

although gliomata are often considered to occur singly microscopical study sometimes reveals incipient glial nodules invisible to the naked eye. The multiplicity of the condition in cerebellum (or cord) and retina is not mysterious. Attention is directed to the absence of 'Xanthomzellen' in the retinal tumour in this case, cells imagined by Lindau to be typical of angiomata.

S. A. K. W.

SENSORIMOTOR NEUROLOGY.

[161] **On the excitation processes of fits and other convulsive and emotional states.**—W. BURRIDGE. *Jour. Ment. Sci.*, 1929, lxxv, 395.

THE motor discharges of an epileptic fit are shown to possess a cardiac parallel. Examination of the cardiac parallel shows that the abnormal behaviour is due to excitation processes of too great intensity to permit the responding organ to give a normal response. Accordingly it is deduced that the responding organ, mediating mind, must also possess a limited capacity to give a normal response. Fits are thereby indicated to be based on excitation processes of too great intensity to evoke normal activity of the responding organ. The results lead to a consideration concerning which element of an excitation process, colloidal aggregation or electrolytes, holds prior possession of the field of response. Prior possession being conceded to colloidal aggregation, theories are developed of the mechanism of the process hitherto termed 'repression,' but better termed 'expulsion,' shell-shock and emotional states. Three kinds of unconsciousness are recognized: (1) That due to excitation processes of too small intensity. (2) That due to excitation processes of unfavourable composition. (3) That due to excitation of too great intensity.

C. S. R.

[162] **Some observations on experimentally produced convulsions.**—F. H. PIKE, CHARLES A. ELSBERG, W. S. McCULLOCH, and A. RIZZOLO. *Amer. Jour. Psychiat.*, 1929, ix, 259.

CLONIC convulsions arise from the motor cortex when this is anatomically and functionally intact. Tonic convulsions arise from lower motor mechanisms in the period immediately succeeding an injury to the cortical motor mechanisms. After lapse of sufficient time, clonic responses may be elicited from them. But this is not evidence that clonic convulsions may and do arise from lower motor mechanisms when those of the cortex are intact. Clonic convulsions in children may develop from lower motor mechanisms before the fibres of the pyramidal system have become myelinated and functionally active. All parts of the motor mechanism act together as one mechanism when the brain

is intact. It does not seem probable that one part should give rise to movements of one type, and some other part of the mechanism independently give rise to movements of another type, when the whole motor system is intact.

C. S. R.

[163] **Epilepsy in children : the relationship of water balance to the occurrence of seizures.**—IRVINE McQUARRIE and CLARE H. HUSTED. *Amer. Jour. Dis. Child.*, 1929, xxxviii, 451.

THIS paper should attract attention from those interested in the biochemical problems associated with epilepsy. The production of ketosis by fasting on a suitable diet causes a marked loss in weight, the major portion being due to a loss of water. Several children with fits were accordingly observed while on different levels of water intake.

In the main four experiments were carried out. Firstly, in a boy suffering from frequent fits it was found that if fluids were forced fits became more frequent, while if fluids were restricted to the point of hyperthermia they ceased. Secondly, it was found that a borderline ketogenic diet along with rigid restriction of excess of fluids stopped fits and that if excess of body fluid was removed by the administration of urea a cessation of fits occurred. Thirdly, it was found that administration of the antidiuretic hormone of the pituitary resulted in the production of status epilepticus. Lastly a comparison was made between varying diets and different levels of water intake.

From the result of this work the authors appear amply justified in concluding that a disturbance in water balance is closely identified with the etiology of epilepsy. Many problems obviously arise as the result of this work and much research is necessary before any definite conclusions can be made ; but the work is certainly suggestive of a metabolic disorder being closely associated with epilepsy.

E. A. C.

[164] **Clinico-anatomical researches on the problem of syphilitic viruses** (Recherches anatomo-cliniques sur le problème des virus syphilitiques). —G. MARINESCO. *Ann. de dermatol. et de syph.*, 1929, x, 681.

THIS long paper embodies a complete historical survey of the controversies in respect of neurotropic and dermatropic syphilitic viruses. Prof. Marinesco comes to the conclusion that so-called metasyphilitic cases, as is already well recognised, are not infrequently associated with lesions which belong pathologically to the dermatropic class, viz., vascularitis, miliary nodules, granulomas, etc. He does not accept the view that separate brands of spirochæte exist as far as neurosyphilis is concerned.

More interesting, because less appreciated at present, are considerations bearing on ' morbid predisposition ' to the affection. According to Friedmann,

79 per cent. of 100 cases of general paralysis between the ages of 24 and 50 belonged to the pycnic type of Kretschmer. The question of ' blood groups ' has to be examined in respect of neurosyphilis. Experimental syphilis takes a malignant form in rabbits that have been thyroidectomised ; and castrated animals of the same species develop the disease in a more general form than do the intact. The fact that in them nose, foot, and tail are the first parts to exhibit syphilitic lesions indicates a possible pituitary element. According to the author's investigations the pH of general paralytics tends towards alkalosis, being practically always above 7.40. A relationship exists between the severity of the lesions and alkalosis of the spinal fluid. In grave cases, with dementia, it reaches 7.58—7.59. In cases refractory to malaria it remains at a high figure. Lowering of pH forms a milieu unfavourable to spirochætal development. Using Ringer's solution and a particular variety of spirochæte he obtained the following results :—

| In Ringer's solution | spirochætes are mobile during |
|----------------------|-------------------------------|
| pH=7.20 | 15 mins.— 2 hours. |
| pH=7.35 | 45 mins.—10 hours. |
| pH=7.50 } | 72 hours. |
| pH=7.60 } | |

If these experiments are corroborated they undoubtedly suggest that the terrain is at least as important as the organism, pathogenically considered ; the degree of concentration of hydrogen ions in the cortex of the candidate for general paralysis is of significance for the appearance of that formidable affection. For cultural development there must be an optimum condition, which seems to exist in the cortex, especially in its middle layers.

S. A. K. W.

[165] **The cerebellar atrophies** (Études anatomo-cliniques sur les atrophies cérébelleuses).—P. MATHIEU and I. BERTRAND. *Revue neurol.*, 1929, i, 721.

THIS fine communication, for which the Prix Charcot was awarded in 1928, requires attentive consideration.

1. Phenomena of rigidity not unlike those of Parkinsonism are sometimes encountered in the course of olivo-ponto-cerebellar atrophies, in association with catatonia and dyskinesia. Analogous states of plastic rigidity are to be found in some instances of heredocerebellar ataxia. In no case were anatomical changes found in the basal ganglia, but in all the olivary system of the medulla was implicated. The interpretation of these clinical appearances is difficult ; the suggestion is made that the cerebellum is one of the regulators of mesencephalic function, and that if its (cortical) inhibitory role is suspended tonigenic centres in the brainstem are set free, or its own ganglionic centres (dentate, roof nuclei), or perhaps both,

2. Certain cerebro-cerebellar atrophies pursue an acute or subacute course and are accompanied by disorders of the psychological series. They seem to belong to a special group of which examples have been published by other observers. A pathological basis in disseminated foci of necrosis associated with cortical atrophy is described. Most of the patients have been between the ages of 40 and 60.

3. The third chapter is concerned with familial cerebellar atrophies (Friedreich and heredo-ataxia cases). The former of these has mainly a dorsal systematisation in the cord, the latter an antero-ventral.

S. A. K. W.

- [166] **Are epidemic encephalitis and Cruchet's encephalomyelitis identical? No.** (Sind die Encephalitis lethargica (epidemica) und die Encephalomyélite (von Cruchet) ein und dieselbe Erkrankung? Nein).—C. v. ECONOMO. *Zeits. f. d. g. Neurol. u. Psychiat.*, 1929, cxx, 265.

MOST neurologists must be aware that Professor Cruchet of Bordeaux has recently republished in brochure form the remarkable series of observations made by him during the War on an epidemic of cases of encephalomyelitis (mainly in 1915-6-7) and has claimed that as a fact they were the first observations made on the condition now called epidemic or lethargic encephalitis; some indeed have gone so far as to rename this "Cruchet's disease." Professor Economo, than whom no one has a better claim to speak with authority, examines Professor Cruchet's arguments in a dispassionate way and concludes decisively against them. It would serve no useful purpose to summarise the details of the examination here, but the communication should be read in extenso because of the historical interest of the question.

S. A. K. W.

- [167] **Remarks on the etiology of encephalitis after vaccination.**—D. WIERSMA. *Acta Psychiat. et Neurol.*, 1929, iv, 75.

THE author's observations may be given in his own words:

1. The clinical aspect, the histopathology and the epidemiology of encephalitis after vaccination and of other kinds of encephalitis which prove to be closely related to the former, make it impossible, or at least highly improbable, that the virulence of the vaccine, the bacteria or the albumen contained in it should be of importance in the etiology of any of these encephalides, especially of that after vaccination.

2. Many arguments can be produced to support the hypothesis according to which the vaccine introduced into the human organism activates another virus already present in the body and causing, when activated in some way or other, the encephalitis.

3. The clinical peculiarities and the histological changes found in encephalitis after vaccination prove that this virus cannot be that of encephalitis lethargica.

4. It is possible, however, that pasteurellæ in this way take a part in the etiology of encephalitis after vaccination.

5. Perhaps a constitutional moment is of importance for its development.

M. C.

[168] **Writer's cramp in epidemic encephalitis** (Ueber Schreibkrampf bei Encephalitis epidemica).—OTTO SITTIG. *Klin. Woch.*, 1929, viii, 794.

A YOUNG man of 25, with characteristic writer's cramp, was found to have had epidemic encephalitis and to be suffering from moderate Parkinsonism. A few cases of this kind are on record; Sittig believes they should be regarded as instances of 'neurosis' for which an organic basis exists.

J. S. P.

[169] **The epidemic of disseminated neural inflammation in Poland during 1928** (Sur l'épidémie d'inflammation disséminée du système nerveux en Pologne durant l'année 1928; et sur ses rapports avec l'encéphalite léthargique, les atteintes du système nerveux au cours de certaines maladies infectieuses, et les cas aigus de sclérose en plaques).—EDWARD FLATAU. *L'Encéphale*, 1929, xxiv, 619.

PROF. FLATAU first describes some 17 cases of acute nervous disease observed by him in Poland during the earlier half of the year 1928. The general clinical picture is stated to have consisted of sudden onset of pains, paræsthesiæ, pareses or paralyzes, sometimes including cranial nerves (usually the seventh), minimal sphincteric disorder, visual trouble, occasional convulsions and difficulty in speaking; brief hyperthermia or none; normal sleep. All the symptoms were moderate or slight, and commonly transient. Of the 17, only two proved fatal. In one case a spinal fluid pleocytosis of 112 lymphocytes with 80 neutrophils was obtained, and a ++ Nonne-Apelt reaction; in another, the latter finding, without increase of cells.

Pathological examination of one personal case gave the following: cellular infiltrates in basal ganglia, cord, and peripheral nerves; neuroglial reaction in the vicinity of vessels, with rare neuronophagia; infiltrates in leptomeninges.

A long but highly interesting discussion reveals the apparent trend in the author's mind; he would have it that recent epidemics (1924-8) of so-called disseminated encephalomyelitis are somehow the aftermath of epidemic encephalitis, which also is not unconnected with a seeming increase of mild or abortive cases of disseminated sclerosis in the same period. A useful bibliography is appended to the article.

S. A. K. W.

- [170] **Study of the epidemic of infantile paralysis in Roumania during the year 1927** (Étude clinico-thérapeutique et anatomo-pathologique sur l'épidémie de paralysie infantile qui a sévi en Roumanie pendant l'année 1927).—G. MARINESCO and M. DRAGANESCO. *Ann. de l'institut Pasteur*, 1929, xliii, 223.

THE 1927 Roumanian epidemic comprised some 1,576 cases, with a mortality of 10.02 per cent. In children of four years and under, the rate per cent. was 41.2 females and 58.8 males. For different age-periods it was 50 per cent. from 15 to 20 years, 33 per cent. from 6 to 9, 25 from 5 to 6, and 10 or under for most of the others. In Bucarest itself the rate over all was 9.5 (442 cases). Family or hospital contagion was remarkably low and in reality trifling; 202 children came from 56 families, and there were only 5 in which 2 children took ill at the same time. None of 80 children attached to the personnel of the hospital caught infection. But a house physician who had been treating cases for three months had occasion to visit an outlying village that had been completely immune, and one week later three cases developed there. He had given paper money to the villagers to buy cigarettes in an inn.

Treatment with convalescent serum did not, probably, have the best chance; it was utilised in 19 cases, and was taken from children ill two months previously, under obviously difficult circumstances. Most of the 19 were already in the paralytic stage. Six were cured, 5 ameliorated, but with paralytic consequences, and 8 were fatal. With the serum of Pettit 30 cases were treated, and 6 ended in death; 7 were cured, 6 had slight, 3 moderate, and 8 severe sequelæ.

S. A. K. W.

- [171] **Diabetic tabes** (Zur Frage der diabetischen Tabes).—R. A. REYNOLDS. *Jahrb. f. Psychiat. u. Neurol.*, 1929, xlvi, 267.

THE author's case was that of a woman of 58, with well-marked diabetes mellitus, who also showed the 'tabetic' symptoms and signs of sensory impairment in legs, loss of deep reflexes, Rombergism, etc. The pupils were fixed (both for light and accommodation). The Wassermann reaction in the serum was negative, but there seems unfortunately to be no record of the cerebro-spinal fluid.

Autopsy showed tabetiform alterations in the dorsal columns of the cord and in dorsal spinal roots. No histological sign of infection was present, and the diagnosis of pure degenerative change seems justifiable. According to the author lues is completely excluded.

J. S. P.

- [172] **Systematised motor neuritis** (La neurite sistemattizzata motrice).—O. ROSSI. *Rassegna clin.-scientific.*, 1928, vi, 1.

A GENERAL discussion of the clinical features of so-called motor neuritis. Mention is made of the motor radial mononeuritis of lead palsy and its varieties and subdivisions; and of the motor polyneuritis of some cases of lead, malaria, and diphtheria. Other cases are etiologically obscure.

S. A. K. W.

- [173] **The nervous disorders of erythræmia** (Zur Kenntnis der nervösen Störungen bei Erythræmie).—KEN TAGA. *Jahrb. f. Psychiat. u. Neurol.*, 1929, xlvii, 274.

A BRIEF series of references to previous work on the subject is followed by an account of the examination of a personal case, that of a woman of 72 (reds 9,100,000 at their maximum). The patient was also arteriosclerotic and suffered from cancer of the uterus.

In the meninges were found small hæmorrhages (chiefly pial), and in the brain diffuse œdema, with areas of cerebral softening of hæmorrhagic origin. The vessels in these parts were distinctly less affected than others in seemingly normal regions, which exhibited arteriosclerotic and endarteritic change. A status marmoratus was found in the basal ganglia. Papilloœdema was present during life, but its causation was not determined.

S. A. K. W.

PROGNOSIS AND TREATMENT.

- [174] **Cerebral arteriography and cranial hypertension** (L'artériographie cérébrale et l'hypertension crânienne).—E. MONIZ. *Revue neurol.*, 1929, i, 1122.
- [174] **Three new cases of cure of cranial hypertension by intracarotid injections of sodium iodide** (Trois nouveaux cas de cure, au moins provisoire, du syndrome d'hypertension crânienne par les injections intracarotidiennes d'iodure de sodium).—E. MONIZ. *Revue neurol.*, 1929, i, 1135.

In these two papers the author reports cases in which pronounced amelioration of the general symptoms of rise of intracranial pressure took place in consequence of intracarotid injections of sodium iodide for purposes of arteriography. Headache disappeared, and in one or two instances improvement in vision unmistakably occurred, though transient. It is especially in cases of serous meningitis that such change for the better is remarked and it may persist indefinitely. He believes it possible to diagnose the latter condition arteriographically when the arteries of the Sylvian group are not visible in the first part of their course; on the other hand the condition may occur in regions not, as a rule, capable of examination by this particular technique.

J. V.