2). At the very least it deserves more attention than haemorrhage into nerves (page 29). In some of the more common neuropathies, i.e., carpal tunnel syndrome, a more complete discussion of specific electrophysiologic abnormalities would be helpful, i.e., a table perhaps comparing distal motor latency, median palmar studies, antidromic or orthodromic techniques might be valuable. The author states that multiple tests on the median nerve increases the chance of obtaining a false positive result. While this is probably correct, the chance of false-positive testing may in fact be reduced if multiple tests are obtained with strict criteria, e.g., requiring greater than 1 abnormality to diagnose CTS. The difficulty, of course, is defining what the gold standard test for CTS is then judging the electrophysiology according to this (page 181). It might be of interest to know what the author's bias is. Some clinical neurophysiologists would disagree that EMG examination of abductor pollicus brevis is useful in diagnosing early CTS. In Chapter 4 I would have liked to have seen a better discussion of conduction block and temporal dispersion using up-to-date criteria. Conduction block is an important feature of a number of focal neuropathies and it would be helpful to have this discussed thoroughly. Although some MRI images have appeared in this new edition, I think readers (particularly those in the United States) will be searching for more. The revised picture of the brachial plexus in Chapter 7 is a very worthy addition to this new edition.

John Stewart has preserved his clear writing style and objective perspective. This is a worthwhile text for neurologists in general, physiatrists and particularly clinicians who see these patients in clinics or neurophysiology laboratories.

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THE MENTAL STATUS EXAMINATION IN NEUROLOGY. 3rd Edition, 1993. Edited by Richard L. Strub. Published by F.A. Davis. 244 pages. $CDN 30.00 approx.

The examination of higher functions is assuming increasing importance in neurology yet it remains one of the most difficult and time-consuming parts of the neurological exam. Strub and Black in the third edition of their manual *The Mental Status Examination* have given us a clearly-written guide to carrying out and interpreting this segment of the neurological exam. The authors lucidly and concisely explain the various bedside techniques but go much beyond that in also dealing with the underlying pathophysiology of behavioral signs, symptoms and syndromes. Each of the chapters dealing with particular aspects of cerebral function begins by defining and explaining terminology and then discusses evaluation and finally anatomy and clinical interpretation. Subsequent chapters deal with formal neuropsychological testing, the use of ancillary services such as speech pathology and social work, a summary of the screening exam for dementia and a recording form for the mental status exam. Each chapter ends with a comprehensive reference list. A number of illustrated cases and well-selected figures add to the value of the text.

This volume is unique in providing a detailed step by step guide to the mental status examination. It will be of use to both neurologists and psychiatrists and students of these disciplines. The third edition has incorporated advances in our understanding of behavioral neurology and in fact serves as an introduction to that discipline. This book is highly recommended.

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NEUROLOGICAL AND NEUROSURGICAL INTENSIVE CARE. 3rd Edition, 1993. Edited by Allan H. Ropper. Published by Raven Press, New York. 505 pages. $CDN 119.00 approx.

Neurocritical care or neuro-intensive care is a new specialty that includes both clinical neurology and neurosurgery and, by necessity, incorporates many aspects of general critical care medicine. It deals with acute, life-threatening disorders of the central and peripheral nervous systems and with the neurological complications of systemic diseases.

The book contains 26 chapters written by American experts in various relevant disciplines. It deals with adult intensive care, but many principles probably apply to pediatric neurocritical care. There are specific chapters: cerebrovascular disease (including occlusive arterial disease, intrapharenchymal hemorrhage and subarachnoid hemorrhage), head trauma, brain tumors, central nervous system infections, status epilepticus, Guillain-Barré syndrome, myasthenia gravis and spinal cord compression. There are also chapters that deal with more general topics: management of intracranial pressure, ventilatory management, post-operative care of neurosurgical patients, ethical and legal principles (including brain death and withdrawal of life support – from the American perspective), nosocomial infections and electrophysiological monitoring.

The book has many merits: it is a comprehensive, state-of-the art treatment by recognized experts; it is useful and practical, with emphasis on management. A number of newer concepts, such as salt-wasting in subarachnoid hemorrhage and the pros and cons of hyperventilation for raised intracranial pressure, are well presented. Not all statements are based on rigorous clinical trials, because few have been done in this young discipline. However, most suggestions are based on scientific principles, solid experience and good clinical judgment. There is a minor degree of redundancy and there are a few obvious "typos".

The book should probably be the current standard text for this emerging discipline and is recommended to anyone interested in neurocritical care. More importantly, it will also be of great value to any neurosurgeons and neurologists, including residents, who are faced with the management of the various life-threatening diseases of the nervous system.

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NEUROREGENERATION. 1st edition, 1993. Edited by Alfredo Gorio. Published by Raven Press. 323 pages. $CDN 144.00 approx.

This collection of 15 review articles is not the consequence of a symposium. Most of the invited contributors have been conscientious in providing extensive reviews and the result is a useful overview of research in regeneration as of 1991. The emphasis is on cellular interactions in neural plasticity and repair, only two chapters being devoted to molecular topics.

The book is dedicated to Michael Goldberger who died in 1992 and is known for his classical studies establishing that new synapses could be formed in the spinal cord following spinal root or spinal cord injury. Goldberger and his longtime collaborator Marion Murray review the controversy which followed the initial observations of Liu and Chambers in 1958 that in the "spared root" preparation, terminals of dorsal root axons could be increased in density in their normal field or extend beyond their normal projections. The data of Goldberger and Murray convincingly demonstrated sprouting of the former but not the latter type.

Carbonetto and David guide the reader through the complex field of adhesive molecules found on the surface of neurons and glial cells and in the extracellular matrix. Calcium-independent CAMs (cell adhesion molecules) belonging to the immunoglobulin family participate in axonal fasciculation and neurite outgrowth on glial substrata through axon-axon and axon-glia interactions respectively. At least 8 codherins, calcium-dependent cell-adhesion molecules, are present in the nervous system where they are thought to promote cell adhesion during early development. Laminin, fibronectin, and some collagens in the extracellular matrix all act on axons through the integrin family of receptors: antibodies to laminin or to some integrins have been shown to impede axonal regeneration in peripheral nerves. Proteoglycans can promote or inhibit neurite growth according to their carbohydrate content. Molecules that interfere with growth cone extension either by anti-adhesive or collapsing actions have attracted considerable attention during the past five years although evidence since publication of this review indicates that axons from transplanted fetal neurons can extend a considerable distance in adult white matter where such inhibitory molecules abound. Very recently, amino acid sequence has been determined for one inhibitory molecule homologous to the fasciculins that guide growth cones during invertebrate development.

Cangiano et al. review some of the signals that lead to atrophy and fibrillation in denervated muscle. In addition to interruption of anterogradely transported trophic agents and reduced muscle activity in the absence of nerve impulses, these antrons have observed that breakdown products from injured nerves influence the muscle fibre membrane during the first two weeks after nerve transection.

Theo Hagg, a recent recruit to the Canadian neuroscience community, reviews his studies with Varon on the actions of nerve growth factor (NGF) on cholinergic basal forebrain neurons. They showed that most of these neurons do not die immediately after transection of the septohippocampal pathway. Many axotomized neurons atrophy and lose their cholinergic phenotype but can be rescued from this state of suspended animation by delayed administration of NGF.

Most of the chapters describe investigations on animals or in tissue culture rather than clinical observations. As an exception, the brief chapter by Wise Young has a strong clinical orientation. He describes the time course of improvement following spinal cord injury in humans and discusses mechanisms of recovery of injured spinal axons.

The book provides a broad survey of research in neural regeneration useful to anyone looking for an introduction to the field.

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OCCIPITAL SEIZURES AND EPILEPSIES IN CHILDREN. 1993. Edited by F. Andermann, A. Beaumanior, L. Mira, J. Roger and C.A. Tassinari. Published by John Libbey, London, Paris, Rome. 246 pages. $CDN 96.00 approx.

In March 1992 in Milan, Italy, the Mariani Foundation sponsored a symposium on occipital epilepsy in childhood. This multi-authored book (79 authors, 26 chapters) is apparently a complete proceedings of what must have been a lively meeting. My first scientific paper was on the topic of occipital epilepsy, my mentor – Dr. Fred Andermann. I was naturally interested to learn about evolution of thought about this special topic.

The book begins with 4 chapters that summarize present knowledge about the anatomy and physiology of the developing occipital cortex. A chapter by Sankar et al. attempts to correlate this basic science with the clinical issues of childhood occipital epilepsy. In the synopsis, Dr. Beaumanior notes "clarification of the basis for this involvement must await progress in our understanding of the neurobiology of the occipital lobe". The book makes it abundantly clear that there remains an enormous gap between knowledge about occipital anatomy and physiology and the clinical features of children with occipital seizures.

There are 4 chapters on visual testing and EEG. Then 18 chapters follow that outline many interesting syndromes including the basilar migraine – occipital seizure syndrome, benign childhood epilepsy with occipital paroxysms (several types), celiac disease with occipital calcification and television induced seizures. These chapters are very clinical with nary a statistical p value to be found. The word "epidemiology" appears in one title; however, the chapter describes a selected case series. Most of the chapters describe small series of patients – most less than 15 cases. This is classical descriptive neurology and interesting. One of the best chapters (to me) is by Rubboli and Salvi from Bolonga. They review critically, the many different techniques used in EEG activation with photic stimulation. They point out that different techniques give different results. Since EEG is important in defining occipital epilepsy syndromes, variation in clinical experience may be related to lab technique, not biologic reality.

With so many authors with differing first languages, not even Dr. Andermann has been able to smooth out all of the grammar. The summaries at the beginning of each chapter are often very hard to read.

Who should read this book? The details of each author's case series are of interest to reasonably experienced epileptologists. I think that neurology residents and those not involved in the treatment of children with epilepsy would discover from this book that occipital epilepsy in childhood is confusing and complicated. Medical school libraries should obtain this book as an up-to-date, authoritative reference for special clinical problems.

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