the grey matter were seen. The author discusses the possibility that these lesions in the cord might have been caused by sudden spasm of the blood vessels supplying the affected part, the spasm being induced by injury to the corresponding sympathetic ganglion.

The second case originated as a cord lesion at the level of the first lumbar vertebra. Six months later a herpetic eruption appeared on the inner surface of the arms, accompanied temporarily by a burning sensation in the skin of this region. Death occurred a year later. At the post-mortem examination the lumbosacral segments were found to be severely damaged, and in addition a syringomyelic cavity, partly filled with blood and surrounded by firm, thick neuroglial walls, was found extending from the fourth cervical to the eighth thoracic segment. In spite of the clinical history the author considers that the syringomyelia resulted from haemorrhage into the cord which occurred at the same time as the wound, and that the herpetic eruption was incidental to the process of cicatrisation in the cord. He confesses that the relationship of cause and effect is problematical in both cases, but publishes them in order to provoke discussion on the physiological connections between the sympathetic ganglia and the spinal cord.

J. G. Greenfield.


A report based on a series of sixty pneumograms. In forty-two cases the air was injected directly into the ventricles; in twelve cases the injection was into the spinal canal by lumbar puncture, and in six cases a neoplastic cyst of the brain was filled with it. The chief value of the method lies in its ability to show where the tumour is not located, but it is impossible to pass a reliable judgment on the plates unless information is available as to how the injection was made, and the positions and preliminary oscillation of the head.

The introduction of air into the ventricles may be followed by two types of reaction: first, an increase of intracranial pressure (most to be feared in cases of marked papilledema); secondly, evidence of bulbar irritation or paralysis. The former may be long continued; the latter is immediate. In more than half of the cases hyperpyrexia lasting for from one to four days follows the injection.

R. M. S.

SENSORIMOTOR NEUROLOGY.


The author has had the opportunity of observing two cases of Jacksonian epilepsy in which the behaviour of the plantar reflex has not conformed to the classical description given by Babinski. In the first case the reflex was never abolished or even enfeebled during the convulsions, and both on the left and right the reaction was always normal flexion. After the attack the plantar reflex continued to be normal.

In the second case, as soon as the rigidity which held the toes flexed had ceased, plantar stimulation, which had previously produced a Babinski sign
both on the right and left, caused no reaction, and only after the foot had been in repose for some time did the Babinski sign reappear on both sides. It appears reasonable to assume that the presence of the Babinski sign following convulsions is due to fatigue of the cortical centres and motor tract, with release of the lower centres controlling extension. Its failure to appear in Case 1 may be due to the stimulation being most marked in the centres for the face and upper limb. Not being diffused to the centres of the lower limb, the results of exhaustion of the cortex, easily seen in the arm, were not apparent in the leg. On the other hand, in Case 2, the reaction of extension, which depends on the lower centres released by the cortical exhaustion, may momentarily be annihilated by the fact that the stimulation travelling down the motor tract transitorily maintains its predominance.

R. M. S.


The author points out that one must distinguish between the normal cutaneous abdominal reflex, which is chiefly unilateral with more or less marked deviation of the umbilicus and the linea alba and ordinarily elicitable only by stroking, and pathological abdominal reflexes. The latter belong to the order of "reflexes of spinal automatism" and are generally associated with these (flexion or extension reflexes of the lower limbs). When, however, the reflexes of spinal automatism are not pronounced, the distinction between the normal and abnormal abdominal reflexes may be difficult, and one must rely on the following points: The pathological abdominal reflex has a greater tendency than the normal one to bilateral contraction. It is therefore more a "retraction" reflex, while the normal one is more a "unilateral deviation reflex." The pathological abdominal reflex has sometimes a distinctly prolonged period of latency and it is less elective as regards the stimulus required.

The practical importance of the distinction is chiefly in connection with segmental focal diagnosis. When a pathological abdominal reflex is wrongly deemed to be a normal one (and in the absence of sensory disturbances the diagnosis of the level of the lesion depends mainly on motor loss, often slight, and reflex findings), such a mistake may lead to the faulty assumption of a low dorsal or lumbar lesion when the lesion is really situated at a much higher level.

While the existence of a normal abdominal reflex depends on the integrity of the corresponding pyramidal fibres (central efferent reflex path), the pathological abdominal reflexes just described are independent of the pyramidal tract.

R. M. S.


There are many circumstances which might lead one to regard the cremasteric reflex as an abdominal reflex at its lowest metameric level, but this supposition
ABSTRACTS

is not borne out by clinical investigation, for the abdominal and cremasteric reflexes show many incongruities in their behaviour. In many cases, while the abdominal reflexes are brisk and of average strength, the cremasteric reflexes are feeble; again, in many others the cremasteric reflexes are of average strength or brisk while the abdominal reflexes are feeble. In eleven cases the cremasteric reflexes were found to be present along with absent abdominal reflexes, and in five other cases the abdominals were present while the cremasteric reflexes were absent. Only in three cases was there a possibility of this discrepancy being referable to different segments of the cord having been unequally affected. It therefore seems reasonable to assume that the arc of the cremasteric reflex is different from that of the abdominal reflex.

R. M. S.

[16] Position of the head in cerebral tumours above and below the tentorium.
—H. W. STENVERS. Arch. of Neurol. and Psychiat., 1925, xiii, 711.

From a study of eleven clinical cases the author concludes that the forced positions of the head occasionally seen in cases of intracranial neoplasm are dependent, not on disturbances of innervation, but rather on certain mechanical factors, particularly interference with the discharge of the ventricular fluid. Thus in cases of supratentorial tumour the patient will, in suitable cases, keep his head forward to enlarge the communication of the fourth ventricle and cisterna, to enlarge the cisterna, and to free the medulla oblongata from pressure. In cases of supratentorial tumour the patient moves his head backward. The fluid can then flow more easily out of the third ventricle, and the medulla oblongata does not then rest on the dens epistrophei. In the majority of cases of tumour situated in the posterior fossa the ventricle is closed by the tumour or cerebellum, and movement of the head gives no relief. Consequently, in these cases the forced positions fail to appear. Occasionally, however, posterior fossa tumours which grow in the direction of the aqueduct cause a retracted position of the head.

R. M. S.

[17] Fourteen simultaneous cases of an acute degenerative striatal disease.
—A. H. WOODS and L. PENDLETON. Arch. of Neurol. and Psychiat., 1925, xiii, 549.

Following a winter of famine in Northern China, fourteen children and adults in that region were suddenly and nearly simultaneously attacked by a malady the common symptoms of which were sudden giving way of the limbs, speech defects, convulsive seizures in some and disturbances of automatic associated movements in others. Three families were involved, of whom all the adult members recovered; two children died, one has grown progressively worse during the intervening two years, and several are permanently crippled.

The striatal motor symptoms differed from those of the pseudosclerosis group in the abruptness of onset, the fulminating course in one patient, the number of persons simultaneously involved, the occurrence of abortive cases,
and in the absence of tremor, hepatic symptoms, corneal changes and psychic deterioration. On the other hand, the symptoms of derangement of the myostatic mechanism and of automatic associated movements resembled those of pseudosclerosis.

The pathological process appeared to be of a non-inflammatory and degenerative character, for in the case which came to autopsy severe necrosis of ganglion cells together with reactive glial changes were present. These elements were most severely injured in the striate body, and its downward extension the substantia nigra, but they also suffered in all parts, from the cortex to the lumbar spinal cord. Gross necrosis was limited to the globus pallidus, and substantia nigra, the putamen not being involved. Giant glial cells were not present. The authors believe that the cases reported belong to a hitherto undescribed variety of the pseudosclerosis group, and that the pathological condition was engendered by some unknown poison circulating in the blood stream.

R. M. S.

[18] Decerebrate rigidity in man.—L. E. DAVIS. Arch. of Neurol. and Psychiat., 1925, xiii, 569.

The case reported closely resembled that described by Walshe in 1923, the symptoms of decerebrate rigidity being caused by the presence of a suprasellar cyst pressing on the structures in the anterior part of the brain stem. In this case the rigidity in extension was of a character exactly analogous to that found in experimental decerebration. Magnus-de Kleijn neck reflexes were also present, but irregularities of the pulse or respiration did not occur, showing that there was no stimulation of the medullary centres, such as is frequently encountered in tonic spasms.

The pathological findings tend to show that extensor rigidity is accompanied by definite changes in the pyramidal system cephalad to the site of the lesion.

R. M. S.


This author gives at length, with tables and diagrams, the results of her investigations of 218 cases of Huntington’s chorea. Forty-six patients admitted to the Kalamazoo State Hospital, in a period of fifty-two years, gave a history of 172 cases of the disease in their families, three-quarters of which were traced through the fifth and sixth generations.

1. The disease is infrequent in Michigan State hospitals. The admission rate to Kalamazoo is 2·2 per thousand, and 1·9 per thousand in hospitals in other parts of the peninsula. Based on the Kalamazoo cases, for each hospitalized choreic, approximately four others are found in the family.

2. What has been previously stated with regard to the inheritance of Huntington’s chorea is confirmed. In all cases where the family history was complete direct and similar inheritance was found.

3. Of 218 patients who had the disease, all but thirty-five married, and
they produced 603 children. Of these, 16 per cent. died young, 25·7 per cent. were free from the disease, 26·8 per cent. developed chorea, and 30·8 per cent. were under the average age at which the disease develops.

4. The average age of onset in the group of thirty-two families is 37·1, but the disease may appear in individuals as young as seventeen or as old as sixty.

5. Potential choreics do not differ materially from their non-choreic siblings in early life, and there is no reliable indicator of the later development of chorea. In this group 68 per cent. stood out markedly for temperamental irregularities, and the rest showed nothing of an abnormal nature.

6. Two-thirds of the choreics showed behaviour difficulties, of which assault was the most frequent, and emotional instability next in order. Suicide occurred five times, and unsuccessful attempts seven times.

7. Mental symptoms (impairment of judgment, lack of initiative, change of disposition, etc.) were found in 52 per cent. of the cases.

8. The average length of life after the development of the disease was 16·1 years. Exhaustion was the most frequent cause of death.

9. Seventeen cases of Sydenham’s chorea were found in non-choreic relatives, and in three individuals who afterwards developed Huntington’s chorea. Other neuropathic conditions were not reported except in a small percentage of relatives.

10. The families affected were of mixed races, but limited to English, Scottish, German, and Irish stock, with a few French Canadians. Farmers’ families predominated, only 3 per cent. being in professional classes.

11. Only 31 per cent. of the choreics became public charges. Thirty-five of the forty-six cases at Kalamazoo Hospital were there as public charges, and the cost of maintenance to July 1, 1928, amounted to approximately £9,000. The hospital residence of the forty-six cases represents an economic loss to the choreic and his family of approximately £35,980. The combined amounts of maintenance and loss of salary for the hospitalization alone come to over a quarter of a million dollars (over £50,000).

12. The Michigan choreics were located in the southern half of the lower peninsula. More than half of them were in the United States prior to 1800.

13. Avoidance of marriage or voluntary sterilization is probably the best means of preventing Huntington’s chorea.

E. B. G. R.


The case is reported of a white woman, aged forty-nine, who, previous to admission to hospital, had had several attacks of erythema on the backs of the hands, and persistent diarrhoea. Mental symptoms—irritability, mendacity and delusions—developed later, with weakness in the limbs and diplopia. The skin lesions on admission were characteristic of pellagra, and the woman, who was emaciated, died fifteen days later.

At autopsy the pia mater was found to be thickened, and there was excess of fluid beneath it. The most marked cortical change was a gliosis, associated with a diminution of the number of ganglion cells, irregularly
distributed. The Betz cells, and to a less extent the smaller pyramidal cells, showed acute swelling, with chromatolysis and displacement of the nuclei. Similar changes appeared in the spinal cord. The writer compares these findings with cases described by Singer and Pollock, Spiller and Spielmeyer, and does not consider them peculiar to pellagra.

E. B. G. R.

TREATMENT.


Treatment of general paresis by the inoculation of patients with tertian malaria has resulted in complete clinical remissions in 30 per cent. of unselected cases. A temperature of 105° maintained over a period of not more than from twelve to eighteen hours produced as favourable results as an equal or greater degree of pyrexia maintained over a longer period. A suggestion is made that the usual routine number of febrile crises is unnecessary, and that equally beneficial results may be obtained by terminating the malaria after the sixth or seventh crisis.

Lewis Yealland.


A survey of the history of treatment in paretic neurosyphilis reveals the fact that, generally speaking, the results have been somewhat disappointing, and up to the present little can be added to the prognostic remarks made by Mickle in 1886, before paresis was known to be a form of syphilis. In this review of a portion of the literature on the subject the authors lay special emphasis on the early methods of treatment, and particularly how some of them, in a way, anticipated recent methods by the production of artificial fevers. The hopeful results secured by the exponents of the acute fever method (Wagner-Jauregg, Delgado, Nonne, etc.) are reviewed rather extensively, and these reports reveal an enthusiasm which, the authors hope, will be justified by further experience of this type of approach.

Some interesting statistics are given concerning paretics, male and female, and both white and coloured, admitted during the past forty years to St. Elizabeth’s Hospital, Washington. The figures concern the age on admission, civil status, general results of treatment, and length of residence in hospital, and are illustrated by tables and charts. The fact that 1,198 patients (of 1,558 admissions) had died of the disease while still at the same hospital is cited as testimony to the outcome to be expected, regardless of treatment.

The authors then give the results obtained by treating sixty-eight paretics in St. Elizabeth’s Hospital with malarial inoculations. Of these, sixteen cases of complete remission were recorded, nineteen were unchanged, twelve deteriorated, thirteen died, and of the remaining eight no information was forthcoming. These results the authors consider very hopeful, since a critical