JNMT Bookshelf

ESSENTIALS OF NUCLEAR MEDICINE IMAGING, Second Edition

Fred A. Mettler, Jr., MD and Milton J. Guiberteau, MD, Grune and Stratton, New York, 1986, 391 pp, $47.50.

It has been two years since the publication of the first edition of *Essentials of Nuclear Medicine* and the second edition has several additions and modifications in order to stay abreast of new developments. The majority of the updated information is found in the chapters dealing with cardiac and gastrointestinal systems, tumor and abscess imaging, and computers. There have also been additions to the sections on specialized brain imaging, parathyroid imaging, ^{111}In labeled leukocyte imaging, and labeled antibody imaging. Appendix F is a new section dealing with radionuclide imaging during pregnancy and is very instructive and helpful.

The majority of the text deals mainly with different clinical imaging procedures and is a good overview of clinical indications and findings for student and residents. A new section of specialized brain imaging describes imaging with radioiodinated amines and positron-emitting agents. Parathyroid imaging using subtraction techniques with thallium and technetium are also briefly described.

In the cardiac section, several new areas have been added. Thallium imaging using dipyridamole in patients unable to tolerate exercise has been added. In addition, functional cardiac images generated from data acquired from gated equilibrium blood-pool studies are expanded upon with more information describing ejection fraction images, paradox images, and phase analysis images. Conspicuously absent, however, is the use of SPECT scanning in cardiac studies.

Certain sections on gastrointestinal imaging have been expanded to include esophageal transit, gastroesophageal reflux, and gastric emptying studies. Finally, new sections dealing with advances in tumor and abcess imaging have been added to the second edition. There is a good introduction of labeling and imaging techniques of ^{111}In leukocytes along with normal and abnormal scan findings. Harvesting and labeling of monoclonal antibodies is also briefly covered with their potential diagnostic and therapeutic uses.

The chapter on computers has been reorganized with added information on software considerations, display modes, service considerations, and camera-computer interfacing. A disappointing feature of this new edition is the failure to update and expand on the use of SPECT imaging in various procedures.

Essentials of Nuclear Medicine is precisely what the title implies and is an introductory text designed to provide the reader with a basic understanding of all aspects of nuclear medicine, including instrumentation, radioactivity and radionuclides, computers, radiation safety and clinical indications. The strength of this text lies in the breadth, and not necessarily in the depth, of material covered. It is an excellent introductory text for nuclear medicine technologists, radiology residents, and also nuclear medicine physicians. It needs to be supplemented, however, by other texts for more in-depth understanding of both the clinical and technical aspects of nuclear medicine.

Technologists will find this an easy reading and informative text, which provides a good clinical basis for the various nuclear medicine procedures. Its weaknesses lie in the areas of basic science, instrumentation, computers, and in new innovations such as SPECT imaging. Supplementary reading in these areas is a must in order to have an up-to-date overview of nuclear medicine.

DAVID A. THORNE, MD
University of Utah School of Medicine
Salt Lake City, Utah

THYROID AND PARATHYROID IMAGING

Martin P. Sandler, MD, James A. Patton, PhD, and C. Leon Partain, MD, PhD, editors. Appleton-Century-Crofts, Norwalk, Connecticut, 379 pp, $75.00.

This is a multi-authored book which discusses the techniques and clinical findings of imaging the thyroid and parathyroid glands. The book is logically organized, well-written, and the quality of the illustrations is good. It should become the authoritative source on thyroid and parathyroid imaging.

The book covers all aspects of thyroid evaluation including RIA, radionuclide imaging, x-ray fluorescent imaging, ultrasonography, x-ray computed tomography, and magnetic resonance imaging. In addition, a chapter on parathyroid imaging, discussing all these modalities, is included.

In the first part of the book, separate chapters are devoted to the production and quality control of radiopharmaceuticals used in thyroid imaging, and to the physics, instrumentation, and quality assurance of nuclear medicine procedures. A chapter is included that reviews embryology, anatomy, and physiology of the thyroid and parathyroid. The remainder of the book is devoted to discussions of the various techniques for imaging the thyroid that are available and the interpretation of the images. A large portion of this section is devoted to radionuclide techniques.

This book is the most comprehensive source of information on thyroid imaging available. Unlike most books that restrict

themselves to one imaging modality, this book allows the reader to see the advantages and disadvantages of all the major imaging techniques of the thyroid and parathyroid. A wealth of references are given at the end of each chapter which allow further reading on the subject, if desired.

I would highly recommend this book to anyone who is involved in the multimodality approach to thyroid and parathyroid imaging. It is useful as both a text book and as a reference when presented with a difficult case. The authors are to be commended for creating this excellent text.

FREDERICK L. DATZ, MD
University of Utah School of Medicine
Salt Lake City, Utah