A NOTE ON THE TREATMENT OF RECURRENT MALARIA AND MALARIAL RELAPSES.

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RECENT publications in THE LANCET have shown wide divergence of opinion on the treatment of malaria, so that medical men who are not familiar with the disease would find it difficult to determine the line of treatment which should be adopted. I have seen cases where heroic doses of quinine have been given in the belief that a cure would be effected. The subsequent history has shown that this is not so. In other cases quinine has been given in such minute doses as to be valueless; and cases of tertian malaria have been seen with three and four relapses, quinine having been withheld, it was stated, until the temperature should become normal.

During the period January, 1918, to July, 1919, observations and investigations have been carried out on 8000 soldiers who have been sent back to England on account of malaria contracted in one or other of the theatres of war. The majority of cases were studied in the Southern Command concentration camp for cases of malaria, the minority in the 3rd Southern General Hospital, Oxford, and the Kitchener Hospital, Brighton.

On arrival in England men infected with malaria parasites are not in most instances really ill unless they are suffering from a disease additional to their malarial infection. Many are debilitated and in poor condition, but it is surprising how rapidly they improve with the change of climate, change of diet, and adequate treatment. Men who have been some time in England, and whose condition is not complicated by other disease, do not present a debilitated appearance unless they are the victims of inadequate treatment and inadequate or improper diet. The disheartening thing to all of them is the occurrence of relapses. All of them have had quinine, many of them have had it in large amounts. Practically all of them dislike it, more especially in solution; any faith they have ever had in the value of quinine as a cure for malaria has been severely shaken. Yet quinine is undoubtedly the remedy for malaria. Observations have been made with various other drugs, including the ring compounds of arsenic. The results were not satisfactory. None of them is of the same value as quinine.

The primary attack of malaria is often severe, more especially when the disease is contracted under the conditions which so frequently occur on active service. The patients may then be unable to absorb quinine, and it is necessary to have recourse to intramuscular or intravenous injections, but in England when dealing with relapses these methods of medication are unnecessary.

When the tongue, as an indicator of the condition of the gastro-intestinal tract, is kept clean intolerance to quinine is not observed. Men have stated that they either could not take quinine or could not take it in solution. In no instance have their statements been verified. Time and again I have proved to the men the inaccuracy of their observations and that they can take quinine in

solution with beneficial results. Tablets of quinine are not a satisfactory form of medication. Tablets are more pleasant to take than quinine in solution, but with them evasion is so much easier and is so commonly practised that they should not be employed in hospital treatment. No man can relapse during the period that he swallows 15 gr. of quinine sulphate in solution once daily. Smaller doses are not sufficient, and it is better to give the amount in one dose rather than in divided doses. Fifteen grains of quinine taken daily can do no harm to any man infected with malaria parasites. If the case does relapse the man is either not swallowing or not absorbing the quinine.

It has not been determined how long the continuation of treatment is necessary. It was not found practicable to continue the treatment beyond 28 days in hospitals or concentration camps for malaria. All that was accomplished was to demonstrate to the men that they were not invalids, and that with proper treatment they could be kept in health. It is advisable to continue the treatment for as long as possible, pointing out to the men that failure to do so will be followed by a relapse. The interval between the completion of 28 days' treatment and the occurrence of a relapse varies from several days to several weeks.

The ordinary hospital diet is excellent, and all that is required for uncomplicated cases of malaria. Indeed, if an adequate dietary could be ensured and arrangements made for the routine administration of quinine under supervision the vast majority of the men would be better out of hospital and engaged in work. Nothing conduces more to hospitalism than the admission of a man to hospital every time that he has a relapse, or his retention in bed after his temperature has become normal.

In the absence of treatment or in cases inadequately treated relapses are observed. In these cases 15 gr. of quinine sulphate in solution should be given twice daily for five days and thereafter 15 gr. once daily. A rigor cannot be aborted, and if the first dose be given when the temperature is rising vomiting may occur. The first dose should be given when the temperature is falling—that is, in the sweating stage. No patient suffering from a relapse without complications, who is treated in this way, will show a rise of temperature subsequently to the fourth day.

No importance is attached to the use of tonics, such as iron and arsenic. Where they have been given it has been in deference to the wishes of the men.

An alarming complication is the occurrence of blackwater fever. Fortunately the incidence of this condition is not high. Seven cases were observed. All of them recovered. In these cases quinine was withheld while the urine was abnormal. In all of them the temperature rose after the blackwater had disappeared. Quinine was then given and continued for as long as the patients were in hospital.

ROYAL PORTSMOUTH HOSPITAL.—The financial resources of the Royal Portsmouth Hospital are considerably strained, the expenditure being nearly £100 a week more than the income, due to the great advance in the cost of every-day necessities. To place the institution in a better position an appeal is being made for a contribution of 1d. a week from those engaged in the various business establishments in the town. It is hoped by this means to increase the income by over £10,000 a year.