

NMT Bookshelf

BASIC NUCLEAR MEDICINE

Sheldon Baum and Roland Bramlet, Appleton-Century-Crofts, New York, 1975. 270 pp, \$13.75

The emphasis of this textbook has been placed on clinical nuclear medicine. It has been divided into three main parts: "Radionuclide Imaging and External Monitoring," "The Nuclear Medicine Laboratory," and "The Physical Aspects of Nuclear Medicine."

The useful information in each chapter is given in a very logical sequence. For example, Chap. 1 on the central nervous system begins with brain imaging. Discussions on rationale and radionuclides deal with current methodologies and are followed by a short paragraph on the history of the subject. The section on normal brain imaging gives the reader information about routine views and correlates these with anatomical features. All of the principles are precisely stated.

Abnormal conditions, such as brain tumors, vascular-type lesions, cerebral infarction, subdural hematoma, and nonneoplastic space-occupying lesions, are discussed at some length. Laced with excellent examples of each pathological condition and supportive illustrations, the reader has the basics for understanding and recognizing various disease states.

The chapter concludes with a similar treatment of radionuclide cisternography. The more commonly used radionuclides receive an excellent review. Various conditions, such as normal-pressure communicating hydrocephalus, are discussed. The nuclear medicine images are among some of the best I have ever seen.

Each chapter concludes with a list of references and a welcomed additional reading list. This is a most useful inclusion for the neophyte and or non-nuclear medicine physician for whom this book is intended.

The majority of nuclear medicine images are of extremely high quality. A few suffer the overexposure problems that seem to plague most textbooks.

The chapter on the thyroid is very well written. There are many scans illustrating various thyroid conditions and the various procedures that can be accomplished to demonstrate them. Radioiodine therapy receives sufficient coverage for reader understanding.

Part Two on laboratory nuclear medicine includes sections on blood volume, erythrocyte (red blood cell) survival, ferrokinetics, Schilling's test, fat absorption studies, radioassay, and autoradiography. References are given individually for each section. The procedures are clearly defined and outlined so that each one can be easily performed. Anyone possessing an understanding of basic laboratory operations can follow the instructions.

Part Three, "The Physical Aspects of Nuclear Medicine," rounds out this book. You will note that in

other texts this data is usually put first. Since the authors felt that it is not imperative to understand these principles they chose to put them last. Thus the emphasis is on the clinical aspect rather than the scientific. There is sufficient data here to enable the reader to grasp the techniques of nuclear medicine. Efforts have been directed toward understanding instrumentation.

This is a fine textbook that will surely help physicians and residents in other related specialties.

ROBERT J. LADUE
University of Iowa
Hospitals and Clinics
Iowa City, Iowa

NCRP REPORT NUMBER 44: KRYPTON-85 IN THE ATMOSPHERE—ACCUMULATION, BIOLOGICAL SIGNIFICANCE, AND CONTROL TECHNOLOGY

Scientific Committee 38, National Council on Radiation Protection and Measurements, Washington, DC, 1975. 79 pp, \$4.00

This NCRP report was prepared by a task group on ^{85}Kr of the National Council on Radiation Protection and Measurements Scientific Committee 38 on Waste Disposal.

Presently the release of ^{85}Kr pollution to the atmosphere is primarily through the reprocessing of nuclear fuels from electric power reactors. This report predicts to the year 2000 the rapid growth of the nuclear power industry, based on the growth of the past power requirements, and future global inventories of ^{85}Kr .

Since ^{85}Kr is essentially nonreactive and difficult to control, the gas is a special problem. In view of this there is a review of the physical, chemical, radiologic, and biologic properties of krypton. Also discussed are its fate after release to the atmosphere, dosimetry, and radiologic biologic significance. The last chapter is a discussion on the current status of the removal of ^{85}Kr from the waste gases of the nuclear power industry, but these processes are problematic and costly.

The reading is easy and not encumbered with a lot of formulas; the work is complete and presents the problem well. Although this is not a book that a nuclear medicine technologist would need or use, it may be useful and informative to radiation biologists and nuclear physicists.

Presentation of material like this is important for it generates interest in the expectation of problems created by the continued unrestricted release of this nuclide to the global atmospheric envelope.

BYRON J. KOHRS
St. Mary Hospital
Quincy, Illinois