

Endocrine Imaging

M.P. Sandler, J.A. Patton, M.D. Gross, B. Shapiro, and T.H.M. Falke. Norwalk, CT: Appleton & Lange, 1991, 446 pages, \$115.00.

This multi-authored textbook on the correlative imaging aspects of the human endocrine system is well illustrated and written in a concise, comprehensive, and consistent style. It represents one of the most definitive works to date on the subject as it encompasses the entire endocrine system. This textbook is outstanding because it integrates essential anatomic information with physiologic information and is written with the medical imager in mind. Basic aspects of embryology, histology, and anatomy, as well as the normal and common pathophysiologic states of each organ system, are presented as a prelude to understanding the role of modern "high tech" imaging techniques in solving clinical problems. One cannot read this book without gaining a much better understanding and insight into the various mechanisms operating within the normal and abnormally functioning endocrine organs. Knowing this, a rational, well informed selection of imaging procedures can be ordered to confirm clinical diagnoses.

This book is divided into 17 chapters covering the various common diagnostic and therapeutic problems of the endocrine system. The first four chapters deal with the basic physics and chemistry (radiopharmaceuticals) of modern cross-sectional, functional, and anatomic imaging. Chapters 5 through 16 cover the various organ systems. The final chapter is an interesting presentation of the legal aspects of medical imaging. There are excellent tables in each chapter which list essential clinical findings and useful comparative imaging data (i.e., sensitivity and specificity) for each disease process discussed. Good quality images from different modalities are also presented on a case-by-case basis. Each chapter is well referenced.

During the past two decades, a number of significant breakthroughs

in digital technology have provided physicians with a rich choice of imaging methods to use for the benefit of their patients. Cross-sectional imaging methods, including ultrasound, CT, and MRI, have allowed the three-dimensional detection and spatial localization of innumerable types of abnormalities, formerly diagnosable only through invasive techniques. New radiopharmaceuticals in nuclear medicine allow for the selective targeting of normal and diseased tissues and the study of organ physiology metabolism. These new techniques are used, and instructively illustrated, throughout the text. The authors are generous in making frequent recommendations about which combination of anatomic and functional imaging techniques to order, to arrive at the best answer to relevant clinical questions.

In summary, *Endocrine Imaging* brings together a massive amount of information in a cogent yet highly readable manner. All radiologists and nuclear medicine physicians who routinely image, and occasionally treat, the various organs of the endocrine system will find this book essential reading and a welcome addition to their libraries. The strong clinical orientation of the authors will make this text particularly valuable to medical students, as well as to radiology, nuclear medicine, internal medicine, and endocrinology residents. Nuclear Medicine and radiology technologists who enjoy reading about the clinical aspects of their profession will also benefit from this book. I highly recommend this book and feel that it is well worth the asking price.

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Imaging of AIDS.

Pierre M. Trotot, ed. St. Louis, MO: Mosby-Year Book, Inc., 1991, 288 pp. \$89.00.

Imaging of AIDS is an attractively bound textbook edited by P. M. Trotot with the assistance of an impressive list

of contributors. This particular edition is an authorized English translation of the French text entitled *Imagerie médicale du SIDA et des rétrovirus* originally published by Éditions Vigot, Paris, France, in 1988. The work was translated by G.G. Champe of the University of Iowa for B.C. Decker Publishing Company and is distributed by Mosby-Year Book in the U.S. Although this work represents six years of extensive research, dating from 1981 to 1987, as a recently released English text in 1991, it is already out of date.

There are two stated goals listed in the preface of this book: (1) the establishment of an atlas in which the general practitioner can find and appreciate images of AIDS related disease processes and (2) the creation of a work in which these images are effectively used in a clinical context. The strong clinical, microbiological, and epidemical orientation of the authors will assist the physician in the proper use and interpretation of radiological procedures.

The book is divided into 7 sections consisting of 26 chapters. Section 1 deals with the general principles of virology, microbiology, and epidemiology of AIDS, as well as the entire clinical spectrum of HIV infection. This is an excellent section and is particularly informative for the practicing physician. Section 2 describes the clinical and microbiologic aspects of AIDS in the thoracic cavity and effectively demonstrates these processes with radiologic images. The text discusses the relative merits of various radiologic procedures when approaching pneumonic infectious processes versus mediastinal mass lesions.

Neurologic, abdominal, and systemic involvement of AIDS are described in Sections 3-5. Section 6 is an excellent treatment of the special medical issues raised in pediatric AIDS cases. The information in this section is extensive, well presented, and very useful. Section 7 describes the medical consequences of chronic myelopathies related to HTLV-1 infections.

There are several serious drawbacks in this book. The book neglects to dis-

cuss the role of nuclear medicine in treating AIDS patients. A tremendous amount of data has been collected and published during the last 10 years concerning the unique role of gallium-67 imaging in the various pulmonary infections and neoplastic processes associated with AIDS patients. The role of indium-111 WBC scanning in specifically detecting occult abdominal abscesses and confirming bone infections (osteomyelitis) has been discussed in nuclear medicine literature for the past seven or eight years.

For the above reason, I cannot strongly recommend this text for the nuclear medicine physician.

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**DTC Radiation Safety
Videos, Vol 1—
Environmental Services;
Vol 2—Security.**

Audrey V. Wegst, PhD and Jon J. Erickson, PhD, producers.
Kansas City, MO: Diagnostic
Technology Consultants, 1991,
\$295.00 per volume.

These two videos are part of a series of nine such videos dealing with radiation safety issues for a wide spectrum of hospital personnel including housekeeping staff, nurses, cardiac catheterization laboratory technologists, pregnant workers, and hospital administrators. They are produced by a team of highly qualified and well respected medical physics consultants in conjunction with a film production studio.

Both the tapes reviewed contained similar material, but were directed toward different target audiences; in one case, housekeeping personnel, and, in the other, security guards. Each answers the question "What is ionizing radiation?" and then proceeds to explain the concept of ALARA by demonstrating various warning signs and the radiation protection precautions provided by time, distance, and shielding. This is done without recourse to technical jargon or the mention of units of radiation exposure and

recommended dose limits.

The videos are well produced and convey their message succinctly, although I do have some minor criticisms. In the housekeeping video, a supervisor takes us on a tour of the hospital and indicates where extra caution needs to be exercised. In the course of this tour, there is a demonstration of the use of a G-M monitor which appears to indicate that a radiation warning placard has some radioactive contamination. Immediately thereafter the supervisor picks up this card to demonstrate the international radiation warning symbol. Is this card contaminated or not? It would have been wiser to demonstrate the G-M monitor over a properly labeled source of activity in a lead pot.

In the security video, we accompany a security guard during his tour of duty and, in the process, are introduced several times to a bass fisherman masquerading as a member of the hospital housekeeping staff—or is it the other way around? The part is grossly overplayed to the point of farce and is quite out of character with the more serious nature of the security guard.

Time, distance, and shielding are ably demonstrated in the housekeeping video with the aid of a candle as a source of light. In contrast to this, the security video leaves one wondering if this is a radiation safety lesson or an anti-smoking campaign, when cigarettes are used to convey the same time, distance, and shielding concepts. Although this demonstration is intended to inject some humor, I believe that a smoker might well be turned off by this segment, to the point of ignoring the real message concerning radiation protection.

The housekeeping tape lasts 25 minutes and the security tape is 30 minutes long. Each tape is divided into convenient sections with breakpoints to review the material just presented. In addition to the tape, the purchaser is provided with a comprehensive package including a teaching guide, a multiple choice test set with a quick answer key, and a more extensive set of answers explaining each of the

answers, including those that are incorrect. In order to meet regulatory requirements, there are sign-up sheets for personnel who view the tapes and certificates of participation, as well as reference material, such as names of resource personnel and a bibliography.

Education is a major function of any radiation safety officer (RSO) and the task becomes a chore when it has to be repeated frequently for the orientation of new personnel. These tapes could be used in a self-teaching mode, in which case the test provides a good yardstick of the viewer's comprehension. This would be useful when trying to address shift workers. However, I recommend that the tapes be used in a discussion forum with a knowledgeable person present to help clarify various points. The literacy level required by these tapes is probably close to Grades 11 or 12 and this may be deemed too high for some audiences. Even though the tapes are 30 minutes or less, they may be too long to hold the attention span of some audiences and, in this context, the breakpoints could conveniently be used to initiate discussion and aid comprehension.

Overall, I found the tapes to be professionally produced, to contain the basic information necessary (it is acknowledged that some agreement states may impose stiffer requirements), and to present the information in a lucid manner for the target audience, without resorting to technical terminology, although each kit does contain a glossary of terms. These tapes will be a valuable adjunct to the training provided by RSOs, and I look forward to seeing the other tapes in this series, as they become available. If the remaining programs are of the same high caliber, they will fill a significant gap in the knowledge of hospital personnel and may help those nuclear medicine technologists who find themselves constantly responding to questions pertaining to the risks of radiation exposure.

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