
DISEASES OF THE HEART

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TO

MY WIFE

AND TO

R. M. F. AND B. J. F.

PREFACE

This book endeavors to provide a comprehensive and integrated exposition of the diseases of the heart. The swift pace of recent advances in this subject calls for a reorientation in presentation, and a modification in emphasis from that found in available standard works on cardiac disease.

In particular, special emphasis has been placed on the pathologic physiology of cardiac disorders, including the pathogenesis or mechanism of the symptoms and signs of circulatory failure, of angina pectoris and myocardial infarction, and of the various manifestations of the individual cardiac diseases. These discussions are not exhibited for mere academic consumption, but with the belief that an understanding of the dynamic events responsible for clinical phenomena is essential for maximum skill in diagnosis and treatment.

The increased utilization of quantitative measurements in the clinical study of circulatory disease is reflected in detailed discussions of the cardiac output, blood volume and extracellular volume, peripheral and intracardiac blood oxygen concentration and intracardiac pressures, body fluid and tissue electrolytes, and renal and pulmonary blood flow. Throughout the book these measurements are applied to clinical understanding and practical usage in the every-day diagnosis and treatment of cardiac disease.

Certain subjects of predominant importance have been presented as individual monographs. Ten chapters have been devoted to circulatory failure, eight chapters to diseases of the coronary circulation, and three to rheumatic fever and rheumatic heart disease. Bacterial endocarditis has been discussed extensively because it is the most frequent curable cardiac disease. Its bacteriological aspects have been presented in some detail because of their importance for effective diagnosis and treatment. Congenital heart disease has likewise been fully described because of the many recent advances in diagnosis and treatment. Special recognition has been given to cardiac catheterization, oxygen and pressure studies and angiocardiography as aids to the exact diagnosis essential for possible surgical treatment. The diagnosis and treatment of other remediable cardiac conditions have been emphasized, e.g., thyrocardiac disease, constrictive pericarditis, and heart failure due to anemia, avitaminosis, arteriovenous aneurysm and myxedema. Reference is also made to very recent advances in the surgical treatment of various clinical and experimental cardiac lesions including coronary artery disease, valvular disease and septal defects as well as other congenital anomalies, tumors and traumatic disturbances. To avoid repetition, no special chapter is devoted to cardiovascular emergencies, but appropriate discussions may be found rapidly by reference to the individual conditions under the heading "emergencies, acute cardiovascular" in the index.

Certain less common forms of cardiac disease have been described in greater detail than is usually found in standard books, e.g., cardiac disease related to endocrine, metabolic and nutritional disturbances, including also the cardiac effects of hemochromatosis, von Gierke's disease, xanthomatosis, amyloidosis and acute porphyria. Ample consideration has been given to the effects of various infections on the heart, to nonspecific myocarditis, and to other myocardial diseases of obscure origin, e.g., idiopathic hypertrophy, scleroderma and myotonia atrophica.

Roentgenology and electrocardiography have become essential elements of cardiologic practice and are thoroughly discussed throughout the book. Individual chapters devoted exclusively to a formal presentation of electrocardiography and roentgenology have been omitted, partly to avoid duplication and save space, but chiefly because as isolated subjects they could not be presented adequately in single chapters. Instead, emphasis has been placed on the application of electrocardiographic and roentgenologic interpretation to clinical practice, in which these findings must be integrated with the clinical history, symptomatology and other objective data.

Electrocardiography has been discussed in detail in connection with the arrhythmias, angina pectoris, myocardial infarction, pericarditis and myocardial disease, while both electrocardiography and roentgenology, including angiocardiology, have been amply considered in connection with such subjects as chamber enlargement, valvular heart disease and congenital cardiac lesions. To a lesser extent electrocardiographic and roentgenologic findings are also described in connection with almost every other type of heart disease, according to the importance and diagnostic value of these findings relative to other clinical features. A number of other graphic methods, including phonocardiography, roentgenkymography, electrokymography (fluorocardiography) and endocardial electrocardiography, have recently received increasing attention from cardiac investigators and these have been briefly mentioned when pertinent. However, because of their limited practical value at the present time these and other subjects in which the author may have a special interest have not been unjustly emphasized.

It is impossible to make specific acknowledgment to the host of individuals who, directly or indirectly, have helped provide the knowledge which is the basis for this book. I owe much to hospital colleagues and associates, and especially to Dr. Arthur Fishberg. Of the numerous teachers and collaborators to whom I am indebted I wish to mention specifically the late Dr. C. J. Rothberger of Vienna who trained me in experimental cardiology and electrocardiography, the late Dr. Louis Gross in cardiac pathology and the late Dr. Emanuel Libman in clinical cardiology.

For the opportunity of studying and utilizing the clinical material on his wards and for his encouragement in clinical research, I am especially grateful to Dr. George Baehr. I also wish to offer thanks to Dr. B. S. Oppenheimer and Dr. I. Snapper, under whom I have served for brief periods. Dr. A. Master kindly permitted my use of the electrocardiographic files and Dr. M. Sussman

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New York City

CHARLES K. FRIEDBERG

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