the metropolitan districts, (not in hospitals,) 296 cases of consecutive fever are reported, rather less than two thirds of which had salines; one tenth had calomel; twenty-three were treated by nourishment alone; one tenth had tonics; one ninth had stimulants.

The amount of deaths is 92, or 31· per cent. Ninety-four cases are reported to have gone into consecutive fever without having been in collapse.

It is obvious that no particular use can be made of the above statements; a defect which need be the less deplored, since cholera, in the form of consecutive fever, becomes analogous to other fevers, the treatment of which is generally understood, or at least is an important branch of continued study in the profession. It is a disease the management of which requires daily, almost hourly, vigilance and attention to symptoms as they arise, as well as an unremitting application of judgment to each particular case.

The average of deaths exceeds by something more than 5 per cent. that of the deaths in typhoid fever.

The Committee have to report, with deep regret, that the returns are almost silent on the topic of "Simple and choleraic diarrhoea passing into cholera."

Of 1,104 cases treated in metropolitan hospitals, from which the evidence of treatment in the stages of choleraic and collapse has been extracted, the information regarding the stages of "Simple and choleraic diarrhoea passing into cholera" is extremely faulty.

Of 1,008 cases, it is wholly unknown whether they were treated or not in the stage of simple diarrhoea:

73 were known not to have had any treatment in that stage;

23 only were treated by medicine in that stage.

Of 1,005 cases, it is wholly unknown whether they were treated or not in the stage of choleraic diarrhoea:

48 were known not to have been treated in that stage;

51 only were treated by medicine in that stage.

In 123 cases the stages of "Simple and choleraic diarrhoea" are reported as "absent."

The treatment of the small number of cases recorded is as follows:—

The following table gives the results of 51 cases of "Simple and choleraic diarrhoea passing into cholera," 23 of whom were treated in the stage of simple diarrhoea; and 51 in that of "Choleraic diarrhoea passing into cholera," in metropolitan hospitals.

22 cases were treated in both stages:

- in 4 calomel and opium were given (large doses) throughout both stages;
- 8 sulphuric acid through both stages, in 1 with chloric ether,
- 2 with opium and aperients;
- 3 chalk mixture through both stages;
- 1 chalk mixture in the 1st stage, calomel and opium and external stimulants in the 2d stage;
- 2 chalk and opium in the 1st stage, and calomel and opium (large doses) in the 2d stage;
- 1 iron alum through both stages;
- 3 castor oil through both stages;
- 1 salines and opium in the 1st stage only.

Of 28 cases treated in the second stage, only

- in 13 calomel and opium were given (large doses),
- in 1 with catechu;
- 1 salines;
- 6 sulphuric acid;
- 3 chalk mixture;
- 4 castor oil;
- 1 aperients and opium.

The returns of cases of "Simple and choleraic diarrhoea passing into cholera," in the metropolitan districts, (not in hospitals,) give 3,638 cases.

Of 3104 cases, it is wholly unknown whether they were treated in the pre-monitory stages of the disease.

239 it is known that no medical aid was given in either of the stages of diarrhoea.

In 35 cases, the stages of "Simple and choleraic diarrhoea" are reported as "absent."

184 cases were treated through both stages, viz., "Simple and choleraic diarrhoea."

137 cases were treated in the stage of choleraic diarrhoea only.

The treatment of the cases recorded is as follows:—

Of 184 cases in both the stages of "Simple and choleraic diarrhoea passing into cholera," it appears that

#### *Alteratives.*

In 25 cases calomel was given;  
in 1 with aperients;  
1 emetics.

In 13 cases salines were given;  
in 7 with opium,  
1 calomel.

In 6 cases sulphur and soda were given.

#### *Astringents.*

In 44 cases sulphuric acid was given;  
in 15 with opium,  
4 calomel,  
2 catechu and kino,  
2 stimulants,  
1 aperients.

In 18 cases chalk mixture was given;  
in 1 with calomel,  
5 catechu or kino,  
1 aromatic confection,  
1 aperients,  
1 stimulants.

In 67 cases chalk with opium was given;  
in 8 with calomel,  
7 catechu or kino,  
2 aromatic confection,  
6 stimulants,  
2 external warmth.

In 4 cases extract of logwood was given;  
in 1 with calomel,  
1 stimulants.

#### *Stimulants.*

In 2 cases stimulants were given.

#### *Eliminants.*

In 5 cases aperients were given.

In 137 cases of "Choleraic diarrhoea passing into cholera," treated in the metropolitan districts, not in hospitals, it appears that

*Alteratives.*

In 26 cases calomel was given ;  
in 15 with opium,

2 stimulants,

7 aperients,

1 emetics.

In 7 cases salines were given ;  
in 1 with calomel,

1 stimulants.

In 1 case sulphur and soda were given.

*Astringents.*

In 41 cases sulphuric acid was given ;  
in 11 with opium,

1 calomel,

9 stimulants.

In 7 cases chalk mixture was given ;  
in 4 with calomel,

1 catechu or kino.

In 36 cases chalk with opium was given ;  
in 8 with catechu or kino,

2 calomel,

3 aromatic confection,

4 salines,

1 aperients,

4 stimulants.

In 1 case aromatic confection was given.

1 case catechu.

1 case extract of logwood.

*Stimulants.*

In 13 cases stimulants were given ;  
in 3 with opium,

6 catechu or kino,

2 emetics.

*Eliminants.*

In 2 cases aperients were given.  
1 case emetics.

Showing so far a relative failure of the various plans adopted to stay the disease in its earlier stages. The number of cases treated, however, is but small compared with the whole ;

consequently from these two tables by themselves no fair inference can be made as to the comparative success of different modes of treatment.

The reported facts upon the treatment of these early stages of the disease are therefore not sufficiently numerous or distinct to warrant any specific induction, yet it should be observed that this is the very point at which statistical returns are capable of displaying the most unequivocal as well as the most practically useful information. There are, without doubt, certain points which might be proved from full returns regarding the premonitory stages, and those facts would be most important in the management of the disease at any future visitation. They would especially serve to meet it at that early period of its course when it is definitely controllable by medicine.

Thus, for example, had the fact been shown by adequate statistics, that the majority of cases which have passed into cholera have been altogether without treatment in the earlier stages, then the value and necessity of prompt treatment would be entirely established.

Again, if any of the various modes of treatment could have been in like manner shown to be utterly inadequate to arrest the disease in its progress to the severer stages, then the disuse altogether of such modes would secure an early trial for a more approved treatment, and prevent the waste of irretrievable opportunity.

Inferences, as comprehensive as these, however desirable, must not be rested on the narrow basis of a few isolated returns. It is, therefore, earnestly to be hoped that this most important part of the statistics of cholera may receive the careful attention of the medical profession when they furnish returns on any future occasion.

It remains only to analyze the data from which may be ascertained what has been the treatment of all those cases of "Simple and choleraic diarrhoea," which have not passed into cholera.

The following table shows the cases treated in metropolitan hospitals. The number of cases is 504.

*Alteratives.*

In these cases

In 154 calomel was administered ;  
in 126 with opium,

2 astringents,

21 aperients,

2 salines,

3 stimulants, of which 1 died ;

In 17 cases salines were given,  
 in 2 with astringents,  
 1 opium,  
 3 aperients,  
 5 mercury,  
 3 stimulants,  
 1 external irritants.

*Astringents.*

In 60 cases chalk mixture was given,  
 in 54 with opium,  
 21 aperients,  
 2 astringents,  
 2 salines,  
 2 stimulants;  
 in 118 cases sulphuric acid was given,  
 in 4 with opium,  
 36 external stimulants, of which 2 died.

*Stimulants.*

In 23 cases stimulants were given,  
 in 2 with astringents,  
 2 opium.

*Eliminants.*

In 132 cases aperients were given,  
 in 1 with astringents,  
 1 opium,  
 1 external irritants.

The following statement shows the cases treated in metropolitan districts (not in hospitals).

The number of cases is 3,337.

In which

in 90 cases calomel was administered,  
 in 16 with aromatic confection,  
 1 catechu,  
 21 logwood,  
 1 tonics,  
 13 aperients,  
 18 salines;

in 427 cases calomel with opium was given,  
 in 6 with aromatic confection,  
 18 catechu, &c.,  
 7 logwood,  
 8 acetate of lead,  
 68 aperients,  
 56 stimulants,  
 90 sulphuric acid,  
 99 salines;

in 122 cases salines were administered,  
 in 51 with opium,  
 1 aromatic confection,  
 7 catechu,  
 11 aperients,  
 6 stimulants,  
 25 other preparations;

in 318 cases chalk mixture was given,  
 in 42 with calomel,  
 56 aromatic confection,  
 49 catechu, kino, &c.,  
 14 logwood,  
 12 aperients,  
 18 stimulants,  
 2 sulphuric acid,  
 1 salines,  
 63 other preparations;

in 959 cases chalk with opium was administered,  
 in 169 with calomel,  
 38 aromatic confection,  
 224 catechu,  
 7 logwood,  
 1 tonics,  
 22 aperients,  
 59 stimulants,  
 53 other preparations,  
 6 sulphuric acid,  
 7 salines;

in 142 cases aromatic confection was given,  
 in 3 with catechu, kino, &c.;

in 18 cases logwood was administered,  
 in 12 with aromatic confection;

in 497 cases sulphuric acid was administered,  
 in 41 with calomel,  
     4 catechu,  
    16 tonics,  
    25 aperients,  
    67 stimulants,  
     4 salines,  
     2 other preparations;  
 in 265 cases sulphuric acid with opium was administered,  
     in 8 with calomel,  
        2 tonics,  
        2 aperients,  
        1 salines,  
       20 stimulants;  
 in 216 cases opium was administered,  
     in 10 with aromatic confection,  
        26 catechu,  
        6 logwood,  
       18 acetate of lead,  
       22 tonics,  
       68 aperients,  
       11 sulphuric acid,  
       15 other preparations;  
 in 205 cases stimulants were administered,  
     in 107 with opium,  
        35 calomel,  
        7 aromatic confection,  
        5 catechu,  
        7 logwood,  
        3 tonics,  
        6 aperients,  
        4 other preparations;  
 in 28 cases castor oil was administered,  
     in 17 with calomel,  
        3 opium,  
        1 catechu,  
        2 other preparations;  
 in 4 cases charcoal and oxide of zinc were given,  
 6 cases sulphate of copper and opium,  
 11 cases creosote was administered.

To the above cases, returned in detail according to the forms sent out, may be added the following, communicated

by different practitioners, stated by them only in the aggregate, with a general notice of the treatment.

The number of cases is 17,332.

*Alteratives.*

406 cases were treated with calomel,  
 188 - - - with calomel and opium.

*Astringents.*

916 cases were treated with chalk mixture,  
 833 of which had aromatic confection also;  
 8,247 cases were treated with chalk and opium,  
 in which 3,876 had calomel also administered,  
     2,500 ammonia and catechu,  
     1,029 other astringents;  
 6,454 cases were treated with sulphuric acid,  
 in which 2,912 had opium also,  
     1,532 calomel and opium;  
 1,122 cases were treated with opium alone.

In order to extract all practicable information from the foregoing statements, it will be useful to add all these cases (according to their classes of treatment respectively) to the cases of diarrhoea in the same hospitals and districts which have gone into cholera. Then by taking the per-centage of the cases which have passed into cholera compared with the whole number of diarrhoea cases in each class respectively, the relative proportion of failure of each class of treatment will appear.

TABLE of "Cases of Simple and Choleraic Diarrhoea" treated in Metropolitan Hospitals, and in Metropolitan Districts (not in Hospitals), which have *not* passed into Cholera, and also of Cases of Simple and Choleraic Diarrhoea which have passed into Cholera, together with the relative Per-centage of Failure to stay the Disease in its earlier Stages, under each Mode of Treatment.

TREATMENT.	Cases of Simple and Choleraic Diarrhea which have not passed into Cholera.				Cases of Simple and Choleraic Diarrhea which have passed into Cholera.		Total of Failures to stay the Disease in its earlier Stages.	Per Cent. of Failure	If the Deaths are included as Failures.
	Treated in Metropolitan Hospitals.	Treated in Metropolitan Districts (not in Hospitals).		Deaths from Diarrhea.	Treated in Metropolitan Hospitals.	Treated in Metropolitan Districts (not in Hospitals).			
		Detailed Cases.	Cases given in the aggregate.						
ALTERATIVES :—									
Calomel	28	90	406	—	—	13	524	2.4	—
Calomel with opium	126	427	188	—	3	38	741	6.9	7.1
Salines	17	122	—	—	—	20	139	13.6	—
ASTRINGENTS :—									
Chalk Mixture	6	318	—	—	9	25	324	8.9	12.6
Chalk with opium, calomel, and astringents	54	959	*5,747	—	16	103	6,760	1.5	1.7
Chalk and aromatic confection	—	—	916	—	—	—	916	—	—
Chalk, opium, ammonia, and catechu	—	—	2,500	—	—	5	2,500	0.2	—
Aromatic confection	—	142	—	—	1	—	142	—	—
Sulphuric acid with and without opium and calomel	118	497	6,454	2	13	85	7,069	1.3	1.5
Sulphuric acid and opium	—	565	—	—	1	—	265	—	0.3
Opium	—	216	1,122	—	36	—	1,338	—	2.6
Other astringents	—	21	—	—	11	7	21	—	—
STIMULANTS	23	205	—	1	4	15	228	6.1	8.1
ELIMINANTS	192	28	—	—	—	8	160	4.7	—

\* 3876 with calomel, 1029 with astringents.

† Treatment not detailed.

Thus the order of per-centage of failure to stay the disease in its earlier stages, or in that of premonitory diarrhoea, is as follows :—

	Per Cent.	Or, including the Deaths from Diarrhoea as Failures, per Cent.
Salines	13.6	—
Chalk mixture	8.9	12.6
Calomel, with opium	6.9	7.1
Opium	—	2.6
Calomel	2.4	—
Chalk, with opium, calomel, and astringents	1.5	1.7
Sulphuric acid, with opium and calomel	1.3	1.5
Sulphuric acid, with opium	—	0.3
*Chalk, with opium, ammonia, and catechu	0.2	—

Taking sulphuric acid, with and without opium, and with calomel as an adjunctive remedy

1.33

1.54

Taking chalk with and without opium, together with aromatic confection and ammonia, with catechu, kino, logwood, and calomel as an adjunctive remedy

1.31

1.55

Showing a decided preference to the astringent plan of treatment in the early stages of the disease, or in the premonitory diarrhoea.

Although the facts gathered and digested during this investigation throw a most useful light on the comparative value of different modes of treatment, the Committee are of opinion that still more decisive evidence might be obtained under more favourable circumstances. The inquiry upon which they now report was not undertaken until the epidemic had already reached its culminating point, and when leisure for due pre-arrangement was wholly wanting. The work was partially impeded by the absence of experience in devising the most perfect method of drawing out the returns, and the answers have been less general than might have been expected, had the papers been sent out earlier and the

\* A general return of cases in the aggregate—no details.



medical profession been more prepared to co-operate The Committee are therefore of opinion that much more might and would be effected by carrying out further the plan hitherto only partially successful.

They entertain a conviction, which has grown with the progress of the work, that by ensuring fuller and more numerous returns to a more complete and distinct form of inquiry, they would, on any future visitation of the disease, be enabled to collect ample store of available facts, and to deduce truths of the utmost importance both to guide medical practice and to enlighten science.

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