Trends in vascular surgery

William Pearce, John Satsumura, James Yao, editors. Evanston, Ill; 2005; Greenwood Academic; 352 pages; $124.95

This text is a compilation of the presentations from the Twenty-ninth Annual Vascular Symposium held by the Division of Vascular Surgery, Feinberg School of Medicine at Northwestern University. The aims of the Symposium and this book are to review advances and provide an overall coverage of the practice of vascular surgery. The work of almost 100 authors is presented in 44 chapters organized into 13 sections.

The topics covered include basic considerations, government issues, noninvasive tests, carotid surgery, carotid stents, infraguinal arterial reconstructions, percutaneous endovascular therapy, aortic aneurysm, aortic endovascular grafts, upper-extremity ischemia, hemodialysis access, vascular trauma, and venous problems. The authors of each chapter are recognized experts. The chapters address controversies and “hot topics” rather than giving an overall coverage of the issue for most topics. The topic selections are somewhat eclectic but certainly relevant to the practicing vascular surgeon.

Each chapter is well organized and clearly presented. The editors have done well to avoid repetition despite some overlap in topics. Although there are many well-presented line drawings and tables, the reproduction of these and some of the photographs and images is of rather poor quality. The cited references in each chapter are well chosen for the most part; unfortunately, some chapters have no references within the past 5 years.

In keeping with the present state of vascular surgery, much of the book is devoted to endovascular procedures. The chapter “Pathology and Physiology of Stents and Stent Endografts” gives a brief but comprehensive overview of important information that should be known to all who use these devices. The reference list is extensive and up-to-date.

The section on carotid interventions is brief and incomplete but gives a “snapshot” of issues that are rapidly evolving. These include some tips and techniques, an introduction to cerebral protective devices, and some limited results and discussion of the ongoing trials.

Aortic surgery and endografting are covered in sections that reflect the more mature nature of this material. There are excellent reviews of endoleak management, surgical conversion, and fenestrated and branched grafts. These chapters are adequately detailed and well referenced. Other chapters on thoracic and abdominal aneurysms are complementary to this material. A thoughtful chapter on “Guidelines for Treatment of AAA” brings together many well-tried concepts with up-to-date trials and treatment comparisons to provide a measured approach to decision making. All practitioners, regardless of practice preferences, should be aware of this material.

Included in the chapters on venous management are reviews of venous ablation, assessment of the swollen limb, and venous disease in obesity. Although there is little new in these chapters, they do serve as a reminder of management approaches to these common but sometimes challenging disorders. The chapter on “New Concepts in the Management of DVT” is a well-organized overview of newer medications and approaches presented in a concise, readable, well-referenced form.

The chapters on renal dialysis complications, including hard ischemia, and the DOQI targets are useful reviews with practice implications for anyone practicing in this area.

The section on noninvasive testing presents a comparison of portable ultrasound machines for aortic screening; unfortunately, it is not comprehensive, and with rapidly changing technology, is becoming dated. The review of infraguinal graft surveillance is thorough and well referenced and should be well known to vascular surgeons. A protocol for carotid screening is presented and will be useful in discussions of the relevance of this to patient and social issues. The chapter on three-dimensional ultrasound presents a variety of material of interest but, thus far, limited clinical relevance.

This text provides an accessible resource for quick updates on many areas of vascular surgery. Although it cannot be considered as a comprehensive textbook, its authors and editors have produced a useful volume of updates and reminders for any vascular specialist.

Vascular surgery: Basic science and clinical correlations

Rodney White and Larry Hollier, editors; 2nd ed; Malden, MA; 2005; Blackwell Futura; 628 pages; $160.00.

Over the past 10 years, new advances in vascular imaging and interventional endovascular procedures have dramatically changed the practice of contemporary vascular surgery. Accordingly, our vascular surgery training programs have altered their goals and objectives to insure that their trainees develop excellence in endovascular procedures while teaching them the clinical judgment necessary to choose between endovascular and conventional vascular reconstruction techniques.

Acquiring thorough knowledge of the basic science of vascular disease as it applies to ones understanding of vascular physiology and pathology directly correlates with the development of clinical surgical judgment. This second edition of Vascular Surgery: Basic Science and Clinical Correlations retains some of the basic science and molecular biology emphasis from the first edition while highlighting new information that has developed over the past 10 years regarding vascular imaging and interventional and endovascular procedures. Reflecting changes in the contemporary practice of vascular surgery, this new edition emphasizes the importance of vascular procedures to the management of patients with vascular disease. The current text also emphasizes vascular pathology and physiology that the editors believe is relevant to the vascular board examinations.


This edition of the text is slightly shorter than the first edition and has dropped the previous sections “Peri-Operative Monitoring and Management,” and “Statistics for Vascular Surgeons” while combining the previous edition’s section “Basic Science of Vascular Disease” into the current section of “Vascular Pathology and Physiology.” The editors have retained chapters pertaining to the basic science and molecular biology of vascular disease, which they believe are relevant to contemporary vascular surgical practice as well as to vascular surgeons who are preparing for their vascular surgery board examinations. It is unfortunate that they elected to remove the section on statistics for the vascular surgeon, as knowledge of statistics is necessary for the critical evaluation of scientific literature. The two well-written sections pertaining to endovascular therapy include five chapters on endovascular techniques and six chapters whose goals were to compare “conventional arterial reconstructive techniques” with endovascular procedures.

The section of “Vascular Pathology and Physiology” makes up nearly one half of the text. Approximately one third of the chapters within this section outline the basic science of vascular disease. The remaining chapters focus on specific examples of vascular pathology and physiology. The editors admit that about 40% of this edition has not undergone significant revision. Unfortunately, this section suffers the most from this lack of revision. Chapters are written to teach the molecular biology of vascular disease as it applies to the pathophysics of specific disease entities.

Most of the chapters are well written by authors who are experts in their assigned subjects. Some chapters which have benefited from significant revisions include “Molecular Aspects of Atherosclerosis,” “Buerger’s Disease,” “Intimal Hyperplasia,” “Physiological Changes and Visceral Ischemia,” “Compartment Syndromes Physiology,” “Cerebral Ischemia,” and “Vascular Erectile Dysfunction: Mechanisms and Current Approaches.” For some topics, there have been no significant changes in the understanding of their molecular biology and pathophysiology over the past 10 years. Examples of well-written chapters not requiring major revision include: “Entrapment Syndromes,” “Thoracic Out-

Results: General surgery or vascular operations were performed on 12,099 (24%) of 50,248 severely injured adult patients in 2002 and 21,854 (16%) of 138,009 injured patients in 2012. Nineteen percent to 26% of all patients underwent vascular procedures. Patients with combined general surgery and vascular procedures were less likely to be discharged home and more likely to die. The findings suggest that there is already a trend away from open vascular procedures at level III/IV trauma centers, which may be a sign of system compensation for changes in the workforce.

Keywords: Open vascular repair; Resident training; Trauma; Vascular surgery; Vascular trauma. Copyright © 2016 Elsevier Inc. All rights reserved.

Vascular surgery as a surgical subspecialty has been offered following general surgery training for nearly 25 years. Recently, it has been offered as a primary residency following medical school in a five-year curriculum. Today, approximately 3,000 physicians have trained in Accreditation Council for Graduate Medical Education (ACGME) approved fellowships. The composition includes commonly encountered issues in vascular surgery, details of how to perform common endovascular and open procedures and to provide information that is critical in vascular patient evaluation.

Refer to goremedical.com/combatmanual for key sources from which the data was obtained, as well as key studies to read regarding the topics specific to the chapter. Summary The trends towards outpatient vascular surgery, coupled with the increasing demands of acute vascular surgical expertise for less-common open and high-risk procedures have created a crisis in the field. When the field of General Surgery was at a similar crossroads in the early 2000s, the community responded with the development of Acute Care Surgery (ACS) services to manage resource-intensive emergencies. Vascular surgery should learn from the ACS experience and consider the development of Vascular Acute Care Surgery (VACS) services responsible for the care of acute vascular patients.