
Percutaneous Treatment of Left Side Cardiac Valves



UNIVERSITÀ
degli STUDI
di CATANIA

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Percutaneous Treatment of Left Side Cardiac Valves

A Practical Guide for the Interventional
Cardiologist

Third Edition

 Springer

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Preface

The field of transcatheter therapies for valvular heart disease is a never-ending source of technical and device innovation, novel indications and new treatment solutions. The interest of the scientific community in this sub-discipline of interventional cardiology is demonstrated by the extraordinary volume of literature on the field, as well as the variety of national and international meetings, symposia and teaching courses focusing on this topic. This book – now at its third edition – represents a practical guide addressing the rapidly expanding and innovative field of transcatheter therapies for left-side valvular heart disease. The table of contents has been uniquely built to update the reader with the latest practical and scientific advances in the field.

The first section is dedicated to mitral valve disease, with a focus on the latest interventional strategies of mitral valve repair and replacement. The subsequent section is dedicated to aortic interventions, including a step-by-step guide to newer-generation devices for transcatheter aortic valve implantation. Special attention has been paid to the devices that carry the most interesting novel elements in the field. Each section includes a number of authoritative review articles and accompanying illustrations dealing with various aspects of valvular heart disease, from anatomy to pathophysiology, from pre-procedural planning to in-lab technique.

This third edition would not have been possible without the enthusiastic participation and support of many extraordinary colleagues and friends who have shared their knowledge and experience with us all.

February 2018
Catania, Italy

Corrado Tamburino
Davide Capodanno
Marco Barbanti

Preface to the Second Edition

At the time of publication of this handbook, percutaneous treatment of left side cardiac valves represented just an exciting and promising opportunity. The lack of outcome data at medium and long term, however, required some caution, since there were still too many unknowns related to a minimally invasive treatment of valvular heart disease, including durability of acute results, long-term impact of procedural complications, patient selection, and so on. After two years since our first publication, the literature has produced substantial data supporting particularly transcatheter aortic valve implantation, in parallel with a considerable increase of the procedures around the world, as well as operators' experience and procedural success. These data allow now to consider these procedures not only a promise for the future, but a solid reality of our present. Not surprisingly, the enthusiasm for these achievements has prompted the industry to continuously improve their own devices. The scenario has therefore changed dramatically in recent years, necessitating a substantial update of the first edition of this volume. Once again, the goal of this practical handbook is to give interventional cardiologists an advanced understanding and the current state of the art of the percutaneous treatment of left side cardiac valves.

April 2012
Catania, Italy

Corrado Tamburino
Gian Paolo Ussia

Preface to the First Edition

Transcatheter therapy of cardiac valve diseases is a rediscovery by interventional cardiologists. Treating cardiac valve diseases with alternative techniques to cardiac surgery using prosthetic devices has rekindled interest in the field of hemodynamics, which has been neglected in recent years. Within this framework, two sectors can be distinguished: valvuloplasty techniques using a balloon alone to treat mitral, aortic, and pulmonary stenoses, and those using prosthetic heart valves or repair devices. Valvuloplasty techniques should be considered as palliative, as the duration of their effectiveness varies from just a few weeks, as in the case of aortic valvuloplasty for degenerative stenoses, to years, as in the case of mitral and pulmonary valvuloplasty. By contrast, transcatheter implantation of biological prosthetic valves or repair techniques using dedicated devices aim to provide a definitive therapeutic solution or at least a solution offering results that are equal to or just as good as those of cardiac surgery. The advent of devices for the percutaneous treatment of left chamber valve diseases is one of the greatest breakthroughs in interventional cardiology. The goal of this handbook is to give interventional cardiologists the means to understand the context of the percutaneous treatment of valve diseases and the state of the art of the techniques and procedures currently available.

April 2010
Catania, Italy

Corrado Tamburino
Gian Paolo Ussia

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