ART. XIII.—*Malarial Fever as met with in South Africa during the late War : its Symptoms, Treatment, and Prevention.*^a By ARTHUR HAMILTON STEWART ROBERTS, M.D., B.Ch. Univ. Dubl.

It was my fortune during the late war to be stationed at Komati Poort, one of the most unhealthy districts in South Africa, where malarial fever forms the great obstacle to European settlements. Here the telluric conditions were eminently favourable for the development of the malarial poison. It is a badly-drained, low-lying district, rich in vegetable matter, through which runs the course of the old Crocodile river-bed. The so-called malarial season is divided into well-marked maximal and minimal periods, the latter corresponding to the months of May, June, July, and November, December, January, and the former to February, March, April, and August, September, October. The local inhabitants state that malarial fever is most prevalent after a very hot summer and during the rainy season.

The types of malarial fever which I observed at Komati Poort were all of the tertian or quartan variety, and, fortunately, no case of a pernicious type occurred. In these types, as a rule, chill, fever, and sweat followed each other in orderly sequence. The patient generally knew that he was going to have an attack a few hours before it arrived by a general feeling of malaise, often accompanied by headache.

The cold stage commences by headache, nausea, and vomiting. This is gradually followed by shivering, until at length the rigor becomes fully developed, the teeth chatter, and the whole body shakes. The patient looks cold, but while the surface temperature is reduced the temperature in the axilla may be greatly increased, and may rise to 104° or 105°. The pulse is rapid, hard, and small. This stage lasts from ten minutes to an hour or longer.

The hot stage commences with flushes of heat, and the skin becomes intensely hot. The face is flushed, the skin reddened, and the pulse full and bounding. There is sometimes delirium. The patient suffers from intense thirst. This stage lasts from half an hour to three or four hours.

^a Being a Thesis read for the Degree of Doctor of Medicine of the University of Dublin, June, 1903.

The sweating stage varies much. The entire body may be bathed in perspiration, or it may be very slight. The headache and feeling of malaise disappear, and within a short time the paroxysm is over.

The total length of the paroxysm varies from ten to twelve hours, but is sometimes much shorter.

Many of my patients had repeated attacks of malarial fever, and this was followed, after several months, by the symptoms of chronic malarial poisoning. The malarial cachexia presented two striking features—namely, anæmia and enlarged spleen. The symptoms are those of ordinary anæmia, breathlessness on exertion, œdema of ankles, and hæmorrhages, particularly into the retina. They present the typical symptoms of splenic anæmia.

Treatment.—Each man was provided with a mosquito net, as infection seems most liable to occur at night, and ten grains of bisulphate of quinine were administered daily to each man as a prophylactic. During the paroxysm the patient was, in the cold stage, wrapped in blankets, given a purgative, followed by hot drinks, and the following prescription administered :—

R. Antipyrin.	-	-	3ij.
Spt. ammon. aromat.	-	-	3ij.
Aquæ chloroformi ad.	-	-	℥viii.
Ft. mist.			M.

Two tablespoonfuls to be given every four hours until the paroxysm is over.

This relieves the intense headache and backache, beads of perspiration appear upon the face, and gradually the whole body is bathed in a copious sweat, and the patient usually sinks into a refreshing sleep. At the expiration of the paroxysm the administration of twenty to thirty grains of bisulphate of quinine daily for the first three days, and then continued in smaller doses for the next two or three weeks, in many instances prevented fresh paroxysms.

In cases of chronic malaria, where the malarial cachexia was well established, I found that arsenic given in gradually increasing doses gave surprisingly good results, and that with careful treatment the majority of the cases recovered. The spleen was gradually reduced in size, but in many cases this enlargement would take years to completely disappear.

All the water for drinking purposes was boiled, and stored in mosquito proof tanks. The surrounding jungle was cleared away as much as possible, and the ground drained. The huts for the men were built at the highest possible level, and were elevated some distance above the ground, as the fact that the distribution of the poison of malaria is influenced by gravity has long been conceded. These endeavours to improve the sanitary conditions of Komati Poort were continued by my successors. The numerous shallow pools which exist on each side of the bed of the old Crocodile River, and which formed breeding grounds for the mosquito, were flooded with petroleum. The gradual clearance of the thick-jungle was persevered with, and by these means it is hoped to render the most unhealthy district in South Africa fit for the inhabitation of Europeans.

ART. XIV.—*Examination of the Blood as an Aid to Diagnosis.*^a By O'DONEL H. DODWELL BROWNE, M.D.,
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IN all branches of the medical profession we find men taking up one special subject and devoting their whole time and skill to it. By this means they gain a very accurate and full knowledge of that subject, and can prove themselves a great help to all needing their aid. There are many men whose sole occupation it is to examine blood; and by subjecting the blood to certain tests, both physical and chemical, they are able to make a definite diagnosis of many diseases to which the human body is heir. Of all the means at their disposal for this pursuit the microscope seems to be their best appliance; nor is a thorough examination deemed to be satisfactory until the blood in some way or other be subjected to this crucial test.

With the aid of the microscope not only can the examiner tell in what way the examined blood differs from what is considered normal, but he can tell how far below or above the normal it differs, and after several such examinations can fairly accurately determine how the patient progresses.

^a Being a Thesis read for the Degree of Doctor of Medicine of the University of Dublin, June, 1903.