REPORTS

ON

CHOLERA,

IN THE

MEERUT, ROHILCUND AND AJMERE DIVISIONS,

IN THE YEAR 1856.

AGRA:

PRINTED AT THE SECUNDRA ORPHAN PRESS.

1857.

REPORTS

ON

CHOLERA,

IN THE

MEERUT, ROHILCUND AND AJMERE DIVISIONS,

IN THE YEAR 1856.

AGRA:

PRINTED AT THE SECUNDRA ORPHAN PRESS.

1857.

BRITISH MUSEUM
Transferred
1889
DUPLICATE.

REPORTS ON CHOLERA.

From H. H. GREATHED, ESQUIRE, *Commissioner of the Meerut Division to* C. B. THORNHILL, ESQUIRE, *Officiating Secretary to Government, North Western Provinces, Agra, No.* 249, *dated Camp, Allygurh, the 1st December* 1856.

SIR,

JUDICIAL DEPARTMENT.

The accompanying returns and reports regarding the ravages committed by Cholera in this Division, during last summer, are submitted for the information of Government, and will be perused with painful interest.

2—The disease broke out in the Allygurh district on the 1st June; it appeared at Khoorjah in Boolundshuhur on the 9th of that month, in Meerut on the 15th of July, and in the first week of August it reached Moozuffernuggur, Saharunpore, and Deyrah. The number of days the pestilence prevailed, and the number of victims it is recorded to have carried off in each district, are stated in the margin.* But it is to be feared the number of deaths that occurred in the interior are incomplete, and that the numbers are under-stated.

* *Districts,*	*No. of Days.*	*No. of Deaths.*
Allygurh,	91	11,785
Boolundshuhur,	63	4,427
Meerut,	42	4,581
Moozuffernuggur,	42	7,581
Saharunpore,	72	3,396
Deyrah Doon,	33	369
Total,		32,139

3.—The losses amongst the European Troops at Meerut were :—

		Rate per cent. of Mortality.
Men,	40	2·50
Women,	17	6·39
Children,	31	7·96

4—The Native Troops suffered but slightly; there were no cases in the Regiment quartered at Allygurh, only seven casualties among the 2,470 men stationed at Meerut, and one in the Company forming the Treasury Guard at Saharunpore. At Deyrah, however, 27 men of the Goorkha Battalion were carried off.

5—Among the population the heaviest losses fell in Allygurh, Boolundshuhur and Moozuffernuggur, in the villages, and country towns. In Meerut and Saharunpore, the mortality was disproportionately great in the chief cities. In the city of Meerut, 806, or two per cent., died out of a population of 40,000, and in the city of Saharunpore 821, or 2·16 per cent. out of 38,000, while the average rate of mortality on the remainder of the population, in each district, appears to have been, in Meerut, 0·27, and in Saharunpore, 0·33. The accuracy of these rates is open to some degree of question, as the returns from the villages are not socom plete as the state-

ments compiled under the eye of the Magistrate; but there can be no doubt the two cities suffered disproportionately. It is useless to attempt to conjecture the cause of their misfortune, for Meerut is a healthy, well-drained town, and Saharunpore is in both respects the reverse.

6.—There was a wide difference in the manner in which the Jails were affected by the disease. In the Allygurh, Boolundshuhur, Saharunpore and Deyrah Jails, there were no fatal cases, and very few admissions; while 86 deaths occurred in the Meerut, and 26 in the Moozuffernuggur Jails. The explanations afforded by Doctor Thring and Mr. Berford will, I trust, be held to relieve these Officers of all responsibility for this lamentable mortality. I can vouch for Doctor Thring's untiring zeal, and for the earnestness of his endeavours to check the pestilence, but its virulence baffled all human efforts. Mr. Berford exerted himself with intelligence to improve the position of the prisoners, and to save them from the scourge. The mortality in the Moozuffernuggur Jail is the more remarkable, as the city and environs suffered but slightly.

7.—The reports present one gratifying feature; they shew how anxiously the District and Medical Officers labored to alleviate the calamity, and how largely the benevolence of private individuals was called into active exercise. I would call particular attention to Mr. Edwards' foresight in providing against the approach of the scourge, and to the calmness with which he carried on the entire duties of the Magistracy during its prevalence. Mr. Spankie, who was on leave, offered to return and to remain at Saharunpore until the pestilence had abated, but I thought it unnecessary. Mr. Dunlop would not avail himself of his leave of absence, and would not quit Meerut until the disease had died out.

From H. G. Keene, Esquire, *Superintendent, Deyrah Doon, to* H. H. Greathed, Esquire, *Commissioner of the Meerut Division, No.* 119, *dated Deyrah, the 31st September* 1856.

Sir,

I have the honor to furnish the return called for in your circular letter No. 47, of 23rd August, the Cholera having now, according to all appearance, ceased to be an epidemic here, though there is little doubt that isolated cases may, and do, from time to time, present themselves.

2—Some remarks with which I have been favored by the Civil Assistant Surgeon, are also submitted.

3.—I am happy to record that every person of influence in our little community has been active in endeavouring to alleviate the general distress. But I cannot avoid joining Mr. Banister in particularizing the exertions of the Revd. J. S. Woodside, American Presbyterian Missionary, to whom I am indeed indebted for a vast amount of assistance in every matter in which I have had to seek his aid. Mr. Banister has likewise devoted himself to

his professional duties with unremitting assiduity. The Tehseeldar has worked hard, and is believed to have effected several cures with medicines with which he provided himself.

4.—On the first apprehension of the pest, measures were taken for the distribution of remedies, and many lives have been saved, to all appearance, by the timely administration of sedatives. Depôts for this purpose were established at various spots in the town and station, and large quantities, with directions, issued to the Police and landholders of the Mofussil. Messrs. Elwall and Thelwall, Tea planters of Hurbunswala, also labored benevolently and with effect among their workmen and the inhabitants of the vicinity. A proclamation was issued, by my directions, warning the people against indulgence in improper kinds of food, (which were specified,) and inviting them to make use of the Dispensary and the Depôts; and I did the best in my power to improve the ventilation and cleanliness of the place. The poorer classes seem almost exclusively the sufferers, which may possibly be caused as much by the poverty of their habit of body as by their crowded and ill-ventilated locations. No contagious character seems fairly attributable to the disorder, which has pursued its usual eccentric course, some localities being severely visited. I myself lost two attendants in one day; other, and much larger, families escaped entirely. Drunkards and opium-eaters rarely recovered.

5.—The few Europeans who died were persons of weakly health; there were also a few supposed cases of attack among this class, which did not prove fatal.

P. S.—In reference to the tabular statement, I would beg to remind you that the *reports* do not shew all the deaths; many die who are never reported, I dare say, as many as are entered.

Report on the Cholera in Zillah Deyrah Dhoon, from 7th August, to 10th September, 1856.

Date.	Fall of Rain.	Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
			Admissions.	Deaths.	Deaths.	Deaths.
August 7th ..	0·2	East.	"	"	1	0
" 8th ..	0·5	"	"	"	0	0
" 9th ..	1·4	"	"	"	1	0
" 10th ..	0·2	"	1	"	1	3
" 11th ..	0·6	"	"	"	0	0
" 12th ..	0·0	"	"	"	3	2
" 13th ..	0·2	"	"	"	3	0
" 14th ..	0·1	"	"	"	5	1
" 15th ..	1·3	"	"	"	8	0
" 16th ..	0·0	West.	"	"	7	4
" 17th ..	1·0	East.	"	"	13	1
" 18th ..	1·0	"	"	"	17	4
" 19th ..	0·0	"	"	"	21	0
" 20th ..	1·0	"	"	"	7	1
" 21st ..	1·0	"	"	"	19	18
" 22nd ..	0·1	"	"	"	17	14
" 23rd ..	0·4	"	"	"	18	9
" 24th ..	1·0	"	"	"	18	6
" 25th ..	0·1	"	"	"	9	5
" 26th ..	1·1	"	"	"	7	12
" 27th ..	0·7	"	"	"	7	9
" 28th ..	2·2	"	"	"	15	8
" 29th ..	0·2	"	"	"	1	8
" 30th ..	0·3	"	"	"	10	10
" 31st ..	0·0	"	"	"	7	4
September 1st ..	0·0	"	"	"	0	0
" 2nd ..	0·7	"	"	"	6	2
" 3rd ..	0·0	"	"	"	2	1
" 4th ..	0·0	"	"	"	2	0
" 5th ..	0·0	"	"	"	1	5
" 6th ..	1·0	"	"	"	2	1
" 7th ..	0·2	"	"	"	2	0
" 8th ..	0·8	"	"	"	0	6
" 9th ..	0·0	West.	"	"	0	2
" 10th ..	0·0	"	"	"	0	3
Total, ...	15·5	"	1	"	230	139

From G. Banister, Esquire, *Civil Assistant Surgeon, Deyrah, to* H. G. Keene, Esquire, *Superintendent of Deyrah Dhoon, dated Deyrah, the 13th September, 1856.*

The following is the number of Cholera patients treated in the Dispensary, Jail, and Regiment, during the late epidemic:—

Battalion,		41	--	27 deaths.
Jail,		1	--	0
Dispensary.	In-patients,	67	--	38 deaths.
	Out-patients,	55	--	53
		164	--	68
				14
				82

The result of 34 is not known; of the remaining 21, 18 were cured, and 3 died;—to which must be added about 14 which is the proportional number to 34 that 68 is to 164, which is exactly 50 per cent.

The first case occurred on the 12th August, the last, on the 4th September; but the virulence of the epidemic was expended on the 24th of August, and it did not therefore rage in the Regiment and City for more than twelve days. It came from the east and passed onwards to the west; rain fell steadily during the whole month. The maximum height of the thermometer from sunrise to 10 P. M., was 92°, the mimimum, 74°. There were several severe storms of wind, lightning and thunder on the 19th, 20th and 21st; the wind was steadily from the east. Medicines were unsparingly supplied to all the most respectable natives, and to every European family for distribution among the people, and numerous Depôts were established in the City, Villages, and Chowkees; in fact, every exertion was used to calm the general alarm and insure the most efficient medical attendance on the sick. Many recovered from the first effects of the epidemic, viz. collapse, arrest of secretions, cramps, purges, and vomits, but died from a consecutive typhora fever, in which the brain was the chief organ affected. The medicine, which of all others has proved the most satisfactory in its effects, is Calomel persisted in until the secretion of bile has been excited, and then followed by Quasia, either alone or in combination with iron.

I may as well add that Mr. Woodside is, in my opinion, the gentleman who, of all others, most exerted himself in acts of charity and kindness towards the suffering poor.

From R. SPANKIE, ESQUIRE, *Magistrate, Saharunpore, to* H. H. GREATHED, ESQUIRE, *Commissioner, 1st Division, Meerut, No.* 131, *dated Saharunpore, 25th November, 1856.*

SIR,

I have the honor to forward a report on the Cholera in this district during the past season. As Mr. Edwards was Officiating Magistrate at the time, I beg to forward his full and complete report, which does him the highest credit.

2.—With reference to paragraph 8, I would remark that such exceptions are common, perhaps they are the rule with this disease. One side of a barrack is struck, and in the other not a case occurs.

3.—The greatest sufferers were those whose habits of life most readily exposed them to the disease; the lowest Mahomedans and Hindoos, the first, notorious for their uncleanliness, and the latter, for the filthy food they eat.

4.—The inference, that the use of animal food, or of bad and indifferent meat, may have predisposed persons to attacks, because the butchers and lower castes suffered most severely, is, perhaps, open to doubt. The butchers are an excessively dirty set of fellows, and their slaughter-houses, I should think, are unwholesome from their neglect to cleanse them. We want a conservancy law that should give Magistrates the power of regulating markets and inspecting food of all kinds. Slaughter-houses should not be permitted to exist in large cities, but should be outside the suburbs.

5.—It is one curious feature of this visitation, that bilious fevers have generally accompanied it. The fever here this year is said to be more severe than usual.

6.—I think that you will agree with me that Mr. Edwards' measures, to provide the necessary medicine before the actual arrival of the disease, were exceedingly judicious and deserving of commendation.

From R. M. EDWARDS, ESQUIRE, *Joint Magistrate, Saharunpore, to* R. SPANKIE, ESQUIRE, *Magistrate, Saharunpore, No.* 362, *dated Saharunpore, the 24th November, 1856.*

SIR,

With advertence to the Commissioner's Circular, No. 47, dated 23rd August, I have the honor to submit the following report:—

2.—This report could not be supplied at an earlier date, as the epidemic has only within the last few days completely disappeared from the district.

3.—The accompanying return has been made as nearly as practicable in the prescribed form.

4.—It will be seen that the total number of casualties in the city of Saharunpore are stated at 821, while the aggregate of deaths from the disease in the rest of the district has been computed at 2,575.

5.—The returns for this city are, I think pretty accurate; they have been compiled from the daily reports. I have enquired into the matter from many of the city residents, and without an exception, the number of deaths roughly estimated by them have approximated those given in the return.

6.—The returns for the district are not so accurate; they, I think, have been under-estimated. I have found it impossible to give a correct daily return of casualties.

7.—The chowkeedars who report weekly on the state of their villages, were the channels through which information of the epidemic was conveyed. They, on each visit to the Thannah, reported the total number of deaths during the intervening period, but could not state those which had occurred daily, indeed, they frequently were unable to attend weekly on account of the severe floods, which rendered the streams, for days together, wholly impassable.

8.—It is worthy of remark, that from first to last, not a single case of Cholera occurred in the Jail or in the Stud lines, and only one fatal case in the Treasury Guard. I am wholly unable to account for this as the epidemic was very severe in the village nearest to the Jail and the Stud. In the European part of the station, there were three fatal cases, viz.—Mr. Thomson, in the Botanical Garden; Mrs. Monipy, a pensioner, who is said to have caught the disease at Meerut; and the infant child of Sergeant Wood.

9.—In the city, and indeed throughout the district, the Mahomedans of the lower castes were the principal sufferers; the butcher class the greatest of all. The fatality among the sweeper caste was also great.

10.—The scourge first appeared at the village of Abbah, to the south of Rampore, and then broke out at Kherra and Umbytha, after which it burst out almost simultaneously at different points in the district, appearing to take no particular course or direction. It would strike with great severity one village, while the surrounding villages would be, perhaps, wholly free from the disease. Its sudden appearance without any visible cause at isolated points, and its immediate fatality might be likened to the seeds which a bird drops in its flight and which germinate where they fall.

11.—The amount of rain, or the direction of the wind, did not appear to affect it. It was hoped that on the 8th September, when the wind changed from east to west, the disease might diminish, but the number of fatal cases on the contrary increased.

12.—The following list will show the casualties of various places throughout the district:—

Saharunpore city,	821
Saharunpore district,	414
Jowallapore city,	90
Hurdwar,	8
Sooltanpore town and district,	197
Roorkee town and district,	357
Munglour,	299
Sirsawa town and district,	130
Rampoor town,	73
Rampoor district,	75
Gungoh town and district,	210
Deobund city,	270
Deobund district,	408
Moozuffurah, Behut and Raipore,	44
Total,	3,396

13.—From the above return it will be seen that the whole of the northern part of the district was comparatively lightly affected by the epidemic.

14.—As the disease, before it appeared here, had been raging for some time at Allygurh, Meerut, &c., and was evidently gradually approaching this district, I had large supplies of Cholera pills prepared, the ingredients being the same as those usually employed, viz., ½ grain opium, ½ grain assafœtida, ½ grain black pepper. Immediately the epidemic shewed itself, these pills were distributed. In the city, supplies of them were sent to the following places:—

The Tehseel.

Kotwalee.

The Nazir was ordered to keep a large supply.

All the City chowkees.

Supplies of pills were given to all the Chowkeedars of Mohullahs for distribution in their beats.

The shops of the Punsarees.

To all the Native Hakeems who would receive and make use of them.

A large supply was kept at the Cutcherry for immediate despatch wherever required.

15.—My object was to place the best known remedy within reach of all, that the pills should be available without delay, for when taken in time, the result was very favorable.

16.—Supplies of these pills were also sent to the Thannahs, and 1st Class Chowkees throughout the district, and to the Murhellahs along the main lines of road, for the benefit of travellers.

17.—The village Chowkeedars on visiting the Thannahs or Chowkees to make their usual reports, were also supplied with pills for distribution in their villages, should the epidemic have shewed itself.

18.—Great benefit resulted from these pills. I believe I am correct in saying that not hundreds, but thousands of lives were saved by means of them.

19.—Forty thousand of these pills were distributed! Besides this, I imagine a goodly number were made by the people themselves, as I made it generally known of what these pills were composed, and the ingredients are procurable in any bazaar.

20.—For a few days, when the epidemic was at its height, the people, in a measure, lost faith in the medicine, and declared the pills powerless to arrest the disease. The cause, as far as I could discover, was simply that the malady had assumed so severe a type, and was so quickly fatal, that death resulted before the medicine had time to get into the system.

21.—The people say that there were two descriptions of the disease; one, where between the vomiting and the purging a considerable interval elapsed; the other, where they were simultaneous. In the former, the pills were of very great use; in the latter, they were of small avail, as death ensued frequently in little more than an hour from seizure. This very severe type was comparatively rare.

22.—The only other palliative measure I had recourse to, with the exception of impressing upon all the necessity for cleanliness in or near their dwellings and a free draught of air, was to prevent the sale of the guava fruit in the city. This I must confess was an arbitrary measure, but it was, I think, justified by the necessity for at once stopping what was allowed on all sides to be a fruitful cause of Cholera.

23.—Before passing the order, I consulted Doctors Jameson and Cockburn, who highly approved of the proposition; it was, indeed, with the exception of the fruit sellers themselves, generally approved of by the people.

24.—The measures resorted to by the Natives themselves, were of the strangest description.

25.—In the city, over every Mahomedan's door, might be seen a small slip of paper containing a text from the Koran.

The following was the most general:—

لي خمسة اطفي بها حرالوباء الحاتمة المصطفى والمرتضى و ابناهما و الفاطمة

26.—They assembled in their respective Musjids, and shouted out, all night long, the names and attributes of the Deity.

27.—Another measure was to select a goat, read over it a text from the Koran, breathe and spit on its head, then sacrifice it, and distribute small pieces of the flesh to be partaken of by the faithful.

28.—Both Hindoos and Mahomedans gave away large quantities of food, money, &c. in charity.

29.—The scape-goat was also made use of, the form gone through, being much the same as that described in Leviticus.

30.—I fear I cannot mention any individuals who were particularly distinguished for zeal in alleviating the general suffering. Each man's mind was occupied about his own immediate family or relatives; and, though a great deal was given in charity, yet it was given, not so much with the view of assisting or comforting the indigent, as in the hope of appeasing the Deity, and so warding off the fearful visitation from themselves.

31.—The following individuals, *Aleemoolah Khan,* late Kotwal, now Officiating Tehseeldar of Deobund; *Bunseedhur,* Vukeel, of the Judge's Court; *Sewa Ram,* Vukeel, Hakeem; *Moozuffur Hoosain; Nawab Sirdar Khan,* Hakeem; and *Mahomed Buksh,* prepared a kind of arrack at their own expense, and distributed it *gratis* to all applicants. That made by the late Kotwal, was said at the time to have done great good, and (with what amount of truth, I cannot say,) to have proved beneficial when the pills had altogether failed.

32.—The fact of the epidemic having been so much more general and of a severer type among the Mahomedan population, especially among the butchers and lower castes, would seem to show that the use of animal food, or of bad or indifferent meat, renders people far more liable to the disease.

Report on the Cholera in Zillah Saharunpore, from the 1st of August, to the 31st October, 1856.

Date.	Fall of Rain.	Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
			Admission.	Deaths.	Deaths.	Deaths.
1856.						
August 1st	1·07	Easterly.	None.	None.	4	
" 2nd	0·73	"	"	"	1	
" 3rd	0·03	"	"	"	5	
" 4th	0·03	"	"	"	0	
" 5th	0·76	"	"	"	0	
" 6th	0·72	"	"	"	2	
" 7th	0·62	"	"	"	0	
" 8th	0·78	"	"	"	1	
" 9th	2·11	"	"	"	0	
" 10th	1·20	"	"	"	1	
" 11th	0·36	"	"	"	3	
" 12th	0·50	"	"	"	2	
" 13th	0·33	"	"	"	2	
" 14th	0·81	"	"	"	1	
" 15th	0·86	"	"	"	3	
" 16th	0·92	"	"	"	4	
" 17th	0·74	"	"	"	1	
" 18th	0·0	"	"	"	1	
" 19th	0·0	"	"	"	1	
" 20th	0·20	"	"	"	5	
" 21st	0·34	"	"	"	3	
" 22nd	0·11	"	"	"	2	
" 23rd	0·59	"	"	"	1	
" 24th	0·31	"	"	"	1	
" 25th	1·15	"	"	"	1	
" 26th	0·87	"	"	"	5	
" 27th	0·88	"	"	"	6	
" 28th	0·70	"	"	"	3	
" 29th	0·48	"	"	"	3	
" 30th	0·14	"	"	"	5	
" 31st	0·88	"	"	"	5	
September 1st	0·26	"	"	"	30	
" 2nd	0·55	"	"	"	32	
" 3rd	0·70	"	"	"	35	
" 4th	0·51	"	"	"	44	
" 5th	0·01	"	"	"	45	
" 6th	1·13	"	"	"	29	
" 7th	1·05	"	"	"	33	
" 8th	0·74	Westerly.	"	"	13	
" 9th	1·80	"	"	"	39	
" 10th	0·01	"	"	"	39	
" 11th	0·0	"	"	"	60	
" 12th	0·54	"	"	"	42	
" 13th	0·14	"	"	"	46	
" 14th	0·09	"	"	"	40	
" 15th	0·76	"	"	"	32	
" 16th	0·72	"	"	"	40	
" 17th	0·50	"	"	"	25	
Carried forward,..	29·63	"	"	"	696	

Report on the Cholera in Zillah Saharunpore, from the 1st of August, to the 31st October, 1856.

Date.	Fall of rain.	Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
			Admission.	Deaths.	Deaths.	Deaths.
Brought forward,	29·63		None.	None.	696	
September 18th	0·25	Westerly.	"	"	15	
" 19th	0·96	"	"	"	25	
" 20th	1·12	Easterly.	"	"	21	
" 21st	1·45	"	"	"	7	
" 22nd	2·10	"	"	"	8	
" 23rd	1·88	"	"	"	8	
" 24th	0·01	"	"	"	9	
" 25th	None.	Westerly.	"	"	6	
" 26th	"	"	"	"	3	
" 27th	"	"	"	"	5	
" 28th	"	"	"	"	3	
" 29th	"	"	"	"	4	
" 30th	"	"	"	"	1	
October 1st	"	"	"	"	1	
" 2nd	"	"	"	"	0	
" 3rd	"	"	"	"	2	
" 4th	"	"	"	"	3	
" 5th	"	"	"	"	0	
" 6th	"	"	"	"	0	
" 7th	"	"	"	"	2	
" 8th	"	"	"	"	0	
" 9th	"	"	"	"	0	
" 10th	"	"	"	"	0	
" 11th	"	"	"	"	2	
" 12th	"	"	"	"	0	
" 13th	"	"	"	"	0	
" 14th	"	"	"	"	0	
" 15th	"	"	"	"	0	
" 16th	"	"	"	"	0	
" 17th	"	"	"	"	0	
" 18th	"	"	"	"	0	
" 19th	"	"	"	"	0	
" 20th	"	"	"	"	0	
" 21st	"	"	"	"	0	
" 22nd	"	"	"	"	0	
" 23rd	"	"	"	"	0	
" 24th	"	"	"	"	0	
" 25th	"	"	"	"	0	
" 26th	"	"	"	"	0	
" 27th	"	"	"	"	0	
" 28th	"	"	"	"	0	
" 29th	"	"	"	"	0	
" 30th	"	"	"	"	0	
" 31st	"	"	"	"	0	
Total, ..	39·40	"	"	"	821	2,575

From G. Berford, Esquire, *Officiating Magistrate, Moozuffernuggur, to* H. H. Greathed, Esquire, *Commisioner, 1st or Meerut Division, No.* 144.

I have the honor of forwarding the statement of the progress in this District of the lately prevalent epidemic, called for in your Circular No. 47, of the 23rd of August last.

2.—The preparation of these returns has been delayed by the necessity of rectifying certain errors into which the Thannahdars had fallen when furnishing the materials of the statement now submitted. I regret to say, however, that, although my report has been thus delayed, it is still somewhat premature, as the epidemic has not yet entirely died out from the district. It lingers in Poar and its vicinity, and to a less degree in Bhookurheree.

3.—The classes of the community among which the disease found its most numerous victims were the Chumars, Kuhars, Kussaees, and generally all those of whom the occupations were such as exposed them to filth and noxious effluvia. The unclean, the ill-fed, and the overworked suffered most, and in a marked degree. No class, of course, enjoyed complete immunity from the disease, but those above indicated sustained the heaviest losses.

4.—The portions of the district in which the Cholera has been most virulent, appear to have been Thannah Bhawun, Shamlee, Khustowlee, Churthawul and Chupar. The reasons for the pre-eminence in misfortune of the above places are not difficult of detection. Both Thannah Bhawun and Shamlee are situated on the Jumna Canal, and the soil of each is saturated with putrid water. Both are comparatively large towns; and the conservancy of both is very inefficient. Shamlee in particular is filthy. The Tehseeldar, whose appreciation of the value and necessity of cleanliness is unusually clear for a native of Hindoostan, has exerted himself greatly to effect improvements in this respect; but his success has been hitherto incommensurate with his labor. Khatowlee was surrounded during the rains by swamps. The natural drainage of the vicinity would appear to be checked by the Ganges Canal, or by some of its Rajbuhas. Churthawul is distant from either Canal, but two very large and offensive tanks lie on the east and west. Chupar was inundated by the bursting of a Rajbuha, which, in addition to the excessive rains, saturated the whole neighbourhood. Here also there are two large ill-kept tanks.

5.—The only palliative measures adopted, consisted in the despatch of medicines to the several places where the Cholera declared itself, and the enforcement generally of such sanitary measures for cleanliness, &c., as were possible. The medicines employed were chiefly the common Cholera pills, composed of asafœtida, black pepper, and opium. That they were found useful, was satisfactorily proved by the eagerness with which they were sought. As regards the prisoners in the Jail, I removed into tents as many as I could provide accommodation for, with the view of separating those in health from the depressing influence of the sight of disease prevailing around them. The tents were pitched on the highest and airiest spot in

the vicinity. The weather at that time was very wet, but the result of the experiment was decidedly favorable. It had moreover the good effect of increasing the accommodation available for the prisoners remaining in the Jail, and the separation of the sick from the healthy was more effectually secured. I also, with the assent of the Medical Officer in charge, made some unimportant alterations in the diet of the prisoners, and permitted the use of tobacco during the prevalence of the epidemic. I do not suppose these latter measures capable of effecting any great improvement in the prisoners' health, but I hoped that they might in some degree serve to inspirit men naturally dejected by imprisonment and the daily sight of some of their limited number sinking under disease. I also diminished the amount of labor required from each prisoner by one-half.

6.—I had reason to be perfectly satisfied with the conduct of the Native Doctors attached respectively to the Jail and the Dispensary; but no public or private individual distinguished himself by any extraordinary efforts to alleviate the public suffering.

7.—The type of disease at the Sudder station was, I think, undoubtedly less virulent than elsewhere in the district. Great efforts were made to secure cleanliness in the town and its vicinity; the drainage, naturally good towards the river, was improved; one tank was filled up with rubbish from a neighbouring brick-kiln, and another tank was drained into the river. The people made timely requisitions for medicines, and, altogether, the extreme severity of the disease was, I think, mitigated.

8.—The number of deaths entered in the last column of the statement now furnished, must be looked upon only as approximating to the truth. The returns from the Jail hospital and chief city are, however, I believe, quite accurate.

Report on the Cholera in Zillah Moozuffernuggur, from 8th August, to 19th September, 1856.

Date.		Fall of Rain.		Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
		Inches.	Tenths.		Admission.	Deaths.	Deaths.	Deaths.
August	8th	0		Easterly.	1		Before the instructions were received.	
	9th	1		"	0			
	10th	0		"	0			
	11th	28		"	1			
	12th	0		"	0			
	13th	13		"	1			
	14th	1		"	0			
	15th	1		"	1			
	16th	5		"	0			
	17th	0		"	1			
	18th	1		"	0			
	19th	0		"	1	1		
	20th	2		"	0	0		
	21st	0		"	1	0		
	22nd	5		"	1	2		
	23rd			"	2	2		
	24th			"	4	0		
	25th	6		"	1	2		
	26th	6		"	2	0		
	27th	2		"	1	2		6978.
	28th	12		"	3	1	7	Omitting Bhookurheree whence no return has yet been received, and where it is probable that about 500 persons may have died of Cholera.
	29th	7		"	3	3	5	
	30th			"	2	2	8	
	31st	10		"	0	0	5	
September	1st	4		"	1	1	2	
	2nd	7		"	4	3	1	
	3rd	1		"	2	0	4	
	4th	5		"	0	1	4	
	5th	6	3	"	0	0	3	
	6th	40		"	1	3	2	
	7th	13		"	0	1	4	
	8th	2		Westerly.	1		4	
	9th			"			4	
	10th			"			1	
	11th			"			0	
	12th			"			0	
	13th			"			3	
	14th			Easterly.	1		1	
	15th	5		"		1		
	16th			Westerly.		1		
	17th			"			3	
	18th	5		Ey. and Wy.			2	
	19th			"				
				Total, ..	36	26	77	

From C. Currie, Esq., *Officiating Magistrate, Meerut, to* H. H. Greathed Esq., *Commissioner 1st Division No. 167, Dated Meerut, the 13th October, 1856.*

Sir,

I have the honor to submit the returns called for in your Circular, No. 47, dated 23rd August last.

2.—The returns shew the daily number of admissions and deaths from Cholera, both in the Jail hospital and City dispensary, records of these having been duly maintained. The estimate aggregate number of deaths in the district, must rest on very uncertain data. The information has, by my directions, been obtained from the Zemindars, Chowkeedars and Putwarees of the different villages.

3.—I enclose a comparative statement, shewing the number of deaths, and rates per cent. of mortality by Cholera in the Jail, City, and Military Stations, prepared by Dr. Thring, the Civil Assistant Surgeon. From this it appears that, taking the population of the Cantonments and City, including European and Native Troops, prisoners, &c. at 80,815, the percentage of deaths by Cholera among them was 1·80. The population of the whole district of Meerut, as given in the last census return, was 11,35,000. Deducting the numbers above given for Cantonments and City, there remain about 10,54,200, and the deaths reported in the district out of the Cantonments and City amount to 3,025, or 0·28 per cent.

4.—The disease began on July 15th in the City, and lasted till the end of August. It appears to have broken out on the same day in the Sudder Bazaar. The district was not visited by it till the beginning of August, and it lasted throughout that month. The wind prevalent during this time was easterly, and rain fell heavily and constantly.

5.—The origin of the disease cannot of course be accurately traced, but all experience goes to prove that if not engendered, it is at least fostered, by Malaria springing from close and foul atmospheres. The places chiefly visited during the past attack, are described as those in which narrow lanes choked up with rubbish and filth abound, and the classes who suffered most were the lowest castes, such as Chumars, Khakrobs, Gaderiyas, Telees, and the like. The inability to provide themselves with wholesome and nutritious food may, of course, be reckoned amongst the causes productive of an increase in the sufferings of these classes, but I have no doubt that the foul atmosphere which they habitually breathe, rendered them most liable to attack.

6.—Medicines of all sorts and kinds were, as usual, tried, and I think that a remark made by Dr. Thring in his report, (a copy of which is enclosed herewith,) regarding the indiscriminate distribution of medicines, is pertinent. There can be no doubt that many patients, especially among the higher classes of females, fell victims to the well-meant but mistaken zeal of the various members of their families. Each member of a family goes to a different dispenser of medicines; one brings one kind, another another, and they are all given indiscriminately to the patient, who dies naturally from the remedy, not from the disease. The assafœtida pills were found of great effect, as also the medicine which goes by the name of the "Pain Killer." The native remedies consist principally of rose-water and warm spices. They put great faith in peppermint.

7.—The disease shewed itself in various forms. In some cases it commenced with perspiration, followed by purging and retching, and if cold perspiration ensued, death immediately followed. In other cases, pain was the first symptom, purging ensued, cold perspiration and death. These were the quickest and least subservient to remedy. If fever and warm perspiration could be induced, the patient recovered.

8.—A list is appended of those persons who made themselves most conspicuous by their exertions to alleviate the sufferings of their fellow-men. The results of these exertions, as noticed above, in no way detracts from the good intentions and credit of those who employ them. You will be glad to see so goodly an array of Government Officers in the list, but I must draw your particular attention to the Native Amlah of the Magistrate's and Collector's Courts, who subscribed amongst themselves, and raised a fund for the purchase of medicines, which they distributed gratuitously to such as required them. The amount thus raised was upwards of Rs. 70 ; and this was placed under the immediate control of Naseer Alee, the Foujdaree Serishtehdar. I trust that His Honor the Lieutenant Governor will bestow some mark of his approbation on these men. I have satisfied myself that the idea was entirely originated amongst themselves, and that it was not adopted at the suggestion of any of their European superiors.

Report of the Visitation of Epidemic Cholera, as it appeared in the Meerut Jail, in July and August, 1856.—By R. S. Thring, *Civil Assistant Surgeon.*

For some time before it appeared at this station, we had heard of the epidemic at Agra, and of its approach towards us from that direction. Early in July, it was stated to be severe at Khoorjah, and in some of the villages to the east of the Jumna between the former place and Dehli.

The city and station of Meerut, and, I believe, the district also, continued remarkably healthy at this time, and free from any unusual amount of bowel complaints, which generally precede a visitation of epidemic Cholera.

On the 15th of July two cases of Cholera were reported to have appeared in the Sudder Bazaar, both of which proved fatal.

On the 18th, the first case appeared in the old Jail; on this date there were 370 prisoners confined in it, almost all the sickly and infirm prisoners were included in this number, and the remainder of the prisoners, numbering about 680, were located in huts near the site of the new Jail, about a mile to the east of the station. These prisoners were, with a few exceptions, strong and healthy men, but I am sorry to say they were much too crowded in the huts. It had always been my intention to propose that the prisoners who were here from Boolundshuhur and Goorgaon should be sent to their respective zillahs before the rains set in, but on my mention-

ing the subject to the Magistrate, he informed me he felt sure such a measure would not be sanctioned, as the prisoners had been ordered in here from Saharunpore also. These arrived at the end of May, many of them in a very sickly state, suffering from enlarged spleens, dysentery and diarrhœa. This arrival brought up the strength of the prisoners at Meerut to about 1,050, there being accommodation for about 1,550 in the old Jail.

It was unfortunate that the Cholera first appeared in that Jail, as it prevented my relieving the crowded huts by drafting some of the prisoners into it ; and from the constant heavy rains, and moist state of the ground, it was impossible to suppose that any benefit would be derived from putting the prisoners into tents, even if we had them at our disposal, which we had not. The Magistrate attempted to hire some, but was unable to do so ; and my application for some of the empty Hospitals situated in unoccupied lines on the outskirts of the station to be placed at my disposal, was refused by the Officer Commanding the station; we were forced therefore to allow the prisoners to remain as they were for a time.

Subsequently, when the disease became most virulent in the huts, and it had begun to abate in the old Jail, I was enabled to remove 150 prisoners there. The virulence of the disease immediately began to abate, and it is perhaps worthy of remark, that, although four new cases occurred in the gang so removed, only one other case appeared amongst the prisoners originally located in the old Jail, and that occurred in a man who could have held no communication with the gang above referred to. This speaks strongly in favor of the non-contagious nature of the disease.

The number of cases of Cholera admitted into Hospital was as follows, viz.:—

From old Jail, fifty cases; of these 29, or 58 per cent. died. New Jail, ninety-seven cases; of these 61, or 62·8 per cent. died. The disease appeared in the former on the 18th July, reached its climax on the 28th, and disappeared about the 8th of August, only one slight case appearing after that date.

In the new Jail, it appeared on the 20th, was at its height on the 4th, and disappeared about the 14th.

The whole of these cases were undoubtedly genuine Cholera, and all, or nearly so, passed through the stage of collapse; it is very possible that towards the termination of the disease, some of the slighter cases were admitted under the head of diarrhœa; for vomiting, although, I believe, always present, was not generally a prominent symptom.

Of the virulence of the epidemic, no better proof can be adduced than the high range of mortality and the rapid course in which many of the cases terminated fatally; some of them in four or five hours. With regard to the symptoms, I believe they were much the same as in most outbreaks of the disease, but in three of the cases recovered, two of them had

large sloughs formed on the lower extremity, and in one the cornea of both eyes sloughed; this uncommon occurrence of course resulted from the low state of vitality to which the powers of life were reduced by the stage of collapse.

During the early period of the epidemic in the Jail, no treatment appeared of any avail; calomel and opium, creasote, nitrate of silver, Jeremie's opiate, stimulants, the assafœtida and opium pills were all tried, but with no advantage; latterly, when the disease was on the decline, and it was more tractable, I found a large dose of calomel and opium at the commencement, followed by small doses of calomel alone every hour, with a moderate supply of stimulants; certainly appeared to me to be the most efficacious mode of treatment, of course frictions of the extremities with artificial heat, being kept up at the same time.

The epidemic attacked the city about the same time it appeared in the old Jail. From the reports furnished to the Magistrate, I believe the deaths to have been about 700. Of course, it would be impossible to furnish any statement as to the rate in which fatal cases occurred, but the native opinion appeared to be that a larger proportion recovered than is usual under visitations of epidemic Cholera. Before the disease appeared, I had a good supply of Cholera pills made up at the Dispensary, consisting of assafœtida, opium and black pepper. Through a mistake of the Native Doctor, a large proportion of these pills contained, in each pill, two grains of calomel: the people described them as very efficacious, but I am unable to state if those containing the calomel were more so than the others; they certainly were not when tried in the Jail Hospital, but at the period they were used, no medicine appeared to have any effect. A large quantity of these pills was distributed to the different Police Stations throughout the City and Bazaars in the Cantonments, and also sent into the district by the Magistrate with a few simple directions of how to treat patients when attacked. The Native Deputy Collector and other charitable persons also distributed medicines to all who chose to apply. Of course, these charitable endeavours to relieve suffering are very praiseworthy; but I doubt if they do not lead to unfavorable results. From the panic that seizes on a family when one of its members is attacked, anxious friends make off in all directions for medicines; each brings back a supply, and too often, I fear, the unfortunate sufferer gets more than is requisite, especially as most of the nostrums contain a large quantity of opium, and I think there cannot be a doubt but in the latter stages of the disease, that drug is strongly contra-indicated.

It is difficult to assign to its true cause the great fatality of the disease amongst the prisoners in the new Jail, but I am afraid, it in a great measure arose from the huts being too crowded, and from a want of proper ventilation through them; as on the 7th, when some of the prisoners were removed, there was a marked diminution in the disease; but it is necessary

to bear in mind that symptoms of a slight abatement had shewn themselves two days previously.

It occurred to me, after the epidemic had passed over, that the well from which the prisoners at the new Jail usually drank was situated in the centre of an oid Mussulman burial-ground; but I can hardly, on consideration, attach any importance to this circumstance. The earth's crust, ere this, must be so covered with decayed animal matter that I should hardly suppose the water to be more impregnated there, than in other situations, especially as the ground does not appear to have been used for funeral purposes for very many years.

During the whole period of the epidemic, the Barometer was unusually low, and its daily oscillations both morning and evening were unusually large.

The clouds were very low, and the atmosphere full of moisture, the wind Easterly, and the rain almost constant. This latter circumstance has generally been considered as very uncommon, in like visitations, rains having generally removed the disease; but I think it would be more just to say that this epidemic of Cholera, like all its predecessors, was only consistent in obeying no rules or laws with which we are acquainted, and that we are in utter ignorance alike of its cause, its mode of propagation, and its treatment.

Report on Cholera cases admitted into the Meerut Dispensary as out-patients, from 15th July, to 26th August, 1856.—By CHUNDERNATH MOOKERJEE, *Sub-Assistant Surgeon.*

Date.	No. Admitted.	Result.	Date.	No. Admitted.	Result.
July 15th	None.	These patients (a day or two after their admission) ceased to attend, and consequently the result is unknown.	August 9th		These patients (a day or two after their admission) ceased to attend, and consequently the result is unknown.
16th	"		10th	2	
17th	"		11th		
18th	"		12th	1	
19th	"		13th	None.	
20th	"		14th	"	
21st	"		15th	"	
22nd	"		16th	"	
23rd	"		17th	"	
24th	1		18th	"	
25th	1		19th	"	
26th	2		20th	"	
27th	2		21st	"	
28th	1		22nd	"	
29th			23rd	"	
30th	1		24th	"	
31st	5		25th	"	
August 1st	1		26th	"	
2nd				"	
3rd	1			"	
4th				"	
5th	1			"	
6th	1			"	
7th	1			"	
8th	4			"	
				"	

Report on Cholera cases admitted into the Meerut Dispensary as in-patients, from 15th July, to 26th August, 1856.

Date.	Number Admitted.	No. Died.	Date.	No. Admitted.	No. Died.
July 15th	None	None	August 9th	None.	
16th	"	"	10th	"	
17th	"	"	11th	"	
18th	"	"	12th	"	
19th	"	"	13th	2	
20th	"	"	14th		
21st	"	"	15th	1	
22nd	"	"	16th		
23rd	1	"	17th		
24th	3	"	18th		1
25th	1	"	19th	1	
26th	2	"	20th	None.	1
27th		"	21st	"	
28th	3	1	22nd	"	
29th	1	2	23rd	"	
30th	1	2	24th	"	
31st			25th		
August 1st	1		26th		
2nd	1	1			
3rd					
4th	1				
5th	1				
6th		1			
7th		1			
8th	1				

List of the Distributers of Medicines during the Cholera Epidemic in the Meerut District, in July and August, 1856, dated Meerut Magistracy: the 13th October, 1856.—By CHARLES CURRIE, *Officiating Magistrate.*

ARTILLERY AND EUROPEAN INFANTRY BAZAARS, &C.

1 Mr. J. H. Walker, Deputy Collector and Deputy Magistrate.

DRAGOON AND SUDDER BAZAARS AND VICINITY.

1 Kour Vuzeer Alee Khan, Deputy Collector and Deputy Magistrate.
2 Baboo Beharee Lall, Clerk Magistrate's Court.

NATIVE CAVALRY AND HOOSAINEE BAZAARS AND VICINITY.

1 Colonel Smyth, Commanding 3rd Light Cavalry.
2 Mr. J. Jones, 3rd Clerk, Collector's Office.

CITY OF MEERUT AND VICINITY.

1 Gungapershad, Peishkar of Huzoor Tehseel.
Mungul Sain, Sèrishtadar Meerut Collectorate.
Nuseer Alee, ditto Ditto Magistracy.
Hyat Alee, Vukeel Adawlut Dewanny.

5 Bankay Rae, Vukeel Adawlut Dewanny.
Ultaf Hoossein, Serishtadar Commissioner's Office.
Mussee-oollah, Superintendent of Roads.
Mahomed Alee Khan,
Gunga Sahoy,
10 Kishen Sahoy,
Shib Sahoy,
Mungul Sain, } Residents of the City.
Hidayut Alee,
Gobind Sahoy,
15 Moulvee Valayut Alee,
Hoosein Buksh,
Abdool Kadur,
Buldeo Sahoy,
Laljee Sahoy, } Hukeems of the City.
20 Sree Kunth,
Kadim Hoosein,
22 Saadut Khan,
23 Muddun Mohun Chatoorjee, 2nd Clerk, Collector's Office.

ILAQA HAUPPER TEHSEEL.

1 Mahomed Buksh, Moonsiff of Haupper.
Chumput Roy, Native Agent Barrack Department.
Vuzeer Khan, Kotwal of Haupper.
Ram Dass, Banker of ditto.
5 Salugram, Hukeem of ditto.
Mirza Izzut Beg.
Noubut Roy.
Mohun, Brahmin of Dahana.
Gobind, ditto ditto.
10 Pirbhoo, ditto Bhutyanah.
Hurgyan, ditto ditto.
12 Sheo Lall, Hukeem of Gurhmooktesur.

ILAQA MORADNUGGER TEHSEEL.

1 Khyratee Ram, Brahmin of Dhoulanah.
Nanuckchund, of Dhoulanah.
Mehr Alee Shah, of Dasnah.
Sheonarain, Byde of Dhoulanah.
5 Salugram Ram, Mahajun of Dasnah.
Oomur Khan, Jemadar Chowkee Dhurgul.

ILAQA BUROTE TEHSEEL.

1 Kurum Alee Khan, Tehseeldar of Burotee.

ILAQA SIRDHANAH TEHSEEL.

1 Toolshee Ram, Mahajun of Sirdhanah

ILAQA MAWANAH TEHSEEL.

1 Rampershaud, Tehseeldar of Mawanah.
Toorab Alee, Thanahdar of Neloha.
Mahomed Buksh, ditto Pureechutgurh.
4 Khyratee Ram, Sahookar of Neloha.

Comparative Statement of the number of deaths and rates per cent. of mortality by Cholera in the Jail, City and Military Station of Meerut, during the late Epidemic; Meerut, 8th September, 1856.—By S. R. THRING, *Civil Assistant Surgeon.*

Description of Persons.	Strength.	Total No. of Deaths by Cholera.	Rates per cent. of Mortality.	REMARKS.
European Troops, ..	1,600	40	2·50	The strength and mortality of the Troops have been supplied from the Superintending Surgeon's office; the mortality of the City and Cantonments are the numbers reported from the Kotwalee.
„ Women, ...	266	17	6·37	
„ Children, ...	389	31	7·96	
Native Troops, ...	2,470	7	0·24	
Prisoners in the Jail, ..	1,090	90	8·25	
Residents of City, ..	35,000	708	2·02	
Do. of Cantonment Bazaars,	40,000	569	1·42	

Report on the Cholera prevalent in Zillah Meerut, from 15th July, to 26th August, 1856.—By C. CURRIE, ESQUIRE, *Officiating Magistrate, Meerut the 13th October, 1856.*

Date.	Fall of Rain.		Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
	Inches.	Tenth.		Admission.	Deaths.	Deaths.	Deaths.
1856.							
July 15th to 30th				61	25	207	
July 31st	5	5	Easterly.	11	4	15	
August 1st	7		"	4	5	36	
2nd	9	5	"	12	9	54	
3rd	3	10	"	4	3	54	
4th	19	10	"	17	5	55	
5th	10	5	"	9	9	37	
6th	3	5	"	9	8	51	
7th	1		Westerly.	5	5	43	
8th	1		"	6	6	43	
9th		5	"	1	0	29	
10th	2		"	2	1	28	
11th	1		Easterly.	2	3	36	
12th	2	6	"	0	1	26	
13th	Driz	zling	"	3	0	20	
14th	3		"	1	0	15	
15th	2	5	"		2	15	
16th	1		"			9	
17th	9		"			8	
18th	1		"			8	
19th			"			6	
20th			"			5	
21st			"			3	
22nd			"			0	
23rd	6		"			6	
24th	5		"			1	
25th	24		Westerly.			1	
26th	16		Easterly.			5	
				147	86	806	

From H. P. Fane, Esquire, *Officiating Magistrate, Boolundshuhur. to* H. H. Greathed, Esquire, *Commissioner, 1st Division, Meerut, No* 107, *dated Boolundshuhur, the 22nd October, 1856.*

Sir,

I have the honor to furnish the return regarding Cholera, called for in your Circular No. 47, of the 23rd August last. You will perceive that the form transmitted by you has been very imperfectly filled up.

The daily report of deaths in the city of Boolundshuhur is procurable only from the 23rd July to the 12th August, the period during which the disease was most violent. A memorandum of the daily deaths in the several Thannah jurisdictions has been received from only two Thannahs, the rest have transmitted merely a return of the total number of deaths from Cholera ascertained to have taken place in their respective districts. I fear that but little reliance can be placed on the accuracy of the returns; but it must be remembered that these reports were called for at a time when the epidemic had in a great measure ceased.

I am unable to account for the great difference in the number of deaths in the various districts. It would appear however that the neighbourhood of the Trunk Road suffered most from the epidemic. The almost entire freedom from the disease of the prisoners in the Jail during the time it prevailed in the Town, is a satisfactory proof of the healthiness and cleanliness of the building.

With regard to paragraph 2 of your Circular, the daily fall of rain and direction of wind have been furnished for the period during which the Cholera prevailed; it will be seen that the wind blew continuously from the east.

A Native Physician in the city, in the pay of the Collector, has drawn up a report regarding the symptoms and treatment of the disease; it contains the best information procurable on the subject. He states that the sickness began in the southern quarter of the City, and prevailed most in the western, these being the parts principally inhabited by the lower castes; it was least in the northern quarter, which is contrary to what might be expected, as the northern part is low and consists principally of small houses. It attacked all classes of people, but raged principally among the lowest castes.

The symptoms are thus reported. In the earlier cases merely vomiting took place, but afterwards the malady took the form of both vomiting and purging, with a burning sensation in the stomach, the face turned black, and the eye sunk; some patients purged so much that they died at once, but others lingered for 3 or 4 days. In some cases profuse perspiration and fainting occurred. The Native Physician also stated that he remarked that when the first symptom of the malady was vomiting, and diarrhœa afterwards appeared, the attack was usually fatal, but when the

diarrhœa occurred first and the vomiting supervened, the patient generally recovered. The details of the character and peculiar symptoms of the epidemic as received from the various parts of the district, do not differ materially from the account given above. No one class is mentioned as specially affected by the disease.

The Thannahdar of Jewur reports that the first case in his district was of a travelling pedler from Goorgaon, and he adds that the disease was generally believed to have arisen from the village in which the pedler died.

With reference to the 3rd paragraph of your Circular, I beg to state that the Native Physician above-mentioned was appointed about two years ago by Mr. Turnbull, and is paid by him; the cost of medicine is also disbursed by Mr. Turnbull. When the Cholera commenced, medicine was sent to the various Thannahs of the district, as well as to the Kotwalee of the city. They consisted mostly of draughts and pills made up according to the Physician's own *recipe;* the draughts were made of the juice of "Kurela" (Mamardicia Charantia), onion and mint, and the pills of assafœtida, musk, camphor, and opium; these have been reported by him to have been efficacious, but he allows that he tried various medicines and found no one prescription effectual in all cases, nor did he remark that any one medicine was pre-eminently successful. Both in the city and in the district, much medicine was distributed by private individuals.

Chowbé Dunput Rae, Treasurer; Mr. Jones, of the Magistrate's office; Sheikh Abdool Qadur, Agent of Nuwab Moostufa Khan; and Imdad Alee, Vakeel, supplied medicines in the city. Other names mentioned are Mehndo Buksh, Agent of Nuwab Wulleedad Khan; Jugdees Rae and Shadee Ram of Syona; Oomrai Singh of Suhunpoor; Gunga Pershad of Soonera; Abdool Luteef Khan of Khunpore; Asghur Alee, Tehseeldar of Secundrabad, Luchmun Suroop of Secundrabad; and Syud Mohumed Khan of Doulutpore. The Suraogees of Secundrabad subscribed amongst themselves and distributed medicines.

Peer Mohumed, the Thannahdar of Syana, says he had pills made of the Mudar flower and the milk of the same plant, black pepper and salt in equal parts, which he distributed and found efficacious.

In connection with the subject of Cholera, I may mention a curious instance of ignorance and superstition on the part of the Hindoos of the village of Shekpore, in this district, which occurred during the height of the epidemic, and which, I regret to say, led to an affray, which however was not attended by any serious consequences.

The inhabitants of Juiwal, with the view of removing the disease from their own village, went in a large body with musical instruments and a male buffalo with its horns painted red, with the intention of escorting the buffalo across the boundary of their village. The people of the next village, Sherpore, however, having received information of their intention, were waiting to prevent the buffalo being driven across the boundary, and

a collision with swords and sticks took place; however no one was killed, or even seriously wounded.

The women too of some villages had processions with the object of transferring the disease to their neighbours, but instead of a buffalo, they took their old clothes, pots, &c., and threw them in the next village.

Date.		Fall of Rain.	Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
				Admission.	Deaths.	Deaths.	Deaths.
1856. July	12th	None.	Easterly.	None.	None.	20 Deaths are said to have occurred between 12th and 22nd July.	Thannah Syana.
	13th	$\frac{9}{10}$	"	"	"		From 28th July to 28th August, ... 174
	14th	None.	"	"	"		Ahar, from 18th July to 6th September, ... 59
	15th		"	"	"		Anoopshuhur, ditto, .. 514
	16th	$1\frac{6}{10}$	"	"	"		Dubaie, ditto, ... 362
	17th	$1\frac{3}{10}$	"	"	"		Khoorjah, from 9th June to 3rd August, ... 921
	18th	$\frac{6}{10}$	"	"	"		Jewur, from 1st July to 1st August, ... 105
	19th	None.	"	"	"		Dadree, ... 137
	20th		"	"	"		Secundrabad, ... 739
	21st		"	"	"		Shikarpore, ... 557
	22nd		"	"	"		Boolundshuhur, exclusive of City, ... 535
	23rd		"	"	"	6	
	24th		"	"	"	16	Total, .. 4,103
	25th	$\frac{4}{10}$	"	"	"	5	
	26th	None.	"	"	"	6	
	27th		"	"	"	17	
	28th	$\frac{3}{10}$	"	"	"	16	
	29th	$\frac{7}{10}$	"	"	"	24	
	30th	None.	"	"	"	24	
	31st	1 inch.	"	"	"	6	
August	1st	$\frac{7}{10}$	"	"	"	28	
	2nd	$\frac{2}{10}$	"	"	"	20	
	3rd	$1\frac{1}{10}$	1	"	"	13	
	4th	$1\frac{2}{10}$	"	"	"	20	
	5th	None.	"	"	"	24	
	6th	$\frac{2}{10}$	"	"	"	25	
	7th	$\frac{1}{10}$	"	"	"	11	
	8th	$\frac{5}{10}$	"	"	"	13	
	9th	$\frac{1}{10}$	"	"	"	3	
	10th	$\frac{0}{10}$	"	"	"	5	
	11th	$\frac{2}{10}$	"	"	"	2	
Total, ...			1			304	

From W. C. Watson, Esquire, *Officiating Magistrate of Allygurh to* H. H. Greathed, Esquire, *Commissioner of Meerut, No.* 122, *dated Allygurh, the 15th October, 1856.*

Sir,

In compliance with the instructions conveyed in your letter No. 47, dated 23rd August, I have the honor to submit in the prescribed tabular form, a statement of the deaths which occurred from Cholera in this District during the late visitation of the disease.

2.—I have also taken the liberty to furnish an additional tabular statement, which I hope will exhibit in a convenient form the degree in which the disease declared itself in different portions of the district. It likewise shews the per-centage of deaths on the population, and in each square mile.

3.—The returns from which these statements have been prepared, have been carefully tested, and I believe they may be recieved with some confidence of their general correctness.

4.—In consequence of the returns not having been called for till the disease had almost disappeared, it was found impossible to give a statement of the daily deaths with any approach to correctness, and it has not therefore been attempted.

5.—The prisoners in the Jail, as also the Burkundazes and Nujeebs forming the Guard, enjoyed a remarkable exception from the disease, only seven cases having occurred, none of which were fatal.

6.—The Regiment stationed at this place likewise escaped in a very remarkable manner. I am informed by the Medical Officer in charge that during the period when the disease was raging in other parts of the station and district, viz., in the months of June, July, and August, not a single case occurred in the Regimental hospital; and although there had been some fatal cases in the month of May, they do not seem to have been connected with the advent of the epidemic from which the rest of the district afterwards suffered.

7.—The ordinary measures of relief were adopted, and medicine prepared at the Dispensary in large quantities, was distributed to the people through the agency of the Police.

District.	Thannahs.	Hindoo Males.			Hindoo Females.			Mahomedan Males.			Mahomedan Females.			Total Population.	Total Deaths from Cholera.	Percentage of total Deaths.	Area in British Square Miles, containing 640 Acres each.	Percentage of Deaths per Square Mile.	Period during which Deaths from Cholera occurred.
		According to Census of 1st July 1853.	Ascertained to have died of Cholera.	Percentage, of Deaths.	According to Census of 1st July, 1853.	Ascertained to have died of Cholera.	Percentage of Deaths.	According to Census of 1st July, 1853.	Ascertained to have died of Cholera.	Percentage of Deaths.	According to Census of 1st July, 1853.	Ascertained to have died of Cholera.	Percentage of Deaths.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Allygurh.	Coel, inclusive of City, ..	85835	1551	1·80	74935	931	1·24	15168	176	1·16	13978	141	1·00	189916	2799	1·46	300·8	9·2	1st June to 10th August.
	Tuppuhl, ...	27030	169	·62	23230	98	·42	2367	16	·67	2276	14	·61	54893	297	·54	148·4	2·0	1st July to 15th Sept.
	Bhudwas, ...	46690	83	·17	37654	51	·13	4369	9	·20	4410	11	·24	93013	154	·16	202·1	·7	1st July to 15th Sept.
	Eglass, ...	22886	1117	4·83	20215	722	3·57	1342	73	5·43	1160	48	4·13	118555	1960	1·65	210·2	9·3	1st June to 31st August.
	Dadan, ...	13379	404	2·91	11469	241	2·10	1582	66	4·17	1376	45	3·27	27808	756	2·72	78·0	9·5	15th June to 31st August.
	Hattrass and Sasnee, ..	97049	1331	1·37	84748	891	1·05	8396	177	2·10	7335	133	1·81	197528	2532	1·28	287·0	8·8	15th June to 6th August.
	Atrowlee, ...	49713	272	·54	44125	237	·53	7517	255	·73	6964	51	·73	108319	615	·56	226·2	2·7	11th July to 6th August.
	Secundra Rao,	53930	262	·48	44669	209	·45	6739	54	·72	6437	42	·65	111775	567	·50	209·4	2·7	15th June to 31st August.
	Akberabad,....	53366	536	1·00	47431	384	·80	8902	164	1·84	8639	124	1·43	118338	1210	1·02	236·8	5·1	15th June to 31st August.
	Khyr, ...	56588	704	1·24	49219	523	1·06	4570	43	·94	4025	25	·62	114402	1295	1·13	254·5	5·0	20th June to 31st July.
	Total, ...	506466	6429	1·26	437695	4287	·97	60952	1033	1·69	56600	634	1·12	1134565	12185	1·60	2153·4	5·6	

Report on the Cholera in Zillah Allygurh, from 1st June, to 30th August, 1856.

Date.	Fall of Rain.	Direction of Wind.	Jail Hospital.		Chief City.	Rest of the District.
			Admission.	Deaths.	Deaths.	Deaths.
1st June to 30th August 1856.	Inch, 32·82	An Easterly wind prevailed almost without variation during the whole three months, from 1st June to 30th August.	June,·· 3. July,·· 3. August, 1.		Coel, ·560	*Thannah.* Coel, ·· ·· 2,239 Tuppuhl, ·· 297 Bhudwas, ·· 154 Eglass,·· ·· 1,960 Dadan,·· ·· 756 Hattrass, ·· 1,937 Attrowlee, ·· 615 Secundrabad, 567 Sasnee, ·· 595 Akberabad,·· 1,210 Khyr, ·· ·· 1,295
Total, ··	32·82		7		560	11,625

From R. C. Oldfield, Esquire, *Assistant Secretary to Government, North Western Provinces, to* H. H. Greathed, Esquire, *Commissioner of the Meerut Division* 6388, *dated Agra, the 19th December 1856. Judicial Department.*

Sir,

In reply to your letter, No. 249, of the 1st instant, I am desired to intimate that the papers submitted therewith, regarding the ravages committed by Cholera during last summer, will furnish a valuable addition to the information which is being collected from all quarters on this painfully interesting subject. They will be published with other reports for general perusal and reference.

2.—The Lieutenant Governor is deeply sensible of the zealous and humane efforts of the Civil and Medical Officers throughout your Division, for the mitigation of the effects of this peculiarly violent outbreak of disease. Dr. Thring, the Civil Assistant Surgeon at Meerut, had a special amount of labor and anxiety imposed upon him in the care of the large body of prisoners collected at that place, among whom, as well as in the city, the malady raged at one time with much virulence, and Mr. Edwards acted with laudable judgment and precaution in having stores of the needful medicines ready in anticipation of its progress to his district.

From R. ALEXANDER, ESQUIRE, *Commissioner of the 3rd, or Rohilkund Division, to* C. B. THORNHILL, ESQUIRE, *Officiating Secretary to the Government, North Western Provinces, No.* 191, *dated Rohilkund the 21st November, 1856.*

SIR,

I have the honor to submit for the consideration and orders of His Honor the Lieutenant Governor, the annexed reports and enclosures from Magistrates of Districts in this Division, narrating the course and effects of the pestilence of Cholera which visited the province of Rohilkund in the past rainy season, as well as the other parts of the North Western Provinces.

2.—The subject belongs more particularly to the Medical Department, and doubtless the results of experience gained, and facts discovered, in connection with the originating source of the malady, and with its more generally successful treatment, will be more fully discussed and appreciated at the proper time by those who are qualified to treat the subject professionally; but, as in all matters of general and statistical enquiry in this country, the co-operation of the executive, in the Magistrate and Collector of the District, is necessary, I considered the demand for these reports from the Magistrates to be appropriate.

3.—They will serve, if no other purpose, to shew His Honor that the Magistrates in this Division were not wanting in zeal and effort to effect—as much as lay in their power—alleviation and remedy to the sufferings of the people under this scourge.

4.—In Bijnour, Budaon and Bareilly, returns are offered of the numbers seized and of deaths. Reliance cannot be placed, I think, on these sufficient to establish any certain deductions; but, I apprehend, that of the numbers seized, the entries given are below the actual number; on the other hand, it is not improbable that out of the deaths, some may have been attributed in ignorance to Cholera.

5.—The district of Shajehanpore suffered the least, indeed very much less than any other district.

6.—I have addressed the Magistrate of Moradabad to know whether he can give me district returns, as Doctor Stiven's account applies exclusively to the jail and city; but in Bareilly and Badaon, from the present report, the disease was most rife and virulent.

7.—The Medical Agency in these two districts was under Doctor Hay, the Civil Assistant Surgeon, and he has given a short report respecting Bareilly.

8.—It was not till after the disease had gained head that the Sub-Assistant Surgeon from Bijnour was deputed to Budaon, and the report for that district is written by Mr. Edwards. His record of deaths has been made after the progress of the disease had been checked, and is a table of mortality, not of casualties, from the disease, and without a mortality

register for a similar period and season in other years, no comparison, from which to make deductions, can be instituted.

9.—In Bijnour, Doctor Knight, the Civil Assistant Surgeon, seems to have assured himself of the value of gunpowder as a disinfectant, and certainly the result in the Jail was most satisfactory. It would have been well had he mentioned the number of prisoners in the Jail, and the actual number attacked in the vicinity without it.

10.—Doctor Knight and the Magistrate appear also to have taken pains to ascertain the relative number of deaths in cases which were treated, and in those for which no treatment was adopted, and to have satisfied themselves of the marked success which attended the remedies administered in treatment.

11.—I regret to have to mention that after the receipt of the Bareilly report, and when the fury of the disease was thought to have been expended, Cholera broke out in the Teraee pergunnahs of Roodurpore, &c., and that the loss of life has been great. The effect on the resources of these pergunnahs will be serious, for the one want is of cultivators, the Agency of Government supplying the remaining need of water for irrigation and advances for cultivation.

From A. Shakespear, Esquire, *Magistrate of Bijnour, to* R. Alexander, *Commissioner of the 3rd or Rohilkund Division, No. 72, dated Bijnour the 29th October, 1856.*

Sir,

I have the honor, with reference to your Circular letter No. 48, dated the 8th ultimo, to submit copy of a report which I have just received from Doctor Knight, Civil Assistant Surgeon, on the measures adopted for mitigating the ravages of Cholera in this district during the past two months.

2.—I beg at the same time to forward half monthly statements made up to the 15th instant, which have been prepared from the returns of the police Officers, by whom full particulars were given, showing name, date of attack, and subsequent result in each case.

3.—It is not to be supposed that these are all the cases which have occurred since the first case was reported in August, for doubtless in many outlying villages the apathy and incredulity of the people would withhold them from applying for medicine or reporting deaths. Still as strict orders were issued to the police to make known our wish that all classes should freely obtain the remedies noted by Doctor Knight, and regular supplies were kept at each thannah and large police chowkee, it may be fairly assumed that the majority of the residents, in places not very far removed from the depôts, appreciated, and availed themselves of the assistance thus afforded.

4.—Reference to the following table will give a general idea of the progress of the disease, the points from which it has passed off, and where it has abated or still continues to prevail. I have added a column to exhibit the percentage of deaths to cases reported, but I would remark that this item is swollen by the large number of deaths resulting where medicine was not obtained, which were about four to one as compared with the cases in which the prescribed remedies were taken:—

Name of Thannah or Chokee.	Cases of Cholera Reported.				Total Cases reported.	Deaths reported.	Percentage of Deaths to Cases.
	From 14th to 31st August 1856.	From 1st to 15th September 1856.	From 16th to 30th September 1856.	From 1st to 15th October 1856.			
Thannah Bijnour, ...	58	66	25	4	153	49	32·0
Chokee Huldour, ...	0	0	29	20	49	17	34·6
Thannah Nagul, ...	11	13	79	2	105	78	74·2
„ Chandpore, ..	81	86	113	15	295	125	42·3
Chokee Noorpore, ..	0	44	22	7	73	55	75·3
Thannah Nugeenah, ..	3	29	38	61	131	70	53·4
„ Dhampore, ..	91	64	99	0	254	119	46·8
Chokee Nehtour, ...	9	14	28	15	66	3	4·5
„ Sherkote, ..	117	86	65	15	283	173	61·1
Thannah Seohara, ...	46	18	22	33	119	90	75·6
Chokee Suhespore, ..	0	48	5	0	53	27	50·9
Thannah Nujeebabad, ..	0	0	69	57	126	32	25·3
Chokee Keerutpore, ..	0	3	23	21	47	8	17·0
Thannah Mundawur, ..	3	35	37	15	90	60	66·6
„ Burrapoora, ..	0	0	12	15	27	4	14·8
Chokee Kotkadir, ..	0	0	4	7	11	4	36·3
Thannah Ufzulgurh, ..	0	0	15	72	87	51	58·6
Total, ...	419	506	685	359	1969	965	49·0

5.—Doctor Knight, in his 5th paragraph, has noted the percentage of deaths with, and without, medicine up to the end of September, to make the information complete up to the latest date,—I note as follows:—

From 1st to 15th October, throughout the district.

With medicine, deaths 13·6 per cent.

Without do. do. 95·2 do.—

During the same period in thannah Bijnour alone, only four cases were reported, in all of which medicine was taken and recovery followed.

6.—In conclusion, I beg to state that no special sanitary measures have been adopted in this district during this visitation. At first I was inclined to issue stringent orders for the removal of offensive matter and the cleaning of towns, and did actually give instructions to this effect for the town of Bijnour; but on further consideration I was so satisfied of the

danger, at such a season and under such circumstances, of disturbing noxious accumulations, that I withdrew my orders regarding this place, and determined to postpone, until the cold season should make the measure safe, all endeavours to introduce a better system of conservancy amongst the closely-packed population of our towns.

From R. C. KNIGHT, ESQUIRE, *Civil Assistant Surgeon, Bijnour, to* A. SHAKESPEAR, ESQUIRE, *Magistrate of Bijnour, dated Bijnour, the 1st October 1856.*

SIR,

I have the honor to acknowledge the receipt of your letter No. 82 of date the 13th ultimo, also the communication, in original, No. 84 of date the 8th ultimo, addressed to you by the Commissioner of the Division on the subject of Cholera, asking for information as to what sanitary measures may have been adopted in the district, both as preventive, and in treatment of the pestilence.

2.—About the end of the first week in August we had tidings of the approach of the disease, it having reached Daranugger, six miles south by west from Bijnour, and on the 14th, the first case appeared in the town, and it proved fatal.

3.—On the 10th of that month I fumigated the Jail by means of gunpowder.

This is not the place to enter at any length into the peculiar views I hold with regard to the advantages of this mode of purifying an atmosphere supposed to be in any manner tainted ; but I may mention that with respect to Cholera, I had this method of fumigation first strongly forced upon my attention by seeing recorded, somewhere, the following remarkable circumstance:—

During the period of the Polish insurrection, some years ago, the Cholera was raging frightfully all over the country. At one place where it was severely felt, a battle took place between the Russians and the Poles, and to the surprise of every one, the pestilence immediately vanished from that locality. The only rational inference was that the atmosphere had been purified by the combustion of the gunpowder in the battle.

The products of the exploded gunpowder are carbon, carbonic-acid gas and nitrogen, in enormous quantities, and some of these are considered by many to exercise a chemical action on the Choleraic poison. That is to say, they are supposed to be *disinfectants*, or substances which *chemically* decompose or destroy the noxious matter. What the Choleraic poison is, it is impossible to say, in the present limited state of our knowledge; but supposing it to be atmospheric, the above-mentioned fact goes far to prove that such a simple mode of purification may with great hope of success be had recourse to, and it certainly does go far to lead us to the belief that some of these products are absolutely *disinfectants*. At all events, I can certify that frequently, on board of ship, I have perceived the

atmosphere to become suddenly sweetened when *large quantities of gunpowder have been exploded.**

Impressed with these views, I had the Jail fumigated on the 10th of August, as I have mentioned above; and it is a remarkable fact that though for about seven weeks the Cholera raged in the immediate vicinity of the Jail, though it attacked several of the people living close by, only *one case* occurred amongst the prisoners, and the man recovered.

4.—With regard to the medical treatment in accordance with my views of the pathology of Cholera, I had disbtributed to the Thannahdars throughout the district, two distinct sorts of pills, numbered respectively No. 1 and No. 2, to the amount, up to this date, of 11,430. Written instructions were sent to all the Thannahdars as to the method of administering the medicine. No. 1 were *Emetic Pills* intended to give a salutary shock to the whole nervous system, to re-call nervous energy, to stir up and vivify the blunted nerves throughout the body, particularly those presiding over respiration, and thus enable the blood to pass through the lungs and be there vitalized, by coming in contact with the inhaled atmospheric air, and to excite the heart to action. This accomplished; No. 2, were then administered. These were *Alkaline Pills,* and were given with the object of affording Alkali to the blood, in order to its fluidity, with the view of preventing coagulation and keeping it fluid.

5.—Of course, we had to trust to the Thannahdars for the distribution of the medicines, a thing not very satisfactory; nevertheless, the percentage of deaths of those who got medicines, compared with those who got none, is very remarkable; and I cannot but declare that I feel certain that if, in every case, the remedies had been administered to the sufferers, *in good time,* and in a *rational manner* by those about them, the mortality would have been far less. In the Thannah of Bijnour itself, this difference cannot but be noticed, in referring to the Magistrate's statements. Here a great many of the cases were under the intelligent supervision of my own subordinates, and when they were called in good time, their success was certainly very observable, and this will be

---

* Note. Whilst I was writing the above, I observed in the public prints notices of an interesting fact mentioned by Doctor Alexander Hunter of Madras, in the *Indian Journal of Arts, Science and Manufacture:* "A certain part of Blacktown of Madras used to be notorious for its unhealthiness, and especially for its liability to Cholera. For some years past the Peninsular Oriental "Company have been accustomed to store coal in the neighbourhood in large quantities. Since "the coal was exposed in heaps, a marked improvement has taken place in the health of the "occupants of the adjoining houses, and Cholera appears to have been warded off, though it has "frequently prevailed in other parts of the town." This is a fact that ought not to be allowed to slip from the memory. It is inferred from this, and with good reason, that mineral coal is no less valuable than charcoal as a disinfecting agent; and here I may mention that charcoal is regarded by chemists as only a *deodoriser* or *remover* of smell. not a smell-*destroyer* or *disinfectant;* but the above-mentioned fact would seem to prove that charcoal, mineral coal at least, is a *positive disinfectant.*

particularly perceptible on comparing the percentage of Bijnour with that of the other Thannahs.

Taking the grand total they will stand as follows :—

From the 14th to 31st August.—With medicine, deaths 27 per cent.; without medicine, deaths 84 per cent. nearly.

From 1st to 15th September.—With medicine, deaths 26 per cent nearly; without medicine, deaths 84 per cent. exactly.

From 16th to 30th September.—With medicine, deaths 22 per cent. nearly; without medicine, deaths 83 per cent. exactly.

In Bijnour Thannah exclusively, the percentage by deaths was as follows:—

From 14th to 31st August.—With medicine, deaths 10 per cent. exactly; without medicine, deaths 87·5 per cent. exactly

From 1st to 15th September.—With medicine, deaths 15 per cent. nearly; without medicine, deaths 100 per cent exactly.

From 16th to 30th September.—With medicine, deaths 6·3 per cent. nearly; without medicine, deaths 100 per cent. exactly.

6.—It must be confessed that the great difference existing between the percentage of those cases where medicine was used, and where it was not, is very startling, and leads inevitably, to the inference that if intelligent means had been at hand to administer it in a rational manner, more lives might have been saved.

7.—During the whole time of this visitation, I have been most miserably cramped for want of assistance. On the 6th of August the weak Cholera was reported to be within six miles of us, namely at Daranugger; the Sub-Assistant Surgeon was ordered off to Budaon, in consequence of the disease having appeared there; and as the Dispensary Subordinates were few and inefficient, I found myself much embarrassed. My two Vaccinators were absent, attending the Medical School at Agra. The two apprentices belonging to the Dispensary were quite inefficient, in such an emergency. In short, the only persons I had to trust were the Native Doctor in the Jail and the 1st Compounder in the Dispensary, and they certainly seconded my efforts most energetically by day and by night.

8.—As the disease began to decline in and about Bijnour, it commenced to assume a fearful malignancy at Dhampore and Chandpore. It seemed to have gathered fresh strength. As I could not part with my only efficient assistants to send to those places, it occurred to me that I might find two vaccinators, placed at my disposal by Doctor Pearson, useful. They had been sent to me by him in order that, during the non-vaccinating season, they might usefully employ their time in the Dispensaries in learning what they could, and though I knew that one of them had never seen a case of Cholera in his life, (probably such was the case with the other,) I sent them forth to Dhampore and Chandpore, respectively, feeling

convinced that at all events they could administer the medicine in a more intelligent manner than the common people belonging to the villages were likely to do. Before they departed, they were well instructed as to how they were to proceed; they were also provided with written instructions, the necessary supply of medicine was furnished to them, a fresh stock was from time to time sent out, heir and I am glad to say their services were attended with the most happy results.

9.—It is worthy of being noted as a remakable fact, that heir immediately on the conclusion of Mohurrum, the number of deaths from Cholera became alarmingly numerous. The ceremony ended on the evening of the 11th September, and immediately the increased mortality began, evidently induced, in my opinion, by the corresponding depression following the unusual excitement of the period. On the 14th no less than fifteen fatal cases were reported as having occurred in the town. By the 16th it began to subside gradually in Bijnour, but still continues to cling to Dhampore and Chandpore, though, in both places, I am happy to say, it is on the decline.

Statement showing the number of Cases of Cholera reported in Zillah Bijnour, from 14th to 31st of August 1856, in the following Thannahs and Chokees.—By A. SHAKESPEAR, *Magistrate Bijnour Magistracy: the 24th September 1856.*

NAMES OF THANNAHS.	Number of cases.	Recovered.	Deaths.	*Number of persons to whom Medicine was given.*			*Number of persons who did not apply for Medicine.*		
				Recovered.	Deaths.	Total.	Recovered.	Deaths.	Tota
Bijnour Thannah, ...	58	46	12	45	5	50	1	7	8
Nagul ditto, ...	11	5	6	4	3	7	1	3	4
Chandpore ditto, ...	81	64	17	64	2	66	0	15	15
Nugeenah ditto, ...	3	1	2	0	0	0	1	2	3
Dhampore ditto, ...	91	18	73	18	26	44	0	41	47
Nehtour Chokee, ...	9	8	1	7	0	7	1	1	2
Sherkote ditto, ...	117	51	66	35	27	62	16	39	55
Seohara Thannah, ...	46	15	31	8	4	12	7	27	34
Mundawur ditto, ...	3	1	2	0	0	0	1	2	3
Total, ..	419	209	210	181	67	248	28	143	171

Statement showing the number of Cases of Cholera reported in Zillah Bijnour, from 1st to 15th September, 1856, in the following Thannahs and Chokees.

Names of Thannahs.	Number of cases.	Recovered.	Deaths.	Number of persons to whom Medicine was given.			Number of persons who died no Medicine apply for		
				Recovered.	Deaths.	Total.	Recovered.	Deaths.	Total.
Bijnour Thannah, ...	66	39	27	39	7	46	0	20	20
Nagul ditto, ...	13	9	4	7	1	8	2	3	5
Chandpore ditto, ...	86	47	39	47	4	51	0	35	35
Noorpore Chokee, ...	44	13	31	11	22	33	2	9	11
Nugeenah Thannah, ..	29	14	15	7	5	12	7	10	17
Dhampore ditto, ...	64	46	18	40	11	51	6	7	13
Nehtour Chokee, ...	14	14	0	14	0	14	0	0	0
Sherkote ditto, ...	86	29	57	11	5	16	18	52	70
Seohora Thannah, ...	18	3	15	2	2	4	1	13	14
Suhespore Chokee, ...	48	24	24	24	0	24	0	24	24
Keerutpore ditto, ...	3	3	0	3	0	3	0	0	0
Mundawur Thannah, ..	35	4	31	4	15	19	0	16	16
Total, ..	506	245	261	209	72	281	36	189	225

Statement showing the number of Cases of Cholera reported in Zillah Bijnour, from 16th to 30th September 1856, in the following Police Divisions.

Names of Thannahs.	Number of Cases.	Recovered.	Deaths.	Number of Persons to whom Medicine was given.			Number of Persons who did not apply for Medicine.		
				Recovered.	Deaths.	Total	Recovered.	Deaths.	Total.
Bijnour Thannah, ...	25	15	10	15	1	16	0	9	9
Huldour Chokee, ...	29	21	8	21	5	26	0	3	3
Nagul Thannah, ...	79	12	67	11	2	13	1	65	66
Chandpore ditto, ...	113	48	65	48	21	69	0	44	44
Noorpore Chokee, ...	22	5	17	5	14	19	0	3	3
Nageenah Thannah, ..	38	25	13	14	2	16	11	11	22
Dhampore ditto, ...	99	71	28	71	14	85	0	14	14
Nehtour Chokee, ...	28	26	2	26	2	28	0	0	0
Sherkote ditto,..	65	27	38	4	0	4	23	38	61
Seohara Thannah, ...	22	10	12	2	3	5	8	9	17
Suheespore Chokee, ..	5	2	3	0	1	1	2	2	4
Nujeebabad Thannah, ..	69	54	15	54	12	66	0	3	3
Kewutpore Chokee, ..	23	20	3	20	0	20	0	3	3
Mundawur Thannah, ..	37	15	22	15	10	25	0	12	12
Burhapoora ditto, ...	12	9	3	9	3	12	0	0	0
Kotkadir Chokee, ...	4	0	4	0	0	0	0	4	4
Ufzulgurh Thannah, ..	15	10	5	8	1	9	2	4	6
Total, ...	685	370	315	323	91	414	47	224	271

Statement showing the number of Cases of Cholera reported in Zillah Bijnour, from 1st to 15th October 1856, in the undermentioned Thannahs and Chokees.

Names of Thannahs.	Number of Cases.	Recovered.	Deaths.	Number of Persons to whom Medicine was given.			Number of Persons who did not apply for Medicine.		
				Recovered.	Deaths.	Total.	Recovered.	Deaths.	Total.
Thannah Bijnour, ...	4	4	0	4	0	4	0	0	0
Chokee Huldour, ...	20	11	9	11	9	20	0	0	0
Thannah Nagul, ...	2	1	1	1	0	1	0	1	1
Ditto Chandpore, ...	15	11	4	11	2	13	0	2	2
Chokee Noorpore, ...	7	0	7	0	0	0	0	7	7
Thannah Nugeenah, ..	61	21	40	15	8	23	6	32	38
Ditto Dhampore, ...	0	0	0	0	0	0	0	0	0
Chokee Nehtour, ...	15	15	0	15	0	15	0	0	0
Ditto Sherkote, ...	15	3	12	3	0	3	0	12	12
Thannah Seohara, ...	33	1	32	1	0	1	0	32	32
Chokee Suhespore, ..	0	0	0	0	0	0	0	0	0
Kotewalee Nujeebabad, ..	57	40	17	39	8	47	1	9	10
Chokee Kurutpore, ..	21	16	5	16	0	16	0	5	5
Thannah Mundawur, ..	15	10	5	10	5	15	0	0	0
Ditto Burrapoora, ...	15	14	1	14	1	15	0	0	0
Chokee Kotkadir, ...	7	7	0	7	0	7	0	0	0
Thannah Ufzulgurh, ..	72	26	46	26	6	32	0	40	40
Total, ...	359	180	179	173	39	212	7	140	147

From A. JOHNSTON, ESQUIRE, *Officiating Magistrate of Moradabad, to* R. ALEXANDER, ESQUIRE, *Commissioner of the 3rd or Rohilcund Division; No. 88, dated Moradabad, the 7th August 1856.*

SIR,

I have the honor to submit a report from the Civil Surgeon regarding the Cholera in the Jail and City of Moradabad, and the remedial measures which have been adopted.

2.—The Jail has been freer from the disease than many parts of the City, and it will be seen that a large proportion of the cases which have occurred in the Jail have recovered. The distribution of medicine throughout the town has likewise no doubt led to recovery in many cases, which otherwise might have proved fatal. I have taken every means of making it generally known that medicines are procurable at the Kotwalee Dispensary and all of the Chokees.

3.—Doctor Stiven has likewise sent a Native Doctor to Sumbhul, where the disease has been more prevalent and fatal than elsewhere; and medicine has likewise been supplied to other places of importance throughout the district.

4.—A daily report regarding the progress of the disease is sent in from Sumbhul, and I have called for the same for the town of Moradabad.

From W. S. STIVEN, ESQUIRE, M. D., *Civil Assistant Surgeon, Moradabad, to* A. JOHNSTON, ESQUIRE, *Officiating Magistrate of Moradabad; dated Moradabad, the 7th August 1856.*

SIR,

I have the honor to state that on my return from Bareilly on the 20th July, I found two cases of Cholera in the Jail Hospital; but as Doctor Henderson had reported the circumstance to you, I did not deem it necessary to address you officially on the subject. I however ordered a supply of medicines to be made up, and issued instructions that whenever a prisoner complained in the slightest degree he was to be taken at once to the Hospital and medicine given to him. Fortunately, the two cases, alluded to above recovered, and no others were admitted into Hospital, till the 31st, when one occurred and proved fatal. Since then up to this date, (7th August) twelve cases have occurred of which three have proved fatal, seven have recovered, and two are still under treatment; one of the latter is doing well, the second doubtful. Two cases have occurred in the Jail Guard, one proving fatal. The above is the state of matters in the Jail, which, like all well-ventilated clean places, and where the inhabitants are well fed and clothed, has kept freer from the disease than the neighbouring sections of the city with their dense population and bad ventilation, and in many parts filthy streets. The treatment adopted in the Jail has been calomel

with opium; assafœtida, opium and pepper pills. Mixtures of aromatic spirits of ammonia and camphor, and one of carbonate of ammonia; laudanum and bazar spirits, these latter intended to keep up the strength; and frictions of turpentine, and the application of mustard poultices over the liver, &c. I have found in my own experience that the above treatment is the most successful, and I recommend its adoption in all establishments under my care.

I now beg to report my arrangements with respect to affording relief to the sick in the city. Supplies of medicine have been sent to all the Police Chokees, and men have been placed at the Kotwalee and the Chokees at a distance from the Head and Branch Dispensaries, so that no delay may occur in affording relief to those who apply for it. In addition to these arrangements, you issued an order giving intimation to the people that the means were afforded if they would apply for such. These orders have been again repeated. The number of cases treated are shewn below, since the 30th of July 1856, up to the 7th instant.

Head Dispensary admitted 63, of whom 16 have died.

City Branch Dispensary admitted 36, three deaths.

Kotwalee 36 admitted, 7 died. Talbagh Chokee 47 admissions, 9 deaths.

Kutgurh Chokee, no admissions up to 7th instant. This of course merely gives an account of those applying for relief. A regular register kept at the Kotwalee would be advisable to shew the number of cases actually occurring.

From the above statement it will be seen that 182 cases have applied for relief, and that 35 have died. I reported to the Superintending Surgeon at Meerut the occurrence of Cholera here, about a fortnight ago, and since then have let him know how matters are going on.

From W. Edwards, Esquire, *Magistrate of Budaon, to* R. Alexander, Esquire, *Commissioner of the 3rd or Rohilcund Division; No. 112, dated Budaon, the 6th October 1856.*

Sir,

I have the honor o acknowledge the receipt of your letter No. 48, dated the 8th instant, and n reply to state that several weeks prior to the appearance of Cholera n this district, but in anticipation of its approach, measures were taken for thoroughly cleaning all drains in the town of Budaon, and for clearing off all filth and rubbish, and preventing their accumulation in future.

2.—Similar measures were also adopted as regards the chief towns and qusbahs in the district, Suheswan, Bissowlee, Oojhanee, &c. &c., as far as possible.

3.—Proclamations in Urdu and Hindee, copies of which I enclose, were drawn up and lithographed for distribution throughout the district. In these the symptoms of the disease were described, the simplest and readiest mode of treatment prescribed, and the places detailed where medicines would be at once supplied on application, gratis.

4.—Cholera pills in large numbers were supplied to each Tuhseel, Thannah and subordinate Chokees, and depôts were also established in Budaon and the chief towns and villages.

5.—The disease first made its appearance in the Pergunnah of Gonour, to which it had been conveyed from the Allygurh district across the Ganges. Hence it spread through the district and reached Budaon about the close of July. On the 24th of the month some cases occurred in the Jail, and of these five terminated fatally.

6.—The prisoners were at once removed and distributed in gangs wherever we could find suitable accommodation for them.

7.—The Hospital and Huwalat were removed into the new Tuhseel buildings, and the Jail itself left completely unoccupied. Tobacco was supplied to the prisoners, and some additions and alterations made in their usual diet ; their hours of labour also were curtailed.

8.—These measures happily proved efficacious. The alteration in their diet and the change of air and residence raised their spirits, which were very desponding while the men were shut up in Jail, and after their removal only 18 cases occurred, of which seven were fatal.

9 —The disease was entirely confined to the prisoners, not one of the Jail Guard or Establishment had even an attack.

10.—The Detachment of the 18th Native Infantry, on duty as a Treasury Guard, was attacked by the disease, and the Sobadar in command of the party, a Havildar and some Sepoys died of it.

11.—This Guard is wretchedly lodged, as I have brought to your notice in a previous letter; and to this fact I think the virulence of the disease among them may be in a great measure ascribed. Not an instance occurred in the Police Sowars' lines, which are only about forty yards in rear of those of the Sepoys, and had lately been put into thorough repair, were clean and well ventilated.

12.—It became necessary at once to remove the Guard, and as tents on account of the rains and the wetness of the ground were out of the question, they were directed to occupy some rooms in the Cutcherry made available for the purpose, my own office-room and that of the Joint Magistrate's among the rest. The men were also allowed to mount guard in their native dress instead of their uniform.

13.—These measures had the desired effect, and only one fatal case occurred subsequent to their removal into dry and commodious quarters.

14.—As respects the town, little could be done after the disease broke out but to establish depôts of medicines, and warn those attacked

to supply themselves through their friends, or proceed at once to the Dispensary, or seek medical aid from thence.

15.—Additional sweepers were directed to be entertained, and the whole body placed under the orders of two Jemadars in order to ensure the duty being thoroughly performed.

16.—Until the 9th of August, when a Sub-Assistant Surgeon arrived from Bijnour, the sole medical charge of the station devolved on the Native Doctor, Narain Dass; and I deem it my duty to bring to your favorable notice the very praiseworthy zeal and unwearied devotion shewn by this Officer in discharging his very onerous duties through this trying period.

17.—He never appeared to allow himself any rest, and although he visited morning and evening the Jail Hospital and Sepoy Guard, as also the out-lying gangs of convicts, at long distances from each other, and had sole charge of the Dispensary crowded with sick and applicants for relief, he still was able from time to time to visit the city and prescribe for the numerous sick who were unable to come to the Dispensary for his advice.

18.—But the European Officers and Native community entertain a very grateful sense of Narain Dass's services, and I would venture to hope that his merits may be recognized by the Government bestowing on him from the Toshahkhana a pair of shawls, a watch, a case of instruments, or any other suitable present, as a mark of their favor. A present of this sort is far more highly valued by the Native community than any donation in money, and is at the same time calculated to stimulate others to a similar zealous and courageous performance of their duty in future emergencies of the like nature.

19.—Previous to the receipt of your letter under acknowledgment, I had taken measures to ascertain, as far as possible, the number of casualties by Cholera throughout the district.

20.—It would be next to inpossible to ascertain with any correctness the number of persons who were attacked but recovered, as no record could be kept of those to whom medicines were supplied, either for themselves or their families, and these never thought of returning to report the favorable effect or otherwise of the medicines furnished.

21.—During the prevalence of the disease, I purposely abstained from requiring any returns to be sent in of its progress or effects, as these statements are useless in themselves, and only tend to increase the panic and depression already prevailing, which it is so requisite to use all means in our power in order to allay.

22.—Now, however, that the disease has passed away, and the memory of its ravages is fresh in the recollection, it is not difficult through the Police and Village Chokeedars to obtain a correct return of the casualties throughout the district generally; and I now subjoin the following *table*, the result of my enquiries.

Number.	Thannah Jurisdiction.	Population.	Deaths.	Ratio of Deaths to Population.	Remarks.
1	Budaon, ...	1,27,328	952	·75	This shows that 1 out of every 136 persons died; the mortality in London on the outbreak of Cholera in 1848-49, was 1 in 151 persons.
2	Oojhanee, ...	85,103	279	·33	
3	Datagunge, ...	78,766	224	·28	
4	Ooseith, ...	77,847	35	·05	
5	Bissowlee, ...	90.071	496	·55	
6	Islamnuggur, ...	71,588	544	·76	
7	Sabeeroon, ...	1,05,946	617	·58	
8	Kote Salhabun, ...	89,609	1,516	1·61	
9	Gonour, ...	1,19,690	1,536	1·28	
	Total, ...	8,45,868	6,199	·73	

23.—I am in hopes of being able hereafter to submit some further information on the progress of the disease throughout this district and its prevalence in particular localities. At present my information is insufficient, and my knowledge of the district too limited, to enable me to submit anything worthy of notice.

24.—I am inclined however to believe that its fatality has been greatest in low-lying villages and hamlets, and along the banks of rivers and streams, while more elevated sites have been less severely visited.

25.—The disease has certainly confined itself chiefly to where all sanitary rules have been set at defiance, where the people live in close, filthy and unventilated streets and gullees, while those inhabiting airy situations have enjoyed a comparative immunity. Very few of the better classes have been attacked or cut off by Cholera; it seemed to confine itself almost exclusively to the very poor.

If Native reports are to be believed, it was the contrary in the district of Allygurh, from whence the Cholera travelled to this one.

26.—Its course has been very eccentric, passing over some places, and then again retracing its steps and breaking out in these, but still pursuing on the whole a north-western course, and never returning to a locality where it had prevailed after once disappearing.

From C. HORNE, ESQUIRE, *Officiating Magistrate of Bareilly, to* R. ALEXANDER, ESQUIRE, *Commissioner of the 3rd or Rohilcund Division; No. 245, dated Bareilly, the 22nd September 1856.*

SIR,

With reference to your letter No. 48, dated the 8th September, I have the honor to submit the following observations:—

2.—Had I not received your letter, I had proposed to myself to submit, when the Cholera should have ceased from its attacks, a short account of the same, together with any remarks the Civil Surgeon would have kindly given me.

3.—A return of this nature had been called for by the Superintending Surgeon from the Civil Surgeon, and I had promised to furnish him with a copy of any Memorandum I might prepare.

4.—As my returns have come in from the district generally, and Doctor Hay has kindly given me those from the Dispensaries up to the end of August, I have the honor to submit the same as per margin.*

* Nos. I. and II.

5.—These returns, as far as regards the Dispensaries, may be looked upon as perfectly correct; but with reference to those prepared in the Thannahs, the same remark will not apply. Many bowel complaints will be classed as Cholera, whilst I have little doubt but that many hundred cases of real Cholera were never reported in spite of all my careful instructions. They will, however, give some idea of the prevalence of the disease.

6.—This would appear to have commenced towards the close of June, and to have reached its maximum in the middle of August, whence it rapidly declined; so rapidly, that in the beginning of September cases were very rare.

7.—Jehanabad is an exception to this remark, as at the present moment it still prevails there, and in June and July no cases were reported, and in August only four.

8.—I do not find that it travelled in any particular direction, or that the wind in any way influenced the progress of the disease.

9.—Nor was it apparently aggravated by unhealthiness of situation owing to want of drainage, dense jungle, &c.

10.—Roodurpore was comparatively free from it, and this bears out the theory as propounded by Doctor Balfour of Delhie, that when fever and ague is prevalent, Cholera takes less hold of the population.

11.—In Beesulpore it is still very prevalent, and I can in no way account for it.

12.—In some peculiar spots it raged with great virulence; for instance in the village of Sawthul, on the Pillibheet road, it raged to such an extent as to decimate the inhabitants. I have not the number by me or should state them; and from the enquiries I made, there was no special cause for its unwonted severity in this particular spot.

13.—In the city of Bareilly I watched its progress most narrowly, and could detect but little difference in severity between the amount of disease in the best and worst drained spots.

14.—Behareepore and Mullookpore Mohullahs, which lie low, suffered perhaps a little more than other Mohullahs; but drainage is much wanted generally, and I am preparing to have a proper set of levels taken of the city preparatory to proposing some plans for the same.

15.—The poor and those predisposed to disease from poverty and insufficient food and shelter, seem to have been the parties principally attacked, although there are many instances of the higher classes suffering.

16.—Of the immense number of officials congregated at the Sudder Cutcherries in all departments, I have only heard of *one death* by Cholera, although the decease of relatives was a constant source of absence from duty.

17.—Cholera, almost every year, is to be found in the city in June and July, but not very generally; and this year the number of cases reported did not appear to me to warrant the entertainment of any extra establishment until about the close of July, for there is (as you are aware) a large Central Dispensary with a branch at each end of the city.

18.—At this time Doctor Hay was absent upon leave. I therefore deferred the matter until his return, when I immediately consulted with him, and arranged for the opening of five Cholera depôts at convenient and centrically situated Police posts, the expense of the same being defrayed from the surplus Chokeedaree funds.

19.—In these many cases were treated, and the appended Statement No. I., in which they are embodied, shews at a glance the extent of their operation; but I trust that Doctor Hay, under whose immediate superintendence they were, will add a few remarks relative to them.

20.—The parties employed were Vaccinators attached to the Dispensary and a Native Doctor out of employ, by name Mohumud Buksh Khan, to whom I propose to give a gratuity of Rs. 25 for his gratuitous services during the month of August, as detailed by Doctor Hay in his Memorandum.

21.—Meanwhile I had not been idle. I had procured 100 copies of a printed Cholera Circular, and distributed very many bottles of medicine in every part of the district, and Doctor Hay sent out Cholera pills for the other neighbouring stations.

22.—Every effort was made to keep the city and the villages clean; heaps of filth were removed, white-washing recommended, and all the usual precautions were adopted.

23.—A short table, No. III., shews how the medicine was distributed, and I believe the relief effected by it was very great.

24.—I had a large store by me from last year. This I gave away, and I had the happiness myself of seeing five or six cures effected.

25.—The medicine employed was a composition of ammonia, rum, opium, water and lime; and Doctor Hay will be able to supply the proportions, together with any remarks on its efficacy.

26.—Including 1 anna for the glass bottle, the total cost per quart was under 5 annas, so that it may be deemed a very cheap remedy, the more so as it is a certain cure for snake-bites if taken in time, and the patient be kept in motion.

27.—On the 27th August the Cholera depôts were discontinued as being no longer needed, and I am happy to say that a case of Cholera in the city is now very rare.

28.—The Sudder Bazaar in Cantonments suffered very much; but I have no returns therefrom, as it is under Military supervision, and I have been credibly informed that as many as 100 men were carried off by the scourge in Cantonments, including the Bazaar aforesaid. (There are 720 houses in the Sudder Bazaar).

29.—In the Regiments, also, I am told that the cases were very rare. I think that I have now stated sufficient to shew how far this district has suffered, and what measures have been taken for the alleviation of this affliction.

30.—The table submitted will make all clear, and I trust that the remarks offered by the Civil Surgeon will throw light upon any of the medical features of the complaint, of which I have not treated.

31.—If I remain in the district, I shall propose extensive plans for drainage in the city; opening out of narrow lanes, filling up of tanks, and some especially of making open Gunges for the sale of vegetables, meat, &c.

32.—The slaughtering of cattle I shall propose to confine to one spot, or two at the most, and that of sheep and goats to four or five.

33.—But at present I have so much work on my hands, that I shall defer these propositions until I have more leisure for separate report.

34.—In conclusion, I should add that Mr. Carmichael has labored most zealously in Pillibheet for the cleanliness of the town, and that the disease there, would appear, not to have been severe, possibly in consequence of these measures, and also that I have received the greatest assistance from Mr. Deputy Magistrate Wyatt, in immediate charge of the city of Bareilly.

ABSTRACT.

Total cases treated in Dispensaries, .. 1,255.	Cured, .. 795.	Died, .. 275.	Result not known.—185 ceased to attend.
In Thannahs, ...			3,369
Bottles of Medicines distributed, ...			327
Pills sent out, ...			576
Total ascertained deaths, ...			3,739 persons.

Remarks on the Epidemic Cholera which visited the Bareilly district from June to August 1856.

It did not attract much attention in the civil lines and city until July, up to which time it had been rife in the Cantonments and in the Sudder Bazaar, where private servants and many others of the native community fell victims to the scourge. At the request of the Brigade Major, I supplied several bottles of Cholera Mixture and Cholera Pills, which were made over to the Kotwal of the Bazaar for distribution to all who might be attacked with symptoms of Cholera; and where the medicine, especially the Mixture, was administered early in the disease, favorable results were generally the consequence.

The receipt for the Mixture and the Pills will be sent with these remarks. They have been used for some years past in this district, and are generally taken with much confidence by Natives as to the benefit likely to result therefrom. The Mixture is also used in cases of snake bite, and I have constant applications from residents in Cantonments and elsewhere for a bottle of the snake medicine, as poor people from the neighbouring villages constantly require it.

From the middle of July the Cholera began to make itself more present to my notice, it having commenced its operations in this Jail, and here and there in the civil lines.

There were cases of it amongst domestic servants and their friends and relatives.

About the 15th of July I had occasion to visit Nynee Tal, and did not return until the 29th of that month, by which time the disease was in full play in almost every part of the district south of the Terai. In the city, at the Lunatic Asylum, main and branch Dispensaries, in fact in all parts, nothing was heard of, or thought of, but the ravages of Cholera, and the alarm in the minds of the people amongst the educated and uneducated regarding it was considerable. The type of the disease did not differ in any particular respect from what is usually observed during the progress of a visitation of epidemic Cholera.

In many cases one vomiting and two or three motions apparently sufficed to bring the patient to death's door, and in all cases, unless remedies were very speedily resorted to, the disease terminated fatally.

Early in August, Cholera depôts were established and placed in charge of the City and Tehseelee Vaccinators, who were doing duty at the main Dispensary. From that time the epidemic seemed to be on the wane, for each day's and each week's report up to the end of the month indicated a gradual but perceptible diminution in the number of cases and in the severity of the attacks. A week after I returned from Nynee Tal, the Native Doctor attached to the Civil Station was seized with Cholera. This illness and its depressing consequences deprived me of the services of this

man for nearly a month, during which time I had to make the best arrangements I could for the performance of his duties.

No residents in the station suffered from an attack of this disease, although bowel complaints were frequent and the demands for remedies suited to such ailments numerous.

When the Cholera depôts were established in the city, medicines not only adopted for cases of Cholera, but also for diarrhœa, dysentery, fever and other diseases common at this time of the year were made over to Vaccinators stationed at these depôts to distribute, that they might make themselves as useful as possible; and if any dependence can be placed upon the returns which were sent in to me, as to the number of applicants for relief, it would appear that many others besides those attacked by Cholera obtained benefit from the medicines administered to them.

All the Vaccinators were, I believe, in the receipt of the usual allowance granted to Tehselee Vaccinators, and the only individual who did work without any remuneration was Mohumud Buksh, whom I employed to visit all the depôts each day, and on his way from place to place to make enquiries into the amount of Cholera prevailing in the different Mohullahs, and if he met with any cases, to administer appropriate remedies without delay. This man was formerly employed as acting Native Doctor with a gang of prisoners at Pillibheet; but since the prisoners have been moved into Bareilly he has been in attendance at the Bareilly Dispensary waiting for any thing that might fall to his lot. I think he should be remunerated for his voluntary exertions during the month of August last, for I consider he did good service in various ways during the late visitation of Cholera.

Cholera Mixture.

This forms one quarter bottle. { 3 oz. of Quicklime in 9 oz. of water, with 2 oz. of Ammonia, reduced by careful straining to 6 oz., with 12 oz. of water, 6 oz. of Rum, and ½ drachm of Opium added.

Opium Pills.

Receipt No. 1. { 2 grains Opium, 1 grain Assafœtida, 1 grain Red Pepper. } For one pill.

Receipt No. 2. { 1 grain Opium, 1 grain Croton, 1 grain Aloes, 1 grain Assafœtida. } For one pill.

No. 1.—Statement of Cholera Patients treated in Dispensaries for June, July and August 1856.

Name of City and Out-Dispensaries.	Number Cured.	Number Died.	Number not known.	Total.	Remarks.
City, ...	174	99	49	322	From 30th June to end of August.
Killa Branch, ...	64	23	12	99	Ditto ditto.
Old Town ditto, ...	69	7	22	98	Ditto ditto.
Cholera Depôt Mullookpore, ..	47	9	4	60	From 5th to 27th Augus.
„ „ Gurhee, ...	16	4	10	30	Ditto ditto.
„ „ Shahamut Gunj,	32	13	4	49	Ditto ditto.
„ „ Bhoor, ...	22	4	6	32	Ditto ditto.
„ „ Behareepore, ..	41	7	6	54	Ditto ditto.
Pillibheet Dispensary, ...	99	11	13	123	For June, July and August.
Beharee ditto, ...	68	32	33	133	Ditto ditto.
Aonlah ditto, ...	109	43	22	174	Ditto ditto.
Beesulpore ditto, ...	40	12	0	52	Ditto ditto.
Roodurpore ditto, ...	14	11	4	29	Ditto ditto.
Total, ...	795	275	185	1,255	

Statement shewing distribution of Cholera Medicine in June, July and August 1856.

Disbursement.	*Bottles.*
Sent to Pillibheet, ...	10
„ Cotwalee Bareilly and Chokees, ...	94
„ Furreedpore and its subordinate Chokees, ...	21
„ Beharee, ...	25
„ Meergunj, ...	15
„ Shahee, ...	20
„ Beesulpore, ...	13
„ Aonlah, ...	19
„ Nawabgunj, ...	14
„ Roodurpore, ...	3
„ Ghat Kyara, ...	4
„ „ Surdarnugger, ...	6
„ Umlah Foujdaree, ...	27
„ „ Collectory, ...	15
„ Dâwk Office, ...	2
„ Road Fund Department, ...	8
„ Shimboonath Thakoor, ...	2
„ Sudder Ameen's Office, ...	1
„ Beharee Lall, Mookhtyar, ...	2
„ Essreepershad, ditto, ...	2
„ Magistrate, ...	12
„ Deputy Magistrate, ...	12
	327

Statement of the Persons who died from Cholera, during the 3rd Quarter, i. e., from June to August 1856.

Months.	Aonlah.	Bareilly.	Beesulpore.	Beharee.	Bijtee.	Pillibheet.	Purewa, *alias* Jehanabad.	Furreedpore.	Shahee.	Meergunj.	Nuwabgunj.	Roodurpore.	Ritcha.	Grand Total.	REMARKS.
June, ..	0	1	51	1	0	10	0	9	17	27	62	0	0	178	In Beesulpore, there is still some Cholera.
July, ..	68	562	97	42	0	19	0	81	30	315	51	0	43	1308	In Jehanabad, it rages very badly.
August,	85	1093	59	132	6	36	4	30	26	139	103	20	150	1883	
Total, ..	153	1656	207	175	6	65	4	120	73	481	216	20	193	3369	

From M. RICKETTS, ESQUIRE, *Magistrate of Shahjehanpore, to* R. ALEXANDER, ESQUIRE, *Commissioner, Rohilcund; No. 116, dated Shahjehanpore, the 13th October 1856.*

SIR,

With advertence to your letter No. 48, dated 8th September 1856, I beg to forward copy of a letter from the Civil Surgeon on the subject mooted.

2.—This district has been singularly free from the Cholera epidemic, which has raged more or less, throughout the North Western Provinces. Individual cases have of course occurred in all parts of the district, but in Pulleea alone on the edge of the Terai, and in the Jail did any sufficient number of instances come to notice, to warrant special attention.

3.—We have no returns of the number seized in the Pulleea neighbourhood, but only of those who sought relief from the Thannah, to the number of 200. Of these 150 were virtually not treated, for notwithstanding the inscription in clear writing on each packet of medicines sent out for distribution with simple instructions for administering, the Naib Darogah of the Thannah fearing a far greater influx of calls than were made, gave a little only of the compound to each sufferer, and thus wasted it all. The remaining fifty applications were made, after his mistake was rectified, and of these patients 35 recovered, and the remainder died of the disease. The epidemic lasted in Pulleea for about seven weeks.

4.—The treatment pursued in the Jail is noted by the Civil Surgeon. Ordinary measures failing, the prisoners were first removed from the wards into the enclosure of the Jail, and thence to tents in open ground and to

lock-up outposts. The number seized, treated, cured, and fatal, were as follows:—

Seized.	Treated.	Cured.	Fatal.
122	122	93	29

From H. H. Bowling, Esquire, *Civil Surgeon, to* M. Ricketts, Esquire, *Magistrate of Shahjehanpore dated Shahjehanpore, the 11th October 1856.*

Sir,

Regarding the sanitary measures, which were adopted as preventive of, and in treatment of Cholera, in this district during the past season, I have few remarks to make, or suggestions to offer; this part of the country, with the exception of the Jail, and one outpost, having happily been exempt from the epidemic. In the Jail the usual treatment was adopted with pretty good success; removing the men from the wards at night, and as soon as tents could be procured, altogether from the Jail, in the first instance checked, and in the last entirely stopped the disease. This, in my opinion, is the only certain preventive to be adopted in Jails.

2.—In the district nothing came under my observation, but from report the medicines found most efficacious in the Hospital were sent out with instructions as far as our means would admit of, they being limited owing to the delay in sending the annual supply of medicines; but the attempt to use medicines and treatment through the means of people utterly ignorant of their nature, purposes and effects, was, and must always be, a failure.

3.—In Cholera medicine does little, unless taken in the earliest stage, and that natives never will do at any time unless assisted by external treatments, appliances and attendance, such as the poorer classes of natives in their villages cannot have, little is to be hoped from it. Police surveillance and regulations as to cleanliness and the removal of all decaying malarious matters from the villages, and the use of disinfectants, are the means I should recommend as most likely to prove really efficacious as preventives of epidemic Cholera.

From Joseph Ewart, Esquire, M. D., *Civil Assistant Surgeon, Ajmere, to* Colonel C. G. Dixon, *Commissioner of Ajmere; No. 11, dated Ajmere, the 1st September 1856.*

Sir,

I have the honor to forward for your information the following brief detailed report of the Cholera outbreak in the Jail and City of Ajmere.

For several weeks past there had been a steady march of the disease from Agra towards Ajmere. It appears, as far as I am able to determine from native and newspaper reports, that Cholera was imported into Bhurtpore from Agra, into Jeypore from Bhurtpore, and into Kishengurh and Ajmere from Jeypore. If these reports be correct, they show that for several weeks past the Cholera has been diffusing itself with fearful destruction of life in the large towns and cities placed on the line of commercial communication between Agra and Ajmere: it was not until the beginning of the month of August that the disease made its appearance in Ajmere. The first cases (2) treated in the Charitable Dispensary were direct importations from Jeypore. After this the disease began gradually to develope itself into more gigantic proportions, and very soon threatened to assume a diffused or epidemic character. Deaths were frequently reported to have been occasioned by Cholera in the city; the attendance of patients with the actual ailment unmistakebly developed increased at the Dispensary, but the prisoners in the Jail continued to enjoy an immunity up to the 12th of August, on which date a prisoner awaiting his trial, who felt well enough to run about at 2 P. M., was admitted into Hospital at 3, or an hour afterwards, and was a corpse in three more short hours. I without delay had the honor of communicating to you the above facts, and availed myself of the opportunity to advise the thorough whitewashing of the Jail and Hospital; at the same time, I remarked that should the disease in question threaten to assume enlarged dimensions, I should feel it my duty to suggest for your favorable consideration, the propriety of having the entire body of prisoners removed from the Jail to some suitable locality equally characterized by its elevation, dryness and salubrity. The whitewashing of the Jail and Jail Hospital was executed with the greatest practicable expedition; and I considered it justifiable to wait and carefully watch the manœuvres of the enemy. On the 16th, a patient who had been suffering from, and was under treatment for, intermittent fever was attacked, and on the 17th another patient who had a few hours before been discharged cured from diarrhœa, was re-admitted into Hospital, suffering from genuine Asiatic Cholera. On the 8th, a fourth case occurred, which put on in a few hours the most serious symptoms. I immediately acquainted you with these circumstances, and on the strength of the facts before me, had the honor to suggest the advisability of removing the sick from the precincts of the Jail into a Hospital to be temporarily erected for their reception on some open and healthy spot. This sanitary recommendation was cordially approved by you. A sirkee shed for the sick, with suitable accommodation for the Guard and Native Doctor, was very quickly erected, and the patients were transferred to their new abode on the 22nd. You will, I am sure, be happy to hear, (and don't think that I am premature in stating the circumstances as fact) that there has already been matter for congratulation, in your so cordially and readily

adopting the plan proposed for the speedy removal of the sick prisoners to the free, open and airy uninfected plain. The following chain of statistical facts are briefly recorded in support of this opinion:—

Out of fifteen Cholera patients admitted since the 22nd to this mornings 6 A. M., six were attacked originally in the cells, eight whilst being treated for other diseases in Hospital, and one in the sirkee sheds, into which all the prisoners were wisely conveyed on the 31st.

Out of the six patients received direct from the Jail four proved fatal; out of the eight cases which were attacked whilst being treated for other ailments in the new temporary Hospital only two were fatal. I regret to say that the one patient received into Hospital this morning died this afternoon. In support of this supposition I would also bring to bear the important fact of four deaths having occurred out of six attacks prior to the 22nd, or to the removal of the sick from the precincts of the Jail.

The results indeed of having the sick transferred from the Jail Hospital to the open plain, (as far as I am able to judge from the facts before me,) as illustrative of a diminished mortality, are so satisfactory that there are good and strong reasons for congratulation at te success which has been already attained. Similar advantages, it is earnestly hoped and firmly believed, will accrue from the transfer of the entire body of prisoners into sirkee sheds.

Since the poison producing and disseminating this fearful and unmanageable disease has become so concentrated in the new Hospital as to propagate itself amongst the patients undergoing treatment for other disease, I would most respectfully suggest for your most favorable consideration, the pressing necessity of having another sirkee shed constructed for the accommodation of those patients who may seek medical aid from other diseases.

With the earnest wish and hope that this will also meet with your earliest and most cordial approval.

From R. C. Oldfield, Esquire, *Assistant Secretary to Government, North Western Provinces, to* Colonel C. G. Dixon, *Commissioner of Ajmere; No. 4339, dated Agra, the 22nd September 1856.*

Sir,

I am directed by the Hon'ble the Lieutenant Governor to acknowledge the receipt of your letter No. 364, dated 3rd instant, forwarding, for His Honor's information, copy of a report by Dr. Ewart on the outbreak of Cholera in the Jail and City of Ajmere.

2.—I am instructed to inform you that a copy of the report will be sent to the Civil Surgeon at Agra, for any remarks which may occur to him as to the progress of the disease from that place till it showed itself early in August at Ajmere.

3.—All facts bearing on the outbreak and development of the disease in different parts of the country during the past exceptional season, will be carefully collated and eventually published for general information.

4.—The removal of the prisoners from the Ajmere Jail to temporary huts on a dry and good site has been separately approved.

From R. C. Oldfield, Esquire, *Assistant Secretary to Government, North Western Provinces, to* J. Murray, Esquire, M. D., *Civil Surgeon, Agra; No. 4538, dated Agra, the 22nd September 1856.*

Sir,

I have the honor, by direction of the Lieutenant Governor, to forward to you the accompanying copies of a letter from the Commissioner of Ajmere, dated 3rd instant, and of the reply thereto, on the subject of the outbreak of Cholera in the Jail and City of Ajmere.

BRITISH MUSEUM
Transferred
1889
DUPLICATE.

DOCUMENT
TRANSFERRED FROM