Two points particularly interested me:

1. The number of bugs in these pest houses. Their number and size were amazing. I saw no other type of body parasite in Lapland.

2. For less acute diseases the Lapps did not adopt the same drastic attitude. I saw many cases of tuberculosis, including one bed-ridden case of advanced pulmonary tuberculosis. They lived with the rest of the family, and appeared to be well looked after and kindly treated.

CLINICAL ANALYSIS OF 100 CASES OF EARLY BERI-BERI.

BY

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THE incidence of scurvy and beri-beri among British troops in the East having been recently reported on by Colonel W. H. Willcox, C.B., C.M.G., A.M.S., the following observations may be of general interest:

During 1913 and 1914 I had occasion to investigate a series of cases of early beri-beri at the Police Hospital in Bangkok, Siam, under the direction of Dr. Highet, the P.M.O. While Drs. Morden, Carthiaw, and A. C. Rankin were concerned with the problem of etiology, I undertook to analyse the early manifestations of beri-beri, with a view to establishing the correct chronological order of the early signs and symptoms. The completion of my work was interrupted by the war, hence the delay in publication.

The data to follow are compiled from over 300 examinations of 100 cases. All patients were adult Siamese males, and each case was thoroughly examined at least twice.

The first symptom or sign to be noted by the patient was invariably one of the three following: (a) Oedema of feet and legs (50 per cent.); (b) numbness or anaesthesia of feet (43 per cent.); and (c) epigastric fullness and distress (7 per cent.)

TABLE I.—Early Signs and Symptoms.

Sign or Symptom.	First Complaint.	Later Complaints.	Not Observed by Patient.
	Cases.	Cases.	Cases.
Oedema of feet... ..	50	39	11
Anaesthesia of feet	43	57	0
Epigastric distress	7	70	23

In every case the oedema appeared first in the feet, then the legs, and then in the hands. Appreciable swelling of the hands was seldom seen in these early cases. Practically all patients complained of more or less general weakness. Several patients stated that swelling of the feet had come and gone before the onset of anaesthesia. Nine patients complained of early pains in the legs. One developed effusion into both knee-joints, but had a previous rheumatic history. In eighty-two cases the action of the bowels was considered normal. Seventeen were constipated, and one complained of diarrhoea at the date of first examination.

Cardiac enlargement was found at the first examination in only 15 per cent. of cases. Subsequent enlargement

TABLE II.—Pulse Rate.

In Erect Posture after Walking Ten Yards.		After Sitting for Five Minutes.	
	Cases.		Cases.
80 to 90 per minute ...	14	70 to 80 per minute ...	23
90 to 100 ..	19	80 to 90 ..	27
100 to 110 ..	30	90 to 100 ..	18
110 to 120 ..	20	100 to 110 ..	23
120 to 130 ..	10	110 to 120 ..	5
130 to 140 ..	5	120 to 130 ..	2
140 to 150 ..	2	130 to 140 ..	2

occurred in four additional cases, in spite of treatment. The treatment adopted was physical rest, with a diet rich in anti-beri-beri vitamins, polished rice being rigidly excluded. Further treatment was largely symptomatic. A soft mitral systolic murmur was heard at the first examination in twenty cases. Cardiac arrhythmia was noted in five of these early cases. The pulse rate per minute is shown in Table II.

The arterial tension as recorded by the "Tycoos" sphygmomanometer at the first examination is shown in Table No. III, the normal in healthy adult natives falling between 90 and 100:

TABLE III.—Arterial Tension ("Tycoos").

80 to 90	24 cases	100 to 110	22 cases
90 to 100	17 ..	110 to 120	15 ..
100 exactly	21 ..	120 to 130	1 case

Of 41 cases with a tension below 100, after a few days of treatment 23 were raised to between 95 and 100, whereas of the 38 cases with a tension of over 100, 21 were reduced in a few days to 100.

The knee-jerk is involved early. An increased reaction was observed in a few cases to be followed by diminution or abolition of the reflex. Table No. IV shows the conditions found:

TABLE IV.—State of the Knee-jerk.

	Increased.	Normal.	Diminished.	Abolished.
First examination ...	6	23	22	49
Later examination:				
Increased	0	1	0	0
Normal	4	10	7	2
Diminished	1	12	12	9
Abolished	1	0	3	38

The plantar reflex was found to vary in inverse proportion to the anaesthesia. Steppage gait in walking increased with the anaesthesia, and in severe cases amounted to ataxia, with a positive Romberg sign. A positive knee-jerk and abdominal reflex was sometimes obtainable in a patient who was anaesthetic to pain of a pin-prick up to the costal margin.

Sensation to pain of a pin-prick always disappeared before the sensations of superficial touch, deep pressure, and posture.

The degree and extent of anaesthesia, and the condition of the reflexes may fluctuate widely from day to day, recovery frequently being effected with amazing rapidity. For example, deep anaesthesia to pain up to the knees has disappeared in five days. Another case (No. 68) is worthy of special mention. On admission to hospital this patient was anaesthetic to pin-prick up to the umbilicus, with hyperaesthesia shading gradually up to the level of the clavicle. After five days the anaesthesia did not extend beyond the knees. Table V shows the extent of anaesthesia to pin-prick at the first examination. I might add that it is not unusual for a patient to be walking about with anaesthesia to pain of pin-prick up to the level of the umbilicus, or even the clavicle.

TABLE V.—Extent of Anaesthesia to Pain of Pin-prick.

	Cases.
Feet only	5
Feet and legs	35
Feet, legs and thighs	9
Feet, legs and hands	4
Feet, legs, thighs and hands	3
Up to level of umbilicus	1
Up to level of second rib	1
Up to level of second rib with hands	5
Up to level of clavicle	1
Up to level of clavicle with hands and wrists	3
Up to level of clavicle with all limbs	30
General, including face	2