BOOK REVIEWS

John M. Porter, MD, Book Review Section Editor

Surgery of the aorta and its branches
Bruce Gewertz, Lewis Schwartz; Philadelphia; 2000; W.B. Saunders; 479 pages; $165.00.

Aortic surgery, territory that until recently was only explored by surgical specialists, has rapidly evolved into an area traversed by multiple competing specialties. To stay the course and steer clear of danger, Gewertz and Schwartz have edited a timely monograph on the subject that functions as a review of where we’ve been, as well as a perspective on where we’re going. These editors have enlisted an outstanding group of authors to guide interested readers through up-to-date information on aortic surgery, while maintaining appropriate balance in the vital area of reconstructive vascular surgery.

Section editors selected coauthors from their own institutions so that consistent thought prevails throughout the sections of the book. Developmental anomalies of the aorta and basic principles of aortic surgery nicely complement more clinically oriented chapters that fully cover the current practice of aortic and visceral artery surgery. Two sections in particular (thoracoabdominal and pararenal aortic aneurysms and renovascular disease) are extremely well written. They provide depth that the trainee will find in few other texts and that will enlighten even the most experienced vascular surgeon. Photographic images are sharp, and artwork is well done. A series of color plates is provided at the beginning of the text to enhance corresponding black-and-white images in some of the chapters.

Thanks to diligent editing, the volume maintains uniformity of style and content despite representation from six major university medical centers. Even the reference lists are relatively current, which is a feat in itself. This monograph will appeal to all clinicians interested in aortic surgery. It is affordably priced, full of technical pearls, and well written. I am delighted to have been given the opportunity to comment on a book that really meets its mark.

Jeffrey L. Ballard, MD
Loma Linda University Medical Center
Division of Vascular Surgery
Loma Linda, Calif

Vascular surgery highlights 1999-2000
Alun Davies; Oxford; 2000; Health Press; 92 pages; $19.95.

This book aims to highlight recent developments in a limited number of vascular surgical topics. Each chapter contains a summary of what the authors feel is likely to be major changes to current surgical practice, resulting in a list of what’s “in” and “out” for their individual area of expertise. The chapters are very concise, only averaging around 2000 words for each area, some of which are very broad topics. Most of the chapters are well written, but there are areas where the quoted evidence has been in the public domain for a number of years and does not really qualify as a highlight of 1999-2000. Some of this results from the choice of topics for the book, a number of which have not seen any publications likely to result in a major change in practice over the last 2 or 3 years. There are some areas of controversy that have been omitted from the text, such as the management of vascular graft infection or the role of lower limb angioplasty, and the book may have been more complete with these included.

It is not entirely clear who the intended readership of this book will be. Many of the regular subscribers to this journal are likely to find it of limited use. For those looking for evidence on which to base their practice, the very restricted space each author has been given does not allow a full enough presentation of the facts. Although it may act as a useful collection of relatively recent references for the area of interest, much of this information can be gathered reasonably quickly from Internet-based databases of medical publications. Recently qualified doctors studying for their initial postgraduate examinations and, perhaps, enthusiastic medical students may find this overview of current practice useful, and certainly a thorough knowledge of the facts presented in each chapter would be enough to impress all but the hardest of examiners. At only $20, this book represents reasonable value for those involved with the care of vascular patients who require a relatively quick overview of each of the topics presented.

Paul Hayes, MD
University of Leicester
Leicester, England

Plasma lipids and their role in disease
Philip Barter, Kerry-Anne Rye; Amsterdam; 1999; Harwood Academic; 352 pages; $120.00.

This 350-page volume, part of a series on Advances in Vascular Biology, addresses plasma lipids and their roles in disease and focuses on atherosclerosis. The book is ably edited by Philip J. Barter and Kerry-Anne Rye of the Department of Medicine at the Royal Adelaide Hospital and the Lipid Research Laboratories in Adelaide, Australia. Twenty-eight basic scientist contributors offer 16 chapters, including a well-written “Overview of Plasma Lipid Transport” by the editors. Ten of the 28 contributing authors are Australian with other authors from Finland, France, the United States, and Canada. Well-chosen references extend well back into the past for key contributions and are up-to-date, including 1998.

JOURNAL OF VASCULAR SURGERY/December 2000 1251
The major thrust of the book is the relationship between dyslipidemia and atherosclerosis: “Atherosclerosis is a complex progressive disease characterized by the deposition of lipid derived from plasma lipid proteins.” (Mamo JCL and Proctor SD in “Chylomicron Remnants and Atherosclerosis”). These authors hypothesized that chylomicron remnants were atherogenic and that postprandial chylomicronemia could account for atherosclerosis in individuals whose fasting lipid levels were normal. They further stated: “It may be that targeting specific dietary habits could lead to further reductions in morbidity and mortality.” Indeed, that statement might be true, but dietary alteration has been extremely difficult to accomplish. An underlying assumption dominates many of the chapters describing lipid metabolism, biochemistry, and receptor dynamics. The theme is that both prevention and therapy are possible by lipid manipulation.

The genetics of receptors and lipid abnormalities are superbly portrayed. If one wishes to know the localization of a particular function by region in a particular chromosome and the coding region of the gene within exons and how many introns separate that region, one can find this information in this book. The certainties of knowledge about LDL receptors are clearly described by P. T. Kovanen and W. J. Schneider, and the uncertainties about HDL receptors and reverse cholesterol transport are equally well discussed by Noel Fidge. The latter chapter was an eye-opener for me.

Well-done diagrams throughout help illustrate many complex interrelationships and feedback mechanisms. The caveat is that some of the diagram legends do not make abbreviations clear that the experts assume to be clear to their colleagues. Some of these are difficult for an average reader, such as myself. Figs 4.2 and 4.3 were particularly difficult, as was the use of a neologism “Plaque Fragilization” occurring as the result of “Pro-inflammatory and Prothrombogenic activities.” To conclude that “Identification of LDL subclasses of elevated atherogenicity heralds a new clinical era when therapeutic intervention may be defined as a direct function of the lipoprotein profile in any given dyslipidemic patient” would be, from the perspective of those of us dealing with advanced disease, an unfulfilled and possibly pious hope. This might well be true for early disease stages and for prevention. The roles of homocysteinemia, diabetes, and inflammatory, infectious, and immune responses could be crucial in treating advanced disease. The chapter on oxidation of plasma lipids and lipoproteins is thorough and well qualified, but little mention is made of ascorbic acid.

With minor criticisms, I recommend this book to all readers interested in atherogenesis and lipid metabolism. The average vascular surgeon will probably not read this book. I am glad to have read it and will keep it in my library as a reference source. This is hard-core basic science: a book about everything you wanted to know about plasma lipids but were afraid to ask.

Ralph DePalma, MD
University of Nevada
Department of Surgery
Reno, Nev
Their biosynthesis starts in peroxisomes, and defects at these steps cause the malformation syndrome, Rhizomelic Chondrodysplasia Punctata (RCDP). The RCDP phenotype predicts developmental roles for plasmalogens in bone, brain, lens, lung, kidney and heart. Recent studies have revealed secondary plasmalogen deficiencies associated with more common disorders and allow us to tease out additional pathways dependent on plasmalogen functions. In this review, we present current knowledge of plasmalogen biology in health and disease. We propose that lipids are at the center of Alzheimer’s disease pathology based on their involvement in the blood-brain barrier function, amyloid precursor protein (APP) processing, myelination, membrane remodeling, receptor signaling, inflammation, oxidation, and energy balance. Under healthy conditions, lipid homeostasis bestows a balanced cellular environment that enables the proper functioning of brain cells. Race and ethnicity play a significant role in the risk of AD and related disorders. In 2014, nearly 5 million people over the age of 65 had been diagnosed with Alzheimer’s disease or related dementias (ADRD) (Matthews et al., 2019). Water and mineral salts, their role in the cell. Organic substances: proteins, fats, carbohydrates, their structure and functions. Structure and functions of the cell membrane and cell envelope. Types of substance passing into the cell. Diagnosis and prevention of disease they cause. Characteristics of the phylum Flatworms. Peculiarities of structure and vital activity. Lipids and proteins. Lipids are basic components of the membrane, they compose 20%–80% of its mass. Most common of them are phospholipids, lecithin and chol. Plasma membrane contains proteins which are embedded in a lipid sea. There are 3 types of membrane proteins. Advances in Vascular Biology—Volume 5: Plasma Lipids and Their Role in Disease Edited by Philip J. Barter and Kerry-Anne Rye (Series Editors, M. A. Vadas and J. Harlan) Amsterdam: Harwood Academic Publishers (1999). 368 pp. $120.00. In one sense, the topic of plasma lipids and their role in disease is a mature field of biomedical investigation, with successful clinical applications to diagnosis, prevention, and treatment. At the same time, the field is still advancing rapidly, particularly with the use of transgenic models of disease that are illuminating important fundamental and clinical issues in addition to their structural roles, a subset of ether lipids are thought to function as endogenous antioxidants and emerging studies suggest that they are involved in cell differentiation and signaling pathways. sn-1 position of glycerol, play several roles in cellular function and are an important component of the cellular plasma membrane [9]. Although the mechanisms of action for plasmalogens remain unclear, they are starting to receive medical interest as they are now being linked to Alzheimer’s disease, Down syndrome, molecular signaling abnormalities and cancer.