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.

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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.

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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.

The account of microvascular decompression of the trigeminal nerve root entry zone by P.J. Jannetta represents a major tour de force and it is beautifully and well balanced in its entirely. The anatomy of the brainstem and the arterial and venous aspects of the brainstem would do justice to any textbook of anatomy. The results of this form of treatment are very well demonstrated while some of the other surgical methods have not reported results in as much detail.

The final chapter in the book is by William H. Sweet and discusses treatment complications, some aspects of the literature and responses to a questionnaire which he distributed. It is comprehensive, fair and well balanced. It again is a tour de force and represents an abiding interest of a dedicated surgeon who has devoted a large part of his energies to that most annoying of all propositions, i.e., the relief of pain.

The physiology of pain and pain transmission has been treated a little carelessly. For example, there is no mention of capsaicin which probably depletes substance P in peripheral sensory nerves and definitely reduces the pain of herpes zoster and other types of facial pain simply by applying the substance to the skin.

The index of this book is not in keeping with the rest of it. There is no reference to "corneal reflex", "quintothalamic tract", "tract", and there is no way that one can discover anything about the physiology or anatomy of the supranuclear connections of the corneal reflex. The book is otherwise well printed, the paper is first class, it is easy to read, and a major contribution to the subject.

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RADIATION INJURY TO THE NERVOUS SYSTEM. 1991. Edited by Philip H. Gutin, Steven A. Leibel and Glenn E. Sheline. Published by Raven Press. 472 pages. $143 Cdn. approx.

In the preface the editors state that this book is designed to describe the current state of knowledge about the tolerance of the nervous system to various kinds of radiation, the mechanisms of radiation injury, and how nervous system tolerance and injury relate to the more general problem of radiation damage to normal tissues of all types.

To do this, the first section of the book is devoted to the response of normal tissues to ionizing radiation. Chapters deal with the cellular and biochemical targets in radiation injury, the biochemical response, cellular and tissue kinetics, and the influence of dose rate and fractionation of radiation effects.

The second section deals with experimental results on nervous system tolerance to radiation. Central nervous system (CNS) injury in small and large animals following low linear energy transfer (LET) radiation injury is described. This is followed by a description of the CNS injury from neutrons, charged particles and the implantation of radioactive isotopes. A very thorough description of the pathology of CNS radiation injury ensues.

The largest section deals with the clinical aspects of CNS radiation injury. The biological basis of tissue response to radiation is now correlated with the clinical picture.

The clinical manifestation of CNS radiation injury and their management are outlined. There is a very interesting chapter on the changes in intellect associated with cranial radiation therapy. This step-wise approach from the kinetics of cell population to the effects of radiation on these processes to the clinical manifestation of CNS injury is very successful.

A short final section deals with the effects of heat on the CNS, the issue of CNS radio-protection and radiation induced CNS tumors.

Overall, this book successfully integrates the biological basis and clinical aspects of CNS radiation injury. The text is easy to read, and there is an abundance of pictures, tables, graphs, diagrams and references. It should be a part of the library of those involved in the treatment of malignant disease of the brain and serve to stimulate further research efforts.

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NEUROTRANSMITTERS AND EPILEPSY, VOLUME 2 FRONTIERS OF CLINICAL NEUROSCIENCE. 1991. Edited by Robert S. Fisher and Joseph T. Coyle. Published by John Wiley & Sons, Inc., New York. 260 pages. Price not available.

This volume is a multiauthored publication which summarizes the current state of knowledge of the role of neurotransmitters in epilepsy. The two primary topics of the text include the clinical problem of epilepsy and the current concepts of neurotransmitter function. Most of the 17 chapters relate to basic mechanisms of neurotransmitter function in epilepsy. There are chapters on second messenger systems, GABA function, acetylcholine in epilepsy, serotonin in epilepsy, noradrenergic systems, glutamate, excitatory amino acids and opioid peptides. A review chapter is included towards the end of the text on the mechanisms of action of antiepileptic drugs in relation to their effects on neurotransmitter receptors and ion channels.

The book is a very up-to-date review on neurotransmitter function and epilepsy. It is very readable and the chapters are well balanced. Despite the text being multiauthored the style of the different chapters is similar. The text is well referenced with a number of references as recent as 1990. The text is relatively brief and can be read in a short period of time.

The text would be of interest to neurologists who wish to learn more about the basic mechanisms of the epilepsies and how the mechanisms of action of the antiepileptic drugs relate to these mechanisms.

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