Biochemistry of Epilepsy.—Is epilepsy a symptom of disturbed general physiology? Biochemical studies of blood of epileptics are described, as to sugar, acidity, alkali reserve, gases, Ca and P, nitrogenous substances, cholesterol, chlorides. Studies show a more than normal variability in epileptics; most have normal glucose tolerance curves. Frequency of seizures can be increased or decreased by alteration in chemical constituents of blood, though some of the changes noticed are the result, not the cause of fits. There is no evidence of intoxication with alkaline substances as cause of fits. Slight temporary acidosis during and after fit is due to increased muscular metabolism, pH normal in majority, no evidence of general cerebral anoxæmia. Epilepsy is not related to tetany. Fluctuations in blood Ca increases fluctuation of excitability in nervous tissue: blood fibrinogen is increased; most constant physiological abnormality is inconstancy. This applies to blood sugar level, pH, blood Ca, etc. (H. de P.)

E.E.G. and Schizophrenics.—A comparison of E.E.G. of 132 schizophrenic and normal subjects, in 4 groups. (1) Most normal E.E.G. of schizophrenic group are those of paranoid; (2) dysrhythmic pattern not differing from those of non-schizophrenic with convulsive disorder (e.g. epilepsy) found in catatonics; (3) choppy pattern, suggesting irritation or other lesion may be due to organic disease; (4) mixed. Brain patterns change only when brain physiology changes. Work is still in progress and may be useful both for diagnosis and in deciding treatment in individual cases. (H. de P.)

E.E.G. in Psychoses.—Use of E.E.G. in localizing cerebral tumours, method adapted for localizing cerebral atrophy by testing for distribution of alpha wave activity in psychotics, simultaneous recording from two regions—normal and pathological—necessary for true comparison; method and results are described and discussed. (H. de P.)

Psychotic Manifestations in Cerebral Vascular Lesions.—Correlations between acute cerebral lesions and psychotic manifestations were recorded in 170 out of 1000 cases, all severe, ending fatally in a short time. Cortical destruction caused larger proportion of psychotic symptoms than involvement of basal ganglia by perforating vessels. (H. de P.)

Menopausal Depression and Estrogenic Hormone.—Investigations on depressed patients of menopausal and post-menopausal age groups are described. Character and severity of symptoms varied somewhat, but all required in-patient treatment. They received estrogenic hormone while being treated by psychotherapy, recreation, etc. Beneficial effects were confined to improvement of vasomotor symptoms and general well-being. Estrogenic hormone does not appear to be a specific therapeutic agent in severe depressions. (H. de P.)

Detoxication of Sodium Benzoate.—Quick's liver-function test based on excretion of hippuric acid after ingestion of benzoic acid has been applied to 18 patients with catatonic dementia praecox. Results suggested that metabolic disturbance of the liver may be a characteristic feature of this condition. A modification of this technique was used on cases of this and other neuropsychiatric disorders; results suggest failure of absorption not due to hepatic dysfunction as the true explanation of these findings. (H. de P.)
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The Influence of Degree of Interpolated Learning on Retroactive Inhibition and the Overt Transfer of Specific Responses. A. W. Melton and J. M. Irwin. 173.

Geographical Orientation. T. A. Ryan and M. S. Ryan. 204.

The Chrony of Cold and Warmth. F. N. Jones. 216.

The Role of Motivation in Learning without Awareness. J. G. Miller. 229.

The Pitch of Complex Tones. L. A. Jeffress. 240.


Ocular Patterns and Their Psychological Implications. H. F. Brandt. 260.


ANNALES MÉDICO-PSYCHOLOGIQUES


Capacité Civile et Valeur des Actes des Aliénés Internes. (Civil capacity and validity of contracts of insane persons under detention.) X. Abély. 1.

Capacité Civile et Valeur des Actes des Aliénés Internés. (Civil capacity and validity of contracts of insane persons under detention (continued).) X. Abély. 1.

Crise Comitiale et Ménigite Lymphocytaire Curable. (Convulsive seizures with curable lymphocytic meningitis.) J. Euzière, E. Fassio, and R. Lafon. 137.

Les Images Consécutives et les Hallucinations Optiques dans la Schizophrénie. (Consecutive images and optic hallucinations in schizophrenia.) V. Vujic and K. Lévy. 140.

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Principes Directeurs du Diagnostic en Médecine Mentale. (Leading principles of diagnosis in mental medicine.) M. Laignel-Lavastine. 201.


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La Fonction Gastrique chez les Schizophrènes. (Gastric function in schizophrenics.) C. Chatagnon. 325.

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Le Service Neurologique de l’Hôpital des Maladies Mentales et Nerveuses de Bucarest. (The neurological service of the Bucarest Hospital for Nervous and Mental Diseases.) D. Paulian. 257.

Syndrome Lymphoblastique Médialstinal avec Métastases Ganglionnaires et Encéphalo-Craniennes. (Mediastinal lymphoblastic sarcoma with metastases of the central nervous system.) D. Paulian. 268.


Une Étude et Queues Légendes sur les Stations Balnéaires d’Anatolie au Temps des Seljukides et Après. (A study and some stories of spas in Anatolia in the time of Seljukides and after.) S. Unver. 296.

Un Cas de la Maladie de Fox-Fordyce. (A case of Fox-Fordyce disease.) Z. Ohya. 305.

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Adjustment of Acid Base Balance of Patients with Petit Mal Epilepsy to Overventilation. L. F.
CURRENT JOURNALS

*Physiology of Concussion, W. W. Scott. 270.
Remissions in Epileptic Patients Treated with Sodium Bromide in an Outpatient Clinic. T. T. Stone and A. J. Aff. 299.
Effects of Ethyl Alcohol on the Cerebral Cortex and the Hypothalamus of the Cat. J. H. Massermann and L. Jacobson. 334.

Case Reports.
Folie a Deux: Report of a Case of Remission from a Psychosis of more than Twenty-Five Years' Duration. B. Postle. 372.

Experimental Disseminated Encephalopathy.—Seven monkeys were given inoculations for a period varying from four to thirteen months with sterile extract and emulsion of rabbit brain. A progressive condition, characterized by symptoms of widespread involvement of the central nervous system, developed. Pathological examination showed disseminated perivascular lesions characterized by destruction of myelin and accumulations of fatty granular cells. The macroglia at times had degenerated and at other times showed proliferative changes. In addition, large areas of partial demyelination which showed no apparent relation to blood vessels were observed. The pathogenesis of this experimental encephalopathy is investigated, and its significance is briefly discussed in relation to similar conditions in man. (R. M. S.)

Pick's Disease with Temporal Lobe Atrophy.—The authors report a case of Pick's disease in which the focal atrophy was almost exclusively limited to the temporal lobes. The case is analyzed and an attempt made to correlate the clinical and pathological findings. (R. M. S.)

CO₂ Content of Blood in Epilepsy.—The authors' observations are consistent with electroencephalographic evidence that the type of cerebral dysrhythmia present in grand mal seizures is in contrast to that in petit mal attacks, and that carbon dioxide has a pronounced influence on cortical rhythms. All the available evidence indicates that carbon dioxide plays a significant etiological role in epilepsy. (R. M. S.)

Acid-Base Balance and Overventilation in Epilepsy.—The person with petit mal epilepsy responds to overventilation with a greater drop in the carbon dioxide content of the internal jugular blood and maintains the low level reached for a longer period after the overbreathing has ceased than does the non-epileptic control subject. The corresponding changes in the acid-base balance are such that the epileptic patient has an acid-base loop of greater area than the control subject. These findings can be explained on the assumption that the mechanisms which regulate the physicochemical state of the brain are somewhat impaired in petit mal epilepsy, so that the person with such a condition is not able adequately to control or quickly adjust the acid-base balance when it is disturbed by overventilation. (R. M. S.)

Physiology in Concussion.—Animal studies were undertaken to determine the mechanisms operating in sudden loss of consciousness following blows to the head. It is suggested that the loss of consciousness as a result of a blow on the head may possibly be explained on the basis of short lasting, complete cerebral anemia (Cannon). It is agreed with Weiss and Baker that the rate of circulatory change is important in the production of unconsciousness. (R. M. S.)

Spinothalamic Tract.—The course of the spinothalamic tract is traced from the apical and pericorneal cells of the dorsal horn across the anterior commissure to the anterolateral columns. It then ascends in this column, its fibers gradually being pushed dorsad, so that just above the pyramidal decussation it lies immediately below the spinal tract of the fifth nerve. In the bulb it lies on the periphery and dorsolateral to the inferior olivary nucleus. Through the pons the spinothalamic tract is just medial to the middle cerebellar peduncle and on the same plane, but lateral to the medial lemniscus. In the mesencephalon it becomes peripheral again, lying just lateral to the brachium conjunctivum. It passes through the colliculi, to which the spinotectal fibres are given off, and then, lying just medial to the brachium of the inferior colliculus it enters the diencephalon. Turning abruptly laterad, the fibres of the spinothalamic tract terminate in the basal and ventral part of the nucleus ventralis posterior of the thalamus. There appears to be throughout the course of the tract a distinct, although probably somewhat overlapping, topical arrangement. (R. M. S.)

Flaccid Hemiplegia.—Clinical and pathological studies in man indicate that destruction of portions of the basal ganglia together with portions of the external and internal capsules may result in prolonged flaccid paralysis. The occurrence of flaccidity in man usually appears to depend on
the destruction of the striatum and its radiations. It is thought that the method of removing the hemisphere for glioma by first attending to the venous drainage before extirpation and clipping the large arteries as they are brought into view, offers the best clinical result because it spares the blood supply to the basal ganglia, although this method is probably more difficult and dangerous than that of first removing the arterial circulation. (R. M. S.)

**Metrazol Shock and Schizophrenia.**—The authors conclude that metrazol shock

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Metrazol Shock and Schizophrenia.—The authors conclude that metrazol shock

therapy does not seem to produce permanent and lasting recovery in schizophrenia. (R. M. S.)

**Production of Headache with Subarachnoid and Ventricular Air.**—It is suggested that the earlier phases of headache accompanying pneumoencephalography are not due to distortion of dural areas or the meningeal vascular tree. This type of headache is probably due to direct (chemical or mechanical) stimulation of the sensory nerve endings along many of the larger branches of the internal carotid artery. (R. M. S.)

**Anticonvulsant Properties of Sodium Diphenyl Hydantoinate.**—Sodium diphenyl hydantoinate has anticonvulsant properties which are demonstrable by administration of metrazol subcutaneously in a group of epileptic patients before and after sodium diphenyl hydantoinate is given. (R. M. S.)

**Heat-Regulatory Mechanisms.**—In the chronic stage of the psychosis, schizophrenic patients show less reactivity to metabolic stimulation than do normal subjects. (R. M. S.)

**Mineral Content of Brain.**—Microincinerated sections of the brains of rabbits treated with either insulinor metrazol or a combination of the two, by a technique similar to that employed in the treatment of patients with psychoses, showed marked changes in the mineral content of the cerebral neurons. These changes consisted of dust formation, hypomineralization, vacuolation or complete demineralization of the ganglion cells. The changes were prominent in the cornu ammonis, but were also observed in other parts of the brain and appeared to correspond with those in sections stained with cresyl violet. Dust formation and complete demineralization...
indicated severe damage to the protoplasm and could be observed as long as one hundred and seventeen days after completion of treatment. (R. M. S.)

**Dissociation of Deep Sensibility at Different Levels.**—Dissociated loss of postural and vibratory sensation was found to be not uncommon with lesions of the cerebrum, brain stem, and spinal cord. In seven patients with cerebral lesions causing disturbance of deep sensibility, position sense, stereognosis and two point discrimination were lost or markedly diminished, while the appreciation of vibration was spared or slightly affected. There were no instances in which the converse was true. With lesions at the thoracic and lumbar levels of the cord the opposite type of dissociation was found. Vibratory sense in the lower extremities was affected earlier and more severely than was the sense of position. In three patients with compression of the cervical region of the cord and medulla, with dissociated loss of deep sensation involving the upper extremities, sense of position was more affected than that of vibration, again with astereognosis. (R. M. S.)

**Section of Spinal Root of Fifth Cranial Nerve.**—Experience with the section of the bulbar spinal root of the fifth cranial nerve and the results obtained from patients subjected to this procedure permit the following conclusions: (1) the operation is practical from the technical standpoint; (2) touch sensation of the face is preserved; (3) the subjective sensation of numbness is avoided; (4) the procedure is ideal for patients with malignant tumours of the face, since the exposure permits one to section the ninth cranial nerve as well as the upper cervical roots. (R. M. S.)

**Colloid Cysts of Third Ventricle.**—The most reasonable explanation of the origin of colloid cysts of the third ventricle is that they arise from the paraphysis, which is an embryonic structure derived from the fetal ependyma of the anterior portion of the roof of the third ventricle. The histological structure of the cysts seems to substantiate this view, as tubules are frequently observed in their walls and suggest origin from a glandular structure. The symptoms are usually suggestive and when combined with evidence of blockage of one or both foramen of Monro, as shown in a ventriculogram and with other neurological findings indicating increased intracranial pressure and pressure on adjacent parts, make possible a pre-operative diagnosis with a fair degree of certainty. (R. M. S.)

**Myoclonus Epilepsy.**—In a case of myoclonus the central nervous system was studied histopathologically. Inclusion bodies, consisting of amylolysed and argentophilic substances, with amitotic division in some, were observed throughout the nerve and glia cells of the central nervous system, except the spinal cord. The substantia nigra and the dentate nuclei were the main sites of these bodies. In correlating the clinical picture with the pathological changes the authors are inclined to attribute the mental symptoms to involvement of the cerebral convolutions, especially the frontal, and the so-called extrapyramidal symptoms to lesions in the substantia nigra. The myoclonus may possibly be due to the changes in the dentate mechanism, as in palatal myoclonus. (R. M. S.)

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Monochorea and Somatotopic Localization. C. Davison and P. Goodhart. 726.

Special Article.

Physiologic Regulation of the Cerebral Circulation. H. S. Forbes. 804.

Temporary Arrest of Circulation to C.N.S.—Twenty-four animals were subjected to periods of circulatory arrest, clamping of the pulmonary artery being used for this purpose. Arrest of the circulation for three minutes and ten seconds, or less, was tolerated without any obvious neurological disturbance. Subjected to three minutes and twenty-five seconds or more of circulatory arrest, cats showed permanent alteration in behaviour and circulatory function. After six minutes of circulatory arrest vision and sensation suffered some degree of permanent injury. After seven minutes and thirty-six seconds of circulatory arrest there were permanent de-
mentia, blindness, serious sensory and auditory defects, motor and postural defects and reflex abnormalities. When the circulation was interrupted for eight minutes and forty-five seconds or longer, life could not be restored for more than a few hours. (R. M. S.)

Tuberculoma of Brain.—Tuberculomas of the brain occur at all ages and in a variety of types. With a few exceptions, they arise from haematogenous metastasis from a tuberculous focus elsewhere in the body, usually in the lungs or related lymph nodes. Clinical and pathologic studies indicate that tuberculomas producing the symptoms of tumor of the brain develop most frequently in adolescents and young adults with a single extracranial tuberculous focus. Tuberculomas associated with tuberculous meningitis tend to occur chiefly in children and in the presence of generalized tuberculosis. The pathologic characteristics of tuberculomas are not different from those of tuberculosis elsewhere. Tuberculomas may be positively identified by finding acid-fast bacilli in them. Tuberculomas constitute only a small and declining percentage of verified tumors of the brain. The clinical syndromes which they produce are not significantly different from those produced by other varieties of cerebral tumor. A correct etiologic diagnosis is made only when the patient has active tuberculosis in another organ or in the presence of a positive tuberculin reaction in a child. A history of tuberculous disease in the past is suggestive but not conclusive. Laboratory studies do not aid in the differential diagnosis. (R. M. S.)

Dystrophia Myotonica.—On the basis of the similarities of the properties of myotonia to those of Tiegel's, veratrine, neuromuscular and acetylcholine contractures, it is suggested that myotonia is a contracture and that the defect in myotonia is chiefly or entirely in the muscle. Evidence is presented that a defect in neuromuscular transmission does not adequately explain the observed phenomena and is probably not present. (R. M. S.)

Metrazol Convulsions.—Although local cerebral vasoconstriction may immediately precede a metrazol convulsion, there is no evidence from these studies that cerebral anæmia initiates the seizure. As the convulsion progresses, however, a change occurs in cerebral blood flow, dependent on the altered relationship of blood gases and changes in blood pressure. Any change in cerebral blood flow following the convulsion is temporary, as indicated by the return of blood gases to original levels within a short time after the convolution. There is no similarity between insulin hypoglycaemia and a metrazol convolution as regards changes in the relationship of dextrose and oxygen. The cerebral hypoxia occurring in the former condition has only a superficial resemblance to the cerebral hypoxia of the latter condition. So far as these data are concerned, changes in mental states following metrazol convulsions and insulin hypoglycaemia cannot be explained on the basis of any common alteration in either cerebral chemistry or cerebral blood flow. (R. M. S.)

Insulin and Blood.—When insulin leads to a fall of the blood sugar below 50 mg. per hundred cubic centimetres, this is accompanied by a fall in the carbon dioxide tension of the alveolar air. Restoration of the blood sugar level leads to a rise in the carbon dioxide tension (experiments on schizophrenic patients). In deep coma the carbon dioxide tension of the alveolar air at a given level of the blood sugar is higher than at similar levels before coma occurs. The carbon dioxide tension of the arterial blood is lowered during insulin hypoglycaemia and restored to control levels in unanesthetized dogs on injection of dextrose. General excitement induced by painful stimuli and struggle lead to rise of the blood sugar and lowering of the carbon dioxide tension of the arterial blood in unanesthetized dogs. Injection of metrazol or epinephrine has effects on the carbon dioxide tension and the sugar of arterial blood similar to those of general excitement. All effects are reversible and are not accompanied by a change in the pH of the arterial blood. It is assumed that excitation of the sympathetic nerve centres is responsible for the decrease in carbon dioxide tension of the arterial blood and of the alveolar air. (R. M. S.)

Paraplegia in Flexion.—The author contributes a valuable discussion of the factors underlying cases of spinal and cerebral paraplegia in flexion. (R. M. S.)

Amyotrophic Lateral Sclerosis.—Hassin concludes that in amyotrophic lateral sclerosis the pathological picture in the pons is the reverse of that in olivoponto-cerebellar atrophy, in which a different system of ganglion cells is affected. (R. M. S.)

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Estructura y Conexiones del Nucleo Supraóptico del Hombre. (Structure and connections of the supra-optic nucleus in man.) M. Balado and E. Franke. 275.

Alteraciones Neurolóxicas Consecutivas a Lesiones Traumáticas de la Corteza Cerebral en el Hombre. (Cortical lesions in man following trauma.) S. O. Alcalde. 295.
Hematoma Subdural Crónico. (Chronic subdural hematoma.) B. B. Spota, G. H. Dickmann, and A. J. Alurralde. 315.

Epiduritis Supurada. (Suppurative epidural lesions.) R. H. Sirven. 334.


Sobre la Dirección de las Corrientes Eléctricas de la Corteza Cerebral. (Action potentials of the cerebral cortex.) M. Balada and L. F. Romero. 7.

Estudio Anatomopatológico de Siete Tumores de Epifisis y uno Yuxtakephisisario. (Anatomopathological study of tumours of the epiphysis and neighbouring structures.) J. M. Prado. 21.

BRAIN


*Pyramidal Lesion in the Monkey. S. S. Tower. 36.


Forms of Growth in Gliomas.—Large sections were made of 120 gliomatous brains. All the gliomas except ependymomas showed very wide infiltration, irrespective of the rate of tumour growth. Only 30 per cent. were relatively circumscribed, while 60 per cent., including all astrocytomas, showed diffuse changes beyond the expected limits of the tumour. The remainder, especially glioblastomas, showed multicentral growth. Brain tissue was often preserved in the infiltrated areas. The methods of spread are described. (D. J. W.)

L'ENCÉPHALE


Recherches sur 100 Malades Entrés au "Service Spécial des Aliénés Alcooliques" du Département de la Seine. (Investigations of 100 cases in the special service for alcoholic psychoses.) J. Dublineau and H. Duchêne. 275.

Combinaison de l'Amytrophie de Charcot-Marie-Tooth et de la Maladie de Friedreich, chez Plusieurs Membres d'une Même Famille. (Combination of Charcot-Marie-Tooth atrophy and Friedreich's ataxia in several members of the same family.) L. van Bogaert and M. Moreau. 312.

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La Projection des Noyaux Antérieurs du Thalamus sur L'Écorce Interhémisphérique. (The projection of the anterior nucleus of the thalamus in the cortex.) J. Stoffels. 783.


Étude Anatomo-Clinique d'un Cas de Chorée de Sydenham. (Clinico-anatomical study of a case of Sydenham's chorea.) M.-T. Callewaert. 5.

Ophthalmplogie Bilatérale par Propagation Intracranienne d'une Tumeur du Sinus Maxillaire Droit. (Bilateral ophthalmoplegia by intracranial extension of a tumour of the right maxillary sinus.) M. André. 21.


Ataxie Cérébrale avec Arreflexie Généralisée Survenue Progressivement dans le Décours d'une Coqueluche. (Cerebellar ataxia with generalized areflexia following whooping-cough.) E. Kokken. 39.
Factors

Increased Urobilinogen Excretion
II. of Distribution on Calcium and Effect The Antibody Formation
Comparison of on Cas de Trois Cas de *Syndrome Neuropathologique Heinemann and P. M. 459. Anemia in Serum I. commonly found Effects C. Hsu, C. Chu, C. L. Endogenous 267. of Normal Plethysmograph. G. M. Flow (cerebral lesions.) (Parly (Parinaud's Lesions.) (E.


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Electrophoretic Analysis of Plasma and Urinary Proteins J. A. Luetacher. 313.


Observe E. D. Pass the Serum Cholesterol in Acute Infection as Recorded and after Pneumonia. A. Steiner and K. B. Turner. 373.


Studies of Rheumatic Disease. III. Familial Association and Aggregation in Rheumatic Disease. R. L. Gauld and F. E. M. Read. 393.

*Urinary Excretion of Thiamin in Clinical Cases and the Value of Such Analyses in the Diagnosis of Thiamin Deficiency. W. D. Robinson, D. Melnick, and H. Field. 399.


Urinary Excretion of Thiamin.—It is shown that urinary thiamin excretion is a fairly reliable index to the adequacy of the preceding diet in respect to this vitamin. Low thiamin excretions were obtained from patients with “alcoholic beri-beri,” while diabetic and hyperthyroid patients had normal urinary thiamin values. (J. N. C.)
Sulphate) and Paradrine (p-Hydroxy-d-Methyl-
Phenylethylamine Hydrobromide) on the Circula-
tion, Metabolism, and Respiration in Normal Man. 
M. D. Altschule and A. Iglauer. 497.

The Effect of Paradrine on the Venous System. 
A. Iglauer and M. D. Altschule. 503.

Observations on the Blood Iodine. I. The Blood 
Iodine in Health, in Thyroid and Cardiorenal 
Disease, and in Leukemia. K. B. Turner, 
A. Delamater, and W. D. Province. 515.

The Relation of Specific Gravity to Composition and 
Total Solids in Normal Human Urine. J. W. 
Price, M. Miller, and J. M. Hayman. 537.

Effect of Benzedrine and Paradrine on 
Circulation, Metabolism, and Respiration. 
—These two papers show the effect of 
benzedrine and paradrine on respiration
and circulation. Both raise systolic and 
diastolic blood pressure with no alteration in 
cardiac output or in respiratory 
dynamics. Paradrine produces as well a 
generalized increase of venous pressure, and 
it is suggested that this increase is due to 
active constriction of the veins. 

Correlation between Bisulphite Binding and 
Urinary Thiamin.—There is shown to 
be no correlation between the urinary 
thiamin and the blood bisulphite binding 
substances and also that the determination of the 
B. B. S. lacks sensitivity and specific-
ity for determining thiamin deficiency.

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The Telencephalic Zonal System of the Teleost 
Corydora Pahaturs. R. A. N. Miller. 149.

The Efferent Fibers of the Thalamus of Macacus 
Rhesus. II. The Anterior Nuclei, Medial Nuclei, 
Pulvinar, and Additional Studies on the Ventral 
Nuclei. R. L. Crouch. 177.

The Nuclear Masses in the Cervical Spinal Cord of 
Macaca Mulatta. A. F. Reed. 187.

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An Analysis of the Problem of Emergent Fibers in 
Posterior Spinal Roots, dealing with the Rate of 
Growth of Extraneous Fibers into the Roots 
after Ganglionectomy. W. H. L. Westbrook. 
383.

Morphology of the Cerebellar Nuclei in the Rabbit 
and Cat. R. S. Snider. 399.

A Comparative Fiber and Numerical Analysis of the 
Pyramidal Tract. A. M. Lassek and G. L. 
Rasmussen. 417.

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Supra- and Post-Optic Commissures in the Brain 
of the Rat. Y. Tsang. 535.

Partial Agenesis of the Cerebellum in Dogs. R. S. 
Dow. 569.

A Quantitative and Experimental Study of the 
Cervical Sympathetic Trunk. J. O. Foley and F. S. 
Dubois. 587.

The Respiratory Center and its Descending Path-
ways.

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Vol. 86. No. 362. May 1940.

The Influence of Cardiazol on Chronic Schizophrenia. 

*The Relationship between Disturbance of Liver 
Function and Mental Disease. P. Berkenau. 
514.

Prolonged Narcosis with Paraldehyde and Dial. 
M. B. Brody. 526.

A Note on the Use of the 1937 Revision of the 
Stanford Binet Vocabulary List in Mental Hospital 

Ascorbic Acid in Patients suffering from Psychoses of 
the Senium. D. G. Remp, J. B. Ziegler, and 
D. E. Cameron. 534.
Liver Function and Mental Disease.—
The liver function of 32 patients with mental disease was tested by means of the oral hippuric acid synthesis test, the Takata reaction and other tests. Hippuric acid synthesis was found to be deficient in all the 15 cases showing catatonic features and normal in the remainder. The reaction was positive in 10 of the 14 cases in the catatonic group, and negative in the non-catatonic group, except for 2 chronic alcoholics. The author speculates as to the relationship between the liver impairment and the mental state. (B. McA.)

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Vol. 91. No. 2. February 1940.
A Simple Version of Aphasia. L. B. Alford. 190.
Comparison of Medical and Surgical Treatment in Hypertension.—Psychotherapy is considered the most important factor in the treatment of hypertension. (W. M. H.)

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Goodenough Test in Chronic Encephalitis.—Failure in this test is related to perceptual difficulties in relation to the body. With disturbance of motility the body image is poorly integrated as shown by the drawing of the human form. (W. M. H.)

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Disorders of the Perception in the Light of the Hypnotical Experiment. V. I. Kouravitski. 50.
Invasive Forms of Cerebral Paralyses in the Subcortical Pathology. L. B. Litvak. 53.
Lumbar Puncture in the Closed Traumas of the Skull as Diagnostic and Therapeutic Method. A. B. Rogover. 67.

Comparative Physiology of the Plasticity of the Nervous System. A. I. Karamian. 73.
On the Peculiarities of the Psychic Modifications in Myoclonus-Epilepsy. V. K. Skobnikova. 80.
Results of the Treatment of Narcolepsy with Ephedrin in Combination with Luminal. M. I. Sandomirsy. 87.
Zone of the Trauma of the Brain and Encephalography. I. L. Benkovitch. 100.
Spinal Cord Regeneration.—The spinal cord of rats was sectioned between T5 and TI3 and a gap of 2–3 mm, ensued by tension maintained on the tail. After four weeks of spinal performance sensory and motor recovery was shown by voluntary climbing, walking, and placing based on proprioception. Stimulation of the brain stem at sacrifice produced hind leg movements. New axones from cord tracts and spinal roots were found to bridge the gap. Their growth was aided by implant of degenerating sciatic nerve. (W. M. H.)

Paleocerebellar Inhibition of Carotid Sinus Reflexes.—Weak faradic stimulation of the vermis cortex of the anterior cerebellum inhibits carotid sinus vasopressor and respiratory reflexes produced by carotid occlusion, and reflexes, chiefly respiratory, induced by intracarotid KCN. These effects are due to inhibition of bulbo pontine centres. (W. M. H.)

Conditioned Vestibular Reactions.—In dogs vestibular reflexes as elicited by galvanic current were readily produced as conditioned responses to an auditory stimulus. Prolonged deep and peculiar motor phenomena developed in one of four dogs. (W. M. H.)

Modification of Cortical Frequency Spectrum.—The Grass frequency analyser showed that with increase in CO₂ of internal jugular blood there is a shift of cortical frequencies toward the fast side. Oxygen and glucose may be varied in wide limits with little change in the frequency spectrum. When O₂ or glucose fall critically there is sudden shift to the slow side; with very high glucose a shift to the fast. (W. M. H.)

Cortical Lesions and Placing and Hopping Reactions.—The control of hopping and placing reactions is localized to the sensorimotor cortex and on removal of the area in the rat of 1–5 days, which corresponds to the sensorimotor cortex of the adult, no other part of the cortex or subcortical structure can assume this control. In the area there is some subdivision of function. (W. M. H.)

Isocortex and Hippocampus Activity.—Micro-electrode techniques for study of electrical changes in the nervous system are described. In the isocortex and hippocampus the activity of only a small volume of adjacent tissue is recorded. Contrasted with the slow waves from various positions in the hippocampus are rapid deflections of 1 m.sec. in duration, negative in their predominant phase, recorded only in or near the strata containing the pyramidal cell bodies of Ammon’s horns. Responses to stimulation of afferent fibre are taken to represent activity of perikarya of the pyramidal cells. (W. M. H.)
Cord Potentials in Spinal Shock—Single Volleys.—After spinal transection the threshold for cord potential and ipsilateral flexor reflex are in the cat and dog equal to that of afferent nerve: in the monkey reflex threshold reaches the level of nerve threshold only after 12 days. In the cat and dog spinal shock is at the internuncial level; in the monkey as well as internuncial depression there is deep and prolonged shock to the motor neurones.

Multiple Stimuli. In the spinal monkey inhibition of the internuncial response to the second of two volleys depends on the positive wave in the preceding cord potential. With repetitive stimulation there is little increase in positivity. Such behaviour is in contrast to that of peripheral nerve and suggests that the sources of negativity and positivity are different. (W. M. H.)

Diencephalic Stimulation and Sleep.—Somnolence is produced in cats by destructive electric currents to the lateral hypothalamic area. Catalepsy develops with lesions of the medial and caudal parts of the hypothalamic area. Stimulation of these structures fails to give somnolence. (W. M. H.)

Diaphragmatic Sensation.—In man pain may be referred to a completely anesthetized area of skin in the shoulder tip when the central diaphragmatic peritoneum is stimulated. In the cat and dog nociceptive sensibility produced by like stimulation is independent of afferent fibres of the vagus, intercostal nerves, and efferent sympathetic fibres. Viscero-cutaneous reflexes are therefore not essential for nociceptive sensation with this type of stimulation. (W. M. H.)

Phasic Response to Cortical Stimulation.—Phasic responses to cortical stimulation depend on proprioceptive impulses passing from dorsal roots through the ventral spino-cerebellar tract. (W. M. H.)
Temperature and Mechanical Response, Viscosity and Oxygen Consumption of Muscle.—In Mytilus muscle decrease in temperature and tonic contractions diminish the rate of rise of tension during A.C. stimulation. While most tonic contractions increase the O₂ uptake it falls with shortening produced by Na and NH₄ ions. Isotonic NaCl causes frog muscle to lose weight; Ca antagonizes this action. (W. M. H.)

Excitation and Conduction in Giant Axon.—The advantages of the giant axon (about 0.5 mm. in diameter) of the squid are exploited in a study of temporal and spatial distributions of potential with varied intensity of shock. Local partial excitation is observed in the compressed fibre with near-threshold stimuli. The response is found to increment or decrement only slowly over a considerable length of nerve. No changes in birefringence occur in the axis cylinder. (W. M. H.)

Excitability and Physiological Response in Giant Axon.—In single nerve fibres of the squid variations in excitability may be correlated with the local potentials developed by conditioning stimuli. Excitation arises from the electrical summation of components of local action currents and the applied stimuli. Excitability curves for single squid fibres resemble those found for bundles of frog sciatic fibres. A refractory period of local response is found circa 1 m.sec. after a just sub-threshold conditioning stimulus. (W. M. H.)

Inactivation of Adrenaline by Phenolases.—When inactivated by polyphenol oxidase and by the cytochrome system adrenaline takes up rapidly 2 atoms O₂ per mol. and forms a pigmented substance. A further slow uptake of O₂ occurs independent of the enzyme and the red colour changes to brown. Inactivation of adrenaline by peroxidase cannot be measured manometrically. (W. M. H.)

Discharge from Sensory Organs of Cat's Vibrissae.—The nerve endings stimulated by movement of the vibrissae are slowly adapting. The duration of the silent period following stimulation in a nerve fibre giving a spontaneous discharge is related to the total number of impulses discharged. K in small amounts leads to spontaneous discharges and an increased initial discharge. K is not likely an agent for rapid adaption of endings. (W. M. H.)

Permeability of Blood-Aqueous Humour in Eye.—The membrane separating the eye fluids from blood is not specifically impermeable to cations, nor does it show undirectional impermeability. The membrane does not secrete K, and probably not Na or Cl. (W. M. H.)

Metabolic Rate of Alcohol (2 papers).—(a) Following intravenous alcohol equilibrium between content of muscle and plasma occurs in 1-1½ hours. Most tissues contain 70-80 per cent., and fat 10-20 per cent. of the concentration of alcohol in the plasma. The factor r (concentration of alcohol in whole body expressed as a fraction of that in the plasma) is constant in one animal but varies among animals. (b) The metabolic rate of alcohol depends on the concentration in the body. The rate per unit liver weight in animals previously fed with alcohol is significantly smaller than in normal animals. The rate is increased by addition of alanine to the body. (W. M. H.)
Psychopathic Personality among the Mentally Defective. E. J. Humphreys. 231.
An Approach to the Problem of Psychopathic Personality. R. A. Savit. 255.
Therapeutic Considerations in Psychoses of Old Age. G. F. Etting. 274.
The Psychiatric Examination of the Criminotic Individual. A. N. Foxe. 289.
Determining the Prognosis in the Involutional Psychoses. J. A. Brussel. 301.
The Injection Treatment of Varicose Veins in a State Hospital. M. A. Yost. 307.

REVUE NEUROLOGIQUE
Vol. 72.
No. 4.
1939–1940.
Congrès Neurologique International (Copenhagen, 21–25 Août, 1939). (International Neurological Congress at Copenhagen, August, 1939.)

RIVISTA DI NEUROLOGIA (NAPOLEI)
Vol. 13.
No. 1.
February 1940.

*La Nevralgia del Glossofaringe e le Nevrailgie Auriculo-Facciali. (Glossopharyngeal and auriculo-facial neuralgia.) C. Pero. 1.
*Su due Casi di Neurofibromatosi di Recklinghausen. (Two cases of Recklinghausen's neurofibromatosis.) P. Giliberti. 27.
*Ulteriori Dati sulla Iodoterapia Endovenosa ed Endodurale. (End results in intravenous and intradural iodine therapy.) A. Rubino and D. Amico. 49.
*La Reazione di Donaggio nell'Elettroshockterapia. (Donaggio's reaction in electro-shock therapy.) A. de Falco. 68.

Glossopharyngeal Neuralgia.—After dealing with the records of glossopharyngeal neuralgia in the literature the author describes a case in which the pain was definitely localized to the lateral wall of the pharynx, the tonsil, the arch of the palate, and the ear, and radiated to the internal surface of the forearm and arm in the distribution of C8–D1. The author explains the mechanism of this limited radiation of the pain by the anastomosis between fibres from the superior cervical ganglion and those from the petrosal ganglion of the glossopharyngeal. Similarly, artificial anesthesias and neuralgias which do not correspond to strict nerve distribution are to be explained by the presence of pain fibres in the carotid plexus which are distributed along the vessels rather than along the nerve trunks. (R. G. G.)

Recklinghausen's Neurofibromatosis.—A full description of the clinical features of two cases and histopathological findings in the tumours are given. The tendency to malignant changes in the tumours is discussed and the author is inclined to suggest that the nervous elements in these may actually take on malignant characteristics. (R. G. G.)

Intravenous Iodine Therapy.—Fifteen cases are described of inflammatory affection of the nervous system (especially leptomeningitis) which were treated by intrathecal along with intravenous iodine. The authors are much impressed by the efficacy of this form of treatment. (R. G. G.)

Donaggio's Reaction in Electro-Shock Therapy.—The reaction is examined in seven cases of schizophrenia treated by electro-shock therapy and the positive findings in six of the cases indicates, according to the author, that this treatment determines an organic modification and disturbance of equilibrium in the nervous system. (R. G. G.)

RIVISTA DI PATOLOGIA NERVOSA E MENTALE
Vol. 55.
No. 1.
January–February 1940.

*Poliradiculonevrite con Dissociazione Albumino-Citologica (Sindrome di Guillain-Barré-Strohl) con Risentimento Diencefalico. (Polyradicul-neuritis with cell protein dissociation.) A. Grassi. 1.
Neurasthenia and Alterations in Midbrain and Spinal Cord.—Eight cases of this syndrome are described. The alterations in the midbrain and spinal cord were responsible for changes in the response of the pupils to light and in the deep reflexes. The history, clinical course, C.S.F. changes, and radiological changes in the skull bones, point to a degenerative rather than an inflammatory cause for this syndrome. It is correlated by the author with Adie’s disease which has recently been considered to be degenerative. The syndrome now described differs from the latter in that the lesions responsible for the changes in the deep reflexes are in the pyramidal tracts rather than in the posterior columns. Moreover the infrequency of C.F. changes in Adie’s disease is in agreement with the smaller extent of the organic lesions as compared with the syndrome here described. The midbrain lesions are common to both syndromes although they may be manifested clinically in different ways.

(R. G. G.)

Parenchymatous Lesions of Cerelbellum in Carcinoma.—A woman of forty suffering from a malignant tumour of the uterus, developed a cerebellar symptom complex characterized by ataxia of the lower limbs, myoclonus and asynergia of the upper limbs, and nystagmoid clonic movement of the eyes. A diagnosis of secondary in the cerebellum was made. A post mortem confirmed that the cerebellum was the seat of the lesion and that pathological examination showed a diffuse hyperplasia of the glial tissue of the brain especially of the cerebellum where there was a demyelination in the region of the right dentate nucleus and to a lesser extent of the left, corresponding to the area of the greatest glial proliferation. In the cerebellar cortex there was some degree of atrophy of the Purkinje cells. The fundamental pathology of the gliosis and the relation of this to the demyelinating lesions is discussed. The symptomatology is correlated with the anatomical losses in the capsule of the dentate nucleus and the exceptional character of the myoclonic movements which in some ways resemble myoclonus and in others a pedunculopontine tremor.

(R. G. G.)

Epilepsy and Endocrines.—Ablation of one or both suprarenal cortices in dogs which were not predisposed to epileptic attacks following sensory stimulation and which had been shown to have a constitutional excess of cortical hormone was found to lead not only to a noteworthy
increase in the cortical excitability but also to an increased predisposition to epileptic attacks. In such animals the parenteral administration of an extract of whole suprarenal gland leads to diminution of the cortical excitability and to a disappearance of the predisposition to epileptic attacks following sensory stimulation. (R. G. G.)

SCHWEIZER ARCHIV FÜR NEUROLOGIE UND PSYCHIATRE

Vol. 45. No. 1. 1940.

*Ausgewählte, kritisch besprochene Beispiele zum Eherecht der Geisteskranken. (Critical review of selected examples of eligibility for marriage of the mentally afflicted.) B. Dukor. 1.

*Die genetische Einheitlichkeit der klinisch unkomplizierten Schwachsinnformen. (Hereditary uniformity and uncomplicated mental defect.) C. Brugger. 140.

*Gewerbliche Gifte und Nervensystem. (Hereditary poisons and the nervous system.) F. Flury. 146.

*Die Schätzung der Anzahlung von Nervenleiden in der Bevölkerung der Schweiz. (Statistics of mental abnormality in Canton Appenzell on-Rhine for the year 1937.) A. Koller. 159.

*Die Verhältnisse der Reflexe im Insulincoma. (The behaviour of reflexes in insulin coma.) S. Lups and F. Kramer. 213.

*Rorschachbeobachtungen an chronisch Lungentuberkulose und Herzkranken. (Test results by Rorschach’s method in cases of chronic pulmonary tuberculosis and heart disease.) F. Singeisen. 230.

*Les Symptômes Cérébraux et Psychopathologiques dans les Intoxications Professionnelles par des Substances Anorganiques. (Cerebral and psychopathological symptoms in industrial poisoning by inorganic substances.) H. Steck. 248.

Eligibility for Marriage of Mentally Afflicted.—250 cases which came before the courts between 1912 and 1940 are considered, of which about one-fifth are outlined. The histories are followed by critical discussions of the problems involved and the opinions of the experts. Questions discussed are: (1) right to marry; (2) annulment of marriage; (3) divorce. Conditions described include mental deficiency, insanity, senility, etc. (H. de P.)

Hereditary Uniformity of Uncomplicated Mental Defect.—Discussions of the findings of various investigations on hereditary forms of mental defect show that different degrees of defect are found in the same family, and even in 5 out of 60 pairs of uniovular twins. It is suggested that there may be dominant as well as recessive forms of mental deficiency. The severest forms of idiocy are least influenced by hereditary and most by environmental factors. The incidence of mental defect in the families of persons on probation is noticeably large. (H. de P.)

Hereditary Poisons and Nervous System.

—Poisons are divided into organic and inorganic, and their effects are general and specific. No poison affects only the C.N.S., though some cause predominantly nervous symptoms and signs. Chemically quite different substances can give rise to similar clinical pictures in the chronic stage. In the acute stage they are more differentiated. Their general effects are probably due to penetration of the cell with resulting interference with cell-function and metabolism. The poisons act as chemical traumatia to the organism as a whole. Some form depots in various organs so that their effect may persist after removal of the patient from the noxious agent. Specific effects of organic compounds and heavy metals used in industry are described and suggestions for prevention and treatment outlined. (H. de P.)

Mental Abnormality Statistics in Canton Appenzell.—A follow-up of children found to be mentally abnormal in the years 1907 and 1922. About 60 per cent. have turned out better and about 20 per cent. worse than was anticipated; 20 per cent. have remained approximately stationary. These results show that special education has justified itself. Of those who approach normality the majority are married and able to support their families. Among their children the proportion of defectives is as yet uncertain, but appears to be rather high. Those members of the original groups who have deteriorated include a large proportion who have physical defects, e.g., deafness, as well as mental. Results show the desirability of preventing propagation of defectives and of alcoholism. (H. de P.)

Reflexes in Insulin Coma.—Tests are described for depth of coma for use in shock therapy. Those considered of most value are the corneal and Babinski reflexes. Blood-sugar level is not a reliable test, as depth of coma is not necessarily proportional to fall in blood-sugar. Tables are given showing experimental time sequence of reflex changes in relation to insulin injection and sugar feed. (H. de P.)

Rorschach’s Test Results in Pulmonary T.B. and Heart Disease.—It has been noticed that psychical changes often accompany chronic physical illness. Investigations are described on 50 cases of pulmonary T.B. and 40 cases of severe heart and circulatory disorders by objective tests. These show fundamental differences between the two groups. Tuberculous patients are typically extraverted and unstable. Heart patients are typically introverted and characterized by depression and chronic anxiety. Both groups show unimpaired intelligence, and a tendency to exaggerated interest in physiological and
pathological processes. The question is discussed whether these characteristics are merely exaggerations of those existing before the onset of illness, or are results of disease processes. (H. de P.)

Cerebral and Psychopathological Symptoms in Industrial Poisoning.—Results of poisoning by mercury and lead are described in detail and by manganese and thallium more briefly. Severe cerebral symptoms are more common with lead than mercury. Differential diagnosis between metallic poisons, endogenous psychoses, and organic diseases of the nervous system is discussed. (H. de P.)

BOOK REVIEWS

THE HYPOTHALAMUS AND CENTRAL LEVELS OF AUTONOMIC FUNCTIONS


It is indeed difficult to give a critical review of a volume to which many authors have subscribed. There is no doubt, however, that the general level is extremely high.

Following a précis in which standardization of anatomical nomenclature is aimed at—an excellent proposition—eight chapters are given over to the anatomy of this region of the brain. An excellent review of the work indicative of the presence of secretory cells is to be found in Chapter IV, and this is followed by an equally informative one dealing with the connections of the primate thalamus. The work on the vascular bed of the hypothalamus is of considerable interest.

Chapters X to XXV are given over to the study of the physiology of the hypothalamus. All are of a high standard. There is much that is new in these chapters and all neurologists would be well advised to study them with care.

The remaining nine chapters are classified under the title "Clinical Symposium." Several of these chapters, however, deal essentially with the pathological changes found in this region of the central nervous system. The attention of readers is drawn to the chapters on disturbances of temperature regulation in man following lesions of the hypothalamus, and to the most interesting work of White, who records the results of stimulating this region of the brain, upon cardiac rate, blood pressure and state of consciousness.

The excellent printing, illustrations and complete bibliography make this volume of the greatest value to all neurologists. Nothing but the highest praise is to be given for this most valuable contribution to our knowledge of the hypothalamus and no library of a neurologist would be complete without it.

DISEASES OF THE NERVOUS SYSTEM

W. Russell Brain


This is a book which will be welcomed by the student, for in fairly compact form is to be found most of the important information regarding diseases of the nervous system. The specialist, however, may well wish to differ from the author’s opinion as expressed in many places. The X-ray photographs are unsatisfactory and it is hoped that in the next edition better paper for their reproduction may be available. The index is very complete. This second edition is a worthy successor to the first.