Percutaneous Interventions for Structural Heart Disease

Bernhard Reimers
Issam Moussa • Andrea Pacchioni
Editors

Percutaneous Interventions for Structural Heart Disease

An Illustrated Guide

Springer

Editors
Bernhard Reimers
Cardiovascular Department
Humanitas University
Rozzano – Milano
Italy

Rutgers Robert Wood Johnson Medical School
Robert Wood Johnson University Hospital
RWJBarnabas Health
New Brunswick
New Jersey
USA

Issam Moussa
Cardiac and Endovascular Interventions
First Coast Cardiovascular Institute
Jacksonville
Florida
USA

Andrea Pacchioni
Department of Cardiology
Mirano Hospital
Mirano
Italy

ISBN 978-3-319-43755-2 ISBN 978-3-319-43757-6 (eBook)
DOI 10.1007/978-3-319-43757-6

Library of Congress Control Number: 2017931365

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

Structural interventions bring a new set of information that every interventional cardiologist needs to master. This field is such in a rapid evolution that anybody is likely to assume that a book will become obsolete quite fast. This consideration is valid only at a certain extent, because there is always an amount of basic knowledge that will not change significantly. This fact represents a valid reason to put together a book.

As far as I am concerned, I am very happy to have had the opportunity to write the introduction to *Percutaneous Interventions for Structural Heart Disease: An Illustrated Guide* edited by Bernhard Reimers, Issam Moussa, and Andrea Pacchioni. This task gave me the opportunity to read most of the chapters: a rewarding experience because I learned a lot. The topics are very well organized with a large amount of practical suggestions not easy to be found in other publications.

The first section about the aortic valve is really complete. The step-by-step guide to use OSIRIS to read and evaluate the multislice CT scan is unique and tremendously useful.

The suggestions regarding procedural planning, valve selection, and dealing with problems are very clear and up to date.

The chapters regarding mitral valve are a serious attempt to cover this enormous field in rapid expansion and may appear incomplete. We cannot dismiss that such a fast-moving target will always be difficult to be fully captured in a book. Nevertheless, the content represents a ground knowledge that cannot be dismissed.

I liked reading about left appendix closure with many practical suggestions such as the need to deploy the Watchman device as a quick solution to close a traumatic appendix rupture.

Closure of paravalvular leaks represents such an evolving field and the reader needs to perform additional homework to learn about new techniques and additional vascular plugs.

Patent foramen ovale is fully covered, and even the issue of nickel allergy is presented with a controversial case description. I wish a preventive approach to this problem and a more in-depth discussion would have been included.

The last chapters deal with transcatheter closure of postmyocardial infarction ventricular septal defect. The authors are very clear to direct the reader into a detailed description of the procedure: very useful and practical. The case on this

topic illustrates the utilization of a transeptal approach to enter the left ventricle from the left atrium to gain access into the right ventricle from the septal defect.

Throughout this book, there are a lot of figures with clear commentaries. I would state that most of the chapters satisfy this need, while in others, a more extensive endeavor to document the writing with more pictures and schemes would have been appropriate.

Very important are the case presentations following each major topic giving a lively atmosphere necessary to keep the interest alive and to bring the reader into real-life scenarios.

Without question, this book represents a must to have and more importantly to read for every interventional cardiologist who desires entering the field of structural transcatheter procedures.

The editors and all the contributors need to be commended for this remarkable production.

Milan, Italy Antonio Colombo

Preface

Structural interventions should be considered a true revolution in many cath labs, which, before the exponential increase in structural procedures, mostly treated coronary and sometimes peripheral artery disease.

We should thank the pioneering work of doctors such as Alain Cribier and Philipp Bonhoeffer, who believed in a mission, thought by many to be impossible, to insert a valve prosthesis percutaneously. Other colleagues, such as Horst Sievert, for many years a "structural interventionalist," and Antonio Colombo, fortunately both among the authors of this volume, improved the techniques of structural interventions with numerous practical tips and tricks followed by pivotal clinical trials.

The present book seeks to put together the experience, mostly practical, of real experts of the field, to be transmitted to the rapidly increasing community of interventionalists performing structural heart therapies. We wanted to create a practical guide, starting with the correct preparation of the intervention, by evaluating cardiac images obtained with CT and transesophageal echography, new but basic knowledge, and absolutely essential to the success of a procedure. In the following section, procedural techniques and available devices are presented. Finally, a description of complications and how to manage and avoid them are a core part of the book. We considered this particularly important in honoring those patients who suffered a complication and helped to make our procedures safer.

Of course, this book does not claim to be complete, but we hope that it will become a small but precious part of the learning process toward becoming a structural interventionalist. We acknowledge the work, diligence, and willingness of our distinguished authors, colleagues, and friends who wrote the various chapters. We thank them for sharing with us and the readers their vast experience to the advantage of our patients.

Last but not least, we are particularly grateful to our wives Antonella, Corinna, and Mireille.

Mirano, Italy — Bernhard Reimers
Mirano, Italy — Andrea Pacchioni
FL, USA — Issam Moussa

Contents

Part II Mitral Valve Intervention

Part III Left Appendage Closure