Book Reviews

DIAGNOSTIC CARDIOLOGY

P. C. Come, Ed.
Philadelphia, J.B. Lippincott Company, 1984, 586 pp, $67.50

Over the past 15 years, the diagnosis and management of cardiovascular disease in adults and children have dramatically changed, especially in the field of noninvasive imaging. In this book Dr. Come has undertaken the formidable task of discussing "the currently available noninvasive imaging techniques" of the heart. Its purpose is to satisfy a "need for a comprehensive text," but not to be "encyclopedic." Forty-nine expert authors have contributed to this well structured volume in order to achieve this purpose.

The book is divided into four basic sections: roentgenographic imaging, magnetic resonance imaging, nuclear imaging, and echocardiographic imaging. Each section has chapters which are devoted to one aspect of that imaging modality, with each chapter following the general format: historical perspectives, techniques, clinical applications, and conclusions. This easy to follow and useful format shows the influence of the editor, with a well unified structure throughout, despite the number of different contributors.

The section on roentgenography consists of chapters on the chest x-ray, computed tomographic (CT) scanning of the heart and blood vessels, and digital subtraction angiography (DSA). Much of the clinical discussion on CT scanning and DSA consists of the potential future applications of these modalities in keeping with their current status. The brief section on magnetic resonance imaging clearly and understandably introduces the theory and technical considerations of magnetic resonance imaging. In depth discussion of techniques, however, is not possible, and the reader is directed to an excellent reference list. Again, the major clinical discussion focuses on the future applications of this noninvasive test in both anatomic imaging and metabolic investigation.

Of course, the nuclear imaging section is most pertinent to physicians involved in nuclear medicine. Consisting of basic radiation physics and instrumentation, blood-pool scintigraphy, myocardial perfusion assessment, infarct-avid myocardial scintigraphy, and pediatric nuclear cardiology, this section comprises ~20% of the text. The first chapter on physics and instrumentation provides a brief overview of the principles and techniques of nuclear imaging. This one chapter cannot possibly provide the depth found in standard textbooks on this subject, but does manage to introduce the student of nuclear imaging to the important principles involved in this field.

The chapter on blood-pool imaging uses the theme of "cardiac performance" as its basis. First-pass techniques, gated techniques, and most parameters of cardiac function available from nuclear cardiology are described in adequate detail for the student and clinician. Assessment of myocardial perfusion is also thoroughly covered in the next chapter. A well needed discussion on thallium kinetics is followed by technical and clinical considerations, including limitations, of this technique. There is no mention, however, of tomographic thallium imaging, and positron emission tomography receives only one column of discussion.

Infarct-avid myocardial scintigraphy is succinctly presented in the following chapter. The chapter on pediatric nuclear cardiology adds information on cardiac shunting and the clinical indications for cardiac function and myocardial perfusion studies in children.

The majority of this book (70%) is devoted to echocardiographic examination of the heart, with the first chapters covering, in detail, basic physical principles and instrumentation. Subsequent chapters describe the findings of both M-mode and two-dimensional (2-D) techniques for a given anatomic entity. This division into clincal areas is useful, but the pattern does not include Doppler examination, which is placed in its own chapter at the end. To have the Doppler findings placed next to the M-mode and 2-D findings, of, say, aortic stenosis, would complete the structure of this text.

The obvious limitations of this text, as with any text, is the rapidly changing character of noninvasive imaging. By the time of publication, minor advances have already occurred, and major changes can be expected. This does not negate, however, this excellent recording of current techniques. The inclusion of tomographic thallium imaging and further expansion of positron imaging and Doppler examination would make this volume more complete.

This textbook will be most useful for the student of cardiovascular medicine, and the cardiovascular clinician who wishes to refer to topics which are not in his area of primary interest. Nuclear medicine physicians have more detailed resources available in their field, but large radiology or nuclear medicine departments involved in training may find this text a useful addition to their library.

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DIFFERENTIAL DIAGNOSIS IN NUCLEAR MEDICINE.

E. B. Silberstein, J.G. McAffee.
New York, McGraw-Hill Book Company, cloth, 1984, pp 318, $37.25.

This multi-authored text is based on the Gamut format originating with Dr. William LeRoy Thompson (at AFIP) and popularized by Dr. Benjamin Felson in his book as well as featured in the *Journal of American Medical Association's (JAMA)* "Gamuts in Radiology" section. The book is written entirely as comprehensive lists in a very detailed and formal outline format that includes a wide scope of differential diagnosis grouped in 11 parts, or systems (such as Part VIII "Hematology," or Part XI "Skeletal System") and divided into 55 chapters (such as "Schilling Test" or "Non-Osseous Uptake"). Eleven physicians contributed to the text. There are no scans or other pictorial features included.