August 22, 1924.—Knee-joint aspirated and 100 cubic centimetres of fluid withdrawn. Pus-cells and diplococci present.

August 28, 1924.—Knee-joint again aspirated and seventy cubic centimetres of exudate withdrawn. The fluid was clear and no pus-cells or micro-organisms were found. On this date, too, no pus-cells could be found in the urine. Thereafter the knee-joint returned to its normal size, and the patient was discharged from hospital on September 18, 1924, the joint was stiff and there was a limitation of movement. He had regained full functional use of the joint towards the end of November.

His blood was frequently examined for malaria but with negative results. He had never had pneumonia or venereal disease. His Wassermann reaction was negative. His serum agglutination against typhoid, para. A and para. B was within normal limits for an inoculated man.

It therefore appears certain that he had a generalized pneumococcal infection with special involvement of the right knee-joint. It establishes the fact that some cases of pneumococcal arthritis get well if the fluid is aspirated sufficiently frequently without recourse to more heroic treatment.

I am much indebted to Major J. M. B. Rahilly, O.C. 17th I.G.H., Razmak, Waziristan, for permission to publish these notes, as also to Lieutenant Gill, I.M.S., who did the aspirations.

Á-MALAIRIN IN THE TREATMENT OF CHRONIC MALARIA.

BY MAJOR J. HEATLY SPENCER.

Royal Army Medical Corps.

Through the courtesy of the proprietors of the Chemical and Research Laboratories a supply of this drug was obtained for trial in India. The active principle of the drug is the glucoside of dioxydiamino-diphenyl-diarsenide. The cases here reported on were chosen specially for both severity of type and frequency of attacks, and were all bad cases of chronic relapsing benign tertian infection, which treatment by quinine and other drugs failed to improve. The object of the trial was to ascertain whether such a type of case could be materially benefited as regards liability to recurring attacks of active malaria. The drug was not used to treat actual attacks, but was given in definite courses with a view to ultimate and not immediate results. For this reason while quinine was withheld in the first cases treated, it was subsequently given when active symptoms were present. It is clear that in chronic infections, already the subjects of extensive quinine therapy, without improvement, its effects could neither enhance nor prejudice the results of the drug under trial. In the cases now reported a provocative effect has been noted in several instances, and it is doubtful if sterilization has been effected in any (possibly in two). The history of each case has been followed as far as military conditions have allowed. The conditions as regards climate and temperature under
which the tests have been made may be said to be ideally severe, as the altitude is 5,500 feet, and severe cold at night follows upon high sun temperature by day, while sudden changes in weather are frequent in the spring, all of which conditions are specially prone to cause recurrences of active symptoms in chronic benign tertian cases. Malignant tertian cases were excluded as it was considered this type would prove a less exacting test of the qualities of the drug. Treatment consisted of four weekly intramuscular injections of 1 c.c., followed by a second course three months later.

Case 1.—Sergeant P——, R.E. (incomplete course given). Contracted August, 1922. Attacks, seventeen to twenty at average intervals of one month. Treatment began January 13, 1924; concluded February 2, 1924. Active malaria with B.T. in blood at commencement of treatment. Spleen + + (two fingers below ribs), liver + tender, cachexia moderate. Clinical symptoms: Rigors, etc.

Subsequent history: Blood positive on February 3, 1924; clinical malaria on February 7 and 10, and March 4, 1924. All while out in camp. Blood positive on March 8, 1924. Interviewed six months after stated he had been entirely free from all symptoms since the attack of March 4, 1924. Appearance healthy. Owing to this man being away from station the second course could not be given.

Case 2.—Signaller K——G——, B Divisional Signals, contracted June, 1921, at Karachi. Treatment commenced January 27, 1924. Number of intermediate attacks thirty. A very severe case of chronic relapsing malaria which had undergone a special course of antimalarial treatment at Kasauli, on the final day of which he was admitted to hospital with a severe malarial attack. Condition on commencing treatment—Blood positive, spleen + +, cachexia marked. Attacks were then coming on at ten-day intervals. First course concluded February 18, 1924. Blood on January 30 and March 2, 1924, negative. Slight symptoms occurred on February 24 and 29, 1924. Blood, March 2, 1924, negative, on March 12, 1924, positive B.T. On March 19, 1924, admitted to hospital for invaliding and then stated he was much improved as regards severity and frequency of attack. Second course commenced May 28 concluded June 18. Case invalided to England in October, up to which time he had only had two minor attacks not requiring admission to hospital.

Reported by letter (from United Kingdom), dated November 24, in which he stated he was well and had had but a few slight attacks in no way comparable in severity to his former ones. The clinical improvement in this case at the date of departure to the United Kingdom was definite. The cachexia had disappeared, the spleen was just palpable, and the man looked well and stated he was greatly improved.

Case 3.—Signaller Q——, B Divisional Signals. Contracted June, 1922. Admitted for treatment, April 5, 1924. Number of attacks twelve. On admission blood positive. Spleen +. Rigors. First course between
Clinical and other Notes

April 8 and 29. No symptoms during first course, which was followed by four slight attacks (at fortnightly intervals) not requiring hospital treatment. Second course given between August 31 and September 27, 1924.

Interviewed at end of November, 1924, stated that he had not been entirely free from attacks but they were much less severe than before treatment. Spleen was then not palpable.

Case 4.—Rifleman S——, 2nd Camerons. Disease contracted at Kohat, October, 1921. Admitted April 6, 1924. Blood positive. Cachexia marked. Spleen very large, reaching nearly to umbilicus. Liver tender. Rigors. Number of intermediate attacks: three at intervals of about six months. First course given between April 11 and May 2, 1924. Film during course on June 1, 1924, positive. Film on June 10, 1924, positive, accompanied by rigor. Slight attack on August 25, 1924. (Not admitted to hospital.) Second course given between September 5 and 26, 1924, when the spleen had appreciably diminished in size. There was a typical attack just before commencing this course. Admitted to hospital on November 11, 1924, for invaliding. The spleen was then very much smaller, descending one inch below the costal margin on full inspiration. The blood on admission was negative and the general health much improved. This case was invalided to United Kingdom and no subsequent history is available. A third course was given during November, 1924.

Case 5.—Signaller P——, B Divisional Signals. Contracted June, 1923, at D. I. Khan. Admitted April 3, 1924, with positive blood and enlarged spleen. Number of intermediate attacks: seven (at intervals of about six weeks). First course given between April 5 and 26, 1924. No symptoms during course. Second course given between September 12 and October 3, 1924. There were no attacks between the two courses, but the first injection of the second course was followed in forty-eight hours by an attack of fever. Interviewed on December 4, 1924, stated he had been quite well since second course and felt better in every way since treated. The spleen was then just palpable.

Case 6.—Mrs. L——, contracted October, 1923, in Baluchistan. Between October and December, 1923, had very frequent attacks, and again between May and June, 1924. First course given between July 27 and August 17, 1924, was free from fever for about six weeks, when she suffered from attacks every other day for fourteen days. This case would not take quinine. Second course given between November 24 and December 15, 1924. Up to March 1, 1925, there have been no further attacks.

Case 7.—Signaller W——, B Divisional Signals. Contracted at Tonk in July, 1922. Admitted for treatment April 26, 1924, with rigor and positive blood. Spleen enlarged. Number of intermediate attacks, twelve at intervals of two months. First course given between April 29 and May 19, 1924. No symptoms during course, which was followed by three slight
attacks at three weeks’ interval, not requiring hospital treatment. Second course given between September 5 and 26, 1924, and followed by three slight attacks.

Interviewed on November 27 stated he had very definitely improved and had never before been free from attacks for so long.

Case 8.—Gunner S——, 38th Field Battery, Royal Artillery. Contracted at Lahore in 1923. Admitted for treatment July 10, 1924. Intermediate attacks, seven. On admission blood positive, rigors, cachexia. First course between July 14 and August 6, 1924. This was followed by two slight attacks not requiring admission to hospital. Second course between November 4 and 25, 1924.

Interviewed on March 15, 1925, stated he had been entirely free since treatment; appeared in robust health.

Summary.—It would be unwise to attempt to express an opinion on the results of so few cases but the author is inclined to consider this drug one of the best combinations of arsenic he has used in the treatment of chronic malarial infections. Two of the cases treated had entirely failed to benefit from treatment by “Eoanophalie.” While none of the cases responded immediately to treatment all appear to have derived considerable ultimate benefit.

An official use of this drug on say fifty cases whose histories could be followed for two years after treatment would be of great interest and value.

Travel.

AN ASCENT OF MOUNT ETNA.

By Major M. B. H. Ritchie, D.S.O.
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(From the “Field,” August 6, 1925.)

The idea of making the ascent of Mount Etna came as an eleventh-hour inspiration when about to start on leave from Malta. Visible from that island in clear weather, about 100 miles to the northward, Etna is the loftiest volcano in Europe, being close on 11,000 feet high. Two guide books to Sicily in my possession, both of pre-war date, recommended as taking-off places for the ascent either Randazzo or Nicolosi, inclining to favour the latter, a village ten miles above the city of Catania. Full moon during summer was given as the best time of the year for the undertaking. The first day of leave was full moon, the season summer (June), so without further inquiries—there was no time to get a reply from Sicily—we broke the homeward journey at Catania and motored up to Nicolosi.

Accommodation was obtained at the inn, the head guide interviewed at the office of the Italian Alpine Club, situated in the village, and all arrangements were soon completed for the ascent, which was timed to start at 10 o’clock the following morning. The usual method is by mule as far as