MISLEADING MALARIA

BY

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In view of the danger from malaria to our Armies operating in Southern Europe and other malarial areas Capt. Birks's paper, "Symptomatology of Malaria," in the issue of the *Journal* of June 26 is a timely warning of some of the ways in which malaria attacks without causing febrile symptoms, and so may mislead the physician. There are other ways in which "malaria kills, not in the hot blood of a fever, but in cold blood, masquerading as some non-febrile disease." The following is a summary of a paper, "Some Clinical Features of Quartan Malaria," by myself, which appeared in the *Malayan Medical Journal* in 1904 and the *Indian Medical Gazette* in 1905.

Quartan malaria rarely kills as a febrile disease, and is especially suitable for the study of chronic malaria.

In 18% of 66 cases pyrexia was absent
In 18% „ 66 „ „ occurred at long intervals
In 32% „ 83 „ oedema was a prominent feature
In 18% „ 83 „ „ overshadowed all other features

In some cases the combination of normal temperature, dense albumin in the urine, with blood and tube casts, had led to a diagnosis of acute nephritis until the discovery of quartan malaria parasites. This condition is much less common with the other parasites. In 20 of 83 cases it was diarrhoea or dysentery which brought the patient into hospital, and there was no complaint of fever. In 5 out of 83 cases there were abscesses—some large, multiple, and painless. In nearly all cases cough was common; in some there was severe bronchitis. It was the failure of an ulcer to heal that first put me on to the track of afebrile quartan malaria, and thence to afebrile malaria generally.

In an article entitled "Rare Nervous Symptoms produced by Malaria" (Watson, 1908) I drew attention to epileptiform attacks in B.T. malaria and paralysis of the sixth nerve, presumably the early symptom of malaria coma.

In a "Note on the Parasites of a Case of Malignant Malaria, with a Discussion of the Development of the Crescent" (Watson, 1903) I wrote, describing a peripheral blood film: "In many places groups of as many as 30 almost fully developed parasites were counted, reminding one of what is occasionally seen in cerebral and other capillaries. This suggested that red corpuscles infected by M.T. parasites develop adhesiveness, which accounts for the blockage of capillaries, and might explain the "generalized disease of arterioles and capillaries" suggested by Capt. Birks as the cause of the symptoms in his cases.

The full significance of unrecognized malaria I did not realize until, as a result of antimalaria work begun in 1901, the following figures were compiled:

Number of Deaths in Kland and Port Swettenham corrected for Deaths Occurring in Hospital

	1900	1901	1902	1903
Fever	259	368	59	46
Other diseases ..	215	214	85	69
Totals	474	582	144	115

Further experience of successful antimalaria work has consistently shown a decrease in "other diseases" such as diarrhoea, dysentery, convulsions, and anaemia.

Quinine Injections

Normally, quinine by mouth is sufficient, but there are many exceptions to the rule. A medical friend staying with me relapsed from B.T. malaria. His tongue became dry. He was given quin. bihydrochlor. 7 gr. t.i.d. At the end of 48 hours he still had fever and parasites. Meyer's reagent showed no quinine in the urine. Intramuscular injections produced the desired result.

When quinine is injected intramuscularly it is safer to limit the amount injected in one place to 5 gr., and less painful to the patient. In 1933 I carried out a series of experiments with guinea-pigs and rabbits. As the dose of quinine bihydrochloride was raised from 1 gr. to 5 gr. the oedema and redness, seen on cutting into the site of the injection 48 hours later,

increased. On injecting 8 gr. extensive sloughing was observed. A patient came to me with both thighs puckered in dozens of places. She had had a course of injections.

An injection of morphine, with a good sleep, is appreciated by the patient after sleepless nights and severe headache, as doctors themselves will find if they contract malaria.

Hyperpyrexia

When I first went to the Tropics I wondered how I would treat hyperpyrexia in malaria in the absence of ice. It is true that the temperature in B.T. malaria often rises to 105° F. and over, but I have never seen hyperpyrexia endanger the patient's life. The late Dr. C. W. Daniels, who had a rich experience of malaria, both clinical and pathological, told me that this was his experience also in uncomplicated malaria. He thought the textbooks had inherited the heading from the pre-microscope days, when typhomalarial fever was a common diagnosis. When I did meet hyperpyrexia in other diseases it was easily controlled by sponging with or pouring on water of a temperature about 80° F., to the great comfort of the patient.

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SCOTLAND'S HEALTH

It says much for the work of the Ministry of Food that the Department of Health for Scotland in the fourth year of total war can place "the nutritional basis of food rationing" second only to the Department's own efforts in the factors responsible for the satisfactory state of the public health during 1942. Other contributing causes are stated in the annual summary report of the Department to be the increased employment and purchasing power of the working classes (though it is difficult to see how the latter plays a part when consumer goods are so limited) and the mild winter. As in England, however, there was no absence of health problems.

The incidence of tuberculosis was higher than it has been for some years—9,126 notifications, as against 8,302 in 1941 and 7,484 in 1938. Deaths were 80 per 100,000 of the population, as compared with 83 in 1941 and 69 in 1938. New cases of venereal disease treated at Scottish centres numbered 10,999, compared with 10,530 in 1941 and 6,929 in 1939; there were more cases of syphilis and fewer of gonorrhoea. The report states that it is too early yet to judge the effect of Regulation 33B, but "common" sources of infection named so far have been few. The only other disease the increase in which can be attributed to war conditions is cerebrospinal fever. The number of confirmed cases (1,621) was 247 fewer than in 1941, but it was still over five times greater than the figures for 1938 and 1939.

The infant mortality rate, which was 69.3 for the year under review, has only once been lower, and that was in 1939, when the rate was 68.5. The report of the subcommittee of the Department which has been examining this problem is expected shortly. Scotland now has 99 wartime nurseries for 4,353 children, as compared with 29 for 1,180 a year ago. About 1,000,000 people were vaccinated in Scotland during the small-pox outbreaks last year; eight deaths were recorded in each of the three principal centres of outbreak—Glasgow, Fife, and Edinburgh. References are made in the report to the successful "Clyde Basin Experiment," under which 3,758 workers have been medically examined, many by the specialist service provided, and 1,523 admitted to hospitals or convalescent homes.

On the subject of the Beveridge report there is the following comment: "The adoption of the proposals would involve the supersession of the present scheme of National Health Insurance, with its segregation of the insured population in financially separate approved societies and branches, charged with the administration of sickness, disablement, and maternity benefits. The present restriction of medical benefit to insured persons and the administration of this benefit by insurance committees would likewise disappear." The Department, like the Ministry of Health in England, is discussing the future of the medical services with representatives of doctors, hospitals, and local authorities. The Committee on Post-war Hospital Problems (chairman, Sir Hector Hetherington) is expected to report at an early date, and hospital surveys, which should be completed in the autumn, are being carried out by special commissioners.