and brain tumors of childhood. The organization, the completeness, the excellence of illustrations and the judicious use of appropriate tables and gumut lists in a logical fashion, make, even to this battle worn pediatric neuroradiologist, delightful and informative reading. The organization into small succinct paragraphs and sections dealing with the essence of the neuro-imaging of each particular disease entity, is suitably and successfully enhanced by a small but appropriate number of relative references which are, throughout the book, up to date. This reviewer knows only too well the effort necessary to keep both illustrations and suitable references up to date and make them appropriate. The use of arrows is particularly pleasing. The line drawing whether unique from the author or adapted from others are used in those areas which maybe difficult to understand. On page 442 and in the chapter on Hydrocephalus one such drawing relative to the ventricular index of the frontal horns and the ventricular angle is more of historical interest and helpful to the nonpediatric neuroradiologist. The chapter on brain tumors in particular is a veritable atlas, found in very few other places and here the successful reproduction of images is to be applauded. The author also has used a time honored but readily utilized technique of highlighting the diagnosis or the aim of the illustration as a minor heading. This adds immeasurably to the readability of the illustrations. Although satisfactory, discussion of angiography and vascular diseases could be expanded from just a chapter to throughout the book.

What the author therefore has done is dramatically to expand and improve his first edition, both in step with the times and techniques and to highlight our better understanding of the disease processes and the enhanced peculiarities of their neuroimaging. It becomes a useful companion to excellent neuroradiology chapters in general pediatric radiology books (eg. Practical Pediatric Imaging published by Little, Brown), the appropriate chapters in publications on general diagnostic neuroradiology (eg. Diagnostic Neuroradiology by Anne Osborn, published by Mosby) and together with those dealing with MRI of the central nervous system in children (eg. MRI in Pediatric Neuroradiology by Samuel M. Wolpert and Patrick D. Barnes published by Mosby), amongst others. With the addition of this book to those mentioned, all published recently, not only is an up-to-date and comprehensive knowledge of pediatric neuroradiology in all its guises obtained, but also the perspective of pediatric neuroradiology within neuroradiology and within pediatrics in general. This textbook is one of the most used and at times "permanently borrowed" books in our department. However it is this reviewer's opinion that in addition to dedicated pediatric neuroradiologists, it will make more than just a referral textbook for pediatric radiologists, general neuroradiologists, pediatric neurologists and neurosurgeons especially, but will also be an essential aid in their day to day practice. This reviewer found it a pleasure to read even in large portions at a time, for it is well written and at times extremely concise, therefore a time efficient exercise. It is probably a little too focused for someone at the resident level, but whether one sees one pediatric neurological or neurosurgical patient a week or 10 a day on whom pediatric MRI is performed regardless of the subspecialty, and this book is an essential companion. If not better than others, it is outstanding and this reviewer knows that within another 4 years, another edition should be available.

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NEUROCARDIOLOGY. 1994. Edited by J.A. Armour and J.L. Ardell. Published by Oxford University Press Canada. 443 pages. $C91.00.

The insights of the ancients are not always passed down from generation to generation. Our classical forefathers knew that the mind, soul, and heart were inextricably linked, but for decades much of this connection has not been appreciated by technically trained contemporary physicians. Those of us who specialize in diseases of the nervous system might easily be lulled into thinking that the heart is a rather simple organ, capable of going faster or slower, and whose main function is to feed the brain. Obversely, physicians more oriented to the cardiovascular system could be content with conceiving the brain as an organ which places an inordinately high demand for bloodfow, and whose major role is to speed or slow the heart. This admirable volume is an attempt to dispel some of these myths, and to highlight recent advances in the intricate and multilevel interactions of the brain, peripheral nervous system, heart, and peripheral vascular system.

The editors, who are both authorities in the field, have compiled a volume of 16 chapters. The overall organization of this book is excellent. The book flows smoothly through sections on afferent cardiovascular neurons, efferent parasympathetic and sympathetic neurons, and intrinsic cardiac neurons. Succeeding chapters deal with efferent autonomic neuronal control of specific cardiac functions, coronary circulation, cardiac electrophysiology, and interactions between peripheral and central neurons. There are no less than three full chapters on spinal cord neuronal regulation, cardiovascular neurons in the medulla oblongata, and suprabulbar neuronal regulation of the heart. The final three chapters are designed to bring it all together: the control of cardiovascular function in the awake subject, clinical arrhythmias, and the role of the autonomic nervous system in clinical heart failure. All of the authors are well respected workers in their respective fields.

With this admirable organization and cadre of authors, how well does the book succeed? On the whole, the chapters are clear and well written. There is relatively little overlap between chapters. This book is a comprehensive approach to an overlap between two fields and it succeeds quite well. As a cardiologist, I found the chapters on spinal cord and brain cardiovascular regulation particularly illuminating. The two chapters on mammalian intrinsic cardiac neurons, written by the editors, are clear expositions of state of the art work. There is a surprising richness of intrinsic innervation within the mammalian heart. Intracardic neurons respond to a variety of mechanical and chemical effectors, and the authors have documented the presence and functional integrity of intrinsic cardiac ganglia. These ganglia interact both efferently and afferently with central mechanisms. Although the variety of effectors suggests a number of functions for these neurons and ganglia, the field is still in its youth and their teleological role has not been established.

Overall I was struck by the multilevelled complexity of neuronal cardiovascular control. However this richness of feedback mechanisms does raise a question: How does anything ever get done? Many systems seem designed to feed back and dampen each other and one is impressed that the brain, like the federal government, is ever able to make a decision.

On balance, this is an ambitious and impressive book which is a worthwhile addition to the libraries of workers in the field. I highly recommend it.

Robert Sheldon
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