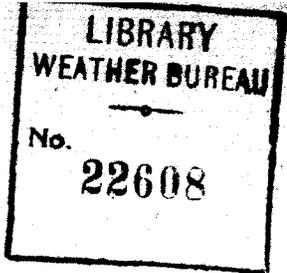


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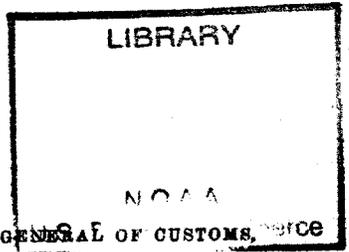
FOR THE HALF-YEAR ENDED 31st MARCH 1891.

41st Issue.

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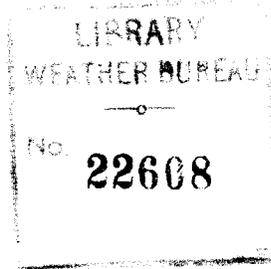
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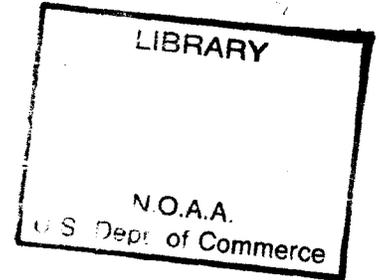
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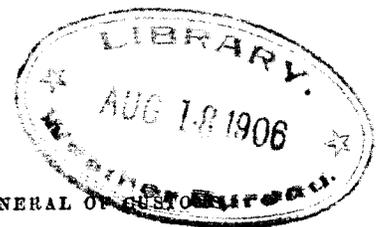
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National Oceanic and Atmospheric Administration

Environmental Data Rescue Program

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Lason, Inc.
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Beltsville, MD
December 20, 2000

INSPECTOR GENERAL'S CIRCULAR No. 19 OF 1870.

INSPECTORATE GENERAL OF CUSTOMS,

PEKING, 31st December 1870.

SIR,

1.—It has been suggested to me that it would be well to take advantage of the circumstances in which the Customs Establishment is placed, to procure information with regard to disease amongst foreigners and natives in China; and I have, in consequence, come to the resolution of publishing half-yearly in collected form all that may be obtainable. If carried out to the extent hoped for, the scheme may prove highly useful to the medical profession both in China and at home, and to the public generally. I therefore look with confidence to the co-operation of the Customs Medical Officer at your port, and rely on his assisting me in this matter by framing a half-yearly report containing the result of his observations at..... upon the local peculiarities of disease, and upon diseases rarely or never encountered out of China. The facts brought forward and the opinions expressed will be arranged and published either with or without the name of the physician responsible for them, just as he may desire.

2.—The suggestions of the Customs Medical Officers at the various ports as to the points which it would be well to have especially elucidated, will be of great value in the framing of a form which will save trouble to those members of the medical profession, whether connected with the Customs or not, who will join in carrying out the plan proposed. Meanwhile I would particularly invite attention to—

a.—The general health of.....during the period reported on; the death rate amongst foreigners; and, as far as possible, a classification of the causes of death.

b.—Diseases prevalent at.....

c.—General type of disease; peculiarities and complications encountered; special treatment demanded.

d.—Relation of disease to { Season.
Alteration in local conditions—such as drainage, etc.
Alteration in climatic conditions.

e.—Peculiar diseases; especially leprosy.

f.—Epidemics { Absence or presence.
Causes.
Course and treatment.
Fatality.

Other points, of a general or special kind, will naturally suggest themselves to medical men; what I have above called attention to will serve to fix the general scope of the undertaking. I have committed to Dr. ALEX. JAMIESON, of Shanghai, the charge of arranging the Reports for publication, so that they may be made available in a convenient form.

3.—Considering the number of places at which the Customs Inspectorate has established offices, the thousands of miles north and south and east and west over which these offices are scattered, the varieties of climate, and the peculiar conditions to which, under such different circumstances, life and health are subjected, I believe the Inspectorate, aided by its Medical Officers, can do good service in the general interest in the direction indicated; and, as already stated, I rely with confidence on the support and assistance of the Medical Officer at each port in the furtherance and perfecting of this scheme. You will hand a copy of this Circular to Dr., and request him, in my name, to hand to you in future, for transmission to myself, half-yearly Reports of the kind required, for the half-years ending 31st March and 30th September—that is, for the Winter and Summer seasons.

4.—

* * * * *

I am, etc.,

(Signed) ROBERT HART,

I. G.

THE COMMISSIONERS OF CUSTOMS,—*Newchwang, Ningpo,*
Tientsin, Foochow,
Chefoo, Tamsui,
Hankow, Tainan,
Kiukiang, Amoy,
Chinkiang, Swatow, and
Shanghai, Canton.

SHANGHAI, 1st June 1894.

SIR,

IN accordance with the directions of your Despatch No. 6 A (Returns Series) of the 24th June 1871, I now forward to the Statistical Department of the Inspectorate General of Customs, the following documents:—

Report on the Health of Hankow for the eighteen months ended 31st December 1890.
pp. 1-8.

Report on the Health of Tainan, p. 33;

Report on the Health of Shanghai, pp. 36-46; each of these referring to the two years ended 31st March 1891.

Report on the Health of Canton, pp. 11-13;

Report on the Health of Amoy, p. 19;

Report on the Health of Pakhoi, pp. 31, 32; each of these referring to the year ended 31st March 1891.

Report on the Health of Chinkiang, pp. 9, 10;

Report on the Health of Ningpo, p. 14;

Rapport sanitaire du district douanier de Lappa, pp. 15-18;

Report on the Health of Tientsin, p. 20;

Report on the Health of Kiukiang, pp. 21-28;

Report on the Health of Ichang, pp. 29, 30;

Report on the Health of Chefoo, pp. 34, 35; each of these referring to the half-year ended 31st March 1891.

I have the honour to be,

SIR,

Your obedient Servant,

R. ALEX. JAMIESON.

THE INSPECTOR GENERAL OF CUSTOMS,

PEKING.

The Contributors to this Volume are:—

C. BEGG, M.B., C.M.Ed.	Hankow.
J. A. LYNCH, M.D., M.CH.	Chinkiang.
J. F. WALES, B.A., M.D., CH.M.	Canton.
C. C. DE BURGH DALY, M.B., B.CH.	Ningpo.
G. S.	Lappa.
B. STEWART RINGER, M.D., M.R.C.S., L.S.A.	Amoy.
A. IRWIN, F.R.C.S.I.	Tientsin.
GEORGE R. UNDERWOOD, M.B., C.M., L.R.C.S.Ed.	Kiukiang.
E. A. ALDRIDGE, L.M.&L.K.&Q.C.P.I., M.R.C.S.	Ichang.
A. SHARP DEANE, L.K.&Q.C.P., L.R.C.S.I.	Pakhoi.
W. WYKEHAM MYERS, M.B., CH.M.	Tainan.
W. A. HENDERSON, L.R.C.S.Ed., L.R.C.P.Ed.	Chefoo.
R. ALEX. JAMIESON, M.A., M.D., M.R.C.P.	Shanghai.

DR. C. BEGG'S REPORT ON THE HEALTH
OF HANKOW

For the Eighteen Months ended 31st December 1890.

METEOROLOGICAL TABLE, July 1889 to December 1890.

MONTH.	WIND.					BAROMETER.		THERMOMETER.		SOLAR RAD.		RAIN.	
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Variable.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	No. of Days.	Quantity.
1889.						<i>Inches.</i>	<i>Inches.</i>	°	°	°	°		<i>Inches.</i>
July.....	5	5	9	1	11	29.734	29.446	102.0	68.0	151.0	97.5	10	6.67
August.....	11	8	...	...	12	29.896	29.514	99.5	70.0	147.0	133.0	8	3.20
September.....	12	3	...	5	10	30.534	29.600	96.0	62.0	148.0	73.0	18.	12.39
October.....	13	4	...	6	8	30.286	29.760	84.0	48.0	134.0	65.0	18	9.04
November.....	21	4	...	3	2	30.522	29.848	67.0	37.0	120.0	55.0	13	3.21
December.....	15	8	1	3	4	30.570	29.938	59.0	30.0	108.0	60.0	3	0.07
1890.													
January.....	11	3	1	4	12	30.560	29.950	*	*	*	*	8	1.82
February.....	11	8	2	3	4	30.520	29.570	*	*	*	*	9	1.61
March.....	16	3	...	2	10	30.500	29.810	*	*	*	*	7	4.39
April.....	8	12	2	3	5	30.334	29.416	87.0	38.0	144.0	78.0	14	8.63
May.....	7	10	2	3	9	30.100	29.570	90.0	50.0	145.0	105.0	11	3.95
June.....	4	11	4	1	10	29.848	29.434	99.5	67.0	148.0	76.0	11	10.52
July.....	7	12	4	...	8	29.810	29.430	98.0	76.5	150.0	126.0	11	4.56
August.....	5	15	...	2	9	29.790	29.534	97.0	64.0	160.0	135.0	8	3.64
September.....	14	6	...	4	6	30.236	29.550	92.0	65.0	147.0	131.0	...	...
October.....	15	...	...	8	8	30.253	29.836	86.0	52.0	139.0	90.0	1	0.20
November.....	17	1	1	1	10	30.382	29.810	78.0	35.0	128.0	64.0	6	1.35
December.....	16	5	...	4	6	30.532	29.664	64.0	26.0	107.0	51.0	12	1.99

* No instruments.

For the above meteorological table I am indebted to Mr. Tidesurveyor R. TRANNACK.

During my absence for 15 months of the period under consideration the whole of the medical duties of the port fell to Dr. THOMSON, who submits the following Report:—

The summer of 1889 was a rather trying one. Heavy rains in June were followed by intense heat in July. During the first three days of July the readings of the maximum and minimum thermometers rose rapidly, and from this time onward we had a succession of very

hot days and nights. For the period extending from the 4th to the 12th July the mean temperature, as calculated from the average of the maximum and minimum readings for each 24 hours, was 92°.2 F. The maximum temperature was reached on the 9th, and read 102° F. in the shade.

Between the mornings of the 9th and 11th four deaths occurred in the Settlement. Three of the victims were from among the residents—one, an adult, whose death could in no way be attributed to climatic influences; two were infants, whose deaths were more or less directly traceable to conditions of climate and season.

The fourth was an engineer on board one of the river steamers—a well-built, powerful man, of about 25 years of age,—and in his case the cause of death was heat apoplexy or sunstroke. When first seen by me he was stretched on his back on the upper deck, with limbs flaccid, mouth open, breathing stertorously, skin burning, eyes fixed, pupils contracted and conjunctival reflex gone, pulse bounding and frequent. Temperature in axilla 108°.5 F. On questioning his shipmates I was told that he had been in China for about three weeks only, having come direct from Glasgow to Shanghai. This was his first trip up river. As a new-comer, he had evidently been rather careless of himself: while on deck, with but a single awning between him and the blazing midday sun, and while on shore, he wore an ordinary sailor cap (no sun hat, no preserves for the eyes). He seems, too, to have suffered from constipation for some time previous. On the afternoon of the day he was seized, after working hard in the engine-room, he came on deck, exhausted and perspiring, and freely exposed himself to the little breeze there was. After resting awhile he returned to the engine-room, to finish the work he had been engaged upon, and then came back and had a cold bath on deck. Feeling somewhat unwell after this, he went on shore to see the doctor. Not finding the doctor at home, he left, intending to call again either that evening or next day. On reaching the boat, however, he dropped, unconscious, and when seen by me, shortly afterwards, was in the condition described above. In two and a half hours the temperature in the axilla had fallen to 106° F., but there was no sign of returning consciousness. Approaching midnight, convulsions set in; the first seizure occurred while I was with another patient. It was described as being very violent and general. His tongue was badly bitten. The second seizure occurred while I was present. It affected first the face and muscles of mastication, the right arm, and afterwards, and to a less degree, the muscles of the back, giving rise to slight opisthotonus. The pulse had now become much weaker, was irregular and intermittent; the countenance was livid; eyes fixed in the same glassy stare, though now the corneæ were dimmer. As he sank, gradually, the respirations became less noisy, convulsions less frequent and feeble. He died about 2.30 A.M., between seven and eight hours after he dropped on deck, never having shown the slightest sign of consciousness from the time he fell.

At the beginning of the outburst of heat above referred to the minds of some of the members of the community were further disturbed by a threatened rising among the Chinese. The exposure incurred during a sudden flight and hasty return was no doubt a potent factor in the immediate cause of death in the case of one of the infants above mentioned.

In July, August and September of 1889, besides cases of severe diarrhœa, there were several cases of acute dysentery among the residents. All were successfully treated and cut short in the acute stage, with the exception of one case (male adult), which became chronic, and continued more or less troublesome until early in the spring of 1890. Since then he has been entirely free, having gone through the summer of 1890 without the suspicion of a return. Several of the men on board H.B.M.S. *Merlin*, which was in this port part of July and August, suffered from dysentery and dysenteric diarrhœa. Two had to be left behind in hospital. Both had been ailing for some time, but made a fairly speedy recovery.

Ague and remittent fevers seem to be of extremely rare occurrence among the residents; while among the patients attending the hospital for Chinese, ague (tertian, quartan, quotidian, in order of frequency) seems common enough. Among the European residents I remember having seen only one typical case of tertian ague during the past two summers, and it very speedily yielded to treatment.

Equally common among foreign residents and natives—or more marked in the case of foreign residents—is a sthenic type of fever, in which the temperature, as taken in the axilla, runs up to 103° or 104°, in many cases to 105°, and in rare cases to 106° and 107° F., in the course of a few hours. As must needs be from the suddenness of the rise in temperature, there is usually, to begin with, a feeling of chilliness. At the height of the disease the face is generally flushed, the pulse soft and frequent, the skin invariably hot and dry (“burning”), and headache, usually intense, is complained of. In such cases the bowels have generally been constipated or irregular in action for some days before the onset of the symptoms mentioned. Without entering into particulars, it may be stated, in a general way, that such fevers are most probably due to the absorption of some very poisonous ptomaines by the bowel. A dose of castor oil, or some such purgative sufficient to thoroughly clear the bowel, puts a stop to the further production of these ptomaines; and as the quantity already absorbed is being eliminated from the system, the symptoms gradually subside. In many cases this may be all the treatment required; but when the temperature is very high, the skin particularly burning and headache most intense, antifebrin has a wonderful effect. As a rule, for an adult, 5 grains of antifebrin dissolved in a little brandy and diluted with water, with or without 5 to 10 minims of tincture of digitalis, according to the circumstances of the case, has been followed by cessation of headache, profuse perspiration and quiet sleep of some hours' duration, from which the patient awakes refreshed and well. In the majority of cases, where the bowels are attended to, the single dose suffices.

The autumn of 1889 was remarkable for the continued high state of the river. So late as October the water rose above the level of the bund and flooded the whole Concession. For weeks before this the underground drains were practically sealed, and the low-lying lots, covered with stagnant water and decaying vegetable and animal matters, were more or less converted into so many cesspools. So far as these, then, were concerned the further rise in October was to be welcomed. With all its inconveniences and disadvantages in other respects, and although the current sets from the Chinese city adjoining, the inundation was favourable to the health of the community. So offensive and so evidently injurious were these low-lying lots throughout the season that in November 1889 an address, signed by all the residents under whose notice it came, was forwarded to the Secretary of the Municipal Council, urging that the matter should be represented to the owners of these lots. Copies of this address were sent by the Council to each of the owners. Some, I am glad to say, immediately responded by having their lots raised to the ordinary level, while others have not yet seen their way to do the same.

The winter of 1889-90 was very mild. No ice was collected, and we had to depend on a supply from Tientsin for the following summer. In future the Hankow Ice Factory, just started, will, it is to be hoped, make us independent of fickle winter's supply.

During the winter months no special epidemic occurred; but early in the spring there raged in the Chinese city an unusually severe epidemic of small-pox. Within the Settlement only two cases came under my notice.

The patient in the one case was a Chinaman employed in one of the hongs. He had never been vaccinated, and though his case was a pretty severe one—mixed discrete and confluent,—he showed no untoward symptom from beginning to end, and escaped without any noticeable pitting.

The other patient was a foreigner, and lived in a hong with many occupants. He was at once removed to hospital, and there isolated. His case is remarkable in that it appears to have been a second attack. He declared that he had had small-pox when a child, and showed at least one marked pit by the side of the nose. This time, at all events, he was covered from head to foot with typical small-pox rash, though, apart from the rash, his symptoms were of the mildest form. With the exception of a couple of days, when the rash was developing, he hardly felt sick, and, but for his appearance and the sake of others, would no doubt have considered confinement, even to his room, a hardship. He, too, escaped without any further permanent marking.

In the spring of 1890 there occurred one case of enteric fever.

The patient was a young adult male. For the first two or three days the temperature was anything but typical of enteric fever; it began high, and as small-pox was prevalent at the time, and one case had just appeared in the Settlement, I was inclined at first to believe that this might turn out a mild case of small-pox. It was not until the fourth day that one could have been sure of the true nature of the illness. The temperature tracing, too, seemed to make a new start on the third day of the illness, and after that the disease ran through the typical course of moderately severe enteric fever.

As comparative rarities I may mention a case of measles and a case of whooping-cough in adults that came under my notice last spring. The patient in the former case was an officer on one of the river boats. On the trip before this a child with measles had travelled on the steamer for a short distance. He said he never had had measles as a child, and this was a first attack. The patient with whooping-cough had it for the first time too, and caught infection while travelling with children suffering from the disease.

Influenza first made its appearance here in April, shortly after the first cases were reported from Shanghai. It certainly seemed to have been carried in the line of traffic from Shanghai; but then the great world-wide epidemic seems to have spread in a westerly direction, with less dependence on routes of trade and travel for its direction than would appear from this. In cases here the temperature averaged nearly a degree higher than in cases in England, judging from the reports that appeared in the medical journals. I cannot say that I saw any after consequences.

From July 1889 until May 1890 we had not to record a single death; but in May 1890 one of our most venerable residents passed away.

He died of liver abscess, complicated with acute croupous pneumonia. The abscess or abscesses burst into the hepatic flexure of the colon, and on three separate occasions large quantities of blood clot were passed by the bowel.

The summer of 1890 was very mild, but not particularly healthy. There were, as usual, cases of dysentery, summer diarrhoea, and the sthenic type of fever above referred to; but besides these, many who hardly ever felt sick before complained of a general feeling of malaise, which, however, led to no further development. During the hot months cholera was, as usual, reported among the natives in the city; but there was no epidemic of true Asiatic cholera, such as prevailed in Nagasaki and Shanghai. About the end of July a case of true Asiatic cholera on board one of the river boats was reported from Kiukiang. The boat was allowed to

proceed from Kiukiang, but was detained here below the harbour limit until inspected by the Medical Officer of the port. After inspection I was able to report that none of the passengers or crew showed any sign of being infected; and time bore me out in this, as no other case subsequently appeared on board. The ship, so far as appeared necessary, was disinfected, and proceeded on her way without loss of time. Early one morning in July I was called to a case that showed all the symptoms of a mild attack of cholera.

The patient—an adult male of about 30 years of age—was seized during the night with sudden diarrhœa, and in the course of a few hours was quite prostrate, with hollow eyes, *vox choleraica*, cramps in lower extremities, and the stools, which were very frequent and free, were of the peculiar rice-water character. The attack soon yielded to treatment, and next day the patient was in his office attending to business.

In September one infant of 11 months died of acute dysentery. At the Kiukiang hills, on a former occasion, on slighter illness, he had shown a marked tendency to sudden collapse, and now, under the severer strain, he soon sank, the duration of the illness being within 24 hours. In marked contrast to this was the case of another infant that fought against entero-colitis, with teething, throughout the long summer months, and only in September, when in a very exhausted and worn condition, succumbed at last in Kiukiang, on his way to the hills, where he was being sent as a last resource.

For some weeks during the hot season the underground drains were again practically blocked from the high state of the river; and though some of the low-lying lots had been raised since the season of 1889, those that remained, and still remain, low were offensive enough.

During the whole period under consideration there were in all seven births (five males and two females) and six deaths (two adult males and four children from 10 to 15 months of age—three males and one female) among the residents proper; or, taking the year 1890 by itself, there were six births and three deaths (one adult and two children).

On my return to Hankow, after 15 months' absence in England, I was in time to observe what appeared to be a second wave of "la grippe." I had seen something of this curious epidemic at home, and hardly feel justified in classing what I now saw among my patients as the same disease. I have found myself unable to distinguish it from ordinary influenza as we have been accustomed to see it, although observers all notice an elevation of temperature and a severity of after effects which lead them to make a distinction. To my mind it rather appears as if these were due to a greater severity, the result of its being able to attack so many at once; and I feel inclined to attribute the chance it thus obtained of distinguishing itself solely to the state of the atmosphere, which was most favourable to its development. This was markedly so at the period I speak of. During October 1890 the sun was warm and bright, and it was pleasant out of doors; but the houses were chilly, and as yet few people had started fires. One had to dress more warmly for the house than for out of doors; and it seemed to me that as soon as that fact was taken notice of,

the epidemic quickly ceased. Treatment I found, to be successful, had to be directed to good nursing and attending to the usual rules of health. A sharp purge, expectorants, with poultices and a warm, dry atmosphere, speedily ended the cases; and just in proportion to the amount of care taken at the time, so was the after effect. It seemed unnecessary to try and control the fever or to look for any special drug, and very little trouble was given by patients as soon as they were placed in a normal condition of function. What might be termed a third wave passed over the Settlement in February 1891. This time it was confined to a row of houses occupied by some Chinese, principally girls. Some of the cases were rather severe, and attacked the lungs, always a weak spot with Chinese; but with care all recovered perfectly.

SPRUE.

I wish to add to my former communication the following case I treated at home, and the report of which I read, together with my former cases, in a paper before the Medico-Chirurgical Society of Edinburgh, 2nd April 1890. The paper appeared in the *Edinburgh Medical Journal* for September 1890:—

I have treated, however, since my return home one patient whom I met in a hotel in London, whose case is a specially interesting one, for, among other things, it had been diagnosed as a true example of the disease in question by good men both in India and at home. It is also most interesting from the intelligent account given by the patient of its origin, and as being just the case where, had an irritable, defenceless condition of the mucous membrane from mouth to anus existed for 19 years, one would not have been surprised had it ended in atrophy, and the patient been incurable.

Patient states:—

I first contracted what we call in India hill diarrhoea in 1871, marching from Nini Tal to Almora. It was a three days' march, and, although in the Himalaya range, was very hot. I drank copiously from the small springs on the sides of the hill. On reaching Almora diarrhoea set in violently, and continued for a long time after I went to the plains. It was partially stopped by a medicine, but not, however, cured; and I was never, I may say, certain of myself, and, as far as I can recollect, never had a firm motion. In 1878 I had a very bad attack in Paris, and was again helped by treatment. My last bad attack was at Darjeeling, in 1883, and up to date I have never been free from it. In 1883 I weighed 17 stone 12 pounds, and went gradually down to under 12 stone. I am now 12 stone 3 pounds, with clothes and a light overcoat, which is scarcely enough for a man of 6 feet 4 inches.

This patient presented the appearance of chronic ill health: pale, anæmic; pained, anxious face; and being of commanding height, his thinness was most pronounced. He complained of constant pain with diarrhoea, or rather a constant uneasy feeling in the bowel and irregular motions, ever and again lighting up into a sharp attack of diarrhoea, leaving him prostrate.

In October 1889 I put him through a course of six powders of santonine, but he could only obtain the *white*; and he wrote me on the 19th of that month as follows:—

I certainly think I have benefited by the course, but possibly my complaint is of such long standing that only six powders may not be sufficient.

He was advised to obtain the yellow santonine and repeat the course; and on the 16th March 1890 he writes me:—

DEAR DR. BEGG,

I AM afraid from my long silence you will think I have forgotten you, but that is not the case, as I waited to give the treatment you recommended a good long test before communicating the result. I went through a second course of the santonine (the yellow), and I am delighted to be able to tell you that I have been, I may say, quite free from that complaint ever since, and have felt as I have not done for years.

Confirming that letter, he writes a week later:—

I only wish I could help you to make it well known, as after years of suffering and consulting some of the best physicians in London, who gave me no permanent relief, your treatment has, as far as I can now speak, completely cured me. In addition to the relief and freedom from pain, I am quite a different man, and able to go through a hard day's work without feeling fatigue, which I was not able or fit to do before. I for one can say that the old remedies of chalk mixture, acids, milk diet, etc., are of no use for sprue, or what I call hill diarrhoea, for I have tried them all, and many other medicines that have from time to time been given me.

I afterwards saw this patient in London, and confirmed his statements as to his restored condition of perfect health.

Since my return to China I have seen Dr. THIN's article on Sprue, published in the *British Medical Journal*, and have written a communication to the same journal on the subject. Dr. THIN's paper was a description of a postmortem on a patient of his who died on account of, or at any rate with, the disease. A splendid series of microscopic sections of the mucous membrane from mouth to anus was prepared by Dr. F. J. WETHERED, a pathologist of repute attached to a London hospital. By his kindness I was afforded an opportunity of examining the series, and had the benefit of Dr. WETHERED's personal explanation of each slide. At the close of our investigations Dr. WETHERED expressed himself as positive that the theory of mine would alone explain the appearances seen, and since my return to China has confirmed that opinion. Writing under date 21st January 1891, he states:—

. . . . With regard to the pathology of the disease, I am fully of your opinion. . . . I have examined several stools microscopically; micro-organisms are of course present in large numbers. *The peculiar white coating that sometimes makes its appearance consists almost entirely of bacilli.*

At the postmortem it was found that this peculiar white coating lined the tube, especially at the part of the bowel where absorption ought to take place, and, to speak generally, that where the coating was present the underlying mucous membrane had undergone extensive change; at all other parts it was healthy. Even Dr. THIN was forced to admit that the appearances went to prove that—

The thick coating of mucoid-like substance that covered the free surface of the bowel must have prevented the contact of the contents with the mucosa, such as it was. The result of such a condition must interfere directly with assimilation and nutrition, and these are the functions which are profoundly interfered with in this disease.

Nothing has been discovered in this or in any other case to account for the peculiar pathological changes described, but their wide extent suggests some morbid agent acting from the free surface. . . .

Dr. WETHERED now tells us that the peculiar white coating consists almost entirely of bacilli; and I think this statement, taken with the conclusions forced on Dr. THIN, justify me in the hope of soon finding my theory of the cause of this disease established. However that may be, I am still as strong a believer as ever in the power of *yellow* santonine in curing it, given in the way I described. I consider the colour of the drug and the method of its administration most important. It may be unnecessary to state that any specimen of white santonine can be turned into yellow by exposure to strong sunlight for an hour or two. My observation of the difference in clinical value of the two drugs (if they are really distinct) was confirmed by many of the men I met at home who had used santonine for cases of worms, and had been

struck with the fact that it did not seem as powerful as the old yellow they had been accustomed to in former days.

From several quarters I have had most gratifying confirmation of the efficacy of my treatment. Where I have been able to criticise failures I have found that little stress had been laid on the two points I hold to be essential—*i.e.*, colour of drug and method of administration.

Since my return there have been, up to date, three deaths to record, for none of which can the climate of the port or its sanitary condition be blamed. The first was a long-standing case of aortic aneurism; the second patient was brought in from the country with acute croupous pneumonia affecting both lungs; and the third was a case of chronic bronchitis in a patient aged 71.

I can, however, hardly congratulate the residents on any improvement in the sanitary condition of the port, except in so far as filling up of several low-lying lots is concerned. The drainage still continues in a most unsatisfactory condition, and under the present system must of necessity be so. The residents have adopted several of the minor suggestions I made to them when asked to report on their drainage system; but their efforts seem to have been principally directed to protecting the nose from being offended and in trying the impossible task of working efficiently the present system. The water supply continues to be from the same source as before, which cannot be too strongly condemned.

DR. J. A. LYNCH'S REPORT ON THE HEALTH OF CHINKIANG

For the Half-year ended 31st March 1891.

METEOROLOGICAL TABLE, October 1890 to March 1891.

MONTH.	WIND.						BAROMETER.		THERMOMETER.		RAIN.	
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Variable.	No. of Days Calm.	Highest.	Lowest.	Highest.	Lowest.	No. of Days.	Quantity.
1890.							<i>Inches.</i>	<i>Inches.</i>	°	°		<i>Inches.</i>
October	17	2	...	7	5	...	30.62	30.04	78	47	...	...
November	8	5	...	4	5	8	*	*	73	36	6	1.81
December	7	2	...	6	10	6	*	*	67	21	7	1.06
1891.												
January	9	5	...	8	5	4	*	*	57	22	8	0.94
February	15	3	...	6	3	1	30.76	29.89	57	23	6	2.01
March	6	8	2	3	8	4	30.45	29.68	87	32	8	1.36

* No record.

The winter of 1890-91 was mild and pleasant. The health of the foreign community continued highly satisfactory up to the early days of February, when influenza, which had been smouldering among the native population for a long time past, broke out in our midst. The epidemic was of a much more virulent type than that of last year. Great prostration, calling for the free use of stimulants, was the rule rather than the exception. 13 cases in all were treated. Four occurred in children: these were characterised by acute onset, with high fever and long-continued vomiting; chest symptoms were slight; and the disease ran a rapid and favourable course. In adults the prominent symptoms were cough, headache, and neuralgic pains; the patients became excessively feeble, and convalescence was slow. In one child the disease was followed by purulent tympanitis of both ears, and in two adults by obstinate diarrhoea.

Small-pox is usually prevalent among the Chinese during the spring months. So far as I can learn, the number of cases this season has been singularly small as compared with former years, and no foreigner has been attacked.

A curious sequela of small-pox came under my notice in April 1890, but was not alluded to in my Report.

A lady who had contracted the disease in Yang-chou came to me, some two months after recovery, with a very singular condition of the face. Desquamation had been perfectly normal except on the middle of the forehead, the nose and a portion of each cheek. In these situations an enormous overgrowth of epidermis lay heaped up in pale brown, horny masses. No amount of washing and scrubbing was of any avail. The patient when I saw her was fretful and despondent, not venturing out of doors on account of her disfigurement. A few applications of salicylic collodion removed the unsightly growth and restored her peace of mind.

In March a case of rōtheln was met with—the first I have seen in China. The patient, a lady missionary, had just come in from Kao-yu, beyond Yang-chou. The course of the illness was in no respect different from that observed in Europe.

DR. J. F. WALES'S REPORT ON THE HEALTH OF CANTON

For the Year ended 31st March 1891.

DURING the past year there were three deaths among the foreign residents. The diseases ending fatally were dysentery, Bright's disease and purpura.

Numerous and severe cases of dysentery and malarial fevers occurred in the autumn and winter, and influenza was epidemic in and around Canton in January and part of February.

In a house on Honam tenanted by some of the members of the Imperial Maritime Customs Out-door Staff four persons were attacked, almost simultaneously, with acute dysentery. Here the disease was traceable to the use of water that had been obtained from a well on the premises. The well was closed, and the outbreak ceased.

Scarcity of good water, caused by the lengthened absence of rain, had much to do with the general unhealthiness which prevailed. The exposure to the air of the beds of wells, ponds, small streams, etc., that had become dried up was another factor.

Experience shows that there are certain cases of malarial fevers which quinine and other anti-periodic drugs fail to cure. These are only benefited by removal of the patients from this place to a higher or drier locality, *e.g.*, the Peak at Hongkong or Macao. Of this fact I had recently two well-marked examples.

Both at first suffered from quotidian ague, and in one the disease gradually assumed the remittent type. These patients obtained almost immediate relief after leaving here. One of them assured me that he felt better as soon as his steamer had crossed the Saltflats, a few miles from Canton, and that within 48 hours his temperature had fallen from 104° F. to below 100° F. These persons were again attacked by the disease shortly after their return, and this notwithstanding that they had been taking quinine in sufficient doses to produce deafness. I had, therefore, to advise them to go to Macao, where they quickly became convalescent.

Almost one-third of the foreign residents suffered from influenza.

With the majority the symptoms were very mild. The initial pyrexia in two cases reached 105° F., and with a few the bronchitis and subsequent prostration were severe and persistent. Bronchitis was the only pulmonary complication I noticed in connexion with this epidemic. Nutrients and tonics—*e.g.*, cod-liver oil and Fellows's syrup—did much, I believe, to relieve these symptoms and to hasten convalescence; cough mixtures, I found, were of little use.

Influenza was credited by the Chinese as the cause of the high mortality which lately prevailed in the city, and which ceased with the beginning of the rainy season. It probably was only one factor, the principal cause being the filthy water that they were obliged to procure from the canals. I have not, however, been able to learn of the existence of enteric fever. That the deaths were exceedingly numerous was evidenced by the fact that coffins worth \$8 were difficult to procure at \$20.

The following meteorological abstract has been prepared by Mr. Harbour Master MAY:—

ABSTRACT of CANTON CUSTOMS METEOROLOGICAL TABLES, April 1889 to March 1891.

MONTH.	WIND.							WEATHER.			BAROMETER.				THERMOMETER.			
	No. of Days N. to E.	No. of Days E. to S.	No. of Days S. to W.	No. of Days W. to N.	No. of Days Variable.	No. of Days Calm.	Average Hourly Force.	No. of Days Fog.	No. of Days Rain.	Rainfall.	DAY.		NIGHT.		DAY.		NIGHT.	
											Highest Reading and Average Highest.	Lowest Reading and Average Lowest.	Highest Reading and Average Highest.	Lowest Reading and Average Lowest.	Highest Reading and Average Highest.	Lowest Reading and Average Lowest.	Highest Reading and Average Highest.	Lowest Reading and Average Lowest.
1889.							miles			Inches.	Inches.	Inches.	Inches.	°	°	°	°	
April	1	21	...	...	8	...	6.8	1	16	6.99	{ 30.230	29.860	30.200	29.830	92.00	59.00	81.00	59.00
May	3	22	...	...	6	...	7.6	...	21	17.67	{ 30.084	29.732	30.044	29.968	78.60	69.10	73.80	67.60
June.....	...	8	9	1	12	...	5.8	...	21	7.47	{ 30.030	29.954	30.008	29.969	84.20	76.00	80.20	73.40
July.....	...	11	5	...	15	...	7.0	...	13	2.83	{ 30.070	29.722	30.050	29.670	93.00	76.00	92.00	75.00
August.....	3	17	1	2	8	...	7.4	...	15	9.23	{ 29.936	29.879	29.923	29.874	88.80	79.20	84.90	77.80
September	5	13	...	...	12	...	5.8	...	11	3.15	{ 30.090	29.634	30.015	29.700	97.00	74.00	97.50	71.00
October.....	15	5	1	2	8	...	6.2	...	9	5.51	{ 29.912	29.847	29.878	29.841	93.00	81.30	87.30	78.70
November..	20	1	...	3	6	...	6.8	...	10	0.87	{ 30.100	29.650	30.080	29.630	96.50	73.00	87.00	74.00
December..	16	...	...	1	14	...	7.4	...	4	0.18	{ 29.925	29.857	29.902	29.835	90.10	79.20	83.40	77.50
1890.											{ 30.182	29.890	30.180	29.900	96.40	74.50	88.50	69.00
January	13	1	...	...	17	...	7.1	...	10	2.33	{ 30.081	30.004	30.029	30.002	90.20	79.40	83.60	76.20
February...	9	6	...	...	13	...	7.5	1	11	1.48	{ 30.254	29.830	30.230	29.700	94.00	66.50	93.00	61.00
March.....	17	2	1	2	9	...	6.6	1	22	4.66	{ 30.164	30.083	30.119	30.058	85.10	74.30	78.80	71.40
April.....	3	12	...	...	15	...	6.5	...	17	9.22	{ 30.546	29.982	30.530	29.978	86.50	52.00	80.00	49.00
May.....	1	19	...	...	10	1	5.8	...	22	12.66	{ 30.196	30.091	30.118	30.069	74.20	63.80	70.30	62.70
June.....	...	22	1	...	7	...	6.3	...	26	8.48	{ 30.506	30.034	30.440	30.030	84.00	48.00	81.00	42.00
July.....	...	16	3	...	12	...	5.2	...	21	13.17	{ 30.297	30.197	30.227	30.169	70.10	55.00	64.70	52.20
August.....	...	14	3	...	13	1	4.0	...	21	8.98	{ 30.490	29.900	30.470	29.850	83.00	42.00	78.20	37.00
September	7	6	2	1	14	...	3.7	...	8	2.86	{ 30.304	30.212	30.269	30.204	65.40	52.00	58.20	49.90
October*...	...	...	...	...	...	...	...	...	...	...	{ 30.414	29.758	30.372	29.700	83.50	47.00	81.90	43.00
November..	9	8	...	3	10	...	...	2	5	...	{ 30.177	30.079	30.123	30.049	70.70	56.80	63.90	54.50
December..	10	4	1	2	14	...	...	1	11	...	{ 30.390	29.880	30.378	29.870	86.00	45.00	77.00	42.00
1891.											{ 30.134	30.046	30.103	30.054	65.20	57.30	62.00	54.60
January	12	1	1	2	14	1	...	...	3	...	{ 30.260	29.754	30.222	29.780	88.50	56.50	87.00	45.00
February...	5	6	...	3	14	...	...	2	6	...	{ 30.049	29.960	30.016	29.999	79.50	70.90	75.60	67.60
March.....	10	3	2	3	12	1	...	...	19	...	{ 30.056	29.764	30.042	29.770	92.00	70.50	85.00	67.00
											{ 29.951	29.874	29.944	29.889	84.50	75.80	80.10	74.20
											{ 29.950	29.684	29.996	29.702	92.00	74.00	87.00	73.00
											{ 29.881	29.819	29.860	29.810	86.70	78.60	83.20	76.40
											{ 29.968	29.600	29.955	29.622	95.00	74.00	93.00	72.00
											{ 29.831	29.777	29.823	29.765	87.60	78.60	83.30	77.50
											{ 30.030	29.704	30.000	29.734	95.50	73.00	96.00	69.00
											{ 29.890	29.824	29.866	29.828	88.80	79.00	83.40	76.00
											{ 30.044	29.750	30.110	29.720	97.00	63.00	86.00	63.00
											{ 29.941	29.870	29.923	29.878	88.80	76.40	81.20	73.30
											{ 30.350	30.020	30.370	30.060	86.00	51.00	81.00	48.00
											{ 30.204	30.124	30.200	30.158	79.60	65.00	69.90	61.50
											{ 30.510	29.950	30.400	30.060	84.00	47.00	77.50	42.00
											{ 30.258	30.146	30.231	30.166	73.20	60.20	65.50	58.20
											{ 30.477	30.062	30.380	30.069	80.00	45.00	77.00	43.00
											{ 30.326	30.208	30.274	30.224	72.00	56.40	63.40	52.40
											{ 30.690	29.912	30.570	29.790	82.00	42.50	72.00	41.00
											{ 30.349	30.255	30.304	30.244	65.30	54.70	60.10	51.80
											{ 30.460	29.900	30.370	29.820	76.50	46.00	75.00	44.00
											{ 30.216	30.132	30.186	30.122	64.60	55.80	63.00	54.50

* The records for October were destroyed in the fire which consumed the Customs Examination Shed on the 25th October 1890. In consequence of the destruction, through the same cause, of the anemometer and rain gauge, no record of the force of wind or the actual measurement of rain could be supplied.

REMARKS.—1889: During April the highest reading of the barometer was 30.230, on the 20th; and the lowest 29.830, on the 26th. The highest temperature was 92°, on the 28th; and the lowest 59°, on the 20th and 22nd. S. E. winds prevailed, and the strongest was recorded on the 7th, averaging 11.7 miles an hour during 24 hours. Rain fell on 16 days, measuring 6.99 inches.—During May the highest reading of the barometer was 30.204, on the 8th; and the lowest 29.732, on the 30th. The highest temperature was 92°, on the 31st; and the lowest 68°, on the 24th. S. E. winds prevailed, and the strongest was recorded on the 3rd, averaging 12.6 miles an hour during 24 hours. Rain fell on 21 days, measuring 17.67 inches.—During June the highest reading of the barometer was 30.070, on the 26th; and the lowest 29.670, on the 16th. The highest temperature was 93°, on the 1st; and the lowest 75°, on the 11th and 18th. S. W. winds prevailed, and the strongest was recorded on the 22nd, averaging 9 miles an hour during 24 hours. Rain fell on 21 days, measuring 7.47 inches.—During July the highest reading of the barometer was 30.090, on the 3rd; and the lowest 29.634, on the 16th. The highest temperature was 97°.5, on the 24th; and the lowest 71°, on the 26th. S. E. winds prevailed, and the strongest was recorded on the 18th, averaging 13 miles an hour during 24 hours. Rain fell on 13 days, measuring 2.83 inches.—During August the highest reading of the barometer was 30.100, on the 7th and 8th, and the lowest 29.630, on the 15th. The highest temperature was 96°.5, on the 1st; and the lowest 73°, on the 23rd. S. E. winds prevailed, and the strongest was recorded on the 16th, averaging 32 miles an hour during 24 hours. Rain fell on 15 days, measuring 9.23 inches.—During September the highest reading of the barometer was 30.122, on the 13th; and the lowest 29.890, on the 7th. The highest temperature was 96°.4, on the 5th; and the lowest 69°, on the 12th. S. E. winds prevailed, and the strongest was recorded on the 1st, averaging 10 miles an hour during 24 hours. Rain fell on 11 days, measuring 3.15 inches.—During October the highest reading of the barometer was 30.254, on the 1st; and the lowest 29.700, on the 16th. The highest temperature was 94°, on the 4th and 7th; and the lowest 61°, on the 31st. N. E. winds prevailed, and the strongest was recorded on the 21st, averaging 11.3 miles an hour during 24 hours. Rain fell on 9 days, measuring 5.51 inches.—During November the highest reading of the barometer was 30.546, on the 13th; and the lowest 29.978, on the 8th. The highest temperature was 86°.5, on the 8th; and the lowest 49°, on the 14th. N. E. winds prevailed, and the strongest was recorded on the 11th, averaging 14.1 miles an hour during 24 hours. Rain fell on 10 days, measuring 0.87 inch.—During December the highest reading of the barometer was 30.506, on the 13th; and the lowest 30.030, on the 7th. The highest temperature was 84°, on the 31st; and the lowest 42°, on the 5th. N. E. winds prevailed, and the strongest was recorded on the 12th, averaging 17 miles an hour during 24 hours. Rain fell on 4 days, measuring 0.18 inch.—**1890:** During January the highest reading of the barometer was 30.490, on the 4th; and the lowest 29.850, on the 25th. The highest temperature was 83°, on the 1st; and the lowest 37°, on the 5th. N. E. winds prevailed, and the strongest was recorded on the 3rd, averaging 15.2 miles an hour during 24 hours. Rain fell on 10 days, measuring 2.33 inches.—During February the highest reading of the barometer was 30.414, on the 11th; and the lowest 29.700, on the 16th. The highest temperature was 83°.5, on the 17th; and the lowest 43°, on the 11th. N. E. winds prevailed, and the strongest was recorded on the 18th, averaging 13.6 miles an hour during 24 hours. Rain fell on 11 days, measuring 1.48 inches.—During March the highest reading of the barometer was 30.390, on the 5th; and the lowest 29.870, on the 9th. The highest temperature was 86°, on the 21st; and the lowest 42°, on the 1st. N. E. winds prevailed, and the strongest was recorded on the 23rd, averaging 13.8 miles an hour during 24 hours. Rain fell on 22 days, measuring 4.66 inches.—During April the highest reading of the barometer was 30.260, on the 4th; and the lowest 29.754, on the 24th. The highest temperature was 88°.5, on the 29th; and the lowest 45°, on the 2nd. S. E. winds prevailed, and the strongest was recorded on the 18th, averaging 10.6 miles an hour during 24 hours. Rain fell on 17 days, measuring 9.22 inches.—During May the highest reading of the barometer was 30.056, on the 14th; and the lowest 29.764, on the 9th. The highest temperature was 92°, on the 18th; and the lowest 67°, on the 3rd. S. E. winds prevailed, and the strongest was recorded on the 7th, averaging 10.5 miles an hour during 24 hours; one day (the 13th) was calm throughout. Rain fell on 22 days, measuring 12.66 inches.—During June the highest reading of the barometer was 29.996, on the 24th; and the lowest 29.684, on the 29th. The highest temperature was 92°, on the 17th; and the lowest 73°, on the 1st and 7th. S. E. winds prevailed, and the strongest was recorded on the 30th, averaging 9.9 miles an hour during 24 hours. Rain fell on 26 days, measuring 8.48 inches.—During July the highest reading of the barometer was 29.968, on the 2nd; and the lowest 29.600, on the 17th. The highest temperature was 95°, on the 13th; and the lowest 72°, on the 25th and 26th. S. E. winds prevailed, and the strongest was recorded on the 26th, averaging 8.2 miles an hour during 24 hours. Rain fell on 21 days, measuring 13.17 inches.—During August the highest reading of the barometer was 30.030, on the 20th; and the lowest 29.704, on the 2nd. The highest temperature was 96°, on the 25th; and the lowest 69°, on the 9th. S. E. winds prevailed, and the strongest was recorded on the 13th and 17th, averaging 6 miles an hour during 24 hours; one day (the 30th) was calm throughout. Rain fell on 21 days, measuring 8.98 inches. A slight shock of earthquake, travelling in a southerly direction, was felt on the 30th at 9.50 P. M.—During September the highest reading of the barometer was 30.110, on the 27th; and the lowest 29.720, on the 5th. The highest temperature was 97°, on the 30th; and the lowest 63°, on the 25th. N. E. winds prevailed, and the strongest was recorded on the 8th, averaging 6.8 miles an hour during 24 hours. Rain fell on 8 days, measuring 2.86 inches.—During November the highest reading of the barometer was 30.370, on the 11th and 13th; and the lowest 30.020, on the 10th (readings taken from aneroid by Messrs. G. FALCONER & Co., Hongkong and London). The highest temperature was 86°, on the 8th and 9th; and the lowest 48°, on the 13th. N. E. winds prevailed. Rain fell on 5 days.—During December the highest reading of the barometer was 30.510, on the 30th; and the lowest 29.950, on the 27th (readings taken from standard barometer No. 647, by ADIE, London). The highest temperature was 84°, on the 4th; and the lowest 42°, on the 31st. N. E. winds prevailed. Rain fell on 11 days.—**1891:** During January the highest reading of the barometer was 30.477, on the 15th; and the lowest 30.062, on the 30th. The highest temperature was 80°, on the 12th, 23rd and 27th; and the lowest 43°, on the 15th. N. E. winds prevailed. Rain fell on 3 days.—During February the highest reading of the barometer was 30.690, on the 12th; and the lowest 29.790, on the 4th. The highest temperature was 82°, on the 24th and 27th; and the lowest 41°, on the 6th. S. E. winds prevailed. Rain fell on 6 days.—During March the highest reading of the barometer was 30.460, on the 23rd; and the lowest 29.820, on the 16th. The highest temperature was 76°.5, on the 1st; and the lowest 44°, on the 27th. N. E. winds prevailed. Rain fell on 19 days.

DR. C. C. DE BURGH DALY'S REPORT ON THE HEALTH
OF NINGPO

For the Half-year ended 31st March 1891.

Births: two living, one stillborn. Deaths: none.

The health of the community has been excellent, giving me, as usual, little or nothing of interest to report about foreigners; the only serious case occurring amongst them was one of acute rheumatism, which is only now, as I write this, slowly recovering after six weeks' illness.

The fever which it has become fashionable to call influenza, although it has very little resemblance to ordinary influenza, was epidemic here in the autumn. A few foreigners and a large number of natives suffered from it. No fatal case occurred in my practice.

The symptoms in the acute cases were chill, followed by high fever, rapidly reaching 103° or 105°, with severe pains referred to the bones. The fever lasted from two to seven days, then rapidly subsided, leaving behind, in many cases, a most persistent, troublesome cough. The treatment generally recommended was rest in bed, and aconite internally, while the fever lasted, and sedatives for the cough. I found quinine, antipyrin, etc., had rather an injurious effect.

In marked contrast to the autumn of 1889, the weather here last autumn was very fine, and, consequently, very few cases of intermittent fever occurred amongst the foreigners.

The diseases prevalent amongst the natives were intermittent fevers of the various types, quartan ague being the commonest; continuous fevers, divided by the natives into 7, 14, and 21 days' fever; measles and small-pox; and in the autumn cholera and dysentery.

RAPPORT SANITAIRE DU DISTRICT DOUANIER DE LAPPA

Pour le Semestre finissant le 31 mars 1891.

LES conditions spéciales du district de Lappa, comparables, si l'on veut, à celles du district de Kowloon, ôtent toute ombre d'intérêt au rapport clinique qu'on puisse faire exclusivement sur lui. Le nombre des résidents étrangers n'est que trop restreint et encore ceux-là, des employés de la Douane impériale, n'habitent que les postes douaniers de Chinsan et Malowchow. Le reste, y compris tout le personnel de l'*In-door* et une partie de celui de l'*Out-door Staff* de la Douane de Lappa, réside à Macao, établissement portugais limitrophe du district.

Les cas fournis à l'histoire nosologique du district de Lappa par les résidents étrangers ont été pendant le semestre d'octobre 1890 à mars 1891—et généralement ils le sont toujours—tout-à-fait dénués d'intérêt clinique. Pour ce qui regarde la pathologie indigène, les données que l'on peut obtenir dans un pays où on ne connaît guère la statistique et où la médecine est exercée par des charlatans, sont toujours insuffisantes, quand elles ne sont pas fausses.

Voilà pourquoi, invité à faire le rapport clinique du dernier semestre au district de Lappa, j'ai dû me rapporter aux environs de ce district, spécialement à Macao.

Le climat du district douanier de Lappa et de ses environs est, sans contredit, un des plus doux, s'il n'est pas le plus sain, de toute la côte de la Chine. Le voisinage des rizières qui couvrent le sol de l'île de Hianshan à peine se fait-il sentir sur le littoral; et il n'y a que le poste douanier de Chinsan qui de temps à autre produit quelques cas de paludisme, plus ou moins graves, surtout chez les Européens arrivés d'autres contrées marécageuses.

Le poste de Malowchow avait donné, dès son installation, assez de cas d'infection paludéenne. Les mesures qu'on a pris pour l'assainissement des habitations dans ce poste ont fait disparaître tout-à-fait ces cas; et il n'arrive aujourd'hui que rarement d'y rencontrer quelques cas pathologiques sans valeur, soit du rhumatisme ou des bronchites, surtout dans la saison favorable à ces manifestations morbides—février à avril.

À Macao, pendant le semestre qui vient de s'écouler, rien n'a altéré l'état sanitaire normal du pays si ce n'est les épidémies de variole et d'*influenza*, dont la première a sévi dès le mois de janvier et l'autre surtout en février.

Je ne saurais à la rigueur appeler la variole qui a sévi à Lappa et dans ses environs une épidémie, puisque la variole y vient chaque année, endémique et tant soit peu meurtrière. Seulement, cette fois-ci elle ne s'est pas confinée aux indigènes, elle s'est portée sur les résidents et les non-résidents étrangers.

À l'hôpital militaire de Macao on n'a eu que trois décès, un Chinois et deux soldats de la garnison indienne (Mahrattas), dont pas un seul n'avait été vacciné. À l'hôpital civil on a eu un seul décès, un enfant indien, non vacciné, lui aussi. Dans la clinique des médecins établis à Macao on a compté jusqu'à 14 cas de décès, tous des naturels de Macao.

D'une façon générale, on peut dire que les individus qui avaient été vaccinés et surtout revaccinés n'ont eu que la variole discrète, voire même la varioloïde; la variole confluyente et surtout la forme hémorrhagique n'ont fait des ravages que sur des individus non vaccinés. Il

faut, pourtant, faire exception d'un cas de variole hémorrhagique survenu dans une femme en couches, laquelle, dit-on, avait été vaccinée dans son enfance. Je crois que ce fut le seul cas et encore on ne doit peut-être trop s'y appesantir, car il y avait longtemps que la vaccination avait été faite.

Mais ce qui est un argument de première ligne en faveur des avantages de la vaccination c'est que, ayant vacciné moi-même dans le mois de janvier 693 indigènes, qui devaient s'embarquer comme passagers sur le bateau à vapeur *Independent*, pour le Mexique, je les ai vus se promener partout dans la ville et ses environs, au milieu de l'épidémie, dont pas un seul ne fut frappé. Et pourtant ils ne se sont embarqués que pendant les premiers jours de mars.

Le premier cas d'*influenza* que j'ai observé dans le dernier semestre, ce fut à la fin de janvier, à bord d'une chaloupe à vapeur de la Douane impériale. Il y avait 10 matelots indigènes frappés ensemble, plus le second, un Européen, qui était allé se soigner à terre. Puis, dans quelques jours l'*influenza* s'était repandue partout, chez les Européens comme chez les indigènes.

L'épidémie s'est montrée toujours la même, sauf l'intensité des symptômes. Invasion sans prodromes; céphalalgie, rachialgie, prostration générale; fièvre, atteignant parfois 40° et plus rarement 41° centigrades (104° à 106° Fahrenheit); anorexie, soif, langue rouge sur les bords et à la pointe, couverte d'un enduit jaunâtre sur le dos; nausées, allant par exception jusqu'au vomissement; toux, d'abord faible, puis un peu plus forte; phénomènes stéthoscopiques nuls ou à peu près. Le traitement dans les cas les plus légers se bornait aux diaphorétiques (jaborandi, poudre de Dover), quelques fois on employait avec succès la quinine, mais dans la majorité des cas il fallait recourir à l'antipyrine (3 à 4 grammes, soit 45 à 60 grains, dans la journée).

Les symptômes, qui subsistaient au delà du deuxième jour, étaient généralement la toux, accompagnée ensuite des râles humides de la bronchite, surtout dans les individus prédisposés; l'expectoration facile ou s'établissant aisément par le moyen des expectorants et balsamiques (kermès, Tolu, etc.); l'anorexie toujours difficile à débouter avant le quatrième ou le cinquième jour, demandant mainte fois l'emploi d'un purgatif léger (citrate de magnésie, sulfate de soude). La fièvre, la céphalalgie, la prostration générale, qui cédaient sous l'action de l'antipyrine, ne revenaient que si le malade abusait des forces dont il croyait disposer et qui n'étaient que fictives. En se mettant au grand air, sans la moindre précaution, il attrapait souvent une pneumonie, quelquefois une pleurésie, une bronchite capillaire, etc. Ces cas exceptés, je n'ai jamais observé la fièvre de retour, dont quelques habiles médecins font pourtant un symptôme fréquent de l'*influenza*.

C'est vraiment à regretter que ni même à Macao, où il y a un hôpital chinois, on ne puisse obtenir des données positives sur les ravages produits par les épidémies de variole et d'*influenza* pendant le trimestre qui vient de finir. *Mutatis mutandis*, on peut dire de la statistique chinoise de Macao ce que le docteur JAMIESON a dit de celle de Shanghai:—

Formal statistics collected from Tipao are absolutely valueless. They are falsified either designedly or through idle carelessness.*

Il y a, pourtant, un moyen d'estimer la mortalité produite par les susdites épidémies parmi la population chinoise de Macao; c'est de comparer la nécrologie absolue du dernier trimestre avec celle du premier trimestre des années précédentes. Pour y arriver, on peut consulter la statistique du cimetière chinois de Macao. Certes, le moyen n'est pas absolument sûr; car d'abord la population indigène de Macao n'est pas toujours la même, elle n'est que trop

* Customs *Medical Reports*, xxxvi, 11.

flottante dans sa grande majorité; puis, les enterrements des résidents chinois ne se font pas tous à Macao; il y a parfois des cadavres qui sont transportés en Chine pour y être inhumés, surtout à Lappa et à Canton. Mais, d'un autre côté, on peut admettre que pendant les épidémies la proportion des cadavres transportés au dehors de Macao reste la même qu'auparavant; et, après tout, il faut avouer que la différence est tellement frappante qu'on ne peut l'attribuer qu'aux ravages épidémiques.

Au fait, la moyenne des cinq derniers ans, 1886-90, donne pour la population chinoise de Macao, dans le premier trimestre, janvier à mars, une mortalité de 412, ce que pendant les trois mois qui viennent de s'écouler a monté au chiffre assez sensible de 809, soit à peu près le double.

Quant à l'influence de la saison je la trouve bien difficile à saisir. Cette année l'hiver a été très-doux; on n'a pas eu les pluies qui en règle générale caractérisent les mois de février et mars dans ces pays, et le froid même n'est jamais tombé au-dessous de 9° centigrades. Les années précédentes, l'hiver a été autrement rigoureux; pourtant, ni la variole ni l'influenza n'ont fait de ravages que l'on puisse comparer à ceux de l'année courante.

TABLEAU I.

Enterrements au Cimetière chinois de Macao pendant le Trimestre janvier-mars.

CADAVRES.	1886.	1887.	1888.	1889.	1890.	MOYENNE.	1891.
Hommes.....	122	148	149	150	149	143	293
Femmes.....	101	102	149	101	104	112	254
Enfants.....	152	178	250	123	82	157	262
TOTAL.....	375	428	548	374	335	412	809

TABLEAU II.

Enterrements de non-Chinois au Cimetière catholique de Macao pendant le dernier Semestre.

MALADIES QUI ONT CAUSÉ LA MORT.	Octobre.	Novembre.	Décembre.	Janvier.	Février.	Mars.	TOTAL.
Lésions des appareils—							
Respiratoire.....	...	5	1	4	6	7	23
Digestif.....	1	...	...	...	...	2	3
Circulatoire.....	1	...	...	1	...	1	3
Nerveux.....	1	...	...	1	...	...	2
Génito-urinaire.....	...	1	...	...	...	...	1
Variole.....	...	...	1	3	4	7	15
Sénilité.....	3	...	...	1	7	...	11
Autres maladies.....	3	...	...	...	3	1	7
TOTAL.....	9	6	2	10	20	18	65

Les Européens décédés ont été au nombre de quatre, tous Portugais et militaires; les causes de décès ont été hernie inguinale étranglée, suicide, paludisme et tuberculose.

Au district de Lappa on n'a pas eu de décès d'Européen.

RÉSUMÉ des PRINCIPALES OBSERVATIONS MÉTÉOROLOGIQUES faites à l'OBSERVATOIRE
de MACAO pendant le SEMESTRE finissant le 31 mars 1891.*

OBSERVATIONS.	Octobre.	Novembre.	Décembre.	Janvier.	Février.	Mars.	
Pression	maxima	30.217	30.260	30.337	30.346	30.513	30.346
	minima	29.696	29.990	29.880	29.957	29.825	29.751
	oscillation quotidienne.....	0.059	0.062	0.064	0.060	0.065	0.063
Température....	maxima	97.00	83.00	82.00	82.00	81.00	82.00
	minima	64.00	53.00	53.00	49.00	45.00	52.00
	oscillation moyenne.....	20.00	15.86	13.51	15.57	12.96	9.45
Humidité.....	maxima	95.00	95.00	100.00	94.00	100.00	100.00
	minima	40.50	21.00	39.50	42.00	36.00	53.50
Pluie.....	quantité en pouces.....	0.08	0.17	4.04	0.11	...	2.65
	nombre de jours.....	1	1	3	1	...	7
État du ciel.....	beau ou presque, jours.....	18	17	14	17	1	...
	moyenne nébulosité, jours...	12	11	13	13	10	10
	couvert ou presque, jours...	1	2	4	1	17	21
Vent.....	vélocité moyenne diurne....	68k.1	55k.5	64k.8	58k.9	51k.1	59k.9
	direction	N. 26° 5' E.	N. 31° E.	N. 49° 5' E.	N. 36° E.	N. 1° O.	N. 22° E.

* Extrait d'un tableau que je dois à la bienveillance de M. J. C. ALCOBA, Capitaine du port de Macao.

Baromètre à 32° Fahrenheit au niveau de la mer. Échelle en pouces anglaises. Thermomètre à l'air, en degrés Fahrenheit.

G. S.

DR. B. STEWART RINGER'S REPORT ON THE HEALTH OF AMOY

For the Year ended 31st March 1891.

DURING the 12 months ended 31st March 1891 the health of the foreign community at this port has been fairly good, and the locality has been free from any serious epidemic.

During the spring of the year 1890 several cases of influenza, characterised by muscular pains, sore throat, fever and protracted convalescence, were attended; there were also others, however, of a milder type generally, which under different circumstances would have been classed as cases of ordinary catarrh.

The summer was neither excessively hot nor long, and although some severe cases of malarial fever and diarrhoea occurred, the season was, on the whole, healthy.

Thirteen births and two deaths have to be recorded. Among the former, one labour was terminated by the aid of the short forceps, in consequence of uterine inertia; the rest were normal. Of the two deaths, the first occurred in January 1890, and resulted from exhaustion following chronic diarrhoea, which had continued for three years, in one who had resided for many years amongst the Chinese up country; the second took place in May from drowning, the result of a boating accident.

A somewhat severe outbreak of purulent ophthalmia was attended during the months of July and August at the Roman Catholic Orphanage, where 60 Chinese children are resident; and notwithstanding the various precautions taken, more than one-third of the children were attacked.

The instillation of a nitrate of silver solution, frequent cleansings with zinc lotion, and guarding the eyes from the light, in some instances, cut short the attack; but in others the disease proved most intractable, and in two cases staphyloma followed the severe ulceration of the cornea which previously existed.

In the early part of the present year (1891) many cases of measles were reported among the Chinese in the neighbourhood of the foreign Settlement; and as the natives are most unguarded and careless in connexion with the spread of contagion, it was feared that the disease might extend widely among the foreign community; but every effort was made to prevent this, and, happily, only three or four cases occurred, all of which terminated favourably.

It is noteworthy that the rainy season was retarded this year, with the unpleasant result that the water in several of the wells, which is usually clear and fresh, became so brackish that it was quite undrinkable and most disagreeable to wash in. I was informed that many of the Chinese were much concerned about this matter, and sought the aid of their deities, considering it likely that the long drought would be followed by some violent outbreak of epidemic disease—and probably not without some reason. However, a timely downpour of rain rapidly restored confidence and soon removed the unpleasant condition.

DR. A. IRWIN'S REPORT ON THE HEALTH
OF TIENTSIN

For the Half-year ended 31st March 1891.

WITH the exception of an epidemic of influenza and several cases of the so-called typho-malarial fever, the health of the foreign community, notwithstanding the inundated state of the surrounding country, has been fairly good.

One death took place from typho-malarial fever, the origin of the disease in this case being clearly traceable to exposure to the emanations from freshly turned-up soil.

Two deaths occurred among the shipping in port—one from meningitis, the other from phthisis.

Very few residents escaped the influenza; but, as a general rule, the attack was very mild, lasting about three days. In two cases pneumonia set in, but in each only the base of the right lung was attacked, and in neither case was there any cause for anxiety.

The foreign population of the Settlement numbers about 250. Nearly all are strong and healthy; so that, as far as they are concerned, the materials for writing a medical report are almost *nil*.

At the native hospitals no cases of any special interest presented themselves during the period under review.

DR. GEORGE R. UNDERWOOD'S REPORT ON THE HEALTH OF KIUKIANG

For the Half-year ended 31st March 1891.

DURING the past six months the health of the foreign residents has been good on the whole, though the number of minor ailments has certainly been above the average. The autumn was dry and pleasant, with much sunshine, and the winter has not been colder or more rainy than usual.

As in former years, malaria, in the form of quotidian or tertian ague, has been the complaint most frequently met with. In every case of the 24 treated a purge, followed by a few full doses of quinine, or, better, quinine combined with salicylate of soda, sufficed to check the fever. Foreign children born in this place have an especial liability to malarial attacks, while adult residents who have not lived in aguish districts before settling here may escape it altogether.

Influenza found its way to this port, fortunately not in epidemic form so far as foreigners were concerned, and three patients came under my care.

The first—A. B., 48, male—awoke one morning not feeling well, and two hours afterwards, on my seeing him, he complained of giddiness, sickness with vomiting, and difficulty in breathing. His temperature was 102°, and the pulse 116. The urgent symptoms were relieved by rest, poultices and medicinal treatment. The temperature became normal after five days, and 12 days from the beginning of the attack the giddiness, which had been to him most alarming, had all but gone. This patient has for years been the subject of irritable heart, and every few months required to have digitalis or strophanthus. While other symptoms disappeared, the pulse, up to three weeks from the date of seizure, varied from 90 to 100, the average in health being 80, and his strength was regained very slowly.

In a second case—C. D., 40, male—the attack began with slight headache, chilliness, rise of temperature to 100°.8, and a little cough. The next day the cough continued, otherwise the patient felt better, and had no headache or fever. For a week after this he had little appetite, and felt languid and disinclined to work. He then began to complain of palpitation and discomfort in the region of the heart, which hindered him from sleeping well at night. On examination the heart's action was found to be irregular, one contraction in every seven or eight following too quickly on the preceding one, and the pulse was weak, with a rate of 45 to 50. Complete rest, a dietary from which tea and coffee, found by the patient to increase the palpitation, were excluded, with tincture of strophanthus in 5-minim doses, three times a day, caused the irregular action to cease, and the pulse returned to its normal (70-72) in a fortnight. Three months passed before the patient felt thoroughly well.

In the third case bronchial catarrh was the prominent feature. Convalescence, though prolonged, was complete.

Two residents suffered from simple continued fever, a form of illness not often seen here in winter.

In the first—E. F., female, 32—there was at the onset severe headache, slightly furred tongue, loss of appetite, constipation, and inability to sleep well at night. The evening temperature for 18 days fluctuated between 100° and 101°·8, and that of the morning from 1° to 1°·5 lower. After this the thermometer never registered over 100°, and by the end of the fourth week the temperature was normal. Antipyrin relieved the headache, but neither that drug, quinine, nor quinine and salicylate of soda had any effect on the fever. There was at no time any abdominal tenderness, and pulmonary symptoms were entirely absent. It was from the beginning uncomplicated, simple continued fever. Convalescence, once it began, was satisfactory.

On 5th February I was asked to see G. H., 26, male, who had been suffering from fever from the 1st of the month. The patient, who was 5 feet 9 inches in height, of average build, and in fair muscular condition, told me that he had been living in a malarious district in the interior, and thought that he had ague. When I examined him, at 10 A.M., his pulse was 78, respirations 8.5, and temperature 101°, and his skin was soft and moist. He had no headache; the tongue was clean; he had desire for food; the abdomen was full, with slight tenderness over the right iliac region (this was not found again); his bowels were constipated; and he could sleep quite well at night. He had had what he considered an aguish attack at 4 P.M. the day previous, when the temperature was 103°·8. The bowels were cleared; quinine with salicylate of soda in full doses given three times a day, with a diet of milk and soups, with the result that after 12th February the temperature only once rose to 101°·5, and the intermittent crises ceased. There remained for three weeks more an increase of temperature, varying from 0°·5 to 2°, and this, uninfluenced by medicinal treatment, gradually passed off. Cascara was not a success in the treatment of the constipation, which held throughout the illness, and, when required, castor oil was preferred. The irregularly slow respiratory rate was a noteworthy feature in the case, and with convalescence the frequency increased. The patient's ordinary rate I found to be 12 per minute. All through the illness there was neither headache nor thirst, and the tongue remained free from coating. Appetite and digestion continued good, with the exception of two days, when constipation had been unrelieved, though, of course, the patient lost weight. In both this case and the preceding one a change of air would have been most beneficial had the season permitted, and the feverishness would have been got rid of much sooner. The data of the pulse, respirations and temperature are under-noted:—

DATE.	Pulse.	Respira- tions.	Tem- perature.	DATE.	Pulse.	Respira- tions.	Tem- perature.	DATE.	Pulse.	Respira- tions.	Tem- perature.
Feb. 5	78	8.5	101.0	Feb. 15	70	10	98.5	Feb. 25	70	10	99.0
" 6	78	8.5	101.0	" 16	72	10	99.6	" 26	74	10	99.5
" 7	94	8.5	102.8	" 17	72	10	99.9	" 27	68	10	99.0
" 8	78	4.5	101.8	" 18	72	9	99.6	" 28	70	9	98.4
" 9	90	5.5	102.8	" 19	92	8	101.5	" 1	68	11	98.4
" 10	69	10	100.3	" 20	86	7	100.0	" 2	78	11	99.3
" 11	78	10	102.0	" 21	...	...	...	" 3	72	11	99.0
" 12	72	12	101.4	" 22	78	9	100.0	" 4	74	10	99.4
" 13	84	12	102.8	" 23	72	10	99.2	" 5	...	...	99.2
" 14	74	11	100.6	" 24	68	11	99.2	" 6	78	10	98.8
" 15	80	12	101.8	" 25	70	10	99.0	" 7	...	...	98.6
" 16	70	8	100.0	" 26	68	11	99.4	" 8	...	...	99.2
" 17	76	12	101.8	" 27	70	11	99.4	" 9	...	...	99.2
" 18	64	6	98.9	" 28	72	10	99.0	" 10	...	...	99.2
" 19	78	6	99.6	" 29	...	...	99.9	" 11	...	...	99.0
" 20	72	12	99.3	" 30	72	9	99.2	" 12	74	...	99.0
" 21	78	12	100.4	" 1	72	10	99.8	" 13	...	...	98.6
" 22	72	12	98.8	" 2	78	9	99.2	" 14	76	12	99.0
" 23	72	12	100.4	" 3	88	12	100.4	" 15	...	...	98.4
" 24	78	12	100.4	" 4	...	...	...	" 16	...	...	...
" 25	78	12	100.4	" 5	...	...	...	" 17	...	...	...
" 26	78	12	100.4	" 6	...	...	...	" 18	...	...	...
" 27	78	12	100.4	" 7	...	...	...	" 19	...	...	...
" 28	78	12	100.4	" 8	...	...	...	" 20	...	...	...
" 29	78	12	100.4	" 9	...	...	...	" 21	...	...	...
" 30	78	12	100.4	" 10	...	...	...	" 22	...	...	...
" 1	78	12	100.4	" 11	...	...	...	" 23	...	...	...
" 2	78	12	100.4	" 12	...	...	...	" 24	...	...	...
" 3	78	12	100.4	" 13	...	...	...	" 25	...	...	...
" 4	78	12	100.4	" 14	...	...	...	" 26	...	...	...
" 5	78	12	100.4	" 15	...	...	...	" 27	...	...	...
" 6	78	12	100.4	" 16	...	...	...	" 28	...	...	...
" 7	78	12	100.4	" 17	...	...	...	" 29	...	...	...
" 8	78	12	100.4	" 18	...	...	...	" 30	...	...	...
" 9	78	12	100.4	" 19	...	...	...	" 1	...	...	...
" 10	78	12	100.4	" 20	...	...	...	" 2	...	...	...
" 11	78	12	100.4	" 21	...	...	...	" 3	...	...	...
" 12	78	12	100.4	" 22	...	...	...	" 4	...	...	...
" 13	78	12	100.4	" 23	...	...	...	" 5	...	...	...
" 14	78	12	100.4	" 24	...	...	...	" 6	...	...	...
" 15	78	12	100.4	" 25	...	...	...	" 7	...	...	...
" 16	78	12	100.4	" 26	...	...	...	" 8	...	...	...
" 17	78	12	100.4	" 27	...	...	...	" 9	...	...	...
" 18	78	12	100.4	" 28	...	...	...	" 10	...	...	...
" 19	78	12	100.4	" 29	...	...	...	" 11	...	...	...
" 20	78	12	100.4	" 30	...	...	...	" 12	...	...	...
" 21	78	12	100.4	" 1	...	...	...	" 13	...	...	...
" 22	78	12	100.4	" 2	...	...	...	" 14	...	...	...
" 23	78	12	100.4	" 3	...	...	...	" 15	...	...	...
" 24	78	12	100.4	" 4	...	...	...	" 16	...	...	...
" 25	78	12	100.4	" 5	...	...	...	" 17	...	...	...
" 26	78	12	100.4	" 6	...	...	...	" 18	...	...	...
" 27	78	12	100.4	" 7	...	...	...	" 19	...	...	...
" 28	78	12	100.4	" 8	...	...	...	" 20	...	...	...
" 29	78	12	100.4	" 9	...	...	...	" 21	...	...	...
" 30	78	12	100.4	" 10	...	...	...	" 22	...	...	...
" 1	78	12	100.4	" 11	...	...	...	" 23	...	...	...
" 2	78	12	100.4	" 12	...	...	...	" 24	...	...	...
" 3	78	12	100.4	" 13	...	...	...	" 25	...	...	...
" 4	78	12	100.4	" 14	...	...	...	" 26	...	...	...
" 5	78	12	100.4	" 15	...	...	...	" 27	...	...	...
" 6	78	12	100.4	" 16	...	...	...	" 28	...	...	...
" 7	78	12	100.4	" 17	...	...	...	" 29	...	...	...
" 8	78	12	100.4	" 18	...	...	...	" 30	...	...	...
" 9	78	12	100.4	" 19	...	...	...	" 1	...	...	...
" 10	78	12	100.4	" 20	...	...	...	" 2	...	...	...
" 11	78	12	100.4	" 21	...	...	...	" 3	...	...	...
" 12	78	12	100.4	" 22	...	...	...	" 4	...	...	...
" 13	78	12	100.4	" 23	...	...	...	" 5	...	...	...
" 14	78	12	100.4	" 24	...	...	...	" 6	...	...	...
" 15	78	12	100.4	" 25	...	...	...	" 7	...	...	...
" 16	78	12	100.4	" 26	...	...	...	" 8	...	...	...
" 17	78	12	100.4	" 27	...	...	...	" 9	...	...	...
" 18	78	12	100.4	" 28	...	...	...	" 10	...	...	...
" 19	78	12	100.4	" 29	...	...	...	" 11	...	...	...
" 20	78	12	100.4	" 30	...	...	...	" 12	...	...	...
" 21	78	12	100.4	" 1	...	...	...	" 13	...	...	...
" 22	78	12	100.4	" 2	...	...	...	" 14	...	...	...
" 23	78	12	100.4	" 3	...	...	...	" 15	...	...	...
" 24	78	12	100.4	" 4	...	...	...	" 16	...	...	...
" 25	78	12	100.4	" 5	...	...	...	" 17	...	...	...
" 26	78	12	100.4	" 6	...	...	...	" 18	...	...	...
" 27	78	12	100.4	" 7	...	...	...	" 19	...	...	...
" 28	78	12	100.4	" 8	...	...	...	" 20	...	...	...
" 29	78	12	100.4	" 9	...	...	...	" 21	...	...	...
" 30	78	12	100.4	" 10	...	...	...	" 22	...	...	...
" 1	78	12	100.4	" 11	...	...	...	" 23	...	...	...
" 2	78	12	100.4	" 12	...	...	...	" 24	...	...	...
" 3	78	12	100.4	" 13	...	...	...	" 25	...	...	...
" 4	78	12	100.4	" 14	...	...	...	" 26	...	...	...
" 5	78	12	100.4	" 15	...	...	...	" 27	...	...	...
" 6	78	12	100.4	" 16	...	...	...	" 28	...	...	...
" 7	78	12	100.4	" 17	...	...	...	" 29	...	...	...
" 8	78	12	100.4	" 18	...	...	...	" 30	...	...	...
" 9	78	12	100.4	" 19	...	...	...	" 1	...	...	...
" 10	78	12	100.4	" 20	...	...	...	" 2	...	...	...
" 11	78	12	100.4	" 21	...	...	...	" 3	...	...	...
" 12	78	12	100.4	" 22	...	...	...	" 4	...	...	...
" 13	78	12	100.4	" 23	...	...	...	" 5	...	...	...
" 14	78	12	100.4	" 24	...	...	...	" 6	...	...	...
" 15	78	12	100.4	" 25	...	...	...	" 7	...	...	...
" 16	78	12	100.4	" 26	...	...	...	" 8	...	...	...
" 17	78	12	100.4	" 27	...	...	...	" 9	...	...	...
" 18	78	12	100.4	" 28	...	...	...	" 10	...	...	...
" 19	78	12	100.4	" 29	...	...	...	" 11	...	...	...
" 20	78	12	100.4	" 30	...	...	...	" 12	...	...	...
" 21	78	12	100.4	" 1	...	...	...	" 13	...	...	...
" 22	78	12	100.4	" 2	...	...	...	" 14	...	...	...
" 23	78	12	100.4	" 3	...	...	...	" 15	...	...	...
" 24	78	12	100.4	" 4	...	...	...	" 16	...	...	...
" 25	78	12	100.4	" 5	...	...	...	" 17	...	...	...
" 26	78	12	100.4	" 6	...	...	...	" 18	...	...	...
" 27	78	12	100.4	" 7	...	...	...	" 19	...	...	...
" 28	78	12	100.4	" 8	...	...	...	" 20	...	...	...
" 29	78	12	100.4	" 9	...	...	...	" 21	...	...	...
" 30	78	12	100.4	" 10	...	...</			

The following notes of a case of hepatic abscess present some points of interest:—

E. T., male, 48, consulted me on 28th November regarding pain and uneasiness in the right hypochondriac region. The patient, a man of sedentary habits, is about 5 feet 8 inches, of fair muscularity, though its quality was somewhat flabby. The face was pale and anæmic (before this illness began his appearance denoted anæmia), and without any yellowish tint, nor was the conjunctiva in the least degree stained. The pulse was 86 and the temperature 101° at 9 P.M., when examined. He stated that about the middle of September he had severe neuralgia of the scalp, and, to relieve it, took several large doses of salicylate of soda. This proceeding brought on diarrhœa, and with it the pain from which he still suffered and from which he had not been free since. With the pain there had been fever, more or less and constant. The bowels had been constipated, the dejecta not specially light coloured; and flatulence had caused much annoyance. The abdomen was found to be much distended with flatus; an ill-defined swelling, with tenderness on palpation, could be made out over the ascending colon, especially at the upper part, but whether the hepatic area was increased could not be determined. Means were taken to get rid of the gas in the bowels, and then the lower margin of the right lobe of the liver could be felt $\frac{3}{4}$ inch below the ribs, at a point 2 inches internal to the nipple line, and over this area there was tenderness. At the nipple line, and to the right of it, the lower margin of the liver could not be felt below the ribs, though pressure showed tenderness. There was no enlargement upwards, and auscultation revealed nothing. The stools were natural in colour. The patient could lie on either side in bed, but felt most comfortable when on his back. The pain had hindered his getting good sleep for weeks. The provisional diagnosis was "abscess." Salines were at first given, with a diet largely of milk; but digestion became so impaired that all medicines were stopped except to relieve the constipation, and the patient's strength supported as much as possible. Mustard poultices and hot water were useful in relieving the pain.

During the first two weeks after coming under my care the lower border of the left side of the right lobe descended slowly till it was $1\frac{1}{2}$ inch below the costal margin. The fever continued irregular—one evening the temperature 99° , the next perhaps 102° , always above the normal, and the pulse fluctuated with the temperature.

On 18th December an aspirator needle was passed deeply into the liver, at a point just below the ribs and $2\frac{1}{2}$ inches internal to the line of the nipple, but no pus was found. The pain after this puncture became more localised in the nipple line at the costal margin, and the lower border began to be felt there. The area below the ribs increased till it extended 2 inches downwards, and the lower border could be traced distinctly to the left lobe. The diagnosis was now becoming unmistakeable. On 27th December (Dr. GILLISON giving chloroform and rendering other valuable assistance) a needle was passed into the liver just below the costal margin in the nipple line, and pus was found. An incision was then made from above downwards, $3\frac{1}{2}$ inches long, the needle remaining in place as a guide to the abscess cavity. The peritoneum was exposed, and the hepatic surface found to be adherent at the point of incision into the liver. The needle was withdrawn, a director pushed along its track into the cavity, and then a pair of dressing forceps used to dilate the opening. Pus to the extent of 8 ounces was evacuated, the abdominal peritoneum all this time being kept close upon the hepatic surface. The opening was further dilated by the finger, and the margin all round stitched to the abdominal wall. The cavity was washed out, a drainage tube put in, and a dressing of absorbent cotton wool applied, the surface of the wound being dusted with iodoform. The further progress of the case is under-noted:—

28th December, 9 A.M.—Temperature $98^{\circ}.6$. Patient had a good night. Eructations troublesome. Had iced bouillon with pepsine. After changing the dressing, tonic contractions of abdominal muscles, of reflex origin, caused severe pain in the liver. Gave $\frac{1}{4}$ grain of hydrochlorate of morphia subcutaneously.

9 P.M.—Temperature $98^{\circ}.6$; pulse 108. Morphia repeated.

29th December, 9 A.M.—Temperature 98°.6; pulse 84. Night not good, from discomfort caused by cream taken before bedtime. Vomited this morning, and felt relieved at once. Occasional spasmodic contractions of abdominal wall.

9 P.M.—Temperature 98°.6; pulse 84.

30th December, 9 A.M.—Temperature 98°.4; pulse 76. Had a good night. Contractions after the dressing is changed. 25 grains of powdered rhubarb caused a free movement.

9 P.M.—Temperature 98°.6; pulse 74.

31st December, A.M.—Temperature 98°.7; pulse 76. Night disturbed. Pain lasted two hours after changing the dressing last night. Carbolic acid (1 in 60), to wash out the cavity, instead of bichloride.

P.M.—Temperature 99°.2; pulse 76. Begins to look better. Still occasional eructations.

1st January, A.M.—Temperature 99°.4; pulse 86. Changed drainage tube under chloroform, and put in two—the calibre not being sufficient. Matter sero-sanguinolent, with, to-day, slight odour.

P.M.—Temperature 99°; pulse 84. Was sick after chloroform. Discharge free.

2nd January, A.M.—Temperature 99°; pulse 80. Reverted to bichloride lotion. Discharge free, no odour. Appetite poor.

P.M.—Temperature 99°; pulse 78.

3rd January, A.M.—Temperature 98°.7; pulse 80. Passed a fair night, but had considerable pain after washing out cavity, which is done each dressing. The abdomen is now flat.

4th January, A.M.—Temperature 98°.6; pulse 82. Again required powdered rhubarb, and had satisfactory motion.

P.M.—Temperature 98°.7; pulse 84.

5th January, A.M.—Temperature 98°.7; pulse 80. Good night. Changed tubes.

P.M.—Temperature 98°.6; pulse 82. Ordered bismuth, powdered rhubarb and bicarbonate of soda.

6th January, A.M.—Temperature 98°.6; pulse 80. Night disturbed. Abdomen distended with gas; relieved by an enema.

P.M.—Temperature 98°.6; pulse 75.

7th January, A.M.—Temperature 98°.6; pulse 74. Night not good from indigestion.

P.M.—Temperature 99°; pulse 88. Tincture of cascara given to-night.

8th January, A.M.—Temperature 98°.8; pulse 80. Poor night. Wound discharging freely; tube slipped out, the dressing having shifted.

P.M.—Temperature 98°.9; pulse 74. Again cascara.

9th January, A.M.—Temperature 98°.8; pulse 80. Cascara has had no effect; a large dose of powdered rhubarb to be given to-night.

P.M.—Temperature 98°.6; pulse 90.

10th January, A.M.—Temperature 98°.8, pulse 76. Copious movement after powdered rhubarb. Patient fatigued.

P.M.—Temperature 98°.8; pulse 94.

11th January, A.M.—Temperature 98°.6; pulse 74. One movement.

P.M.—Temperature 99°.4; pulse 84.

12th January, A.M.—Temperature 98°.8; pulse 81. Discharge very free. Tube changed. Spasmodic pains continued after changing dressing last night. Cascara.

P.M.—Temperature 99°.2; pulse 85.

13th January, A.M.—Temperature 98°.6; pulse 74. Fairly good night.

P.M.—Temperature 99°; pulse 79. Several motions after cascara.

14th January, A.M.—Temperature 99°; pulse 80. Colic after cascara hindered sound sleep.

P.M.—Temperature 99°.2; pulse 82.

15th January, A.M.—Temperature 98°.6; pulse 76. Passed a good night. Discharge free. Tube, which is now short, pushed out by the spasmodic contractions of abdominal wall.

P.M.—Temperature 99°.4; pulse 87. Patient's last meal is at 8 P.M., so that at 9 P.M. the pulse is higher, digestion being in progress.

16th January, A.M.—Temperature 99°.2; pulse 82. Owing to drainage being inefficient a longer tube had to be put in under chloroform.

P.M.—Temperature 99°.4; pulse 88.

17th January, A.M.—Temperature 99°; pulse 77. Night disturbed. Matter escaping freely. Cascara, early in the morning, produced one movement.

P.M.—Temperature 99°.9; pulse 88.

18th January, A.M.—Temperature 99°.2; pulse 84. Severe spasmodic contractions during the night felt around the tube. Sleep fair. Matter not coming freely, the tube was replaced, and, as usual, the cavity washed out with bichloride of mercury lotion.

P.M.—Temperature 99°.8; pulse 93. Appetite for some days past good. Two movements.

19th January, A.M.—Temperature 99°.4; pulse 83. Much discharge on dressing.

P.M.—Temperature 99°.4; pulse 93. Changing dressing much less painful for several days past.

20th January, A.M.—Temperature 99°; pulse 88. Night good. An air mattress, just procured, adds much to patient's comfort. The skin over the sacrum was beginning to get irritated. Strong adhesive plaster (two folds) answers exceedingly well in such a case when the skin is not broken.

P.M.—Temperature 99°.4; pulse 88.

21st January, A.M.—Temperature 98°.4; pulse 74. Night good. Cascara again.

P.M.—Temperature 99°.8; pulse 96. No movement; much gas in bowels. Dressing easily borne.

22nd January, A.M.—Temperature 98°.9; pulse 78. A good night. No movement. A large dose of cascara this morning. (Patient cannot swallow pills or take castor oil, and takes salts in the dry form.) Matter is still dark and sero-sanguineous.

P.M.—Temperature 99°.4; pulse 84. One difficult movement.

23rd January, A.M.—Temperature 98°.6; pulse 80. Several small movements during the night. No sleep, and patient fatigued accordingly.

P.M.—Temperature 99°.4; pulse 96. A free motion during the day. Appetite very good.

24th January, A.M.—Temperature 98°.7; pulse 84. Night fair. Two movements before daybreak.

P.M.—Temperature 100°; pulse 90. Patient has a light coryza.

25th January, A.M.—Temperature 98°.8; pulse 75. Passed a good night. One movement.

P.M.—Temperature 100°; pulse 90. A little bronchial catarrh.

26th January, A.M.—Temperature 98°.6; pulse 72. A good night. Matter now more distinctly purulent. Cascara this morning.

P.M.—Temperature 100°.3; pulse 96. Pain this afternoon in right hypochondrium; the bowels distended with flatus.

27th January, A.M.—Temperature 98°.8; pulse 78. Cascara again to-day. The cold runs its course, and there is still cough.

P.M.—Temperature 100°.4; pulse 88. Bowels not yet moved. Flatulence troublesome.

28th January, A.M.—Temperature 99°.5; pulse 80. A bad night. Severe pain in liver, to the right of the wound, which is increased by the flatulent condition. Three movements during the night, but no sleep.

P.M.—Temperature 100°.3; pulse 93. The day has been easier, though there is still pain.

29th January, A.M.—Temperature 99°.5; pulse 80. A good night's rest. 4 drachms of sulphate of magnesia early in the morning, followed by 2 drachms more at 2 P.M.

P.M.—Temperature 100°.6; pulse 100. No movement; an enema of glycerine to be given.

30th January, A.M.—Temperature 98°.4; pulse 74. Four large movements immediately after the glycerine; much gas escaped. Slept little. Ascending colon still distended.

P.M.—Temperature 100°.4; pulse 100.

31st January, A.M.—Temperature 98°.4; pulse 78. Brouchial catarrh troublesome all night. Gave a sedative mixture. Wound contracting quickly now.

P.M.—Temperature 99°.5; pulse 78. A glycerine enema brought away mucus only. The wound is slightly erythematous at upper part.

1st February, A.M.—Temperature 98°.6; pulse 76. Catarrh better. Slept five hours. Erythema round margin of wound less. Bowels distended and uncomfortable.

P.M.—Temperature 100°; pulse 90. Day fairly good. Discharge still profuse.

2nd February, A.M.—Temperature 99°.8; pulse 80. Night fairly good. Pain in neighbourhood of wound; erythematous blush still present. Took sulphate of magnesia early in the morning.

P.M.—Temperature 99°.6; pulse 94. No motion.

3rd February, A.M.—Temperature 98°.6; pulse 77. Had a good night.

P.M.—Temperature 99°.6; pulse 90. A second dose of sulphate of magnesia resulted in two movements and much gas. Patient's appetite is good, in spite of continued feverishness.

4th February, A.M.—Temperature 98°.4; pulse 80. A good night.

P.M.—Temperature 100°; pulse 96.

5th February, A.M.—Temperature 99°; pulse 80. No sleep, from pain in side and distension of bowels.

P.M.—Temperature 100°.4; pulse 92. Took sulphate of magnesia at 4 A.M., and had two liquid stools in forenoon.

6th February, A.M.—Temperature 99°.4; pulse 84. Night not good; very tired this morning.

P.M.—Temperature 101°; pulse 90. Pain all day over liver in mid-axillary line. 25 minims of nepenthe at bedtime.

7th February, A.M.—Temperature 100°.7; pulse 89. Pain in right hypochondrium all night, and a swelling externally at lower border of liver in mid-axillary line. *Pressure over this caused the rupture of a second abscess into the cavity of the old one*, and 2 ounces of pus escaped. A drainage tube was passed to the opening without difficulty, and the sac washed out.

P.M.—Temperature 100°.9; pulse 93. Patient slept a little during the day, and matter has been escaping freely.

8th February, A.M.—Temperature 99°.2; pulse 85. Patient had to take nepenthe at midnight to relieve spasmodic contractions of abdominal wall, which came on at three different times during the night. A little ulceration in progress at the lower edge of the wound, which is still erythematous.

9th February, A.M.—Temperature 98°.6; pulse 88. Slept little. Ulceration extending slightly. No result followed administration of glycerine enema.

P.M.—Temperature 99°.4; pulse 92. A good day. No movement.

10th February, A.M.—Temperature $98^{\circ}.4$; pulse 76. Passed a good night. Wound discharging freely.

P.M.—Temperature $98^{\circ}.6$; pulse 84. Powdered rhubarb at 6 P.M.

11th February, A.M.—Temperature $98^{\circ}.4$; pulse 75. Fair night. Still no motion.

P.M.—Temperature $98^{\circ}.4$; pulse 81. At 11 A.M. a glycerine enema produced a free movement. Ulceration at edge of wound less.

12th February, A.M.—Temperature $98^{\circ}.4$; pulse 72. Good night. Matter coming freely.

P.M.—Temperature $98^{\circ}.4$; pulse 78.

13th February, A.M.—Temperature $98^{\circ}.6$; pulse 68. A good night.

P.M.—Temperature $98^{\circ}.8$; pulse 72.

14th February, A.M.—Temperature $98^{\circ}.6$; pulse 68. Powdered rhubarb early this morning.

P.M.—Temperature $98^{\circ}.6$; pulse 86. A motion after midday.

15th February, A.M.—Temperature $98^{\circ}.4$; pulse 69. A good night.

P.M.—Temperature $98^{\circ}.4$; pulse 84. Day comfortable.

16th February, A.M.—Temperature $98^{\circ}.4$; pulse 68. A good night.

P.M.—Temperature $98^{\circ}.7$; pulse 76.

17th February, A.M.—Temperature $98^{\circ}.4$; pulse 69. Pressure over abscess expels about a teaspoonful of matter. PARKE, DAVIS, & Co.'s elixir of cascara, in small teaspoonful this morning, produced two movements in afternoon.

P.M.—Temperature $98^{\circ}.4$; pulse 81.

From the last entry the temperature has not risen above $98^{\circ}.5$, the patient has rapidly gained strength and a small teaspoonful of cascara elixir has ensured a daily motion. To-day (28th March) the wound is all but closed, and only a few drops of pus stain the dressing.

The diagnosis was doubtful for at least two weeks after the patient came under my care. The large doses of salicylate of soda may possibly have set up typhlitis, followed by localised inflammation of the liver. When first examined a certain amount of perihepatitis was present, but that seemed insufficient to account for the continued pain. The face did not indicate anything hepatic, nor was the conjunctiva stained, the greater part of the organ carrying on its functions, and there being no ducts of importance compressed. After the operation the spasms were very painful; they were produced by reflex contraction of the abdominal muscles compressing the liver: moving the drainage tube would at once bring them on.

The india-rubber drainage tubing was not so large as I should have liked, and there was no little trouble with it. In another case I shall certainly try metallic tubes, though it is doubtful whether, with the spasmodic contractions to which this patient was subject, a metallic tube could have been borne. After the operation the temperature fell, but did not become normal. The record is interesting as showing that abscess may be present with a very slight degree of fever. After the rupture of the second abscess, on 7th February, the normal was quickly regained. The pain also became less after the operation, but did not cease till after 7th February. The troublesome flatulence was partly due to a slight deficiency in bile and partly to the atonic state of the muscular walls of the intestines, which had existed before the patient became ill. He was not in the way of taking any exercise, and had suffered from constipation for years. The elixir of cascara of Messrs. PARKE, DAVIS, & Co. answered capitally, and seemed more reliable than the tincture previously used.

There were no deaths among foreigners during the period under review.

The number of Chinese attending the hospital for treatment was about the same as usual. There were for the year 5,475 patients, and of these over 1,000 in-door. Many of the

latter were admitted for some operation on the eyelids, and remained in for only a day or two. Influenza ran through the hospital, attacking both attendants and patients. It took the form of smart fever, with headache, etc., lasting four to seven days, and leaving the patient weak afterwards.

In October gangrenous erysipelas showed itself in an in-patient who had had amputation of the penis performed for epithelioma, and was about to leave. The disease showed itself in the left arm, and after a few days the patient succumbed.

A second case occurred four days after the first, in a patient suffering from callous ulcers of the leg, who was lying in another ward. Here the result was also bad.

All the patients were discharged at once, and the place was thoroughly cleaned, white-washed, and left empty for a month. Since then we have had no recurrence. It is difficult to prevent overcrowding at this season, so many coming whom treatment would much benefit.

DR. E. A. ALDRIDGE'S REPORT ON THE HEALTH OF ICHANG

For the Half-year ended 31st March 1891.

The following abstract is from the meteorological observations taken at the Custom House, Ichang (latitude, 30° 14' 25" N.; longitude, 111° 18' 34" E.):—

METEOROLOGICAL TABLE, October 1890 to March 1891.

MONTH.	THERMOMETER.				BAROMETER.		RAINFALL.	
	Highest.	Lowest.	Average Highest.	Average Lowest.	Highest.	Lowest.	No. of Days.	Quantity.
1890.	° F.	° F.	° F.	° F.	<i>Inches.</i>	<i>Inches.</i>		<i>Inches.</i>
October	91.0	49.2	79.0	56.9	30.32	29.93	1	0.23
November	76.8	39.8	68.5	50.4	30.44	29.85	4	1.21
December	61.0	27.2	53.7	43.0	30.56	29.71	9	1.68
1891.								
January	59.5	27.0	49.2	35.6	30.47	29.93	4	0.28
February	60.5	25.0	49.4	36.8	30.62	29.88	6	0.58
March	87.5	37.5	65.5	46.2	30.36	29.60	6	1.33

On analysing the above record it is found that the average temperature has been about 50° F., an extremely pleasant one for winter. This has been accompanied by an unusually dry season, the rainfall for the six months being only 5.31 inches, falling in 175 hours, making a total for the 12 months of 41.01 inches, which fell in 531 hours. The weather was mostly clear, fresh and bracing. The recession of the river left a beautiful, flat, sandy beach, about 300 yards broad and 2 miles long, allowing of good exercise without the necessity of having to meander among the thousands of tombs and paddy fields that are the immediate and uninviting surroundings of the city of Ichang. Many hard frosts were experienced; while the snow that fell melted almost at once on the ground, but was seen for days covering the tops of the mountains round. During the coldest days, even though the temperature could not be considered very low, the cold seemed most penetrating, and the amount of clothing one had to wear for comfort was astonishing.

Nasal and laryngeal catarrhs and rheumatism were frequent among foreigners, to which result the over-heating of the rooms by closed stoves—their houses not being provided with grates and fireplaces—no doubt contributed.

Fogs were absent, except on the river in the morning and evening.

Among foreigners there was one case of remittent fever, noticeable for the lengthy and intractable elevation of temperature, without any other serious symptoms. Recovery was most satisfactory.

A case of acute dysentery speedily yielded to treatment.

A middle-aged gentleman, of portly build, suffered from "lawn-tennis leg" on the first occasion of playing tennis for some time.

The characteristic sharp pain occurred, and his neighbour was at once accused of having struck him with a ball. There was great loss of power in the limb, and a painful, depressed spot was felt at the seat of rupture.

Two female children were born to foreigners.

A period of great mortality from malarial fevers among the native population lasted during the summer months, but came to an end in October.

There was an outbreak of whooping-cough in February, and several cases were attended. Pulmonary complications, from which death resulted in more than one instance, were more frequent than is generally noticed in that disease in China.

One case was followed by cancrum oris. The treatment was at once energetic, and fuming nitric acid was applied; but the child succumbed on the fourth day of the disease.

There was no return of the influenza, which, as recorded in my last Report,* was prevalent in Ichang during April of last year.

* Customs *Medical Reports*, xl, 5.

DR. A. SHARP DEANE'S REPORT ON THE HEALTH OF PAKHOI

For the Year ended 31st March 1891.

SINCE my last Report few cases of illness have to be recorded; the health, both of Chinese and foreigners, compares favourably with the previous 12 months. This may be accounted for in that there was a more even rainfall, and the temperature did not rise so high as during the preceding year, although the hot season was more protracted. Most rain fell at the proper season, not as in 1889, when the greater portion fell in August and September. In 1889, from 1st April to the end of July there was only 17.65 inches of rain, which, with a hot sun on light, sandy soil, almost amounts to a drought; during August, 30.23 inches, and from 1st September to the end of the year, 16.75 inches, were registered—making the total rainfall from 1st April to 31st December, 64.63 inches. Comparing these figures with those of 1890, the rainfall from 1st April to the 31st July was 38.05 inches; for August, 12.61 inches; and from 1st September to the 31st December, 6.66 inches—making for these nine months a total of 57.32 inches, against 64.63 inches during the same period in 1889. From this it will be seen that the rainfall for the nine months of 1889 exceeded the fall of the corresponding period of 1890 by 7.31 inches. But what is of the most vital importance to us here is not that the amount of rain in one year should be more or less than that of another, but that we should have an evenly distributed and sufficient quantity of rain between April and the end of July, as was the case in 1890, when rain fell during these four months to the extent of 38.05 inches, against 17.65 inches during the corresponding months of 1889.

EPIDEMICS.

A mild epidemic was experienced here during May. It lasted about three weeks, and affected Chinese exclusively. Out of a large number I saw 20 cases only, two of which were under my care. The symptoms and course of the disease were stated to be the same in all as in these two cases, namely:—

An intense feeling of malaise, followed by rigor; pain in the back, like that experienced at the commencement of small-pox, increasing in severity; very foul tongue; suffusion of the conjunctivæ; dryness of the inside of the nose; high fever; racking frontal, temporal and occipital headache, the pain extending down the back of the neck; general muscular pains; scanty excretion of urine; constipation; great restlessness and loss of sleep. The climax of the affection was reached about the fifth or sixth day. As a rule, after the seventh day the symptoms gradually subsided, leaving the sufferers very weak, and some of them with a bad cough (bronchitis?).

The mortality in this epidemic was small; I heard of but four deaths, and these were said to have been due to lung complications.

The temperature of the two cases above referred to began to rise from the first onset of the disease, and during its course, on about the fifth day, reached 103° in one case and 104°·5 in the other. Beyond a dose of compound powder of jalap with calomel, as a purge, no other medicine was given until convalescence was established, and then a tonic was prescribed. Both cases were in their usual health within a month from the commencement of the attack.

Bubonic plague, mentioned in my last Report as having broken out at Lungchow,* disappeared in April, after a heavy fall of rain. No cases occurred at this port during the year.

The Chinese are of opinion that bubonic plague emanates from the ground, and is favoured by a long continuance of dry weather, when the earth becomes porous and numerous fissures appear on the surface, facilitating the escape of whatever causes the disease. Heavy rain, they say, prevents the occurrence of plague; or if it is already among them, a downpour of two or three days' duration will cause it to cease.

DYSENTERY.

Among foreigners, at the end of October one case of dysentery was treated, which, however, I do not consider was of local origin, as the symptoms appeared in the patient, who was not feeling well previous to landing, only a few days after arrival from a Yangtze port. A very similar case occurred here some years ago in a patient who had resided on the Yangtze for some years, and who, almost immediately on arrival, developed symptoms of dysentery.

In the following table the temperature is taken according to the rules laid down at the Hongkong Observatory:—

METEOROLOGICAL TABLE, April 1890 to March 1891. (Latitude, 21° 29' N.; longitude, 109° 6' E.)

MONTH.	THERMOMETER.			RAINFALL.	MONTH.	THERMOMETER.			RAINFALL.
	Highest.	Lowest.	Mean.			Highest.	Lowest.	Mean.	
1890.	° F.	° F.	° F.	Inches.	1890.	° F.	° F.	° F.	Inches.
April.....	91	59	79.0	4.57	November.....	82	55	67.5	0.70
May.....	96	67	84.0	9.48	December.....	81	52	68.0	2.36
June.....	95	75	84.5	10.81	1891.				
July.....	93	72	88.0	13.19	January.....	79	51	67.0	2.08
August.....	93	71	89.0	12.61	February.....	80	42	58.0	2.69
September.....	92	62	74.0	3.20	March.....	85	52	63.5	2.62
October.....	90	63	75.5	0.40					

* Customs *Medical Reports*, xxxviii and xxxix, 15.

DR. W. WYKEHAM MYERS'S REPORT ON THE HEALTH OF TAINAN

For the Two Years ended 31st March 1891.

THE topographical and climatic attributes of this port having been fully described in previous Reports, it is very difficult, in view of the extremely small community settled here, to find material for other than a bare repetition of nosological details which neither from a professional nor a general point of view would seem to be of sufficient interest to warrant more than the recital which has already been amply given.

During the period under review but one death has taken place, and that was from advanced pulmonary and laryngeal phthisis.

The patient was sent here in a very desperate condition, necessarily more with the hope of alleviating his suffering than from any prospect of permanent recovery. As always happens, however, the further deposit of tubercle was arrested almost from the time of his arrival, and, to the surprise of everyone, not even excepting himself, life was prolonged for three years, and passed in a state of comfort that contrasted most favourably with his condition before coming to Tainan. Though specific bacilli were never absent from the sputum, still their numbers began to diminish from an early date, and towards the last were reduced very considerably.

I have already and repeatedly pointed out this peculiar and beneficial local effect on tubercular disease, and can only reiterate my firm conviction that were this fact more generally known, consumptives would gladly come here, if only for the relief from distressing symptoms which is so surely afforded by residence within this area.

We have not observed in South Formosa any phenomenal climatic change within the past two years, and I am therefore unable to supply the information called for under this heading.

We have been singularly free from all epidemics, and, as far as I know, no cases of influenza have been met with.

There have been three births during the time reported on, none of which, however, call for any further notice.

Residence at Anping having of late years become much more common than it used to be, cases of pernicious malarial infection are necessarily of more frequent occurrence than formerly; but a run to Takow or elsewhere generally modifies or does away with permanent bad effects, even from this cause, and I am happy to say that the health of the community, as a whole, has been very good.

There have been two cases of insolation. In one the sequent debility and general nervous symptoms were so protracted that the patient had to leave the island for three months on a trip to Japan. Though not quite up to his previous form, he has returned very much improved, and will, no doubt, soon be quite well again.

DR. W. A. HENDERSON'S REPORT ON THE HEALTH OF CHEFOO

For the Half-year ended 31st March 1891.

DURING the cold season Chefoo has but little relationship to pathology. Dry, bracing atmosphere, blue skies, a powerful sun that from 11 A.M. to 3 P.M. melts the skater's ice, just enough frost to prevent rain, are not the conditions favourable to the development of infectious disease. Yet the foreign Settlement, being situated on the fringe of a large native population, is liable to all the epidemics which visit the latter. Hence, for the last two winters foreigners have suffered from the influenza which has been prevalent among the natives. Last winter it appeared in November, and continued till January, the larger number of cases occurring in January. Few houses were left unvisited.

The character of the complaint was much the same as in Europe: generally, three days' fever, accompanied and followed by great prostration and by derangement of the respiratory and intestinal tracts. When due care was not taken, relapse occurred. In one case it was very severe; soon, pulmonary abscess became manifest. Boracic acid (10 grains three times daily) was administered, and in less than a week evacuation was complete, and the discharge, which had been copious and characteristic of sphacelus, ceased.

While influenza has attacked one or two individuals in most households, I have found that another form of epidemic poison had infected every person that I have examined, with the exception of one. This affection took the form of herpetic tonsillitis, which, according to Dr. SQUIRE,* is regarded by TROUSSEAU as a form of sporadic influenza. My first case occurred on the 24th November, and presented the following symptoms:—

The maximum afternoon temperature for the first week was from 102° to 103°; second week, from 101° to 102°; third week, from 100° to 101°; fourth week, 100°—there being in all a month's fever. The fall in the morning was from 1° to 1½°. On the first day of fever there was headache and sore throat, after which no pain in either region; very irritating cough during first 10 days; further, no discomfort. From the first the pharynx generally, but the soft palate especially, was studded with large herpetic vesicles; while the fever subsided the throat persisted.

On 31st March the patient was in the same condition of throat. The soft palate was then thickly studded with vesicles, and from each vesicle proceeded a dilated vein. On the tonsils and posterior wall of the pharynx, which were formerly covered by a crop of vesicles, there were continuous patches of congestion, denuded of their epithelium.

The appearance is similar, as far as those regions are concerned, to the case of sprue described by Dr. THIN.† In fact, I have at present a case of sprue, contracted in the south, the pharyngeal aspect of which is identical with some of the cases of herpes tonsillitis in Chefoo.

In the middle of February some children were attacked by the complaint.

* *Lancet*, 16th August 1890.

† *British Medical Journal*, 14th June 1890.

One child had a week's fever; before she had recovered, another had it for two days. When they recovered from the fever the youngest got it, and for a fortnight had a nightly rise of temperature, which was normal during the day. All the throats were similarly affected, but in a less degree than in the father. The eldest boy then had the throat symptoms, but no fever.

A similar outbreak occurred in another household, and I then thought of the milk. Upon the udders of three cows I found vesicles. The dairyman declared that such vesicles were not uncommon during the first two months after calving; so frequent were they, he said, that the term of duration had never been watched. Four days afterwards I found that the vesicles had dried up.

I then made a visitation among the residents, and found that no throat had escaped, as mentioned. None, however, had the eruption so extensively as the first case. In this the vesicles were of the largest size of herpetic vesicle. In some they were very minute, and limited to small patches on the anterior pillars of the fauces. Between these two extremes were all degrees of development; frequently the whole of the soft palate was involved. In one family of six children two had two days' fever, the mother had one day of fever, with stiff neck. In two other families a similar proportion had fever; but as a rule there is no fever, and seldom local discomfort.

Dr. DOUTHWAITE had one boy patient with a week's fever, the afternoon temperature reaching 105° , and, besides the inflamed throat, the chest was overspread with erythema, and a few petechiæ on the wrists.

A number of Chinese examined had also the throat trouble. In a few there was high fever, with great prostration, but no deaths have been heard of.

This affection is not limited to Chefoo. Five patients from Mid-China lately consulted me for other troubles, but each, unknown to himself, had the throat eruption, there being no accompanying discomfort. These facts indicate the widespread character of the epidemic. It is interesting to notice that Surgeon D. M. MOIR, in his paper on Malaria and Influenza,* enumerates congestion of tonsils and fauces among characteristic symptoms, but makes no mention of herpes.

The duration of this affection will be interesting to observe, as it shows no signs of waning, and, according to Dr. STEPHEN MACKENZIE, it is not a condition to be lightly regarded, as he has known it to lead to œdema of the glottis.

* *Indian Medical Gazette*, December 1890.

for the former month was 83° (20th), the minimum, 39° (30th). Winter may be said to have begun in November. The maximum of 73° was registered on the 8th, and the minimum of 29° on the 14th. Except during the last week, hardly any rain fell, and this relative prevalence of dry weather lasted throughout the winter. Thus there was hardly any rain in December; in January 1890 only a few showery days in the latter half of the month; three wet days and a few showery ones in February; and four wet days, besides a few showers, in March. The absence of rain does not imply that the air was dry; on the contrary, the unusually high mean temperature through the season kept a very large quantity of watery vapour in suspension. December was mild to the 11th, when, on the 12th, there was a sudden fall to 34° . The maximum temperature (51°) was registered on the 11th, the minimum (23°) on the 13th. The maxima for January (11th), February (14th) and March (18th) were, respectively, 60° , 68° and 63° . The corresponding minima were, for January (6th), 26° ; February (11th), 30° ; and March (5th), 27° . These figures, however, give only an imperfect idea of the prevailing temperature of the season, which can be more accurately estimated from the facts that in January and March the mercury never fell to freezing-point between 9 A.M. and 9 P.M., and that in February 32° and below were registered on only five days, while the mercury never touched freezing-point between 9 A.M. and midnight. Freezing-point was not reached after the 13th March.

After the exceptionally mild winter just described, the weather throughout the summer of 1890 was unusually calm. A severe storm occurred on the 24th April; on the 14th and 17th July strong winds at Shanghai indicated the neighbourhood of typhoons on the coast; and September was boisterous without any distinct storm. May, June and August were perfectly calm. A very slight shock of earthquake was registered at Zikawei during the morning of the 3rd June, but little notice, if any, was taken of it in the Settlements. The season presented nothing unusual as regards rainfall. April was showery throughout, with short heavy downpours on the 21st and 24th. May began and ended with rain, but the intermediate four weeks were, except for a few momentary showers, perfectly dry. June was rainy from beginning to end, with heavy downfalls on the 9th, 17th and 18th. A like description applies to July and August, two days' heavy rain occurring in each month. After the 3rd, September was perfectly dry. But whatever has to be said about health as influenced by meteorological conditions, the impression of comfort or discomfort left by a Shanghai summer depends far more upon the prevailing temperature, and especially upon the night temperature, than upon anything else. April, May and June were very variable as regards heat. A few hot days occurred in each month, but during the first half of June there were some days which were almost wintry. The maximum temperature registered in April was 84° (19th); in May, 90° (19th); in June, 97° (30th). The corresponding minima were, for April, 38° (5th); for May, 48° (5th); and for June, 60° (2nd and 3rd). July was a month of suffocating nights, the temperature after midnight oscillating about 81° . The maximum (97°) was reached on the 1st, the minimum (72°) on the 30th. August, though very hot, was much more tolerable, the night temperature never having exceeded 82° , which it reached only once; the maximum for the month was 95° (18th), the minimum, 66° (31st). September was mild; a few very cold days in the last week seemed to promise an early autumn, but the month closed in the midst of unusual heat; the maximum temperature recorded was 87° (30th), the minimum, 53° (25th).

The autumn of 1890 began in the last week of October. Strong winds prevailed from December 1890 to March 1891, October and November having been calm, with the exception of two heavy blows on the 11th and 29th November. There were, however, no great atmospheric disturbances, except on the 26th February, which was marked by two violent thunderstorms. The winter was unusually dry. Hardly any rain fell in October and November; December, January and March were showery, with but slight rainfall; and February would have been classed as dry but for heavy falls of rain on the 4th, 26th and 27th. Cold weather did not set in until the 31st December. The first frost of the season occurred on the 13th November, and was the only frost for that month. In December there were only four days (14th, 16th, 30th and 31st) on which the mercury fell to freezing-point. January 1891 was very variable as to temperature, but was, on the whole, mild until the 31st, when the maximum reached was $31^{\circ}5$, the minimum being 29° . February was mild; there was no frost after the 20th. In March frost was registered on four days only; the weather was, however, cold to the 25th, when spring began. For October 1890 the maximum was 80° (1st), the minimum, 39° (27th); for November, maximum, 73° (28th), minimum, 30° (13th); for December, maximum, 66° (27th), minimum, 23° (31st); for January 1891, maximum, 63° (29th), minimum, 19° (16th—this was the coldest day of the season); for February, maximum, 72° (22nd), minimum, 22° (12th); for March, maximum, 79° (31st), minimum, 29° (11th).

During the summer months of 1889 the mortality among foreigners was singularly low. Cholera appeared early, caused one death in June, and then practically passed out of sight. The information that can be gathered about disease among natives is always vague and unreliable, and false in detail. But it was at least possible to ascertain that no fatal epidemic visited Shanghai or its neighbourhood, characterised by the more prominent symptoms of cholera. And although diarrhœa was prevalent among foreigners, as, in fact, it always is in late spring and summer, there was little or none of the "choleraic diarrhœa" which is separated only in degree from genuine cholera, and which usually, if not always, precedes and accompanies an epidemic of the latter. It may therefore be fairly a matter of doubt whether true cholera was really lighted up or not. I say "lighted up," and not "introduced" or "imported," for there can be no doubt that we are now, and probably have been for many years, quite competent to manufacture our own cholera. Supposing that the disease is dependent on the activity of special germs, the mode of preservation of those germs from one period of cholera prevalence to the next is a question not only of great interest theoretically, but of vast importance practically. We may attribute extraordinary tenacity of life to them, and assume that their functions are held in complete abeyance by the absence of certain unknown conditions, meteorological or other; or we may as reasonably, perhaps more reasonably, hold that when once domiciled and acclimatised in a locality they are always more or less active, so far as reproduction is concerned, but at the same time susceptible of such temporary modifications in correspondence with their environment as for the time being modify their virulence and restrain the complete exhibition of their powers. Under this latter supposition many diarrhœas, classed as simple and running a favourable course, may be cholera in disguise. It is certain, however, that no attempt to exterminate cholera germs or any other germs can possibly succeed except by accident, and that such accident is extremely unlikely to occur. Hence the only directions in which efforts to arrest

or limit epidemic or endemic disease have any chance of being successful are two, namely, (1) investigation of the biology, physiology and pathology of specific germs themselves, which, if thoroughly carried out, may reveal the conditions most unfavourable to their life or special activity, or most favourable to their modification and retention in a modified and more or less harmless form; and (2) practical application of the law arrived at empirically thousands of years ago—that free access of light, rapid and thorough circulation of air, scrupulous cleanliness, attention to general health, and, in a word, all that is included in the expression “hygiene of the body and environment,” produce a condition of things eminently unfavourable to the development of virulence in the, by supposition, ever-present elements of contagious diseases.

Dysentery and diarrhoea were neither severe nor widespread. On the other hand, the eruptive fevers occupied a very important place in the morbidity of the foreign community. There was an epidemic of measles. Nine or ten cases of scarlet fever are known to have occurred, with two deaths. Small-pox, without being of unusual prevalence or severity, was present far on into summer, causing a death in July, and many cases of varicella were observed among children. Along with this group of eruptive fevers I place, for reasons which will immediately be obvious, the various forms of “sore throat.” For many years after the foreign Settlements of Shanghai had assumed, with respect to family life, the appearance and dimensions of a small European city, we were almost entirely free from the presence of the eruptive fevers, with the exception of small-pox, which is not an infantile malady. When there were no children, or very few, there was naturally no prevalence of infantile diseases, and even after children multiplied some time was required before these diseases established themselves. But their establishment was necessarily only a question of time, for in the first place, although even now we know hardly anything about the nature and prevalence of disease at any given time among the natives, we have always had indications that none of the forms of eruptive fever, including diphtheria, are absent from among them. This being so, it was clear, in the next place, that the unrestricted communication between native families of the lowest class and foreign families by means of servants, the rapid closing in of native dwellings round and between foreign houses, the dense overcrowding of the former, their unimaginable filth, the lack of any knowledge or any care on the part of natives with regard to the isolation of cases of contagious disease or the removal of the dead, must in time make foreigners sharers in every form of malady which at any given period might visit the natives epidemically. To enforce this *à priori*, but perfectly unassailable, reasoning, two circumstances brought their support. One was the occasional but rare occurrence of cases of eruptive fever: measles at first, soon with its invariable concomitant of whooping-cough, which speedily became endemic; then varicella, which, in forms of greater or less severity, is now seldom absent; parotitis and scarlet fever, which have as yet hardly acquired rights of citizenship, but soon will; and lastly, but very rarely, true diphtheria. The second, the importance of which has not yet been proved, is the rapidly increasing frequency of throat affections: catarrhal tonsillitis and pharyngitis, follicular tonsillitis, ulcerative tonsillitis, the peculiarity of these affections lying in this—that they are oftener than they ought to be accompanied by swelling and tenderness of the cervical glands, by apparently disproportionate febrile reaction, by ill-defined eruptions on the skin, and by a marked tendency to exudation. This exudation may frequently be completely removed in small fragments by gentle swabbing, leaving the mucous membrane beneath

congested but intact. But it is often more tenacious and adherent. These seem to be indications that the time is not far distant when scarlet fever and diphtheria will lose their present character of interesting rarities in Shanghai and become fatally familiar.

Judging by my own case books, I may safely say that typhoid fever was by no means common. Only two deaths occurred, both patients being non-residents. On the other hand, cases of malarious fever were constantly cropping up, and it will be observed that five deaths are attributed to the various forms of the disease. Several cases of pneumonia (almost unknown among foreigners in Shanghai a few years ago) were under treatment, but only two deaths (one in an infant) are recorded. Excessively high temperature in June, July and August sufficiently explains why a very large number of cases of heat malaise (with three deaths from heat apoplexy), congestion of the liver, obstinate dyspepsia, and menorrhagia swelled the sick lists of private practitioners.

The following table, in which the deaths of foreigners from April to December 1889 are tabulated, shows with sufficient clearness that the year, though, on the whole, an unhealthy one, was, as respects mortality, by no means unfavourable:—

DEATHS OF FOREIGNERS during the Months April to December 1889.

CAUSE OF DEATH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Small-pox	1†	...	...	...	...	...	1
Scarlet fever	1	...	...	1†	...	...	...	2
Enteric fever	1*	1*	...	1	...	...	3
Malarial fever	1†	...	...	1 1†	1†	1	...	...	...	5
Beri-beri	1	...	...	...	...	...	...	...	1
General tuberculosis	1†	1†	...	...	1†	...	...	...	3
Whooping-cough	1†	...	...	...	...	1
Cholera	1*	...	...	...	...	...	...	1
Phthisis	1	...	...	1	...	1*	3
Pneumonia	1†	...	...	...	1*	...	...	...	...	2
Congestion of the lungs	1†	1
Abscess of the lung	1	...	...	...	...	1
Asphyxia neonatorum	1†	...	...	...	1
Laryngitis	1†	1
Disease of the heart	1	...	...	...	...	1	2	...	...	4
Aneurism	1*	...	...	1	1	...	...	...	3
Dysentery	1*	1 1*	...	...	1*	4
Chronic diarrhoea	1*	...	...	1
Cirrhosis of the liver	1	...	...	1
Abscess of the liver	1	...	...	...	...	...	...	...	...	1
Perityphlitis	1	...	...	1
Peritonitis	1*	...	...	1	...	...	...	...	...	2
Cirrhosis of the kidneys	1	1
Meningitis	1	1†	1*	...	...	...	2
Apoplexy	1	...	...	...	...	1*	2
Heat apoplexy	2 1*	...	...	...	...	...	3
Cerebro-spinal sclerosis	1	...	...	...	1
Alcoholism	1	1	...	...	...	...	...	...	2
Convulsions	1†	1†	...	...	...	2
Debility	2†	...	...	...	2
Accidental poisoning	1	...	1
Laceration of the brain	1	...	1
Drowned	1*	...	...	...	...	...	1*	...	2
Suicide	1	...	...	...	...	...	...	1
Not certified	1* 1†	...	...	...	...	...	1*	...	...	3
TOTAL	7	5	5	10	9	13	8	3	6	66

* Non-residents.

† Children.

Malarial fevers, which, as I have said, were observed with unusual frequency during the summer of 1889, continued to prevail throughout the subsequent winter. No deaths, however, were recorded. I may note, as a rather curious circumstance, that during the six months I had in my own practice four cases of quartan ague, a form which, so far as my experience goes, is extremely rare here. Three deaths (two among residents—one in October 1889 and one in January 1890) are attributed to typhoid fever. 28 cases of this disease (or 6.51 per cent. of all admissions) were treated in the Shanghai General Hospital in 1889, with a mortality of 4 (or 14.30 per cent.). The number of cases under observation was certainly larger than during summer, but the type was mild, as, indeed, may be inferred from the trivial mortality. Diarrhœa, dysentery and dysenteric diarrhœa occurred with great frequency, and, along with an unusually wide prevalence of pulmonary affections and of eruptive fevers, rendered the winter season distinctly unhealthy. Bronchitis was widespread, and several cases of pneumonia came under observation. Personally I found that in the majority of the cases of pneumonia treated by me both lungs were affected, but this may have been a mere chance experience. Many patients were supposed, and supposed themselves, to be attacked by "influenza," but for my own part I was unable in any instance to discover a difference between the symptoms described and those which at times when influenza is not the fashion would be grouped under the vulgar name of a "feverish cold." It is worth noticing that although true influenza, as described by observers in Europe and America, is very frequently followed by distressing and even dangerous sequelæ, the affection which went by that name in Shanghai, when once recovered from, left no traces behind it. The same prevalence of menacing throat inflammations was observed in the winter half-year as had been observed in summer. There was, however, no death from either diphtheria or scarlet fever.

The eruptive fevers were, as I learn from native sources, unusually severe and widespread among the Chinese during the winter of 1889-90. Small-pox was in a vague way described as a pestilence. Foreigners did not suffer severely from this disease, only one death (in March 1890) having occurred. Varicella, in many instances of a type that might almost be described as virulent, prevailed among children, especially after the first week of December 1889.

One case in particular which came under my observation would, I am convinced, but for external and accidental circumstances, have been at one moment mistaken for small-pox. The patient was a girl, 11 years old. She and her sister, a child of 10, had been successfully re-vaccinated two months previously. The younger child took a mild attack of varicella, with successive crops of clear vesicles, with hardly any febrile reaction and no involvement of the mucous membranes. The elder child was attacked a week later, but was not seen until the third day of the eruption, when the face, scalp, body and extremities were covered with a vesicular eruption, and the temperature was continuously above 103° day and night. There were 10 or 12 vesicles on the hard and soft palate and fauces, and dysphagia was very distressing. Here and there the base of a vesicle was hard and surrounded by a slight areola. The characteristic odour of small-pox was, however, wanting. The eruption became pustular a couple of days later, but only in places exposed to friction. The vesicles which were not interfered with dried up, and where scabs formed, and in process of time fell, the cicatrices were superficial and disappeared in a few weeks.

Measles was infrequent until January 1890, in which month and later several adults were attacked as well as a multitude of children. Many, if not most, of the adults seen by me had a history of ordinary home measles in childhood.

Simultaneously with measles, rōtheln and whooping-cough made their appearance, according to the general rule. Rōtheln occurred with great frequency in February, characterised by an invasion period of general malaise and sore throat, followed by patches of roseolar eruption, slight coryza and lachrymation, and finely furfuraceous or altogether invisible desquamation. The temperature in these cases is almost always, if not always, high out of all proportion to the importance of the disease, 105° F. being commonly enough observed in very young children.

The supervision exerted by the Municipal Councils over butchers, milk-sellers, dairy-keepers and publicans is no doubt productive of much good to foreigners; but the belief, if it exists, that any precautions taken by a public body so limited in its powers as is the Municipal Council can "render the occurrence of cholera or any other disease in an epidemic form almost impossible" is a pure delusion. We cannot protect the Chinese against themselves; the most we can do is, by personal and domestic care, to protect ourselves against them. Powers to compel notification of contagious disease and of death, to enforce disinfection, and to prevent overcrowding in native tenements are all wanting, and, until they are obtained, efforts to secure hygienic conditions among the Chinese in our midst must remain largely fruitless. Meanwhile a good deal of money is being annually wasted on "disinfectants," which, in the quantities used, do not disinfect, but are simply deodorants. Careful scavenging and the liberal use of water under pressure, and of lime, are the only effectual and non-destructive measures which can be applied on a large scale to the disinfection (which is really only the cleaning under a more thorough and elaborate form) of native houses, courts and alley-ways. One great advantage of the acquisition of the waterworks by the Council would be the possibility of preventing the use of the river and creeks as sources of native water supply. No doubt year by year more and more pipe water is used by the Chinese; but there is still, at any given moment, an immense store of river and creek water in *kang* in native houses and yards, nominally undergoing the alum-precipitation process, but really, in addition, taking up inert and dangerous impurities, besides, in all probability, maturing the organic impurities which it contained when drawn. It is a mistake to believe that a Chinaman drinks nothing but tea or boiled water. To say nothing of the great consumption of ices by natives in summer, or of the quantity of pond ice eaten, a thirsty Chinese, who cannot at the moment provide himself with tea, and finds reasonably clean water under his hand, will drink the water without once thinking about its intimate purity.

How important the supervision of native taverns is may be judged from the following extract from the *North-China Daily News* of the 12th February 1890. This case was, happily, detected, but there can be no doubt that it is representative of a large number which escape notice, and which would, if discovered, explain many of the obscure affections for which foreign sailors are brought under medical observation.

At the Mixed Court, on the 8th February, the keeper of a native tavern was fined \$10 for selling foreign liquor—gin—to a sailor. The gin was so strong that when a drop of it was put on a brass dollar, the coin turned green. The stuff was sold at the rate of 30 cash for a glass about half the size of an ordinary tumbler.

This casts into the shade the "Hongkew gin" which, many years ago, I announced as an excellent liniment for ponies suffering from strains, and about which I was subjected to much good-natured ridicule in the newspapers and elsewhere.

Among the diseases of the summer months of 1890 cholera was predominant, its visitation, so far as foreigners were concerned, being almost exactly limited to August and September. Already, however, in July many cases of cholera and of severe choleraic diarrhœa had been admitted to the hospitals for Chinese, and the native employés of St. Luke's Hospital reported at that time that the mortality among the natives was excessive, cases of sudden collapse, with or without vomiting and diarrhœa, occurring with frequency in every quarter of the Settlements. The first death registered from this cause occurred on the 2nd August, the last on the 29th September. 18 cases were fatal among residents and 14 among non-residents. The degree of fatality of the disease may be judged from the fact that out of 27 cases admitted to the General Hospital 17 died, the per-centage (62.96) being below the average in Shanghai. During the prevalence of cholera here the disease raged like a pestilence in Japan. As usual during a season in which cholera is widespread, affections of the bowels of every degree of severity came under observation with great frequency. Diarrhœa was exceedingly prevalent in August, both the simple form and one of so much severity that it might be qualified as choleraic. Many cases of dysentery likewise occurred, and, in my experience, were unusually obstinate. Few will now be found to deny that genuine cholera is a disease of specific character, breeding true from a specific germ, although all the symptoms, whether taken singly or grouped in any imaginable fashion, may be found in other affections having no relation whatsoever to cholera. It may, of course, be assumed that the causes of these affections have the power of exerting such a modifying influence on certain bacterial forms always present in the intestinal tract, and generally innocuous, as to transform them into organisms identical with, or closely allied in properties and functions to, those which produce the toxine or toxines of cholera. No direct observations have, however, been recorded in support of any such theory, which, if it were proved, would cast a very important light on a region of pathology which is at present plunged in darkness. It is, at any rate, certain that when cholera flourishes it does so not only in consequence of a possibly enhanced virulence of its germ, acquired in virtue of hitherto unknown conditions, but also in consequence of an epidemic constitution, likewise depending on unknown conditions, but manifesting itself by a previous and contemporaneous prevalence of catarrhal bowel affections. Here, too, it may be said that these affections are, for a great part, cholera in disguise, and there exist, in fact, observations to support this view. But there remains a remnant which cannot be so explained, but which becomes intelligible on the assumption of some conditions, meteorological or other, specially favourable to the development of all the causes productive of intestinal fluxes.

During this cholera season the type of disease showed some deviation from the usual standard. Thus, for example, there were cases which, after apparent convalescence, terminated fatally from suppression of urine. Of these, while none, so far as I know, were absolutely sudden, some were extremely rapid when once suppression occurred. Others assumed a more chronic form, lasting from three to ten days, with uræmic symptoms. There was at least one case in which fatal dysentery swiftly supervened on cholera, and more than one marked by cerebral symptoms with violent delirium.

Apart from phthisis (three cases), only one death occurred from disease of the chest. Pulmonary affections were, in fact, infrequent and mild during this summer. There was, however, the same prevalence of sore throats of all kinds and degrees, which has been so often noted.

Of the fevers, typhoid and malarial fevers were remarkably infrequent. Simple catarrhal fever, or "influenza," was of common occurrence, but as no death was attributed to it, it may be assumed that the affection is not very formidable. Its peculiarity appears to lie in the nervous prostration it induces, which is out of all proportion to the degree of fever or to the severity of the muscular pains and bronchitis which, apart from the prostration, are the only important symptoms. Measles and whooping-cough occurred, but with no great frequency, among children. There were many cases of varicella, and small-pox caused two deaths in April 1890, one occurring in the person of a resident.

The following table completes the statistics of deaths up to the 31st December 1890:—

DEATHS of FOREIGNERS during the Year 1890.

CAUSE OF DEATH.	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.	JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	TOTAL.
Small-pox	1†	1 1†	...	...	...	...	...	1*	...	...	4
Typhus fever	1†	...	...	...	...	...	1
"Fever" and enteric fever..	1 1†	...	...	...	...	...	...	1†	1	...	1	...	5
Malarial fever	1*	...	...	...	...	...	1†	...	2
Cholera	10 3* 6†	6 4*	...	...	...	34
Influenza	1†	...	1
Diphtheria	1†	...	...	...	...	1†	2
Syphilis	1	1*	...	...	...	...	2
Cancer	2	...	1	...	...	3
Diabetes	1	...	...	...	...	...	...	1
Bright's disease	1	...	1	...	1	...	...	...	...	...	...	...	3
Phthisis	2	...	1	...	1	...	...	1*	...	...	1	1	7
Tubercular enteritis	1*	...	...	...	...	...	...	...	...	1
Meningitis	1†	...	...	...	...	...	...	1*	...	...	...	...	5
Convulsions	1†	...	...	...	...	...	...	...	1†	...	1
Cerebro-spinal sclerosis	1	...	...	...	...	...	...	...	...	...	...	...	1
General paralysis	1	...	...	...	1
Heat apoplexy	1	1†	...	...	...	...	2
Apoplexy	1*	...	...	...	...	...	...	...	1	...	2
Hemiplegia	1*	...	...	...	...	...	...	...	...	...	...	1
Locomotor ataxy	1	...	...	1
Disease of the heart	1†	...	...	...	...	...	1	...	...	2
Heart failure and syncope...	1*	...	...	...	1	...	1†	...	1	...	4
Aneurism	1*	...	...	...	...	...	1	...	...	...	...	2
Bronchitis	1	...	...	...	1*	2
Pulmonary embolism	1	...	...	...	...	...	...	1
Peritonitis	1	...	...	...	...	1	...	2
Intestinal obstruction	1	...	...	...	...	...	...	...	...	1
Enteritis and gastro-enteritis	1 1†	...	...	...	...	2
Diarrhoea	1	...	...	...	...	...	...	...	...	1
Dysentery	2 1*	1	...	...	...	4
Cirrhosis of the liver	1*	...	...	...	...	1
Abscess of the liver	1	...	1	...	...	1*	...	...	...	3
Icterus neonatorum	1†	...	...	...	...	1
Sclerema	1†	...	...	...	...	...	...	1
Injuries	2*	...	...	1†	...	...	...	...	...	...	...	3
Drowned	1*	1 2*	...	...	1*	...	...	5
Not certified	1	...	...	...	1 1†	...	1†	1*	...	1*	1 1*	...	8
TOTAL	8	4	6	7	6	6	9	41	16	7	10	3	123

* Not resident (35).

† Children (28).

There was no fatal case of cholera in the winter season 1890-91. Why the disease should have been suddenly arrested at the end of September is a question to which no answer is at present ready. The weather did not become cold until the last week of October, which month, although extremely dry, was no drier than September. September, it is true, was very stormy throughout, while October was remarkably free from atmospheric disturbances, and this was the only difference which existed between the two months in respect of the more obvious meteorological conditions. Diarrhoea, dysentery and dysenteric diarrhoea were observed, but exhibited no severity, only one death being registered during the half-year from these affections. On the other hand, there was a very wide prevalence of bronchitis, and several cases of pneumonia (three fatal) were under treatment. Roughly, it may be said that there is a sort of equilibrium established in any given season between affections of the respiratory and those of the intestinal tract. When either group enters into activity, the other is more or less in abeyance. Tonsillitis of varying degrees of severity was always well in evidence, and several cases of parotitis occurred, especially in January, though there was nothing that could be qualified as an epidemic of mumps.

Two cases of severe sun malaise came under my notice at the end of March 1891, when, although the temperature was by no means excessive, the direct impact of the sun's rays was, as is often the case even in December, especially trying. When such instances occur there is probably some associated atmospheric state or some widespread, though probably trivial, epidemic constitution which, if known, would explain the difference which exists between the effects of exposure to the sun at different times under conditions of elevation, temperature and clearness of the air which are apparently identical.

The eruptive fevers prevailed throughout the six months. Small-pox caused three deaths—one in October 1890, two in January and one in February 1891,—and several cases of the disease among residents and non-residents were treated in hospital or elsewhere.

Two cases occurred among the members of the out-door staff of the Customs in February. Both patients had been searching native baggage a few days before they fell ill. Both bore good vaccination marks, and both recovered.

Measles is now seldom absent from the Settlements. Many children suffered from it or from varicella, which, though frequent, was not epidemic, during the latter half of the season. Catarrhal fever was likewise very prevalent. Typhoid fell lightly, only one case having proved fatal among residents and one among non-residents. On the other hand, malarial fevers were constantly present, and it again happened that a few cases of the unusual quartan form came under my care. No doubt I had not the monopoly of them.

In October I observed a curious form of fever which puzzled me then, and puzzles me still. In my practice it occurred in only two families, living in the same house and presumably under the same conditions as regards contact with the Chinese; they may therefore be considered as forming one group. I saw, however, two Chinese families through which the disease was running, and I was informed that a multitude of natives were affected in the same way.

The onset of the affection was in all cases sudden, with violent headache and vomiting, quickly followed by a scarlet suffusion, without definite spots, of the whole skin, and invincible drowsiness. In one of the two families referred to the mother was first attacked—18th October,—one child on the 19th,

two children on the 20th, one child on the 21st, one child and two amahs on the 22nd. The father thought himself threatened, but saturated himself with quinine, and suffered only from headache and vomiting. The mucous membranes were not affected, but in all the cases there was a profuse flow of limpid urine during the entire illness. After 48 hours, eruption and fever disappeared, and then cough with slight sore throat supervened. The highest temperature registered was $103^{\circ}.2$ in adults, and $105^{\circ}.4$ in children.

At the same time I observed, chiefly among children, a great number of cases of two-days' fever, apparently very contagious, accompanied by tonsillitis, pharyngitis and cough. This was generally dignified with the name of influenza, but bore no resemblance to that disease. The fever rose to 104° or 105° , but there was no rash. Let alone, or treated with quinine or anything else, the fever fell after 48 hours, and convalescence was rapid. Seeing it at first among children only, I was inclined to attribute it to errors of diet, but this was a mistake.

The two affections thus briefly described were evidently closely allied forms of some single malady.

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