PEDIATRIC CARDIOLOGY

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Foreword

Sixty years ago Dr. Thomas Morgan Rotch, then Professor of Diseases of Children, published the first textbook on Pediatrics from the Harvard Medical School. Even in 1896 there was enough information regarding this relatively new specialty to require a volume of some 1100 pages, but only seven of these were headed Congenital Diseases of the Heart. Obviously there was relatively little to say about this particular pediatric problem and even less stimulus toward further knowledge, for Dr. Rotch wrote that, although "it is usually possible to make a diagnosis of congenital cardiac disease, . . . a diagnosis of the especial lesion is, as a rule, impossible." In any case the exact diagnosis was only of academic interest. In his single paragraph devoted to the management of congenital heart disease Dr. Rotch did mention "the administration of digitalis in small doses and with the utmost caution" as occasionally useful, but concluded that the treatment was "essentially hygienic and symptomatic."

The next textbook of Pediatrics from the Harvard Medical School appeared thirty years later. Professor John Lovett Morse was able to compress what he thought the pediatrician of 1926 needed to know about heart disease into forty pages, less than five of which sufficed for Congenital Heart Disease. Doctor Morse could find one item of progress unknown to Dr. Rotch. But even this was nearly useless, for "the Roentgen ray, which theoretically ought to be of considerable assistance in the diagnosis of special lesions, is practically of little assistance even in the hands of an expert." Yet, "Fortunately the diagnosis of the exact lesion . . . is not of great importance in either prognosis or treatment. . . . There is no curative treatment [and] nothing which will either diminish the deformities or favor the closure of abnormal openings. The treatment, must, therefore, be hygienic and symptomatic."

Now, in 1956 we find ourselves at the end of another thirty-year interval. Judged by the progress before 1926, the mere size of this new book on Pediatric Cardiology from the Harvard Medical School and Children's Hospital of Boston is sufficiently impressive. Even more

striking is the preponderance of pages devoted to the diagnosis and treatment of congenital as compared with acquired heart disease. Obviously the sudden increase in knowledge and interest concerning a subject until recently so neglected, is worldwide. Its local history has been traced here only as a convenient example of the size and suddenness of this development. Why should one thirty-year interval (indeed, essentially the last fifteen of those thirty years) have witnessed such striking progress?

A partial explanation is found in the decline of other challenges, such as the feeding methods, formulas and digestive diseases of infancy and childhood. But the real cause was the demonstration by Gross in 1939 and by Blalock and Taussig in 1945 that it was indeed possible to "diminish the deformities or favor the closure of abnormal openings." The essential element was some basis for hopefulness. With hope, interest in diagnosis came suddenly to life; cardiac catheterization became a useful tool rather than a *tour-de-force;* "the Roentgen ray" was belatedly found to be of considerable assistance, indeed, and the "symptomatic and hygienic treatment" took on entirely new meaning and purpose.

The pediatrician—and especially the younger pediatrician—has rightly been unwilling to see all these aspects of diagnosis and treatment handed over to a new subspecialist in cardiology. Fully aware that the surgeon who operates upon the heart of a child requires special skill and training, the pediatrician considers the nonsurgical aspects of cardiac disease in infancy and childhood to be pediatric responsibilities. In rising to meet this new and growing challenge, he will find this volume extremely helpful. Its author once described to me his hope of making this "a do-it-yourself cardiology." I believe he has succeeded.

Doctor Nadas is especially well qualified for this task. His approach as an author parallels that of his own professional life. His residency in Pediatrics at The Children's Hospital in Boston and his year of full-time pediatric responsibility and teaching at the Children's Hospital of Michigan in Detroit were followed by four years of general pediatric practice in a small city some distance from the specialized services of a medical school. With this background of practical experience Dr. Nadas returned to The Children's Hospital in Boston in 1949 to participate in the suddenly and rapidly expanding activities of its Cardiology Division. Now, as Cardiologist to the group of hospitals making up The Children's Medical Center, and Consultant in Pediatric Cardiology to the Boston Lying-in Hospital, the author would, I believe, prefer to be known primarily as a thoughtful and resourceful doctor for infants and children. That Dr. Nadas is also a wise specialist of large experience in cardiology and a teacher of great skill and enthusiasm will be abundantly clear to the reader of the following pages.

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Preface

This volume is intended to be a handbook for the pediatrician, the general physician and the medical student. It does not claim to be a treatise on the physiology of the heart, though obviously physiological data will be presented in an attempt to explain the clinical picture. I have tried to make every chapter fairly complete by itself; thus a certain amount of repetition is unavoidable.

My intention has been to put proper emphasis on clinical recognition and management of heart diseases in children. Techniques of cardiac catheterization and angiocardiography, for example, have been described; but primary emphasis has been kept on the principles and procedures of clinical management.

I have written almost exclusively about our own experiences at The Children's Medical Center during the past ten years, and I did not intend to write a reference book. Diseases and even important therapeutic procedures such as open heart surgery and hypothermia with which I had little personal contact have been discussed only cursorily. The interested reader may do better to look up these topics in the reference material rather than have me interpret other people's work for him. The list of references, like the book itself, is a subjective one. I did not aim at completeness, but rather included only the books and articles I have found particularly interesting and useful through the years.

The list of people to whom I am indebted—directly or indirectly—in helping me complete this work would easily fill a whole page.

I want to start with my mother and father. The memory of my father, a writer who always wanted to be a doctor, inspired me particularly. I felt that I was paying homage to him by fusing in this volume the profession of the writer with that of the physician. The little emblem at the foot of this preface was the trademark of his magazine published many years ago in Budapest, Hungary.

On the professional side I should like to begin with Dr. Charles A. Janeway, Thomas Morgan Rotch Professor of Pediatrics at Harvard Medical School, who gave me the opportunity to work in the field of

pediatric cardiology. Doctor Clement A. Smith, friend and teacher, has helped me in many ways during the past fifteen years. I want to express my sincere thanks to Drs. Edward B. D. Neuhauser and Martin H. Wittenborg, who taught (and fought) me in radiology, and to Dr. Robert E. Gross for much invaluable teaching and the use of his patient material. Doctors Abraham M. Rudolph and Walter T. Goodale, my associates in the laboratory, assisted me in collecting and interpreting the physiological data presented. Without the help of Drs. Patrick A. Ongley and Donald C. Fyler I am sure the illustrations would not have been completed in time. I would also like to thank Dr. Robert M. Smith for his contribution in writing the section on Anesthesia.

I would like to express my sincere appreciation to Mr. Walter T. Hall, who, through the establishment of a fund for the support of research in pediatric cardiology, helped to defray expenses of publication.

I wish to thank my secretary, Miss Myrtle R. Westhaver, for her efficiency in holding together the cardiology department during the trying period in which this book was written, Mrs. Marcia Lawson for the editing of the manuscript, Mr. Ferdinand R. Harding for the photography, Mrs. Margaret M. Steele for the typing, and Miss Mary E. Delaney for the illustrations.

Finally, I want to thank sincerely the W. B. Saunders Company for the many patient ways by which they helped me prepare this volume and efficiently bridge the Atlantic with their galley proofs.

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Contents

Part Two. ACQUIRED HEART DISEASE