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In addition to surgery and radiotherapy, local treatment modalities for the management of brain tumours are increasingly being developed and clinically tested. This book describes for the first time basic tumour biology as well as all current procedures in progress at the most recent level of knowledge, presented by leading experts in the respective fields.

Image guided resection procedures, fluorescence guided surgery, developments in interstitial radiosurgery are addressed, just as intracavitary chemotherapy and all current concepts and studies of interstitial targeted therapy. Owing to its topicality this book will remain for long the standard for this comprehensively treated subject.

This volume highlights the important role played by neurosurgeons and their techniques in neurorehabilitation. The authors review the recent advances made in neurosurgical techniques which can contribute to the patient’s functional recovery from neurological deficits, such as movement disorders, bladder dysfunction, pain and other sensory disturbances, and cognitive dysfunction after CNS damage.

They also demonstrate that when neurosurgeons are actively involved in applying a multidisciplinary approach during early neurorehabilitation, the patient’s functional recovery is greatly facilitated through the timely use of various different neurosurgical techniques, including nerve grafting, cell transplantation, cortical stimulation, deep brain and spinal cord stimulation, peripheral nerve stimulation, and intrathecal drug therapy. The importance of such a multidisciplinary approach is discussed in terms of a new concept, the neurosurgical re-engineering of the damaged CNS.
Brain Edema is a simple phenomenon – an abnormal increase of brain tissue volume by the increase of brain tissue water content. However the etiology is not simple and relating to a wide variety of neurological disorders including ischemia, trauma, tumor, hemorrhage and hydrocephalus. It is still a major cause of death in the neurological/neurosurgical ward.

This volume is an up-to-date report on progress in brain edema research, diagnosis and treatment, including papers presented at the 12th International Symposium on Brain Edema and Brain Tissue Injury in 2002. Major topics include molecular biology and blood-brain barrier disorders, ischemic and traumatic brain edema, imaging and diagnosis of brain edema, treatment and radiation effect. Various papers in the rapidly growing fields of neuroimaging and molecular medicine are also included.

In the continuous effort to further improve neurosurgery, intraoperative information on structure and function of the brain has become an important tool which potentially will result in an improved outcome of neurosurgical procedures.

In this book experts from different countries and neurosurgical organizations have collected information on the state-of-the-art of intraoperative imaging, MRI, CT and ultrasound. Various contributions cover the future of neuroimaging, the impact of intraoperative imaging on glioma surgery, technical and neurosurgical aspects of the different imaging modalities and systems, and economical aspects. The present book thus provides a unique and comprehensive source of information on the complex of intraoperative imaging in modern neurosurgery.
SpringerMedicine

Bernhard Sutter,
Oskar Schröttner (eds.)

Advances in Epilepsy Surgery and Radiosurgery

Hardcover EUR 72.95*
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ISBN 3-211-83837-6
Acta Neurochirurgica, Supplement 84

Treatment in epilepsy has changed in the last couple of years due to modern drugs and surgery. This collection presents the state of the art in epilepsy surgery and future aspects in the treatment.

The options of surgery and radiosurgery are shown together with their results. The topics are leading from Gamma Knife surgery to the options and results of common radiosurgical diagnosis for treatment with the Leksell Gamma Knife and the possibilities and results of the use of the latter.

Yücel Kanpolat (ed.)

Research and Publishing in Neurosurgery

2002. VIII, 135 pages. 20 figures.
Hardcover EUR 84.95*
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Acta Neurochirurgica, Supplement 83

“Research” and “Publishing” are phrases familiar to all neurosurgeons and neuroscientists. Many young neurosurgeons struggle with them on a trial-and-error basis at first, and there are not structured education programs providing information on standard methods.

The European Association of Neurosurgical Societies Research Committee has developed a course on research and publication methods for residents in neurosurgery who have not yet completed training.

This supplement includes selected contributions from this course and will serve as an essential handbook providing basic tools to guide research and publication work, presenting time-saving advice, and resulting in the most beneficial contributions in experimental and clinical research.

* All prices are recommended retail prices. Net-prices subject to local VAT.
The management of cerebral aneurysms is still the subject of controversy in spite of recent dramatic advances in surgical techniques and neuro-intensive care.

Currently, two main topics in this field have totally different aspects: 1. the management of unruptured cerebral aneurysms as a preventive medicine and 2. neurocrutical management of severe subarachnoid hemorrhage (SAH) after the rupture. These topics were discussed during the Swiss-Japanese Joint Conference in Zurich, Switzerland, in May 2001.

Selected papers from this meeting are included in this volume presenting new clinical experiences in order to find out updated and proper ways to focus the treatment and providing updated information on neurocritical care aspects as well as endovascular and surgical treatment modalities carried out in daily practice in Zurich and Japan.

Intracranial Pressure is a linking keyword, uniting various aspects of diagnostics and treatment of hydrocephalus, head injury, subarachnoid haemorrhage, and brain ischaemia.

This volume contains selected papers presented at the Xlth International Symposium on Intracranial Pressure and Brain Biochemical Monitoring, held in Cambridge, UK, in July 2000. Various clinical and experimental methodologies are discussed including multiparameter brain biochemical monitoring (including brain oxygenation, microdialysis and novel imaging techniques), assessment of cerebral autoregulation, measurement of brain compliance, etc.

This state-of-the-art volume introduces neuroscientists into a world of new techniques, models, monitoring modalities but also theories and new concepts, which highlight directions for the further research and future clinical practice.

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