of lacunar cerebral sclerosis, 2 of uræmic delirium and 2 of mental confusion of infective origin. The test was less constantly positive in dementia praecox and cerebral syphilis. It was negative in general paralysis, tabes dorsalis and disseminated sclerosis, as also in all normal fluids. The test may therefore be of value in distinguishing general paralysis from other syphilitic brain diseases, especially those associated with mental confusion, and also as demonstrating an organic basis for mental or hysterical symptoms.

In the second part of their paper the authors discuss the relationship of mucin degeneration to confusional states, a relationship previously indicated by Buseaino, who described a similar degeneration of the brain as "grape-like disintegration." According to Cajal the insulation of axons may vary in completeness according to the extension or retraction of the processes of the interfascicular glia (oligodendroglia). Similarly it is possible that degeneration of these cells may lead to defective insulation and consequent confusion of mental processes.

J. G. GREENFIELD.

SENSORIMOTOR NEUROLOGY.


The figures herein given are based on the examination of 318 cases of the disease. In some respects, as is to be expected, they differ from those of previous investigators; and while they cannot be conveniently summarized attention may be directed to some of the points which they raise.

The percentage of men is 58, of women 42. This is rather contrary to accepted opinions, but is explained to some extent by the nature of the clinical material, a large part of it being derived from the artisan class. Between the ages of 21 and 30, 38·6 per cent. of the cases commence, and 30·8 per cent. between the ages of 31 and 40. The frequency of neurological symptoms as the first indication of the disease takes place in the following order: difficulty in walking (64 per cent.), paraesthesiae (26 per cent.), sphincter trouble (24 per cent.), giddiness (19 per cent.), diplopia (18 per cent.), pains (18 per cent.), dysarthria (6 per cent.), affection of upper limbs (4 per cent.), facial weakness (1 per cent.). It is unusual, perhaps, to find so high a percentage commencing with pains (chiefly in the back); this may be to some extent the expression of muscular weakness. When the disease is fully established, in the sense that the diagnosis is certain, the following is the list of symptoms in order of frequency: spastic lower extremities, loss of abdominal reflexes, nystagmus, intention-tremor, pallor of the temporal halves of the optic discs, sphincter disorder, scanning articulation, paraesthesia, 'psychical alterations.'

A feature is made of the curious finding that the symptoms are not uncommonly aggravated after lumbar puncture; sometimes, indeed, within two or three weeks a previously unremarked symptom will make its appear-
The author found this latter occurrence in no less than 38 per cent. (27 cases out of 71). He gives brief details of several cases of this kind, and draws the conclusion that in disseminated sclerosis the nervous system is peculiarly sensitive to any influence.

S. A. K. W.


Under the above title the author describes a case of Schilder’s encephalitis periaxialis diffusa. The new terminology suggested is certainly more exact than that given to the disease by Schilder, as it emphasizes three of the main characters of the pathological process, its limitation to the white matter of the brain, its progressive nature and the dense neuroglial reaction to which it gives rise. As Flatau points out, although the disease is ‘periaxial’ in the early stages, the axis cylinders are soon destroyed. Schilder’s name is, therefore, so far incorrect. But the new name is rather more cumbersome, and the old one is now so generally known and accepted that the attempt to change it will probably fail.

The patient was a Jewish boy of fourteen years, whose vision began to fail in November, 1920, and became progressively worse so that three months later blindness was complete. A week or so after the onset of blindness he had a series of general convulsions with loss of consciousness and frothing at the mouth. Inquiry revealed the fact that his hearing had become defective some three or four months before there was any failure of vision. With the progress of the disease his walking became impaired and his mentality altered, so that he spoke little and only to complain of his eyesight.

When examined first in hospital in February, 1921, the pupils were unequal but reacted to light. The optic discs were atrophic. There was some reduction of the abdominal reflexes but the plantar responses were of the normal type. The patient resisted medical examination and mumbled constantly and inarticulately, but sometimes it was possible to make out that he was complaining of his blindness. He passed his urine and faeces in bed. At first he could stand and walk unsteadily but without support, but this power was lost in a few weeks’ time. He could taste and smell his food and recognized objects by touch. The cerebrospinal fluid gave a very weak Nonne Apelt reaction (‘à peine marquée’), and a negative Wassermann reaction. In April, 1921, the pupillary reaction to light was lost, and during this month the patient had some more convulsions. By July he was quite demented, tearing his clothes and sheets into shreds with his teeth, and putting his faeces into his mouth. Further convulsions occurred in September, and he died on October 21, 1921, about a year after the onset of symptoms.

At the post-mortem examination the brain presented no external abnormality except microgyria of the occipital and parietal convolutions. On section, however, it showed a diffuse and almost complete gelatinous gliosis of the white matter of the occipital and temporal lobes. For the most part this gliosis reached the cortex of the occipital lobes but in places spared the subcortical layer of myelinated fibres. Microscopically the evidences of disease
were considerably more widespread, as there was early degeneration of myelinated fibres in the frontal poles and in the cerebellar hemispheres and considerable atrophy both of cells and fibres throughout the cerebral cortex. There was, however, little neuroglial overgrowth in the cortex except in those places where it had been invaded by the underlying gliosis of the white matter. In the latter large astrocytes and compound granular corpuscles were numerous, but there was no perivascular infiltration with small cells and no plasma cells were seen. There was degeneration of the pyramidal tracts in the brainstem and cord and recent hemorrhages were found in the grey matter of the lumbar enlargement. The optic nerves showed considerable myelin degeneration, especially in the region of the chiasma.

The author discusses the clinical and pathological relationships of the disease, but is unable to throw any fresh light on its etiology and pathogenesis.

J. G. GREENFIELD.


A male, age fifty-eight, suffered with periodical exacerbations of intense headaches and vertigo, of one year's duration. When admitted to the hospital eleven months after the onset he displayed negativism and suffered from visual hallucinations. He would not answer questions and refused his food. No signs of localizing value were determined on examination. On the eve of his death the left optic disc showed hypermetropia and optic retinitis and the right showed a high degree of myopia and an old choroidal retinitis; the vessels were not dilated. The spinal fluid was normal and not under pressure. The patient died about one month after admission.

On sectioning the brain, a massive, bilateral symmetrical vascular sarcoma was present in the occipital lobes, which invaded the lateral ventricles.

The interest in this case was: (1) The large size of the tumour contrasting with the paucity of clinical signs; (2) the considerable development of the tumour in the occipital lobes contrasting with the very few ocular symptoms.

A. W. YOUNG.

[237] Spina bifida occulta cervicalis.—G. B. HASSIN. Arch. of Neurol. and Psychiat., 1925, xiv, 813.

A man, age 36, was admitted to hospital with a history of gradual loss of power in all four limbs. Examination showed the presence of a slightly reddened hairy area containing a small depressed scar at the level of the sixth cervical vertebra. Palpation of this area provoked a 'queer' sensation, and revealed underneath a slight depression in the situation of the spinous process. The pupils, cranial nerves, speech and mentality were normal. Some atrophy was noticeable in the seapular muscles, and those of the upper extremities, and especially the right forearm, were similarly affected. Active movements
in the shoulders and elbows were entirely absent, but movements at the wrists and fingers were performed with great ease and freedom. In the lower limbs active and passive movements were freely carried out, although the gait was markedly spastic. The tendon reflexes, except those of the biceps, were markedly exaggerated with bilateral ankle clonus and Babinski sign. The abdominal and cremasteric reflexes were absent. Sensibility was normal except for loss of the stereognostic sense, loss of touch sense in both thumbs, and of the sense of position in the fingers of the left hand. The nerves and muscles responded normally to both the faradic and galvanic current. The Wassermann reaction was negative in both blood and cerebrospinal fluid. Roentgen-ray examination revealed the presence of a small cleft in the spinous process of the sixth cervical vertebra.

This case emphasizes the importance of looking carefully for evidence of spina bifida occulta in all cases of paralysis of obscure origin.

R. M. S.


Paraplegia from breech extraction is not as unusual as has been supposed, and it is probable that many cases are unrecognized. The author records six examples of this condition, in five of which conduction in the cord was completely interrupted in the upper thoracic segments; in the one fatal case which came to autopsy the cord was stretched and softened at the eighth cervical and first thoracic segments.

Complete paralysis of the lower intercostals, spinal, abdominal, and all leg muscles regularly resulted in those cases which survived. The bladder discharged urine automatically, but there was always constipation. A complete 'mass reflex' was observed in two cases, but trophic and vasomotor changes were remarkably inconspicuous.

R. M. S.


The case described is that of a man of 46 who, towards the end of the war, and progressively since then, has suffered from a peculiar condition of the right hand and forearm, characterized by the co-existence of inflammatory and atrophic processes in the skin of the limb, a blue-red colouration of the same, areas of thinning as well as points of thickening, a general swelling of the tissues of the hand, and loss of sensibility to tactile, painful, and thermal stimuli.

The differential diagnosis is considered at length, and the case is classed, largely on the basis of dermatological opinion, as one of so-called acrodermatitis chronica atrophicans, although the sensory changes are not features of that affection. It is held with some degree of speculation that the condition has a psychogenic origin.

S. A. K. W.
In a family of 101 persons, twenty-one were affected with peroneal atrophy in five generations. In this family the disease is not transmitted by persons who do not have the disease, either manifest or latent, but it is possible for persons who have not yet shown the disease to procreate offspring to whom they transmit it. If the parent lives long enough he will transmit the disease. Half the offspring of an affected parent are apt to be affected, provided the family is large and lives long enough to develop the disease. This applies both to parents who have the disease manifest at the time of procreation and to those who have the hereditary taint but have not yet developed it.

Males and females exhibit the disease equally and probably transmit it equally. The condition is apparently dominant to the normal and is not sex-linked.

R. M. S.

PROGNOSIS AND TREATMENT.

The patient was a man of 52, who had a severe apoplexy with right hemiplegia and loss of speech. After a stationary period was reached speech re-education was undertaken and persevered with for about eighteen months. Without, apparently, any other factor being in action than that of this re-education, the patient began to show an associated movement in flexion of the hand and forearm towards the mouth during the process of word-finding; at first it appeared solely during the mental effort of word-finding, but at a later stage it came only when the patient failed to find the required word. At the same time certain spasmodic movements of the hemiplegic right arm notably diminished.

Subsequently, following massage and exercises, voluntary control over the right arm improved, and with this the associated movement of the limb during speech reactions disappeared. Autopsy revealed an almost complete destruction of the left speech area, only the occipital part of the lower temporal lobe being left untouched.

The author indulges at great length in an interesting if somewhat hypothetical discussion on the part played by speech re-education in influencing the neighbouring mechanisms of the left hemisphere; apart from vicarious function of the right hemisphere, he argues that its effect was to excite the functional capacity of what of the speech area was left and at the same time eventually to prevent dissipation of physiological stimuli to mechanisms in the vicinity; and he sees in this process analogies with the activation of protoplasm by immune bodies.

S. A. K. W.