
Ventricular Geometry in Post-Myocardial Infarction Aneurysms

V Rao Parachuri • Srilakshmi M. Adhyapak

Ventricular Geometry in Post-Myocardial Infarction Aneurysms

Implications for Surgical Ventricular
Restoration

 Springer

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ISBN 978-1-4471-2860-1 ISBN 978-1-4471-2861-8 (eBook)
DOI 10.1007/978-1-4471-2861-8
Springer Dordrecht Heidelberg New York London

Library of Congress Control Number: 2012939724

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Printed on acid-free paper

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This book is dedicated to all the scientists, researchers, students, anatomists, physiologists, cardiologists, and cardiac surgeons who have dedicated their lives to the evolution of innovations to tackle and reverse the relentless downhill course of the syndrome of heart failure.

Foreword

This book by a cardiac surgeon and a cardiologist offers a detailed analysis of ventricular function at the cellular, hemodynamic, and clinical levels with a review of surgical procedures that have historically been aimed at surgical restoration of the distorted left ventricle to its more normal volume and ellipsoid configuration following myocardial infarction or dilated cardiomyopathy. Some of these patients may be candidates for heart transplantation, but many are not, and can benefit by a conventional surgical approach. It is a fascinating story. The early work of Dor, Jatene, Cooley, and others is carefully evaluated, and Parachuri's own modification of surgical ventricular restoration is documented (with a complementary video) with late follow-up and objective assessment. Dr. Parachuri has performed over 800 ventricular endopatch procedures clinically, and this experience provides a significant clinical foundation for the authors' recommendations of advanced surgical correction (therapeutic remodeling) of scarred and aneurysmal left ventricles. It is a clinical experience which is unlikely to be duplicated currently in North America, given the frequency of interventional reflow procedures and thrombolysis that appear to have significantly reduced the incidence of mechanical complications of myocardial infarction. Nevertheless, the experience and recommendations made in this book are applicable to all current populations who experience heart failure. This book also includes assessment of concomitant coronary bypass grafting, mitral valve procedures, and treatment of ventricular arrhythmias.

I had the good fortune of working with Dr. Parachuri at St. Vincent Hospital in Worcester, MA, in the 1990s. Even then his skills as a cardiac surgeon predicted a bright future, manifested in this carefully documented book on the assessment and surgical treatment of heart failure. This book will serve well the interests of cardiothoracic surgical residents, cardiologists in training, as well as practicing clinicians in cardiac disease and serious students of cardiac function and failure.

Willard M. Daggett, M.D.

Preface

The goal of this book is to provide cardiac surgeons and cardiologists a definitive perspective of optimal surgical ventricular restoration in patients with advanced heart failure due to large ventricular aneurysms following transmural myocardial infarctions. The recently concluded STICH multi-center randomized trial has vitiated the role of surgical reshaping of the dilated, distorted ventricle in patients ineligible for cardiac transplantation. This mechanical complication of transmural myocardial infarctions leading to intractable and refractory heart failure is a persisting entity in both the developed and developing countries of the world. The continuing occurrence of this devastating complication is due to a conundrum of logistic constraints restraining timely revascularization and certain ethnic predisposing factors peculiar to certain specific populations. This opens the avenue for rethinking about the surgical techniques involved in the palliation of this condition. Therefore, surgical ventricular restoration of these adversely remodeled ventricles has a continuing role in the management of this difficult subset of patients. The process of cardiac remodeling has been studied extensively, and recent surgical techniques for ventricular restoration have proven late adverse remodeling.

The objective of this book therefore is to discuss the surgical technical evolutions toward a near-ellipsoid ventricular shape which results in near-physiological hemodynamics evident at long term. With our limited objective, this book does not claim to be a compendium or handbook of current information on the selected topics nor is it a review of literature. It is largely the works of the editors and their associates with a balanced point of view. We wish to express our thanks to all the authors and publishers who permitted us to quote their publications, figures, and data in this book. We wish to specially thank Dr. M.R. Girinath at Apollo Hospitals, Chennai, and Dr. Devi Prasad Shetty at Narayana Hrudayalaya Institute of Medical Sciences, Bangalore, for their encouragement.

Finally, we wish to thank the editorial and production staffs of Springer for their professional help and cooperation in producing this book.

Bangalore, India

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Srilakshmi M. Adhyapak

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