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ABSTRACTS

NEUROPATHOLOGY.


This is a very long analysis of the relation of infection to changes in the nervous system, and concerns a number of diseased states the precise nature of which is at present very much debated. The paper does not lend itself to brief abstraction, and should be consulted in the original. Dr. Pette deals first with acute inflammatory affections whose lesions are confined mainly to grey matter. Of these he says that the symptoms come on acutely and soon reach a maximum, the spinal fluid points to specific inflammation, both ectodermal and mesodermal reactions occur, and the condition is one characterised by neurotropism. He next examines acute diseases whose lesions involve mainly the white matter. Of these he remarks their onset in acute fashion (as a rule), often in sequence to acute infections of known type (measles, chickenpox, smallpox, vaccination, typhoid, angina, gastroenteritis, etc.); their symptoms vary, the pyramidal system being frequently involved, and depend to some extent on the age of the patient; fluid changes are seldom awanting, and the most characteristic histological change is demyelination. Numerous cases cannot be made to fit into any specific disease-form. The etiology and pathogenesis of these respective groups are then discussed at considerable length.

S. A. K. W.


Professor Spielmeier’s new contribution to a much discussed topic cannot be summarised easily. He enlarges on the principles which should guide the research student, pointing out with the greatest clearness that one and the same infection can produce very different alterations in the central nervous system. Reactive glial hyperplasia in infective conditions is often independent of mesenchymal, leuco- and lymphocytic infiltrations. The glia is an interstitial tissue, and the author combats the view of those who argue otherwise. Anatomy has no means at its disposal to determine the etiological nature of pathological processes. The noxae producing infection in the nervous system may be, and are, utterly different from each other. No etiological deductions whatever can be drawn from identity in histological pictures. Conditions alleged to be due to filterable viruses cannot be distinguished from those attributed to bacterial agencies by their producing glial responses in the first place, and ordinary mesodermal change secondarily. Relative preservation of axis-cylinders in comparison with myelin degeneration is a banal and completely unspecific histological reaction. The author asks what conclusion can be drawn from the very numerous pathological data which he illustrates in
his paper and answers it thus: the study "shows us what is common to the tissue-pictures of completely different infective processes and at the same time what is variable in processes which are etiologically the same."

The article should be read in extenso.

S. A. K. W.


PROFESSOR SPIELMEYER has discussed in philosophic fashion the bearing of new data connected with encephalitis of postvaccinial and exanthematous types on the problem of the relation of lesions to disease. He is unconvinced by the view which attributes these to activation of a separate virus by that of the original infection. Believing that the actual changes represent something 'new' in cerebral pathology, he underlines the fact that morphology will not explain etiology, supporting his argument by the occurrence of similar or identical cortical alterations as a sequel to a variety of different factors, all affecting modification of the circulation in local fashion. It is the etiology of the conditions concerned that requires research.

S. A. K. W.


It is stated that there is no variation in the pathological findings between the cases which may be classed as idiopathic and those where the epilepsy may appear to have been precipitated by cerebral trauma, infection or emotional shock. These findings are as follows:

1. Shrinkage of the tuber cinereum and cell loss in the substantia grisea ventriculi tertii, nucleus tuberis lateralis and nucleus tubero-mammillaris were seen in all the cases studied.
2. Cell loss is greatest in the substantia grisea and least noticeable in the nucleus tubero-mammillaris.
3. Some degree of cell degeneration is present in the remaining cells of these groups.
4. No correlation is seen between the nature of the cause of death and the amount of the cell loss.
5. Hyperæmia was an outstanding finding in all but one brain and seemed to be regional in the tuber cinereum or at least was most intense there. In the control cases it was entirely absent.
6. These findings in the brains of epileptics, together with the experimental production of convulsive seizures resembling epilepsy in dogs by placing an irritative and destructive lesion in the tuber cinereum, seem to point to this region of the brain as being definitely related to the etiology of epilepsy.

C. S. R.


Encephalography has called attention to widespread areas of increased fluid collection and cortical atrophy, confined for the most part to the cerebrospinal fluid circulating pathways, over the cortex. A definite pathology of the Pacchionian bodies has been established. In the light of their present accepted physiology, this pathology may predispose or give rise to impairment of cerebrospinal fluid elimination and consequent accumulations of fluid, producing pressure along the course of its cortical pathways. Gross cortical atrophy of the pressure type probably results from a progressive vicious circle. (a) Pressure upon the cortex due to gross lesions, as well as fluid accumulations. (b) Mild ischaemic changes probably secondary to decrease in circulation. (c) Ganglion-cell degeneration and disappearance associated with a fibroplastic glial increase. (d) Shrinkage of the cortex and subcortex consequent on pressure and degeneration. Microscopic sections from areas of the same brain in the zones of atrophy show decrease in the number of ganglion-cells and glial proliferation, as well as atrophic changes in the sub-cortex. These areas are usually found in the frontoparietal portions, whereas the temporopolar regions are not involved in this atrophy, and sections show changes within normal limits. A possible hydraulic pressure mechanism responsible for the development of certain types of widespread atrophic degeneration of the brain is presented, and may be responsible for many types of gross changes noted, especially in the mentally defective and chronic epileptic or degenerative cases showing atrophy of unexplained origin.

C. S. R.


The case of amaurotic idiocy described was somewhat unusual in the degree to which certain layers and areas of the cortex had suffered from the process of neuronal degeneration. In particular in certain areas the fourth layer of nerve-cells had almost completely disappeared. The author uses this case
as an argument in favour of the theory of 'pathoclisis' or 'tendency to become diseased' which was enunciated by C. and O. Vogt in 1922. In fact the paper is chiefly valuable in giving a brief summary of this theory, which in its fully developed form is so complex as to be almost incomprehensible.

The paper is illustrated by large-scale photographs of the cortex which are rarely met with except in papers from the Vogts' laboratory in Berlin. In the present instance the degree of enlargement is not sufficient to demonstrate the types of cell present, and the photographs do little more than indicate the zones of greatest cell destruction.

J. G. G.


The case on which this paper is based was one of syphilitic Parkinsonism, beginning at the age of 61, and associated with slight dementia. The cerebrospinal fluid was positive to the four classical tests (globulin, cell-count, colloidal and Wassermann reactions). Antisyphilitic treatment however produced no effect. Post-mortem examination of the brain showed numerous senile plaques in the cortex, and a generalised arteriosclerotic condition, probably syphilitic in nature. Perivascular infiltration was very slight in the cortex and rather better marked in the basal ganglia where there was also loss of many of the larger cells and particularly intense changes in the vessel walls. An unusual feature of the case was the presence of nodules of polymorphonuclear cells in the cortex, in the subjacent white matter, and in the red nucleus of the right side. In spite of the absence of spirochaetes in these nodules the authors consider them to have been syphilitic.

This combination of chronic arteriosclerotic with acute inflammatory lesions led the authors to discuss the question of the relationship of cerebral, especially mental, symptoms to the syphilitic lesions found in the cerebrospinal fluid or in the brain. This is a big question and the authors do little more than open it by referring to a series of cases of mental disease in syphilitic subjects with 'positive' cerebrospinal fluids. Obviously a large quantity of carefully examined post-mortem material would be needed if any certain light were to be thrown on this subject.

J. G. G.

SENSORIMOTOR NEUROLOGY.


From a clinical standpoint cases of myoclonus may be divided in two groups: (1) Myoclono-epileptic cases and (2) myoclonic cases without epilepsy. Those of the first group showed pronounced deterioration and symptoms of extra-