

MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.	1501	Press Mis.
Dated	4-10	1871.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Department,
4th October 1871.*

No. 9. Read the following letter from the Sanitary Commissioner for Madras, to the Chief Secretary to Government, Fort St. George, dated Madras, 26th September 1871, No. 1357:—

I have the honour to acknowledge receipt of Proceedings of Government, No. 2912, of 12th ultimo, and to state in reference thereto, that I have subsequently been favoured with copies of the reports on the cholera outbreak in Her Majesty's 18th Hussars at Secunderabad by Deputy Inspector-General Cowen, and Assistant-Surgeon Scott in medical charge of the regiment. These reports, as directed, will be printed in the appendix to my general report on cholera for the current year.

2. The facts, as recorded by these gentlemen, correspond, in most particulars, with the results of my own special inquiries already submitted to Government. The reports, moreover, contain much valuable information on the progress of the epidemic in Her Majesty's 18th Hussars, which could only have been furnished by those who were actually present with the corps and watched the daily course of the cholera outbreak.

3. In one important particular, as to the possible causation of the outbreak in the Hussars, however, these gentlemen have expressed opinions which are not in accord with my own conclusions. They do not attach much importance to the evidence which would seem to connect the outbreak with the use of contaminated water, while I, on the contrary, hold that the facts justify a very strong presumption that the drinking water was, it may be accidentally, contaminated by cholera matter. The purity of the water supply was unquestionably open to grave doubts.

4. The point is of extreme importance in a scientific aspect, while the opinions of the medical profession are so divided in regard to the diffusion of cholera by means of water, and it is to be very much regretted that the evidence as to the actual source of the water used by the regiment for some time before the outbreak should be so unsatisfactory.

In my report and description of the site of the parade grounds wells, I purposely wrote of the "well or wells" because I could not satisfactorily determine in my own mind, after hearing various statements as to the source of the water, which of the wells was ordinarily used for supplying the Hussar Regiment.

5. But I have been recently assured that the well supplying the drinking water of the Hussars previous to the cholera outbreak was the well marked No. 1 in the accompanying sketch-plan. This well was sunk some years ago by the proprietor of the old Ice Manufactory in its immediate vicinity. It is a large square-shaped masonry well, and is said to yield very good water, but of late it has been very little used, the native public practically preferring the Wells Nos. 2, 3, and 4. The water raised from the Well No. 1 is said to have been run into masonry troughs, one of which is reserved for cattle, the other to have furnished the water used by the Hussars, I say "said to have been used" advisedly, because all the time I was at Secunderabad, and though visiting the locality frequently, I never saw more than an occasional person drawing water from the well in question, while I observed public water-carriers filling their bags repeatedly from Wells Nos. 3 and 4, and hundreds of bazaar people surrounding these wells for their daily supply. The Well No. 2 is used chiefly by the families of the Sappers and inhabitants of the village adjoining their lines.

6. But if the water from No. 1 Well alone was used by the Hussars, I think it strengthens the suspicion in favour of water contamination. What are the facts in regard to this well?

1st.—It has a large surface of water exposed to atmospheric impurity, dust, &c., and the water is not drawn in sufficient quantity to keep the yield pure. The organic contamination at a later date was sufficient to justify doubts as to its purity at the time of the cholera outbreak.

2nd.—It is situated on the bank of a nullah farthest removed of the wells from the public road, and the ground around this well, more particularly the bed of the nullah, I satisfied myself was liable to defilement by human excrement.

3rd.—The presence of water troughs in connexion with this well afforded an additional element of danger, as in the not improbable event of a traveller with choleraic diarrhoea resorting to the bed of the nullah close by, he would naturally seek for water to cleanse himself at the trough. (It must be remembered that the bed of the nullah was quite dry in the end of May.)

4th.—The water of this well is very little used by the general public. Supposing, for the sake of argument, that the water in the well or trough had been fouled by the direct introduction of cholera matter, it is evident that the Hussar Regiment, and not the general public, would exhibit the symptoms of cholera poisoning most severely.

5th.—Lastly, there is nothing in the shape or position of the water troughs attached to the well to prevent them being used by native travellers for latrine purposes; I cannot, of course, aver that they were actually so used, though, from the habits of the people, such pollution was by no means improbable.

7. The main facts adduced in my report as regards the water supply remain still unaltered. This supply was drawn from a public well on the parade ground, which public well and masonry troughs in connexion thereto were easily liable to contamination. And as regards the possibility of contamination, it must be borne in view that, on the morning of the 24th of May, the area around the well would most likely be traversed by a large concourse of natives assembled to witness the birth-day parade of the troops.

8. Assistant-Surgeon Scott thus disposes of the question of water contamination:—

“At the time of the outbreak, the regiment obtained its water from a well in the Sappers lines. * * *. This water was being used by the Conductors of the Ordnance and Commissariat Departments and their families, and by the Sappers and their families. No cases of cholera occurred amongst them;” and Deputy Inspector-General Cowen remarks:—

“It has been satisfactorily disproved that the water supply to the troops on the day of the outbreak came from other than the source from which it has been drawn for months, viz., a well in the Sappers lines, and which well could hardly have received contamination on that day, as the water was used by others besides the 18th Hussars, without producing cholera.”

9. Now I have already shown that the use of this particular well water by many others than the Hussars was exceedingly improbable, the well being the least used of all. For one native frequenting this well, there would be fifty drawing water from Wells Nos. 3 and 4. I do not know on what authority the evidence rests as to the use of the well water by the Commissariat and Ordnance Sergeants, but if the pukkally maistry is the authority, I should be inclined to reject the evidence altogether. As regards the families of the Sappers, I have myself witnessed them drawing water NOT from No. 1 Well as stated, but from the small dipping Well No. 2 on the same side of the nullah.

10. The evidence of native water-carriers as to the source whence they obtain water can never be relied upon, unless corroborated by independent testimony. At Bangalore it was some time since found necessary to march the pukkallies to and from the “Dhobies’ wells” under escort, and to lock up their bags after the day’s supply of drinking water had been brought for the Lancers. As no precautions of this nature was adopted in regard to the water of the 18th Hussars, or of the Commissariat and Ordnance Sergeants, I can only conclude the evidence that they all used water from the same well rests upon testimony that cannot be considered reliable.

11. May I venture to request that this communication may be considered as an appendix to the report I lately submitted on the outbreak of cholera at Secunderabad.

No. 10. ORDER THEREON, 4th October 1871, No. 1501.

Ordered that a copy of this letter, together with the plan received with it, be forwarded to the Secretary of State for India, in continuation of Despatch, dated the 6th instant, No. 36.

(True Extract.)

Captain, R. E.,
Acting Joint Secretary, P. W. D.,
for Chief Secretary.

To the Sanitary Commissioner.

Exd. J. Wright.

Boobt. of {1871} ~~Boobt.~~

PUBLIC.

To
THE SANITARY COMMISSIONER.

ated October, 4th.

ced.

Encl.

G. O., 4th October 1871, No. 1501.

OCTOBER.
Nos. 9-10.

Directing that the letter from the Sanitary Commission, submitting his observations on the reports of Drs. Cowen and Scott, on the outbreak of cholera in Her Majesty's 18th Hussars at Secunderabad, be forwarded to the Secretary of State.

No 1307

Office of Sanitary Commissioner
Madras 26th Sept. 1891.

From

The Sanitary Commissioner
for Madras.

To

The Chief Secretary to Government,
Public Department,
Fort Saint George.

Sir,

I have the honor to acknowledge receipt of
Proceedings of Government No 29 of 1891, and
to state in reference thereto, that I have subsequently
been favored with copies of the reports on the cholera
outbreaks in H. M's 18th Hussars at Secunderabad
by Deputy Inspector General Cowen, and Staff
Surgeon Scott in medical charge of the Regt.
These reports, as directed, will be printed in the
appendix to my general report on cholera for the
current year.

2. The facts as recorded by these gentlemen
corresponds in most particulars, with the results
of my own special inquiries already submitted
to Government. The reports moreover contain most
valuable information on the progress of the epi-
demic in H. M's 18th Hussars, which could only
have been furnished by those who were actual
present with the corps and watched the daily
course of the cholera outbreak.

3. In one important particular, as to
the possible causation of the outbreak in the

Russians however, these gentlemen have expressed opinions which are not in accord with my own conclusions. They do not attach much importance to the evidence which would seem to connect the outbreak with the use of contaminated water, while I, on the contrary, hold that the facts justify a very strong presumption that the drinking water was, it may be accidentally, contaminated by cholera matter. The purity of the water supply was unquestionably open to grave doubts.

4. The point is of extreme importance in a scientific aspect, while the opinions of the medical Profession are so divided in regards to the diffusion of cholera by means of water, and it is to be very much regretted that the evidence as to the actual source of the water used by the Regiment, for some time before the outbreak should be so unsatisfactory.

In my report, and description of the site of the parade grounds wells, I purposely wrote of the "wells or wells" because I could not satisfactorily determine in my own mind, after hearing various statements as to the source of the water, which of the wells was ordinarily used for supplying the Russian Regiment.

But I have been recently assured that the well supplying the drinking water of the Russians previous to the cholera outbreak was the well marked No. 1 in the accompanying sketch plan. This well was sunk some years ago by the proprietor of the old rice manufactory in its immediate vicinity. It is a large square shaped

masonry well, and is said to yield very good water, but of late it has been very little used, the native public practically preferring the wells Nos. 2, 3 and 4. The water raised from the well No. 1 is said to have been run into masonry troughs, one of which is reserved for cattle the other to have furnished the water used by the Russians. I say "said to have been used" advisedly because all the time I was at Secunderabad, and although visiting the locality frequently, I never saw more than an occasional person drawing water from the well in question, while I observed public water carriers filling their bags repeatedly from wells Nos. 3 and 4, and hundreds of bazaar people surrounding these wells for their daily supply. The well No. 2 is used chiefly by the families of the Europeans and inhabitants of the village adjoining their lines.

6. But if the water from No. 1 well alone was used by the Russians, I think it strengthens the suspicion in favor of water contamination. What are the facts in regards to this well?

1st It has a large surface of water exposed to atmospheric impurity, dust, &c., and the water is not drawn in sufficient quantity to keep the yield pure. The organic contamination at a later date, was sufficient to justify doubts as to its purity at the time of the cholera outbreak.

2nd It is situated on the bank of a nullah, farthest removed of the wells from the public roads, and the ground around this well more particularly the bed of the nullah I satisfied myself was liable to defilement

by human excrement.

3rd The presence of water troughs in connection with this well afforded an additional element of danger, as in the not improbable event of a traveller with choleraic diarrhoea resorting to the bed of the nullah close by, he would naturally seek for water to cleanse himself at the trough. It must be remembered that the bed of the nullah was quite dry in the end of May.

4th The water of this well is very little used by the general public. Supposing, for the sake of argument, that the water in the well or trough had been fouled by the direct introduction of cholera matter it is evident that the Hussar Regt. and not the general public would exhibit the symptoms of cholera poisoning most severely.

5th Lastly there is nothing in the shape or position of the water troughs attached to the well to prevent them being used by native travellers for latrine purposes. I cannot of course aver that they were actually so used though from the habits of the people, such pollution was by no means improbable.

6th The main facts adduced in my report as regards the water supply remain still unaltered. This supply was drawn from a public well on the parade ground which

public well and masonry troughs in connection thereto were easily liable to contamination. And as regards the possibility of contamination it must be borne in view that on the morning of the 24th of May, the area around the well would most likely be traversed by a large concourse of natives assembled to witness the birthday parade of the troops.

8. Assistant Surgeon Scott. thus disposes of the question of water contamination.

"At the time of the outbreak, the Regt. obtained its water from a well in the Sappers' lines & & &. This water was being used by the conductors of the Ordnance and Commissariat departments and their families and by the Sappers and their families. No cases of cholera occurred amongst them." and Deputy Inspector General Cowen remarks:-

"It has been satisfactorily disproved that the water supply to the troops on the day of the outbreak came from other than the source from which it has been drawn for months, viz a well in the Sappers' lines, and which well could hardly have received contamination on that day, as the water was used by others besides the 18th Hussars, without producing cholera."

9. Now I have already shown that the use of this particular well water by many others than the Hussars was exceedingly improbable, the well being the least used of all.

For one native frequenting this well, there would be fifty drawing water from wells Nos 3 and 4. I do not know on what authority the evidence rests as to the use of the well water by the Commissariat and Ordnance Sergeants, but if the powdermill mistry is the authority I should be inclined to reject the evidence altogether. As regards the families of the Sappers, I have myself witnessed them drawing water not from ~~the~~ well as stated, but from the small dipping well No 2 on the same side of the nullah.

10. The evidence of native water carriers as to the source whence they obtain water can never be relied upon, unless corroborated by independent testimony. At Bangalore it was some time since found necessary to march the powder allies to and from the "Dhobies wells" under escort, and to lock up their bags after the daily supply of drinking water had been brought for the Sappers. No no precautions of this nature was adopted in regard to the water of the 18th Hussars, or of the Commissariat, and Ordnance Sergeants, I can only conclude the evidence that they all used water from the same well rests upon testimony that cannot be considered reliable.

11. It may I venture to request that this communication may be considered as an appendix to the report, lately submitted on the outbreak of cholera at

Secunderabad.

I have the honor to be

Sir

Your most obed^t Serv^t

W. Moorish F. R. C. S.
Sanitary Commissioner
for Madras.

9.10.18

Cort. of 1871, Madras.

Public

To the Sany Court

Dated 4 Oct

Recd

Encl

G. O. 6 Oct 1871, No. 158.

Nos. 9010

Directing that the letter for the Sany Court. Submission of his observation on the reports of Crown & North on the outbreak of cholera in the 18th August at Secunderabad, be forwarded to the Secy of State

Public Printing & Stationery Dept. No. 1000

Public Printing & Stationery Dept.

The Sany Court. Encl. for Secy

The Chief Secy to the Govt. of Madras

Dated 26th 3 Sept 1871.

Recd 29.

No. 1587.

Submit observations on the report on cholera at Secunderabad by the Cont. and Secy.

With an Order

9-10

Ordered that a copy of this letter, together with the above remarks with it, be forwarded to the Secretary of State for India, in continuation of Report dated the 6th Oct 1871.

The Secretary Government of Madras