

EAST AFR. PROT.
1922b

C.O
19226
Rec^d
Ref: 7 JUN 5

HOBBY & MR FEVER REPORT 1912

PRINTED FOR PARLIAMENT
Cd. 7211 JANUARY 1914

only Gold Coast S.S. Nig, are still in
areas. D. illager should see this report
& that is 18574, before they go to S.W.
London AT. 10/6/13

Year 1913
Month
Period Paper
12

12/20
14

AFRICA PROTECTORATE.

No. 356.

C. O
19226
JUN 13

GOVERNMENT HOUSE,
NAIROBI,
BRITISH EAST AFRICA.

May 12th, 1913.

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Sir,

22/6/13
Report with
enclosures.

With reference to your despatch No. 75 of the 28th of January I have the honour to transmit herewith a report on the cases of blackwater fever which occurred in this Protectorate during the year 1912.

I trust that this report embodies all the information required.

I have the honour to be,

Sir,

Your humble, obedient servant,

H. Conway Beppel

GOVERNOR.

THE RIGHT HONOURABLE

LEWIS HARCOURT, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES,

DOWNING STREET, LONDON, S.W.

PRINTED FOR PARLIAMENT
 Cd. 7211 JANUARY 1914

C. O.
 INCLOSURE 19226

In Despatch No. 352 of Dec 12 1913

REC 7 JUN 13

REPORT ON BLACKWATER FEVER IN BRITISH EAST AFRICA

FOR THE YEAR

1912.

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Station or Place.	January	February	March	April	May	June	July	August	September	October	November	December	Race of Patient.	Mode of termination of case.
						1							European	Recovery
													Africans	Death
								1					Goan	Death
													Goan	Recovery
River Camp, Trans Nzoia							1						European	Death.

The above table sets forth the recorded distribution of Blackwater Fever in regard to time and place together with certain other details for the year 1912. Of the total number two were Europeans, two Asiatics, and two Africans. In respect of professional attendance one case was seen by a Medical man, four by junior members of the Department, and one by laymen. All the patients were males.

Locality.

(a) *Physical features:*

So far as locality is concerned, Kisii and the Kwaratak River Camp have an altitude each of over five thousand feet, while Voi, Ng'arak, and Mumia lie at lower levels.

Kisii, though in high country (5,700 ft. approximately), is not far from the lower altitudes surrounding the Victoria Nyanza and tracks provide means of communication between it and the lake.

The Kwaratek River Camp has an elevation of 6,100 feet and is situated on a low ridge near swampy ground at the junction of the trade route between Abyssinia and Munias with the river in question.

Munias with an altitude of some 4,500 ft. is situated on a small hill in a thickly populated country and surrounded by rivers.

Voi (1,930 ft.) is situated in bush country, a swamp existing close to the camp where one of the cases occurred.

Ngabotok (2,400 ft.) is an outlying station to the south-west of Lake Rudolf.

It is situated on the top of a small hill about 1,500 yards from the Turkwell River. The surrounding country is open phorn bush on sandy soil, except near the river itself where there is a well-defined belt of vegetation consisting of large trees and dense undergrowth varying from 200 to 400 yards in width. When travelling in the district water is usually obtained from water holes or wet springs as the Kerio and Turkwell are the only rivers that flow. These water-holes are often polluted owing to the number of stock watered at them.

All these localities, except that of the Kwaratek River Camp, are classed as unhealthy.

(b) *Occurrence* None of the cases reported, so far as is known, form part of a series. The disease has, however, before now manifested itself at Munias, Voi, and Ngabotok.

(a) ~~insect fauna~~

In view of the nature of their employment it can, I think, be safely assumed that all of the persons under review in this report as having suffered from Blackwater Fever have been exposed to the attacks of mosquitoes. One was a Surgeon, one an Engineer, one a trader, one an agent of a trading firm, and two native soldiers.

Anopheles and Tabanus have been found in the Voi and Sabisa regions and mosquitoes - some of them with spotted wings - are stated to exist in the country through which the Kwaratai flows. As J. Ngabetor, while the results of investigation at one period of the year would seem to have failed to secure any specimens of Sullisiana either in the station itself or close to the river (although one was heard at the former place) yet, towards the close of 1912, it is asserted that they were very plentiful. House fly are present on the Turkwell River.

No information is available to hand concerning the insect fauna of Kiili.

Seasonal Variation.

Four of the cases occurred in the cool season of the year, i.e., between the months of April and September, at the commencement of which period the heavy rains usually set in.

Personal History.

(a) ~~Medical history~~

In four of the patients previous attacks of Malaria are stated to have occurred and, of this number, but one would appear to have attempted prophylaxis and that in an inefficient manner.

(c) Insect fauna

In view of the nature of their employment it can, I think, be safely assumed that all of the persons under review in this report as having suffered from Blackwater Fever have been exposed to the attacks of mosquitoes. One was a Surveyor, one an Engineer, one a trader, one an agent of a trading firm, and two native soldiers.

Anopheles and Tabanids have been found in the Voi and Mambas regions and mosquitoes - some of them with spotted wings - are stated to exist in the country through which the Mwarak flows. As to Ngabetok, while the results of investigation at one period of the year would seem to have failed to secure any specimens of Culicidae either in the station itself or close to the river (although one was heard at the former place) yet, towards the close of 1912, it is asserted that they were very plentiful. These flies are present on the Turkwell River.

No information is available to hand concerning the insect fauna of Kisii.

Seasonal Variation.

Four of the cases occurred in the cool season of the year, i.e., between the months of April and September, at the commencement of which period the heavy rains usually set in.

Personal History.

(a) Medical history

In four of the patients previous attacks of Malaria are stated to have occurred and, of this number, but one would appear to have attempted prophylaxis and that in an inefficient manner.

No information is available regarding the previous history of the remaining two of the total. So far as the Europeans are concerned one had had a little over four years' service in the country and the other but six months'. There is no record of previous Haemoglobinuric manifestations having been observed in any of the cases.

(b) Previous movements & personal conditions

At the time of the onset of their illnesses two of the sufferers (Europeans) were engaged in out-door work and living in camp. A native servant of one of them is stated to have coincidentally developed an illness which was characterised by vomiting and the passage of blood in the urine. The remaining patients were in residence at their respective stations when overtaken by the disease.

(c) Microscopic examination of the blood

In blood smears taken from one of the patients Malarial parasites (rings) were found on the sixth and seventh days of the illness and, in those taken from a second, none were found. No record is available to show that blood examinations were made in the remaining cases.

From a consideration of the information available in regard to the cases which are the subject of this report it would appear that the patients

(1) followed occupations which rendered them

them specially liable to exposure to Malarial infection,

and that the majority of them

(2) have no record of having taken quinine systematically,

(3) had had attacks of Malaria prior to the development of Blackwater,

& 4) manifested the disease in localities rated as unhealthy.

In conclusion I have the honour to enclose herewith the report of the Voi case, made by the Senior Medical Officer, European Hospital, Mombasa, under whose care the patient came on admission to that institution.

A map is also enclosed showing the occurrence of cases in the various localities.

H. H. H. H.

Acting Principal Medical Officer.

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Nairobi.

April 17th, 1913.

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Sir,

I have the honour to enclose a report on a case of Blackwater Fever treated in the Government Hospital at Mombasa in June and July 1912. Copies of the temperature and quantitative urias charts are included.

I have the honour to be,

Sir,

Your obedient servant,

sd/ W.J.Radford.

Senior Medical Officer

Principal Medical Officer,

E.E.Africa.

Print

Report on a case of Blackwater Fever
treated at Government Hospital, Mombasa.

Name V. B. (Case 35)
Aged 25 years.
Sex Male.
Profession Engineer, Railway.
Residence in country 6 months.
Colony British East Africa.

- I. Locality. (a) Voi situated on a stream of the same name under the Ndara Hills, elevation 1830 ft. at a distance of 103 miles from the Coast. General character of country is bush, but with a large swampy area close to the site of the Patient's camp. This was generally stationary but occasionally moved to accommodate the necessities of his work viz., Engineer in charge of a new Railway water supply for the Township.
- (b) His tent was situated in places immediately associated with numbers of Native and Indian workmen, his food supply could not be described as good in quality, or capable of much variety, unless he ^{dined} ~~desired~~ at the Dak Bungalow situated about 2 miles away, necessitating travelling in a railway trolley at all seasons.

He appears to have led an austere life, and there is absolutely no reason to suppose that he had any intercourse with Native women.

It may here be said that the locality is known to be very unhealthy, and its reputation for malaria is most unenviable. Many cases contracted there have come under my own observation, as well as one other case of Blackwater.

Practically
(c) Among others the following insects are known: - Anopheles, Tabanids, Glossina Fusca, Austenii, Longipennis, etc.

Season of the year
II. The Rain fall is practically identical with that of the Coast i.e., March - May and October - January. Average for the year 18 to 20 inches. Occasionally the district is visited by severe thunderstorms, and large tracts of surrounding country inundated.

Personal history
III. (a) Patient had no experience of Tropical countries prior to his appointment here, his general health appears to have been excellent he had taken systematically 5 gr. of the Sulphate of Quinine since his advent at Voi once a week and more during his attacks of malaria, of which there appear to have been 3 recorded, one necessitating his removal to Nairobi for a period of 10 days.

His history of malaria on admission contains these words " I have had fever on or off for months", and having regard to the fact that his attack of Blackwater supervened within 6 months of his arrival in the country, it can be assumed that his first infection of malaria occurred soon after his arrival, when he was immediately stationed at Vei.

- ~~From previous personal conditions~~
- (b) The conditions of life to which he was subjected were those obtaining in a construction camp, tent life, rough and ready conveniences, food some too good or regular, but he took the precautions of sleeping under a mesquite net and boiling his drinking water. That he was unduly exposed to malaria infection cannot be questioned as the nature of his work, and his own zeal called him out into the District at all hours.

Present attack.

Came under observation 25.6.12 was brought into Hospital at 8.30 a.m. with a history of 6 days illness, ushered in by vomiting, rigors and headache. ^{He} Did not know his temperature limit; on the 20th ^{he} noticed his urine was "port wine coloured, and ^{did} does not remember anything for some days;" was found on the 24th by the Permanent Way Inspector ill and brought into Hospital.

On admission.

Very anaemic, herpes on lower lip, slight jaundice, complains of headache and pain in the back, very restless, much thirst.

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~~On 6~~
 A blood examination showed creaction of the blood corpuscles, some malarial (ring) parasites. No blood count was made. The pulse rate was from 84 to 104; the respirations 28 to the minute. The spleen would not be felt. Twenty eight or a half ounces of dark rusty albumen were passed during the twenty four hours. At 7:30 pm there was a rigor clearing which the temperature rose to 102.0 the urine now became very dark (urine cleared) & the jaundice increased ~~but~~ there was no vomiting. Absolute rest in bed was

prescribed & large quantities of fluid were given during the day. Potassium bicarbonate & the liquor Hydrargyri Perchloridi were given & after the rigor an effervescent medicine containing Quinine (grv) was given twice

in a day. During the night the urine was dark but not as thick as the patient did not sleep at all.
 June 26th The temperature fell to normal at day break. ~~The~~ During the day the pulse varied between 88 & 120 ^{to the minute}, a character it was unsatisfactory. The urine cleared a little but the general condition of the patient did not improve, he was very restless. There was much dyspnoea & pain in the loins & thighs. A further examination of the blood showed an increased number of malarial ring parasites. Quinine grs xxx were ~~given~~ twenty four hours was prescribed twenty eight or a half ounces, urine was passed during the twenty four hours.
 June 27th The temperature fell to normal in the morning after a good sleep. The urine became clearer. At 7:45 pm the patient had a severe rigor which was followed by the passage immediately afterwards of a very dark urine. Before the shivering fit had quite subsided the patient was given a hypodermic

injection of Quinine pro \bar{x} the total amount of
urine passed during the twenty four
hours was fifty one ounces

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He had a good night.

On June 28th he was better. The hypo-
dermic injection of Quinine pro \bar{x} was
repeated. The temperature rose to 99.2 the
urine was clearing.

He again passed a good night.

On June 29th he was better. The hypodermic
injection of Quinine pro \bar{x} was repeated & two
doses of an effervescent mixture of quinine
(pro \bar{x}) were given by the mouth. The diet
was increased. The pulse rate was from 68-80
& the temperature rose to 99.8 dropping to
subnormal at night.

June 30th from now onwards the patient
made an uninterrupted recovery. He was
convalescent & was given tonics.

July 13th He was now allowed to sit
out in the strand. The urine was normal &
of better colour. He continued a few white urates.

July 17th The patient was discharged
from hospital.

1/2. Blood examination corpuscles ^{don't} srenated, some rings, count ^{there was a leucocyte} not made.

Pulse 84 - 104. Respirations 28. Spleen not felt.

Urine 28 1/2 ounces, dark smoky, albumen.

Rigor at 7.0 p.m. temperature rising to 102.6°

Urine after this very dark (porter). Jaundice increased; no vomiting.

Treatment. Absolute rest in bed, given large quantities of fluids, with Pot. Bicarb. and Liq. Hydrarg Perchlor, and after the Rigor an effervescing Quinine draught gr. V twice daily.

26.6.12. Temperature fell to normal at day break, urine during the night darker but not so thick, total amount passed 27 1/2 ounces in 24 hours. No sleep last night. Temperature rose to 103.8° at 6.0 p.m, and pulse varied through the day 88 - 120, but satisfactory. During the day the urine cleared a little, but the general condition of the patient had not improved, very restless, dyspnoea and much pain in Loins and Thighs.

Blood examination. More rings.

Placed on Quinine 30 gr. in 24 hours.

27.6.12. Temperature fell to normal in morning after a good sleep. Urine clearer.

At 7.45 p.m. Patient had a severe rigor, and urine passed immediately after this was very dark.

Before the shivering had finished, patient was given

a hypodermic injection of Quinine gr. \bar{x} .

Total amount of urine passed in 24 hours = 51 ounces,
good night.

28.6.12. Patient better, repeat hypodermic injection
of Quinine gr. \bar{x} , temperature rose to 99.2° only, urine
clearing.

29.6.12 Good night. Patient better.

Repeat Hypodermic Quinine gr. \bar{x} , and 2 doses of
effervescent Quinine (gr \bar{x} per dose) by mouth. Diet
increased.

Temperature rose to 99.8° only dropping to subnormal at night.
Pulse satisfactory 98 - 80.

30.6.12. From now onwards there was nothing to report.
Patient enters the convalescent stage, and was given tonics
etc.

13.7.12. Allowed to sit out on the verandah.
Urine normal with a few white urates. Colour much
better.

17.7.12. Patient discharged to-day to up country.
Further history. Nil.

Remarks.

As appears this case was treated as a double Tertian
infection with Hypodermic injection of Quinine, in spite
of the fact that haemaglobinuræa was present, and that the
patient was in a most critical condition.

The presence of rings and pigment in the corpuscles, and the daily varying range of the temperature indicated the lines on which the treatment was to be directed, and, as it appears, with the happiest result.

Dr. Haran C.M.C. also saw the case and agreed that the condition was one calling for the energetic treatment that was adopted: and in the course of a long experience in malaria and its many evidences, I cannot recall any case which called so clearly for a definite course of treatment, unless it be those of so called dysentery coming from the same district which yielded in the same manner to the hypodermic exhibition of the Hydrate chlorate of Quinine.

On reviewing the history of the case it will be noticed that within 24 hours of admission Quinine in small doses was given by the mouth, and pushed until 30 gr. daily was so taken on the third day as well as the Hypodermic dose.

The defining factor in the case was the presence of rings and pigment in the corpuscles demonstrable from the first, and indeed persisting until the first hypodermic injection, after which no trace could be found in any specimen drawn from the peripheral blood.

It is a point of interest that the recognition of the rings was confirmed by the Bacteriologist, Dr. Ross, whose opinion was not received until long after the treatment was decided on and applied, on account of the distance between the Coast and Nairobi.

sd/ William J. Radford.
Senior Medical Officer.

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URINE QUANTITY.

Case 35 H. V. B.	Time.	Quantity	Total	Total 24 hours ounces.
Date June 25, '12.	8.45 a.m.	1½ oz.		
	2.00 p.m.	3½ "		
	4.00 "	5½ "		
	6.30 "	4 "	14½	
	8.00 "	8 "	15	29½
June 26, 1912	2.50 a.m.	7½ oz.		
	5.00 "	8 "		
	12.00 "	6 "	21½	
	4.00 p.m.	6½	6½	28
June 27th, '12	4.00 a.m.	15		
	6.00 "	8		
	8.00 "	6		
	11.55 "	7	34	
	2.30 p.m.	6		
	4.00 "	7		
	7.30 "	½		
	10.00 "	4	17½	51½

	Time	Quantity	Total	Total 24 hours ounces.
June 28, 1912.	12.30 a.m.	7½		
	2.30 "	8		
	5.45 "	8		
	9.00 "	4		
	11.00 "	4½	32	
	4.00 p.m.	8		
	10.00 "	9	17	49
June 29, 1912	4.00 a.m.	13		
	7.30 "	7½		
	11.50	12	52½	
	3.50 p.m.	8		
	6.50 "	7		
	12 midnight	9	24	56½
June 30, 1912.	5.30 a.m.	8		
	12 noon	5	13	
	4.00 p.m.	7		
	8.00 "	8	12	25

	Time	Quantity	Total	Total 24 hours
July 1. 1912.	3.00 a.m.	10		
	6.00 "	4		
	9.15 "	9	25	
	2.00 a.m.	3		
	4.00 "	1		
	11.50	12	21	44
July 2. 1912	6.00 a.m.	12		
	12.00 noon	13	25	
	6.00 p.m.	9		
	11.50 "	16	25	50

PHYSICIAN'S CHART.

DISEASE.

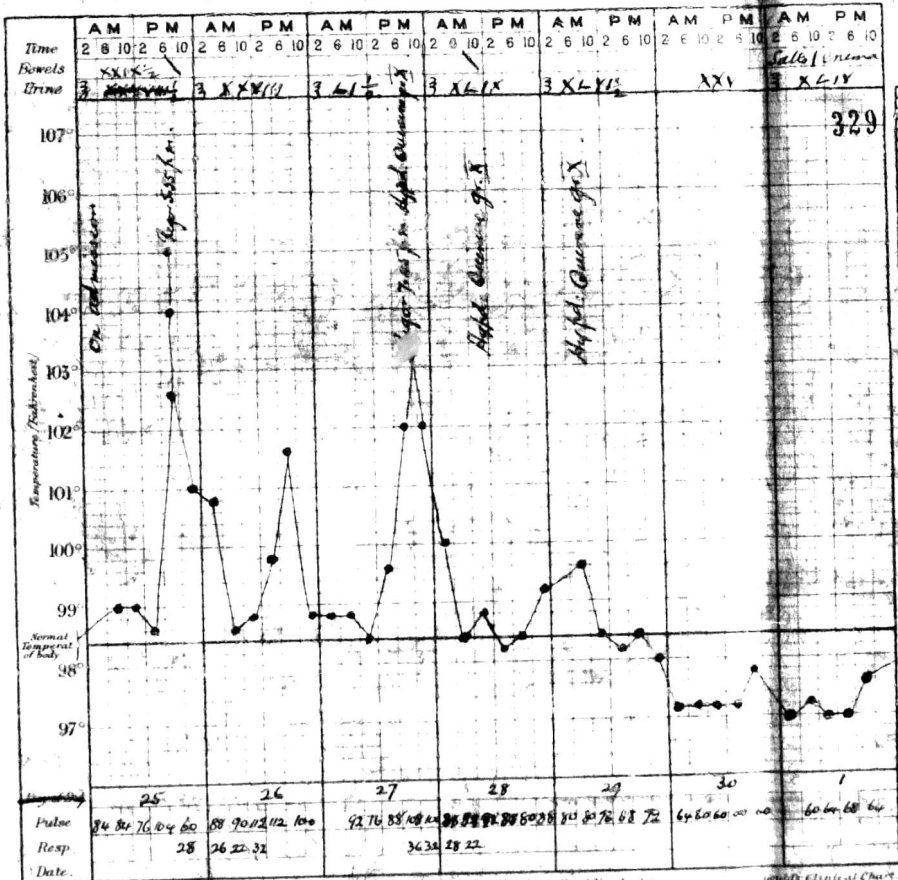
diarrhea

V.B.

25 yrs.

History of Case

Admission
June 1912
25. 6. 12

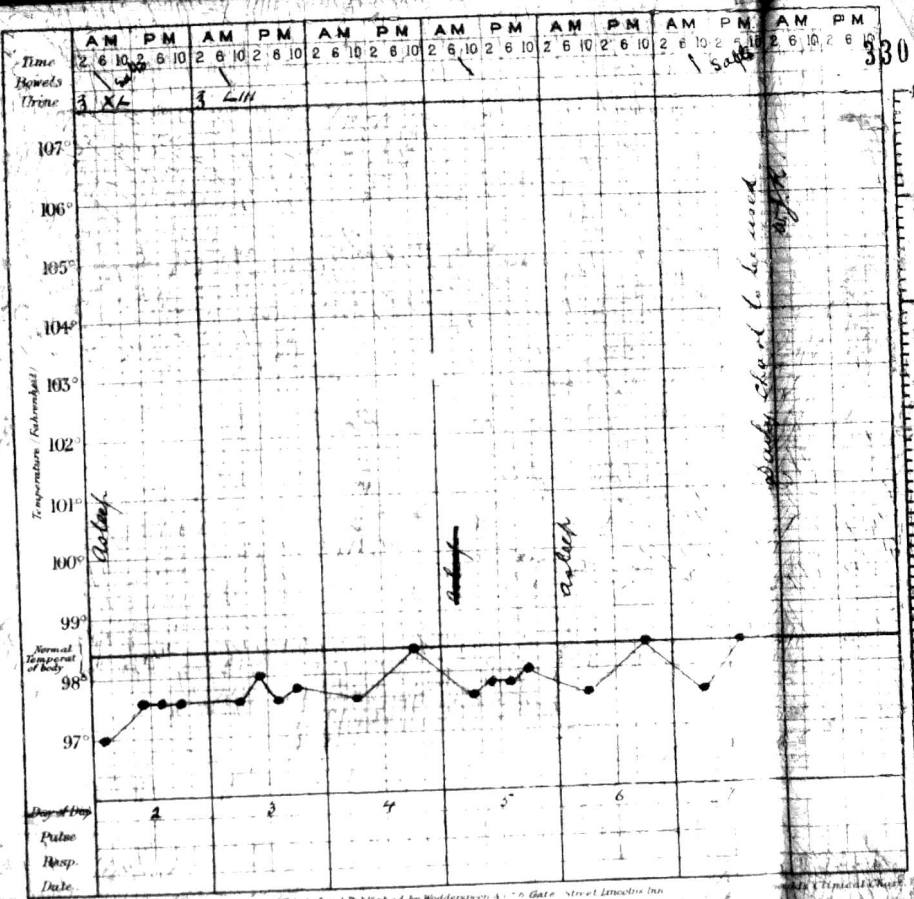


TEMPERATURE CHART.

DISEASE

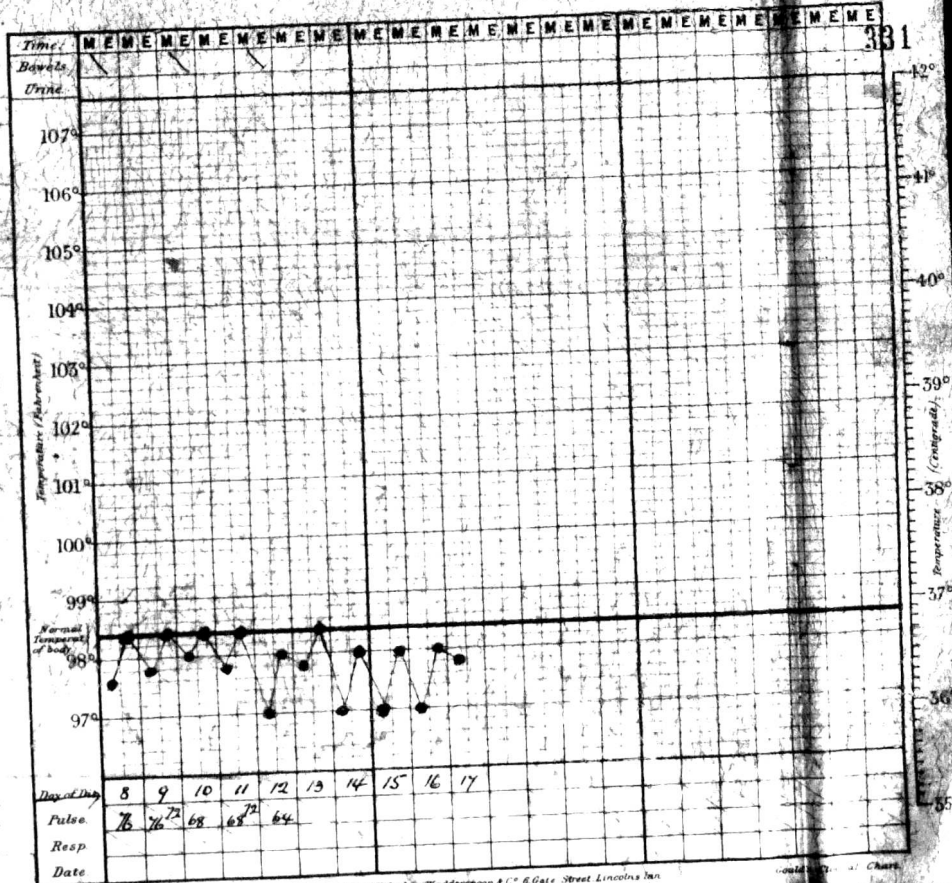
History of Case

July 1912
Date of admission



EASE.

of Case.

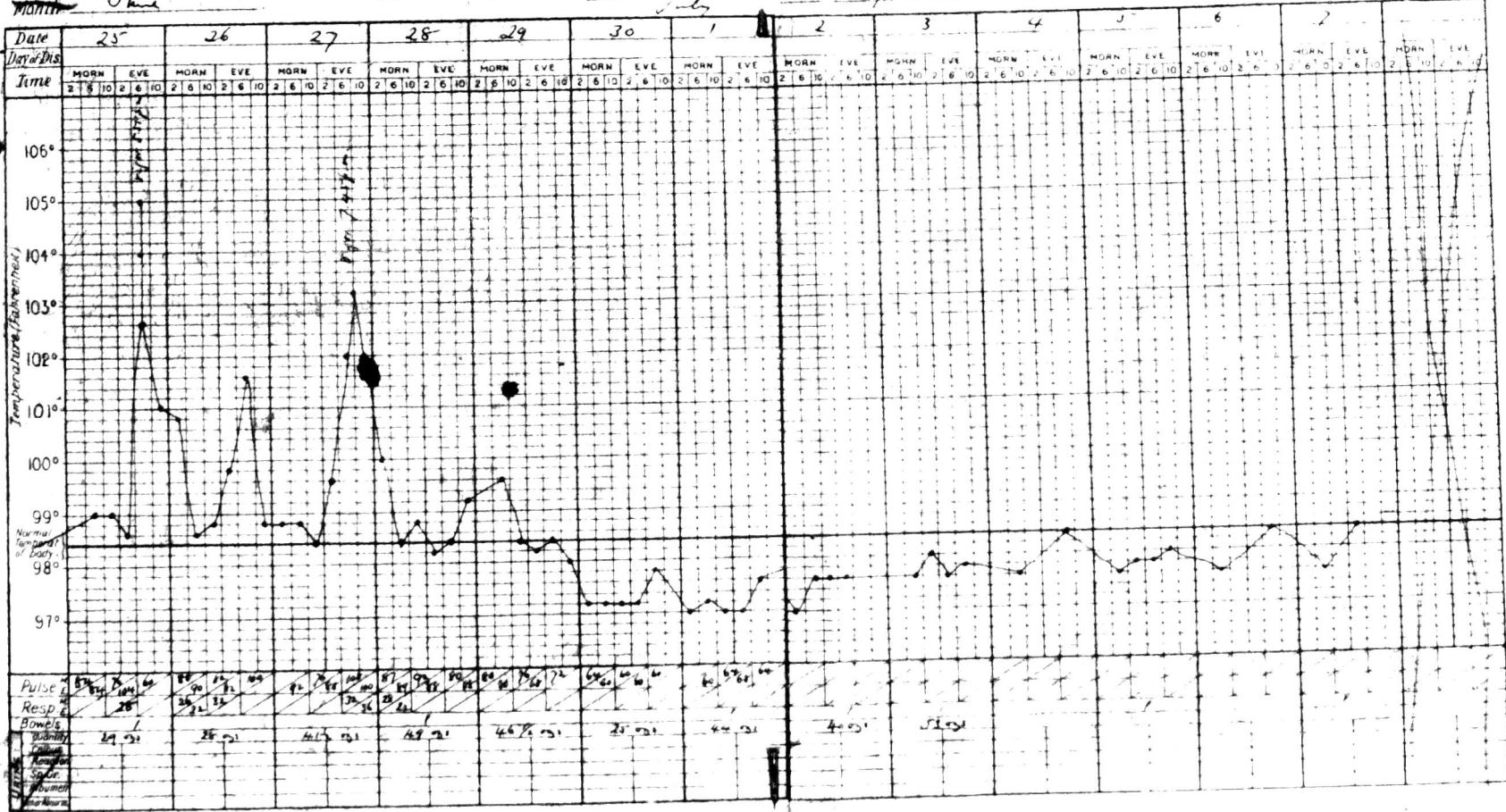


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July 1912 admission.

Month June

July



Temperature (Fahrenheit)

Normal Temp of Rectum

Pulse
 Resp
 Bowels
 Quantity
 Colour
 Consistency
 Mucous
 Blood
 Pus
 Strips
 Stools
 Urine

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