SOUTH-EASTERN DIVISION.

THE SPRING MEETING of the South-Eastern Division was held by courtesy of the Visiting Committee and of Dr. M. A. Collins at the Kent County Mental Hospital, Chartham, near Canterbury, on Friday, May 6, 1932.

Members and their guests inspected the hospital and grounds during the forenoon, and were afterwards entertained to lunch. Dr. F. R. P. Taylor expressed the thanks of the meeting to the Visiting Committee for their hospitality, and proposed the toast of the Chairman of the Committee, Alderman Sidney Brown, to which the latter responded.

The minutes of the last meeting were taken as read, and confirmed.

The fixing of the date and place of the Autumn Meeting, 1932, and of the Spring Meeting, 1933, was left to the Divisional Secretary.

The following were elected members of the Divisional Committee of Management: Drs. D. Rice, E. D. T. Roberts, W. Robinson, M. A. Collins, K. Paddle, H. G. L. Haynes, and A. C. Sinclair.

Dr. J. Noel Sergeant was re-elected Honorary Secretary of the Division.

The following were elected Representative Members of Council: Drs. D. Rice, E. D. T. Roberts, M. A. Collins, W. Robinson, and F. R. P. Taylor.

Dr. M. A. Collins was elected Chairman of the Division.

Mr. T. A. CLARKE read a most interesting paper on "**Ear, Nose and Throat Sepsis in Mental Disease,**" (in collaboration with Dr. A. K. MCCOWAN) (*vide* p. 705). A discussion followed, in which Dr. SHEPHERD, Dr. PADDLE and Dr. COLLINS took part.

Mr. A. BERESFORD-JONES read a paper entitled "**Spinal Anæsthesia and Its Applicability to Operations on the Insane**" (in collaboration with Dr. F. C. M. TAYLOR). Dr. SHERA and Dr. COLLINS took part in the discussion which followed.

A vote of thanks was proposed by Dr. HAYNES, and seconded by Dr. ROBINSON.

Members and their guests were then entertained to tea by Mrs. Collins.

SOUTH-WESTERN DIVISION.

THE SPRING MEETING of the Division was held, by kind invitation of the Committee of Visitors and of Dr. E. Barton White, at the Bristol City Mental Hospital, Fishponds, Bristol, on Thursday, April 28, 1932.

The following members were present: Drs. P. K. McCowan, R. Ström-Olsen, H. W. Hills, S. J. Gilfillan, P. G. Grant, B. M. Mules, A. S. Mules, P. Lornie, W. G. Rivers, Herbert Smith, H. C. MacBryan, Arthur Darlington, J. J. O'Reilly, A. S. Taylor, L. Barber, E. Casson, W. R. Dawson and S. E. Martin.

Drs. D. C. Rayner and R. E. Hemphill attended as visitors.

Dr. E. Barton White was in the Chair.

The minutes of the last meeting were read and confirmed.

A letter was read from Mrs. J. R. Lord thanking the members for their expression of sympathy with her in the loss of her husband.

The CHAIRMAN referred to the loss the Association had sustained by the deaths of Dr. Watson and Prof. G. M. Robertson, and the S.-W. Division in particular by the deaths of Dr. J. G. Soutar and Dr. W. F. Nelis.

On the proposal of Dr. B. M. MULES, seconded by Dr. P. K. MCCOWAN, Dr. S. E. Martin was elected Hon. Divisional Secretary.

Dr. E. Barton White and Dr. B. M. Mules were elected Representative Members of Council, on the proposal of Dr. J. J. O'REILLY, seconded by Dr. P. K. MCCOWAN.

Dr. E. Barton White was elected Divisional Chairman on the proposition of Dr. S. J. GILFILLAN, seconded by Dr. P. K. MCCOWAN.

The following were elected ordinary members:

ROBERT WARNOCK MAXWELL, M.R.C.S., L.R.C.P., Assistant Medical Officer, Somerset and Bath Mental Hospital, Wells.

Proposed by Drs. J. McGarvey, Arthur Darlington and S. Edgar Martin.

ROBERT EDWARD HEMPHILL, M.B., B.Ch.B.A.O., Trinity College, Dublin; Assistant Medical Officer, Bristol City Mental Hospital, Bristol.

Proposed by Drs. E. Barton White, J. R. Benson and S. Edgar Martin.

The HON. SECRETARY reported that he had received an invitation for the 1933 Spring Meeting to be held at Bailbrook House, Bath, and also one from Dr. J. R. Benson for the Autumn, 1932, Meeting to be held at Laverstock House, Salisbury, provided Dr. Benson could make arrangements in the meantime. The matter was left in the hands of the Hon. Divisional Secretary.

Dr. L. BARBER and Dr. A. L. TAYLOR then read a paper entitled "Observations on 33 Cases of G.P.I. Treated by Induced Malaria" (see below), which gave rise to an interesting discussion, in which the CHAIRMAN, Drs. MCCOWAN and DAWSON took part. Dr. A. L. TAYLOR replied.

Drs. E. BARTON WHITE and A. L. TAYLOR followed with an account of "Some Cases of Pellagra," which resulted in a productive discussion, in which Drs. MCCOWAN, GILFILLAN and the CHAIRMAN participated.

The CHAIRMAN thanked Drs. L. Barber and A. L. Taylor for their papers.

During the morning the members were shown over the Hospital, and among interesting things saw the new Observation Ward and the Pathological Department, where Dr. A. L. Taylor demonstrated, both under the microscope and by charts, some of the findings which he later in the afternoon referred to in his paper.

The members were kindly entertained to lunch and tea. Dr. S. J. GILFILLAN proposed a hearty vote of thanks to the Committee of Visitors and Dr. E. Barton White for their hospitality.

"Observations on 33 Cases of General Paralysis Treated by Induced Malaria," by L. BARBER, M.B., D.P.M., Assistant Medical Officer, Bristol Mental Hospital, and A. L. TAYLOR, M.D.Leeds, Pathologist, Bristol General Hospital and Bristol Mental Hospital.

(*Abstract.*)

THIS paper is an account of our experiences with a series of 33 cases treated during the past two years. The series has been in no way selected; it has been our practice to treat every case admitted during this period, whether in an early or advanced stage of the disease, the only omissions being a few practically moribund cases.

The series includes 23 men and 10 women—33 cases in all. The ages of the patients treated varied from 28 to 64, with an average of 44 years. The youngest, a man of 28, had contracted syphilis at 18, and had shown mental symptoms for nearly a year. Wherever possible the length of time elapsing between original infection and the onset of mental symptoms was ascertained, but reliable information was lacking in most cases. In the 12 cases ascertained the latent period varied between 6 and 28 years, with an average of 16 years. The average duration of mental symptoms before admission was 5½ months. All the cases were certified except one, who was a temporary patient. Treatment was started in the majority of cases within a month of admission; in a few debilitated subjects it was deferred until the physical condition had improved.

Technique of Malarial Induction.

The original strain of malarial parasite was supplied by Col. S. P. James, of the Ministry of Health, from the Malarial Treatment Centre at Horton. Of the two cases bitten by infected mosquitoes, one did not develop and therefore has not been included in the series; the other developed satisfactorily, and the malarial strain has been transferred from one patient to another by blood inoculation.

In the majority of cases the malaria was allowed to run its full course, but in some debilitated patients the "intermittent" method was used, the attacks being cut short by a single 5-gr. dose of quinine sulphate. We have been much impressed by the ease and certainty with which the malarial infection may be suspended whenever this is judged to be necessary on account of the patient's physical condition.

The results in the series of cases under review are conveniently set out in Table I below. Three cases did not develop typical malaria after inoculation, and we have not felt justified in including them as treated cases.

TABLE I.—*Total* 33 *Cases, of which* 30 *were Successfully Inoculated.*

	Number.		Percentage of "takes."	
(1) Discharged		5		16·6%
(2) Still in hospital—				
(*a*) Improved	6		20·0%	
(*b*) Stationary	6		20.0%	
(*c*) Deteriorated	3		10·0%	
	—	15	———	50%
(3) Died		10		33·3%

(1) *Patients discharged.*—3 women, 2 men. One of the women relapsed after being at home seven months, and had to be re-admitted. The other 4 cases were all personally interviewed recently. One woman has been at home for more than a year; she is married and looks capably after her home. Her husband states that she has been quite well physically and mentally since her discharge. She is now attending the Bristol General Hospital monthly for anti-syphilitic treatment. The other woman has been at home for 7 months; she also is a married woman and is looking after her home and four children. Her conversation is quite rational and her general conduct perfectly normal. Also attending for anti-syphilitic treatment. One man has been discharged for over a year and has been working as a carpenter at his former place of employment since he left the hospital. His friends regard him as completely cured. The other man has now been at home for four months, and is very capably managing a small store. His mental condition is apparently quite recovered, but his gait is slightly ataxic. Is attending the General Hospital for anti-syphilitic treatment.

(2) *Patients remaining in hospital.*—These may conveniently be divided into the three groups indicated above:

(*a*) *Improved.*—6 cases, 5 men and 1 woman, show considerable improvement. Of the men 3 are in useful employment daily, are granted parole in the grounds and allowed out for the day occasionally in the care of their friends. The other 2 are incapable of doing work, but are improved to the extent of looking after themselves, and are clean and tidy in their habits and dress. The woman occupies herself usefully in the ward, and is quiet and well-conducted, whereas before treatment she was grandiose, violent and destructive.

(*b*) *Stationary.*—6 cases, 3 men and 3 women, show no appreciable change in their mental condition, but are all up and about, and require very little supervision.

(*c*) *Deteriorated.*—3 cases, all on the male side, have definitely gone downhill; in each case the deterioration has followed upon a seizure 22, 11 and 4 months, respectively, after their treatment.

(3) *Deaths.*—10 cases, 9 men and 1 woman, have died. 4 cases died during treatment, and the others after progressive degeneration, at intervals varying from one to nineteen months from the completion of their course.

Laboratory Investigations.

We have applied the appropriate tests to the cerebro-spinal fluid systematically throughout the period of study, with a view to determining whether these reactions undergo any notable modifications as a result of the malarial treatment. In brief it may be said that while very few cases showed a dramatic return to normal, the average figures for the whole series indicate a definite improvement which was parallel with the clinical results obtained.

Pleocytosis.—Except in the acute and rapidly fatal forms of the disease, this is never very pronounced. The highest cell-increase in our series before treatment was 54 per c.mm., with an average of 25. After treatment these figures became 45 and 18 respectively, which are still considerably above the high normal limit.

Protein.—Very little change was observed in total protein content. Before treatment an average of 60 mgrm. per 100 c.c. (roughly twice the high normal value); after treatment average 50 mgrm. The globulin increase, however, estimated by the Ross-Jones modification of the Nonne-Apelt method, was definitely less in most cases.

Wassermann reaction.—Table II shows the reactions obtained in the blood and spinal fluid of all cases before treatment, and a comparison between pre- and post-malarial reactions in 18 of the cases where this could be made at a later date:

TABLE II.

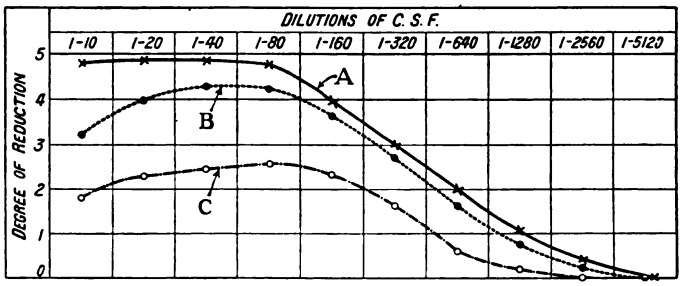
Wassermann reaction.	Whole series before treatment.		Blood.		Cerebro-spinal fluid.	
	Blood.	Cerebro-spinal fluid.	Before.	After.	Before.	After.
+++	21	26	12	4	15	4
++	5	1	3	6	0	7
+	5	6	2	5	3	5
—	2	0	1	3	0	2
Total	33	33	18	18	18	18

+++ = Complete deviation of 3 M.H.D. complement by serum dilution 1/50 ; ++ = dilution 1/25 ; + = dilution 1/5.

It will be seen that 100% of the cerebro-spinal fluids and 94% of the bloods gave positive reactions, only two of the latter showing negative results. It is interesting to note in passing that one of these is now discharged, while the other is practically normal mentally, though still in hospital. The figures presented show a considerable diminution of deviating power of both serum and spinal fluid, and this may fairly be regarded as indicating a lessened intensity of the syphilitic process. In two cases the cerebro-spinal fluid gave a completely negative reaction after treatment (from +++ and + respectively), and both these cases are in the discharged group.

In the present series the strength of the Lange reaction before treatment varied considerably in different cases. 16 of the fluids showed the classical "paretic" curve with complete reduction in the first four or five tubes ; the others showed varying degrees of reduction, less in amount, but conforming to the same general type of curve. No case failed to give a definite reduction, which was most pronounced in the lower dilutions of the cerebro-spinal fluid. After recovery from the malaria not every case showed a striking alteration in the Lange curve, but the average reduction was considerably diminished in intensity.

TABLE III.—*Showing the Effect of Malarial Treatment on Lange Curve.*



A = Typical paretic curve (given by 16 cases of the series) ; B = average curve before malarial treatment ; C = average curve after treatment.

In two cases (since discharged), after treatment the Lange curve was completely negative, and in three others practically so, although before malaria the curve was pronounced and quite typical. On the other hand, the cases which showed little or no clinical improvement suffered little change in the spinal fluid and blood reactions.

In general terms we may state that the laboratory findings after malarial treatment have corresponded well with the clinical progress observed. In the discharged and improved cases we have found almost constantly a reduction of the

Wassermann reaction, with cell- and protein-content and Lange curve all showing an appreciable reduction. These results surely indicate an abatement of the syphilitic process directly due to the malarial infection, and raise the interesting question as to how its beneficial effects are brought about. It has been suggested that the malarial parasite, being of protozoal nature, stands in close biological relationship with the spirochæte, and that malarial infection may produce group-specific antibodies which tend to combat the syphilitic virus. A less speculative explanation seems to us worthy of notice. Four of our cases died during the course of treatment, and in two of these we were able to make a *post-mortem* examination. In both, on histological examination of various portions of the brain, we have found extreme congestion of the cerebral vessels, which were engorged with blood and surrounded by an inflammatory infiltration far in excess of that in non-treated cases, brains of which were sectioned for comparison. Similar appearances have been described by Sträussler and Koskinas, who sectioned four brains of patients dying during treatment. So far as we may judge from the scanty material at our disposal, it would appear that important factors are the flushing out of the syphilitic toxins from the cerebral circulation, and an improved oxygenation of tissues previously starved for want of blood. It is obvious that once gross destruction has occurred restoration of the delicate nervous tissues is impossible, a fact which is in keeping with the disappointing clinical results of treatment in advanced cases.

The marked cerebral congestion occurring during the malarial course is, in itself, not without danger, particularly as the vessels are already weakened by syphilitic arteritis. In this connection we have been much impressed by the number of small hæmorrhages encountered in all parts of the brains examined, as compared with those in untreated controls. Such hæmorrhages are, of course, a well-recognized feature of general paralysis and the larger ones are responsible for the seizures which frequently occur during the course of the disease. In the malarial brains they were strikingly numerous and mostly of microscopic size, appearing to arise from ruptured capillaries; at places as many as three or four were found in a single field of the microscope. The suggestion therefore seems reasonable that in addition to the malarial toxæmia, the mechanical results of gross cerebral congestion are largely responsible for the fatalities which occur during the course of treatment. Malarial therapy is undoubtedly a considerable extra strain on tissues already weakened by disease, and we fully recognize that its use entails a very definite immediate risk to the patient. But our own observations detailed above have satisfied us that the results of this treatment well justify the risk involved.

In conclusion we would express our warmest thanks to Dr. E. Barton White and the Assistant Medical Staff of the Bristol Mental Hospital, whose enthusiastic co-operation has been of immense help throughout the period of study.

NORTHERN AND MIDLAND DIVISION.

THE SPRING MEETING of the Division was held, by the courtesy of Dr. H. Dove Cormac, at the Cheshire County Mental Hospital, Parkside, Macclesfield, on Wednesday, April 27, 1932.

Members were conducted over the Hospital and gardens, and much interest was shown in the new occupation pavilion and other treatment rooms, the aviaries, and the staff swimming-bath, where an exhibition of expert diving and swimming was given by members of the nursing staff.

A large company of members and visitors were entertained to luncheon by the Visiting Committee. A cordial vote of thanks was moved by Dr. EDGERLEY and carried by acclamation.

The following members were present: Drs. Bain, Bruce, Brunton, Chevens, Dove Cormac, Davidson, Dixon, Drury, Drake-Brockman, Eaves, Edgerley, Ewing, Forrester, Gillespie, Healey, Hopkins, Leech, Mackenzie, Macmillan, Parkin, Reeves, Starkey, Thomson, Wilkes, Russell.

Approximately 100 visitors, including members' wives, members of the Visiting Committee, and students from Manchester University also attended.

A business meeting, attended by members only, was held at 2.15 p.m., Dr. Dove Cormac, Divisional Chairman, presiding.