and 21% gave a definitely elevated reading of 85 mgrm. as an average.

40% of 47 cases after an interval of at least two years showed little if any modification of the fluid Wassermann, 15% showed a slight modification, 23% showed a great modification, and 21%showed a complete negative. The behaviour of the Wassermann bears little relation to the clinical outcome.

The time has not yet come to give definite prognostic views from the behaviour of the cerebro-spinal fluid after malarial treatment.

G. W. T. H. FLEMING.

## 5. Treatment.

## Experience with Silver Salvarsan in the Treatment of Multiple Sclerosis. (Journ. of Nerv. and Ment. Dis., June, 1928.) Osnato, M.

Osnato obtained good results in 6 of a series of 25 cases of multiple sclerosis treated during the last six years. He emphasizes very strongly the fact that treatment, to be of the slightest use, must be carried out systematically and continuously for a long time, and during the first few months the patient should be kept in bed. The patients were given 0.3 grm. silver salvarsan intravenously every week for ten weeks. A rest of a month followed and then the series was repeated. This should go on for at least from eighteen months to two years. Poor results so often obtained in the treatment of multiple sclerosis may be due to insufficient treatment. G. W. T. H. FLEMING.

## The Treatment of Syphilis: Considerations from the Neurologist's Standpoint [Betrachtungen des Neurologen zur Behandlung der Syphilis]. (Psych.-Neurol. Woch., Nos. 23, 24, 25, June 9, 16, 23, 1928.) Daltner, B.

The author, who is a member of Prof. Wagner-Jauregg's clinic, delivered this address to the Vienna Medical Society in January, 1928. It embodies a number of important observations on the cerebro-spinal fluid in treated and untreated syphilis and general paralysis. Two typical cases are quoted, in whom intensive specific treatment was carried out during the latent period, on account of a persistent blood Wassermann, and was followed by the development of paretic symptoms. The question arises whether the state of the central nervous system can be ascertained during this period. Both the pupil reactions and the blood Wassermann are quite fallacious for this purpose. The changes in the cerebro-spinal fluid are reliable, subject to the following considerations: Collected statistics show that in the early secondary stage about 60% of patients show changes in the cerebro-spinal fluid; in the postsecondary latent period only 25-50% show changes. The proportion of syphilitics who develop metasyphilitic disorders is not above 11%, but the chances of developing these disorders become greater the longer the changes in the fluid persist. It appears that only those patients who retain a positive cerebro-spinal fluid in the latent period are liable to general paralysis.

When paralytics who have been successfully treated by malaria are followed up, it is found that the changes in the fluid disappear very gradually in cases that show complete remission, and that where they persist unaltered a relapse sooner or later takes place. These observations can be applied to patients in the post-secondary latent period with a persistently positive cerebro-spinal fluid. They may be regarded as being in a state of unstable equilibrium, in which various factors may precipitate the onset of general paralysis. Untimely therapeutic intervention may constitute such a factor, as the following observations seem to show. In a series of general paralytics the period that had elapsed between the original infection and the onset of paralytic symptoms was shortest in those whose syphilis had been energetically treated, and longest in the untreated cases; further, the results of malarial therapy were much better in untreated than in treated cases.

The conclusion is that specific treatment is definitely contraindicated in latent cases with persistently positive changes in the cerebro-spinal fluid. A single examination of the fluid gives no indication of whether the tendency of the fluid is to return to normal or to remain persistently pathological. Reliance must be placed on repeated examinations with study of the resultant curves for each reaction. If the pathological changes are persistent, the patient should be given a course of malarial treatment, or failing this a combined course of tuberculin with bismuth and salvarsan. The technique of this latter method is described in detail.

In view of the importance of repeated lumbar punctures in the treatment of every case of syphilis, it is desirable to carry out the procedure with as little disturbance as possible to the patient's activities, and the author considers that, using Antoni's special cannula, punctures can safely be done on out-patients.

A. Walk.

## The Treatment of Debilitated General Paralytics [Wie sollen geschwächte Paralytiker behandelt werden?]. (Psyck.-Neurol. Woch., No. 19, May 12, 1928.) Weisz, M.

This is a preliminary communication on a new method of treatment which the author has applied to cases of progressive general paralysis who are either in too weak a condition to undergo malarial treatment or who have relapsed following treatment. It consists of repeated injections of small quantities of blood from another patient in whom the disease has become arrested, either spontaneously or as a result of malarial treatment. From ten to twelve intravenous injections are given, each of 10 c.c. of blood. The blood is not citrated, and grouping is unnecessary. The author reports good results, most of the patients treated having shown considerable mental and physical improvement. A. WALK.