

The Glyoxalase Activity of the Red Blood-Cell: The Function of Glutathione. (Biochem. Journ., vol. xxvii, p. 486, No. 2, 1933.) Jowett, M., and Quastel, J. H.

The presence of reduced glutathione is necessary for the activity of glyoxalase in red cells. Human red cells show a high glyoxalase activity, which disappears almost entirely on lysis of the cells with distilled water, but can be restored by the addition of glutathione at concentrations of the same order as that present in the intact cell. Methylglyoxal and glutathione combine reversibly. The glyoxalase activity of the red cell under varying conditions is an indicator of the concentration of reduced glutathione in the cell. Oxygen diminishes the glyoxalase activity of both intact and lysed red cells. The inhibitory effect of oxygen on the glyoxalase activity of the red cells is decreased by glucose; the behaviour of the lysed blood-cell is unaffected by glucose.

G. W. T. H. FLEMING.

Chemical Studies in the Epileptic Syndrome. (Journ. of Nerv. and Ment. Dis., vol. lxxvii, p. 601, June, 1933.) Hopkins, H.

The author found the average whole blood cholesterol slightly lower in a group of epileptic patients than in a corresponding normal group. The range of variation in whole blood cholesterol from hour to hour throughout 24 hour-periods was greater in epileptic patients than in normal individuals.

G. W. T. H. FLEMING.

A Comparative Research on the Chlorides in the Serum in some Nervous and Mental Diseases [Ricerche comparative dei cloruri del siero di sangue in alcune malattie nervose e mentali]. (Riv. Sper. di Freniat., vol. lvi, p. 744, Dec., 1932.) Mazza, A.

The author found that the serum chloride is increased above the normal in epileptics, giving a value of 6.1% compared with a normal value of about 5.8. The other mental diseases, including post-encephalitic cases, gave normal values.

G. W. T. H. FLEMING.

The Influence of Muscular Contraction on the Behaviour of Soluble Phosphorus and of Glucose in the Blood of Dogs Subjected to Muscular Activity Caused by Stimulation of the Sensori-motor Centres and by Peripheral Stimulation [Influenza della contrazione muscolare sul comportamento del fosforo solubile e del glicosio del sangue nei cani sottoposti a lavoro muscolare mediante stimolazione dei centri sensitivo-motori e stimolazione periferiche]. (Riv. Sper. di Freniat., vol. xli, p. 627, Sept., 1932.) Longo, V., and Napoli, G.

The authors experimented on 18 dogs. In dogs predisposed to reflex epilepsy and submitted to faradic stimulation of nerves there was, after the fit, a considerable decrease in the inorganic phosphorus and in the total phosphorus and a marked increase in the glucose. In dogs not so predisposed there was a considerable increase in the phosphorus while the glucose behaved irregularly. The authors conclude that there is an intimate relation between the metabolism of phosphorus and of carbohydrates.

G. W. T. H. FLEMING.

Soluble Phosphorus in the Cerebro-spinal Fluid in some Nervous and Mental Diseases [Ricerche sul fosforo solubile del liquido cerebro-spinale in alcune malattie nervose e mentali]. (Riv. Sper. di Freniat., vol. lvi, p. 623, Sept., 1932.) Longo, V.

The writer examined the cerebro-spinal fluid of 53 individuals affected with various conditions, 15 general paralytics, 10 cerebral syphilitics, 10 catatonics, 10 hebephrenics and 8 cases of melancholia. He found that there was in general paralysis a marked increase in both the inorganic phosphorus and the total phosphorus. This increase was very much greater than that found in

cerebral syphilis, and suggests a means of differential diagnosis. He also found the values for both inorganic and total phosphorus greater in hebephrenic than in catatonic dementia præcox. The values in melancholia were within the normal range.
G. W. T. H. FLEMING.

Neurolysis in the Human Cerebro-spinal Fluid [Il processo neurolitico nel liquido cerebrospinale umano]. (Rass. di studi psichiat., vol. xxii, p. 214, March-April, 1933.) Mecco, O.

The author examined the cerebro-spinal fluids of 246 patients, and found that 78% gave a positive result when tested against neural tissue, as Speransky has shown. This neurolytic power was unaffected by inactivation, by filtration, boiling or centrifugalizing, and was more marked in diseases affecting the grey matter than in those affecting the white. This power is probably due to some unknown products of cellular activity. The neurolytic power of the fluid is increased by the presence of the products of neural disintegration.

G. W. T. H. FLEMING.

The Citric Acid Reaction in the Cerebro-spinal Fluid [La reazione con l'acido citrico sciroposo nel liquor.] (Riv. di Pat. Nerv. e Ment., vol. xl, p. 675, Nov.-Dec., 1932.) Leanza, A.

The author investigated the "syrupy" citric acid test, which is supposed to indicate the presence of mucin in the cerebro-spinal fluid, in 10 normal subjects and 215 subjects with various nervous or mental disorders. He found the reaction positive in 40 out of 215 (i.e., 18%), of which 21 were syphilitic affections of the nervous system. The reaction was negative in all non-syphilitic psychoses, and was of no value in differentiating between cerebral syphilis and general paralysis. There was no relation between a positive reaction and an increase in the number of cells.

The author considers that the positive reaction is due neither to mucin nor to globulin, but to some form of serum protein.
G. W. T. H. FLEMING.

A New Globulin Precipitation Reaction in the Cerebro-spinal Fluid for the Diagnosis of General Paralysis [Su una nuova reazione di precipitazione delle globuline nel liquor per la diagnosi di paralisi progressiva]. (Riv. di Pat. Nerv. e Ment., vol. xl, p. 537, Nov.-Dec., 1932.) Cabitto, L.

The author describes a new reaction which he has introduced. The reaction is more sensitive than the reactions of Nonne-Appelt or Weichbrodt, and is specific for general paralysis and tabes in 100% of cases and negative in other conditions.

The reagent is made by dissolving .5 gr. of phosphomolybdic acid in 100 c.c. of distilled water. It will keep indefinitely. To 1 c.c. of cerebro-spinal fluid is added .2 c.c. of reagent. At the point of contact of the two liquids a ring forms. The test-tube is shaken, and the reaction is positive if the turbidity spreads throughout the liquid. If the reaction is negative, the liquid remains clear. The reaction was negative in some cases of nervous and mental disease, where the reactions of Pandy, Weichbrodt, Taccone, Boltz, Nonne-Appelt and Takata-Ara were all "one plus".
G. W. T. H. FLEMING.

A New Reaction to Estimate Changes in the Cerebro-spinal Fluid [Una nuova reazione di orientamento per svelare le alterazioni del liquor]. (Rasseg. di Studi Psich., vol. xxii, p. 65, Jan.-Feb., 1933.) Amodeo, P.

The author describes a new reaction in the cerebro-spinal fluid, which consists of adding 1-2 drops of nitrous-nitric acid to $\frac{1}{2}$ -1 c.c. of fluid. The resulting mixture is heated almost to boiling-point. The reaction is positive if the liquid becomes opalescent and deposits albumen as flakes at the bottom of the tube, and negative if the fluid remains clear. The results closely parallel those of the Boltz, Pandy and similar reactions.
G. W. T. H. FLEMING.