[L. & M. / 2,000—[illegible]-5-97.]

Local & Munl. (1897) Department.

MISCELLANEOUS.

G.O., No. 2254 & 5 M

DATED 15-10-97

INDEXED.

DESPATCHED

[Despatch Abstract.]

Cholera

Ordering that a letter be despatched to the Govt: of Ceylon, on the subject of the recent outbreak of — in Colombo.

Stating, with remarks, that the sanitary measures taken at the last Nagore festival left no room for complaint and that all practicable arrangements will continue to be made for the future to meet the requirements of the pilgrims at the festival.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Local and Municipal Department.

Current Nos 1453 M, 2459 M, and 3086 M.

H.M.

ORDER. No. 2254 M dy 15-10-97

The following letter will be despatched to the Government of Ceylon:-

To
The Sanitary Commr.
with copy of letter to Ceylon

S.V.
Despt 22/10/97

LETTER. No. 2253 M dy 15-10-97

with the Enclosure (G.O. 1536 / 9-9-96)

From

G. S. Forbes Esq. I.C.S.,
Secretary to the Govt. of Madras,
Local and Municipal Deptt.

To

The Colonial Secretary,
Colombo.

Sir,

I am directed to reply to your letter to the Government of India, dated 8th March 1897, with which was forwarded an extract from the report of the Principal Civil Medical officer of the Colony relative to a recent outbreak of cholera in Colombo.

2. The Principal Medical officer suggests that a representation ~~may~~ be made to the ~~the Madras~~ Government of Madras in view of its ~~to~~ adopting measures to prevent cholera or at all events to limit its spread and he observes that if ordinary sanitary ~~measures~~ precautions had been taken at the Nagore festival, the unfortunate pilgrims who went there from Ceylon would not have been infected and Colombo would have been spared the recent outbreak. ~~I am however to state~~

3. The Principal Medical Officer, ~~that~~ I am to ~~say~~ state in reply, appears to have made

suggestions ~~in ignorance~~ of the facts without a complete knowledge

~~that~~ Of recent years this Government has ~~[illegible]~~ ~~permitted~~ introduced ~~consistently with its finances sanctioned~~ specially directed against cholera various measures, ~~generally for the improvement of the sanitation of this Presidency and particularly for preventing the outbreak and spread of cholera~~ and has done much for the sanitary improvement of the Presy generally. In municipal towns, rules requiring a special organization and detailed methods of combating the epidemic have lately been framed and these will be found in the accompanying copy of G.O.No. 1536 M, dated 9th September 1896. In non-municipal areas the duty of taking the necessary steps for stamping out the disease devolves upon the local Revenue and Sanitary officers, and the Collector is required to give the Sanitary Commissioner and the Sanitary officer of the district concerned sufficient previous notice of the occurrence ~~of all~~ with regard to festivals, at which, on any one day, it may be reasonably expected that ten thousand or more persons will assemble, ~~so that so that the Sanitary adviser of Government and the District Sanitary officer have an opportunity of making any suggestions in regard to the arrangements to be made in the case of each of them.~~ At the last Mayore festival, where the pilgrims from Ceylon are stated to have been infected with cholera, ~~all~~ The possible sanitary arrangements were ~~made~~ under the direct supervision of an efficient and experienced Civil Surgeon. A shed for the accommodation of pilgrims was erected at a convenient centre; a sufficient number of latrines and urinals ~~were~~ was provided and care was taken to see that these were kept thoroughly clean; a special staff of

(We are not to answering an indictment)

the prescribed procedure requires that the District Collector shall give sufficient previous notice to the San. Comr of the Presy & the Sant. Officer of the district, so that the necessary arrangements to deal with the sanitary situation may be made. This was the case

Vide para 3 of the Sanitary Commissioner's letter

Vide para 4 - ibid.

Vide report on the festival

J

of maistries, peons and scavengers was employed under the supervision of a committee composed of the local Chief Sanitary Inspector and three municipal Councillors to look after the general sanitation of the town; the pilgrims took their drinking water from sources specially set apart for the purpose, the use of water from other objectionable sources being strictly prohibited; and as cholera made its appearance just about the time of the festival, the special preventive measures described in G.O No. 1536 M dated 9th September 1896, ~~above referred to~~ a copy of which is enclosed were adopted.

Vide para 3 of the report flagged K

do

4 It will thus be seen that the ~~sanitary~~ measures taken at the ~~last Mayore~~ festival left no ~~us~~ room for complaint and I am directed to state that all ~~possible~~ practicable arrangements will continue to be made for the future to meet the requirements of the pilgrims at this festival, and to check the outbreak and spread of cholera, should it occur. ~~if any, on such occasions.~~

So far as the resources of Govt. are available

So far as govt. interference can do so

(From orders)

V.R.
9/10/97

13/10/97

Desp. 22/10/97

Outbreak of Cholera in Colombo —

[L. & M.]
150—30-6-97.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in proceedings :—

Again G.O., No. dated 189 .

Again G.O., No. dated 189 .

Current No. 1453. M of 1897, dated 29th March 1897, from The Under Secretary to the Govt of India, Home Depart

" " 2459. M " 1897, " 3rd July 1897, " The Sanitary Commissioner for Madras

" " " 189 , " , "

(1) H.O.
(2) H.S.

Misc
ORDER.

H.O.

It seems enough to forward Dr King's letter, simpliciter.

S.R. 31/8/7

If we send on Dr. K's letter, with or without comments, we shall certainly be involved in an undesirable controversy with the Ceylon Govt. — I should not send on the letter, but should write a civil letter saying what was actually done at Nagore & is being done generally with the view of preventing the spread of cholera & the general furtherance of sanitation. Our arrangements are by no means perfect & it does not become us to lecture other people. Those who live in glass houses should not throw stones. Moreover, it is not our

The following letter will be despatched to the Government of Ceylon:—

S.R.

Letter

From.

G. S. Forbes, Esquire. I.C.S.
Secretary to the Government of Madras,
Local and Municipal Department

To.

The Colonial Secretary.
Colombo

Sir,

Adverting to your letter to the Government of India, dated 8th March 1897, with which was forward~~ing~~ed an extract from the report of the Principal Civil Medical officer of the Colony relati~~ng~~ve to ~~the~~ a recent outbreak of cholera in Colombo, I am directed to ~~forward~~ transmit for the information of His Excellency the Governor

~~copy of the letter on the subject addressed to this Government by the ~~Local~~ Sanitary Commissioner of the Presidency. ~~From this, it will~~ be seen that the statement of your Principal Medical Officer that Cholera was unknown in Ceylon previous to 1818, is not borne out by facts and that he has been misinformed as to the number of deaths from Cholera at Kila-karai which he has made the occasion for exhorting this Government to adopt measures for the prevention and repression of cholera. Nor does the assertion made by that officer, that if ~~sufficient~~ ordinary sanitary measures had been taken at the Nagore festival the unfortunate pilgrims who went there from Ceylon would not have been infected and Colombo would have been spared the recent outbreak, appear to be at all well-founded; for, although it is an undisputed fact that pilgrims did arrive from the Nagore festival and were attacked with Cholera, yet there is nothing to point to the conclusion that the outbreak of the disease was solely due to importation from that place.~~

31/8/97

Wishing to revise the Ceylon Govt. L

When a draft has been torn & crumpled as this has been, I think a fresh copy might be made for submission to the members of Govt.

4/9/97

I fully concur with the Hon. Mr. H. Bliss.

A.S.H
9.9.97

Noted

[L. & / 1,000—28]

Local & Munl. (1897) Department.

SANITARY COMMISSIONER WITH THE GOVERNMENT OF
Register No. 1359.5
8-APR. 97

CURRENT No. 1453 M

TO BE RETURNED WITH REPLY.

No. 465 d/7-4-97
~~Order~~

Referred to the Sanitary Commissioner for early remarks.

Secretary to Govt.

6/4/97

Fort St George
7th April 1897

To
The Sanitary Commissioner

From
The Under Secretary to the Govt. of India,
Home Department.

No. 1166

Dated 29-3-1897
Received 2-4-1897
Registered 2-4-1897
Enclosures
Spare copies

SUBJECT.

Forwarding for disposal copy of letter from the Colonial Secretary Colombo relative to the recent outbreak of cholera in Colombo.

2/4/97

BACK PAPERS

G O.	No.	Department	Date.
fo	381	[illegible]	6-3-96
fo	1536	[illegible]	9-9-96
–	24	[illegible]	11-1-97
–	1131-32	[illegible]	8-7-96

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Colonial Secretary's Office,

Colombo, 8th; March 1897.

Sir,

I am desired by His Excellency the Governor to forward, for the consideration of your Government, the enclosed copy of an extract from a report furnished by the Principal Civil Medical Officer of this Colony, relative to the recent outbreak of Cholera in Colombo.

I am etc:

Sd/ J. A. Swettenham

~~for~~ Colonial Secratary.

The Secretary to the Governmemt of India,
(Home Department)
Calcutta

SECRETARY TO GOVERNMENT ✻ LOCAL & MUNICIPAL DEPARTMENT ✻
2-APR. 1897

Copy/extract referred to.

Previous to 1818 Cholera was unknown in Ceylon and there was no term in the Sinhalese language to denote the symptoms characteristic of the disease. Notwithstanding frequent outbreaks it is not endemic in any part of the Island, it never originates, spontaneously and it never appears until it is imported from India. In every outbreak in Ceylon the disease can be traced back to Southern India The early cases occur in persons from India or in persons who have been to India. Towards the end of ~~the~~ last year and beginning of the present, Cholera has, I believe, prevailed as an extensive epidemic in different parts of Southern India and on a recent visit I paid to ~~too~~ Jaffna, the Superintendent of Imigrants informed me that at Kela- Kerrai there were upwards of 1200 deaths in a population of 13,000. As Cholera is a perventable disease, and its existance in Southern ~~I~~ India a constant source of danger to Ceylon, I would earnestly

1P2

earnestly advise that a representation be made to the Madras Government to adopt measures to prevent Cholera or at all events to limit its spread. If ordinary sanitary measures had been taken at the Nagoor festival the unfortunate pilgrims who went there from Ceylon would not have been ~~forced~~ infected and Colombo would have been spared the recent outbreak.

LOCAL & MUNICIPAL DEPT.
CURRENT No. 1453 M

[redacted] No: 1166

Copy forwarded to the Government of Madras for disposal.

By order,

Home Department
(Sanitary).
Calcutta, the 29th March 1897.

Offg: Under Secy: to the Govt: of India.

Go 2254-54 M
15-10-97

Ans.

Local & Munl. (1897) Department.

CURRENT No. 2459 M

Order

From
The Sanitary Commissioner
for Madras

No. 1360/S

Dated 3rd July 1897
Received 6 JUL. 1897
Registered 6-7-1897
Enclosures 5 & C. No 1453 M retd
Spare copies.

SUBJECT.

Submitting remarks with reference to endorsement of Govt. No 465 dated 7. 4. 97 on letter from the Colonial Secretary, Colombo relative to the recent outbreak of Cholera at Colombo.

a/1578

BACK PAPERS.

G.O.	No.	Department.	Date.
Go	252	Mr	19-2-97
"	24	Mg	11-1-97
"	1131-32	M	8-7-96
"	1536	M	9-9-96
"	381	M	6-3-96
"	1686	M	21-10-95
"	1028	[illegible]	26-1-95
"	1476	L	8-8-95

FURTHER PAPERS.

G.O.	No.	Department.	Date.
Go	63	L	17-1-94

NEGAPATAM MUNICIPALITY.

Rules prescribing the duties of the Cholera Staff drawn up with reference to G. O. No. 1536 dated 9th September 1896.

1. Before the appearance of cholera the observation Staff of temporary Circle Inspector, peon and toties should patrol its circle, remove with the permanent establishment all defects in sanitation, decaying rubbish, stagnant sewage &c , and report to the Division Inspector and the Chief Sanitary Inspector the first case of cholera or severe diarrhea, so that immediate action may be taken. The staff should also distribute among the people in its circle Dr. King's 'Simple Sanitary Rules' printed copies of which in Tamil will be furnished to it. This staff should inspect all public latrines and if found unclean should report the same to the Division Inspector.

2. As soon as an attack is reported the Circle Inspector should immediately proceed to the house with peon and thoty and keep in the yard of the house a tarred tin canister with disinfecting powder for receiving vomit and excreta, and two tarred chatties to be used by the patient for passing motions and vomits. Even if cases are not reported it is the duty of the Circle Inspsctors and peons to find them out by careful enquiries in the course of their rounds.

3. The thoty with peon should be made to visit each affected house 3 times in the forenoon and 3 times in the afternoon, and remove the contents of the chatties into the tin canister mixed with carbolized saw-dust. The contents of the tin canister should be mixed with saw-dust, straw and kerosine oil and burnt up in the backyard or some other convenient and isolated spot near the house in the presence of the Circle Inspector, or the peon, if the Circle Inspector cannot be present, twice a day once in the morning, and once in the evening.

4. The ashes should be collected in a separate tin canister and removed once in the evening every day to the rubbish depot and buried in the presence of the Circle Inspector.

5. The tin canisters intended for receiving excreta and vomit should under no circumstances be removed from the house of the patient.

6. When the burning takes place outside the house matter should be burnt in large chatties so that no excreta or vomit or anything else infected may touch the ground.

7. When the burning takes place in the backyard the ashes should be removed together with the earth scraped out and put in the tin canister and the spot disinfected with mercury lotion.

8. All infected clothing and bedding, not valuable, should be burnt. The rest should be steeped in mercury lotion in a chatty.

9. After the recovery or death of the patient the earth on the spot where the patient lay should be scraped out and burnt. The spot itself should be disinfected with mercury lotion.

10. When the flooring is either concrete or brick it should be washed over with mercury lotion. The whole house should also be sprinkled over with mercury lotion and the drains washed with it.

11. The affected house should be completely white-washed by the inmates and notice under Section 231 of the District Municipalities Act should be served at

Encl 1

C No. 2459 [illegible]

once upon them by the Division Inspector to do it on pain of prosecution within 24 hours. If the order is not obeyed within that time the Division Inspector should at once prosecute the defaulter with the sanction of the Chairman. And if necessary the Chairman may move the Sub-Divisional Magistrate under Ch. XI of code of criminal procedure applying for the issue of a notice.

12. The above measures should be adopted for ten days in cases in which patients recover.

13. The store of disinfectants will be kept for Negapatam in one of the Market rooms, for Velipalayam in a room attached to the Engine shed in the Municipal Office compound, and for Nagore in the Nagore Dispensary. The stores will be in charge of the respective Division Inspectors.

14. The respective Division Inspectors should assemble the Circle Inspectors, peons and thoties in the morning at 6 A. M. and in the noon at 2 P. M. and distribute to them the required quantity disinfectants.

15. The respective Division Inspectors should visit each affected house not less than 3 times, and the Circle Inspector not less than 6 times a day, and see that the above measures are properly carried out. The Chief Sanitary Inspector should visit each affected house at least once a day for the same purpose.

16. The Chief Sanitary Inspector should send up to the Civil Surgeon through the Chairman, during the prevalence of the epidemic, a daily report specifying the affected houses visited by him, number of attacks and deaths up to that date and number on that date, circles where they occurred, and certifying to the proper carrying out of the above measures with full and detailed information on the working of the Cholera Staff. This report should be drawn up by him at the close of each day and submitted on the following morning.

17. The Division Inspectors will place themselves on cholera duty as soon as the epidemic appears in their respective divisions, and supervise the work of the temporary cholera staff and carry out the preventive and other measures set forth above.

5th November 1896.—

P. RATNASABHAPATHI PILLAI,
Chairman.

N. MUHAMMED OOSMAN,
Civil Surgeon.

Note:— The above rules have been approved by the Collector.

Printed at the "Scottish Branch Press", Negapatam.

1
2459 M of 1897

Remarks by civil Surgeon on report by Hospital assistant Mathuranayagam.

The 1st case of cholera occurred at Nagore on the 19th october 1896, 17 days prior to the commencement of the festival. The disease was imported into Nagore by a Mahamadan girl who was attacked on her way from Muthupet where the people of Nagore and Negapatam had been for the Khandri festival. The next case was, a Hindu male, age 30. No history of importation could have existed between him and the first case. The 3rd case was a Mahamedan boy aged 10 years. He had also returned from Muthupet. 4th and 5th cases were relatives of this boy. The 6th case was also one of importation from Muthupet. The disease was prevalent chiefly among Mahammedans * * *

Cholera was very severe during the Khandri festival from 6th to 17th november 1896 when the people gathered for the festival. The gathering was not so great, not even quarter as much as in the previous year. This was due to the timely action taken in publishing the existence of the disease in the District Gazette, the Madras Mail, the Hindu and Mahamadan papers and also

Encl 2
C.No. 2459 M of 97

posting notices in different Railway Stations. The people arriving at Negapatam Station were warned at the gate by beat of tom tom, the risk consequent upon the prevalence of the disease at Nagore. As the effect of these precautions and stringent measures adopted, the mortality among the pilgrims was considerably reduced and the disease which appeared in a very virulent form was stamped out completely within a comparatively short period of 40 days. Frequent showers of rain, and consequent dampness of low houses contributed greatly to the severity of the disease.

2. Nagore which has a population of 17,000 inhabitants, was divided into two sections. Each was placed under a Special Sanitary Inspector who had under his orders 3 peons and 2 Totties for preventive work. One special Hospital Assistant was employed to administer medicine to affected persons in addition to the Hospital Assistant in charge of the Dispensary. The Hospital Assistant located himself in the Dispensary to render medical aid at all hours of day and night. The Chief Sanitary Inspector and the Division Inspectors supervised the work of the Specia Inspectors and the whole staff worked energetically throughout.

3. The drinking-water wells were hankinized and the river Vettar which received the surface washings of the town during the rains, was entirely prohibited from being used for any purpose by a magisterial order, which was carried out by 5 special peons and Police Constables placed at short intervals throughout the course of the river within the Town. Other objectionable water sources were temporarily closed and a watchman was placed over each to prevent their being used. Instructions with regard to the details of working were printed in English and Vernaculars and distributed among the members of the staff.

(sd) Mahomed Oosman
Civil Surgeon.

(True copy)

W King
Surg Lt. Col.
San. Commr. for Madras.

2
2459 W of 1847

Encl 3
C N° 2459 W of 47

Report of the Kandri festival held at Nagore from the 6th November 1896 to 17th November 1896

Tanjore	District
J. Mathuranayagam Hospital assistant.	Name of Reporter
Kandry festival, Nagore.	Name of festival
From 6th to 17th November 1896.	Date of festival
About 10,000	Number assembled
The Surroundings of the Durgha were kept in a sanitary condition by a temporary Establishment consisting of 2 Maistries, 5 Peons & 27 Scavengers under supervision of the chief Sanitary Inspector of the Municipality & 3 Municipal councillors who formed themselves into a Sub-committee. The pilgrims lived in several buildings in Durgha premises, some in private houses and a few in a shed erected for their accommodation near Eluppaitope.	Accommodation & Sanitary arrangement
One water shed was erected as usual and two men were employed to supply water to the pilgrims. Water was obtained from Veechangulam reserved by the Municipality for drinking purposes.	Water-supply
Six temporary latrines, 3 for males and 3 for females were erected. They were worked on trench system each latrine had a trench about 36 ft long, 1½ ft broad & 1 ft. deep and a toti was posted at each to cover the night soil immediately with dry earth, and remove it as frequently as necessary. A brick pavement measuring 3 ft. square was erected in each of these latrines for washings which were emptied in a wooden cask. One extra male toti was appointed at the Elephant stall latrine and two extra toties were employed at the Durgha Iron latrines in addition to the permanent toties. 16 urinals were erected in different parts around the Durgha premises and one toti was deputed to every 3 urinals. Two rubbish carts, one night soil cart, one sewage cart and one cart to remove the contents of the urinals were employed. The night soil was removed to the usual night soil depot near the Sea-Shore. Disinfecting powder were freely used in the latrines & urinals. One cholera shed was erected and a cook, a watchman & a toti were employed for the same.	Conservancy
Epedemic cholera broke out before the commencement of the festival 4 patients were treated during the period. A separate report will be submitted on the subject.	Epedemic
The general health was unsatisfactory, on account of spread of cholera, malarial fever. The latter is attributed to heavy fall of rain before & during the festival	General health.
	Recommendations

Nagore
24.11.96

(Sd) J. Mathuranayagam
Hospital Assistant.

(True copy)

(Sd) Mahomed Osman
Civil Surgeon

3 / 2458 W of 1897

No: 1620.

Forwarded to the Sanitary Commissione Madras, through the Divisional officer, Negapatam.

1. The Sanitary arrangements were on the whole satisfactory.

2. The temporary urinals & latrines were erected on the plan suggested by the medical officer.

3. Special Maistries were employed to supervise the work of Totis & Sweepers.

4. A cholera shed was erected as advised.

5. An accommodation shed was put up in Eluppai Tope to prevent overcrowding near the Durgha. More would be required next year.

6. The pilgrims assembled were by far less than the usual number. The decrease was due to prevalence of cholera of which timely notice was given to the public.

7. The Sanitary precautions adopted and the medical arrangements made to combat the disease will be submitted in a seperate report.

Negapatam
10th Decr: 96.

(Sd) Muhamed Oosman
Civil Surgeon.

Encl 4

C No. 2459 Mu

4
2459 no of 1897

[Report- by the Principal (Civil) Medical Officer Colombo]

The following measures were taken to prevent Cholera in Colombo spreading and to afford relief to those attacked.

(1) The Municipal Town Hall was used as the centre to which all cases were reported, and from which all preventive measures were taken.

Here the the arrangements were placed under the Municipal Sanitary Officer Dr Drieberg and Colonial Surgeon Dr Gratiaen acting under my supervision. These Officers had 3 Sanitary Inspectors, a staff of Attendants, a carriage specially fitted up with everything necessary to disinfect a house and treat the sick. The Town Hall was in telephonic communication with the Police Stations in the Wards so that when a case of Cholera was reported a Sanitary Officer, Inspector, Attendants, and the carriage started off to the infected house and did everything necessary according to instructions.

(2) In the Wards of the City, the Police Stations were used as the centres to which cases were reported and telephoned to the Town Hall and from which Medical aid was sent without delay.

At the Police Station of every infected Ward a Medical Assistant was stationed who at once visited a case when reported with an Ambulance.

The Police Stations were supplied with medicines disinfectants and Printed instructions which were issued free on application, and Ambulances for the convevance of the sick to hospital. Hand Bills of instructions were also freely distributed.

(3) There were two special Infectious hospitals to which cases of Cholera ~~were~~ could be conveyed. Only one hospital was used as all the cases occurred in the

Encl 5
CNo. 2459 of 97.

Southern

4/2459

Southern part of the town. This was in charge of a Medical Assistant and supplied with everything necessary for the treatment of the sick.

(4) There was house to house visitation in each infected Ward in order to detect concealed cases, and to afford medical treatment. This was conducted by the Municipal Sanitary Inspector and a Police Constable who sent for the Medical Assistant when his services were required.

(5) The grounds of the Infectious hospital are so extensive and the accommodation so good, that we were able to use some of the buildings as " Houses of Refuge " for the possibly infected, until a special building, an unused jail in Slave Island, was placed at our disposal and fitted up.

(6) The sick were where practicable removed to hospital at once if they were willing to go, and the possibly infected or persons suspected of being sick to the " House of Refuge." If the person attacked was unwilling to be removed, a guard was placed over the house to prevent communication and medical assistance offered. As a rule the sick were willing to go to hospital but a very large number of the cases which occurred were reported after death, or the sick were in such a critical state, that removal was impossible. When the case was reported after death was generally only one person with the body, th others having bolted to some other part of the where in some instances they established sec centres of infection.

(7) On the removal to hospital or death patient and the suspected to the " House

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the house in which the case occurred was subjected to the most thorough disinfection, and so well was this done that in no instance did a second case occur after disinfection.

(8) About 100 persons were removed from infected houses to the " House of Refuge," and of these only two were attacked with Cholera, and both died.

(9) The wells in every infected district were filled up, or disinfected after Hankin's method by the daily addition of 2 oz of Permanganate of Potass.

(10) The houses where food was prepared for sale of which there were 97 in Slave Island were subjected to the most careful inspection by the Sanitary Inspector of the Ward, but only one house was infected by a single case of Cholera. It was at once closed.

[Note:
This Report is in original
and is as received cut
as now found]

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4/2465

M of 1897

2,250—1-4-97.

No. 1360/S

OFFICE OF SANITARY COMMISSIONER,

Fort St. George, 3rd July 1897

LOCAL & MUNICIPAL DEPT.
CURRENT No. 2459 M

From

SURGEON-LIEUT.-COL. W. G. KING, M.B., C.M., D.P.H.,

SANITARY COMMISSIONER FOR MADRAS,

To

THE Secretary to Government
Local & Municipal Depttt.

Enclosure.

SIR,

With reference to your endorsement No. 465 dated 6 April 1897, I have the honor to state that as the Principal Civil Medical Officer Colombo had given no grounds for his belief in the Extract of his Report furnished me by you as to the connection between the Nagore festival and the outbreak of Cholera in Colombo, I applied to him for favor of his reasons. These he has conveyed to me and whilst they seem to me of far too general a nature to permit it to be admitted that the outbreak was solely due to introduction from that place it is indubitable that pilgrims did arrive from the festival and were attacked with Cholera.

2. This

2. This occurrence the Principal Medical Officer on behalf of Ceylon makes the occasion for exhorting the South of India to greater care in repression of Cholera, and precedes this demand by a recital of how rarely Cholera has attacked Ceylon. Thus he states that the disease was unknown in the island till 1818. Dr Macnamara, however – no mean authority in Cholera – states it was epidemic in Ceylon as early as 1782-83. But allowing this to pass, I think his statement proves, firstly, how very simple it must have been in bygone days to keep Cholera out of Ceylon and secondly, that, if change of conditions has taken place which renders the task less simple, this is to be found in Ceylon and not in this Presidency.

3. The following table shows the death rate per mille from Cholera in the estimated population of the Madras Presidency from and including 1885, when the Principal Civil Medical Officer admits the disease last attacked Ceylon:–

Years.	Total No. of deaths in the Presidency.	Rate per mille of the estimated Population.
1885	58109	1·9
1886	12,417	0·4
1887	28,359	0·9
1888	58,677	1·8
1889	76,020	2·3
1890	35,288	1·05
1891	98,773	2·9
1892	79,033	2·3
1893	32,209	0·9
1894	42,289	1·2
1895	21,172	0·6
1896	47,847	1·3

4. It will be seen that, great as was the mortality of 1896, it was much less than 1891. There is indeed reason to believe that since 1892 Cholera has not prevailed in this Presidency to the extent it formerly did. This fact, I think, may be ascribed to Government having sanctioned various measures specially directed against Cholera, and the general improvement of the sanitary discipline of the Presidency following its being understood that Government does interest itself in sanitary reform. Indeed, of late years the action of all local authorities in respect to epidemics of Cholera has

has notably increased. All village heads, Revenue Officers* and District Sanitary Officers are perfectly well aware of their duty as to combating Cholera in villages (G.O. ~~Revenue Department~~+ No. 4850 Mis dated 26th Dec 1893). Every Sanitary Officer has received training in sanitation of a very excellent character in the Netley Army Medical School. Certain of them also hold diplomas in Public Health. In respect to Municipal Areas, rules requiring a special organization and detailed methods of combating Cholera were adopted by Municipalities in G.O. No. 1028 M dated 26 June 1895, Local and Municipal and have since been made compulsory by Government G.O. No. 1536 M dated 9th September 1896, Local & Municipal. No festival, at which more than 10,000 people assemble, occurs without its being possible both for myself and the District Sanitary Officer to advise the attention of local authorities to requirements (G.O. No. 1476 L & M dated 8th August 1894). Special rules have been laid down as to sanitary care of pilgrims

by

* Standing Order Revenue Board No. 195

+ Village Officer's manual vol: II.

63 L
171-94

by rail (G.O. No. 590 R dated 20th September 1895 Public Works). Since 1855, hospitals and dispensaries have been increased by 179, so that there are now 486+. Each of these represents a centre from which medical and sanitary advice can be given to local authorities. Recently the Madras District Municipalities Act has been completely amended, and, in doing so, particular attention has been paid by Government to the question of dealing with infectious diseases.

4. The Principal Medical Officer, Ceylon, pushes home his appeal against Madras sanitation, by quoting the statement by the Superintendent of Immigrants, Jaffna, to the effect that at Kila Karai 1,200 deaths had occurred in a population of 13,000. Now, it seems to me that before committing himself to such a statement, it would have been but just to have relied upon state

gained

+ on 31st Dec 1895.

gained from this office, instead of from mere hearsay. The truth is bad enough without the aid of exaggeration given by the Superintendent — 808 deaths from Cholera having occurred in a population of 12,396. But whilst a too ready acceptance of the Jaffna Superintendent's assertion misled the Principal Medical Officer and his exaggeration is excusable, he ventures a mere haphazard assertion when he affirms "if ordinary sanitary measures had been taken at the Nagore festival, the unfortunate pilgrims who went there from Ceylon would not have been infected and Colombo would have been spared the recent outbreak." Mr Oosman,

under

under whom local arrangements for this festival were made, is an officer not likely to spare any personal efforts in the midst of an epidemic. He received part of his early training under me, and he was subsequently for many years my Assistant Surgeon, and I have the fullest confidence in his ability and energy. Enclosed (exhibit A) is the usual Report by him on this festival. I forward for favour of comparison a description of the methods employed in Colombo under the Principal Medical Officer's own direction to combat Cholera (exhibit B). I confess I may be prejudiced, but I fail to see that Colombo gains in any way by the Comparison, beyond the fact that the Negapatam staff had not the facilities offered by the possession of telephonic communication, or a public water supply. I may add that the necessity for providing Negapatam with a protected water supply with the object of Cholera prevention in the interests of Commerce was pleaded by me, in 1890, and that recently, under orders by Government, a scheme has been placed by the Sanitary Engineer before the Sanitary Board.

252h
19-2-97.

5 It must be remembered that the description of measures given by the Principal Medical Officer are those practised under his own careful supervision; but, it seems

from

from his statement as to methods conducted elsewhere in the island that there remains much to be desired. Thus, as to Slave Island he states:—

"Soon after the return of the Mahomedan pilgrims who had gone to the Nagore festival to Colombo, there was a considerable increase in the death of this community, especially in Slave Island, a division of Colombo largely inhabited by Malays. At first as usual the cause of death was concealed, the deaths being registered as due to other causes than Cholera. When concealment was no longer possible it was ascertained that there had been many deaths from Cholera among persons who had returned from the Nagore festival, or in houses which had received pilgrims from that place."

6. As I was not aware of the conditions existing in Ceylon as to sanitary administration, I wrote to the Principal Medical Officer asking him to give me as full information as possible relating to methods in vogue for combating epidemics, especially asking him to furnish me with copies of Acts that are in force. In reply he has sent me the marginally noted Ordinances. Now Regulations founded on the Epidemic Diseases Act of 1897 may well be put aside; firstly, because this Act does not apply to the time complained of by him, namely, 18th November 1896; Secondly, because it is presumed although applicable to Cholera, Ceylon really intended its Regulations, as in the case of every other Government, to combat plague. If then these new Quarantine Regulations be put aside, the defence of Ceylon is limited to a set of rules of a very ordinary nature issued by the Medical Department as to conduct of disinfection, and the ancient Ordinance of 1866.

Ordinance No 8 of 1866
Ordinance No 13 of 1896 (re- plague)
Ordinance No 3 of 1897 (Under Epidemic Diseases Act of 1897)

These have been obtained from the San'y Commr's office [illegible]

7. Taking the above facts into consideration, I believe that if in 1896 Ceylon found it less easy to prevent the spread of Cholera in the Island, it is not necessary to regard Madras as the origin of its misfortunes, Ceylon has been attacked subsequent to the introduction of greatly improved conditions and less mortality in this Presidency, when compared with years when that island had freedom from epidemics. Hence, it would be but logical for Ceylon to consider first whether it has, in the meantime, put its own house in order, and whether adequate measure have been taken—having regard to increased population and extent and rapidity of traffic. From the Principal Civil Medical Officer's appeal to Madras and perusal of Correspondence as to the establishment of a quarantine station in Hare Island, I draw the conclusion that

that Ceylon Sanitation is dominated by exploded Continental opinions. In Madras, we do not appeal to Bengal.– the endemic area of Cholera – in our interests, "to prevent Cholera, or at all events limit its spread." Neither does England rely upon the Sanitary Activity of its neighbours, or attempt to protect itself by the useless proceeding of establishing a quarantine station (Vide correspondence regarding Hare Island), but it does successfully combat Cholera by relying upon its own local sanitary improvements, so that if introduced, Cholera shall not spread. With all due diffidence, this seems to me the policy that Ceylon should follow.

8: By the above, I do not mean to imply that the Madras Presidency has, or is, doing all that might be done to stay Cholera. In fact, in certain districts the mortality from this disease has been so heavy as to cause me personally the deepest regret. I have, however, the assurance of Government that it is not in its power to permit greater expenditure on account of sanitation in this Presidency than it at present does. When it is possible to allow increased expenditure, I need not say the devising of further precautionary measures by this office would be a pleasure and not a toil.

9. As a practical aid towards helping the Ceylon Government, I would state that I believe much good could be effected if it would, in consultation with the Government of Madras, devise measures for insisting that recruiting agents keep intending emigrants whilst in the Madras Presidency in dwellings that have been certified by District Sanitary Officers to be fit as to structure and position in regard to inhabited areas, and have correct arrangements as to water-supply and Conservancy.

I have the honour to be,
Sir,
Your most Obedient Servant,
W G King
Surgeon Lieut Col,
Sanitary Commissioner for Madras

Reg 2254-55 L
15-10-97

Local & Munl. (1897) Department.

CURRENT No. 3086 M

From

The Government of India,
Home Department.

No. 1970

Dated 18-8-97
Received 30-8-1897
Registered 30-8-1897
Enclosures
Spare copies. 7

for **Orders**

This paper may be read and disposed of with Current no. 2459 M which was sent up to Ooty on the 23rd August 1897.

I.R.
9/9/97

SUBJECT.

Forwarding for information copy of despatch from the Secretary of State forwarding copy of letter from the Colonial office concerning an outbreak of cholera at Colombo whether the disease is said to have been carried from a gathering at Nagore.

Cur 2459 M/97

3/9 of 2/9

BACK PAPERS.

G.O.	No.	Department.	Date.
Cus 2459 Ly/97			

FURTHER PAPERS.

G.O.	No.	Department.	Date.

LOCAL & MUNICIPAL DEP
CURRENT No. 318 bM

INDIA OFFICE,
London, 13th May 1897.

Revenue,
No. 78.

To His Excellency the Right Honourable the Governor General of India in Council.

MY LORD,

I forward, for such action as Your Excelleney may see fit, copy of a letter from the Colonial Office concerning an outbreak of cholera at Colombo, whither the disease is said to have been carried from a gathering at Nagore (in the Tanjore District). It is suggested that the sanitary arrangements at the Nagore gathering were less effective than they might have been.

From Colonial Office, dated 8th April 1897, with enclosures.

2. The drastic measures of segregation and disinfection taken on the occurrence of cholera; the disappearance of cholera that ensued; and the complete immunity of Colombo (a tropical seaport town of 140,000 people, close to India) from cholera for eleven years are interesting facts and deserve the attention of the sanitary officers of your Government.

I have the honour to be,
MY LORD,
Your Lordship's most obedient humble Servant,
GEORGE HAMILTON.

COLONIAL OFFICE,
DOWNING STREET,
8th April 1897.

No. 6060—7.

SIR,

I am directed by Mr. Secretary Chamberlain to transmit to you, to be laid before Lord George Hamilton, the enclosed copy of a Despatch from the Governor of Ceylon forwarding a report upon the recent outbreak of cholera in Colombo, a copy of which has also been communicated to the Local Government Board and War Office.

No. 64, 22nd February 1897.

I am to suggest, for His Lordship's consideration, that the attention of the Government of India might be drawn to paragraph 18 of the enclosed report, which points to this outbreak having been introduced from Southern India and alleges proper sanitary measures had not been taken at the Nagore festival.

I am, etc.,
W. D. GRAHAM.

To

The Under Secretary of State, India Office.

No. 64.
Miscellaneous.

QUEEN'S COTTAGE, NUWARA ELIYA,
Ceylon, 22nd February 1897.

SIR,

In compliance with the request contained in your telegram of the 12th ultimo I have the honour to submit a copy of a report furnished by the Principal Civil Medical Officer on the recent outbreak of cholera in Colombo.

The fact that the disease has been so successfully stamped out is without doubt due to the excellent precautions so promptly taken under Sir William Kynsey's orders. The thanks of the Government, indeed of the whole community, are due to that experienced officer, and also to the Mayor of Colombo, Mr. F. H. Price, who so zealously and energetically co-operated with him. Sir William Kynsey expresses his acknowledgments of the excellent services rendered by his staff more especially by Dr. Vanderstraaten. The police also under the orders of Major Knollys have earned commendation.

3. You will observe that Sir William Kynsey is disposed to think that the outbreak of cholera on board the "*Nubia*" was due to infection carried from Colombo, unless indeed the disease was plomaine poison from tinned provisions purchased by the men attacked.

4. Sir William Kynsey bases the former theory on the assumption that there was no cholera at Port Said. This may not be correct. It should also be noted, when considering this question, that there has not been a single case of cholera among the garrison in this island. It seems improbable that under these circumstances the men of the garrison who embarked on the "*Nubia*" should have carried with them the germs of the disease to be developed some seventeen days after leaving Colombo.

I have, &c.,
WEST RIDGEWAY.

To
THE RIGHT HONOURABLE J. CHAMBERLAIN, M. P.,
&c., &c., &c.

No. 198.

PRINCIPAL CIVIL MEDICAL OFFICE,
Colombo, 16th February 1897.

THE HON'BLE THE COLONIAL SECRETARY.

SIR,

I have the honour to acknowledge the receipt of your letter No. 112 of the 2nd instant and to submit the following brief report on the recent outbreak of cholera in Colombo.

2. The area covered by the city of Colombo is about 6,047 acres or 10 square miles; for administrative purposes it is divided into nine wards and the following table shows their area in acres and population according to the census of 1891, with the cases and deaths which occurred in each:—

No.	Ward.	Area in acres.	Population census 1891.	CHOLERA.		
				Cases.	Died.	Recovered.
1	Kollupitiya	1,928	13,449	7	7	...
2	Kotehena	1,649	27,935	1	1	...
3	Maradana	1,297	23,562	19	16	3
4	Slave Island	313	13,622	83	75	8
5	New Bazar...	289	14,501	7	7	...
6	Fort	220	2,541	1	1	...
7	St. Paul's	143	16,322	6	5	1
8	St. Sebastian	116	7,943	4	4	...
9	Pettah	92	7,961	8	8	...
	House of Refuge	...	...	2	2	...
		6,047	127,836	138	126	12

3. The estimated population of the city for the fourth quarter of 1896 during part of which cholera prevailed was 137,930. The population of each ward has not been estimated.

Vital statistics.

4. There were 1,323 deaths registered in the last quarter of 1896 equivalent to a rate of 38·1 per 1,000 per annum, an excess of about 10 per cent. of the average rate for the corresponding period 1893-95. There was a decrease in the birth-rate. The mortality was highest among the Malays who lead with 51·9 per mille. Their co-religionists, the Moors, keep close behind with 47·9. The habits and customs of these two sections of the community and not least the seclusion in which their families live and their concealment of disease are responsible for this high rate. The European rate was 26·9 and the Burghers 27·9, Singhalese 38·3 and Tamils 46·1 and other races 45·2. The death-rate of the different wards of the town was as follows. The healthiest were the Fort and Galle face 15·6 per 1,000, the Pettah 18·9, Kollupitiya 27·7, Kotehena 30·7, Maradana 33·5, New Bazar 35·0, St. Paul's 37·2, St. Sebastian 40·0, and Slave Island 56·2.

5. The last outbreaks of cholera in Columbo previous to the one which is the subject of this report were in 1885. In this year there were two, the first lasted from the 8th of January to the 8th April during which period of 90 days 211 persons (74·78 per cent.) were attacked and 158 died, a death-rate of nearly 75 per cent.; the second lasted from the 7th August to the 14th of September or 38 days; 119 (78·15 per cent.) were attacked and 93 died, a death-rate of nearly 80 per cent.

6. Colombo was free from cholera from September 1885 until the 23rd of November 1896, when the recent outbreak commenced, and it lasted until the 21st of January of the present year, a period of 60 days; 138 persons were attacked and 12 persons recovered, a death-rate of nearly 90 per cent. Of 73 cases sent to hospital, 62 died; (88·40 per cent.) of 65 cases not sent to hospital, only one recovered. There were 16 days upon which no case was reported and the largest number reported on any one day was 12.

7. The origin of the outbreak was traced to a party of Muhammadan pilgrims who returned to Ceylon after visiting a festival at Nagore in Southern India. As usual among that community the early cases were concealed and when they could be no longer concealed they were reported to be cases of acute diarrhœa due to the use of improper food and climatic causes. But the benefit of the doubt as to their true nature was given to the public, and the cases were treated from their commencement as if they were true cholera. No time was lost in making a bacteriological examination of the discharges; from one of the suspected cases the cholera bacillus was not only discovered, but the Laboratory Assistant was attacked with all the symptoms of cholera and every nearly lost his life. This left no doubt as to the true nature of the disease prevailing.

8. Of the 138 attacked 64 were Muhammadans (47 Moors and 17 Malays), 37 Singhalese, 28 Tamils, 3 Burghers, 3 Europeans, 2 being non-residents, Cochin, Bengalu and Chitty one each; 84 were males and 54 females.

9. As regards the divisions of the town in which the cases occurred 83 occurred in Slave Island Ward with 75 deaths and 8 recoveries, 19 in Maradana with 3 recoveries; Pettah 8 fatal, Kollupitiya and New Bazar each furnished 7 fatal cases, St. Paul's with 6 and 1 recovery, St. Sebastian 4 fatal, Kotahena and Fort each a fatal case, and two cases proved fatal in the House of Refuge to which they were removed from an infected house of the Maradana Ward.

10. The table 11 gives the ages of those attacked, from which it will be seen that they were mostly between the ages of 20 and 50.

11. There is good evidence that the disease first broke out in that portion of Slave Island which is largely inhabited by Muhammadans. The first case registered as cholera was from this ward, and there is no doubt whatever that cases were concealed here for some time before the sanitary authorities of the Municipality became aware of the fact. This ward is not an island as its name would lead one to believe, but a peninsula, as it is not entirely surrounded

by the lake. The whole ward was not infected, the area of which is 313 acres with 13,622 inhabitants. The infected area is only a little over 43 acres and consists of 19 streets, or more correctly lanes, having 1,904 houses inhabited by 7,075 persons. Of the 83 cases in the infected area single cases occurred in 74 houses.

12. The water of Colombo comes from a reservoir 40 miles away and the town supply is perhaps the purest in the east. The average daily consumption is 2,090,664 gallons, which would give between 15 and 16 gallons per head per diem. In the infected area there were 24 stand-pipes supplying town water at the rate of 2½ gallons per minute, and there were 112 wells belonging to private individuals nominally only used for bathing purposes, but no doubt in many instances for cooking and drinking. Even if they were used exclusively for bathing, the native always washes his mouth with his bathing water and most probably swallows some of it. The number of stand-pipes is being increased by the Municipality to 48, and 47 of the wells have been filled up.

13. The weather during the last quarter of 1896 was exceptionally wet. The south-west monsoon rains failed and the north-east made up the deficiency. The average rainfall for 26 years at Colombo was 88 inches; in 1896 it was 101, and 60 inches of this fell in the last four months of the year. The soil especially of Slave Island, which is enclosed by the lake, was almost saturated with moisture. This combined with the heat and moisture of the atmosphere formed an excellent breeding-ground for the bacilli of cholera. The excessive rain and the large number of rainy days acted in another way. In fine weather, as a rule, the male members of a family sleep in the verandahs or outside the houses, but in wet weather they come inside the houses adding enormously to the overcrowding and the danger of infection.

14. The outbreak which originated in Slave Island spread to other parts of the town, and almost all the cases wich occurred could be traced to persons who had come from, visited, received visitors, or obtained food from Slave Island, the first infected locality.

15. The most careful enquiries were made daily into the history of every case that occurred in order, if possible, to trace its origin, but without any satisfactory result. The town water-supply was of course above suspicion, but naturally the existence of wells made us suspect the water, and we at once filled up as many as we possibly could and daily disinfected the others after Hankin's method with permanganate of potash. After careful consideration I believe water had little if anything to do with the outbreak, as it is hardly conceivable that so few cases as 83 would have occurred in 60 days in a district having 1,944 houses inhabited by 7,075 persons on 43 acres of ground and that only 74 of these houses had solitary cases. There was no single well common to the whole, and if the wells were infected, I would certainly have expected more cases. The theory I formed was briefly this; the bacilli were undoubtedly introduced into Slave Island by Muhammadan pilgrims who had returned from Nagore in Southern India when there was an epidemic of cholera and where several Ceylon pilgrims died. On returning those attacked by cholera concealed the fact. After all Muhammadan deaths one of the most essential rites connected with the body is to wash it, and the relatives collect and eat food on the floor in the room where the body is lying. The washings from the body and the remains of the feast are swept outside, flies, which in damp and warm weather are a perfect plague in Slave Island, light on this filth and then fly on to any food in the neighbourhood which they infect. The mode in which the food for the poorer classes is prepared assists in this infection by flies. The rice is cooked, then allowed to cool and then distributed from the boutiques. My supposition is that it is infected when exposed for cooling. But if there was anything like a general infection of food the number of cases would have been far larger. Slave Island supplies cooked food to a large number of the poorer classes and the boutiques were most carefully inspected, but we were only able in a single instance to connect a case of cholera with a boutique where food was prepared, and in this boutique there had been a case of cholera. It was of course closed.

16. The following measures were taken to prevent cholera in Colombo spreading and to afford relief to those attacked :—

(1) The Municipal Town Hall was used as the centre to which all cases were reported and from which all preventive measures were taken. Here the arrangements were placed under the Municipal Sanitary Officer, Dr. Drieberg, and Colonial Surgeon, Dr. Gratiaen, acting under my supervision. These officers had three Sanitary Inspectors, a staff of attendants, a carriage especially fitted up with everything necessary to disinfect a house and treat the sick. The Town Hall was in telephonic communication with the police-stations in the wards, so that when a case of cholera was reported, a Sanitary Office , Inspector, attendants and the carriage started off to the infected house and did everything necessary according to instructions.

(2) In the wards of the city the police-stations were used as the centres to which cases were reported and telephoned to the Town Hall and from which medical aid was sent without delay. At the police-station of every infected ward a medical assistant was stationed, who at once visited a case when reported with an ambulance. The police-stations were supplied with medicines and disinfectants and printed instructions which were issued free on application and ambulances for the conveyance of the sick to hospital. Handbills and instructions were also freely distributed.

(3) There were two special infectious hospitals to which cases of cholera could be conveyed; only one hospital was used, as all the cases occurred in the southern part of the town. This was in charge of a medical assistant and supplied with everything necessary for the treatment of the sick.

(4) There was house-to-house visitation in each infected ward in order to detect concealed cases and to afford medical treatment. This was conducted by the Municipal Sanitary Inspector and a police constable who sent for the medical assistant when his services were required.

(5) The grounds of the infectious hospital are so extensive and the accommodation so good that we were able to use some of the buildings as "House of Refuge" for the possibly infected until a special building—an unused jail in Slave Island—was placed at our disposal and fitted up.

(6) The sick were when practicable removed to hospital at once if they were willing to go, and the possibly infected or persons suspected of being sick to the House of Refuge. If the person attacked was unwilling to be removed, a guard was placed over the house to prevent communication and medical assistance offered. As a rule the sick were willing to go to hospital, but a large number of the cases which occurred were reported after death or the sick were in such a critical state that removal was impossible; when the case was reported after death there was generally only one person with the body, the others having bolted to some other part of the town where in some instances they established secondary centres of infection.

(7) On the removal to hospital or death of the patient and the suspected to the "House of Refuge," the house in which the case occurred was subjected to the most thorough disinfection, and so well was this done that in no instance did a second case occur after disinfection.

(8) About 100 persons were removed from infected houses to the "House of Refuge" and of these only two were attacked with cholera and both died.

(9) The wells in every infected district were filled up or disinfected after Hankin's method by the daily addition of 2 ounces of permanganate of potash.

(10) The houses where food was prepared for sale, of which there were 97 in Slave Island, were subjected to the most careful inspection by the Sanitary Inspector of the ward, but only one house was infected by a single case of cholera. It was at once closed.

(11) The arrangement for the treatment of the sick in the infectious hospitals and private houses were under the supervision of Colonial Surgeon Dr. Vanderstraaten who did everything in his power to afford medical aid to the sick. I cannot speak too highly of the services he rendered during the outbreak.

(12) The Mayor of Colombo, Mr. F.H. Price, C.C.S., gave every assistance in his power. I frequently at one time daily accompanied him round the infected centres and he was indefatigable in his efforts to stamp out the disease. The Inspector-General of Police, Major Knollys, C.M.G., and his men, rendered all the assistance in their power.

I annex a diagram of the outbreak and an age table of those attacked.

17. The recent outbreak of cholera has had one good result. It has moved the Municipal Council especially the unofficial members to take action and rebuild the worst part of Slave Island, that part which I named the infected area. The total cost of this work will be about Rs. 6,00,000; a sum of Rs. 79,000 has been already voted and as the plans have all been approved, no time will, I hope, be lost in making a beginning. The whole district will be supplied with an additional quantity of town water and the remaining wells will be closed. My only fear is that the rebuilding of the overcrowded parts of the city is beyond the means of the Municipality and that Government aid is essential, and I respectfully submit this aid should be given in consideration of the fact that the occurrence of any serious epidemic in Colombo will interfere with the trade and industry of the whole island.

18. Previous to 1818 cholera was unknown in Ceylon and there was no term in the Singhalese language to denote the symptoms characteristic of the disease. Notwithstanding frequent outbreaks it is not endemic in any part of the island; it never orginates spontaneously and it never appears until it is imported from India. In every outbreak in Ceylon the disease can be traced back to Southern India. The early cases occur in persons from India or in persons who have been to India. Towards the end of last year and beginning of the present, cholera has, I believe, prevailed as an extensive epidemic in different parts of Southern India, and on a recent visit I paid to Jaffna the Superintendent of Immigrants informed me that at Kela-Kerrai there were upwards of 1,200 deaths in a population of 13,000. As cholera is a preventable disease and its existence in Southern India a constant source of danger to Ceylon, I would earnestly advise that a representation be made to the Madras Government to adopt measures to prevent cholera or at all events to limit its spread. If ordinary sanitary measures had been taken at the Nagore festival the unfortunate pilgrims who went there from Ceylon would not have been infected and Colombo would have been spared the recent outbreak.

19. A detachment of Lancashire Regiment embarked at Colombo on board the P. and O. S. S. "*Nubia*" on the 17th December and the occurrence of some cases of cholera on board requires remark. The cases were all I believe among soldiers from Colombo. The infection was either brought on board at Colombo or from some other port between Colombo and England. There was cholera at Colombo and so far as I am aware none at any port between this and England. It seems to me absurd to suppose the bacilli were taken at Port Said where there was no cholera and to suppose they were not taken in Colombo where there was. My belief is the infection was most probably brought on board at Colombo, but it would be impossible to prove how. If in water or in food I should expect the disease to have appeared sooner than 17 days after the "*Nubia*" left Colombo unless we are to believe the cases returned as dysentery were really cholera. The Colombo water is above

suspicion; it is perhaps the purest of any water in the east, besides if the water were to blame, more men would have been attacked and earlier. As regards food, I don't know any article liable to be contaminated with cholera bacilli which the men would take with them on board. If the bacilli were actually in the intestines of those attacked, the period of incubation was enormously prolonged. The outbreak was most unlikely to have been caused on board ship by bacilli carried in the intestines of mild cases and escaping thence to infect those attacked. There is just another theory which would account for the outbreak and that if that the bacilli were taken on board in clothes. These were perhaps purchased in Colombo and not opened until the cold weather after Port Said was passed; they were then handled and the bacilli they contained were conveyed either directly by the hands to the mouth or indirectly by food. Without in any way desiring to doubt the diagnostic skill of the medical staff on board and in ignorance whether the cholera bacillus was detected in any of the discharges, it is, I would suggest, possible the disease in question was not cholera at all but plomaine poisoning from tinned provisions purchased by the men attacked.

Brigade-Surgeon-Lieutenant-Colonel Duke informed me there was not a single case of cholera among the soldiers of the garrison and no cases of suspicious diarrhœa, and that the men who went on board the "*Nubia*" were perfectly healthy convalescents and time-expired men.

I am, etc.,
W. R. KYNSEY,
Principal Civil Medical Officer,
and Inspector General of Hospitals.

	10 years and under.		20 years and under.		30 years and under.		40 years and under.		50 years and under.		60 years and under.		Total.		Grand Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Singha'ese ...	2	...	4	2	8	5	5	4	2	3	2	...	23	14	37
Moors ...	4	...	3	4	9	10	4	1	3	2	4	3	27	20	47
Malay ...	...	2	1	2	4	3	3	...	1	...	1	...	10	7	17
Tamils ...	...	2	2	1	8	5	4	2	2	2	...	...	16	12	28
Burghers ...	...	...	1	...	1	...	...	...	1	...	...	...	3	...	3
Europeans ...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Italian ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Scotch ...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1
Cochin ...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Bengalu ...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1
Chitty ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Total ...	6	4	12	9	31	23	18	7	10	7	7	4	84	54	138

No. 1970:

COPY forwarded to the Military Department / Government of Madras for information.

By order,

Under Secy. to the Govt. of India.

HOME DEPARTMENT
(SANITARY);
Simla, the 18th August 1897.

To The Govt. of Madras.

CHIEF SECRETARY
25. AUG. 1897
GOVERNMENT OF MADRAS

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