glioma typical fatty granular cells and dysplastic glia-cells can be observed if neuronic alterations have supervened. The author has met with the same type of granular cells in a case of medulloblastoma. Every glia-cell therefore probably has a natural aptitude for phagocytosis and for transformation into lipid substances.

Wallenberg has made a special research into the origin of the so-called giant glia-cells. Two different types of such cells exist: (1) Cells containing a well-formed nucleus nearly always situated in the neighbourhood of blood-vessels, and (2) monster glia-cells containing diffuse chromatin and always situated in the neighbourhood of necrotic tissue. He is inclined to the opinion that a giant glia-cell is produced as a result of an irritation provoked by the imbedding of a foreign body and may be compared to the origin of giant cells in other kinds of tissue.

M.

SENSORIMOTOR NEUROLOGY


Cases of acute pyrexial syphilis of the brain are to be regarded as special forms of neurosyphilis, the onset being acute or subacute, an exacerbation often occurring later. Such cases are severe at the onset. A rapid improvement may be obtained by specific treatment. Cases of pure meningeal involvement have to be differentiated from meningoencephalitic affections with predominant cerebral symptoms. The postmortem examination performed in a few cases showed a meningoencephalitis with predominant changes in the meninges.

M.


The relative rarity of general paralysis in India in association with the high incidence of malaria has led to the suggestion that this disease may occur in a modified form and so escape recognition. It may be admitted that aberrant clinical types are met with, but it has yet to be shown that such cases exhibit positive serological reactions. The wide range of the clinical manifestations of general paralysis, which is a feature of this disease in Burma, renders it difficult to base a diagnosis on the clinical data alone. It is conceivable that cases are missed owing to the fact that they are modified by naturally acquired malaria. That this may be so is supported by the fact that many recover completely or are only slightly reduced mentally as a result of treatment by malarial therapy. It may therefore be presumed that
those cases subjected to repeated infection of naturally acquired malaria exhibit a modified clinical picture. It is also to be expected that the chronicity of the disease will become more marked and the clinical signs modified. Here the usual criteria of diagnosis do not help, for, as in the cases successfully treated by malaria, there may be no clinical data and the serological results may be greatly modified. It may well be that general paralysis is more common than is generally supposed in tropical countries, but whether this premise is correct or not in Burma (where syphilis is far more prevalent than in most parts of India), the classical form of general paralysis is relatively common. It would appear that by long residence in a malarious country an x-factor is acquired which modifies the course, duration and clinical signs of the parenchymatous affections of syphilis; that, by long residence in a non-malarious country, this x-factor is absent so that the reaction of the nervous system to syphilis takes the well-known form; and that by migration from a malarious to a non-malarious country the x-factor is lost. In a large moving population, such as one finds in Burma, many syphilitics will be found in whom this x-factor is complete, modified or entirely absent. This is a possible explanation of the varied manifestations of parasyphilis, as some parts of Burma are malarious and others not.

C. S. R.


This report contains an analysis of the records of 37,438 patients admitted to the Boston City Hospital in 1933. Of these, 1,167 were admitted in coma. Alcohol was responsible in 59.1 per cent., trauma in 13 per cent. and cerebrovascular lesions in 10 per cent. The last two conditions constituted more than half of the 59 non-alcoholic comas. Other causes, which formed 30 per cent. or less of the total, in order of numerical importance, were: poisoning, epilepsy, diabetes, meningitis, anæmia, cardiac failure, exsanguination, neurosyphilis, uræmia and eclampsia.

C. W. D.


A case of midline cerebellar tumour with marked internal hydrocephalus is described with the post-mortem observations. The case presented a syndrome highly suggestive of a neoplasm of the left frontal lobe with a notable inconspicuousness of cerebellar signs or evidences of high intracranial pressure characteristic of subtentorial tumours in general. The possible dynamics of
ABSTRACTS

the hydrocephalic mental syndrome are mentioned with reference to organic vulnerability of the frontal lobes, to psychopathological predisposition, and to unusual resistiveness of the cerebellar pathways. It is concluded that a psychosis may be the presenting clinical problem in cerebellar tumour, and all conclusive manifestations of such a tumour may be lacking at the time when the patient is seen. Topographic diagnosis is always difficult with advanced tumour of the brain, and more difficult than usual when a psychosis excludes the possibility of a reliable subjective account of the disease. Ventriculography should be employed to avert error.

C. S. R.


The six cases reported presented a characteristic clinical picture, nearly all showing a combination of epileptic fits and angiomas of the face. To these, the most prominent, may be added, as frequent symptoms, mental debility and a slight spastic hemiplegia on the side opposite to the angioma of the face. Furthermore, the patients are sometimes rather fat. If x-ray examination is made, a characteristic shadow appears inside the skull, a distinct sinuous shadow, presenting exactly the shape of the surface of the brain, showing both gyri and sulci, often with double contours. Generally, this shadow is localized in the occipital lobe.

Histological examination of the brain shows that the shadow is due to calcification of the outer layers of the cortex, not of the pia mater. This presents in some parts an abundant vascularization, but not a true angioma. The calcification consists of numerous small, mostly microscopic, granules of lime salts, localized in the second and third layers of the cortex. In these layers the nerve tissue is in great part destroyed and replaced by fibrillar neuroglia. In the case described, the occipital lobe, in which the processes were localized, had shrunk and was sclerotic. Otherwise the brain seemed fairly normal; only in places were the same modifications seen to a very slight degree. The changes in the brain probably are not secondary to angiomas of the pia mater. The syndrome must be related to a more generalized malformation of the organism (as in tuberous sclerosis), consisting in the formation of angiomas of the face, slight angiomatous modifications of the pia mater, aplasia of the occipital lobe of the brain with (probably secondary) sclerosis and calcification of the aplastic part. The malformations probably originate in fetal life.

The anatomopathological observations suggest certain directions for therapy. The calcifications are related not to a tumour but to a congenital defect and malformation. Hence operation is not indicated. X-ray treatment may perhaps be administered 'consolaminis causa.' No striking
results are to be expected from treatment, however, since regeneration of aplastic brain tissue is not possible. Symptomatic treatment for the epileptic fits and mental hygienic treatment for the mental defects must be considered as the only therapy.

R. M. S.


An interesting case in which tumour developed in a psychoneurotic patient. Thirty years previously he had a ‘nervous breakdown’ with symptoms similar to those of his final illness.

Homolateral visual hallucinations in the presence of contralateral field defects, aphasia in a right-sided tumour, alterations in x-ray appearances of the skull, and certain mental deteriorations were all observed.

R. G. G.


A man of 24 years of age suffered a severe trauma of the skull, losing consciousness for several hours. Following this he was unable to move his limbs in a normal manner. Four months later the author examined the patient and made a diagnosis of Parkinsonism. In a discussion of the relation between the trauma and the nervous disease, Baumann assumes a predisposing susceptibility of the corpus striatum to traumatic irritation, which he considers the cause of Parkinsonism. The traumatic origin of Parkinsonism in this case does not appear at all convincing.

M.


Oxygen was insufflated subcutaneously in large volumes in a group of seven patients with cryptogenic convulsive states. There was little if any correlation between the time of occurrence of a convolution and the direction of change of blood pressure and pulse rate curves between any two consecutive readings. Oxygen, when given subcutaneously, does not exert any appreciable influence on the frequency of the convulsive attacks.

C. S. R.

The writer submits clinical evidence to show that the form of allergy which is controlled by inheritance—atopy—may in a few cases play a part in the production of seizures, and if these selected patients are not allowed to come in contact with the specifically offending materials seizures do not occur.

R. M. S.


Less work has been done in this group than in any other of the allied branches of epilepsy. We are probably dealing with the same situation as in cryptogenic epilepsy, and it is probable the attacks are closely related to petit mal seizures. In some cases there is a definite history of head injury, in others evidence of previous inflammatory processes of the central nervous system, and, finally, in a third group affective instability might be considered as a responsible factor in decreasing the threshold of convulsibility. There is, however, in addition, something which is responsible for the unusual frequency of attacks. We are not prepared at the present time to state what this factor is; we can only surmise a possibility of some metabolic processes in these children which may be responsible for the phenomenon. As in epilepsy in general, there is probably a multiplicity of etiological factors. The existence is suggested of various types of pyknolepsies which together with the narcolepsies, affect-epilepsies and other well-known paroxysmal disorders make the vast group of convulsive states.

C. S. R.


There is some evidence of an increased pH value in the body fluids of epileptics, particularly before seizures. This increased pH is often accompanied by the retention of water. Convulsive attacks may serve a compensatory purpose in some cases and tend to reduce the increased pH value. Diets such as the ketogenic, the starvation and the dehydration may aid in maintaining normal pH values of the body fluids.

C. S. R.


This communication deals with the epidemic of poliomyelitis that occurred in Philadelphia during the summer of 1932. Four hundred and ten patients—
the greatest proportion of the reported cases—were admitted as suspected cases, and the diagnosis was verified in 304 (74 per cent.). The majority of those affected were in the age groups of 0 to 4 years and 5 to 9 years (58 and 27 per cent. respectively), and 188 were males, 116 females. Two hundred and fifty-four patients received serum; of these, 124 showed some paralysis on admission, and upon discharge this number was increased to 154. Fifty patients received no serum; of these, 28 showed some paresis on admission and 38 upon discharge. A total of 192 patients were discharged with evidence of paralysis, whereas on admission only 152 showed such physical signs.

Twenty-four cases proved fatal (7.8 per cent.), in 18 of which serum was given. Of these 24 fatal cases, 17 patients required the use of the respirator, and 10 of these latter died while in the respirator. The final conclusion was that convalescent serum is of little value in the prevention of paralysis.

C. W. D.


Nervous symptoms appear in 80 per cent. of cases, and as they involve all three parts of the nervous system—brain, cord and periphery—the clinical picture appears confused and bizarre. Mental symptoms are common. There may be early mental changes which may precede all other symptoms—apathy, indolence, conduct abnormalities and a lessened capacity for work. Later they assume a more definite form and any type of psychosis may develop. There is no psychosis characteristic of the disease. In older patients the senile type is common. The most usual form perhaps is the so-called paranoid type. The question arises whether these mental symptoms are due to pathological changes in the brain or to toxins generated by the disease. Many authorities insist on the existence of cerebral lesions as the aetiological factor, but they are unable to explain the tendency of many of the cerebral symptoms to disappear under treatment.

C. S. R.


A chordoma is a tumour which arises from remnants or 'rests' of the embryonic notochord. It is found almost exclusively in two positions in the body, the clivus Blumenbachii and the sacrococcygeal region. In the latter position the tumour may arise in the sacrum and remain there for the most part, it may grow into the pelvis with the formation of a presacral tumour, or it may grow posteriorly, giving rise to a postsacral tumour. The sites of origin are the notochordal remnants found normally in the nuclei pulposi of
the sacrum, and possibly heterotopic foci of chordal tissue anterior or posterior to the sacrum.

In this article the clinical manifestations, surgical treatment and histopathological observations in 10 new cases of sacrococcygeal chordoma are presented, together with a brief survey of the more important literature.

In their general aspects these 10 cases resembled the 75 cases reported up to date. Pain was present in all the cases, and the most valuable examination was digital exploration of the pelvis through the rectum. Preoperative diagnosis of chordoma can be made only through biopsy as roentgenograms may merely suggest the presence of a malignant growth. The specific characteristics of the tumours are: (1) formation of intracellular and extracellular mucus; (2) presence of physaliphorous or huge vacuolated mucus-containing cells; (3) lobular arrangement of the tumour cells, which usually grow in cords; (4) occasional occurrence of vacuolation of the nuclei; and (5) the close resemblance to notochordal tissue as seen in the nuclei pulposi of the intervertebral discs. Surgical treatment is merely palliative.

R. M. S.


For many years opinions have diverged concerning the relationship or identity of the two diseases mentioned. In England, Greenfield and Stern have supported the view of Sлаuck and Neumann that the two conditions are identical, while Bielschowsky, Krabbe, v. Zchoczky and Grinker consider them to be separate entities. The author is an adherent of the dualistic theory. Continued progression of the symptoms is considered to be a characteristic sign in the diagnosis of progressive spinal muscular atrophy which begins in early infancy. This appears to be the one symptom which allows of a definite differentiation between the two affections; the time of onset of the disease and the familial incidence are of no importance in diagnosis.

The results of microscopical examination in a case seen by the author showed the following result: Degeneration of the pyramidal cells in the Rolandic area, considerable degeneration of the motor cells in the anterior horn throughout the spinal cord combined with a diminution of their number, also degeneration of peripheral nerves, degenerative alterations in the end-plates of the motor nerves, and simple atrophy of the paralysed muscles.

The real nature of the Werdnig-Hoffmann type of spinal amyotrophy consists in a progressive degeneration of nerve-cells which have primarily been well formed. The effect is a process of involution which starts in the
muscles and in the motor terminal plates. Further anatomical research concerning the termination of the motor nerves will be of value.

M.


The author has systematically examined over 100 subjects to discover the connexions between the vegetative nervous system and disturbances due to intolerance of lumbar puncture.

These disturbances do not occur in subjects with hypotonia, although they are frequent in those with normal tone and hypertonia of the vegetative nervous system and specially in those who show notable variations in the functions of the system. It is not possible to foresee the behaviour of these disturbances from any sign of hyperexcitability such as positive solar reflexes, either spontaneous or elicited.

However, it would seem established that lumbar puncture provokes, independently of modifications of the pressure of the cerebrospinal fluid, an immediate depression of the whole vegetative nervous system which is followed by a second phase of temporary vagal excitation, then of sympatheticotonia of longer duration; this is almost constant in subjects with the clinical symptomatology of intolerance to lumbar puncture. It should be stated, however, that more data are necessary before it can be affirmed for certain that the disturbances depend on intracranial vasomotor modifications.

R. G. G.


In order to block the venous return from the head the authors employ a sphygmomanometer with its cuff about the neck. The most significant advantage is the fact that it allows a wide variety of measurable pressures with a corresponding range in the degree of obstruction to the venous return from the head. There is not the uncertainty associated with manual compression, and as a rule the patients do not mind the procedure and breathe regularly, even with the cuff pumped up to a pressure of 100 mm. of mercury. Important too is the fact that the degree of pressure used can be accurately duplicated at will by the same or other observers. When the patient’s systolic blood pressure is at a low level the higher pressures are unnecessary and can be dispensed with. There is much less possibility of a sinus caroticus reflex. Many readings at various pressures on the neck can be quickly taken without shifting the patient’s position in any way. Before the lumbar punc-
ture is done, an untrained assistant can be shown quickly how to carry out the jugular compression accurately with the manometer in place on the patient. This serves to accustom the patient to the procedure and assures his relaxation and cooperation.

R. M. S.


A TYPICAL case of myotonia atrophica (dystrophia myotonica) is reported. The patient’s father was probably affected by the disease; a cousin is also suffering from abortive symptoms; several relatives have cataract, while others have died in consequence of tuberculosis. The authors of this paper suggest that the disease is transmitted to subsequent generations in an irregular-dominant manner. Cataract is evidently produced by the pleiotrope action of the gene of myotonia atrophica in the affected families. Rudimentary cases may arise as a result of inhibitory and modifying genes or as a consequence of environmental influences.

M.


A boy, age eleven years, had been suffering from headaches, drowsiness, vomiting and diminution of vision for several weeks. On examination, the following signs were observed: A large number of naevi and a smaller number of fibromata on the body, bilateral papilloedema, oculomotor disturbance, pupillary reactions sluggish, mask-like face, spastic paresis of the left arm and leg, slowness in performing active movements and persistent drowsiness.

The patient died six weeks after admission to hospital. The brain only was permitted to be examined. The organ was enlarged, and on section localized enlargement was seen in the corpus striatum and thalamus. On microscopical examination a widespread new growth of longitudinal cells was found, especially in basal ganglia and thalamus. It is stated that these longitudinal cells were cells of Schwann’s type or at least a precursory stage of these cells. Neither an accumulation of large glial cells (which is a characteristic finding in Recklinghausen’s disease) nor any other tumours were seen. It has to be assumed that in this case primitive cells broke away from the ventricular ependyma and came to a standstill on their way to the periphery. From some unknown cause they later showed blastomic proliferation.

M.
[152] Recent observations on Simmond's disease (Neuere Erfahrungen mit der Simmond'schen Krankheit).—K. HERMANN. Münch. med. Woch., 1934, 81, 1460.

Following a description of the main features of Simmond's disease, Hermann recapitulates the symptoms as follows: General wasting and intense cachexia are the characteristic signs and other symptoms may be completely absent. Atypical cases cannot be diagnosed if too much value is attached to the accessory symptoms. Among these are: White pale skin, prematurely aged features, falling out of hair and teeth, amenorrhoea, impotence, low blood-pressure, low blood sugar, apathy, sleeplessness, loss of appetite, feeling of pressure and pain in the epigastrium after a meal, vomiting, also often anacidity and constipation, low body-temperature, sensation of cold especially in the feet, pruritus, sometimes pathological alterations in the sella turcica and xanthomatous infiltrations. A decrease in the metabolic rate, anaemia and eosinophilia are sometimes observed.

These cases are intolerant of insulin, but, on the other hand, they are said rapidly to improve if treated with the hormone of the anterior lobe of the pituitary body (glandunatin, prolan, prashormon, horpan, anteron). The diagnosis is confirmed by such improvement.

C. W. D.


Chronic and progressive proptosis is shown to be capable of production in immature animals of susceptible species by injection of pituitary extracts and cyanides (preferably methyl cyanide) into rabbits maintained on a diet of alfalfa hay and oats. Its production depends upon two factors, (a) the thyrotropic hormone of the anterior pituitary body on the one hand by passively supplying it and on the other by stimulating the pituitary to produce it, and (b) the existence of a relative thyroid insufficiency. The maintenance of a normal thyroid function by iodine or thyroxine administration prevents the exophthalmos that would result from the cyanide and pituitary extract. Normally there is a direct physiological balance between the thyroid and the thyrotropic hormone.

As regards treatment, iodine and desiccated thyroid appear the only logical remedies at present available.

The opinion is expressed that Graves' disease probably depends upon a deficiency of some hormone of suprarenal cortex and gonad origin. As the disease-process becomes further unravelled it is probable that the cause of the stimulation of midbrain centres occurring in the disease will be found and that a hormone treatment may become available, viz. a hormone probably of suprarenal cortex or gonad origin.

C. W. D.

Three cases are discussed of left recurrent laryngeal paralysis complicating arteriosclerosis with left ventricular failure. In two of the cases coronary thrombosis had occurred. The left recurrent laryngeal palsy was due to compression of the nerve between left pulmonary artery, arch of aorta and ductus arteriosus. The cause of the compression is considered to be dilatation of the pulmonary artery due to enlargement resulting from palsy of the left ventricle.

C. W. D.


A case of toxic peripheral neuritis with muscular atrophy and creatinuria is fully described. Daily analyses were made of the urinary excretion of creatinin, creatin, nitrogen and sulphur. In contrast with other cases of secondary muscular atrophy, but resembling those of progressive muscular dystrophy and myasthenia gravis, the injection of glycine definitely increases the creatinuria; the absence of response of edestin or glutamic acid was also noted. As the patient’s condition improved the creatinuria decreased and the reaction to glycine correspondingly diminished.

C. W. D.


The diagnostic aid offered by the author is based on the theory that, since in one condition there is inflammatory swelling while in the other there is non-inflammatory oedema, the protein content of the aqueous should be definitely increased in papillitis while in choked disc it should be within normal limits. This can be expected if one remembers that aqueous is found not only in the anterior and posterior chambers, but in the meshwork of the vitreous, and that the circulation of the aqueous is very slow. Products of inflammation can therefore reach the anterior chamber by a process of diffusion from the posterior half of the eye. The normal amount of protein in the human aqueous is about 0.02 per cent., and for its estimation the trichloracetic acid test of Mestrezat and Magitot is employed. The method is rapid and simple and aspiration of the aqueous from the anterior chamber is less dangerous than a spinal puncture.

In a series of 11 cases the albumen content of the aqueous was found to
be 0.02 per cent. or less—that is, normal—in seven cases of papillœdema, while in papillitis of inflammatory origin it was 0.04 and 0.10 per cent.—that is, from two to five times the normal amount. In papillitis of non-inflammatory origin due to transudation of fluid rich in albumen, as in renal retinitis, the protein content was 0.03 and 0.04 per cent.—that is, about twice the normal amount, an increase that is also definitely pathological. The protein determination of the aqueous enables the observer, therefore, to differentiate choked disc from papillitis. In the writer’s opinion the clear-cut results obtained and the theoretical soundness of the principles involved warrant the use of this test as an additional aid in the differential diagnosis of papillœdema and papillitis.

R. M. S.


A case is presented in which a pedicle flap from the right nasolabial region was substituted for the right four-fifths of the lower lip, the latter having been destroyed in an accident. The dissection of the flap resulted in denervation of the outer fourth of its free end, but the original nerve-supply entering from the pedicle was left intact and sensations from this sensitive portion were referred mainly to the upper lip and cheek.

Results of localization tests carried out on the sensitive part of the flap revealed a progressive shift of ‘local sign’ from the upper lip and cheek to the lower lip. The development of reorientation required several months. A transitional stage was observed, involving considerable confusion and a tendency to localize sensations in an area intermediate between the old and the new locations of the flap. This tendency was interpreted as a resolution of the conflict arising between the old and the new orientation habits.

No ‘reference’ was observed on return of sensibility to the denervated portion of the pedicled flap. The ability to localize sensations within this area began to return within six weeks and was apparently coincident with the ingress of nerve-fibres from the edges of the chin and lip to which the flap was attached. These results clearly indicate that ‘local sign’ depends mainly on habit-formation, involving the association of cutaneous impulses with the kinaesthetic impulses.

R. M. S.

PROGNOSIS AND TREATMENT


The author describes cases of subacute combined sclerosis in which there was no disorder of the blood, no achlorhydria and no psychosis. In several recent