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MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.

690

Press
Mis.

Dated

23-5-1937

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Department,
23rd May 1871.

No. 98. Read the following Despatch from the Right Honourable the Secretary of State for India, to His Excellency the Right Honourable the Governor in Council, Fort St. George, dated India Office, London, 4th April 1871, No. 4, (Sanitary):—

The Despatch of your Excellency in Council, dated 14th November, No. 29, of 1870, transmitting the Report of the Sanitary Commissioner for the year 1869, and also a Report on Cholera in Southern India for the same year, with a map, by Surgeon W. R. Cornish, has been considered by me in Council.

2. I forward, herewith, a copy of a letter which I have received from the War Office Sanitary Commission containing the observations of the Commission on these reports.

Dated 1st March 1871.

From the Secretary to the Army Sanitary Commission, to the Under Secretary of State for India, dated War Office, 1st March 1871.

The Army Sanitary Commission having had under consideration the Report of the Sanitary Commissioner, Madras, for 1869, and a Report on Cholera in Southern India for the same year by Surgeon W. R. Cornish, F.R.C.S., and Sanitary Commissioner for Madras, which with other papers accompanied Mr. Merivale's letter of the 30th December last, in returning the enclosed copy of a Despatch from the Government of Fort St. George, No. 29, of 14th November 1870, as requested, I am directed to submit, for the information of the Secretary of State for India in Council, the following report by the Commission on these subjects.

(As these documents are really parts of one Report they have been dealt with accordingly.)

Mr. Cornish's report for Madras is an interesting and practical document. It contains tables and digests showing the amount of sickness and mortality among British and Native troops, prisoners and civil population, together with brief notes on the sanitary condition of stations and a short account of sanitary proceedings adopted by Municipal and other authorities during the year. There is also a tabular statement of the results of chemical examinations of water sources at a number of stations.

As the report would not admit of further condensation and must be allowed to speak for itself, the Commission limit their remarks on it to a few leading general points which have arisen out of its perusal.

1. It is satisfactory to learn that the Municipalities in the Madras Presidency are beginning to carry out public health improvements. The work as yet appears to be chiefly surface work, cleansing, and the like. But little has as yet been attempted in permanent sanitary works properly so-called, such as drainage or water-supply, and the application of sewage to agriculture. It is a great matter, however, that a beginning should have been made, and it is to be hoped that the Sanitary Commissioner may be able to report substantial progress year by year.

2. The information in the report regarding epidemics and local sanitary conditions co-existing with them fully confirms past experience as to the intimate relation between filth, bad water, want of drainage and other local causes, and the intensity of epidemics.

Several instances are given in which local reporters consider that cholera was imported by pilgrims and travellers. The evidence, however, is not recorded with sufficient detail to enable any conclusion to be arrived at on the subject. The nature of the evidence required is given in the Instructions of this Commission for the Indian Cholera Inquiry.

*Proceedings of the Madras Government, Public Department,
23rd May 1871.*

3. The tabular statement of water analyses gives the details for a number of sources at the following stations :—

Arnee	...	...	...	...	...	...	...	...	...	4	sources.
Bangalore	...	...	...	...	...	...	...	...	...	8	„
Bellary	...	...	...	...	...	...	...	...	...	2	„
Cannanore	...	...	...	...	...	...	...	...	...	5	„
French Rocks	...	...	...	...	...	...	...	...	...	6	„
Madras	...	...	...	...	...	...	...	...	...	9	„
Salem	...	...	...	...	...	...	...	...	...	2	„
Secunderabad	...	...	...	...	...	...	...	...	...	6	„
Thayetmyo	...	...	...	...	...	...	...	...	...	1	„
Trichinopoly	...	...	...	...	...	...	...	...	...	2	„
Trimulgherry	...	...	...	...	...	...	...	...	...	3	„

In all eleven stations and forty-eight sources.

The results are tabulated in a somewhat different form from the one adopted in Bengal. On previous papers the Commission have shown the necessity for uniformity in analytic methods and in tabulation, and would merely repeat here that as soon as Dr. Angus Smith and Dr. Macnamara have completed their scheme of analyses this scheme and the same method of tabulation should be adopted throughout India.

4. These analyses as they stand appear to indicate an extraordinary amount of impurity in nearly every water source examined.

Taking as a standard Dr. Smith's estimate of the amount of common salt per gallon in water as indicative of the probable presence of sewage matter in waters, viz., a grain or more per gallon, the amount of "chlorides" in these samples is excessive.

In not a single source was the amount of chlorides so low as a grain. The quantities are given at from less than 2 grains in five samples only to 4, 6, 8, 10, 15, 27, 32, and, in one instance, 40.9 grains per gallon.

In only two instances is the amount of organic matter arrived at by Dr. Smith's method, and in both the amount is excessive.

Unless it can be shown that the chlorides in these waters are due to natural local causes, it may be stated that the waters are not fit for use, especially during epidemic seasons.

The sources themselves may be sufficiently pure naturally, and yet the water may vary in quality and may be unsafe for domestic purposes from the introduction of extraneous impurities, an occurrence which may be prevented by properly-constructed wells and by adopting suitable means of distribution. These points have been frequently dwelt on by the Commission in former Minutes.

5. With the facts before them the Commission feel compelled to dissent from the remarks of the Chemical Examiner as to the suitability of many of these waters for domestic purposes.

6. The practical results of the analyses appear to be that every water source should be carefully examined to trace the origin of the chlorides and organic matter, and if it is found that these causes of impurity cannot be cut off, then better water sources should be sought without delay.

7. The report on cholera in 1869 and appendices are valuable contributions to the history of cholera in Southern India. The report is accompanied by illustrative maps, one of which on a large scale contains cholera diagrams on Dr. Goodeve's plan showing the local history of the chief cholera outbreaks in the Madras Presidency during 1869.

8. Section III. of the Appendix, drawn up by Dr. W. A. Thomson, 76th Regiment, contains the first set of replies to questions contained in the Instructions of this Commission for the Indian Cholera Inquiry, and the results, so far as they go, are satisfactory. The information is given with more precision than is usually the case with reports in which the attention of the reporter is not specifically called to the points of the inquiry, and indicate that great advantage will be derived from following the direction given to the inquiry in the "Instructions."

*Proceedings of the Madras Government, Public Department,
23rd May 1871.*

9. Appendix No. 1, by Deputy Inspector-General E. Balfour, gives a most interesting account of the first appearance and subsequent development of cholera at Secunderabad and the surrounding country, and a similar remark applies to Dr. Thomson's report on the epidemic at Thayetmyo.

10. The Commission, looking at this report on the practical side, cannot help feeling that while so much is known in regard to the conditions which have intensified cholera in the Madras Presidency, so little can be said by the reporters as to the execution of works or measures for diminishing the epidemic susceptibility of the population. There is no lack of information regarding sanitary defects at Secunderabad and Thayetmyo. At both places the disease was obviously connected with filth, foul drainage, and bad water. There can be little doubt that similar conditions are to be met with in all the attacked groups of population shown on the map also shows that there are sufficient natural facilities for drainage wherever the disease existed. Bearing these points in view, the Commission would strongly recommend that the attention of the local authorities at the affected towns and stations should be called to the subject with a view to local inquiries being made and proposals for drainage, water-supply, cleansing, and other improvements being prepared.

11. While making this recommendation, the Commission would in no sense undervalue the importance of the scientific data themselves. These all form part of the cholera inquiry; but it is most desirable that practical effect should be given to the results of inquiry as these are arrived at.

No. 99. ORDER THEREON, 23rd May 1871, No. 690.

Communicated to the Inspector-General, Indian Medical Department, and to the Sanitary Commissioner.

(True Extract.)

Acting Chief Secretary.

To the Inspector-General, Indian Medical Department.
„ Sanitary Commissioner.

Exd. A. S. Rodgers.

3 2

Army Sanitary Commission

War Office

1 March 1871.

Sir,
The Army Sanitary Commission having had under consideration the Report of the Sanitary Commissioner for Madras for 1869, and a Report on Cholera in Southern India for the same year by Surgeon J. R. Cornish, F.R.C.S. &c. Sanitary Commissioner for Madras, which with other papers accompanied the letter of the 30 December last. In returning the enclosed copy of the Despatch from the Government of Madras No. 29 of 24 November 1870, as requested, I am directed to submit for the information of the Secretary of State for India in Council the following report by the Commissioner on these subjects.

(as these documents are really parts of one report they have been dealt with accordingly)

The Under Secretary
of State for India

Dr.

Obbt. of 11871 Madras.

PUBLIC.

To

THE INSPECTOR-GENERAL,
INDIAN MEDICAL DEPARTMENT,
&c., &c., &c.

Dated May, 23rd.

Recd.

Encl.

G. O., 23rd May 1871, No. 690.

MAY.

Nos. 98-99.

Communicating Despatch from the Home Government forwarding copy of a letter from the War Office Sanitary Commission containing its observations on the Madras Sanitary Commissioner's Report for 1869.

The report for Madras is an interesting and practical document. It contains tables and diagrams showing the amount of sickness and mortality among British and Native troops, Europeans and civil population together with brief notes on the sanitary condition of stations and a short account of sanitary proceedings adopted by Municipal and other authorities during the year. There is also a tabular statement of the results of chemical examinations of water sources at a number of stations.

The report would not admit of further condemnation and must be allowed to speak for itself. The Commissioner's remarks must be a few leading general points which have arisen out of its perusal.

1. It is satisfactory to learn that the Municipalities in Madras Presidency are

are beginning to carry out public health improvements. The work as yet appears to be chiefly surface work, cleansing and the like. But little has as yet been attempted in permanent sanitary works properly so called such as drainage or water supply and the application of sewage to agriculture. It is a great matter however that a beginning should have been made, and it is to be hoped that the Sanitary Commissioner may be able to report substantial progress year by year.

2. The information in the report regarding epidemics and local sanitary conditions co-existing with them fully confirms past experience as to the intimate relation between filth, bad water, want of drainage and other local causes and the intensity of epidemics.

Several

Several instances are given in which local reports consider that cholera was imported by pilgrims and travellers. The evidence however is not recorded with sufficient detail to enable any conclusion to be arrived at on the subject. The nature of the evidence required is given in the instructions of this Commission for the Indian cholera enquiry.

3. The tabular statement of water analyses gives the details for a number of sources at the following stations:-

Cuttack	4	sources
Bangalore	8	—
Bellary	2	—
Comanore	5	—
French Rocks	6	—
Madras	9	—
Salem	2	—
Secunderabad	6	—
Thy's Day	1	—

Trichinopoly

Trichinopoly — 2 sources
 Trumulperry — 3 —
 In all 11 stations and 48 sources.

The results are tabulated in a somewhat different form from the one adopted in Bengal. On previous papers the Commission have shown the necessity for uniformity in analytic methods and in tabulation and would merely repeat here that as soon as Dr. Angus Smith and Dr. Macnamara have completed their scheme of analysis - this scheme and the same method of tabulation should be adopted throughout India.

4. These analyses in Bengal stand apart to indicate an extraordinary amount of impurity in nearly every water source examined.

Taking as a standard Dr. Smith's estimate of the amount of common

common salt per gallon in water
as indicative of the probable presence
of sewage matter in water, viz. a
grain or two per gallon the amount
of chlorides in these samples is
excessive.

In not a single source
was the amount of chlorides as low
as a grain. The quantities were given
as from less than 2 grains in four
samples only, to 4, 6, 8, 10, 15, 27, 32
and in one instance 40 grains per
gallon.

In only two instances is
the amount of organic matter
arrived at by Dr. Smith's method and
in both the amount is excessive.

Unless it can be shown
that the chlorides in these waters are
due to natural local causes it may be
stated that the waters are not fit for use
especially

5
especially during epidemic seasons.

The sources themselves
may be sufficiently pure naturally
and yet the water may vary in
quality and may be unsuitable for
domestic purposes from the introduction
of extraneous impurities - an occurrence
which may be prevented by properly
constructed wells and by adopting
suitable means of distribution. These
points have been frequently dwelt
on by the Commission in former
minutes.

5. With the facts before them
the Commission feel compelled to
dissent from the remarks of the
chemical examiner as to the suitability
of many of these waters for domestic
purposes.

6. The practical results of the
analyses appear to be that every water
source

as sources should be carefully examined as to the origin of the chlorides of endogenous matter, and if it is found that these sources of impurity of cannot be cut off, then better water supplies should be sought without delay.

7. The report on cholera, in which the appendices are valuable contributions to the history of cholera in the Indian. The report is accompanied by illustrative maps - one of which on a large scale contains cholera diagrams on Dr Goodwin's plan showing the local history of the chief cholera outbreaks in the Madras Presidency during 1864.

8. Section III of the report drawn up by Dr W. A. Thomas: 76 pages contains the first set of replies to questions contained in the Instructions

of

of this Commission for the Indian cholera enquiry and the results so far as they go are satisfactory. The information is given with more precision than is usually the case with reports in which the attention of the reporter is not specifically called to the points of the enquiry and indicate that great advantage will be derived from following the direction given to the enquiry in the Instructions.

9. Appendix No. 1 by Depy. Insp. General E. Balfour gives a most interesting account of the first appearance and subsequent development of cholera at Secunderabad and the surrounding country - and a similar account applies to Dr. Thomson's report on the epidemic at Hyderabad.

10. - The Commission looking at

this

30-7
This report on the practical side cannot
help feeling that while so much is
known in regard to the conditions which
have produced cholera in the Madras
Presidency little can be said by the
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sanitary defects at Secunderabad and
Thyot-Ny - At both places the
disease was obviously connected with
filth, foul drainage and bad water.
There is little doubt that similar
conditions are to be met with in all
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on the map also shows that there are
sufficient natural facilities for drainage
whenever the disease existed. Bearing
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would strongly recommend that the
attention of the local authorities at
the affected towns and stations should
be called to the subject with a view to
local enquiries being made and
proposals for drainage, water supply,
cleansing and other improvements being
prepared.

11. While making this recommendation
the Commission would in no sense
underestimate the importance of the
scientific data themselves. These all
form part of the cholera enquiry, but
it is most desirable that practical
effect should be given to the results
of enquiry as these are arrived
at.

I am &c
J. J. Frederick
Sect. to the Army
Surg. Commr.

No 9.

640.

Copy letter from the War Office
Sanitary Commission, dated
1st March 1871.

Referred to in Sanitary letter to
Madras, No. 4, dated 4th April 1871.

India Office

Sanitary
No. 4.

London 4th April 1871

My Lord,

1. The despatch of Your
Excellency in Council
dated 14th November
1870 of 1870 transmitting
the report of the
Sanitary Commissioner
for the year 1869, and
also a report on Cholera
in Southern India
for

N
A. A.
J. P. S.

His Excellency
The Right Honorable
The Governor in Council
Fort St. George

for the same year, with
a map, by Surgeon W. R.
Cornish, has been considered
by me in Council.

2. I forward herewith
a copy of a letter which
I have received from
the War Office, Sanitary
Commission containing
the observations of
the Commission on these
reports.

dated 1st March 1871

I have the honor to be,
My Lord,

Your Lordship's most-
obedient humble servant

Agst

To England No 29 of 14th Nov 70

N. 2.

Sanitary
4 April 1871

16 June

The
Letter to Port of Entry

N. 4.

23rd May 1871 No 690-

Communicated
to the Inspector General
Indian Medical
Department and to
the Sanitary Commission
:24.

LD

Forwards copy of letter received
from the War Office Sanitary
Commission containing the
Observations on the Madras
Sanitary Commission's Report for
1869.

to
The Inspector General
Indian Medical
Sanitary
1871

98-99

With an Act

Recd. 30th April 1871 and British

