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Book reviews

THE AMPHETAMINES: TOXICITY AND ADDICTION By O. J. Kalant. (Pp. 188; $8·75.) Thomas: Springfield, Ill. 1973.

Written by a physiologist who is also a biochemist on the staff of the Addiction Research Foundation of Ontario, this monograph first appeared in 1966. The second edition has been called for by the occurrence of fresh forms of addiction, and by the results of recent efforts to restrict the availability of amphetamines (both by government action—as in Canada, and by the decision of doctors themselves—as in parts of Britain). Increasingly, amphetamines have come to be viewed as of limited therapeutic use, prescription only rarely warranted. Doctors in western countries have been alarmed by the frequency of housewives becoming misusers on prescription.

At the same time, however, non-medical use has increased greatly. Intravenous administration has become frequent, and so also has group indulgence by young people; epidemics have occurred, such as the one in England during 1968; the post-war Japanese epidemic has been ascribed to ready availability and low social morale as an aftermath of national defeat. The author reviews first acute intoxication, which can be fatal or else results in a transitory psychosis with hallucinations and delusions of persecution. Chronic therapeutic use is then described; it can be without ill effect, or can produce toxic symptoms which are exaggerated characteristic effects of the drug. Amphetamine psychosis is the most serious toxic consequence, closely resembling paranoid schizophrenia.

The author then demonstrates convincingly that true addiction occurs, refuting those who dispute this on the wrong grounds that physical withdrawal symptoms are not seen, and that chronic users are mostly psychopaths. Due to marked tolerance, the addict requires large amounts, and his chronic intoxication manifests as CNS overstimulation, with erratic behaviour, insomnia, anorexia, and irritability.

The author also dismisses the view that current misuse differs from that documented during the '60s. She considers that a sharp contrast between the familiar 'low-dose oral' pattern and the more recent 'high-dose intravenous' pattern is misleading and unwarranted. She criticizes the parochialism evident in the literature, instancing the neglect in the English language journals until recently of the Japanese and the Swedish epidemics. Before assimilating amply documented experience, each country in turn appears to wait until its own national crisis develops. Different medical disciplines likewise fail to share information. International cross-disciplinary symposia and books like this one promote wider understanding, and more effective and legislative policies.

H. J. WALTON

MODERN RADIOTHERAPY AND ONCOLOGY: CENTRAL NERVOUS SYSTEM TUMOURS Edited by D. J. Deeley. (Pp. 323; illustrated; £7.) Butterworths: London. 1974.

'We really know very little about the irradiation of cerebral tumours', writes the editor with disarming modesty. Nevertheless, he and his 13 fellow contributors from centres in various parts of the world have provided much useful information and many references, not only to radiotherapy, but also to the wider aspects of the pathology, diagnosis, and management of brain tumours.

The index is a good one, painstakingly prepared, but, as with many other multiple author books, much more might have been done to edit and coordinate overlapping contributions by different authors. For example, sections on radioactive brain scans, on pituitary adenomas, on craniopharyngioma, and on spinal tumours, appear in different parts of the book and there are hardly any cross-references in the text. It would be very helpful to the reader if he was given an occasional footnote. 'See page 153' ... 'for a different view on this question see chapter 6'. Something of that sort.

Tumour histology, diagnostic radiology, and raised intracranial pressure are all well handled. Henk's chapter on radiotherapy for the whole central nervous system (usually for medulloblastoma) is especially good. Deeley makes many cogent points in his own three chapters. Kramer argues powerfully for radiotherapy as the main line of treatment for craniopharyngioma.

No editor can please every reader, but for my money a second edition of this helpful volume might well consider omitting or shortening the sections on ultra-sound, on electroencephalography, and on scanning after irradiation. Giving in their place a chapter on the side-effects and dangers of radiation (bringing together the data at present scattered

through the book), more about the surgical risks and endocrine management of pituitary tumours, more about haemangioblastoma, suprasellar germinoma ('atypical teratoma') and the tumours of the pineal region; and more on the treatment of brain stem tumours, the results of which—for example, those reported from the Mayo Clinic in 1969—are not as 'uniformly depressing' as is suggested.

T. B. BREWIN

BRAIN BIOCHEMISTRY By H. S. Bachelard. (Pp. 71; 95p.) Chapman and Hall: London. 1974.

There is a growing interest within universities in the subject of neurochemistry. The timely publication of this short inexpensive booklet, provides an ideal supplement to introductory lectures in brain biochemistry for both science and medical students. The short introductory chapter on the anatomy and morphology of the brain provides the basis for the remainder of the book, which concentrates on describing the chemical events related to excitability within nervous tissue. Besides referring to metabolism of neurotransmitters, the author summarizes current ideas on cyclic AMP, the nature of cholinergic receptors, and the concept of neuronal–axonal transport. The final chapter describes adaptive processes in the brain. One example of this form of neuronal plasticity is the inducibility of a key 'transmitter-enzyme' tyrosine hydroxylase following release of noradrenaline. Another illustration is adaptation to specific substrates—for example, following ketosis during development, or after administration of glutamate. Control of cerebral enzyme activity is also affected by hormones. These relatively new findings have a special significance to the problem of drug tolerance and dependence discussed in the final few pages of the monograph. The book can be strongly recommended to students and medical graduates who wish to acquire a well-balanced, up-to-date and yet brief account of the essentials of modern neurochemistry. It is well-produced, and the figures and text are both clear and readable.

A. N. DAVISON

HANDBUCH DER NEUROCHIRURGIE VOL. 7, PT 3. PERIPHERES UND SYMPATISCHES NERVENSYSTEM. Edited by H. Olivecrona, W. Tönnis, W. Krenkel, W. Krücke, D. A. Loose, K. E. Loose, K. Piscol, P. Röttgen, O. Stochdorph, and R. Wüllenweber. (Pp. 24; illustrated; DM 620.) Springer: Berlin. 1974.

This tome could have been dedicated to the memory of Foerster: his lasting influence on German neurology is apparent in almost every section. All contributors are German, and they cover some aspects of neurosurgery which are the domain of general and orthopaedic surgeons in this country—that is, peripheral and sympathetic nerve procedures.

The first 240 pages by Krücke on the microanatomy and pathology of peripheral nerves is inclusive, and beautifully illustrated, and lists over 800 references: he criticizes the confused nomenclature of neuromas, neurinomas, neurofibromas, and Schwannomas of different, and sometimes the same, authors.

The chapter by Röttgen and Wüllenweber on peripheral nerve surgery of about the same length (1 500 references) seems largely in agreement with the work of Seddon and the teams of the Medical Research Council in the last war. Surgery is contraindicated in phantom limb pain, but advised in the carpal tunnel syndrome; conservative treatment of the latter is dismissed as a waste of time. Lesions of the lateral popliteal nerve are blamed on a combination of slimming and TV gazing.

Stochdorph's 30 pages on the pathology of the vegetative nervous system are disappointing: there is almost nothing about the autonomic neuropathies, and no mention of the exciting experimental work of Levi-Montecalcini. Loose and Loose's chapter on surgery of the sympathetic nervous system is uncontroversial, and rightly relegates sympathectomy for hypertension to limbo.

It is a pity that Piscol's outstanding review of operations for the relief of pain should have been misplaced in this volume, as it deals almost exclusively with operations on the cord. His historical review, his excellent account of the physiology of pain, and his critique of the various procedures up to dorsal column stimulation, deserve careful study by medical and surgical neurologists.

E. H. JELLINEK

CLINICAL NEUROSURGERY Vol. 20. Congress of Neurological Surgeons. (Pp. 500; illustrated; $22·50.) Williams and Wilkins: Baltimore. 1972.

This book, the 20th volume in a series published annually, records some of the papers presented by distinguished contributors at the meeting of the Congress of Neurological Surgeons in Denver, Colorado in 1972.

This volume is devoted mainly to the treatment of traumatic and degenerative lesions of the spine. There are contributions on the management of lumbar discs, stenosis of the lumbar canal, and on the implications for spinal fusion. Problems in the treatment of cervical spondylosis and cervical disc protrusion are extensively considered, and there are