

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 entirety. 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 multi-authored 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 multi-authored 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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