BOOK REVIEWS

THALLIUM-201 AND TECHNETIUM-99m PYROPHOSPHATE MYOCARDIAL IMAGING IN THE CORONARY CARE UNIT. F.J. Th. Wackers, Ed. The Hague, Nijhoff Publishers, 1980, 225 pp, $42.00

This fourteen chapter, 255 page book, is primarily the work of Dr. Wackers on the subject of thallium studies, with major subsidiary contributions by Drs. Willerson, Parkey, Bonte, Stokely, and their colleagues on the subject of pyrophosphate imaging. The title appropriately defines the most appropriate audience, cardiologists working in acute coronary care units. Internists, cardiologists, or nuclear medicine physicians seeking a broader view of nuclear cardiology might consider this book auxiliary, respecting its special focus. Background descriptions of physics, instrumentation, and radiopharmacy are brief, readable, and appropriate to the user cardiologist. The chapters on thallium and pyrophosphate biology are excellent and well referenced. The major subject, the study of acute myocardial infarction, reads like many European doctoral theses—filled with data, history, and literal reporting of results. Critical evaluation of conflicting data is light, and organization of the results into general conclusions is sparse, allowing the reader to reflect at leisure among the reports, without excessive influence from the editor. The four chapters on acute infarction, the most appreciable part of the book, will provide the reader with appreciable and detailed exposure to previous work—a useful service.

Remarkably lightly represented in the book are the contributions of other major insights into the analysis of thallium studies. Visual analysis of thallium images is described in detail, with about one page given to regional quantitation, and passing mention made of multiple pinhole tomography. Since many nuclear cardiologists believe that regional quantitation methods have saved thallium cardiography from a probable demise as a precise and dependable technique, the light mention made of the technique could be considered provincial. The impressive "all or none" results obtained by Dr. Wackers and his colleagues explicitly in the acute stage of infarction in fact require no computer analysis. The predominant use of thallium in the more difficult and gray-scale world of stress imaging, however, establish a need for more recognition of the image processing techniques, which will probably become a standard part of gamma camera imaging equipment used for the somewhat special environment of thallium imaging.

Pyrophosphate methods of infarct imaging are ably and briefly presented by the group responsible for developing and disseminating the method. The references on this subject are remarkably dominated by contributions from the same authors. More complete presentations of their work have appeared in their own books, and this text cannot be considered a definitive statement of all the important caveats and issues that must be known to a cardiologist responsible for implementing nuclear cardiology in a coronary care unit. Dividing the presentation among acute infarction, unstable angina, and atypical chest pain, is more logical for thallium than for pyrophosphate, resulting in four chapters less than five pages in length and redundant in content. It has been more difficult to make the "combined" chapters lively than it has to present the primary data for the two different techniques.

The illustrations are well reproduced; the number of misspellings and typographical errors is unreasonably large.

The book provides very useful background material for a cardiologist entering the coronary care environment, with no background in nuclear medicine. Since it is largely the experience of the editor, recourse to other texts on thallium interpretation will be required. The editor has served his cardiology colleagues well by placing a large segment of his experience with thallium studies in one tract. The book is more useful as a reading background than as a reference, considering its limited inclusion of the important contributions of others.

RICHARD PIERSON
St. Luke's Hospital
New York, New York

RADIONUCLIDES IN NEPHROLOGY. A.M. Joekes, A.R. Constable, N.J.G. Brown, W.N. Tauxe, Eds. London, Academic Press, and New York, Grune & Stratton, 1982, 300 pp, $39.50

The proceedings of the Fifth International Symposium on Radionuclides in Nephrology held in London September 2-4, 1981, have been assembled into a book with 45 original articles and seven invited review articles. Its timely publication, within a few months of the symposium, is a tribute to the determination of the editors, though evidently some compromises had to be accepted (the text is typed, illustrations are few and of average quality). On the whole, however, the presentation is quite adequate to bring the reader up-to-date on this important subject.

New material includes discussions of short half-life radionuclides, new radiotracers, computer applications, diuretic renograms, and intrarenal transit times. There are review articles on radiopharmaceuticals, clinical strategy, imaging, pediatric studies, bone studies, transplant management, and obstructive uropathy, these last two are of exceptional quality. Renal transplants and obstructive uropathy are also stressed through numerous original articles in the text. For the most part the original articles are short, easy to read, and have brief bibliographies. Material is presented on DMSA, I-123 ortho-iodohippuric acid, novel methods of evaluating renal transplants (including labeled platelets and ultrasound), evaluation of hypertension in children, effective renal plasma flow, reflux, differential GFR (with and without blood samples), emission computed tomography, functional imaging, interpolative background correction, and semiconductor detectors. There is considerable emphasis on quantitative studies in renal nuclear medicine. No perfect agent for estimation of effective renal plasma flow, glomerular filtration rate, or tubular function is available, and in these quantitative measurements all known radiotracers suffer from overlap. Some significant advances have occurred in renal nuclear medicine, but by and large the reader is not overwhelmed with a sense that great strides forward have been made or that the ultimate resolutions of present problems are forthcoming. This book may be viewed as a frame in a slow movie.

Although the majority of the material has been presented elsewhere, *Radionuclides in Nephrology* offers a very convenient collection of current ideas and techniques. The section on renal obstruction in children is especially well done. The reader will find little on the subject of hypertension in adults—possibly this will be an area for future symposia.

This book is a timely contribution to the field of nuclear medicine and has enough practical material in it to be of value to anyone