# SPECIAL PROCEDURES IN ROENTGEN

# SPECIAL PROCEDURES IN ROENTGEN DIAGNOSIS

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CHARLES C THOMAS · PUBLISHER Springfield · Illinois · U.S.A.

# Published and Distributed Throughout the World by CHARLES C THOMAS • PUBLISHER BANNERSTONE HOUSE 301-327 East Lawrence Avenue, Springfield, Illinois, U.S.A.

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# SPECIAL PROCEDURES IN ROENTGEN DIAGNOSIS

# Publication Number 537 AMERICAN LECTURE SERIES®

### A Monograph in

# The BANNERSTONE DIVISION of AMERICAN LECTURES IN ROENTGEN DIAGNOSIS

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Dedicated to Betty

## **FOREWORD**

VERY FREQUENTLY the practicing radiologist or the resident physician in training expresses a desire to obtain information concerning some special procedure in diagnostic roentgenology. Where a large medical library is available, it is usually possible to find this information, although sometimes one expends several hours in the process.

For sometime there has been a definite need in the field of diagnostic roentgenology to have a source of information readily available which could help one to look up details of special procedures, or at least to find references easily. The consolidated indices which have been prepared by several radiology journals have been of definite help in this regard. Here again, however, the information may not be readily available at the time it is needed most.

Drs. Beranbaum and Meyers are greatly interested in teaching and research in diagnostic roentgenology. After having been personally acquainted with both of the authors, it is easy to understand why they would think of the idea of presenting this book and would have the tenacity to see the work brought to publication. This book should be of great usefulness to all who are interested in the special procedures of diagnostic roentgenology.

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# INTRODUCTION

Since Roentgen's discovery in 1895 a mass of radiologic material has been accumulated with such speed that it taxes one individual's ability to organize and systematize it. This is true not only for the vast areas of medical knowledge which the roentgen method has unfolded, but applies equally as well to the various techniques employed. One is the hand maiden of the other. As our techniques have become more precise, our medical understanding has progressed immeasurably.

Periodically technical development reached a plateau only to erupt again with new momentum. Such a plateau was apparently reached utilizing conventional techniques, followed by opacification of the gastro-intestinal, genito-urinary and biliary tracts.

In 1938, the Robb-Steinberg technique ushered in a new era of opacifying vascular structures. This coupled with image amplification and cine-radiography opened the recent flood gates of a veritable technique explosion. Every artery, every vein, every lymphatic is now being investigated by various means by different examiners. These techniques are by and large scattered far and wide in numerous medical publications. It is our task to systematize and index these techniques, to present slightly different techniques by different examiners, side by side in order that the reader may use his own judgment in selecting the one that suits him best.

In compiling these procedures we have gone directly to the source, so that due credit may be rendered, and in order to present a more comprehensive understanding of the subject. No diagrams or illustrations are included. For greater detail and for a study of illustrations the reader is referred directly to the source. The procedures are completely indexed for more thorough study and reference.

This book is not intended as a comprehensive medical treatise on any subject. Of necessity the understanding of a procedure necessitates comprehension of the medical data involved. The presentation of this medical background material varies considerably depending on the situation.

This is not intended as a book on conventional radiographic techniques found in numerous publications for technicians and physicians. Instead it is oriented purely for the physician, not alone the radiologist, but anyone involved or interested in the roentgen method to clarify a medical problem. This includes not only the general physician but also the specialist who has a need to find a diagnostic roentgen procedure applicable to the problem at hand.

The continuous publication of new procedures indicates that this compilation is of necessity unfinished. This volume is presented with this point of view—comprehensive but incomplete.

### **PREFACE**

A COMPILATION OF technical procedures requires the assistance of numerous individuals. To Dr. Ambrose P. Merrill, Executive Director of St. Barnabas Hospital we are indeed grateful for providing us with tools and the wherewithal for this study. His generosity in this connection is matched only by his warm interest in the department of Radiology at large.

To Dr. Maxwell H. Poppel, Professor of Radiology and Chairman, Department of Radiology, New York University, we wish to express our appreciation. As a most stimulating teacher, he has been a constant source of inspiration.

To Dr. Charles M. Nice, Jr., Professor and Chairman, Department of Radiology Tulane University School of Medicine we express our gratitude for his support and encouragement.

We wish to thank all those who have contributed to the compilation of the various techniques included, as well as the publishers of the various journals from which the abstracts were obtained. Mallinckrodt's World Radiology Current Abstracts were invaluable in directing our attention to numerous foreign publications.

This work was compiled while the junior author was serving as a trainee in Cardiovascular Roentgenology at Tulane University School of Medicine. Appreciation is expressed to the National Heart Institute for this traineeship.

The assistance of Mr. Anthony Maranga, Assistant Director at St. Barnabas and Mrs. Ruth Blazek are gratefully acknowledged.

Finally we wish to thank our wives, without whose indulgence the completion of this book would not have been possible.

S.L.B. P.H.M.

# **ACKNOWLEDGMENT**

This work would not have been possible without the encouragement, and material assistance of Dr. Ambrose P. Merrill, Executive Director of St. Barnabas Hospital for Chronic Diseases, Bronx, New York.

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