spectively—Gordon Brocklehurst, the Hull neurosurgeon, has produced a very lucid and succinctly topical account of aspects of hydrocephalus and spina bifida cystica, and some of the associated minor syndromes (diastematomyelia, myelodysplasia). The critical evaluation by Lorber of systematic and relatively unselected commitment to active surgical treatment of hydrocephalus and spina bifida cystica has allowed a more discriminating application of technical skill in these conditions, and this book provides a most valuable account of the management of the array of problems commonly found. The whole book is not, however, concerned with problems of management. The first five chapters are devoted to pathological and historical reviews, a clinico-pathological correlation, and an outline of the epidemiology of spina bifida. Wisely, the authors resist the temptation to be discursive about cerebrospinal fluid hydrodynamics, but the account of antenatal diagnosis by alpha-fetoprotein assay is rather too cursory for the many paediatricians who will find this book of special value, and for whom the prevention of open neural tube deformities has the highest appeal. Nevertheless, this monograph can be unhesitatingly recommended to all who are involved in the care of patients with major neural tube deformities.

JOHN WILSON

Pediatric Neurology Handbook 2nd edn. By J. T. Jabbour, D. A. Duenas, R. G. Gilmartin, and M. I. Gottlieb. (Pp. 521; illustrated; £9.50.) Kimpton: London. 1976.

The *Pediatric Neurology Handbook* is literally a small book to be carried in the hand rather than the exhaustive work normally associated with this title. Its aim is to present the information in a compact and immediately accessible form. With it, an instant opinion or line of treatment for most neurological disorders of childhood can be formulated. This is not the place to seek the well-reasoned argument or the different aspects of controversy.

Much of the data is presented in tabular form, enabling the reader to make a rapid check of facts and probabilities. There are more than 200 photographs but I found these disappointing in that they were little more than illustrations of points already

well made in the text. There is a proper concentration of detail upon the conditions which are virtually limited to childhood—for example, the genetic and metabolic disorders—and upon those conditions which although common in adults differ considerably when they occur in children. For instance, 45 pages are devoted to convulsive disorders, with analysis and guidance on the management of neonatal and febrile convulsions. Brief descriptions of the commonly used intelligence and psycholinguistic tests enable a clinician to appreciate the relevance of psychological reports. The assessment of neurological emergencies and the grading and management of coma are dealt with in an orthodox and thorough way. The detailed table of contents does not fully compensate for the absence of an index, but anyone who gets to know and who uses this book will find it to be a valuable and reliable standby.

I. T. DRAPER

Normal and Pathological Development of Energy Metabolism Edited by F. A. Hommes and C. J. van den Berg. (Pp. 246; £7.50.) Academic Press: London. 1975.

In October 1974 a symposium was held in the Netherlands on various aspects of energy metabolism in relation to normal and pathological development. The papers given at the meeting and relevant discussion is the subject of this book. Gross interference with energy supply is incompatible with life, so that quite subtle changes are to be expected in metabolic disorders. The inborn errors of metabolism provide good illustrations of non-lethal enzyme deficiencies and there are contributions on galactosaemia, the aminoacidurias, fructose intolerance and pyruvate dehydrogenase deficiency. Such errors have widespread effect as in methionine adenosyltransferase deficiency. The physiological significance and development of the transferase involves transmethylation reactions, biosynthesis of polyamines and enzyme regulation.

However, despite recognition of the biochemical pathways involved, knowledge of the pathogenetic mechanisms operating *in vivo* is scanty, particularly where they affect the developing brain. One critical aspect affecting brain development is the continuing need for energy. General aspects of fetal and

neonatal energy metabolism are described, especially in relationship to the role of mitochondria.

The fine control of glucose supply and utilisation of alternative substrates such as ketone bodies are of special relevance to the pathology of the developing brain. In addition, extracerebral regulation of glycogen metabolism and gluconeogenesis is of importance. These biochemical topics are well discussed, for example, in a chapter which includes a great deal of valuable data on systems relationships and the control of metabolic pathways in developing brain. Complementing this is an account of regulatory factors in glucose and ketone body utilisation in rodents' brain and the effects of hyperketonaemia in children. However, the problems of neonatal hypoglycaemia or hypoxia are not fully dealt with.

Other contributions relate to the main theme as in a chapter on metabolic spaces and heterogeneity in the developing brain or the article on changing pattern of brain mitochondrial substrate utilisation. It is of interest that crude mitochondrial fractions from adult rat brain can be separated into more than two subpopulations and their proportion of changes during development.

By present standards this is a reasonably priced book. It will be especially useful to research workers with a basic science rather than clinical bias.

A. N. DAVISON

VIIth International Congress of Neuropathology Edited by St. Kornyei, S. Tariska, and G. Gosztanyi. (Pp. 690; illustrated; \$116.75.) Excerpta Medica: Amsterdam. 1975.

Three main themes—inflammatory and immunological diseases, hereditary metabolic disorders, neuro-oncology—and a shorter section on hydrocephalus comprise this record of neuropathology in 1974. Over 130 contributions from all over the world provide the casual reader with ample scope from which to pick items of specific interest.

The pathologist's concern with histogenesis of tumours is tempered by concern for correlation with clinical behaviour and prognosis, as emphasised by an eminent neurosurgeon who comments on the relative lack of progress in this direction since Bailey and Cushing. By contrast, the increasing

elucidation of aetiological agents in inflammatory, and specifically viral, diseases leads to the hope that some of the next steps will be in the field of therapeutics. The change in emphasis from morphology to biochemistry in the unravelling of hereditary neuronal disorders is apparent in the papers presented, although it is obvious that the morphological changes are far from fully documented.

This volume is not for consumption *in toto*, but is rather a source of references on the state of the game in several major fields in contemporary neuropathology, and in this it serves its purpose well.

A. J. FRANKS

Textbook of Psychiatry for Medical Practice Edited by C. K. Hofling. (Pp. 643; price not stated.) Lippincott: Philadelphia, 1975.

This large textbook, now in its third edition, is the work of several authors, most of whom have present or past links with the University of Cincinnati. The senior author says in the preface that the book is meant for non-psychiatric physicians. To produce such a work is a laudable aim, but the book has serious shortcomings.

In general it is too long, it has an outdated air, and there is too much preoccupation with psychoanalytic concepts. This last fault is particularly evident in the long, theoretical account of personality development as well as in the chapter on psychosomatic disorders, where the old notion of specific unconscious conflicts underlying specific physical disorders is brought out of the historical museum. There is no mention of epidemiological studies in this field, no mention of the importance of life events in illness in general. Recent references are few.

The same criticism, of lack of reference to important recent work, applies to much of the book. For example, there are several pages on the family dynamics of schizophrenics, but nothing at all on the Danish-American work on the genetics of schizophrenia. There are two chapters on treatment, sensibly divided into one on measures suitable for non-psychiatrists, one on measures suitable only for the psychiatrist. Rather less sensibly, the second chapter is the longer: it contains about 20 pages on psychotherapy, less than two

on behaviour therapy. Incidentally, the non-psychiatrist, after being given a very sketchy account of tricyclic antidepressants, is told that he should 'almost certainly' arrange for psychiatric consultation before prescribing them!

J. L. GIBBONS

Notices

International Conference on Neurological Epidemiology 16-17 May 1977 (Conference course: 15 May 1977), Gorman Auditorium, Gorman Building, Georgetown University Hospital, 3800 Reservoir Road, N.W., Washington, D.C. 20007, USA. No registration fees. Details from Dr B. S. Schoenberg, Head, Section on Epidemiology, NINCDS, NIH, Room 7C10A, 7550 Wisconsin Avenue, Bethesda, Maryland 20014, USA. (Phone: 301-496-1714.)

The two-day conference will consider current knowledge in neuroepidemiology and stress the applicability of this information to the practice of neurology and neurosurgery.

Sixth International Congress on Neurological Surgery 19-25 June 1977, São Paulo, Brazil. Details from Congress Office, Caixa Postal 20389, 01000 São Paulo, SP, Brazil.

Letters

Mechanism of the inverted supinator reflex

SIR,—Estanol and Marin (1976) infiltrated finger flexor muscles with procaine in two patients with an inverted supinator reflex. They then found that no finger jerk could be obtained by tapping the fingers but that finger flexors still contracted in response to percussion of the styloid process of the radius. This was interpreted as evidence against the latter response being mediated by muscle spindles in the finger flexors and in favour of intraspinal spread of afferent impulses, presumably thought to originate in biceps and brachioradialis. Estanol and Marin quoted earlier work of mine (Lance, 1965; Lance and de Gail, 1965) which demonstrated that the irradiation of reflexes depends on the propagation of a vibration wave from the point percussed to the bellies of muscles participating in the reflex contraction. Gamma efferent block by procaine infiltration renders the muscle

spindles less sensitive but still susceptible to excitation by an effective stimulus. The latency for EMG of flexor muscles in Estanol and Marin's experiments was 26.2 ms when the fingers were tapped and 26.8 ms when the radius was percussed, suggesting that the latter is a more direct and possibly more effective stimulus. In this case the afferent volley from the finger flexors induced by vibration would elicit contraction of those muscles through the monosynaptic pathway, the more readily if alpha motor neurone excitability is enhanced by rostral cord compression. The absence of contraction of biceps and brachioradialis would be explained by compression of the posterior roots at the fifth and sixth cervical segment.

If, as Estanol and Marin propose, the afferent pathway from the C5-6 segments is intact, the absence of the biceps and brachioradialis reflexes must be caused by damage to the anterior roots (unless the lesion interrupts the reflex arc within the spinal cord). Anterior root lesions would be expected to reduce reflex contraction in proportion to reduction in muscle power whereas power is often preserved in biceps and brachioradialis when their reflexes are abolished.

To prove Estanol and Marin's hypothesis it would be necessary to infiltrate the biceps and brachioradialis with procaine and show that the reflex contraction in finger flexors then disappeared. On both clinical and neurophysiological grounds, the balance of evidence presently available would still appear to favour the 'peripheral' rather than 'central' explanation of the inverted supinator jerk.

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