

BOOK REVIEWS

***Angiogenesis and Direct Myocardial Revascularization*; Edited by Roger J. Laham and Donald S. Baim in the Contemporary Cardiology series edited by Christopher Cannon, MD. Totowa, NJ: Humana Press Inc., 2005; ISBN 1-58829-153-7; 372.**

Objective

Before the advent of coronary artery bypass graft (CABG) in the 1960s, all patients with coronary artery disease (CAD) were medically treated and did poorly. Those medical strategies were designed to reduce myocardial oxygen consumption in face of critically limited myocardial blood supply. They were generally palliative in nature, providing them with no improvement in the quality of life or life span. CABG and percutaneous coronary intervention (PCI), which was invented in the 1970s, have revolutionized the treatment of CAD by providing ways to increase the blood supply to the myocardium. These are the procedures that have truly improved the quality of life and the life span of patients with CAD. Furthermore, remarkable technical refinements in these procedures have been made since their invention, allowing sicker patients to be treated more safely and effectively. Today, however, an increasing number of patients are no longer candidates for these procedures or have failed these options, remaining symptomatic on maximal medical therapy. These so-called no-option patients may benefit from cutting-edge treatment possibilities such as therapeutic angiogenesis and myogenesis. In this book edited by Roger J. Laham and Donald S. Baim, a panel of world-renowned scientists and clinicians provide a comprehensive review of basic, preclinical, clinical, and developmental strategies in the ever-expanding field of angiogenesis and direct myocardial revascularization.

Description

The book begins by describing the growing problem of no-option patients in whom maximal medical, catheter-based, and surgical interventions have failed. Subsequent chapters cover the foundation of current concepts by reviewing the transcriptional regulation of angiogenesis and preclinical animal as well as tissue-culture models. A comprehensive review and comparison of current modalities of cardiac delivery

of potential angiogenic agents is provided by Price, Young, and Rezaee. Next, a lucidly written and well-illustrated chapter on the imaging of angiogenesis provides a guide for clinical management and therapeutic trials. Subsequent chapters describe the preclinical and clinical bases of the use in therapeutic angiogenesis of protein growth factors (namely, vascular endothelial growth factor and fibroblast growth factor), gene therapy, bone marrow transplant, stem cell transplant, skeletal myoblast transplantation, and transmyocardial laser revascularization. These chapters also provide insight into current research and future direction in these diverse fields of cardiac angiogenesis.

Strong Points

This book adeptly accomplishes the task of being the authoritative and state-of-the-art text in therapeutic cardiac angiogenesis. Although written by authors with diverse backgrounds, it has been masterly edited to make for easy reading and quick reference. The chapters covering the different modalities of angiogenesis share a common theme that provides the reader with the ability to compare and contrast these methods. The strongest features of this book are the comprehensive and in-depth look at all aspects of therapeutic angiogenesis, the emphasis on evidence, and the extensive references for further reading and research. Additionally, the authors, being truly world-renowned pioneers in their respective fields, infuse their writing with their personal opinion and experience, which makes for interesting and educative reading.

Shortcomings

Therapeutic cardiac angiogenesis is a diverse field utilizing different modalities to accomplish a common goal. Chapters devoted to each of these modalities are but an overview of a rapidly evolving field. Readers looking for detailed description and analysis on a certain therapeutic option will benefit not only from the text but also from the carefully selected references.

Recommended Audience

This book will appeal to scientists, clinicians, and students who are searching for a concise and yet

comprehensive review of cardiac angiogenesis. Those who are in the cardiovascular field may finish the book in a couple of days, fully enjoying the enthusiasm of those who work hard to develop the next CABG and PCI.

Overall Evaluation

An outstanding text covering a broad spectrum of current concepts in therapeutic cardiac angiogenesis, presented in a lucid format.

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Drug Eluting Stents; Edited by Christopher J. White; London and New York: Taylor and Francis Group, 2005; 154 pages.

Colombo's Tips and Tricks with Drug Eluting Stents; Edited by Antonio Colombo and Goron Stankovic. London and New York: 2CD's. Taylor and Francis Group, 2005; 252 pages.

Handbook of Drug Eluting Stents; Edited by Patrick W. Serruys and Anthony H. Gershlich. London and New York: Taylor and Francis Group, 2005; 369 pages.

You might wonder why a single publisher would develop three books on the same subject and introduce them to the market simultaneously. Unquestionably, drug-eluting stents are the hottest subject in interventional cardiology today, but are three new monographs really required? Interestingly, the outstanding editors of these books have highly personalized approaches that are reflected in their entirely different treatment of this subject. Each book will be preferred by a certain audience, and all will find some utility by everyone.

White's book is the shortest and most directly applicable as an introduction to the subject for a clinician. The first six chapters are excellent summaries of the problem of restenosis and the failure of previous therapies to resolve it. The next six chapters are very good

and succinct summaries of clinical trials with drug-eluting stents. The outstanding chapter by Steve Ramee reviews all trials that compare bare metal stents with drug-eluting stents. The chapter by Chan is unique; it deals with off-label use of drug-eluting stents. The final chapter on cost analysis provides a sound theoretical approach, but is not very useful in a clinical or administrative sense.

Colombo's book is intended as a practical handbook detailing the technical aspects of stenting in complex cases. The text is cross-referenced to slides and cases contained on two CD-ROMs accompanying the book. Together, the text and illustrations simulate Dr. Colombo actually giving a tutorial. The cases illustrating bifurcation stenting, including the crush and culottes techniques, are truly outstanding. Those showing complications and drug-eluting stent failures are thought provoking and attention grabbing. The chapter on subacute thrombosis, however, could have been expanded and presented in a more pragmatic manner.

Serruys' text is twice as long as the other two books. The style is that of a scholarly presentation of the basic science and clinical trial data underpinning drug-eluting stent efficacy. For anyone interested in learning about new polymer coatings, innovative stent designs, and stents under development, this book contains a wealth of unpublished information. All of the chapters address subjects that are not covered in the current published literature. However, there is little material of direct utility by a clinician engaged in day-to-day medical practice.

Which book should you buy? That depends on who you are and what you are looking for. I will be keeping all three on my shelf, and I anticipate referring to them all quite frequently. Each has defined its area well and each editor has accomplished the task they set for themselves. None is an all-inclusive compendium, or textbook; rather, all three monographs taken in combination cover every subject almost definitively. All are reasonably up-to-date and most include reference to the most recent trials, such as TAXUS V and results in diabetes. In summary, these books really do not compete with one another, but are actually complementary, and each has its advantages and drawbacks.

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