with ventilation or control of the reflex activity of the intercostal muscles. Altogether this is a stimulating and controversial book. It would be of use to those versed in the management of spinal injuries but not to be recommended to the person who has only occasional dealings with high quadriplegic patients. I look forward to the second edition in which these faults can be remedied.

JR SILVER

Evoked Potentials in Clinical Medicine. 2nd Edition. Edited by K H CHIAPPA. (Pp 647; Price: \$72.50). New York: Raven Press, 1989.

The second edition of Keith Chiappa's book amply demonstrates the growth of work on evoked potentials (EP) in clinical medicine since the original publication in 1983. *Evoked potentials in Clinical Medicine* is now a large, well illustrated and extensively referenced compendium of information. It is exceptionally thorough on the areas covered, even though not all modern applications are discussed. The reader is referred to the excellent 1987 Raven Press volume by Marc Nuwer on *Evoked Potential Monitoring in the Operating Room*, for example, and there is only limited cover of electroretinography, none of flash visual or middle latency auditory evoked potentials. Mapping is, quite reasonably, virtually ignored. The sections on the main groups of investigation have all grown appreciably and the illustrations now number almost 200. Indeed, one has the feeling that almost every type of sensory response has been recorded—giving us considerable biological insight—with supportive data based upon large studies permitting statistical and intellectual satisfaction.

The sections are well organised, starting with the principles of EPs, then proceeding to cover separately the methodology, interpretation and references for pattern-shift visual, brain stem auditory and short-latency somatosensory EPs (all by Chiappa alone). This is followed by contributions on short-latency somatosensory EPs in peripheral nerve lesions, plexopathies, radiculopathies and spinal cord trauma (Con Yiannikas), somatosensory EPs in paediatrics (Susan Levy); motor EPs (Philip King and Chiappa); endogenous event-related potentials (Barry Oken); statistics for EPs (Oken); advanced techniques of EPs acquisition and processing (Joseph Sgro, Ronald Emerson and Paul Stanton).

This book is something of a concordance for EPs. There are about 2000, mostly recent, references listed (in very small print). It is a bit like browsing through Scandinavian telephone directories which give the occupation as well as the name—one is tempted to count which name gets the most citations. It is good to see a reasonably non-parochial cover of the literature even if a rather uncritical one. Under the heading of brain death many reports are mentioned but the rather bland citation means that one does not really know whether EPs have a place in the evaluation of brain death or not or, indeed, what the author thinks about it. Medical audit has encouraged us to reconsider the contribution of special investigations and in particular to appraise how various procedures benefit the individual patient. Clinical neurophysiologists are generally enthusiastic about new tests which allow

demonstration of normal and abnormal physiological processes and are both specific and sensitive to particular pathologies. Thus it is encouraging to read a sharp section on cost-effectiveness of EPs, with swingeing attacks on overuse and misuse (see Chiappa and Young, *Arch Neurol* 1985;42:76–7).

This book is at its best on how to set up equipment and carry out tests, on statistics and some advanced techniques including the useful Bayesian inference methods, and for its up to date references. There are few infelicities or oddities but it was curious to find magnetic stimulation mentioned in the context of prevention of pulmonary emboli by virtue of its ability to cause rhythmic contraction of calf muscles. There are a few typographical errors—perhaps the best being Caussian for Casserian on page 434. It is welcome to note that the author generously acknowledges the help of his co-workers, particularly Kathleen Lentz, “who, from an academic background in Chinese literature became an expert on evoked potentials. She accomplished the library research, edited the manuscript scrupulously, performed all of the art work on the figures, in addition to sticking with the project 18 months longer than she originally promised.” Professor Chiappa and his colleagues have indeed laboured hard and long to give us a worthwhile book.

PAMELA PRIOR

The Motor Cortex. By HIROSHI ASANUMA. (Pp 201; Price: \$81.50), New York. Raven Press, 1989.

Understanding of the functional and anatomical processes underlying motor control has, for long, been one of the fundamental problems in neurology and neuroscience. The foundations of clinical neurology itself rest on observational and philosophical concepts of brain function derived from disorders of motor control, as observed in patients with stroke, epilepsy, and other diseases of the nervous system. In this context the observations of Hughlings Jackson and Ferrier were particularly important. One of the most striking problems, perceived by the earlier investigators, is that the anatomical structure of the brain in different living organisms is organised in seemingly different fashion. For example, the complex, highly developed, and specialised frontal cortex of primates, recognised early in the development of concepts of neuroscience as being involved especially with motor expression, is not reflected in similar development in other species, for example birds and reptiles. Indeed, other mammals such as the rat, likewise, do not show this frontal specialisation yet all these species exhibit motor control that is, in its own way, the equal of that demonstrated by the primate.

Asanuma is one of a small number of modern investigators who have developed seminal ideas in relation to these problems and in this book, published forty years after he first began to study the motor system, he sets out some of the major current problems in this field of research. The book is attractively produced, written with economy of style, consisting of 31 short chapters. The book is generally organised in the historical context so that new concepts are introduced, chapter by chapter, in temporal order and the

new hypotheses and experiments derived from each major advance thus fall naturally into context. For the enquiring reader, perhaps without a major background in motor control theory this is a format that is comfortable. Although the book is not overburdened with references most of the key studies of the last thirty years are cited and their major conclusions clearly stated. As might be expected the book is perhaps strongest in its first half when the older studies of the relation between motor cortex, muscle spindles and corticospinal systems are reviewed, and least convincing in the closing chapters where the major problem of the anatomical and physiological basis of motor learning, motor memory, and fluidity of motor programming are addressed. These matters, of course, are still controversial and this controversy is clearly to be seen in the discussion. Dr Asanuma is to be congratulated in producing such a stimulating account of current problems in this area. The book is a valuable summary and introduction for all those, and most neurologists, with an interest in motor control, both in the laboratory, and in the clinic.

M SWASH

Molecular Genetics of Muscle Disease—Duchenne and Other Dystrophies. British Medical Bulletin Vol. 45 No. 3. Edited by A J BULLER, J GOODFELLOW, J M NEWSOM-DAVIES. (Pp 300. Illustrated; Price: £22.50.) Edinburgh: Churchill Livingstone, 1989.

The days when the clinician in any medical discipline could ignore with impunity the advances in the basic sciences underpinning his or her special interest are long gone. Certainly the quite extraordinary advances in our understanding of the molecular biology of the inherited neuromuscular diseases made during the last decade impact directly on the everyday management of patients and their families. In view of this, the advent of a new British Medical Bulletin dedicated to the muscular dystrophies at the end of this decade is both timely and of practical advantage to the “jobbing” clinician, neurologist, paediatrician or clinical geneticist, even if the last-named may be the only one to appreciate the minutiae of recombinant DNA technology!

The detailed analysis of the various techniques employed in the study of the Xp 21 deletion myopathies is of particular value to those involved in genetic counselling, carrier detection and antenatal diagnosis in affected families and relatives of sporadic cases. However it has become clear that the chapter on the Xp 21 deletion is by no means closed. In particular, a number of original (peer-reviewed) contributions in the literature since the Bulletin was published have shown that dystrophin is *not* the absolute discriminator in putative cases of either DMD or BMD that its early promise suggested. Accordingly the results of ongoing studies of large patient populations are awaited with interest.

Among the many other impressive contributions in this volume, the review of the molecular genetics of myotonic dystrophy by Professor Harper and his colleague and that of Professor Emery on his own disease caught the eye. However the discussion of molecular