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Interventional radiology of the peripheral vascular system

Anna-Maria Belli. London, 1994, Little, Brown, and Company, 124 pages, \$85.

The stated purpose of this text is to provide practical guidelines on interventional vascular procedures for the inexperienced and occasional operator. The practices described are those of the individual authors, all of whom are interventional radiologists practicing in England. The book focuses on standard interventional procedures and specifically omits "experimental" techniques such as laser, atherectomy, and stents. It covers the topics of percutaneous transluminal angioplasty (PTA), thrombolysis, therapeutic embolization, retrieval of intravascular foreign bodies, and intracaval filtering devices. At first glance, the book seems too short to cover these topics sufficiently; the written text is, however, well-organized and succinct, and contains adequate basic information on each topic for the beginner. The drawings and radiographs are well reproduced and ample in number to illustrate each described technique. The chapter on PTA contains an adequate review of the indications and contraindications to this procedure. There is no review of the pathophysiology of PTA, which might be of interest to the novice. It includes a "shopping list" of equipment needed for PTA and an excellent section on arterial access. The techniques of guidewire manipulation and of balloon dilatation are covered sufficiently; the author refers to the use of stents in failed PTA, but there is no mention of technique. A more detailed description of PTA of the superficial femoral and iliac arteries (the most common sites of balloon dilatation) would be helpful to the beginner. Finally, there is a review of the results of PTA for various sites; the results of Johnston's prospective study (*Ann Surg* 1987;206:403-12), which offer a more realistic appraisal of PTA, are conspicuously absent.

The section covering thrombolysis is well-designed and thorough. It includes a good basic review of the techniques involved, indications for and contraindications to thrombolysis, and management of the patient receiving catheter-directed lytic therapy. The author briefly covers problems that may be encountered during thrombolysis and their management. A brief review of currently available lytic agents and their mechanism of action is included. The topic of therapeutic embolization is covered in a well-organized chapter, including indications, materials and equipment, technique, complications, and aftercare. Although these techniques are not likely to be used by the beginner or by the practicing vascular surgeon, the subject is nonetheless well represented. The subject of foreign-body retrieval is likewise well organized. Although these procedures are, again, not likely to be employed by the novice, the chapter reviews a number of techniques that can be used in difficult

situations (such as a dislodged stent) during routine peripheral interventional procedures. These practical hints may prove invaluable to the practitioner.

The chapter covering intracaval filtering devices is clearly useful to the practicing interventionalist. It is, again, well organized and covers the indications for and contraindications to filter placement. The insertion techniques for a variety of filter types are reviewed, as are technical problems likely to be encountered and their solutions. A helpful table comparing various filters is included, covering cost, recurrent embolization rate, caval thrombosis rate, appropriateness with respect to caval diameter, and deliverability via the left femoral vein.

In summary, this book adequately and concisely covers the basic issues and techniques of peripheral vascular intervention. As such, it accomplishes its stated purpose. It is easy to read, and has been written by radiologists who are clearly experienced in vascular interventional techniques. The text contains a number of practical tips that are of use to practitioners, especially those just venturing into the field of endovascular intervention. The book's only obvious shortcoming is its omission of endovascular stents. Although the editor specifically deletes the topic as "experimental," stents are an important part of any busy interventional practice. They therefore deserve some attention in any new interventional text. In general, this book is probably too simple for the practicing interventional radiologist, but is well worth its \$85 price tag for the vascular surgeon unfamiliar with catheter-based techniques.

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Lowering cholesterol in high risk individuals and populations

Basil M. Rifkind, New York, 1995, Marcel Dekker, 372 pages, \$125.

This multi-authored book, edited by Basil M. Rifkind, ". . . is intended to be of interest to the several disciplines that relate to its various aspects, including primary care physicians, internal medicine practitioners, cardiologists, pediatricians, epidemiologists, public health physicians, clinical chemists, dietitians and nurses involved in preventive care." These stated goals have been well accomplished in perhaps the best book of its kind that I have read.

There is an enormous amount of misinformation and controversy in the field of lipid management. Although the National Cholesterol Education Program (NCEP) Guidelines (Adult Treatment Panels I and II) published in 1988 and 1993 outline a practical approach to the diagnosis and management of lipid disorders, many questions remain unanswered. The first chapter of this book helps the clinician to interpret the NCEP guidelines and also addresses a number of areas not well covered in the guidelines, such as the role of HDL cholesterol, small dense LDL particles, obesity and the insulin resistance syndrome,

hypertriglyceridemia, diabetes, apolipoproteins, Lp(a), and the potential dangers of low cholesterol. There are other chapters on the controversial topics of cholesterol lowering and total mortality, the role of lipid management in the elderly, and cholesterol lowering in women. These chapters review the available scientific data and clarify many of the confusing issues that are written frequently about in the lay press.

The usual subjects of secondary prevention of coronary heart disease, regression of atherosclerosis, and the pathophysiology and evolution of the atherosclerotic plaque are reviewed. There are chapters that examine the role that population and community-based strategies have on lowering cholesterol in high-risk patients and populations. "Slow and gradual" change in a culture can lead to "large and rapid changes in coronary mortality rate." The important concern of cost-effective programs designed to lower serum cholesterol are discussed in the last chapter of the book. The expense of programs to screen and treat hyperlipidemia are reviewed, as well as methodologic considerations in performing a cost-effective analysis.

The section on diet management is exceptional. Not only is there a thorough review of current diet recommendations, but there is also an extensive chapter on how one goes about implementing these changes, something that is generally lacking in books and monographs on cholesterol lowering. There is a list of resources for both professionals and patients who wish to read more about cholesterol and dietary modification. The chapter on drug therapy gives a brief and practical summary of the available cholesterol lowering medications. The section on drug combinations answers many of the questions that practitioners have about the efficacy and safety of the various combinations of agents that are used to lower serum cholesterol and triglycerides. Surprisingly, nothing is mentioned about the use of fish oils for hypertriglyceridemic patients.

This book presents everything you need to know about lipids in a clear and concise manner and answers many commonly asked questions succinctly. The text accomplishes all of the goals outlined in the preface admirably and is highly recommended for physicians and other health providers caring for patients with coronary and peripheral artery disease.

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Aging: a natural history

Robert E. Ricklefs and Caleb E. Finch, New York, 1995, W. H. Freeman and Co., 209 pages, \$32.95.

This attractive book on the biology of aging is #57 of the Scientific American Library Series devoted to a variety of scientific topics. As would be expected, it is richly illustrated in color on virtually every page and written in an entertaining style intended to appeal to a well-educated lay person. One of the authors (Ricklefs) is a Professor of Biology at the University of Pennsylvania whose expertise is in ecology and population genetics. The second author (Finch) is a geron-

tologist who holds an endowed professorship in the Neurobiology of Aging at the University of Southern California. The focus is on human aging from their viewpoint as biologists and from the unique perspectives offered by evolutionary biology and the different aging patterns of different species. The strength of this book, particularly for physician-readers, is in the authors' ability to explain some of the mechanisms of physiologic deterioration in man in relationship to other species and as an evolutionary phenomenon. The book progresses logically through patterns and theories of aging to analyze environmental risks, natural life span, and the influences of reproduction, genetic changes, and evolutionary forces. The weakness of the book surfaces when the authors move into human disease, particularly in their limited understanding of arteriosclerosis and their discussion of "heart stroke" and "brain stroke." They also consider nitric oxide to serve only as a central nervous system mediator and have a novel interpretation of Alzheimer's as being secondary to autoantibodies in the cerebral vessels that produce injury and "release blood into the brain."

Aside from these lapses, there are excellent descriptions of the Gompertz equation, which is used to compare mortality rates between populations; semelparity, where there is a single episode of breeding and then death; antagonistic pleiotropy, where a gene expresses itself in more than one attribute of the individual and has opposite effects on evolutionary fitness; and predatory influences on species reproduction and aging. There is a very lucid explanation of the four theories of the evolution of aging, which include the wear and tear hypothesis, the theories of mutation accumulation and antagonistic pleiotropy, and finally the wear and repair hypothesis where there are variations in the inherited mechanisms for maintenance and repair. Because maintenance and repair mechanisms are expensive to maintain by the individual in terms of energy and other resources, the degree to which they are developed seems to depend on how much they are likely to prolong the lives of individuals in a population. Where a species is subject to accident, predators, or disease, few individuals make it to old age, and therefore maintenance and repair mechanisms are of little use. But where the probability of death from extrinsic causes is low, maintenance and repair will prolong the lives of those who survive to old age and would therefore be strongly selected as a survival mechanism. The germ line is a special case because it is prevented from aging within the lifetime of the individual by cell lineage selection.

It seems clear that the processes responsible for aging are a consequence of life itself and therefore are unlikely ever to be stopped. The authors conclude that the first goal for ameliorating human aging is to understand the biochemical consequences of the most harmful genes well enough to identify them early in life and alter their expression. In some cases, genetic screening and counseling can reduce the frequency of some exceptionally harmful genes within the population. The second goal is to understand the cellular mechanisms of maintenance and repair well enough to invent a means of enhancing them. This might ultimately be