Abstracts.

NEUROPHYSIOLOGY.


Dr. Rasdolsky's theory for the appearance of onehandedness in man—largely, of course, righthandedness—is based on the closer anatomical connection of the heart with the left arm than with the right. He does not entertain the old idea that the left arm protects the heart in the struggle for existence, but holds that movements of the left arm influence the heart's beat more than do movements of the right, instancing the phenomena of angina pectoris and other cardiac conditions as proving this neural relationship. By experiment on 100 individuals, normal and diseased, he has found that the action of the heart is slowed some seven beats after left arm exercise, and only some five beats after right arm exercise. Further, the heart rhythm returns to normal much more slowly after left arm movements than after right. Thus the author speaks of a normal 'brachio-cardiac reflex.' Clinically, one might speak of the cardiobrachial phenomena of angina; mention might also be made of the 'weakness,' 'heaviness,' etc., of the left arm often complained of by patients who have cardiac disease (motor viscerosomatic reflexes).

The corollary of this theory would be to seek the explanation of left-handedness in an anatomo-physiological relation of the heart to the right arm in certain individuals, but the author makes no mention of this problem, unfortunately.

S. A. K. W.

NEUROPATHOLOGY.


Four groups of experiments on animals are recorded, in which the following conditions were produced: Group I, acute cerebral anæmia; Group II, tetany parathyreopriva; Group III, acute oxalic acid poisoning; Group IV, insulin hypoglycæmia. While the organic disturbances produced probably cause death through their attack on the nervous centres, they cause no consistent structural alterations in the nerve cells, as studied by the methods usually applied to human material.

Emphasis is laid on the fact that our concept of the organic must be large enough to include many processes which do not result in demonstrable
structural lesions, and that current negative findings in such a disease as dementia praecox, for example, should not serve to deter further investigation with the organic approach. 

E. B. G. R.

[48] Amaurotic family idiocy (Contribution à l'étude anatomo-clinique et à la pathogénie de la forme tardive de l'idiotie amaurotique infantile).


The case reported belongs to the late infantile type of amaurotic idiocy. The symptoms began at the age of four years and progressed to a fatal issue at the age of six. The onset of the disease was ushered in by a series of generalized fits with loss of consciousness, which left behind them mental impairment, difficulty in speaking and motor weakness. The limbs became spastic with the extensor type of plantar reflex. Constant involuntary movements of the head and upper limbs supervened, the patient became blind, and the pupils became inactive to light. Naked eye examination of the brain showed shrinkage of the hemispheres, especially of the occipital lobes, and still more of the cerebellum, certain folia of which were extremely atrophied. The meninges were thickened and somewhat adherent to the brain tissue over

• the occipital lobes.

Microscopically the nerve cells throughout the nervous system showed the typical cell change described by Schaffer, viz., swelling of one pole of the cell by the accumulation in it of a lipoid substance allied to lipochrome, and considered by the author to be a mixture of lecithin with other lipoids. The dendrites did not contain any lipid swellings with the exception of those of the Purkinje cells, which showed many such saccules at the origin of their branches. There was in addition, in the cerebellum, atrophy of the basket fibres, of the tangential fibres and of the climbing fibres, but less damage to the granular layer than has been found in some other cases of this type. Neuroglial overgrowth was most evident in the cerebellum, but affected also most regions of the brain. Many of the neuroglial cells contained granules of glycogen; there appeared to be more of this substance than in the normal brain, but less than was found by the author in an infantile case of amaurotic idiocy. This excess of glycogen taken along with the diminution in oxydases and in iron which was found by him in the infantile form leads the author to the opinion that both forms of amaurotic family idiocy are due to a poverty of oxidizing and catalytic ferments in the cytoplasm of the nerve cells and neuroglia, a poverty which is inherent in the cell structure and independent of the ductless glands of the child, although it may be due to some glandular defect in the parents.

J. G. G.


From an analysis of the post-mortem records of thirty-three cases of systemic blastomycosis it was found that the organs most commonly involved are the skin, lungs, and bones. Invasion of the meninges was present in only four cases, three of which showed involvement of the cranial bones. Primary invasion of the meninges by the blastomyecete or yeast fungus does sometimes occur. The author gives records of such cases. Clinically they presented the
ordinary symptoms of meningitis, but had no skin or bone lesions. The blastomycete was found on lumbar puncture in the spinal fluids of four of these cases.

W. G. W.


This paper contains the results of a somewhat elaborate investigation of the fluid obtained by cistern puncture in a large number of normal and of pathological cases.

The author concludes that:

1. In normal subjects the cell content of the lumbar fluid is higher than that of the cistern fluid.

2. In pathological, inclusive of meningeal, cases, the cell content is dependent on both the localization and the intensity of the morbid condition.

3. Fluid taken at the close of cistern puncture contains less cells than at the beginning, in normal persons; the reverse is the case in meningeal disease.

4. The fact of differing cell counts in different places, and the results of experiments with injections of dye, do not favour the common views of the circulation of the fluid.

5. A plus pressure in the cistern is found in cases where venous pressure is raised, and in cases of polycythæmia. The facts indicate this is due rather to stasis of the fluid than to an increased transudation of it.

S. A. K. W.


In neurosyphilis two factors are at work, the local action of the spirochaetes, and the toxic action of their virus, whose source may be from spirochaetes that are not in the nervous system at all. By means of intravenous injections of trypan blue in animals, as well as by intraspinous injections, it is shown that the dye colours especially the dorsal root-entry zones of the cord, the ganglion and glia cells of the dorsal horns, the sheath of the optic nerves, the midbrain, and the cornua ammonis. The argument advanced is that in parasyphilis an increased permeability of the meningeal blood vessels is a regular occurrence, with the result that toxic substances pass from the blood into the cerebrospinal fluid, and from the fluid the nervous system is invaded, along the lines indicated by the histological findings in the experiments with trypan blue. Hauptmann thinks these data furnish important information bearing on the problem, not only of parasyphilis, but also of many non-systematized nervous diseases, e.g., those associated with pernicious anaemia, with lead poisoning, alcohol, and so on. The apparent connection of epilepsy with changes in the cornu ammonis region is also referred to.

S. A. K. W.
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