ANATOMICAL GUIDE FOR THE ELECTROMYOGRAPHER. 1994. 3rd Edition. By Aldo O. Perotto. Published by Charles Thomas. 309 pages. $C62.00.

It is a pleasure to see a book, that as an early student in EMG in the 1970's, guided my needles. In its third edition, it still has all the qualities for use as a quick guide in the Lab. In addition, it now covers some of the more unusual muscles, the examination of which is less common. However, it does not describe Dr. Bolton's examination of the diaphragm. It also lacks the crisp and colorful illustrations that anatomy books often have, but the drawings used are adequate in most instances and give the book its own identity. The addition of cross sections is certainly useful. When most medical texts are over $100, its price of $62 makes it a reasonable and very useful addition to any Electromyographer's library.

Rudolf Arts
Barrie, Ontario

NEUROLOGY OF CRITICAL ILLNESS. 1994. By E.F.M. Wijdicks. Published by F A Davis Company. 360 pages. $C117.00.

Neurocritical care is a new and rapidly-developing subspecialty. As care in major hospitals is being shifted from in-patient to outpatient management, the proportion of beds occupied by patients in critical or intensive care units will progressively enlarge. In Canada, neurologists and neurosurgeons have joined to form the Canadian Neurocritical Care Group to promote effective management of patients with severe nervous system disturbances being treated in these units. In some centers, management takes place in neurological and neurosurgical intensive care units. Ropper and colleagues in Boston have published a valuable book on this subject, now in its third edition. However, many patients in general medical and surgical intensive care units suffer from significant disease of the nervous system, either as a primary event or secondary to involvement of organs outside the nervous system. No book has yet addressed this important group of patients, but Wijdicks, Head of Neurocritical Care at the Mayo Clinic, has now done so with considerable success.

The book is written in four parts. Part I, general clinical and neurological problems: the neurological effect of drugs, management of seizures, the evaluation of generalized weakness, and the neurological complications of invasive procedures. Part II, neurological complications of medical intensive care: infection, cardiac arrest, electrolyte disturbances, acute renal failure, acute hepatic failure, disorders of thrombosis and hemostasis, and acute vasculitic syndromes. Part III, neurological complications of surgical intensive care: aortic and cardiac surgery, environmental injuries, multi-system trauma, and organ transplantation. Part IV, outcomes in central nervous system catastrophies: metabolic encephalopathy, stroke, head injury, spinal trauma, and the diagnosis of brain death and its management. The discussion in these various chapters is comprehensive and lucid, and is enhanced by frequent tables, illustrations, charts and algorithms, to clarify and summarize important principles. Thus, the book is of value if one wishes to read entire chapters or simply to review specific points.

There are the inevitable criticisms. Major topics, such as subarachnoid hemorrhage, poisoning by aspirin, methanol, etc., have been omitted. At times, the discussion tends to be unfocused, with over-emphasis on information from anecdotes or poorly-designed studies to the neglect of well-designed ones, although these are admittedly in short supply in this new subspecialty. The author emphasizes that the discussion is almost exclusively clinical, and he fails to address the important concept that the history and physical examination of the nervous system, while of great importance, is much more difficult to elicit in the intensive care unit because of the presence of an endotracheal tube, the use of sedative or narcotic drugs, splints, vascular lines, and so forth. Thus, in our experience, investigative procedures, particularly electrophysiological studies, have proven valuable.

This book is highly recommended and should be available to all neurologists, neurosurgeons, intensivists, nurses, and other health care personnel involved in the care of critically ill patients.

Charles F. Bolton
London, Ontario

FUNCTIONAL NEURAL TRANSPLANTATION. 1994. Edited by Stephen B. Dunnett and Anders Björklund. Published by Raven Press. 603 pages. $C189.00.

One of the many astonishing advances in the neurosciences over the past decade has been the development of central nervous system neural grafting. Despite the conventional wisdom that CNS tissue cannot regenerate, we have seen success in both human and animal experiments following grafting of foreign tissue into the adult brain. Not only does this tissue survive, but it also functions. The most advanced work is in Parkinson's disease where there is convincing evidence of the survival and growth of grafted dopaminergic tissue and clear associated functional improvement. Transplantation has started in humans with Huntington's disease. And for epilepsy, dementia, spinal cord injury, and stroke it is not far behind.

The experiments in neural grafting, like in any rapidly advancing field, cover a wide range. The main thrust of work uses fetal tissue; although experiments continue with adrenal chromaffin cells that were first used in human transplant experiments in 1985. There is also a broad front where workers are studying alternative, modified tissue such as encapsulated neurotransmitter-producing tumor cells, and genetically-modified cells of various types. As well as studying alternative tissues, there is continuing work into the best techniques of transplantation, and the best location. Once in place and surviving, more questions arise as to the pattern and degree of functional improvement produced by the grafts. This not only includes the motor improvement observed in the parkinsonian models but also associated cognitive and electrophysiological changes.

For the reader newly interested in functional neural grafting, accessing the literature is a daunting task. It is so widely spread and dense that it is difficult to gain an overall impression of the various approaches and areas within the field. This book does a good job of pulling the work together and showing the interrelationships between the different lines of effort. The editors are recognized leaders in the field in both the basic science of grafting and the successful human experiments. They have selected forty experts who have produced 21 chapters. The emphasis is on animal models with functional grafts with less coverage of the human experiments. Like all multi-authored volumes the style varies, but the coverage of the issues is of consistently high quality. There are plenty of diagrams and photographs to break up the text and retain the reader's interest.

The main problem with all books like this is that they are out of date before they are published. As the editors acknowledge, there is extremely promising work in pain control using adrenal chromaffin cells transplanted to the spinal cord – but this work matured after

the chapters had been finalized. The editors have also wisely avoided too much analysis of the human work that has been marked as much by patchy reporting as by good science. Another few years should clarify the human work as the first controlled trials are carried out in Parkinson's disease.

These unavoidable limitations aside, this is a good book. It is certainly the clearest and most complete in this exciting area of neuroscientific research. It will be useful for anyone wanting to understand the basis for the great potential of neural grafting for many human diseases.

Barry Snow
Vancouver, British Columbia

BAILLIERE'S CLINICAL NEUROLOGY. 1993. Inflammatory Myopathies. Edited by F.L. Mastaglia. Published by Harcourt Brace & Co. Ltd. 744 pages. $C36.00.

This monograph on the inflammatory myopathies collects together a series of review articles by experts in the field. It is organized along fairly traditional lines beginning with an outline of the clinical problems noted in inflammatory myopathies and a discussion of the differential diagnoses with which they may be confused. This is followed by an outline of the pathological changes in the muscle. This includes light and electron microscopic findings and the histological demonstration of the immunological changes. A section on inclusion body myositis, which is fairly self contained and describes the clinical, pathological and etiologic aspects of the disease, completes the initial section.

The next part of the book deals with the possible etiologic factors in inflammatory myopathy and covers the immunogenetics, humoral and cellular mechanisms of disturbed immunity as it relates to the disease and the putative role of viruses. The book concludes with separate chapters on retroviruses, animal models and treatment.

All in all, this book is a nice review of the current thinking in inflammatory myopathies. The literature has been growing by leaps and bounds in recent years and it is helpful to find the summaries of this work assembled between two covers. The work reviewed is current and well referenced. The fact that polymyositis has not been "solved" either from the point of view of the etiology or the treatment, means that the competing theories have to be listed in order to give the reader a balanced picture. This sometimes makes the book a little difficult read as it turns into recitation of seemingly unconnected facets of the research. This is not the fault of the authors, but of the subject. The book will serve as a very useful reference manual for anyone interested in inflammatory myopathies and the state of the art in 1993.

Michael H. Brooke
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DISORDERS OF VOLUNTARY MUSCLE. 6th Edition. 1994. Edited by J.N. Walton, G. Karpati and D. Hilton-Jones. Published by Churchill Livingstone. 1171 pages. $C180.00.

The book by Walton which was originally published in 1964 under the title of *Disorders of Voluntary Muscle* has always been well regarded as a guide to the neuromuscular diseases. The present edition, assembled with the help of two additional editors, is the most ambitious edition yet. Over 40 contributors have provided chapters which cover all areas of normal and abnormal muscle behaviour and range from basic scientific aspects to clinical.

The reader is introduced to the topic in a series of chapters starting with the anatomy and physiology of the muscle cells and ending with muscle biochemistry. There are concise summaries of the cell biology of muscle with a good discussion of the molecules involved in muscle development and nerve muscle interaction as well as molecular genetics.

The second section on pathology includes chapters on light microscopy, which as the author says is a little uncomfortably dissociated from the chapter on muscle pathology. Ultrastructural changes make up a third chapter and the information is complete and up to date. The section closes with a chapter on the animal models of neuromuscular disease, an area which is increasingly important as molecular genetics develops.

The third and largest section addresses the clinical aspects and is divided conventionally into the dystrophies, myotonic disorders, inflammatory myopathies, metabolic disorders, myasthenia and diseases of childhood. Motor neuron diseases and peripheral nerve diseases are also included.

The final section is devoted to three sections on EMG and nerve conduction.

The previous editions of this book are well known to neuromuscular clinicians scientists and has always provided as useful source of information and references. The present edition is no exception. It is priced within the reach of the private individual's library and can be recommended as a worthwhile addition.

Michael H. Brooke
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PROGRESS IN PEDIATRIC NEUROLOGY II. 1994. Edited by J. Gordon Millichap. Published by PNB Publishers. 598 pages. $C75.00.

This second volume by J.G. Millichap includes abstracts and editorial comments which appeared in *Pediatric Neurology Briefs* from January, 1991 to December, 1993. The format is similar to a Yearbook with selected abstracts from articles covering a wide range of disorders relevant to pediatric neurology, chosen from close to 100 different journals. The layout is under 18 subject headings with the largest section devoted to epilepsy and related disorders and the shortest to CNS trauma. Each section begins with a useful summary of novel developments in the respective fields often supplemented by a valuable bibliography. The index, separate for subjects and authors, is user-friendly.

The particular strength of the book is being a rich source of valuable, recent publications relevant to child neurology, in a clearly distilled format. As might be expected in a volume of this nature, the chosen articles range in quality from good to excellent, and the quality of the editorial comments vary somewhat in their utility. Lacking are critical assessments of study design and report. Keeping these short comings in mind, this book undeniably will be useful to neurologists and other health professionals with a strong interest in pediatric neurology.

Gabriel M. Ronen
Hamilton, Ontario

CELLULAR AND MOLECULAR MECHANISMS UNDERLYING HIGHER NEURAL FUNCTIONS. 1994. Edited by A.I. Selverston and P. Ascher. Published by John Wiley and Sons, Inc. 328 pages. $C195.00.