

extremely unusual in epidemic encephalitis. The character of the cerebro-spinal fluid is unlike that in other acute disease processes. Except in the fourth case there was an absence of organic constituents. The shorter the period of incubation the more acute and intense is the disease process.

G. W. T. H. FLEMING.

*Millon's Reaction in the Urine of Toxic Psychoses.* (*Riv. di Pat. Nerv. e Ment.*, May, 1928.) Scheiner, E.

Dilutions of the urine from 1 in 10 down to 1 in 150 are made with distilled water, and tested by warming with one drop of Millon's reagent. A rose-red coloured precipitate denotes a positive result, and the lowest dilution in which this occurs is noted.

In alcoholic, post-infective and post-puerperal psychoses and in hebephrenic-katatonic cases of dementia præcox the urine constantly contains a substance whose chief characteristic is a positive Millon's reaction.

This substance is neither free phenol, nor an oxy-aromatic acid, nor tyrosine. The appearance of this substance in the urine is usually accompanied by that of other products of abnormal metabolism, like urobilin and urobilinogen, which signify a disturbance of the liver-cells. The author also considers that the black reaction of Buscaino is due to a substance which originates in an alteration of liver function. The reaction of Millon in the urine probably signifies a process of destruction (necrosis?) in the liver-cells.

G. W. T. H. FLEMING.

*Colloidal Gold Reactions with Spinal Fluids Contaminated with Blood.* (*Arch. of Neur. and Psychiat.*, February, 1928.) Mehrrens, H. G., Wyckoff, H. A., and Davis, R. M.

Spinal fluids which are contaminated with blood, but from which the cells are removed by centrifuging before hæmolysis occurs, produce a colloidal gold curve altered in intensity only; the type of the curve remains the same. When spinal fluids from patients with general paralysis, made normal by treatment, are contaminated with blood-plasma, they show a tendency to revert to the former paralytic type of curve.

G. W. T. H. FLEMING.

*The Colloidal Reaction of Takata-Ara.* (*Riv. di Pat. Nerv. e Ment.*, May, 1928.) Uguccioni, G.

For the colloidal reaction of Takata-Ara three solutions are required—a 10% solution of sodium carbonate, a 0.5% solution of mercuric chloride, and a 0.02% solution of Grüber's basic fuchsin.

To 1 c.c. of cerebro-spinal fluid add 1 drop of the sodium carbonate solution, and then, with a graduated 1 c.c. pipette, 0.3 c.c. of a mixture of equal parts of the mercuric chloride and fuchsin solutions, freshly mixed, shaking after the addition of each few drops of reagent.

The results are read after five minutes, half an hour and twelve hours. Two different types of reaction occur in positive fluids—a metasyphilitic type where there is flocculation and a violet-blue colour, and a meningitic type in which there is a diffuse red colour

without any flocculation. In the normal fluid there is a violet colour without any flocculation even after twelve hours. The great virtue of the reaction is its simplicity. It does not take the place of the Wassermann. It is almost invariably 3+ in general paralysis, weaker in tabes or meningo-vascular neurosyphilis. After malarial treatment of general paralysis the weakening of the reaction runs roughly parallel with the weakening of the Wassermann.

It enables one to differentiate between cases with increase of albumen only, and those in which there is a disproportionate increase in globulin.

G. W. T. H. FLEMING.

*The Practical Value of the Paraffin Reaction in the Cerebro-Spinal Fluid. (Riv. di Neurologia, June, 1928.) Pisani, D., and Gozzano, M.*

The authors used Kafka's paraffin reaction on 84 cases of neurosyphilis and 116 non-syphilitic neurological cases. In only 14 cases out of 69 paralytics or tabo-paralytics was the maximum degree of precipitation in the second tube. After malarial treatment there was a marked weakening of the curve, but the type remained the same. In 8 tabetics the maximum precipitation was in tube 1 in 2 cases, in tube 2 in 3 cases, and in tube 3 in 3 cases. In 7 cases of cerebral or meningeal syphilis the maximum precipitation was in the third tube.

The reaction was negative in 98 out of the 116 non-syphilitic cases. The authors conclude that the paraffin reaction is the best of the colloidal reactions, both from the point of view of the specificity of results and the simplicity of technique.

G. W. T. H. FLEMING.

*Influence of Malarial Treatment on the Spinal Fluid in General Paralysis. (Arch. of Neur. and Psychiat., March, 1928.) Bunker, H. A.*

In 72% of 90 cases in which there was a definite pleocytosis in the spinal fluid prior to treatment, an immediate reduction in the white cell-count to normal or almost normal (6-10 cells) was found after malarial treatment. In 10 additional cases a similar reduction required a month to manifest itself, in 4 cases three months, and in 4 cases six months. In only 7 cases was the pleocytosis unaffected by malaria treatment, in 4 cases it persisted until terminated by treatment with tryparsamide, which was begun after from 7 to forty-three months, in 3 by death after from three to eighteen months.

In 75% of 16 patients an immediate and rather definite post-malarial reduction in the total protein occurred; this was more evident at the end of one month, and more still after three months. In a group of recently treated patients, the average total protein prior to treatment (22 cases) was 192 mgrm. per 100 c.c., 156 mgrm. immediately after treatment (16 cases), 124 mgrm. after one month (13 cases), and 91 mgrm. after three months (10 cases). Of 38 patients observed two years after treatment, 42% gave a practically normal albumen reading of 50 mgrm., 29% gave from 50-75 mgrm.,