NEUROLOGY

SENSORIMOTOR NEUROLOGY.


The authors describe a case of infection of the central nervous system by an organism of the blastomyces group, similar to some cases described in America, in 1916, by Stoddard and Cutler. The patient was a man of thirty-nine, who, for more than five years, had been thought to be suffering from Hodgkin's disease. Three months before his death he began to have headaches and projectile vomiting. Later the eyesight became poor, and a leftsided ophthamoplegia developed. Papilloedema was present when he was examined in hospital. Lumbar puncture gave a clear fluid under great increase of pressure. It formed a pellicle on standing, and contained "315 cells" (sic), of which 30 per cent. were lymphocytes and 6 per cent. polymorphonuclears, while "the remaining cells were round or oval, with greenish highly refractile bodies and a few intracellular granules which did not resemble nuclei. Many presented a double contour and some were obviously budding." This organism grew on blood-agar tubes and, in subculture, on a variety of media; it appeared to resemble in every particular the organism called by Stoddard and Cutler "Torula histolytica."

At the autopsy, in addition to a diffuse meningitis, there were great numbers of minute cysts in the cerebral cortex, basal ganglia and cerebellum. These contained blastomyces, phagocytes, fluid and detritus. The reaction on the part of the host's tissues was almost negligible; there was no neuroglia proliferation and little or no inflammatory exudate.

The histological appearances of the spleen and lymphatic glands differed from those of Hodgkin's disease in the scantiness of eosinophil cells and of fibrosis. No blastomyces were seen in them histologically, but by inoculation of a guinea-pig the organism was proved to be present in the gland at the head of the pancreas.

The authors consider that the organism may have gained entrance to the body, via the tonsils and the cervical lymph glands, almost ten years before death, and that the enlargement of the spleen and lymphatic glands was due to defensive action against the torula.

J. G. GREENFIELD.


This appears to be the fourth case of blastomycotic meningitis which has occurred in Australia since 1917, when Swift and Bull described a case in which the meninges were primarily attacked. In this case also there was no evidence of blastomycotic disease elsewhere than in relation to the cerebrospinal axis. The patient, a child of three and a quarter years, came under observation after four weeks' illness, and remained in hospital until death, her illness lasting altogether four months. The symptoms were those of subacute meningitis, viz., headache, irritability, stiffness of the neck, and
drowsiness which later deepened into coma. Blindness was also a late symptom. There was a slight elevation of temperature and the pulse was rapid. Lumbar puncture, performed on her arrival in hospital, gave a clear fluid under considerable increase of pressure. It contained an excess of mononuclear cells and of protein, but no organisms were found either in the deposit or on culture. Six weeks later, however, the fluid became "semi-opaque with a yellowish amorphous material; numerous yeast cells were discovered in addition to lymphocytes. Subsequent specimens of fluid contained progressively less of the yellowish matter, but yeast cells remained abundant until the child's death."

Post-mortem.—The pia mater was thickened and gelatinous, but there was no evidence of blastomycotic disease elsewhere in the body. Microscopically the pial infiltration was found to consist of mononuclear cells and yeast cells. The parasite here, as in the cerebrospinal fluid, appeared as a rounded cell with a rather thick envelope surrounded by an irregular capsule. It contained two or three highly refractile rounded endospores. Budding forms were also seen. Intrathecal injection of the cerebrospinal fluid into a dog caused similar meningitis, with abundant parasites in the fluid. The organism appears to be the same as that found in other Australian cases, and considered by Badham (Med. Jour. of Australia, 1922, ii, 385) to conform to the type 'Saccharomyces tumefaciens (Curtis).'

J. G. Greenfield.

Two cases of aphasia: I. Broca's aphasia from a lesion of the right hemisphere in a righthanded woman. II. Aphasia with right hemiplegia in a lefthanded woman (Deux cas d'aphasie: I. Aphasie de Broca par lesion de l'hémisphère droite chez une droitière. II. Aphasie avec hémiplegie droite chez une gauchère).—ARDIN-DELTEIL, LEVI-VALENSI and DERRIEU. Revue neurol., 1923, xxxix, 14.

An epitome is given of cases previously recorded in which left hemiplegia has been associated with aphasia in a righthanded person. The subject of the present note was a woman of fifty-nine, who eight years previously had suffered from a transient right hemiparesis without aphasia. She was admitted shortly after the onset of a left hemiplegia with aphasia. The disturbance was mostly in the sphere of outward expression, but there was some interference also with reception and with thought-formulation.

There were also present dysphagia and loss of sphincter control. At autopsy, three weeks later, areas of softening were discovered in the putamen and thalamus of the left hemisphere; in the right hemisphere was a large hemorrhage occupying the centrum ovale and basal ganglia and descending into the crus cerebri. The cortex of both hemispheres was intact.

In a discussion of the case the authors emphasize:—

1. That the patient was and always had been righthanded;
2. That the speech disturbance was essentially an aphasia, not a dysarthria;
3. That the aphasia was definitely associated with the onset of left hemiplegia.
The areas destroyed in the right hemisphere corresponded with those which, if they had been found on the left side, would, according to Pierre Marie's theory, have accounted for the aphasia.

As an introduction to the second case—that of a lefthanded woman admitted with right hemiplegia and aphasia—an epitome is given of similar cases previously reported.

The patient had always been lefthanded, as also was a sister. The ictus occurred at the age of fifty-four, leaving her mute for three days. Following this, gradual recovery took place, but when examined three weeks later she still showed impairment, both of outgoing speech and of comprehension.

In view of the theories put forward by Foster Kennedy and others, that in a righthanded person of lefthanded stock the speech centres may be resident in the right hemisphere (and vice versa), it is unfortunate that the family histories of these two cases are not fully reported.

C. P. S.


The views of Henschen, Wernicke, and others on localization of cerebral function are referred to in some detail, and the principles of intercorrelation of function and organization of personality are insisted on. In the opinion of the author the problem of aphasia can only be solved from this basis. He does not find the conceptions of Head acceptable, considering the latter's classification more significant of varying degrees of severity of aphasia than descriptive of varying types. He suggests, however, that the older writers delimited their areas with too great simplicity and that the concept of organization of functions within the personality may do much to show that the varying conflicting views are capable of mutual adaptation.

R. G. Gordon.


This is an analysis of a series of seven cases of glioma encephali in children aged from two weeks to three years. All the cases showed secondary hydrocephalus. In the five subtentorial cases the tumour involved the vermis cerebelli, and in four of these the right cerebellar hemisphere in addition. In two the growth had extended to pons and medulla. The authors are chiefly concerned with the pathology of the cases; their clinical neurological investigation is insufficiently complete and systematic to be of much value. The frequent involvement of the sixth and seventh cranial nerves was due to pressure, as was the sympathetic ptosis (usually unilateral) which was described in three cases. Absent or diminished knee jerks with ankle clonus were noted in one case.

Of the two supratentorial cases, one showed a bilateral glioma of the
basal ganglia. This child was rigid in extension, with opisthotonos and pleurothotonos.

The other was a congenital glioma of the left cerebral hemisphere, which burst through the scalp spontaneously.

M. A. B.

TREATMENT.


This is a very important paper, the contents of which are not sufficiently indicated by its title.

Briefly, the author has been dissatisfied with the critics of the work of Boeke and others, *apropos* of the function of the sympathetic supply to voluntary muscles. He has carried out a series of experiments mainly in goats, and has shown beyond any reasonable doubt that unilateral section of the abdominal sympathetic chain (grey rami going to nerves for lower limb) profoundly alters the condition of rigidity produced in that limb by appropriate mesencephalic division, or that caused by high spinal division; further, previous section of the rami results in a notable difference in the limb tonus when decerebrate rigidity is subsequently produced. Thus, in his own words, "The hypertonicity and the flexion following transverse section of the cord were profoundly altered in the left lower limb after section of the left abdominal sympathetic trunk. In contrast to the right lower limb the left limb fell into extension and abduction under the influence of mechanical factors, while the knee and ankle jerks were less active. When decerebrate rigidity was produced . . . the most striking differences appeared. The division of the left abdominal sympathetic trunk prevented the onset of decerebrate rigidity in the left lower limb, but the limb participated in the periodical extending movements only to fall into flexion immediately, while all other limbs remained in extension. . . . The length of time between the removal of the sympathetic trunk and decerebration is the factor which alters the character of the observations. The most striking changes were seen in the animal which was decerebrated seventy-three days after the removal of the sympathetic nerves." The results are shown in convincing photographs reproduced in the paper.

The author, moreover, proceeded to substantiate his experimental findings by operation on the human subject. He chose a case of severe left hemiplegia of seven years' duration, from a gunshot wound of the head, and a second case of hemiplegia which had continued for fourteen years.

In the first case he divided the abdominal sympathetic chain on the right side, in particular the grey rami for the nerves (second, third, fourth and fifth lumbar, and first sacral) going to the leg, which was excessively rigid in extension and moved *en bloc*. Within a very few hours of the operation the rigidity of the right leg muscles had materially diminished, and the author gives an interesting and detailed account of the phenomena as observed by