Lewis P.D. & Apostolov K. (introduced) (Royal Postgraduate Medical School, London W12)

Coronavirus encephalitis in mice: preliminary observations

The coronavirus group includes mouse hepatitis virus, infectious bronchitis virus of chickens, and transmissible gastroenteritis virus of pigs. Coronaviruses have been isolated from patients with colds, and have also been implicated in endemic (Balkan) nephropathy. Coronavirus OC43 derived from a patient with a cold, initially grown in human embryonic tracheal culture, was injected intracerebrally into mice and serially subpassaged in brain suspension. It produced a fatal encephalitis when injected into the brain of newborn mice, the period between inoculation and death being 48 to 60 h. Mice older than five days appear not to be susceptible. Animals were killed by perfusion-fixation at 24 and 48 h after inoculation. A prominent periventricular inflammatory response was present, with apparent fusion of groups of intraventricular cells. There was marked disruption and oedema of the corpus callosum. Glial, fibroblastic and vessel wall proliferation was prominent. Neuronal damage was marked at 48 h, especially in the hippocampus, with eosinophilic intracytoplasmic inclusions. Virus particles resembling coronavirus and measuring 80-90 nm were seen extracellularly and within dilated cisternae of endoplasmic reticulum.

BOOK REVIEWS

Bradley W.G.

Disorders of peripheral nerves

316 pages. Blackwell Scientific Publications, Oxford, London, 1974. £9.75

In so many ways this is a useful and practical book, certainly the copy in our EMG department is frequently consulted on points of neuroanatomy and electrophysiology. These areas, as well as neurochemistry, are attacked con bravura and the author should be congratulated on this score. However, it is the practising clinician to whom this book is mainly addressed. Regretfully it must be said that at the clinical level Professor Bradley has not been entirely successful, and although his book claims to offer more than undergraduate neurology texts it is often rather disappointing in its approach to diseases of the peripheral nervous system. It could be that for all his obvious enthusiasm and intelligence, the author does not have quite the breadth of experience for him to be able to present a completely rounded view of his subject.

Serological tests for syphilis in all patients with peripheral neuropathy (cf. p. 85)? Dubious advice. Peripheral nerve lesions in malaria and schistosomiasis (p. 200)? Indeed! Some of the accounts of the clinical pictures of peripheral nerve diseases, common as well as rare, are too perfunctory to be really useful at a postgraduate level. Elsewhere, carcinomatous neuropathies are dealt with in slight and uncritical fashion. The pattern of neuropathy seen in untreated patients with uraemia is not clearly distinguished from that in patients on haemodialysis. The relation of liver failure to the development of peripheral neuropathy is more controversial than might be gathered from pages 168 and 172. Autonomic involvement is insignificant, rather than late, in the Rukavina type of primary amyloidosis (p. 227), and is more apparent in the van Allen type.

In other places an irritating superficiality of approach can be detected. The first sentence of p. 162 and the last paragraph of p. 294 do not need to be spelt out. To write, apropos motor neuron disease (p. 239), that there are a number of pointers which may be of aetiological significance, is overoptimistic—if not downright self-delusory. A penchant for the resonant epithet is not always gainful, despite the
author's highly successful tomaculous (brain-sausage) neuropathy, not mentioned here. Thus one is startled by his reference to two polar forms of leprosy, implying an unusual concept of a disease whose distribution is generally considered to be predominantly tropical.

Perhaps Professor Bradley has been over-ambitious, and has failed by trying to be too comprehensive in too compact a space. Nevertheless, his book contains many good things, and—at a fraction of the price of its encyclopaedic competitor—it must be considered a 'best buy' on its subject.

P. D. LEWIS

Eliasson S.G., Prensky A.L. & Hardin W.B. Jr (eds)
Neurological Pathophysiology
Oxford Medical Publications, Oxford. £3.00

I enjoyed reading this book, which—while of value to the postgraduate student in clinical neurology and in the neurosciences—is primarily written for the undergraduate. Comparable and excellent British textbooks of neurology for the clinical student tend to over-emphasize the importance of the physical examination (better learned from the bedside than from the printed page) and the description of advanced disease. The latter is now of uncertain value in contemporary practice and is a relic of bygone days when the management of patients with neurological disorders seemed to stop short at diagnosis. A textbook chapter on treatment in neurology, looking almost like an afterthought at the end of 400 pages, perpetuates this attitude.

Here, an understanding of the normal and of the diseased nervous system is approached essentially through laboratory research. British undergraduate training in clinical neurology might benefit from increased emphasis on basic sciences, especially in areas outside classical electrophysiology and anatomy, and this book provides such an emphasis. It does not teach you 'how to diagnose and treat common neurological disorders' (what book can?), but rather provides information about the mechanisms overlying such disorders.

The book is warmly recommended despite displaying some features of a hastily brought out commercial production; for instance page 4 describes a cover illustration which is non-existent in the English edition. Also figures are wrongly annotated and bibliographic references incomplete. Developmental as well as adult neurology is covered and chapters by Prensky on normal brain development, the effects of under-nutrition and of hereditary metabolic diseases, are especially good. Special senses are also well covered as are disorders of higher function, though not dementia. Most of the contributions rise above a pedestrian level, and some discuss problems and ideas not encountered in any other graduate book that I have read.

P. D. LEWIS

Schenk E.
Neurologische Untersuchungsmethoden
258 pages, Georg Thieme Verlag, Stuttgart, 2nd edition, 1975. DM 17.80 (in German)

The second edition of this manual, which would best be subtitled 'from symptoms and signs to diagnosis', represents a condensed description of the neurological examination with an extensive interpretation of the clinical findings. The little paperback volume comprises also a very useful instruction in the neurological examination of the newborn, of the infant and of the unconscious patient, and it gives an introduction to the use of the special and laboratory methods, such as radiography, angiography, myelography, computer assisted tomography, gamma-encephalography, electroencephalography, nystagmography and myography, and finally the investigation of the spinal fluid.

This handy book is logically arranged, richly and effectively illustrated, and contains a short list of recommended literature for further reading. For the student it may serve as a valuable means for evaluating neurological findings, for the experienced it still provides a base of reference.

A. BISCHOFF