
Preface

Within medicine, increasing subspecialization has created an almost impossible task; primary care providers are now asked to triage their patients and provide appropriate referrals within a dizzying array of diverse medical fields. Pediatric neurosurgery remains one of a number of highly specialized fields within which most pediatric practitioners including physicians, physician's assistants, and nurse practitioners have never received any training. This fact, combined with the rarity of pediatric neurosurgical diseases, the acuity with which many of them present, the need for rapid triage and tertiary care, and parental anxiety when receiving a neurologic diagnosis, creates a challenging situation for providers caring for children with these conditions.

Several years ago, we hosted a CME event in New York City bearing the same name as this textbook. We solicited comments from attendees and were pleased that most participants felt we were filling a real deficiency in medical education—the cross-fertilization between subspecialties. In fact, a recent survey of pediatricians through an AAP initiative supports our suspicion that many primary care providers felt uncomfortable managing patients with neurosurgical conditions. This survey also suggested a number of neurosurgical topics that pediatricians felt they wanted more assistance in managing and triaging. All of these topics, and many others, are covered from both a neurosurgical and pediatric perspective in this textbook.

In fact, this textbook was designed around a central concept:

Pediatricians and subspecialists need to have a closer working relationship to make childhood medicine work seamlessly in 2016 and beyond.

A pediatrician in a busy practice should not be expected to explain to a concerned parent what the differences in treatment options may be between different types of brain tumors; however all pediatric practitioners should be able to discern between benign and worrisome headaches and to decide when imaging, referral to neurology, or triage to an emergency department is warranted. The relationship between primary care physicians and subspecialists such as pediatric neurosurgeons is obviously at the crux of this book, but should also be at the forefront of mutual efforts to improve care of children. This textbook will never be able to replace the trust and confidence that is built through years of communication and shared patient experiences.

To highlight our belief in the strength of the relationship between primary care providers and subspecialists, this book was envisioned by and co-edited by a pediatric neurosurgeon and a pediatrician each providing the perspective

from within the lens through which they view these common neurosurgical conditions. We hope the vignettes provide real-life flavor to experiences many of you have had, or will have. We expect that the “red flags,” “pediatrician’s perspective,” and references will serve as focused reviews on many of these topics. When reading a newly arrived imaging report, or caring for a child with an unfamiliar diagnosis, these chapters can serve as a medical refresher before calling a parent back with unexpected news or reviewing a finding in the office.

The book is organized into parts that loosely approximate the neurologic development of a child and address issues that are commonly encountered. The first part reviews neurologic development and birth-related trauma commonly seen in the neonatal intensive care unit including issues such as brain injury, brachial plexus injury, and hematomas. The second part addresses findings commonly encountered in the first month of life in the pediatrician’s office. Lumps and bumps, manifestations of neurocutaneous diseases, or tethered cord stigmata are all reviewed in depth. The third part is a comprehensive review of hydrocephalus from birth-related intraventricular hemorrhage through the work-up of macrocephaly and headache management. Part 4 is an important group of chapters describing up to the date thoughts on imaging the central nervous system in children from prenatal ultrasound through MRI and CT including when these different modalities are important to select and the risks associated with each. The fifth grouping of chapters consists of explorations of common neurosurgical conditions that many pediatricians are uncomfortable dealing with, including brain tumors, spasticity, and vascular lesions to use as a reference tool when caring for a complex neurosurgical patient. Finally a series of chapters related to head trauma concludes the textbook, including sections on non-accidental trauma and concussion management.

Most importantly, we hope the topics we cover in the ensuing chapters provide you with some measure of confidence in dealing with conditions you may feel less comfortable with than others, and provide a framework within which you can direct subspecialized care.

We would very much like to take this opportunity to thank our mentors within medicine—Dan Cohen, Gary Edelstein, Sarah Long, Phil Stieg, and Mark Souweidane—for supporting and inspiring our careers and providing continual support and guidance through the years. Educating subsequent generations of pediatricians and neurosurgeons with the lessons you taught us is your greatest legacy and we are proud to be within your lineages.

To our parents and families who instilled within us the belief that education and academics can be at the center of a rich and meaningful life, thank you for supporting our endless training and sharing pride in our demanding but fulfilling careers. Everything we have learned began with your confidence in us and now allows us to begin to pass this on to the next generation of pediatric physicians.

Finally, we are forever indebted to Richard Lansing and Joni Fraser from Springer for seemingly unending patience as we tried to balance our busy medical careers and four young boys at home with an innocent foray into the editing and publishing world. We hope your confidence in us is rewarded in

the impact this book will have and the children benefiting from the shared knowledge going forward.

To our readers, best of luck caring for your patients with these neurologic conditions—there is often no greater challenge in medicine but also often no greater reward!

New York, NY, USA

Jeffrey P. Greenfield
Caroline B. Long

Common Neurosurgical Conditions in the Pediatric
Practice

Recognition and Management

Greenfield, J.P.; Long, C.B. (Eds.)

2017, XV, 444 p. 299 illus., 110 illus. in color., Softcover

ISBN: 978-1-4939-3805-6