Experimental Toxic Encephalo-myelopathy. (*Psychiat. Quart., vol. vii, p.* 267, *April,* 1933.) *Ferraro, A.*

The author investigated the development of diffuse sclerosis following subcutaneous injections of potassium cyanide in 14 cats and 4 monkeys. All but two cases developed the histo-pathological picture characteristic of diffuse sclerosis. There was a definite demyelination, diffuse and symmetrical involvement of the axis cylinders, and typical areas of necrosis and softening. There was a predilection for the periventricular areas. The author points out the similar results obtained by Weil and Crandall after ligation of the pancreatic or bile-ducts, which procedure resulted in demyelination and necrosis in the white substance of the brain, and more so in the periventricular areas. G. W. T. H. FLEMING.

Histological Changes in the Central Nervous System in Acute Hydrazine Hydrate Poisoning [*Alterazioni istologiche del sistema nervosa centrale nell' intossicazione sperimentale acuta da idrato d'idrazina*]. (*Riv. di Pat. Nerv. e Ment., vol. xlii, p.* 27, *July–Aug.*, 1933.) *Curti, G.*

The author carried out experiments on seven rabbits and a dog, using two rabbits and another dog as controls. He injected a sub-lethal dose of hydrazine hydrate, dissolved in distilled water, by the endoperitoneal route. He found degeneration of the nerve-cells and of the astrocytes, and areas of racemose degeneration similar to those described by Buscaino. The oligodendroglia appeared more or less swollen, but the microglia did not show any definite changes.

G. W. T. H. FLEMING.

The Microglia in Mongolian Idiocy [*La microglia nell' idiozia mongoloide*]. (*Riv. di. Pat. Nerv. e Ment., vol. xli, p.* 293, *Mar.–Apr.*, 1933.) *Cardona, F.*

The author studied the microglia by various methods in two cases of mongolian idiocy. He found only a slight increase in the cerebral cortex, without any marked progressive or regressive changes; the microglia of the base was normal. This agrees with the older ideas recently confirmed by Davidoff that the changes are confined to the cortex, and consist of a hypoplasia. G. W. T. H. FLEMING.

The Spinal Fluid Sugar and Chlorides in Neurosyphilis. (*Amer. Journ. Syph., vol. xvii, p.* 382, 1933.) *Brewer, G.*

In 86 controls the mean ratio of cerebro-spinal fluid sugar to blood sugar was ·647, while the ratio of cerebro-spinal fluid chlorides to blood chlorides was 1·48. The chloride ratio is significantly decreased in neuro-syphilis only when severe meningeal irritation or damage occurs; in 5 cases of general paresis the average ratio was 1·36. The sugar ratio, which showed considerable individual variation, tended to decrease with increasing meningeal damage; for the above paresis cases the average ratio was ·519. B. C. BRUNSTETTER (Chem. Abstr.).

The Barrier between the Blood and Cerebro-spinal Fluid. (*Journ. Nerv. and Ment. Dis., vol. lxxix, p.* 125, *Feb.*, 1934.) *Malamud, W., Miller, W. R., and Mullins, B. M.*

The bromide distribution ratio described by Walter was studied in 643 cases of mental disease with the following results: The schizophrenias show a predominance of ratios over 3·20; the psychoneuroses, psychopathic personalities and paranoid states ratios mostly between 3·20–2·80. The manic-depressive psychoses resembled these, but had less of the cases above 3·20 and more below 2·80. The toxic psychoses and the cases of untreated general paralysis showed ratios mainly below 2·80, and none above 3·20. In 530 of the cases in which the protein content of the spinal fluid was determined simultaneously with the permeability ratio, there was a tendency towards a general correlation between the two values. In the cases of

organic psychoses and in the schizophrenias, this correlation was of a higher degree than in the psychoneuroses or manic-depressive psychoses.

G. W. T. H. FLEMING.

The Passage of Chlorine and Bromine through the Blood Cerebro-spinal Fluid Barrier [*Sul passagio del cloro e de bromo attraverso la barriera emato-liquorale*]. (*Riv. Sper. di Freniat., vol. lvii, p.* 880, *Dec.*, 1933.) *Diserfori, B.*

The author examined 57 patients, and found that chlorine and bromine act independently of one another. In 36 patients he found a greater concentration of bromine in the lowest parts of the arachnoid space. In 50% of cases there were small differences in the chlorine content of the fluid in various portions of the fluid. He recommends estimation of both the bromine and the chlorine.

G. W. T. H. FLEMING.

Bromide and Chloride Distribution between Serum and Cerebro-spinal Fluid. (*Proc. Soc. Exp. Biol Med., vol. xxx, p.* 473, 1933.) *Mishkis, M., Ritchie, E. B., and Hastings, A. B.*

Five patients were given sodium bromide in doses of ·01 per lb. of body-weight per day for five days. Twenty hours after the last dose, serum and cerebro-spinal fluid were tested for bromine by the electrometric titration method. In all instances the ratio bromine in serum to bromine in cerebro-spinal fluid was greater than unity ; this supports the theory that bromides are not freely diffusible between serum and cerebro-spinal fluid, in which case the ratio as predicted by the Gibbs-Donnan distribution law would be ·95. The ratio bromine and chlorine in serum to bromine and chlorine in cerebro-spinal fluid was ·87, which agreed with the reported ratio for chlorine alone. C. V. BAILEY (Chem. Abstr.).

Bilirubin and the Blood Cerebro-spinal Fluid Barrier. (*Deut. Arch. klin. Med., vol. clxxiii, p.* 234, 1932.) *Klein, N., and Szentinihalyi, S.*

Qualitative and quantitative studies of the bilirubin content of the cerebro-spinal fluid in various types of icterus show no relation between the amount of bilirubin in the fluid and the amount in the serum ; bilirubin may be present in the fluid with very little in the serum, while the fluid may be quite colourless, with high concentration in the serum. In the cases studied the appearance of bilirubin in the fluid was dependent on the persistence of the icterus and upon the condition of the reticulo-endothelial system, especially the reticular elements of the meninges, the blood-vessel walls and the choroid plexus. Minimal amounts of bilirubin (not over 2 bilirubin units) were found in the fluid even in severe cholæmia, disturbance of the reticulo-endothelial system or acute atrophy of the liver ; the amounts were usually too small to be detected. P. J. JACKSON (Chem. Abstr.).

Variations in Blood Urea, Uric Acid and Cholesterol Content during Meningeal and Cerebral Diseases [*Il comportamento del tasso ureico, dell 'acido urico e del colesterolo del sangue nel corso di meningo ed encefalopatie*]. (*Riv. di. Pat. Nerv. e Ment., vol. xli, p.* 96, *Jan.–Feb.*, 1933.) *Lolli, N.*

The author investigated 23 cases of meningeal and cerebral disease, 10 of these being cases of cerebral hæmorrhage. In many cases there was a tendency towards an increase, sometimes very marked. The modifications in the blood-urea were independent of the chlorides, fever or renal alterations. The author subsequently carried on experimental work on rabbits by puncture of the floor of the fourth ventricle. He obtained the same results as he had found clinically. He thinks that metabolism possesses a centre in the floor of the fourth ventricle.

G. W. T. H. FLEMING.