Book reviews

Physiology and Pharmacology of Epileptogenic Phenomena. Edited by MR Klee, H Dieterlux, and Erwin-J Speckmann. (Pp 430; \$67.32.) New York: Raven Press, 1982.

Ultimate understanding of epileptogenesis will come from knowledge of the physiology of neurons and of the molecular events in their membranes. Therapeutic mastery of epilepsy will relate to the pharmacology of these phenomena. This volume which directly addresses these problems is derived from a major international symposium held in Frankfurt am Main in July 1980. It comprises, in camera ready format, 41 research papers 4-13 pages long and 17, one page abstracts. These contributions are brief research reports, of a high standard, addressed to fellow researchers in cellular electrophysiology.

The papers reflect the marked contribution that has derived from *in vitro* preparations (mammalian hippocampal slice, cultured mammalian neurons, and various invertebrate preparations). They tentatively indicate the contribution that can be expected from novel technical developments (ion sensitive microelectrodes, patch clamp analysis). Most of all they indicate that we already know too many possible causes of burst-firing. Already it is clear that the interactions of the different ionic conductances that may be involved in burst-firing in a hippocampal or cortical neuron can only be handled by computer modelling.

Of course critical breakthroughs of practical importance can occur without complete understanding. We can expect this volume to contribute both to serendipitous discoveries and an integration of the folklore of epileptologists with the exact science of the biophysicist.

BS MELDRUM

Recent Advances in Epilepsy. Edited by Timothy A Pedley, Brian S Meldrum. (Pp 255; £19.50.) Edinburgh: Churchill Livingstone, 1983.

Over recent years there has been an undoubted increase in interest and research into epilepsy, which has been reflected in the publication of many books on the subject. Whilst it can be argued that any advances in our understanding and treatment of epilepsy are more potential

than real, it is nevertheless opportune that progress in this subject should be described in a new series of "recent advances". This volume aims to bring together a series of authoritative reviews on aspects of the subject and succeeds in doing so. It is a welcome relief from the ever increasing numbers of books being produced as results of symposia on various aspects of epilepsy.

Like all multi-author books the chapters are varied in their importance and quality. Particularly useful are those chapters relating to mechanisms of action of anticonvulsant drugs and the way in which further understanding of this is influencing the search for new anticonvulsant agents. A chapter on the design strategies of clinical trials in epilepsy is particularly welcome and emphasises, if this is necessary, the very poor quality of existing anticonvulsant drug studies. There are further worthwhile chapters reviewing advances in EEG monitoring and its clinical usefulness and the pharmacokinetics of drugs in the newborn. The interaction between epilepsy and psychiatry is well covered with chapters on the relationships between violence and epilepsy, and interictal behaviour and temporal lobe epilepsy. The remaining chapters cover amongst other subjects, individual anticonvulsant agents, and the value of salivary drug concentrations.

The book will be of interest to many clinicians who deal with epileptic patients without having a specific research interest in the subject, as well as to those more directly involved. Published in paperback, it represents good value for money, and I hope that it will find a place on the shelves of many libraries.

DW CHADWICK

Electrodiagnosis in Diseases of Nerve and Muscle: Principles and Practice. By Jun Kimura. (Pp 672; \$81.25.) Philadelphia: FA Davis, 1983.

This is a large text and provides extensive reviews of various aspects of clinical neurophysiology. It deals both with the electrodiagnosis of peripheral nerve and muscle lesions, and with tests described as "for less accessible regions of the nervous system". (These most informative chapters include discussions on the blink reflex, the F-wave and somatosensory evoked potentials.)

The book is divided into seven parts or sections. The first, basics of electrodiagnosis, explores the anatomical basis for localisations, electrical properties of nerve

and muscle and finally electrodes and recording apparatus. Abbreviated description of the origin, course and destination of cranial and peripheral nerves are included. Most diagrams are clear, though those taken from an MRC publication are not enhanced by the author's modifications.

Nerve conduction studies occupy the next section; a single chapter is devoted to the assessment of individual nerves and is illustrated extremely well. There are many photographs, rather than diagrams, that show clearly the exact placement of stimulating and recording electrodes when examining various nerves. There are also many tables of normal adult values (principally latencies and conduction velocities). A further chapter explores "facts, fallacies and fancies of nerve stimulation techniques". It provides excellent reading and reflects the author's extensive experience.

Assessment of neuromuscular transmission is the next section and includes a detailed chapter on the techniques of repetitive stimulation. The electromyography section follows; chapters are given to anatomy and physiology of skeletal muscle, to techniques and normal findings, to various types of abnormalities and to a standard discussion of single fibre electromyography.

The blink reflex, F-wave, H-wave and somatosensory evoked potentials are each rewarded with a chapter in the following section on tests for less accessible regions of the nervous system. Some of the blink reflex illustrations are crowded, but generally, recording techniques and clinical applications for these investigations are very well presented. However, as in a previous section that discussed normal nerve conduction studies, paediatric practice is largely ignored.

Two clinical sections, dealing with nerve and muscle disease, conclude the book. Diseases of the motor neuron, diseases of the root and plexus, polyneuropathies, mononeuropathies and entrapment syndromes, myasthenia gravis and other disorders of neuromuscular transmission, myopathies and neuromuscular diseases characterised by abnormal muscle activity are discussed separately. Each chapter is referenced extensively, in fact in encyclopaedic fashion. Clinical descriptions at times, are stretched to cover every possibility of presentation or clinical findings rather than emphasising the very common or classical situation. Neurophysiological investigations and results are given in variable detail. On occasion one is obliged to refer to descriptions of techniques and