## THE SKULL, SINUSES, & MASTOIDS

A HANDBOOK OF ROENTGEN DIAGNOSIS

BARTON R. YOUNG

# The SKULL SINUSES & MASTOIDS

# A Handbook of ROENTGEN DIAGNOSIS

by

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## THE HANDBOOKS OF ROENTGEN DIAGNOSIS



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### Preface

The preparation of this book was originally undertaken by Dr. Karl Kornblum. His untimely death at the height of a distinguished career came during its early stages of preparation. The decision to be his successor was difficult to make, but the responsibility was accepted and a fresh start made.

In this book are presented the roentgen appearances and findings of the normal skull, sinuses and mastoids at significant stages of development from birth to adult life, their normal variants, anomalies and diseases.

The illustrations, for the most part, are from the files of the Department of Radiology, Temple University. Some were procured from other sources and I wish to acknowledge them and express my appreciation to the physicians who made possible their use. Plates 19, 30 and 31 were obtained from material in the X-ray Museum, Temple University Medical School, originally sent to Dr. W. Edward Chamberlain from the Stanford University Hospital through the courtesy of Dr. Robert R. Newell. Plates 32, C, 37, B, 43, A-C, and 56, A, are also from the X-ray Museum, furnished previously by Dr. Merrill C. Sosman, Peter Bent Brigham Hospital, Boston. Plates 33, B-E, and 40 were contributed to the Museum from the Children's Hospital, Boston, by Dr. Edward C. Vogt when he was roentgenologist there. Dr. Robert K. Arbuckle, Oakland, Calif., and Dr. Samuel H. Fisher, Greenville, S. C., supplied films for Plates 55, A, and 67, respectively. Dr. Matthew S. Ersner, Temple University, made available a number of illustrations of unusual teaching value. Dr. Eugene P. Pendergrass and Dr. C. Richard Perryman, University of Pennsylvania Hospital, furnished roentgenograms for Plates 42 and 56, B. Plate 75, B, is from Gray's Anatomy, edited by W. H. Lewis (24th ed.; Philadelphia: Lea & Febiger, 1942), and reproduced by

courtesy of the publisher. Dr. Walter Lutz, Schenectady, N. Y., translated certain parts of *Otologische Röntgendiagnostik*, by Ernest G. Mayer.

The medical, technical and secretarial personnel of the Department of Radiology, Temple University, co-operated wholeheartedly when advice was sought and assistance needed. I am principally indebted to my chief, Dr. W. Edward Chamberlain, for his encouragement and understanding throughout the preparation of the book. Dr. Gustavus C. Bird, Jr., helped with a study of the nasal sinuses of infants and offered valuable suggestions pertaining to the text and illustrations. Appreciation is extended to Miss Lucy Dryar and Mrs. Evelyn E. Beauchesne for preparation of the original copy. Mrs. Beauchesne also lettered the prints and assisted with the references. Their assistance was invaluable. Thanks are due Mrs. Doris Wolf Nace for endless visits to the department files and hospital record room in search of roentgenograms and clinical records. Chief Technician Dewey P. Blackstone and his able staff are owed gratitude for excellent workmanship. Many of the roentgenograms selected for illustrations bear the signature of Miss Esther Black, Mrs. Elmira Dennis, Mrs. Helen Felton, Mrs. Helen Clayman, Mrs. Edith Ricketts, Mrs. Thelma Thomas, Miss Florence Ueltzen or Mr. Blackstone. To all of them and to unnamed technicians who contributed to the success of the book through capable and careful radiography, sincere thanks are offered. Mr. William I. Taylor, Medical Photographer, spared neither time nor effort to furnish prints of excellent quality, usually superior to the originals. He and his former assistant, Mr. Glenroy Stein, willingly furnished additional material whenever there was any possibility of improving what seemed to be best possible reproductions. Deep appreciation is felt for their painstaking efforts and excellent results.

I sincerely appreciate the full co-operation and help extended by the publisher during the preparation of the text and the unusually fine standards that resulted in the best possible reproduction of the illustrations and text.

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