
Neurocritical care as a subspecialty has grown rapidly over the last two decades, including fast-growing new techniques in neuromonitoring, neuroimaging, and various therapeutic tools. Neurosurgical Intensive Care by Javed Siddiqi is a focused, concise handbook that provides a quick review mainly for residents and fellows receiving training in neurocritical care, but also provides a useful refresher for other healthcare professionals providing care to critically ill neurosurgical patients. The book has 31 chapters with some changes in the table of contents and the addition of two chapters compared with the first edition. Neurosurgery faculty, residents, and fellows, most from the author’s institution, edit all chapters with an additional contribution by one critical care physician. Of note, none of the authors are neuroanesthesiologists or neurocritical care physicians, which may explain the strong focus toward neurosurgical diagnostic and therapeutic tools. As per the preface, the goal of the book is to emphasize the importance of understanding neurophysiology as the best approach to neuron rescue: “For the neurosurgeon involved in neurocritical care, decompression is still the mainstay of surgical intervention,” but “[w]hether our patients need open surgery or not, a nuanced understanding of neurophysiology is the best approach to neuron rescue.” The first few chapters address the clinical and diagnostic evaluation of patients in the neurosurgical intensive care unit, focusing mainly on the advances and role of imaging techniques in the diagnosis of underlying pathology. The chapters that follow cover a variety of disease states and clinical issues that arise and may require management. Each chapter starts with a sample case presentation to draw attention to a clinical scenario, followed by a discussion of the topic with a focus on diagnosis and management. Each chapter ends with a brief management plan for the scenario presented. Seven chapters focus on understanding neurophysiology and neuropsychopharmacology and their application to the critically ill patient. Multiple tables, figures, and treatment algorithms are available for easy use as quick references. This book is unique in emphasizing the importance of social aspects and team management, in addition to medical management, in an intensive care unit. Family communication and end-of-life care are emphasized in many critical care textbooks, but the spiritual care of neurosurgical intensive care unit patients and families, in addition to the review of medicolegal issues and discharge planning, is a nice addition in this book. The second edition contains two new chapters. Presented in a concise format, “Anticoagulation and Antiplatelet Therapy in the Neurosurgical Intensive Care Unit” emphasizes up-to-date recommendations for the use of anticoagulation and antiplatelet therapy, a controversial topic in management of neurosurgery patients with intracranial hemorrhage. “Cerebral Microdialysis in the Neurosurgical Intensive Care Unit” addresses the role of cerebral microdialysis in the intensive care unit and its use in traumatic brain injury, stroke, and subarachnoid hemorrhage. Cerebral microdialysis has been U.S. Food and Drug Administration–approved since 2005, and this chapter also reviews its development and use.

Multisystem management chapters address the management of comorbidities of the critically ill neurosurgical patient, including pulmonary issues, infection, fluid management, nutrition, and the role of monitoring brain oxygenation in the neuro intensive care unit. Two topics neglected in the book are the management of cardiac comorbidities and cardiac complications in neurosurgery patients, and the role of point-of-care ultrasound and its advances in the neurocritical care. What is missing from this book is coverage of several clinically oriented intensive care topics that can occur in the neurosurgical patient, such as acute respiratory distress syndrome and acute kidney injury. An intensivist reading this book would need to find another source for these topics.

The audience for this book appears to be both neurosurgery and neurocritical care healthcare professionals. An overlap in the management recommendations emphasizes the need for multidisciplinary management with a focus on timely diagnosis, communication with the patient and family, high-quality nursing care, titration of therapy, and the appropriate use of neuroimaging to guide therapy.

Overall, Neurosurgical Intensive Care is a quick reference for the acute management of neurosurgical patients in the intensive care unit. It is easy to read, reasonably priced, and includes informative tables and treatment algorithms, making it a useful guide mainly for neurosurgeons but also for other healthcare professionals who provide care to critically ill neurosurgical patients.

Basma Mohamed, M.D., Lauren Berkow, M.D. University of Florida College of Medicine, Gainesville, Florida (L.B.). LBerkow@anest.ufl.edu

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