EPITOME OF CURRENT JOURNALS

ACTA PSYCHIATRICA ET NEUROLOGICA


(These numbers contain the Report on the Eighth Congress of Scandinavian Neurologists in Stockholm, Sweden, 1938, and the following papers are of particular interest.)

*Investigations into the Origin of Cerebral Hemorrhages in Experimental Animals. T. Broman. 395.

**The Cerebral Vasomotor-Regulation. S. Christiansen, M. Fog, and T. Vangaard. 413.

Origin of Cerebral Hemorrhages.—Cerebral hemorrhages were produced experimentally by raising the blood pressure artificially following toxic or embolic injury to the vessels. The rise in blood pressure must be produced within 8 hours to 5 days of the injury. (B. McA.)

Cerebral Vasomotor Regulation.—A method for the determination of the cerebral control of the peripheral circulation in man is described. In two cases with localized cortical lesions the cerebral control of the circulation in the hands was affected. (B. McA.)

ALLGEMEINE ZEITSCHRIFT FÜR PSYCHIATRIE


AMERICAN JOURNAL OF PSYCHIATRY


CURRENT JOURNALS


Contributions de Charles Blondel.


La Methode Viennoise de Traitement des Etats Convulsifs et Other Case Propos de muscles characteristics. J. E. Booth. 514.

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Contributions a l'Etude Anatomo-Clinique des Hemorrhages Cerebrales. (Contributions to the anatomoclinical study of cerebral hemorrhages.) D. Paulian, I. Bistriciave, and V. Ionescu. 185.

Affections Osseuses et Para-Osseuses dans le Dysfunctionnement des Glandes Endocrines. (Bone disease and endocrine gland dysfunction.) E. Herskovits. 193.

La Pyretotherapie Intracisternale. (Intracisternal pyrotherapy.) N. Bouff. 216.

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*Partial Thenar Atrophy: a Clinical Entity. R. Wartenberg. 373.

*Experimental Study of Pathogenesis of Cerebral Changes following Prolonged Insulin Hypoglycemia. H. Yannet and J. F. Iannucci. 395.


*Palatal Myoclonus. O. Sittig and V. Haskovec. 413.


*Protective Effect of Cholesterol in Experimental Epilepsy. R. B. Aird and C. Gurchot. 491.

Case Reports.


Convulsive and Other Neurologic Phenomena appearing in Senile and Arteriosclerotic Psychoses. J. B. Tompkins. 513.

Special Articles.


Partial Thenar Atrophy.—Partial thenar atrophy is a definite clinical entity with the following characteristics: atrophy of the muscles on the outer radial aspect of the thenar eminence, of slow, chronic, and hardly noticeable development and with a marked tendency to become stationary. There are no fibrillary twitches, no tenderness of nerve trunks, no sensory changes, and no other motor disturbances. Parasthesias without, or less commonly with, pain are often present on both hands; these usually precede the appearance of the atrophy. An attempt has been made to explain this "partial thenar atrophy," which may be regarded as a clinical entity, on the basis of toxictraumatic damage of the corresponding branches of the median nerves. The presence of a toxic influence on these nerves is indicated by the parasthesias, which may be considered as an expression of chronic sensory polyneuritis due to an undetermined endotoxic or exotoxic process. The traumatic factor is supplied by the fact that in some persons the branches of the median nerve to the muscles of the thenar eminence may have an abnormal course in relation to the ligamentum carpi transversum, and this be subjected to abnormal pressure, stretching, or strangulation in ordinary use of the hand. These two factors would need to coincide in order to produce the partial thenar atrophy, and this would account for the relative rarity of the condition. The second possible explanation, which seems to be more con-
Pathogenesis of Cerebral Changes following Insulin.—The present study is an investigation of some factors considered responsible for the production of cerebral damage following prolonged insulin hypoglycemia. The mechanism for the cerebral damage was not found to be causally related to changes in oxygen saturation of arterial blood or to the presence of marked circulatory impairment. It was found that relatively small doses of insulin, i.e. 3 units per kilogram, resulted in prolonged hypoglycemia but did not produce cerebral injury. However, larger doses, i.e. from 15 to 20 units per kilogram, did result in widespread cerebral damage, although the hypoglycemia produced was neither more prolonged nor more severe as judged by the concentrations of the blood sugar. These results were interpreted as suggesting that the injurious effects of large doses of insulin are brought about by the promotion of some reaction in the cerebral cells which is relatively harmless if the blood sugar is maintained. Animals under anaesthesia induced by pentobarbital sodium were found to be more susceptible to the toxic action of insulin. (R. M. S.)

Sympathetic Nerve Function in Skin Transplants.—Recovery of sympathetic function is described in a series of pedicle skin flaps in man. Sudomotor, vasomotor, pilomotor, and sebomotor functions may recover. The amount of restoration parallels to some extent the recovery of cutaneous sensation. Return of pilomotor function and regeneration of sympathetic fibres occur in the peripherally denervated skin of the cat. (R. M. S.)

Palatal Myoclonus.—In a case of palatal myoclonus anatomical study revealed a lesion in the right cerebellar hemisphere, the dentate nucleus, and the adjacent white matter; pseudohypertrophy of the left olivary body; degeneration of the right restiform body and the right superior cerebellar peduncle, and atrophy of the left red nucleus. (R. M. S.)

Effect of Ideas on Respiration.—A lengthy paper devoted to a comprehensive study of various aspects of the respiratory function in psychoneurotic patients. (R. M. S.)

Cholesterol in Experimental Epilepsy.—The results of this study were interpreted as consistent with the theory that the vital lipoids play a significant role in the permeability of cell membranes, and through this mechanism are an important factor in epilepsy. (R. M. S.)

*Pathologic Laughing and Crying. C. Davison and H. Kelman. 595.
*Treatment of Schizophrenia with Glandular Extracts. S. Fischer. 644.
*Lesions of the Fundus associated with Brain Hemorrhage. L. L. Tureen. 664.
*Histopathologic Changes in the Brain following Experimental Injections of Metrazol. E. Liebert and A. Weil. 690.
*Skin and Body Temperatures of Schizophrenic and Normal Subjects under varying Environmental Conditions. H. Freeman. 724.

Case Reports.

Pathologic Laughing and Crying.—From an analysis of more than 50 cases, together with a study of clinicopathological material and animal experiments reported in the literature, the writers have attempted to reconstruct the centres and pathways regulating laughing and crying. The cases of cortical lesions indicate that certain cortical areas, namely, the frontal, premotor, motor, parietal, temporal, and hippocampal, may act as centres for integration of these affective responses. These impulses are mediated by pathways which are in intimate connection with the hypothalamus. The hypothalamus or some other of the diencephalic nuclei, which are under cortical inhibitory influence, are the main centres or stations for the release of affective responses. A lesion in the corticohypothalamic tract removes cortical control, thereby inducing excessive affective responses. The secondary involvement of the thalamic nuclei, striatum, and pallidum in many of the clinicopathological cases and the edema of these structures in the experimental animal suggest that these areas may also act as centres for the production of these affective responses and that, by means of pathways, they are in intimate association with the hypothalamus. The group of cases of selective lesions of the mesencephalon and telencephalon and the animal experiments indicate that there are pathways, and possibly independent centres in these regions for the production of laughing and crying. Some of these pathways are in intimate connection with the hypothalamus and the faciorespiratory nuclei. (R. M. S.)
Schizophrenia and Glandular Extracts.—
The author states that treatment of schizophre
nial patients with an extract containing
anterior pituitary-like substances from the
urine of pregnant women produces good
therapeutic results. As complete remission
was obtained in 63.4 per cent. and improve
ment in 21.5 per cent., this claim would
appear to err on the side of modesty.  
(R. M. S.)

Capillary Structure in Schizophrenics.—
In patients with schizophrenia the cutaneous
capillaries showed striking deviations from
the normal, the severity of this disease
being related to the degree of derangement
of the capillary structure. The studies
suggest that schizophrenia falls in the
category of vegetative and metabolic
disorders. (R. M. S.)

Lesions of Fundus and Brain Hemorrhage.
—The ocular fundi in 23 cases of massive
hemorrhage of the brain were examined,
in seven on a number of occasions, over a
period of hours or days. Swelling of the op
tic disc was found in association most often
with intraventricular hemorrhage, which
was not accompanied by a subarachnoid or
pontile hemorrhage. Retinal hemorrhages
were not found to be characteristically
associated with retinal arteriosclerosis, but
occurred in the course of subarachnoid and
pontile hemorrhage. The appearance of
papilledema and retinal hemorrhages in
cases of cerebral hemorrhage leads on
occasion to difficulties in differentiation
from tumour of the brain. (R. M. S.)

Cerebral Changes following Barbital
Treatment.—Barbiturates, insulin, and
metrazol produce morphological changes
in the ganglion cells of the brain, often
associated with neuronophagia, but with
our marked macroglial or microglial re
active phenomena. The changes are diffuse
and appear to be somewhat more marked
in the medulla, especially the olivary
bodies. Distention of the subarachnoid
space and the cerebral tissue spaces—
cedema—is a dangerous occurrence and is
much more significant than the changes in
the ganglion cells. The changes in the
ganglion cells are not specific, for they are
the same regardless of the type of poison:
they also resemble changes produced
experimentally by injections of a variety of
organic or inorganic poisons. (R. M. S.)

Brilliant Vital Red and Epilepsy.—
Brilliant vital red affords protection in
cases of human epilepsy. This fact, in
addition to various other considerations
which are discussed, affords strong evidence
in support of the hypothesis that " con
vulsive toxins " and the endothelium of the
hemomecephalic barrier are factors of
etiological importance in human epilepsy
and that the relation between them is
analogous to that demonstrated in experi
mental epilepsy. (R. M. S.)

Skin and Body Temperatures of Schizo
phrenics.—Schizophrenic and normal sub
jects were exposed to varying environ
mental conditions, in the nude and under
fasting conditions. Skin and rectal
temperatures were measured by means of
thermocouples. It was found that im
mediately after exposure the schizophrenic
patients tended to have warmer extremities
than the normal subjects. Exposure to
cold conditions (15, 20, and 24 C. : 59, 68,
and 75.2 F.) resulted consistently in
greater cooling of the skin in the patients
than in the normal controls. Exposure to
hot conditions (44 C. : 110.2 F.) resulted
in no difference in the response of normal
and of schizophrenic subjects. Exposure to
high humidity at low and high temperatures
showed no difference between the patients
and the normal subjects. The rectal
temperatures of macrogentic and normal
subjects reacted similarly under all con
ditions. (R. M. S.)

November 1939.

*Involvement of the Nervous System associated
with Endocarditis: Neuropsychiatric and Neuro
pathologic Observations in Forty-Two Cases of
Fatal Outcome. J. W. Kernohan, H. W. Woll
man, and A. R. Barnes. 789.

*Subdural Shadows in Pneumoencephalograms:
their Diagnosis, Origin, and Significance. F. J. C.
von Storch and A. Buermann. 810.

*Effect of Epinephrine on Convulsions. E. Gell
horn, C. W. Darrow, and L. Yesinick. 826.

Role of Allergy in Multiple Sclerosis: Incidence of
Atony in a Series of Forty Cases. R. L. Buer
and M. B. Sulzberger. 837.

Gross Pathology of the Oligodendrogliomas. K.
Löwenberg and R. W. Wagener. 842.

*Rhythmic Variation of Respiratory Excursion with
Bilateral Injury of Cerebral Effenter Fibers.
R. V. Grimmer, F. H. Hess, and O. R. Lang
worthy. 862.

*The Human Pyramidal Tract: a Fiber and
Numerical Analysis. A. M. Lassek and G. L.
Rasmussen. 872.

Follow-up Study of Five Hundred Patients with
Schizophrenia admitted to the Hospital from 1913
to 1923. T. A. C. Rennie and J. B. Fowler. 877.

Case Reports.
Pinealoma of Diffuse Ependymal Origin. R. P.
Mackay. 892.

Hemorrhages into the Central Nervous System
following Lumbar Spinal Puncture. S. Androp.
903.

Technical Notes.
A Classroom Outline for the Pathologic Diagnosis
of Primary Intracranial Neoplasms: Six Differ
ental Characteristics. L. Alexander. 912.

Involvement of Nervous System with
Endocarditis.—Pathological studies of the
central nervous system have disclosed
beyond question that changes in the central
nervous system, with or without associated
clinical symptoms, are not only common to
all types of endocarditis but also are as
distinctive as are the various types of endo
carditis and that they may be correlated

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one with the other. It must be clear that more careful neurological and psychiatric surveys of patients who have endocarditis would augment information and probably would indicate a greater incidence of such symptoms than is now appreciated. (R. M. S.)

Subdural Shadows in Pneumoencephalograms.—The writers discuss the significance of the presence of gas in the subdural space after and during lumbar pneumoencephalography. A gas may enter the intracranial subdural space during lumbar encephalographic examination (a) by direct introduction into the lumbar subdural space or (b) through tears in the arachnoid which have occurred before, during, or after the examination. Air or its constituent gases cannot be made to pass through the human arachnoid at a pressure of 450 mm. of water (0.627 lb. per sq. in.) maintained in vitro for 72 hours. It is unlikely that these gases pass through an intact arachnoid in vivo as a result of the encephalographic procedure. The presence of subdural air in an encephalogram, when not introduced by way of the lumbar subdural space, implies that the arachnoid has been torn and suggests that the membrane has been involved in a superficial pathological process. Subdural gas occurs most frequently in patients who have been subjected to cranial injuries. Although often associated with cranial injury, and occasionally with subdural hematomas, subdural gas is diagnostic of neither. (R. M. S.)

Epinephrine and Convulsions.—Experiments on narcotized cats show that the anticonvulsant action of epinephrine is linked with carotid sinus and depressor reflexes. The action is abolished by bilateral vagotomy and denervation of both carotid sinuses, but is still present after carotid sinus denervation if one vagus nerve is intact. These facts and the observation that convulsions are frequently increased when the blood pressure is lowered by amyl nitrite make it probable that pressor reflexes from the carotid sinus and arch of the aorta regulate the excitability of the somatic nervous system in a manner similar to that shown by Darrow and Gellhorn for the autonomic system. (R. M. S.)

Respiratory Rhythmic Variation with Injury of Cortical Fibres.—The authors' cases are compared with cases of non-neurological conditions in which rhythmicity of respiratory excursion is shown. The general mechanism of periodic breathing is considered and the method of cerebral control of respiration discussed. (R. M. S.)

Human Pyramidal Tract.—The predominant type of fibre in the human pyramidal tract is one of small calibre. Numerically, large fibres are scarce. Neither small or large fibres are aggregated in any one region of the pyramidal tract, but are equally dispersed throughout. Slightly over 1,000,000 pyramidal tract fibres enter the spinal cord on one side. It is believed that cells other than those of the Betz type give origin to a large percentage of pyramidal tract fibres and that these cells, wherever they may be located, are small. The pyramidal tract, because of the preponderance of small fibres, should, on the whole, be a bundle which conducts slowly. (R. M. S.)

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Valor Diagnóstico Quirúrgico del Electroencéfalogra- mma. (The surgical diagnostic value of the electroencephalogram.) J. C. Christensen. 5.

BRAIN


The Venous Drainage of the Brain, with Special Reference to the Galenic System. B. Schlesinger. 274.


Cortical Potentials and High Intracranial Pressure.—Characteristic changes are seen in the electrical potentials recorded from patients with high intracranial pressure. There is little correlation between these changes and the height of the pressure or its clinical effects. Experimental evidence is advanced to show that the abnormal slow waves are due to secondary osmotic changes resulting in edema of the white matter. These changes may determine the alteration in consciousness found in such cases. (D. J. W.)

L’ENCÉPHALE
Vol. 34 (1). No. 4. April 1939.

JOURNAL OF ANATOMY
Vol. 73. No. 4. July 1939.
*A Specific Factor in Extracts of the Choroid Plexus influencing the Permeability of the Myelencephalic Roof. H. Collet and S. Dain. 525.
*An Experimental Investigation of the Nerve Supply to the Adrenal Medulla of the Cat. W. d’A. Maycock and T. S. Heasip. 551.
*Discontinuity in the Nervous System of Cephalopetates. H. H. Woolard (the late) and J. A. Harman. 559.

Motor Cortex and Pyramidal Tract of Echidna Aculeata.—A description has been given of the results of the electrical stimulation of the cortex of a number of specimens of Echidna aculeata. The results in the main confirm Abbie’s (1938). An excitable area far back between the sulci a and b is present. In it movements of the tail, hindlimb, trunk, forelimb, and head and neck are represented in that order, from above downwards. The threshold for effective stimulation is of the same order of magnitude as for the motor cortex of other mammals. Destruction of the upper part of this area leads to degeneration in a long cortical spinal tract which has been demonstrated by the Marchi method. The tract runs through the cerebral peduncle, decussates in the pons, and continues in the “Nonalbündel” of Kölliker, superficial to the spinal root of the trigeminal nerve throughout the medulla. It enters the most posterior part of the lateral column of the spinal cord and has been traced caudally as the 24th spinal segment. No evidence was found for the presence of a pyramidal tract close to the mid-ventral line of the medulla, nor for a decussation in the usual position at the caudal end of the medulla. Degeneration in intrinsic fibres of the forebrain resulting from the same lesion is also described. It affects association fibres, the anterior commissure, cortico-thalamic connections, the alveus and forming systems, but brings to light no new facts of importance. (A. G. M. W.)

Influence of Choroid Plexus on Permeability of Myelencephalic Roof.—Extract of choroid plexus contains a factor which has the power of increasing tissue permeability. A similar property is shown by extract of meninges but in much less degree, while it is entirely lacking in extract of brain tissue. The factor present in choroid plexus extract is species specific in its influence on tissue permeability. Experimental evidence is recorded suggesting that the factor elaborated by the choroid plexus plays an important part in the mechanism underlying the first extraventricular escape of fluid from the embryonic central nervous system, and it is suggested that it exerts its influence by increasing the permeability of the membrane areas in the myelencephalic roof, thus permitting the extraneural escape of intraventricular fluid. (A. G. M. W.)

Partial Degeneration of Nerve Supply of Adrenal.—Section of spinal roots in the cat is followed by disappearance of the nerve fibres which innervate the chromaffin cells of the adrenal medulla of the same side. This confirms the findings of Elliot, Hollinshead, and Swinyard that the innervation of the chromaffin tissue is preganglionic. The segments over which the adrenal fibres leave the cord are D6-D16 (L3), with possibly a few fibres from higher and lower segments in some cases. By section of this whole series of roots on one side total denervation of the ipsilateral medulla can be achieved. No evidence of contralateral innervation was found. Section of some only of these roots results in the production of local areas of degeneration in the medulla. Segmental relations are preserved, the front end of the gland receiving fibres from the more anterior roots. The separate fibres do not constitute an anastomosing plexus, but each innervates a defined area of the
Section of the great splanchnic nerves produces denervation of the anterior half of the medulla. The lesser splanchnics contain most of the rest of the fibres, but a few run through lower sympathetic ganglia. Total denervation of the gland can therefore be assured by cutting the great splanchnics and removing the sympathetic chain from the diaphragm to the ganglion which gives a transverse ramus to D17 (L4). (A. G. M. W.)

**Nerve Supply to Adrenal Medulla.**—The distribution and relative importance of the adreno-secretory nerves of the adrenal medulla have been investigated in the cat, using the retaction of the denervated nictitating membrane as an indicator of the adrenaline release by nerve stimulation. The nerve supply of the adrenal medulla is derived from the ipsilateral thoracolumbar sympathetic outflow. Most of the adreno-secretory nerves are carried in the greater and lesser splanchnic nerves. Some also run to the adrenal medulla from the first and second lumbar sympathetic ganglia. The relative importance of these paths varies from animal to animal. Occasionally adreno-secretory nerves may enter the lumbar sympathetic chains at the third lumbar ganglia and ascend to the second lumbar ganglia, whence they pass to the adrenal glands. No release was obtained by stimulation of the vagus nerves. (A. G. M. W.)

**Discontinuity in Nervous System of Cnidarians.**—The histology of the nervous system in the sea-anemones *Tealia felina* and *Actinia equina* and the jelly-fishes *Cyanea lamareki* and *Chrysaora isosceles*, studied by the methods of methylene blue and gold chloride, is described. It is concluded that the nervous system in these cnidarians consists of nerve cells the processes of which are discontinuous. The nerve fibres frequently intertwine but never fuse. Nerve fibres terminate on muscle cells by small expansions. (A. G. M. W.)

**Structural Changes in Isolated Visual Cortex.**—The structure of an isolated area of visual cortex shows relatively little change in its cell or fibre architecture. This is taken to indicate the richness of the intracortical connection of each part of the cortex with the immediately neighbouring cortex. In the isolated cortex there is a slight general reduction of cells which affect all the laminae. Most of the large stellate cells of lamina IVb and many of the large solitary cells of Meynert in lamina VI undergoing atrophy and disappear. Evidence is adduced that these cells give origin to projection fibres passing to subcortical centres rather than to association fibres either to neighbouring or distant areas of cortex. In the isolated cortex there is a reduction of the number of individual radial fibres, while the number of fasciculi which they compose remains unchanged. It is probable that these radial fibres are association fibres derived from other parts of the visual cortex. The network of obliquely disposed fibres in the deeper levels of the cortex mostly disappears: the experiments suggest that these fibres are projection fibres derived from subcortical centres. The stria of Gennari remains apparently unchanged in width and density. (A. G. M. W.)


*An Experimental Investigation of the Motor Cortex and its Connexions in the Phalanger, Trichosurus Vulpecula.* F. Goldby. 12.

*Experiments on the Development of the Amphibian Mesonephros.* R. J. O'Connor. 34.

*Some Observations on the Lymphatics of the Nasal Mucous Membrane in the Cat and Monkey.* J. M. Yoffee and C. K. Drinker. 45.

*The Innervation of the Gum of Talpa Europaea.* W. Lewinsky and D. Stewart. 53.


*The Occurrence of the Lemurine Form of the Ectotympanic in a Primitive Marsupial.* F. Wood Jones and V. F. Lambert. 72.

*The Structure of the Epiphysis in Sphenodon and the Primitive Form of Secondary Centre.* R. W. Haines. 80.

*The Cell Structures of the Mamillary Body in the Mammals and in Man.* J. Rose. 91.


*Morphology of Synapse in Cat's Spinal Cord.*—The morphology of the synapse was studied in Cajal reduced silver nitrate preparations of normal spinal cords from 30 mature cats. Modification 4 of Cajal's technique, involving formalin fixation, was found most generally useful. In cells of the ventral horn and the chief portion of the dorsal horn axon terminations as end-bulbs are distributed fairly uniformly over the surface of the cell body and the proximal portion of the dendrites. End-bulbs appear to be less numerous on the distal portions of the dendrites. The density of end-bulbs numerically on the neurone is essentially the same in cells of the ventral horn and chief portion of the dorsal horn and in the various segments of the spinal cord. The density of end-bulbs on the surface of the cell body of a ventral horn cell is of the order of sixteen end-bulbs per 100 sq. μ by the technique employed. There are several thousand end-bulbs on a single larger motor neurone of the spinal cord in the cat. Approximately 38 per cent. of the cell membrane is devoted to the formation of synaptic junctions with other neurones. Considerable variation exists in the size, shape, and staining affinities of individual end-bulbs. The size may vary from less than 1.0 μ in diameter to 4.0 μ.
by 5-0 µ. End-bulbs vary in shape from round to spatulate. The most typical feature of their internal structure is a fine fibril extending the length of the end-bulb appearing as a continuation of the parent nerve fibre. The smaller end-bulbs predominate on cells of the lateral groups of the ventral horn. End-bulbs of intermediate and larger sizes predominate on cells of the medial groups of the ventral horn and the chief portion of the dorsal horn of grey matter. (A. G. M. W.)

Motor Cortex and Connections in *Trichosurus vulpecula.*—An electrically excitable area has been found in the cortex of the anterior third of the hemisphere in the phalanger, *Trichosurus vulpecula.* It falls short of the frontal pole, which is inexicitable, by about 3 mm. In it movements of the head and neck, forelimb, possibly trunk, and certainly hindlimb, are represented. The threshold for effective stimulation is similar to that for the motor cortex of other mammals. The area defined by stimulation corresponds with a cytoarchitectonic area, but is rather larger. The latter shows most of the characteristics of Brodmann’s Area 4, but lamina IV, usually absent in this area, is present although not typically granular. Destruction of the motor area leads only to transient motor disabilities in the hetero-lateral limbs. Marchi experiments have shown that a cortico-spinal tract arises within the anterior third of the hemisphere, probably from the motor area, and after a complete decussation at the hind end of the medulla extends in the posterior column at least as far as the mid-thoracic segments of the spinal cord. They suggest that cortico-thalamic fibres from this part of the hemisphere are similar to those in placental mammals, but that fronto-pontine fibres are scanty or non-myelinated. The Marchi results, so far as they concern the cortico-spinal tracts, have been checked by experiments in which 12 weeks were allowed for degeneration; after which parts of the nervous system were stained by the Davenport silver method. Many cortico-spinal fibres are found to be non-myelinated. In comparison with *Didelphys virginiana,* the chief difference lies in the greater length of the cortico-spinal tract and in the representation of hindlimb movements in the cortex in the phalanger. (A. G. M. W.)

**Lymphatics of Nasal Mucous Membrane.**—In the nose and pharynx of the cat and monkey there is a rich lymphaticplexus which drains into the deep cervical lymph duct. The vessels of this plexus are in very close contact with the nasopharyngeal epithelium. The plexus may readily be injected from the cranial subarachnoid space with India ink or a solution of potassium ferrocyanide and iron ammonium citrate. (A. G. M. W.)

**Innervation of Gum of Talpa europea.**—The gum of the mole has a much richer nerve-supply than the human. The nerves show three types of ending: free endings, end swellings, and touch menisci. (A. G. M. W.)

**Cell Structure of Mamillary Body.**—The mamillary body is well developed in all mammals. Medial, lateral, and dorsal nuclei can be distinguished. In the medial group some nuclei are better developed in lower, others in higher mammals. In the higher mammals the medial nucleus, probably equivalent to the medial and anterior nuclei of lower mammals, is better developed, whereas the basal and intermediate nuclei show a poorer development. In higher mammals the volume of the medial nuclear group, as a whole, shows a relative increase in association with that of the thalamus. The determination of volumes makes this relationship obvious. The lateral group of nuclei in all mammals bears a fairly constant relation to the volume of the hypothalamo-body as a whole, as well as to the whole hypothalamus. The lateral nuclear group seems to have no connection with the thalamus. The dorsal nuclear group, well developed in lower mammals, undergoes a reduction in man and probably in the higher mammals. Whilst its volume decreases relative to the mamillary body, hypothalamus, and thalamus. It is probably not connected with the thalamus. (A. G. M. W.)

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**September 1939.**

Clinical Studies of the Blood Volume. VII. Changes in Blood Volume in Bright’s Disease with or without Edema, Renal Insufficiency, or Congestive Heart Failure, and in Hypertension. A. W. Harris and J. G. Gibson. 527.

Inability to Demonstrate a Platelet-reducing Substance in an Acetone Extract of the Spleen from Patients with Idiopathic Thrombocytopenic Purpura. F. J. Pohle and O. O. Meyer. 529.


The Blood V-Factor (Coenzyme) Level in Normal and Pathological Subjects. H. I. Kohn and F. Bernheim. 585.


The Occurrence of Abnormal Dark Adaptation and its Relation to Vitamin A Metabolism in Patients with Cirrhosis of the Liver. A. J. Patek and C. Haig. 609.

Acute Alcoholism.—Small doses of insulin did not affect the rate of disappearance of alcohol from the blood. Intravenous glucose produced an increased rate of fall in the blood alcohol only in severely intoxicated subjects, while insulin and glucose accelerated this fall in all intoxicated subjects. (J. N. C.)

Abnormal Dark Adaptation.—Abnormal dark adaptation was observed in patients with cirrhosis of the liver, and the changes were unrelated to jaundice. The administration of Vitamin A concentrates was followed by improvement, only partially maintained after the discontinuation of therapy. (J. N. C.)


Clinical Studies of the Blood Volume. VIII. Macrocytic and Hypochromic Anemias due to Chronic Blood Loss, Hemolytic and Miscellaneous Causes, and Polychymemia Vera. J. G. Gibson, A. W. Harris, and V. W. Swigert. 621.


The Effect of Prolonged Administration of Sulfanilamide on Rats with Nephrotic Nephritis. J. E. Smadel and H. F. Swift. 757.


Specific Volume of Plasma and Serum Proteins in Pregnant and in Parturient Women and Their Newborn Children as Derived from Viscosity Measurements. F. W. Obers, 799.


The Value of Mental Hospital Participation in Early Treatment. W. J. T. Kimber. 871.


Part II. C. L. Hingston. 882.

Some Practical Considerations in Relation to In-Patient and Out-Patient Treatment in the Psycho-neuroses. J. Flind. 886.

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A Short Review on the Histology of Epilepsy. A. Meyer. 927.


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*Creatinine in Mentally Defective Patients. L. S. Penrose and C. M. Pugh. 1151.
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*Cerebral Lesions due to Vasomotor Disturbances following Brain Trauma. M. Helfand. 157.
*Physiochemical Mechanisms in Convulsive Reactivity. E. A. Spiegel and M. Spiegel-Adolf. 188.
*Prolonged Non-Hypoglycaemic Coma occurring during the Course of Insulin Shock Therapy. H. Freed and E. Saxe. 216.

Cerebral Lesions following Brain Trauma. —Microscopic and macroscopic examinations have been made in 22 cases of brain trauma in subjects that had no history of convulsions. The pathogenesis of white and red softening, traced microscopically, shows an-gio-necrosis secondary to tissue destruction in traumatic lesions. Lesions may be found in places other than the immediate site of injury. Some lesions in brain trauma are not accompanied by any visible change in the vessels, walls and the findings are attributed to functional disturbances of the vasomotor mechanism. (I. G. J.)

Physiochemical Mechanisms in Convulsive Reactivity.—The relationship between the excitability of nerve cells and the physiochemical state of the surface films is discussed. Abnormal convulsive reactivity is shown to be a part of this general problem. These workers investigated the changes in cellular permeability and polarization of brain tissue caused by anoxemia, cerebral anemia, raised intracranial pressure, increased hydration, alkalosis and acidosis, anesthetics, and hypnotics. Epileptogenic agents act either by (a) a change produced in the ion concentration on the nerve cell surfaces—a convulsion occurring when threshold concentration is reached—or (b) a diminution in the density of the cellular surface films. Cell surfaces became more permeable and excitation is facilitated through lowering the threshold for metabolic and other stimuli. (I. G. J.)

Non-Hypoglycaemic Coma during Insulin Therapy.—Nine cases of prolonged non-hypoglycaemic coma following insulin shock treatment are reported, one of which showed subarachnoid hemorrhage with recovery after the acute episode. The only chemical abnormality found was a depletion of the chlorides in the body fluids. This finding was an exaggeration of what occurs in insulin shock. The neurological picture is usually constant and the prognosis good. The authors suggest that the phenomena are due to reversible cellular changes in the hypothalamic region, and point out the similarity of the clinical features of hypothalamic lesions to those seen in prolonged non-hypoglycaemic coma. (I. G. J.)
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Preliminary Observations on the Course of the Traumatic Psychoses. P. Hoch and E. Davidoff. 337.

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Further Contribution to the Subject of Frontal Ataxia. A. Gordon. 614.


A Comparison of the Thalamus in Dementia Praecox and Manic-Depressive Brains. R. J. Stein and L. H. Ziegler. 709.

The Difficulties of Being Normal. L. W. Darrah. 730.

Two Cases of Parkinsonian Syndrome resulting from Electrical Injury. M. H. Weinberg. 738.

JOURNAL OF NEUROPATHOLOGY AND PSYCHIATRY,
LENINGRAD

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On Transmission of Medulloblastomas along the Liqueur Tract. A. S. Ogurzova. 3.

On the Physiologic Action of Bee Honey. N. M. Artemev. 20.

Bee Honey Treatment of Neuritis and Neuralgia in Sciatrica. H. I. Erusalimikh. 36.

The Dynamics of the Humoral Changes in Schizophrenics under the Insulin-Shock Treatment. L. I. Toltsookhova. 45.


Acute Encephalitis and Encephalomyelitis. M. M. Ammosov. 3.

Vitamin B1 Complex and the Nervous System. V. V. Efremov. 27.

On Protruded Compress Conditions in Schizophrenics during Treatment with Insulin. A. N. Jenrichkovsky. 40.


The Significance of Hexonal and its Synergists in Combateemnt of the Condition of Psychomotor Excitation. V. M. Mukhin. 67.

Swelling of the Brain as a Pathologic Factor. E. N. Malm. 72.

On the Work of the So-Called "Institute of Functional Nervous Diseases" at Tbilisi. Kipshidze and Zurabashvili. 84.

Heterosystemic Associations or Phylogenetic Mechanisms? M. G. Ignatov. 56.

Treatment of Poliomyelitis by Injections of Parental Blood. I. S. Matusova and V. D. Paklar. 60.


Does it befit Soviet Scientist to quote the Fascist "Scientists"? I. Stibans. 77.
JOURNAL OF NEUROPHYSIOLOGY


The Peculiarities in the Delirium of Childhood and Juvenile Schizophrenia. K. I. Shmain. 46.
Vegetative Distortions and Working Capacity. V. A. Kislov. 54.
Disturbance of Uritination and Potentiality. Their Place and Significance in the Symptomatic Diagnosis of Mecmul Toxicosis. B. I. Lozinskaya and S. R. Shulman. 63.
The Psychopathology associated with Brain Tumours. N. S. Chetverikov. 69.

JOURNAL OF PHYSIOLOGY

Vol. 96. No. 4. September 1939.

Acetylcholine output on stimulation diminishes. This fatigue is removed by glucose mannose, galactose, lactate, or pyruvate, all of which promote acetylcholine synthesis. Fructose, sucrose, lactose, arabinose, d-l glyceraldehyde, acetate, acetocacetate, succinate, and acetaldehyde have no effect. (W. M. H.)

Pituitary Antidiuretic Action.—Various cations, anions, and organic substances when added to posterior pituitary extract prolong the antiuretic effect obtained by subcutaneous injection. The importance of pure extracts in assays of antidiuretic potency by subcutaneous injection is emphasized. (W. M. H.)

Peripheral Action of Tetanus Toxin.—Local muscular rigidity may be produced by local injection of tetanus toxin. Such muscle shows a diminished response to maximal nerve excitation, but normal potentiation of twitches following a period of tetanic stimulation. The response to a single nerve volley is repetitive in nature. The contraction on injection of acetylcholine is followed by a prolonged increase in tension. Eserine has little potentiating effect on the nerve twitch tension. The action of the tetanus toxin would appear to be in the region of the neuromuscular junction. (W. M. H.)

Acetylcholine Synthesis in Sympathetic Ganglion.—When perfused with solution containing only inorganic salts the superior cervical ganglion fatigues rapidly and the acetylcholine output on stimulation diminishes. This fatigue is removed by glucose mannose, galactose, lactate, or pyruvate, all of which promote acetylcholine synthesis. Fructose, sucrose, lactose, arabinose, d-l glyceraldehyde, acetate, acetocacetate, succinate, and acetaldehyde have no effect. (W. M. H.)

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Substance liberated by Adrenergic Nerves of Rabbit.—When the adrenergic nerves of the perfused rabbit’s ear are stimulated the effluent contains a substance which stimulates the frog’s heart and constricts the vessels of the rabbit’s ear. Assays of adrenaline equivalent by these methods agree with colorimetric estimates by Shaw’s method. (W. M. H.)


Blood Flow through Muscle during Sustained Anhydrase.—Changes in temperature in the muscles of the leg in man were taken as indices of changes in blood flow on contraction, the temperature having first been stabilized at c. 39-5° C, or 34-5° C, by immersion. 0-05 and 0-1 maximal contractions give marked hyperaemia; 0-2 and 0-3 maximal contractions are not accompanied by hyperaemia. Compression of vessels by taut muscle fibres is believed to suppress hyperaemia. (W. M. H.)

Nerve Impulse Responses evoked in Striated Muscle.—Responses in the motor and plate and in the soleus fibre have been studied after successive nerve impulses. The earliest second impulse (at c. 0-65–1-0 sec.) that can be set up in the motor nerve fibre gives rise to a negative potential of the motor and plate region relative to the rest of the muscle. The latent period of this potential diminishes at longer impulse intervals, but it may be preceded slightly by the new-born muscle impulse, which occurs at impulse intervals of c. 1-6–1-9 sec. The end plate potential appears independent of the new-born impulses, but aids in their growth when it is sufficiently delayed. (W. M. H.)

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Muscle Hemoglobin. G. A. Milikan. 503.


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The Value of Diphenyl Hydantoate (Dilantin) in Psychoses with Convulsive Disorders. N. D. Black. 711.


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**REVUE NEUROLOGIQUE**


Adénome Basophile de l'Hypophyse. (Basophil adenoma of the pituitary.) A. Austregesilo. 1.

Fibrolipome Intradural de la Moelle. (Intradural fibrolipoma of the cord.) J. Jabotinski. 15.

Oligodendroblastome Intéressant le Corps Calleux, Considérations sur le Syndrome du Corps Calleux. (Oligodendroblastoma involving the corpus callosum: the callosal syndrome.) O. Sager and L. Bazgan. 32.


Chordes Prolongées. (Persistent chorea.) L. Babonneux and P. Guilly. 149.

Contribution à l’Étude de la Physiopathologie des Lobes Frontaux. (Contribution to the study of the physiopathology of the frontal lobes.) L. Barraque. 160.

Metastatic Tumours of Cerebrum.—A summary of their histological features and modes of spread. (W. M. H.)


Hypertrophie Musculaire sans Myotonie chez un Nourrisson de 7 Mois avec Retard Général de Développement par Hypothyroidie Congénitale (Syndrome de Débré-Semelaigne). Examen Électrique. (Muscular hypertrophy, developmental retardation, and congenital hypothyroidism in a 7-month baby.) G. Bourguignon. 282.

Le Problème de l’Évolution Maligne de la Tumeur Royale dans une Maladie de Recklinghausen à Caractère Familial. (Malignancy in Recklinghausen’s disease.) R. Huguemini, S. Burgi, and J. Barei. 287.

**RIVISTA DI NEUROLOGIA (NAPOLI)**


*Difficoltà Diagnostiche in Casi di Tumore Endomidollare. (Difficulties in diagnosis in cases of endomidollary tumours.) A. Paleari. 269.*

*Simpatoma Embrionario Benigno Pleinodistale Sottocutanee. (Benign sympathetic neuroblastoma with multiple subcutaneous nodules.) P. Brusa and N. Orlandi. 291.*

*Cerebellite da Parotite Epidemica. (Inflammation of the cerebellum in mumps.) G. Gluck. 309.*

**Diagnosis of Endomedullary Tumours.—** Two cases are described which showed a slow course, spontaneous remissions, and identical histological findings. In the first there was an initial acute phase due to a leu tic pachymeningitis followed by a long period of health, but subsequent death from a glioma. In the second there was an apoplecticiform initiation, presumably due to a haematomyelia, followed by a remission when this was absorbed and final death from a neoplasm. These cases illustrate how the history and course may obscure the diagnosis of tumour. (R. G. G.)

**Benign Sympathetic Neuroblastoma.—** A clinical and histopathological illustration of a very rare case of sympathetic neuroblastoma characterized by multiple subcutaneous nodules and by a benign course. The case of an infant is described which had presented for about 4 years, beginning with the first week of life, numerous small subcutaneous tumours, widely disseminated and varying in size from that of a pea to that of a nut. These neoplasms after a variable number of months, according to the size which they reach, regress so as to disappear without leaving the least trace or in any way interfering with the development of the child, which has and still does enjoy the best of health. The structure of these tumours, studied at three different periods of their evolution, show a proliferation of the immature elements of the sympathetic. The authors interpret this case as a hyperplastic process of the subcutaneous ramifications of the sympathetic superimposed on a basis of congenital malformation. (R. G. G.)

**Inflammation of Cerebellum in Mumps.—** Towards the end of an attack of mumps a sudden onset of severe cerebellar symptoms was presumably due to an extensive cerebellar haemorrhage. Since this case and most others of encephalitis complicating mumps get better, the pathology is obscure, but it would appear that the lesion is vascular and the clinical picture due to hemorrhages. (R. G. G.)
Epilepsy and Reflex Aphasia in Pulmonary Abscesses.—The clinical observations described by the authors deal with a patient who developed, during the course of a pulmonary abscess, epileptic convulsions, psychical disturbances, and a motor aphasia, all of which recovered in a relatively short time without leaving any important residual effects. Apart from the aphasia, which the literature shows to be an extremely rare event as a complication of pleural or pulmonary disease, the case is shown to be of considerable interest in view of the diagnostic possibilities to which the symptomatology here described might give rise. The different theories (toxic, infective, reflex, or embolic) which have been proposed as a pathological interpretation of the epileptic and other nervous manifestations which can be identified in patients with pulmonary and pleural disease are referred to and discussed. The authors conclude, on clinical and pathological grounds, that in the case described both the aphasia and the epilepsy are best accounted for on a reflex basis. (R. G. G.)

Air Injection into Subarachnoid in Meningitis.—After the good therapeutic results obtained by the injection of air into the spinal theca in five cases of cerebrospinal fever which have already been described in a previous paper (L. Pedietti, 2, 1939) the author has continued systematically to adopt this treatment in all cases of meningo-coccal meningitis which have come under his care. The results obtained (seven children completely cured), which have been correlated very carefully with the various factors already known to influence the prognosis and outcome of this disease, are such as to demonstrate the real advantages resulting from the adoption of such therapeutic measures in the treatment of meningo-coccal meningitis. After having once again shown how the introduction of sterile air into the spinal theca can restore and maintain the patency of the foramina connecting the ventricles and the subarachnoid space, and so facilitating the drainage of purulent C.S.F., the author has proceeded to study the possible variations in function produced by the contact of the ventricular ependyma and the choroid plexus with the air. These investigations show that the blood—C.S.F. barrier becomes more permeable when air is present in the ventricles of healthy subjects, and that this is also the case in meningitis. This fact is of great importance in ensuring the therapeutic efficiency of both the serum and sulphanilamide in common use in the treatment of meningo-coccal meningitis. (R. G. G.)

SCHWEIZER ARCHIV FÜR NEUROLOGIE UND PSYCHIATRIE

Vol. 44. No. 1. 1939.


Über die Alkoholhalluzinose und ihre Beziehungen zur Schizophrenie. (Alcohol hallucinosis and its relationship to schizophrenia.) K. Huber. 43.

Anormenzählung im Kanton Appenzell A.Rh. vom Jahre 1937. Bearbeitet im Auftrage der amtlichen Zählkommission. (Number of abnormals in Canton Appenzell in 1937, studied from the employment census.) A. Koller. 69.

Die Psychoanalyse und die menschlichen Existenzprobleme. (Psychoanalysis and the problem of human existence.) A. Storch. 102.

Relazione tra differenziazione strutturale e funzionale dei centri e delle vie nervose nell'embrione di pollo. (Relationship of structural and functional differentiation of the nervous centres and pathways in the chick embryo.) F. Visintini and R. Levi-Montalcini. 119.

Über Verknöcherung der Aderhautgefäße. (Thickening of vessel walls.) G. Will. 151.

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*Über experimentelle Cardiazolepilepsie. (Experimental cardiazole epilepsy.) P. O. Andrell and S. Hansson. 537.

*Einige Stoffwechseluntersuchungen bei endogenen Psychosen mit besonderer Berücksichtigung der Leberfunktion. (Some metabolic studies in endogenous psychoses with some consideration of liver function.) G. Lundquist. 546.

Bisherige Ergebnisse über den Phosphatstoffwechsel im Liquor cerebrospinalis. I. Bericht über ein neues Extraktionsverfahren für kleinere Liquor-
mengen. (The present position of phosphatid metabolism in the cerebrospinal fluid. I. A new extraction method for smallest quantities of fluid.)
F. Roeder. 457

Die Schwebelkohlenstoffvergiftung der Nervensystems.
(Carbon disulphide poisoning of the central nervous system.) C. Baumann. 568.

Versuch einer Cardiazolbehandlung der Epilepsie.
(Cardiazol in the treatment of epilepsy.) A. Erb and J. Pozniak. 581.

Eine weitere Verbesserung meiner Markscheidenfarbemethode am Gefrierschnitt. (A further improvement in my method for staining myelin sheaths in frozen sections.) K. Schroeder. 588.

Beitrag zur Auswahl der Behandlungsmethode bei der Schizophrenienzitherapie. (The choice of method of treatment in schizophrenia.) R. Elste. 594.

Behandlung Schizophrener mittels Insulin- oder Konvulsions-shocks. (Klinischer Beitrag für die Auswahl der Kranken.) (The treatment of schizophrenia by insulin or convulsion shock. A clinical contribution on the choice of patient.) A. Silveira. 604.

*Experimental Untersuchungen über die lokale Einwirkung des Thiohens im Zentralnervensystem. (Experimental investigation of the local action of thiophen in the central nervous system.) F. Uppers. 623.

Experimentelle Untersuchungen über retrograde Zellveränderungen in der unteren Olive nach Läsionen des Kleinhirns. (Experimental studies of retrograde cell changes in the olivary body after cerebellar lesions.) A. Brodal. 646.

Astrocytomas of the Medulla.—In 25 histologically verified tumours of this region 12 were astrocytomas. In six cases the patient was under 20. The average duration of symptoms was 3 years 3 months. The tumours were diffuse in four cases, three of these being in the older group. Four tumours were circumscribed, one having the structure typical of a solid cerebellar astrocytoma. Some were protoplasmic astrocytomas not different from those in the cerebrum. A piloid astrocytoma showed in parts a resemblance to a polar spongioblastoma. In only one case was there cystic formation. (G. M. G.)

Experimental Cardiazol Epilepsy.—Histological studies were made of the brains of twelve guinea-pigs after repeated fits induced by cardiazol. No changes could be found which could be ascribed to the cardiazol. (G. M. G.)

Metabolic Studies in Endogenous Psychoses.—The author criticizes reports of disordered liver function and other changes in mental disease on the basis of isolated investigations. So in groups of old-established schizophrenics, young recent cases, depressions, and other conditions patients were kept in bed on standard diets and various studies made at 3-hourly intervals for at least 3 days, to see if any significant rhythmic variations were to be found. Temperature, urine output, urobilin, urine colour values, urea, and serum albumen were investigated. In some cases Rona’s test for quinine-resistant lipase was studied and in some blood pigment values. Some curves were obtained but were not consistent or significant, and the results give no confirmation of any disorder of liver function. (G. M. G.)

Thiophen Poisoning.—In experimental chronic poisoning in dogs a selective effect on the cerebellum is produced. In milder cases a diffuse change in the granulosa is found. In the more severely affected cases there are localized areas of degeneration and gliosis in the granulosa and to a less extent in the Purkinji cells, the distribution showing that the poison acts through a circulatory disturbance. The sensitiveness varies with the age, the older dogs showing quicker and more severe toxic symptoms. (G. M. G.)

BOOK REVIEWS

ANALYSIS OF HANDWRITING
H. J. Jacoby

(George Allen and Unwin, Ltd., London. 1939. Pp. 312. 10s. 6d.)

The psychiatrist, eager for aids in the study of personality, may often have remarked on the paucity of reliable books in English on the analysis of handwriting. He may rightly look for one in which the principles of graphological interpretation are induced from the correlation of writing characteristics with the features of personality adequately studied and assessed. Rated by such a criterion the present volume does not go far in meeting a real demand. It is an introduction to graphology and at points perhaps necessarily superficial. Some of its limitations are self-imposed —thus the neurological aspects of calligraphy are scarcely mentioned; other drawbacks and more serious come from the poor presentation of data on personality. The results of the “psychological penetration” of the author are loosely expressed in quite unorthodox jargon. The reader longs for adequate clinical description of the make-up of the subjects; he asks for something more certain than astral conceptions like “spiritual deflation of the ego.” Still, the volume has much of real value and compliments will surely be forthcoming from mail censors. The format is good and the accessibility of text and sample references commendably easy.