

1. Number of pages.
2. Date of issue.
3. Reference.
M.R.O. 1-30,000-18-10-29.

MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.

1278

Press
Mis.

Dated

12-10-1870

Not to be folded or roughly handled

12/1/37

Proceedings of the Madras Government, Public Department,
12th October 1870.

No. 68. Read the following letter from the Officiating Under Secretary to the Government of India, Home Department, to the Chief Secretary to Government, Fort Saint George, dated Simla, 28th September 1870, No. 365:—

I am directed to forward, for information, the accompanying copy of a Despatch from Her Majesty's Secretary of State, No. 24, dated the 16th ultimo, together with a copy of the Memorandum therein enclosed by the Army Sanitary Commission on Dr. Townsend's Report on the Cholera Epidemic in the Central Provinces and Berars in 1868.

Despatch from the Right Honourable the Secretary of State for India, to His Excellency the Right Honourable the Governor-General of India in Council, dated India Office, London, 16th August 1870, No. 24, (Sanitary.)

I forward, herewith, for the information of your Excellency in Council, and for communication to Dr. Townsend, Sanitary Commissioner in the Central Provinces and Berars, copy of a Memorandum* by the Army Sanitary Commission, containing the practical results which appear to follow on Dr. Townsend's Report on the Cholera Epidemic of 1868.

* Dated 8th July 1870.

Memorandum by the Army Sanitary Commission on Dr. TOWNSEND'S Report on the Cholera Epidemic in the Central Provinces and Berars, India, in 1868,—dated War Office, the 8th July 1870.

Dr. Townsend's report contains much interesting and useful information regarding the history of cholera in 1868, and the conditions under which it presented itself in his district.

The facts are discussed mainly from a special hypothetical point of view, viz., that cholera is a specific poison, diffused chiefly, if not solely, by human intercourse; that it was brought into the district from elsewhere, and was carried about afterwards by the people.

Diffusion of the poison is, however, not believed by the reporter to be sufficient by itself for the propagation of cholera. He considers that other personal and local favouring conditions are required before "contagion" can take effect on a population. But, on referring to Dr. Bryden's report, it will be found that Dr. Bryden treats this same outbreak of cholera in the Central Provinces in 1868 as nothing more than a geographical portion of a much greater epidemic, extending from the lower part of the Ganges Valley across the Central Provinces to Bombay, and as far into the Madras Presidency as Hyderabad.

Dr. Bryden treats cholera in the Central Provinces from the more extended point of view afforded by statistical facts for the whole area covered by the epidemic, while Dr. Townsend discusses the question from the assumed hypothesis that cholera depends for its progress on personal communication.

For all practical purposes, however, both reporters arrive at the same conclusion.

Dr. Bryden considers quarantine a futile expedient for putting an arrest on an epidemic, while Dr. Townsend, with every desire to make use of efficient quarantine arrangements between affected and unaffected districts, holds that any such arrangements are beset by insurmountable difficulties, and that ineffective quarantine is worse than useless.

We are thus left to deal practically with those conditions which all observers regard as favouring outbreaks of cholera among a population.

Table No. VI in Dr. Townsend's report gives the mortality from cholera in each circle within the epidemic area of 1868.

The total number of towns and villages within the area is given as 11,176, and the population as 2,994,076.

Proceedings of the Madras Government, Public Department,
12th October 1870.

The towns and villages attacked by cholera numbered 978 = 8·7 per cent. of the total villages. The population of the attacked villages amounted to 751,216. The deaths from cholera were 9,602 = 12 per 1,000 of the attacked population.

The outbreak of 1868 was, however, only the precursor of the epidemic of 1869, which covered an area containing 30,135 towns and villages and a population of 7,969,801. Of the villages, 4,100 = 13·6 per cent. were attacked in 1869.

The population of the villages attacked in 1869 amounted to 2,169,084. The deaths were 47,848 = 22 per 1,000 of the attacked population.

Dr. Townsend gives an interesting account of a number of these attacks, and he analyzes with much care the facts bearing on the susceptibility of the population.

The report, indeed, contains the best account we have yet seen of the sanitary economy of native villages, the habits of the people, and the conditions under which epidemic cholera prevails among them. But it would be most desirable in future reports to give this information with greater minuteness of detail, in order that the conditions under which cholera manifests itself in Indian villages may be fully known.

It appears that villages in these Provinces are much of the same character. They are all more or less filthy. Not unfrequently men and animals either occupy the same houses or people live close to cattle. There are no public arrangements for cleanliness or removal of nuisances injurious to health. The people foul large areas of ground round the villages and near water sources. The water supply is drawn mainly from shallow wells, sometimes from deeper wells, sometimes from tanks not sufficiently protected from impurities, sometimes from stagnant surface pools or from beds of drying up streams, and into all these water sources filth deposited in their vicinity may be washed by the rain. Or water is drawn from rivers in which human bodies are occasionally found.

Striking illustrations are given in the report showing the influence of impure water from such sources in developing cholera.

This experience as to the fatal effects of impure water is similar to that obtained in Europe, although on a more extended scale.

The villages appear to be all much of the same character as to their general insanitary conditions. But following the usual epidemic law, all of them do not suffer at the same time or during the same epidemic. Why this should be is an unknown element in the history of cholera. It is worthy of remark, however, that, while the average population of the villages in the attacked circles was only 268, the average population of the attacked villages in these circles was 768.

Several instances are recorded in which partial cleansings, and other simple sanitary improvements of towns and villages, apparently diminished liability to cholera where these had been carried out. But the most efficient protection appears to have been afforded by deserting attacked localities for a short time, a sufficient proof of the influence of unhealthy locality in predisposing to attacks of cholera.

The beneficial influence of removal was also observed in instances where gangs of road labourers (among whom the disease first appeared in the district) were attacked. Simply moving along the road appears in such cases to have arrested the disease.

On the return of the local labourers to work, they were placed under strict conservancy arrangements, and purer water was provided. After this was done, they remained free from cholera, although it went on increasing in the district.

Dr. Townsend appears to consider that, other things being equal, the chief determining cause of cholera in these districts was polluted water. This element he considers neutralized advantages of local position and sub-soil.

Villages built on bare trap rock, without sub-soil and with good natural drainage, suffered in large per-centage—a fact which Dr. Townsend attributes mainly to the water being taken, not from wells, of which there are few or none, but from shallow pools in the rock, much exposed to various impurities. On the contrary, villages built on alluvial soils, with water at 30 or more feet below the surface, comparatively escaped.

Proceedings of the Madras Government, Public Department,
12th October 1870.

He doubts the truth of averments which have often been made as to cholera being dependent on sub-soil water for its development, or on sub-soil at all, seeing that it existed in greatest intensity where there was no sub-soil—only impervious trap rock.*

We concur with Dr. Townsend in the following practical conclusions of the report: they are all in accordance with sound sanitary principles, and point out some of the things which should be done with these villages:—

- (1.)—Some system of cleansing and removal of decaying substances is imperatively required.
- (2.)—The roads and surface drainage of these roads are very defective, and require to be improved on some consistent plan.
- (3.)—One main source of danger lies in the filthy habits of natives in fouling ground in and around their villages, and more especially in the vicinity of water supplies. It is most advisable that some means should be adopted for improving the habits of the people in this respect.

[So simple an expedient as setting aside an area of ground at a safe distance from rivers, streams, wells, and tanks, and requiring that each evacuation should be covered with earth at once, and the ground periodically cropped, would put an end to most of the risks to health to which these villages are exposed. Properly regulated latrines, the contents of which should be applied to agriculture, would answer the same end.]

- (4.)—Providing suitable wells, and protecting them and other water sources from risk of pollution, is also a matter of primary necessity.

Dr. Townsend states that, in 1868, he did not meet with an instance where mortality from cholera approached one per cent. of the population when the only water supply was drawn from a well 30 feet deep, situated at a distance from sources of impurity, lined with masonry in good repair, with a sufficient coping above the surface of the ground, and containing four feet of water in the hot weather.

He proposes to adopt one such well, as a standard, for every 150 or 200 of the population, with pumps in the large villages.

[In sinking these wells, clean ground should be selected, away from habitations. Thirty feet should be assumed rather as a minimum depth. The depth should be sufficient in all cases to afford a water of sufficient purity, to be ascertained by chemical analysis, and in sufficient quantity for the wants of the population. The well should be lined, and the upper part of the tube covered outside by a layer of concrete. There should be a sufficiently raised coping, with a cover; water should either be drawn by a pump or by a windlass, with an iron bucket or chain. The ground about the well should be paved and sloped away from the opening.]

- (5.)—Wherever there are tanks they require to be specially guarded from pollution, as tanks appear to be used for all purposes—drinking, cooking, washing clothes, and bathing, watering animals, and the like.

- (6.)—None of these improvements need be costly. Some aid might be wanted by the people, but they might, as Dr. Townsend suggests, be required to supply the labour.

Dr. Townsend considers that, in the present state of these villages, it would be useless to depend for improvements on any regulations to be left solely to the people to carry out. At the same time, the great numbers in which these villages exist, show how difficult it would be to improve them without the co-operation of the people themselves.

The facts appear to lead to one conclusion, namely, that while the people should be led to see that the doing of certain things is a necessity of their healthy existence, and while they should be required to do them, there should be strict superintendence kept over them. Dr. Townsend proposes that there should be systematic intelligent supervision carried out periodically by Native Inspectors, who would report annually, and act under European superintendence.

- (7.)—A certain amount of outlay, not a great one, would be required for this purpose, but the increased productive powers of the population, arising from improved habits and better health, would far more than compensate for the cost.

* Similar instances of outbreaks of cholera in places situated on granite and other rocks have occurred in England.

Proceedings of the Madras Government, Public Department,
12th October 1870.

A few well-marked cases might be selected for improvement in the first instance, and in this way experience will be obtained.

(8)—With reference to the great susceptibility of European troops to attacks of cholera, Dr. Townsend makes the following remarks, which may be useful, as an indication for further inquiry. He says—

“ It is possible that the greater susceptibility of Europeans to cholera may be induced by a too exclusive use of animal food in the season of the year when decomposition is most rapid, when less exercise is taken, and when the elimination of excretal matter from the blood is less perfect.”

The question here raised by Dr. Townsend is one of temperature and expenditure of force, as well as of diet. It is thus stated by the Royal Commission on the sanitary state of the Indian Army—“ The soldier should either have work or exercise provided sufficient for his diet ; or his diet should be made to accord better with his sedentary habits ” * * * * *

“ the same diet which may be consumed in the cold season with safety cannot be the most suitable for heat.”

No. 69. ORDER THEREON, 12th October 1870, No. 1278.

Communicated to the Sanitary Commissioner.

(True Extract.)

Chief Secretary.

To the Sanitary Commissioner.

Exd. J. Wright.

No.

365

FROM

W. M. SOUTTAR, Esq., M.A.,
Offg. Under Secy. to the Govt. of India,

TO

*The Secretary to the Government
of Fort St. George*

Home Dept.

SIMLA, the 28 September 1870.

SIR,

I AM directed to forward for information the accompanying copy of a despatch from Her Majesty's Secretary of State, No. 24, dated the 16th ultimo, together with a copy of the Memorandum therein enclosed by the Army Sanitary Commission on Dr. Townsend's Report on the Cholera Epidemic in the Central Provinces and Berars in 1868.

I have the honor to be,

SIR,

Your most obedient Servant,

W. M. Souttar

Bot. of 18703 31/10/70

PUBLIC.

To

THE SANITARY COMMISSIONER.

Dated October, 12th.

Recd.

Encl.

G. O., 12th October 1870, No. 1278.

OCTOBER
Nos. 68-69.

Communicating certain papers received from the Government of India regarding the Cholera Epidemic in the Central Provinces and Berars in 1868.

1890 Sept

From

Andrews & Co. of London

Borneo Dept

365-

1890 Sept

1890 Sept 1899.

From and return papers
from the London & Lancashire
the Colonial & Indian
the Central Province
of Borneo in 1888.

12 October 1890 No 1298.

1890

27/10-
1890

To the Secretary
London City & Co.

William

15-2-1870
G.O. 12
G.O. 12

Court of 1870 Madras.

Public

To
The Sanitary Commr.

Dated Oct 12.

Recd.

Encl.

G. O. 12 Oct.

1870, No. 270.

No. 68. 69.

Forw. Certain papers re.
received from the Govt of India
regarding the Cholera Epi-
demic in the Central Provinces
and Berar in 1868.