THE TREATMENT OF MALARIA.

SIR,—May I add a few remarks on the treatment of malaria to the valuable and interesting letters that have appeared in several of your recent issues?

The statements made by Major W. F. Law and Dr. J. Wallace Collett, in the BRITISH MEDICAL JOURNAL of February 21st, 1920, in general terms represent the form of treatment adopted in the Army in India. I believe all military medical officers there recognize the importance of preceding quinine treatment by an aperient, blue pill or calomel, followed by a saline. They are also alive to the urgent necessity of intravenous use of quinine in threatening or developed cerebral malaria. It is the only means of saving life in the vast majority of such cases. In the recent Afghan Campaign there were two exceptionally severe heat waves in June and July, 1919, associated with hundreds of cases of high temperature ranging from 106° F. to 111° F. amongst British troops. Roughly 15 per cent. of these were genuine heatstroke, having the usual classical symptoms and signs of that condition, 75 per cent. had pyrexial phenomena that military medical officers in India sixty years ago called "thermic" or "ardent fever," whilst about 10 per cent. were complicated with malaria, benign tertian infection being responsible in about 80 per cent. of these last mentioned cases. In India we have for many years been acquainted with the predisposition to the effects of the sun arising from infection with the plasmodium of subtertian malaria, but it is only in more recent years that we have attached due importance to the part played by the benign tertian parasite in this connexion. So far as I remember, it was Mannaberg in 1894 who put forward the view that cerebral malaria was a phenomenon of subtertian infection, explaining this singularity by the hypothetical increased agglutination of red cells infected by the subtertian plasmodium causing them to adhere to the walls of the cerebral capillaries. I am not prepared to refute this theory of enhanced adhesiveness of infected red cells in subtertian, but am quite confident that in India cerebral malaria is more commonly associated with benign tertian infection than with subtertian infection.

Medical officers who had the treatment of these cases of cerebral malaria combined with effects of the sun in Afghanistan and the Indian Frontier lately were unanimously of opinion that intravenous injections of quinine, promptly given, saved many lives. With this reference to heatstroke cases one might incidentally remark that in the last few years in India we have observed that if cases of genuine uncomplicated heatstroke are got under treatment early—that is, while the temperature is still rising—and ice and ice-cold water used on the surface with electric fans and thermantidotes working near the patients, the mortality is strikingly reduced and the severity and duration of the sequelae greatly lessened. The statistics of our heatstroke cases in the Army in India during the last two years show this. This, of course, means a high standard of medical organization in barracks, and in the field in camps, with ice for the purpose available everywhere, and a knowledge of first-aid treatment of heatstroke on the part of the comrades of the victims. We now have what are called *heatstroke stations* universally in barracks and in the field.

There are definite reasons why the military medical authorities in India were obliged to place certain restrictions on the use of quinine intravenously and intramuscularly, and to forbid its use hypodermically. At one period there was a run of tetanus cases following the latter use of the drug. It was generally considered that the *Bacillus tetani* was introduced with the injection, although some bacteriologists thought that the spores of this microorganism, already in the bowels, developed and found its way to the seat of the injection. The restrictions have to a large extent been removed, but the hypodermic use of quinine is, I believe, still prohibited, and I consider rightly so. It would be most injudicious to allow young subassistant surgeons to use the drug in this way without supervision.

Whilst the prompt use of quinine intravenously or otherwise is necessary in cases of hyperpyrexia due to malarial infection, it is necessary to be quite sure that it is malaria we are dealing with, and not give quinine on the off-chance that the high temperature is malarial in origin as is sometimes done. In July, 1917, at the end of our penultimate Mahsud Campaign, I got a sudden rise of temperature to 105.2° F., with intense headache, etc., following a prolonged shivering fit. Sandfly fever was epidemic at the time. A blood smear was made, but for some reason not examined for three days. Nevertheless I was given 45 grains of quinine daily for two days without any effect; I have seldom suffered so much as on the evening of the second day, when a dose of trional put me to sleep, and I woke up next morning free from fever, and feeling quite well except being rather feeble. The blood smear when examined was found to be negative as regards malarial parasites. The diagnosis was wrong.

Most medical officers doing duty with troops in India consider that in cases of malaria of any duration, even with very slight enlargement of the spleen and but little anaemia, a course of arsenic and iron is a valuable adjunct to the treatment; this is certainly the case where there has been a noteworthy destruction of erythrocytes.

I do not agree with a correspondent who states that medical officers infected with malaria do not take the prolonged course of quinine they recommend to their patients after malarial infection. I am quite certain that most medical officers from India serving in Mesopotamia up to the end of 1915 who got infected took quinine continuously for months. Without such a course they were almost certain to be invalided owing to relapses. Personally I acquired a heavy benign tertian infection at Kurna (on the rivers Tigris and Euphrates, north of Basra) on February 25th, 1915. I took 30 grains daily for a week, 20 grains daily for two weeks, and then 10 grains daily. During the last named period I had what appeared to be a relapse; I began the intensive treatment again, continued it for three weeks, and then kept up the quinine in gradually decreasing doses for five months without any recurrence up to date.—I am, etc.,

P. HEHIR,
Major-General I.M.S.

London, W., March 1st.

SIR,—Disregarding the few who exhibit nothing more than the general debility and anaemia of post-malarial intoxication, by far the larger proportion of cases of malaria that come under the observation of the general practitioner in this country, during present times, consists of those in which the infection has become more or less long standing; where the earlier and severer attacks of fever have given place to milder relapses at longer intervals; and cases of "latent malaria" presenting few or none of the clinical and physical signs of the disease.

In most of these cases of "active malaria" of benign tertian type (the type usually met with) the routine treatment previously advised in these columns is sufficient. This resolves itself into the administration of a quinine salt in quantities of about 20 grains in twenty-four hours during the acute symptoms, and its gradual reduction to about 10 grains daily afterwards, the whole course being spread over a period varying with the severity of the illness from about six weeks to three months. This routine is substantially the same as that described in your issue of March 13th, excepting that I think there is no advantage in giving quinine in larger single doses than 5 grains; otherwise the unpleasant symptoms of quininism are apt to supervene. The secret of success lies in the fact of the continuous and regular dosage for a necessary period of time. In subtertian malaria more vigorous treatment is, as a rule, indicated.

When, however, the parasites of malaria have become pathologically quiescent within the spleen and other organs —that is to say, in latent malaria—treatment by quinine alone is very disappointing. Quinine acts quickest and best upon the parasites when they are in the blood. For this reason they must be routed out of their lair within the organ cells into the circulation before quinine is given. Strychnine and iron are drugs which provoke the parasite to reappear in the blood stream, and the successful treatment of "chronic malaria" should always include a preliminary course of these and similar medicines.

With reference to the inadvisability and the uselessness of intramuscular injections of quinine, the value of this method in those cases (which do occur) where nothing can be retained by the stomach for the first few days of fever cannot be doubted; nor has its use in my practice ever been followed by extensive necrosis of muscle. I have never injected quinine hypodermically—that is to say, in the same subcutaneous manner as morphine is given for

example. I have always inserted the whole needle deeply into the tissues, and, with ordinary care to secure asepsis, nothing worse than a little pain and tenderness for a few days, together with some discoloration in the region of the puncture point, has been my experience with patients, as with myself personally.

In a tropical climate, and under the conditions of active service in the field, it is not difficult to imagine that the necessary cleanliness and care are not easily possible; and this fact may explain the advisability of administration by the mouth and the untoward results complained of.—I am, etc.,

Guernsey, March 15th. J. WALLACE COLLETT.

MODE OF QUININE ADMINISTRATION.

SIR,—During the war I was stationed for nearly three years at Wynberg Hospital, where we had a very large number of patients suffering from malarial fever contracted in German East Africa, and amongst them cases of phlegmon and paralysis due to intramuscular injections of quinine. These cases are very serious, not only because of the long time required for convalescence, but in the permanent deformities often left, due to sloughing of a large amount of muscle and paralysis. These complications are not due to sepsis or faulty technique, but to the escharotic action of quinine in susceptible subjects. The result is that men hesitate to give injections unless the patient is gravely ill. Hearing that an officer was giving quinine subcutaneously with the same therapeutic result as obtained by the deep method, I started giving quinine under the skin to all acute cases, and did so for the last year I was attached to the hospital. The results, dosage, etc., are recorded in a paper read before the British Medical Association (Cape Town Branch), printed in the *Medical Record*, July, 1918, and reprinted in the *Epitome of Tropical Medicine*, November, 1918, entitled "A plea for the routine treatment of acute malaria by subcutaneous injections of quinine." Briefly I think I proved my thesis that injections of quinine act quicker, and can be given during the fever when the parasites are free in the blood—a great advantage, especially as the majority of cases vomit during the paroxysm, so that quinine by mouth cannot be given. There is no anxiety regarding complications; hundreds of injections were given in my wards; in six cases small collections of necrotic pus were evacuated; within ten days the arms were well, and in the meantime there was no inconvenience to movement of limbs. If this method is given a trial much suffering to the patient will be avoided, and the doctor will have his acute cases free from fever in from twenty-four to fifty-six hours, two to six injections being required either in benign or malignant malaria.—I am, etc.,

H. KNIGHTS RAYSON, M.D.Brux.,
M.R.C.S., L.R.C.P.,
Late Captain S.A.M.C.

Kirkwood, South Africa, February 24th.

CARCINOMA OF THE THYROID.

SIR,—The case of papilliferous carcinoma of the thyroid in a girl of 13 (reported by Mr. Basil Hughes March 13th, p. 362) is interesting, not only on account of the nature of the growth, but also on account of the age of the patient.

In my experience ordinary adeno-carcinoma of the thyroid is also rare, and a correct diagnosis is not usually made until the growth has spread through the capsule of the thyroid and the chance of a cure by operation is remote. I should like to know if this tallies with Mr. Hughes's experience.

Last September I excised the left lobe of the thyroid from a woman aged 25. The lobe was slightly nodular, but appeared clinically to be an ordinary parenchymatous enlargement, causing dyspnoea. The lobe was not adherent to the surrounding structures; a portion was burrowing between the trachea and oesophagus, but there was no difficulty in the operation. On cutting into it afterwards it was seen to be the seat of a greyish-white soft tumour the size of a golf ball, which on microscopical examination proved to be an adeno-carcinoma. There was no sign of glandular infection, and up to the present there is no sign of recurrence. Apart from her age and the unexpected finding of the tumour, an interesting point about this case is that I had removed her right lobe for parenchymatous enlargement six years previously. (A microscopical section from this lobe proved it to be an ordinary parenchymatous goitre.) She still has a small portion of the isthmus, but is taking thyroid extract gr. j daily.—I am, etc.,

Norwich, March 22nd. A. J. BLAXLAND.

SENIOR SURGEON COMMANDERS, R.N.

SIR,—The Admiralty evidently realize they have a very bad case when defending their treatment of senior surgeon commanders. Mr. Long's reply (BRITISH MEDICAL JOURNAL, March 13th, p. 378) is misleading, and made up mainly of garnishing and red herrings.

He speaks of having put the various branches on the same basis as far as possible. This is exactly what he has not done to senior surgeon commanders except when it was to their disadvantage. Thus: (1) We have been retired earlier than the regulations showed when we joined; (2) we got no acting rank scarcely during the war; (3) we get no increase of retired pay, varying from 40 to 100 per cent., that all other branches, ranks, and ratings get; (4) worst of all, promotion to captain was not put on the same basis as in the executive line by a huge amount. For instance, three senior surgeon commanders were placed on the retired list last January 1st at the age of over 54 without even having come within the zone for consideration for promotion. At the same time, commanders (executive) come within the zone at about 38 years of age.

These three unfortunate surgeon commanders find themselves prematurely retired on a pension approximately only 9 per cent. more than the rates fixed forty years ago. They are not getting an increase sufficient to pay increased income tax, much less provide for their families. Have we no friends except the British Medical Association?—I am, etc.,

March 17th. SURGEON CAPTAIN RETIRED.

PUBLIC HEALTH VERSUS THE STATE.

SIR,—I regret to have to trouble you once more, but I must again remind Dr. Baskett that it was not comparative poverty *per se* that caused tuberculosis but the destitution that accompanied it, and that that destitution very largely vanished under paternal legislation, as well as did earlier so much of the infection of which destitution formed the favourable soil.—I am, etc.,

March 22nd. SIDNEY DAVIES.

Medico-Legal.

A PANEL PRACTITIONER'S ACTION FOR SLANDER.

THE Lord Justice Clerk and Lords Dundas and Salvesen recently heard an appeal in an action raised in the Glasgow Sheriff Court by Dr. James Wylie, who sued the general secretary of a friendly society for damages for slander. Dr. Wylie had among his panel patients a woman member of that society. On January 20th, 1917, after a few days' absence in the country, she returned to Glasgow, called on Dr. Wylie, who examined her, and gave her a certificate of incapacity for work, which she forwarded later to the secretary. The latter, misunderstanding the remark of a health inspector as to the date of the patient's return, wrote to the secretary of the Glasgow Insurance Committee stating that the certificate had been granted by Dr. Wylie without seeing the patient, and that in his opinion the doctor had committed a breach of the Medical Benefit Regulations. The Sheriff-Substitute, who first heard the case, found that the letter was defamatory and malicious, and awarded Dr. Wylie £10 damages. The Sheriff, on appeal, acquitted the defender on the ground that the letter was privileged, and that malice had not been proved. Their lordships reversed the latter judgement, and reverted to that of the Sheriff-Substitute, with expenses, holding that the letter had been sent without due inquiry, and that the defender's recklessness in making the charge without regard to its serious nature and to the want of information on which it was founded amounted in law to malice, debarring the plea of privilege. Dr. Wylie was represented by counsel instructed by the Medical and Dental Defence Union of Scotland, Ltd.

THE Linnean Society is taking steps to increase the annual subscription from £3 to £4, mainly on the ground of the increase in the cost of the production of its *Transactions* and *Journal*, but also owing to the tendency of all establishment charges to rise. If the difficulties were temporary, some of the small investment funds might have been used, but as there is no prospect of a return to former conditions an increased income is regarded as absolutely essential. *Nature*, in commenting on the announcement, states that all the learned societies are at present faced with similar problems.