

embedded semi-thin sections which can confirm and complement the information derived from cryostat sections and also reveal important findings not obtainable from frozen sections (capillary changes, sarcomere organization, etc.).

Chapter 2 provides a good description of the principal pathological changes of muscle fibers encountered in neuromuscular diseases. Regrettably, the concept and definition of muscle cell necrosis is obscured by grouping this distinct and important pathological reaction together with other vague changes in the nebulous category of "degeneration".

Chapter 3 on denervation and reinnervation is complete and clear.

Chapter 4 deals with the developmental disorders of muscle and congenital myopathies and is extensive, which reflects the author's special interest in this field. There is a plethora of theoretical and practical information concerning skeletal muscle development. Neuromuscular diseases of infants and children are well covered. Nevertheless, the disproportionately generous attention given to certain items seems paradoxical. For example, congenital fiber type disproportion syndrome is allotted two full pages, which is the same as that provided for the discussion of polymyositis and dermatomyositis in a later chapter.

Chapter 5 contains useful information on metabolic myopathies. The confusion of the pathological lipopigment in Batten's disease ("ceroid-lipofuscin") with normal age pigment is regrettable.

Chapter 6, the characterization of the pathological features of polymyositis, dermatomyositis and inclusion body myositis in this chapter is disappointingly vague and imprecise.

Chapter 7 deals with the muscular dystrophies and is concise but adequate.

Additional sections on the pitfalls in the biopsy interpretation, recipes of certain staining techniques and the logistics of histopathological report preparation, illustrated by examples, are quite helpful.

Many of the 214 color plates successfully complement the descriptive information provided in the text. The value of quite a few plates, however, is diminished by flaws in microphotography (or reproduction) or tissue preparation and staining, as well as by the occasional aberrant interpretation (i.e. attributing a cluster of glycogen-depleted fibers in a specimen from an ALS patient to "active fasciculation"; Plate 77).

On the whole, this is a carefully and clearly written text containing valuable practical and some theoretical information concerning skeletal muscle pathology. An up-to-date and ample reference list is a major asset. The author's personal experience in the field is an important factor in making this a credible text. However, this book cannot be regarded as a comprehensive reference work on muscle pathology. Pathologists who are required to supervise the preparation of diagnostic muscle biopsy specimens and to provide basic microscopic interpretation of cryostat sections, will probably find it a convenient guide.

*George Karpati,  
Montréal, Québec*

**DIZZINESS, HEARING LOSS, AND TINNITUS: THE ESSENTIALS OF NEUROTOLOGY.** 1984. By Robert W. Baloh. Published by F.A. Davis Company, Philadelphia. 197 pages. \$44 Cdn. approx.

The purpose of this book is to present a concise, organized approach to evaluating patients with dizziness, hearing loss, and tinnitus. It achieves this purpose well.

The book is well organized, with a detailed table of contents which enables the reader to rapidly find what he is looking for. The book is divided into three parts. The first deals with the anatomy and physiology of the middle ear, the inner ear, the central vestibular system, and the central auditory system. At 54 pages, this section is relatively brief, but sufficient to give the reader an understanding of basic mechanisms. Part two deals with the history and examination of the patient with vestibular and auditory symptoms. In addition to the bedside examination of the patient, brief sections on electronystagmography, impedance audiometry, auditory evoked responses, and other laboratory tests are included here. Part three deals with diagnosis and treatment. It contains brief discussions of numerous disorders, including vertebrobasilar insufficiency, Meniere's syndrome, benign paroxysmal positional vertigo, acoustic neuroma, and labyrinthine concussion, among others. All of these clinical syndromes and diseases are clearly listed in the table of contents, so that they can be quickly found.

In general, this book is up to date and accurate. For a book of this size, it is extremely well referenced. For example, under Toxic Disorders, there is a one half page discussion of aminoglycosides. This short account is brief, but up to date and still comprehensive. It contains five references, some of which are as recent as 1982. Similarly, in a brief discussion of benign paroxysmal positional vertigo, multiple references are given supporting the statements in the text, and the brief discussion even includes an illustration from pathological studies showing a granular basophilic deposit on the cupula of the left posterior canal.

This book should be useful to all physicians who deal with patients complaining of dizziness, hearing loss, or tinnitus. It is well organized, and brief enough to be useful in the office of the busy family physician. At the same time, it is extremely well referenced and should prove useful to specialists and residents in training as well. This book is highly recommended as a practical information source for those dealing with the dizzy patient.

*W.J. Becker,  
Calgary, Alberta*

**CHEMICAL NEUROANATOMY.** Edited by P.C. Emson. Raven Press. New York. 1983. 560 pages. 219 black-and-white figures. \$90 Cdn. approx.

This international multiauthored monograph is a scholarly, thorough, and attractively printed state-of-the-art summary of metabolic and neurotransmitter mapping of the mammalian brain using histochemical, fluorescent, immunocytochemical, autoradiographic, and quantitative biochemical methods. The title is somewhat misleading because the scope of the book is

limited to putative synaptic transmitters and excludes myelin lipids, carbohydrates, electrolytes, and other 'chemicals' of the brain.

Most of the book is organized regionally, with chapters on the peripheral nervous system, spinal cord, retina, raphé nuclei of the brainstem, cerebellar cortex, thalamus, hypothalamus, hippocampus, amygdala, olfactory bulb, corpus striatum, and cerebral cortex. An exception is a chapter on catecholamine systems, a chemical rather than a strictly anatomical arrangement. The book is profusely illustrated and well indexed. Most chapters contain a list of references which are extensive enough to alone be worth the purchase price.

In addition to reviewing the large body of published literature, new information also is offered. For example, Steinbusch and Nieuwenhuys provide a new immunocytochemical method for the direct localization of serotonin in sections of brain and offer convincing photomicrographs and an atlas of the rat brainstem using this method. The chapter on the peripheral nervous system by Schultzberg is well done and discusses many newly discovered peptides in addition to the now classical data on monoamines and acetylcholine. The olfactory bulb is discussed by Macrides and Davis in relation to transmitters including substance P, opioid peptides, somatostatin, and others, in greater depth than I previously have seen.

I would have enjoyed reading more discussions of the chemical anatomy of the nervous systems of nonmammalian vertebrates and invertebrates for comparison with mammals, as was done by Brecha in his chapter on retinal transmitters. In general I would recommend this book to any neuroscientists investigating neurotransmitters. This critical survey will save many hours in the library integrating voluminous data from the original sources.

Harvey B. Sarnat,  
Calgary, Alberta

**CLINICAL AND BIOLOGICAL ASPECTS OF PERIPHERAL NERVE DISEASES.** Proceedings of the Symposium on Clinical and Biological Aspects of the Peripheral Nervous System Diseases held in Padova, Italy, September 9-12, 1982. Edited by L. Battistin, G.A. Hashim, and A. Lajtha. Published by Alan R. Liss, Inc., New York. 402 pages. \$60 Cdn. approx.

This book documents the proceedings of a symposium held in Padova in September 1982, on peripheral nerve disorders. As might be expected, the majority of the papers are of interest to those working actively in the field rather than to clinical neuroscientists, but this volume does contain some communications of more general interest. For example, there is a clinical overview which provides a concise summary of the major causes of peripheral neuropathy, their distinctions, and their management. There is a well referenced discussion of the electrophysiological findings in peripheral nerve diseases. There is a section on epidemiology, which includes a discussion of the relationship of the Guillian-Barre syndrome to immunization against "swine flu", and to other antecedent events. The immunological aspects of experimental and of human peripheral nerve diseases are well reviewed in another paper, and there is a summary of recent work on serum-induced demyelination. In

another section there is an intriguing report on the recording of spontaneous activity, with microelectrodes from patients with "positive" symptoms following peripheral nerve injuries. These and other papers may be useful for reference.

Peter Ashby,  
Toronto, Ontario

**PEDIATRIC HEAD TRAUMA.** 1983. Edited by Kenneth Shapiro, M.D. Futura Publishing Company, Mount Kisco, New York. 296 pages. \$46 Cdn. approx.

Those practitioners who care for children with head injury are often frustrated by the lack of reference to children's treatment in scientific reports on this topic. Thus, one hopes that this concise text will put the problem of pediatric head trauma in to perspective.

Right away, the first chapter must come to grips with the blending of statistics, while it considers the epidemiology of head trauma in children. The discussion refers to a patient population less than 14 years of age and in so doing, the author has had to extract figures from very large series which are all age inclusive. That done, the expected comes forth. More boys than girls suffer injuries, falls and road traffic accidents are by far the commonest culprits, and fortunately, children who have suffered one head injury, are not at increased risk of further insult. The medical, legal and ethical aspects of child abuse are considered in a separate chapter, and the warning signs of possible abuse enumerated. There is re-emphasis of the "Whiplash Shake Syndrome", which can be the covert explanation for subdural hematoma and more particularly unexplained retinal hemorrhages found in infants.

The initial triage decisions are next considered, first for children with head injury neither severe nor productive of lasting coma. It is calculated that of a substantial number of children who are assessed for head injury, less than 10% are admitted to hospital for observation. The challenge is placed whether this "under-evaluation" and "inappropriate triage has the potential of leading to grave complications". So, appropriate guidelines are provided. The matter of routine skull radiography is in general up for grabs, but in this instance, guidelines are precise about the characteristics of fractures in children's skulls.

The fact that 8% of children seen at random in the emergency room with head injury have skull fractures, whereas 27% of those admitted for observation have same, perhaps underscores what has been suspect for some time — namely, that triage decisions can more reliably be made on the basis of history and clinical examination than abnormal skull radiography. In passing, one takes issue with the statement that epidural hematoma are capable in some instances of decompressing themselves through the overlying fracture.

The radiology chapter is quite thorough, a mini-text of its own. The author has resisted the temptation to speak only about CT diagnosis of head injury, and has wisely begun this section with details of skull and spine radiography, their usefulness and pitfalls. The experience is amply supported by literature references as well as personal case encounters from the author's own children's hospital.