Book Reviews

THE ADULT SPINE: PRINCIPLES AND PRACTICE. Volumes 1 & 2. 1991. First Edition. Edited by John W. Frymoyer, Thomas B. Drucker, Norton M. Hadler, John P. Kostiuk, James N. Weinstein and Thomas S. Whitecloud III. Published by Raven Press. 2422 pages. $314 Cdn. approx.

This two-volume text is divided into seven sections with 104 chapters. There are 109 contributors from six different countries who represent the disciplines of engineering, radiology, physiotherapy, orthopedic surgery, neurology, neurosurgery, anesthesiology, rheumatology, basic science and chiropractic. With such a group of contributors from such diverse backgrounds, it is no wonder that this work represents the most comprehensive reference on the adult spine available today.

The book starts with a most engrossing chapter on the history of spinal disorders mentioning those figures who have been conspicuous or made major contributions to our knowledge of the structure and pathology of the spine. The remainder of the two volumes is divided into seven sections each dealing with a particular aspect of spinal disease. The cervical, thoracic and lumbar spines are dealt with in separate sections and in great detail.

When an editor has 109 contributors one has to expect variation in quality and style of the chapters. Nevertheless, the variation between chapters is minimal and most achieve a very high quality and depth of presentation.

Who will or should read this book? Anyone who cares for patients with back problems would find this volume text a valuable addition to their reference library.

M.H. Atkinson
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AMYOTROPHIC LATERAL SCLEROSIS AND OTHER MOTOR NEURON DISEASES. Advances in Neurology Series Volume 56. 1991. Edited by Lewis P. Rowland. Published by Raven Press, New York. 591 pages. $149 Cdn. approx.

Dr. Lewis Rowland, Director of Neurological Services at the New York Neurological Institute, is a distinguished neurologist and academic who has given much of his energy and skill to understanding amyotrophic lateral sclerosis, one of the most serious of all human diseases. His editing of Advances in Neurology, volume 56 is his second editorship on this topic in the series, the former being volume 36 in 1982. The interval is sufficient to allow for significant advance, for example the identification of linkage of known markers to an ALS gene on chromosome 21 and to a spinal muscular atrophy gene on chromosome 5.

The book is very well organized focussing on cell biology, cellular pathology, genetics, epidemiology, environmental toxins, immunology, persistent viral infection and clinical trials. Many who are recognized as having made significant contributions to the understanding of ALS are among the authorship. The book is the outcome of a meeting in Tuscon, Arizona in December, 1989; and was sponsored by the Muscular Dystrophy Association of America. It should be noted that the attendance at the meeting in Tucson was much larger than the authorship. The discussions at the meeting, including the usual "corridor" conferences and other opportunities to discuss ALS have, no doubt, found their way into the various chapters.

In such a comprehensive publication it is difficult to select what may be the most significant contributions but I was especially impressed with the genetics section as this is the area where the greatest advance has been made. Special mention should be given to contributors such as Paul Jolicouer's elegant research on retrovirus-induced motor neuron disease and Ronald Oppenheim's interesting studies on the effect of proteins that rescue neurons from otherwise certain natural death. Genetically programmed neuronal death was discussed at the meeting and will, no doubt, be a major topic in the future. For those interested in state of the art culturing of neurons there are two nicely illustrated chapters.

Dr. Rowland is to be congratulated for a superb meeting out of which an important publication has evolved but also in undertaking the great task of gathering, organizing, and in his inimitable way, carefully editing the contributions from the various authors. It is a formidable task to which any who have undertaken this can attest. It is always difficult in publishing such work to have it up to date as the editors depend upon the authors and I was pleased to see some references in 1990 publications which is as recent as can be expected in such a work. For those, especially neurologists and graduate students, interested in amyotrophic lateral sclerosis it is an essential addition to their library. The design and paper are of high quality and there are many illustrations. The book is well indexed.

Arthur J. Hudson
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NEUROLOGICAL COMPLICATIONS OF CANCER TREATMENT. 1990. Edited by David A. Rottenburg. Published by Butterworth - Heinemann. 228 pages. $65 Cdn. approx.

As cancer treatment has become more effective at prolonging life, its side effects have become increasingly prevalent. While no organ system is immune from therapeutic toxicity, the nervous system with its limited capacity for cell division and regeneration is particularly susceptible to untoward effects of oncologic interventions. *Neurological Complications of Cancer Treatment* is an important and timely review of this topic.

The book is divided into four parts. Part 1, Complications of Radiation Therapy, includes six chapters devoted to specific syndromes associated with radiation therapy. Most of chapter 1 is devoted to delayed cerebral radiation necrosis. Chapter 2, Hydrocephalus and Dementia, carefully reviews CT and MRI correlates of disseminated necrotizing leukoencephalopathy, mineralizing microangiopathy and cerebral atrophy. Other chapters describe optic neuropathy, cranial neuropathy, myelopathy, and radiation induced tumors. Notably absent is a chapter on radiation

induced plexopathy which is unfortunate, given the prevalence and diagnostic challenge of this entity.

Part II outlines complications of chemotherapy, in 5 chapters. Parts I and II present a balanced and authoritative review of effects of radiation and chemotherapy with surprisingly little overlap between chapters, despite being multi-authored and being divided somewhat artificially into single discrete chapters. Literature listed in the references is extensive and serves as a valuable resource for the reader interested in further information.

Parts III and IV, Complications of Corticosteroids and Immunosuppression, are less exhaustive in content and references. Parts III and IV are in stark contrast to the detail of Part I and II with, for example, a 25 page chapter on radiation induced optic neuropathy.

Authors contributing to the book were well selected for their known expertise in their specific areas. This monograph is an important compilation of information available on neurological complications of cancer treatment. It serves as a helpful and readable reference which is recommended to physicians and other health care providers working with cancer patients.

Neil A. Hagen
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INTRACRANIAL VASCULAR MALFORMATIONS. 1990. First Edition. Edited by D.L. Barrow. Published by American Association of Neurological Surgeons. 250 pages. $88 Cdn. approx.

This latest in a number of "Neurosurgical Topics" which was produced by the Publications Committee of the American Association of Neurological Surgeons is essential reading material for anyone dealing with vascular neurosurgical problems. Twenty-five acknowledged experts in this area have produced a highly readable volume comprised of 16 chapters. Ten of these chapters are mainly concerned with arteriovenous malformations. All aspects are covered including pathology, natural history, clinical presentation, imaging, blood flow physiology, perioperative management, staged embolization, complications, interventional neuroradiological treatment and radiosurgical treatment. As well they are considered by location – cortical, deep supratentorial, brainstem and dural.

The recent advances in our knowledge of other previously less well known vascular malformations are well documented in sections on the natural history of cavernous, capillary and venous malformations. The chapter on the management of intracranial cavernous and venous malformations is particularly well done and will bring the reader up-to-date on new knowledge which has been gained principally from the widespread application of MRI.

I think justice has been done to the various controversies surrounding surgical versus conservative management; open surgical versus interventional neuroradiological versus radiation therapy as sole modalities or in combination.

There is a remarkably uniform and high standard in clarity of expression and excellence in illustration. The references are very up-to-date and they are also quite inclusive. The neurosurgeon or neurologist faced with a specific problem concerning one of the intracranial vascular malformations would therefore find this to be an excellent starting-off point for pursuing even the most exotic or abstruse point. This book can be recommended without qualification.

Bryce Weir
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TRIGEMINAL NEURALGIA. 1990. Edited By Richard L. Rovit, Raj Murali and Peter J. Jannetta. Published by Williams & Wilkins, Baltimore. 288 pages. $88 Cdn. approx.

This small book of 13 chapters has been written by 14 authors and is comprehensive, interesting, and easy to read.

Chapter 1 reviews the history of trigeminal neuralgia and interestingly this disease has only been clearly recognized for about 300 years and also describes some diseases that should like it but clearly are not. It also reviews the historical treatments of this disorder including poisons, electrical stimulation, radiation, nerve destruction, and modern therapeutic agents including some of the above.

The physiology and anatomy of the trigeminal system, peripheral, brainstem, and central, is well described. The interesting and important observation that the most anterior part of the face (the snout or lips) retain normal pain perception when a central lesion (such as in syringobulbia) removes pain sensation from all of the remainder of the face, has been ignored. The implication from this well known clinical fact suggests that the quintothalamic tract from the subnucleus caudalis is bilateral in its transmission to the thalamus. There is a hint of the anatomical substrate for this observation on page 41.

A similar curiosity in the arrangement of sensation is the sparing of the "cervical collar" which so often accompanies complete facial anaesthesia and is well demonstrated in Correlative Neurosurgery, 3rd Edition, Schneider et al., C.C. Thomas, 1982.

In the clinical chapter describing various kinds of facial pain, the arrangement and selection of causes is excellent and covers a great deal of what one will see in the clinic when patients are complaining of typical or atypical facial pain. I think many neurologists would be surprised at the comment that tic douloureux "rarely disturbs sleep". There is no mention of the classical clinical picture one sees with patients with this disease in that at the moment of an episode of pain the patient stops talking, stops moving, stops blinking and sits like a statue for a second or so. There is no other disease that will do this and apparently all patients with trigeminal neuralgia do it at the moment of a stab.

The chapter on medical treatment is excellent. All of the currently available medications are described and good hints are given on how to use them and how to modify the doses with respect to age and undesirable side-effects are also mentioned.

The surgical destruction of peripheral nerves in order to relieve the pain is very good and the chapters on the other procedures, namely, radio frequency, thermal coagulation of the ganglion, percutaneous microcompression of the ganglion, glycerol rhisotomy and microsurgery decompression are done in detail and seem to be generally excellent.