

Book Reviews

Gary E. Fraser

Preventive Cardiology

Oxford University Press, Oxford 1986

397 pp.; £ 30.-

ISBN 0-19-503571-2

This is the second book on coronary heart disease prevention which is being reviewed for this journal within a short space of time. This upsurge of interest in preventive cardiology is welcome. Such books may be written primarily from a practical point of view, in order to provide the scientific basis for preventive cardiology or to strike a balance between the two. The present book is heavily geared toward the theoretical foundations, citing almost exclusively epidemiological evidence. This is, to some extent, as it should be. On the other hand, confidence in the causal relationship between risk factors and the risk of diseases does not rest on data from epidemiological studies, including preventive trials, alone, but depends on collateral information from clinical research and laboratory investigation. At least some reference to the total evidence would have been desirable. The epidemiological investigations quoted are representative and well chosen, accepting that the literature is so large to make it impossible to be comprehensive.

There are altogether 21 chapters on clinical definitions, pathology, dietary interrelationships, smoking, hypertension, psychosocial influences, physical activity, alcohol, as well as the problem of sudden death and pediatric aspects of prevention. The results of intervention studies are not presented as one package but somewhat scattered, with a separate chapter entitled 'Drugs as prevention and cause of ischemic heart disease', including the unwanted effects of drugs. The only chapter which addresses the clinical practice of prevention directly is concerned with 'Behavioral change in the office setting' which, important though it is, does not come face to face with the total issue, which is concerned with what the practicing physician can do in the course of his daily work in the way of preventive medicine generally and preventive cardiology specifically. There are also short and useful sections on rehabilitation and surgical approaches toward changing the natural history of the disease.

In summary, the book is helpful as an introduction to the fundamentals of preventive cardiology, with the limitations mentioned. Notable gaps are the omission of diabetes as a risk factor, even though the detrimental influence of obesity is mentioned in several contexts, and an inadequate discussion of thrombogenesis, limiting attention to platelets, although fibrinogen and hemostatic factors are now recognized as carrying independent risk. Finally, in the chapter on implications for clinical practice, there is mention of the clinical approach toward individual and high-risk persons and prevention on the level of the entire population. The approaches are complementary, as the author briefly and correctly states. However, the chapter in question does not fully come to grips with what are now called the high-risk strategy and the population strategy. As a result, there are no clear 'marching orders' as to who will do what on the level of the two complementary strategies. Admittedly, these matters have not yet crystallized out as much as they might. Nevertheless, the reader of this book should keep this in mind and ask the question of himself.

F.H. Epstein, Zürich

Lionei Opie

The Heart

Physiology, Metabolism, Pharmacology, Therapy

Grune & Stratton, Orlando 1984

XII + 392 pp.; US\$ 55.00

ISBN 0-8089-1668-8

'The Heart' has the same title as Hurst's outstanding textbook but focuses more closely on cardiac function and functional management of heart disease. Four major sections cover the major fields of interest in 25 chapters: 'Physiology'; 'Energy Metabolism and Ventricular Function'; 'Pharmacology: Drug Action'; 'Heart Disease: Pathophysiology and Pharmacologic Therapy'. The component chapters move from molecular and cellular components of function to pressures, with pharmacologic influences introduced at each significant point. The scope of coverage has necessitated compression of considerable material,

though this usually does not compromise clarity. Amplification would have been desirable on various points. For example, with the exception of the discussion of volume overload, the pericardium is virtually ignored, despite its neural, mechanical and metabolic functions which are increasingly apparent. Little attention has been paid to the heart sounds as acoustic and clinical reflectors of function. Diastolic suction is noted as a filling mechanism, but without indicating that it may not occur in normal hearts. Indices of inotropic states that are tabulated are not entirely pre- and afterload independent.

The foregoing reservations do not seriously detract from the educative and practical value of this beautifully produced volume, which is nicely printed with a great number of superb diagrams to explicate the text. With some help from colleagues and an introduction by Richard Bing, the distinguished author has produced a kind of 'auxiliary text' which will be welcome in any cardiologist's collection.

David H. Spodick, Worcester, Mass.

V. Hombach, H.H. Hilger

Holter Monitoring Technique

Technical Aspects and Clinical Applications
Schattauer, Stuttgart 1985
XXVIII + 397 pp.; DM 74.-
ISBN 3-7945-1047-X

The contents of this book includes the presentations which were given during an International Symposium on Holter Monitoring in Cologne in 1983. It is divided into 4 parts. Part 1 deals with technology, part 2 with the clinical application of Holter monitoring, part 3 discusses the pathophysiological and clinical aspects of sudden cardiac death, and part 4 deals with the further applications of Holter monitoring.

Despite some premature opposite opinions, Holter monitoring has become a most important diagnostic tool to be used in daily cardiology practice. Technology has developed to an extent that the complicated time-consuming readings of technically weak tracings available to us in the mid-60's have systematically been replaced by outstanding high technical products. This enables computerization and analysis on 24- or 48-hour tracings and also allows microprocessing of continuous ECG monitoring to be done. There are still many unsolved problems related to

sudden cardiac death and further the old/new interest in silent myocardial ischemia are probably the most important objectives for using Holter monitoring on a broad scale.

This multi-authored book discusses all these subjects in detail and I very much enjoyed the part on Technology which is rarely discussed properly in other books on this topic. The book can be recommended to all cardiologists whether they are involved in hospital or private practice.

Jan J. Kellermann, Tel Hashomer

William S. Frankl, Albert N. Brest

Valvular Heart Disease

Comprehensive Evaluation and Management
Davis, Philadelphia 1986
XIV + 567 pp., US\$ 112.50
ISBN 0-8036-3791-8

Valvular Heart Disease: Comprehensive Evaluation and Management addresses all those who are dealing with patients suffering of this condition.

A comprehensive chapter on the anatomy of valvar lesions, including subvalvular and supra-valvular alterations, illustrates the role of structural lesions for valvular function and provides the anatomic bases for diagnostic recognition of the manifold valvulopathies.

The course of chronic valvular heart disease is extensively dealt with providing a solid background for adequate patient management and timing of surgery. The value of diagnostic measurement such as echocardiography, radionuclide angiography and heart catheterisation is discussed in a very critical and scientific manner. However, it would be of interest for many readers to learn about the author's practical approach to various situations of scientific controversy such as severe aortic and mitral incompetence with few symptoms.

The non-invasive methods are outlined and illustrated in separate chapters. Some specific syndromes such as mitral valve prolapse, valve disease in the elderly and others, which have gained particular interest within the last decade, are dealt with comprehensively in several contributions. The last section of the book deals with all the different aspects of surgical management, including a chapter on long-term prognosis following valve surgery.

All chapters are written in an expert manner and each is accompanied by detailed bibliography. The numerous illustrations are of excellent quality. Because this book covers many of the practical aspects of heart valve surgery and offers a most comprehensive scientific overview on this diversified field, it may be highly recommended to cardiologists and heart surgeons. Moreover, it provides a practical source of reference to anybody interested in cardiac valve surgery.

M. Rothlin, Zurich

John W. Kirklin, Brian G. Barratt-Boyes

Cardiac Surgery

Wiley, Chichester 1986

XIII + 1550 pp.; £ 150.00

ISBN 0-471-01416-8

At last *The Complete Guide to Cardiac Surgery!*

John Kirklin and Brian Barratt-Boyes have combined their considerable talents to create a text which is well-nigh perfect.

Ostensibly, the book is aimed at cardiac surgeons, but residents, cardiologists, anesthetists and others involved in the surgery of the heart will find this book to be most useful. The layout of the chapters is elegant and simple: the contents are clearly stated and may be readily identified. The language and grammar are easily understood and one marvels at the comprehensiveness of the material. The opinions stated are based on the tremendous personal experience of the authors and there are no unfounded statements. The illustrations are beautiful and contribute to a rapid grasp of the technical aspects of the various operations described. I, personally, appreciate the innovative presentation of the references – arranged in alphabetical order and numbered. This greatly simplifies the reference list and should probably be adopted on a wide scale when the bibliography is particularly large.

The first 6 chapters are a masterful presentation of basic general considerations and I would suggest that all residents study them carefully when preparing for the Cardiothoracic Surgery Boards. This fine standard is maintained in the rest of the chapters and it is pleasing to note that the surgery of ischemic heart disease appears first and is followed by the chapter on acquired valvular disease. As these conditions

are most common, it is correct to give them prior consideration.

The text is up-to-date, including topical subjects such as heart transplantation and oxygen-free radical scavengers in myocardial protection.

There are some proofreading mistakes (p. 182, 2nd column, line 26), but this is almost inevitable in a book of 1500 pages. The print is rather small, but was probably dictated by the sheer volume of the material. On the other hand the text is most readable and the index is appropriate.

All in all a major 'tour de force' and a *must* for all cardiac surgeons and their residents.

J.B. Borman, Jerusalem

Liv Hatle, Bjørn Angelsen

Doppler Ultrasound in Cardiology

Physical Principles and Clinical Applications
2nd ed.

Lea & Febiger, Philadelphia 1985

XIII + 331 pp., bound; US\$ 33.00

ISBN 0-8121-0936-8

During the last few years a great interest in sophisticated noninvasive cardiovascular diagnosis has been developed; Doppler echocardiography playing an outstanding role in this field. This book reflects the research activity of the sections of Cardiology and Biomedical Engineering at the University of Trondheim, Norway, which are known for their pioneering work in cardiac Doppler studies. The two main authors, who have combined their talents to produce a readable book, presented with excellent illustrations, are respected authorities on the subject.

The book is organized into seven chapters. The introductory one contains a concise history of Doppler. Chapters 2 and 3 deal with physics of blood flow, continuous and pulsed Doppler techniques, and blood velocity measurements. The three subsequent chapters are basically clinical. Chapter 4 explains the methods of recording intracardiac blood flow velocities and describes the normal velocity patterns. Chapter 5, which constitutes, in our opinion, the kernel of the book, analyzes in detail the Doppler patterns of stenotic and regurgitant valves, prosthetic valves, congenital heart diseases, hypertrophic cardiomyopathy, and pulmonary hypertension. The explanations in each case are correlated with the clinical and hemo-

dynamic findings, and special emphasis is given to the pathophysiological aspects of heart lesions. It is stressed that Doppler ultrasound should not be used separately from two-dimensional echocardiography; the two techniques being complementary, each facilitating the performance and interpretation of the other which combined gives a better basis for patient management. The didactic style plus the overwhelming number of illustrations (226 in 196 pages!) and the superb referencing make this chapter a masterpiece.

Chapter 6 was written in part by K. Kristoffersen, from the Norwegian Institute of Technology, and describes the techniques of measurement of high velocities with pulsed Doppler.

The 7th, and last chapter was written by T. Skjærpe, L. Hegrenæs (Department of Cardiology, University of Trondheim), and H. Ihlen (Department of Cardiology, University of Oslo) and discusses the possibilities and limitations of Doppler calculations of cardiac output. A short appendix is dedicated to measurements of the volumetric flow rate from the velocity profile.

Physical and mathematical considerations, throughout chapters 2 and 3, are frequent and some-

what complicated for the clinical cardiologist. However, as the authors point out in the preface, it is not necessary to grasp these technical chapters in detail before reading the clinical portions where engineering principles are kept to a minimum. Areas of confusion for the beginner, such as frequency analysis, Nyquist limit, methods of spectral analysis, and fast Fourier transform, are clearly explained.

When a technique such as cardiac Doppler develops so rapidly, advances in instrumentation and recently published studies make it difficult to edit a book that reflects the state of the art. Nevertheless, Hatle, Aagelsen, and their coauthors succeeded in accomplishing this hard task. This book is an authoritative account of the subject, and most of the sections are far superior to those found in other publications.

In our opinion this will become one of the basic text books on Doppler echocardiography. One of its outstanding merits is that it can be recommended to the newcomer to the technique as well as to cardiologists or medical technicians with a background in echocardiography who wish to know more about Doppler.

Enrique Z. Fisman, Tel Hashomer