NEUROPATHOLOGY.


In one or other part of the central nervous system of fatigued animals the following changes may be seen.

With Nissl's method in the large cells of the spinal ganglia a chromatolysis of the tigroid zone can be demonstrated. The nuclei are altered, and have irregular outlines. There are no obvious changes in the anterior horns of the spinal medulla, or in the cerebral cortex. Similar changes are noted by Perl’s method with organic iron. There is no alteration in the morphological structure of the endocellular neurofibrils of the cortical cells. Golgi's reticulum is not definitely affected by serious fatigue. The mitochondria, studied by the method of Meres and Renaud, are diminished in number, size, and perhaps power of colouration. Microscopical examination reveals a diminution of the lipoid in the large ganglion cells and in those of the spinal medulla.

R. G. G.


Dr. JERVIS has made a large number of experimental inoculations in rabbits with material derived from cases of disseminated sclerosis. He injected cerebrospinal fluid endocerebrally, at the same time inoculating them with disseminated blood intraperitoneally, intravenously and subcutaneously. Many laboratory animals were subjected to a second complex inoculation of this kind with similar material. Careful controls were conducted. Five rabbits died eventually after inoculation, but in no case could death be ascribed to communicated disease.

All examinations both of human material and of experimental animal tissues, by approved modern methods, failed to reveal in a single instance any evidence of the existence of a spirochaete.

His results therefore must be added to those of others whose researches along identical or similar lines have been negative. The paper is important, and its value is increased by the useful summaries of previous investigations.

S. A. K. W.

[86] Contribution to the pathological histology of the neuroglia (Contributo all’ istologia patologica della neuroglia).—G. B. BELLONI. Riv. di pat. nerv. e ment., 1928, xxxii, 324.

In mental syndromes in which death is preceded by a confusional state, with or without hyperpyrexia, a regressive alteration in neuroglial plexuses and glial cells is found distributed throughout the nervous system. These alterations, which show the characteristics of an autolysis, are more marked in the
protoplasmic glia than in the fibrillar tissue. The astrocytes of the white matter are apt to give rise to amoeboid cells. The glial cells which are transformed into fibrillar tissue under the stimulus of chronic disease are particularly resistant to autolysis.

R. G. G.

[87] New researches on impregnation of the nervous system with silver, particularly of the neuroglia and microglia (Nuove ricerche sulla impregnazione argentea del tessuto nervoso e parzialmente della neuroglia e microglia).—D. BOLSI. Riv. di pat. nerv. e ment., 1927, xxxii, 51, 898, 907.

This is a description of a special laboratory technique for the demonstration of the neuroglia and microglia elaborated by the author. It is not capable of abstraction, but the complicated process is described in full detail in the text.

In a later paper he describes a further elaboration of his method and demonstrates that the microglia of different animals shows varying intensities of staining and colour reactions with his method.

In a third paper (illustrated by microphotographs) he shows how in the process of repair of wounds, cauterization, and acute inflammation of the brain microglia is converted into fatty granular bodies which have already been credited with defensive functions. Phagocytosis and the elaboration of the products of disintegration in the transitional forms are described in detail.

R. G. G.

[88] On the content in the cerebrospinal fluid of the products of division of the albuminoid molecule (Sul contenuto nel liquor dei prodotti di scissione della molecola albuminoidea).—A. MASSAZZA. Riv. di pat. nerv. e ment., 1927, xxxii, 1.

From biochemical experiments on 25 fluids from neurological cases the following facts emerge. The free amine-acids in the fluids are increased in all morbid conditions which show increase of albumin, but the figure is not proportionate to that of the hyperalbuminosis. The increase in amino-acids is moderate in cerebral syphilis, and more obvious in meningeal lesions and in other syndromes exhibiting a meningitic colloidal curve; it seems in all cases in direct correspondence with the intensity of the leucocytosis and with the type of meningitic curve of colloidal precipitation. In normal fluids the figure for amino-acids varies from 1-50 to 1-90 mgm., and in lesions of the neuraxis with hyperalbuminosis from 2 to 4-50 mgm.

As for the amino-acids contained in the total proteins of the various types of fluid tyrosin, identified by Millon’s reaction, shows itself proportionate to the total quantity of albumin. Tryptophane, the aromatic group, and the hydrocarbons of the protein molecule show themselves to a certain extent in
proportion to the total albumin content, but are more definitely demonstrable in meningeal lesions. The increased proportion of the amino-acids, more particularly of certain groups, is of diagnostic significance in meningeal cases.

Similar methods show that inorganic phosphorus ranges from 1.6 to 2.2 mgm. per cent. in normal fluids, is slightly increased in syphilis, and reaches 3 mgm. per cent. in meningeal lesions. Sodium (225 mgm. per cent.), potassium (9 to 16 mgm. per cent.), calcium (2 to 5 mgm. per cent.), and magnesium (0.5 to 2.5 mgm. per cent.) do not vary to any extent in various morbid conditions.

R. G. G.

[89] The Kahn test on spinal fluid.—T. G. HULL, L. FRY and C. GARWOOD. 
Amer. Jour. of Syphilis, 1928, xii, 104.

In the Illinois State Department of Public Health the Kahn test has replaced the Wassermann reaction. Consequently the authors were unable to test the sensitiveness and specificity of the Kahn (globulin concentration) test for the cerebrospinal fluid with the Wassermann reaction as had previously been done by Kahn on 1,000 specimens. In this paper, which is based on the examination of 1,200 specimens of spinal fluid, the specificity of the test was estimated from the clinical history and the relationship to other spinal fluid tests. On the whole fairly good correlation was found with the clinical history. Of 181 specimens of fluid from patients diagnosed as syphilitic, 122 gave positive reactions, 13 partial reactions and 46 negative reactions. Of the last group 32 were from treated patients, and in these corroboration was obtained from the other spinal fluid tests in all except eight specimens from general paralytics, in which the globulin colloidal gold tests remained positive. Of 229 specimens from patients diagnosed as non-syphilitic 222 gave negative Kahn tests. Of the remaining seven fluids four gave positive colloidal gold and globulin tests, which corroborated the Kahn result. In the other three such corroboration was wanting.

This report bears out the specificity of the test, but the non-correspondence of Kahn and Lange tests in the eight general paralytic cases suggests that it is less delicate than the Wassermann reaction.

J. G. G.

[90] New data on the toxic origin of chronic postencephalitic syndromes
(Nuovi dati sulla genesi tossica delle sindromi croniche postencephalitiche).—V. M. BUSCAINO. 
Riv. di pat. nerv. e ment., 1928, xxxii, 880.

The author has found lesions (ulcers) of the gastric and duodenal mucosa accompanying midbrain and basal ganglionic lesions, and adduces evidence to support the theory that chronic syndromes following encephalitis are due to a toxæmia of gastrointestinal origin.

R. G. G.