3. Injection of epinephrine—constriction (average 29 per cent.).
4. Injection of pitressin—constriction (average 33 per cent.).
5. Inhalation of carbon dioxide—inconstant results.

The conclusion is reached that there is a close approximation between the degree of vasoconstriction in the dura and in the skin, both being considerably greater than that in the pia. Vasodilatation, on the other hand, is perhaps greater in the pia.

R. M. S.

NEUROPATHOLOGY


The three main types—neuroglia, astroglia and oligoglia—are distributed sparsely in the superficial cortical layers but show certain differences from layer to layer and from field to field. These differences however are not so great as to permit the observer to distinguish a cortical field by the arrangement of the glia without also taking into account the arrangements of nerve-cells and fibres. All that is claimed is that the author’s observations establish a standard for comparison in pathological conditions.

The second part of the study is concerned with neuroglial changes in diseases not affecting the nervous system.

This requires careful and critical examination, for progressive and regressive changes in the neuroglia are fairly common in the human cortex. All three types may be modified in diseases which seem to have no other effect, clinical or pathological, on the nervous system. Pure hyperplasia of the glia does occur, but a diagnosis of such a condition should only be arrived at with great caution. Even in diseases not affecting the nervous system the neuroglia and astroglia may form an almost continuous network. The staining properties of the glial cells may show variation, and this in itself would seem to be a progressive pathological change.

The question whether there is a correlation between vascular distribution and glial stratification cannot yet be answered with certainty.

R. G. G.

[33] Primary ependymitis: Subacute type with occlusion of the foramina of Monro and hydrocephalus of the lateral ventricles.—J. G. ARNOLD. Arch. of Neurol. and Psychiat., 1934, 32, 143.

The term ‘primary’ is used to designate the relatively uncommon group of cases of ependymitis in which there is no demonstrable concomitant inflammatory reaction of leptomeninges or cerebral tissue. When ependymitis is the result of meningitis or abscess of the brain, the clinical course is that of the
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underlying disease. In the primary type the course and prognosis seem to depend on only one factor, i.e. the appearance and degree of obstructive hydrocephalus. Primary ependymitis, then, is a selective process, either toxic or infectious, which affects only the ventricular ependyma, subependyma and occasionally the choroid plexus, producing symptoms by its stenosing effect on the ventricular foramina, with concomitant obstructive hydrocephalus.

The signs and symptoms are due chiefly to hydrocephalus: increased intracranial tension (headache, vomiting, mental changes, papilloedema, bradycardia and occasionally convulsions), few, if any, localizing signs, and a tendency towards remissions.

The disease is simulated by cerebral neoplasm, tuberculous meningitis and syphilitic meningitis.

R. M. S.

[84] On the morphology and histogenesis of the cerebral angioreticulomata (Su la morfologia e la istogenesi degli angioreticulomi encefalici).—C. PANA. Riv. di pat. nerv. e ment., 1935, 44, 1.

Two cases are described of multiple angioreticulomata in the brain. They occurred in a brother and sister aged 48 and 50 respectively who died at an interval of three years from each other. In the first case the localization was bulbar and cerebral; in the second the two lobes of the cerebellum were concerned. The histological appearance of all the tumours was similar.

After having drawn attention to the characteristic familial distribution of the condition the author discusses the complex morphology and histogenesis of the separate elements making up the angioreticuloma—histiocytes of different types, giant cells, pseudoxanthomatous cells, erythropoietic elements, vascular formations, cystic cavities, and their correspondence with other affections of the reticuloendothelial system.

Taking into account certain morphological characteristics, the superficiality and the ubiquity with which these formations are met with throughout the cerebrospinal axis, the author suggests that their origin is to be sought for in the constituent elements of the leptomeninges.

R. G. G.

[85] Experimental infections of the nervous system with cryptococcus histolyticus (torula) (Infezione sperimentale del sistema nervoso da Cryptococcus histolyticus (Torula)).—V. TRONCONI. Riv. di pat. nerv. e ment., 1935, 44, 32.

In macaque monkeys death occurs fairly quickly after injection of this organism. The clinical course was similar in all the animals, though the
anatomicopathological findings presented some differences. Meningeal and perivascular lesions were for the most part destructive.

Two types were met with: in one the inflammatory elements were not conspicuous while very many organisms were seen; in the other the condition resembled that of tubercular meningitis. Besides meningovascular changes, lesions were discovered actually in the nervous tissue.

Cystic cavities were found both in the brain and the spinal cord containing much cellular detritus and some parasites, but little inflammatory material and with little or no reaction round them. The interstitial tissue always participated in the morbid process and when the parenchyma was affected there was always progressive or regressive glial reaction.

The clinical course and pathological findings of the experimental cases were similar to those which occur in accidental infections of human beings.

R. G. G.


Calcification may occur in the choroid plexus either in the villi or in the arachnoid. The first is represented by psammomata and the second by simple calcareous deposits in the myelin material. Calcification of the villi increases as age advances, though not at a constant rate.

A diffuse calcification which makes the plexus demonstrable by X-ray should always be regarded as pathological.

R. G. G.


A large cyst in the pia mater of the Sylvian fissure was accidentally discovered in three cases. The brain was considerably distorted by the accumulation of a large quantity of fluid. No clinical symptoms had arisen. These cysts are probably formed slowly, allowing sufficient time for the brain to adapt itself to the alteration resulting from the accumulation of fluid. It is noteworthy that a similar accumulation of cerebrospinal fluid in the Sylvian fissure was found as a result of a head injury which was discovered at operation performed a few days later.

M.

The question is discussed whether the products of disintegration arising in the body, which act on the bloodvessels, may have an influence upon the permeability of the bloodvessels in the brain. Experiments performed on dogs showed that the pharmacological representative of such substances of disintegration, viz., histamine, enables fuchsin $S$ to penetrate into the cerebrospinal fluid. Other experiments were performed in order to ascertain the regions in which this permeability is increased by histamine.

M.

SENSORIMOTOR NEUROLOGY

Ependymal tumour of the spinal cord and progressive spinal muscular atrophy (Ependimomatosi midollare e atrofia musculare progressiva spinale).—G. PINTUS. *Riv. di pat. nerv. e ment.*, 1935, 45, 591.

A case is described of progressive muscular atrophy of the spinal type which, besides some atypical distribution of the muscular atrophy, did not present when examined electrically during its whole course of nearly two years any signs of the reaction of degeneration, but only simple hypoexcitability with at most some slow contractions or slight increase so that the polar reactions were equal.

Autopsy showed the following findings: A proliferation of the ependymal cells so that the central canal was entirely obliterated throughout the length of the medulla. The character of the cells indicated that the condition represented a midway position between ependymal tumour-formation and simple proliferation similar to what occurs in a gliosis.

Lacunae were also found in the region of the grey commissure. These might be due to the enlargement of the perivascular spaces and alteration of the surrounding nervous tissue, but also possibly to the circulation of the liquor pressed out of its usual channels by the obliteration of the central canal.

Finally there was a great reduction in the number of anterior horn cells in the whole length of the spinal cord, especially in the region of the cervical and lumbar enlargements. There was a slight lymphocytic reaction round a certain number of the vessels of medium calibre, especially those lying between the white and grey matter.

This condition should be distinguished from chronic poliomyelitis of the adult. It showed no signs of inflammatory origin, and while it might be due to toxic causes, it was impossible to exclude an embryonic origin.
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