cases there is interruption of neurone 1, and in the spinal cord case, of neurone 11. Both neurones 1 and 11 are probably anatomically associated with the pyramidal tract and may decussate with it.

The release phenomenon is a general principle, and applies to the sympathetic as well as to the other parts of the nervous system. When neurone 1 is interrupted, hyperfunction of neurone 11 is exhibited upon stimulation; destruction of neurone 11 causes exaggeration of the activity of the peripheral sympathetic neurones.

Because of their arrangement the sympathetic tracts are suitable for a study of certain properties of the phenomenon of inhibition, which leads to the following conclusions:

1. The ability of any neurone to inhibit is an inherent part of the function of that particular neurone, independent of the activities of neurones situated higher up.

2. The inhibitory power is not of such a nature as to be transmissible from one neurone to another.

R. G. G.

NEUROPATHOLOGY.


The author reviews the problem of the nerve-cell-containing gliomas, and reports a tumour of this type in the right temporal lobe. It fulfilled the essential characteristics of the group, but differed from some in its greater cellularity, the small amount of stroma, and the presence of mitotic figures. The characteristics of gangliogliomas of the temporal lobe are presented, together with a table of the cases reported. They are similar in many respects, if not identical with, the 'spongioblastoma unipolare' described by Bailey and Cushing. The suggestion is made that the pronounced mental phenomena which are present in the clinical picture in most of these cases, as well as their fatal issue in the absence of local serious damage, are the result of a toxic product elaborated by the tumours.

R. M. S.


In a well illustrated paper the author calls attention to the preponderance of giant-cells in some types of glioma. A spongioblastoma multiforme with numerous giant-cells is described, and their presence in other gliomas is discussed.

In summary, one may consider the formation of multiple nuclei as a phenomenon of amitosis, which is frequently frustrated before total separation of the nuclei and division of the protoplasm take place.

R. M. S.
Cerebral gummata may occur under two forms—nodular and infiltrating. The two different aspects of the granulomata are ascribed to the particular way in which the process evolves. This remains more or less typical according to the reaction of the fibrous neuroglia and the resulting necrosis.

The nodular form presents characteristic phenomena of proliferation of vascular and neuroglial tissue with exudation and regression of the elements which compose it. This is especially met with after proliferation has taken place. In these gummata there is little endarteritis obliterans; reparation phenomena difficult to follow in any given case accompany the process.

In the sclerotic gummata there is a red softening and the gliosis is specially perivascular and is associated with the phenomenon of angioplasia. Necrosis in these gummata is very distinct.

R. G. G.

The lesions in this case of a man, 82 years old, affected, in addition to the whole corpus callosum, symmetrical areas in the white matter of some convolutions—the foot of the first frontal, the upper portion of the ascending frontal, and strands of the superior parieto-occipital bundle. Although the patient was a heavy (wine) drinker there were no lesions in the liver. Death was from bronchopneumonia without many symptoms—a frequent cause of death among dement.

The glial elements were proliferated in proportion to the degenerated neurones, but this state of affairs is not described by all authors. There was some new formation of vessels; and amyloid bodies in the degenerating but not in the most degenerated areas pointed to the progressive nature of the lesion. Granular cells containing blood pigment suggested the presence of small hemorrhagic areas in the course of degeneration.

There were not sufficient data to warrant discussion of the pathogenesis.

R. G. G.

Cobb's observations lead him to believe that there are no end-arteries in the brain, not even in the basal ganglia. If one considers any artery, which has
ABSTRACTS

no obvious anastomosis of branches large enough to be called truly arterial, to be an 'end-artery,' one may find many such in the kidney, spleen, mesentery and retina, and a few in the brain. Functionally speaking, however, the capillary and arteriolar anastomoses keep the arterial tree from acting as the sole blood supply of any part.

Edema is probably the most effective factor in shutting off blood from anastomosing capillaries and other small vessels, for these have a low blood pressure, and the swelling quickly blocks the flow, as in wheal formation in the skin. Thus, in the brain, occlusion of an artery, in spite of arterial and capillary anastomosis, can cause enough reduction of oxygen supply to produce necrosis. It is a matter of relative anoxemia (not of anatomically perfect anemia) in a tissue more dependent on its oxygen supply than any other tissue in the body.

R. M. S.


The case of disseminated sclerosis in which the intracellular inclusions to be described were found was one in which the first symptoms in 1921 were those of an acute confusional state. This recurred in 1929 and was then associated with objective nervous manifestations, viz. intention tremor and ataxic gait. A fresh attack occurred in June 1930 which began with left hemiplegia and progressed with symptoms of myelitis to death in August 1930. Histological examination of the central nervous system revealed an enormous number of plaques chiefly of recent formation. They were characterised by the presence of numerous large neuroglial cells with swollen bodies, a few short processes, and often with hypertrophied or multiple nuclei. In many of these cells there were found cytoplasmic inclusions which were best demonstrated by Wolbach's technique, or by Mann's methyl blue eosin stain. They usually lay toward the periphery of the cell body, from one to five being seen in one cell. Three main types were distinguished but there were many intermediate forms. The first type consisted of a small oval homogeneous mass, one or two micra in size, staining by nuclear dyes. The second resembled a dumbbell or punt, in that the colourable material was concentrated at the poles with a faintly staining central portion. The third type was spindle-shaped, with thread-like extremities which stained deeply. In this form a sharply defined, darkly staining mass which took the eosin with Mann's method was constantly found. Owing to the constancy of their size, the regularity of their form, the constant repetition of the same forms, the complexity of their structure, the presence of nuclein in them, and their staining reactions, the author considers these inclusions to be of parasitic nature. He considers them to be identical with the 'spirochaetal debris' of Steiner and the inclusions seen by Luthy.

J. G. G.
The Marchi method.—Donald Duncan. Arch. of Neurol. and Psychiat., 1931, xxv, 327.

From a study of nerves removed from the human subject and various animals the author shows that in any series of Marchi preparations the normal fibres always contain some black globules (Elzholz bodies) and irregular areas. Their size and number vary with the fixing fluid used, the strength of the osmic acid, and the time the tissue is exposed to its action.

A useful bibliography is appended.

R. M. S.

The influence of spinal puncture on the vegetative nervous system (Influenza della rachicentesi sul sistema nervoso della vita vegetativa).—A. Leanza. Riv. di pat. nerv. e ment., 1930, xxxv, 244.

The author has examined the function of the vegetative nervous system in 50 individuals before and after spinal puncture, and has found in about half the cases a disturbance of the vegetative nervous system characterised by hypo-excitability of the sympathetic and hyper-excitability of the autonomic system. He thinks this is due to a diminution of a reflex which stimulates the sympathetic and originates from the pressure of the fluid on the walls of the cavity in which it is contained.

R. G. G.


While there is no typical glucose tolerance curve in epilepsy, a high percentage of epileptic patients present a glucose tolerance curve of a definitely subnormal type. The writers have attempted to correlate the type of epileptic (e.g., irritable, confused, demented) with the blood sugar level, but have been unable to determine that there is any such relation. Similarly they have been unable to establish any definite relation between frequency of fits and the blood sugar level. The comparatively high percentage of cases with renal glycosuria in their series is worthy of note.

C. S. R.

SENSORIMOTOR NEUROLOGY.

Encephalitis periaxialis diffusa: Schiller-Foix disease (Encéphalite periaxiale diffuse: Maladie de Schiller-Foix).—L. Coenen and Leon Mir. L'Encéphale, 1931, xxvi, 357.

The authors describe a case of Schiller's disease in a man of 41 which began with loss of sight in the left eye. Headache, stiffness of the right arm, a burning sensation round the abdomen, and deafness of the left ear came on soon after,