Book reviews

for the effect of extreme hypertension on blood vessels and tissue, and of the painstaking testing and eventual verification of the hypothesis by a series of experiments on rats with renal hypertension. The basic theme is that fibrinoid necrosis in arterioles is a direct effect of high blood pressure on vascular walls. When blood pressure is raised arterial constriction occurs to maintain the relationship of pressure to resistance at a constant level, thus ensuring a constant flow. Since resistance to viscous flow varies inversely with the fourth power of the radius, a small degree of vasoconstriction in the arterioles is sufficient to offset the large increase in pressure. However, the tension generated in the vessel wall as a result of vasoconstriction varies directly with the first power of the radius, so that the physical stress in the walls of hypertensive vessels may be considerably increased. At extreme levels of hypertension there is marked vasoconstriction but in some areas the metabolic reserves of peripheral vascular tone are exhausted, so that after chronic increase in tension weaker regions may give way. Oedema and leakage may occur at areas of dilatation.

Simply and logically, and with great modesty, the author describes the results of years of patient experiment and meticulous technique, marshalling the evidence for and against his hypothesis. In so doing he has produced a remarkable work of medical scholarship which all clinicians and research workers will admire and which few will equal.


The characteristic trend of modern neurology is an attempt at incorporation of the recent rapid advances in knowledge of the physiology and chemistry of the nervous system into clinical practice. Undoubtedly the advances in electrophysiology, histochemistry, and clinical chemistry have been great. Even a 'young Turk' must feel that the major advances have been at the periphery of the nervous system, so it is surprising that this book comprehends a volume of clinical, psychological, and even experimental data bearing on some of the higher functions of the nervous system which could not have been written 20 years ago. The editors of this ambitious handbook were caught unawares and have had to divide the projected volume of neuropsychology into two, leaving aphasia and kindred subjects to volume 4.

Volume 3 contains 21 chapters by well-known authorities starting with an introduction by Critchley (perhaps more appropriate for the later volume) and ending with a long chapter by Luria and colleagues on restoration of higher cortical function after local brain damage. Between these outstanding chapters are others of localization of mental functions, consciousness and attention, coma and sleep, orientation in space and time, memory, intelligence, and emotion. They range from brief reviews supported by a bibliography to definitive monographs. The quality is not necessarily related to the length. Some are frankly poor and of little value to the practising neurologist; others are outstanding reviews. If the clinical scientist sometimes longs for evidence in place of assertion and controlled trials to distinguish therapeutic benefit from natural recovery, there is no doubt that careful study of this book will make many young men ask themselves if British neurology is being too neglectful of the higher functions of the nervous system.

J. A. SIMPSON


This book forms part of Volume 8 of a nine-volume Handbook of Paediatrics and is not intended to stand on its own, containing as it does cross-references to other volumes. Nevertheless, the book provides an impressive account of the neurology and psychiatry of childhood. In the larger section on neurology, there is an introductory section on the basic principles of history-taking, clinical examination, the diagnostic methods in paediatric neurology as illustrated by the assessment of the brain-damaged child. This is followed by an account of the normal development of the skull and brain, after which there are sections dealing in detail with diseases of the nervous system in childhood. These are grouped under the general headings of developmental anomalies of the skull, prenatal and neonatal anomalies and diseases, degenerative, inflammatory, and vascular diseases, damage to the nervous system by physical agents, disorders of the autonomic nervous system, and a chapter on fits in childhood. The second section on psychology and psychiatry starts with a description of normal psychological testing. Disturbances of psychological development and maturation, behaviour disorders, childhood psychoses, and speech disturbances are described, followed by a chapter on psychiatric examination and psychotherapy. The book concludes with a thoughtful chapter on the psychological situation of the child in hospital.

There are more than 30 contributors to this book, and by and large, the difficulties inherent in such a multiple authorship have been satisfactorily overcome. The inevitable delay between the completion of the individual contributions and the final publication of the volume does not appear to have excluded references to up-to-date sources in the literature, some of the papers quoted in the extensive bibliography being as recent as 1969. The book has been produced to the high standards one expects from Springer-Verlag and provides a definitive work of reference on paediatric neurology and psychiatry.

J. B. STANTON


The chief regret one has on reading this report of a symposium on neurogenic disturbances of the bladder is its shortness. Guttmann reports on the treatment of a new case of paraplegia before reflex emptying of the bladder occurs, as it is practised at Stoke
Mandeville—the application of sterile operation theatre technique to repeated catheterization. Bors and Rossier now report that their research into the reflexes arising in the mucosa of the urethra and bladder and affecting the detrusor and the pelvic floor have led them to use the anaesthetizing of bladder and/or rectal mucosa to obtain micturition in some cases of paraplegia. Anaesthetizing of the urethral mucosa can be used to increase the bladder capacity, to relax the detrusor and the pelvic floor, and to diminish the amount of residual urine. The function of the sphincters of the anus and urethra in normal micturition was investigated and reported on by Allert and Jelasic. Electric stimulation was reported on by Burghel and Ichim from Budapest, Graber and Rutishauser from Basel, Potempa from Heidelberg, and Caldwell from Exeter. The Hungarian workers stimulate the pelvic nerves, Potempa stimulates the detrusor, and Caldwell the external sphincter of the urethra. These communications are followed by a report of the subsequent rewarding discussion.

P. W. NATHAN


This volume contains the 70 papers which were presented at the Third European Congress of Neurosurgery, which was held in Madrid in 1967.

About half the papers are devoted to fundamental studies on the anatomy, physiology, pathology, and methodology of the cerebral circulation. The remainder deal with various aspects of occlusive vascular lesions and aneurysms and will be of most interest to the clinical neurosurgeon.

Many of the papers in the section on fundamental studies of the cerebral circulation will already be familiar to those who have read the reports of the international conferences on cerebral blood flow held in Scandinavia and elsewhere in recent years. However, the combination of basic studies and clinical papers which are presented in this volume should be of great value to the young neurosurgeon.

The volume is beautifully produced and the material is well presented.

A. MURRAY HARPER


In this well-produced monograph Professor Zapletal gives an interesting account of his experiences in the surgical treatment of intractable pain during the past 20 years. He describes the current theories on transmission of pain impulses and the consequences of intractable pain on the patient. This is a fairly uncritical review and includes, without comment, certain theories which are now out of fashion, but the account of the anatomy and physiology of pain pathways will be of interest to anyone involved in this type of work and there is a comprehensive bibliography. For certain practical reasons stereotaxic surgery has not been developed in this clinic and as an alternative an open infra-tentorial approach to the mesencephalon and posterior thalamus has been developed. The writer has used this technique in the treatment of extra-pyramidal disease and intractable pain but only the latter subject is dealt with in this monograph. Recent work on percutaneous cordotomy, which would almost certainly modify the writer's views on the treatment of intractable pain, is not mentioned. He reverts the results of 24 open mesencephalic operations on 18 patients between 1955 and 1957. Fourteen patients between 1958 and 1960 were operated on by open mesencephalothalamotomy by destruction of the spino-thalamic tract at the junction of the mesencephalon and the thalamus. Subsequently, a total of 30 open thalamotomies for intractable pain on 22 patients were performed. The results described are similar to other series and certainly compare well with stereotaxic surgery. The immediate results of operation are gratifying, with an increasing incidence of recurrence with the passage of time, depending on the length of survival. A high proportion of these patients were in the terminal stages of malignancy. Professor Zapletal's view that the open operation, under direct vision, is more accurate than stereotaxic surgery is not altogether convincing and is reminiscent of the declaration that 'surgery is more of an art than a science.' However, this description of his experiences is well worth study and is recommended to all those interested in the subject.

JOHN HANKINSON


This is not a textbook on viral diseases of the CNS, but it is an elegant survey of some of the advancing areas of knowledge about the role of viruses in neurology, with particular reference to herpes simplex encephalitis, 'slow' and latent virus infections, and subacute sclerosing panencephalitis. The book contains papers and discussions from a symposium in Oxford in 1968. It is strongly recommended for the insight it gives into many concepts which may be new to the clinical neurologist. It is very well produced, and a pleasure to read.

J. A. SIMPSON


This book of 80 pages is very well printed with a considerable number of Tables and illustrations. The main problem is to understand why and for whom this book was written. The author presumes that the term paroxysmal dysrhythmia is a universally accepted entity. However, in his illustration of EEG features it is difficult to understand what should be included and what should be excluded of all the varieties of possible EEG changes. In the first four illustrations of EEGs there is no indication as to whether electrode placement or montages. The Tables are very clear but it is difficult to understand their relationship to the main aim of the book. The German terminology is difficult to understand as
NEUROGENE BLASENSTÖRUNGEN
P. W. Nathan

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