

**CURRENT THERAPY
IN
CARDIOVASCULAR DISEASE
1984-1985**

NICHOLAS J. FORTUIN, M. D.

CURRENT THERAPY IN CARDIOVASCULAR DISEASE 1984-1985

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PREFACE

Our intent in preparing *Current Therapy of Cardiovascular Disease* is to complement the excellent textbooks of cardiology already available. This book deals only with treatment, leaving to other texts discussions of pathophysiology, clinical presentation, and laboratory diagnosis. The length of the book bears testimony to the complexity of managing cardiac patients in 1984. In this volume are contributions from adult cardiologists, pediatric cardiologists, interventional radiologists, infectious disease experts, cardiac surgeons, vascular surgeons, hematologists, and psychiatrists, further testimony to the many disciplines which may be called forth to manage such patients.

Each author, an acknowledged expert in the field, has described his or her own method of treatment in a highly personal and practical manner. We have not aimed for a balanced presentation weighing the advantages of one mode of treatment against another or reviewing all treatment possibilities but have encouraged discussion of individual styles. Readers may find something with which to disagree in many chapters, particularly in areas where concepts of treatment are in rapid evolution. Some therapies are so new and their role so undefined, such as the use of thrombolytic agents in acute myocardial infarction, that I have not included them in this edition. My hope is that the busy practitioner, when faced with a difficult management problem, will find in this text advice on how one expert handles such a problem.

I wish to thank the authors who have so diligently responded to my request for chapters and have produced such uniformly fine articles. To Mr. Brian C. Decker, whose brainchild this Current Therapy series is, I wish to express special thanks for his quiet enthusiasm, gentle prodding, and highly professional support. The staff of B. C. Decker, Inc have provided invaluable backup in a most efficient manner and have made completion of this work an easy task for the editor. Especially to be commended are Mary K. Maudsley, editor, whose tireless efforts and good spirits in the face of adversity have guided the project to a successful conclusion, and my able secretary, Bonnie Dobrusin, who has had to do several jobs at once. To my wife, Dinnie, and children, Elizabeth, Julianne, and Karen, I am indebted for putting up with a spouse and father whose family commitments have been curtailed by the demands of this book.

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PRINCIPLES OF MANAGEMENT IN PATIENTS WITH HEART DISEASE

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Pity the poor practitioner of only 25 years ago who faced the patient with cardiovascular disease armed with an electrocardiogram, a fluoroscope and a paucity of therapeutic choices. Contrast him with the modern cardiologist and his armamentarium of invasive and noninvasive diagnostic techniques, potent drugs, and surgical therapies. Clearly, the patient has profited greatly from the unparalleled advances in cardiovascular medicine which have occurred during this era. For the physician, diagnosis has become more precise and treatment infinitely more successful, but management of the patient has become more difficult. This is due to the often bewildering array of diagnostic and therapeutic choices currently available which the physician must face daily. Modern cardiology can degenerate easily into a routinized and mechanistic process in which technology is applied to the patient without attention to an overall scheme which considers the unique interaction of each patient with his disorder. In order to avoid this approach, the modern cardiologist must be firmly grounded in the basics of medicine—history taking, physical examination, and laboratory interpretation. He must adhere to certain principles of patient management which were also employed by his counterpart of former times. This chapter sets forth several such principles.

The first and most important principle of management is to establish a proper diagnosis. This statement may appear to be so axiomatic that it hardly needs making, but it is surprising how often it is not heeded. For example, it is not unusual to see patients with chest pain of noncardiac origin, who also happen to have an abnormal electrocardiogram, treated for years with medication based upon the erroneous diagnosis of "coronary artery disease". The advent of frequent treadmill testing has amplified the problem. It is no longer acceptable to treat a patient for "congestive heart failure" because rales are heard in the chest and the patient complains of breathlessness. Rather, the underlying pathologic and

pathophysiologic mechanism responsible for pulmonary congestion, if this is indeed present, must be defined. Treatment may differ depending upon whether there is a mechanical problem (valvular dysfunction), systolic dysfunction (cardiomyopathy), or diastolic dysfunction (left ventricular hypertrophy).

A second principle is that it is essential for the physician to understand as completely as possible the natural history of the cardiac disease, both untreated and treated, before recommending major interventions such as prolonged drug therapy or surgery. While most treatment aims to alleviate symptoms, increasingly therapeutic interventions, particularly surgical, are made to prolong life and improve functional capacity. We now have in the literature many studies which seek to describe the natural history of cardiac disorders as defined by modern technology, but much remains to be determined. *Ex cathedra* pronouncements based on the physician's limited experience in contrast to more extensive published results are not adequate justification for recommending aggressive therapies. It is important to stress that the natural history of most diseases is prolonged, and that patients can lead productive lives without the need for treatment. Unfortunately, physicians receive their training in hospitals where these diseases may be encountered in their later phases, so that the physician's judgment is thereafter clouded by this exposure. When patients are seen at an earlier phase in the natural history of a disease, with an acute exacerbation, inappropriate therapeutic decisions may be rendered based on the experience with the disease at a later stage. Deciding on proper therapy requires clinical judgment; this can be acquired only through experience obtained by caring for many patients with cardiac disorders in both inpatient and outpatient settings for many years. Advanced disease may be relatively easy to treat, but judgment is necessary to know when the disease is advanced, so that treatment can be recommended, and when the disease is in its early stages so as to avoid overly aggressive therapy.

Just as clinicians need seasoning, so to do diagnostic techniques and new therapies. Dr. W. Proctor Harvey has espoused for many years his "5-year rule", which states that five years are needed before one can make a proper judgment on the efficacy of a new form of treatment. The history of medicine supports such an approach; many therapies have been introduced enthusiastically only to be discarded after being subjected to scientific scrutiny. We live in an age when new therapies are promulgated not only in the scientific literature but also in the lay press. Patients are increasingly knowledgeable about new ad-

vances and often request new treatments before they have been evaluated properly. The physician would do well to heed the "5-year rule" or some variation thereof before pushing his patient too rapidly into new treatments. Another problem in this regard relates to the ascertainment bias which is inherent in many published studies. Data obtained from patients in the rarefied atmosphere of a tertiary referral center may not be relevant to patients seen in different settings because the disease is at a different stage of evolution.

I have stressed that the most important principle of therapy is to make a proper diagnosis, but too much diagnostic testing is detrimental to patient care. The cardiologist should first formulate a diagnostic impression based on the patient's presenting complaints and findings from physical examination and simple laboratory studies, and then establish a diagnostic plan which uses the least number of tests to provide answers to his questions. "Shotgunning" with multiple noninvasive tests and routinely doing expensive tests such as echocardiography have no place in medicine. Useful information for patient management will be obtained only if the physician asks specific questions of the tests. If the answers to the questions can be obtained by other, simpler techniques, or if the questions are irrelevant to managing the patient, the tests should not be ordered. It is recognized widely that the best physicians order the fewest tests. Overtesting is bad medicine because it enhances a patient's anxiety about his condition, is wasteful of financial resources, reflects basic insecurity on the part of the physician, and may be motivated by financial considerations.

The physician managing the patient with heart disease must be well grounded in the fundamentals of general medicine. Dr. Eugene Stead's cry, "What this patient needs is a doctor", applies all too often to patients managed only with the eye of a specialist. Most patients have other medical problems which may influence their cardiac disease adversely, and treatment of the cardiac disease may worsen other conditions. It is not possible to manage cardiac disease as an isolated entity.

The physician must be sensitive to the emotional factors which are common in patients with heart disease; he must recognize that patients with heart disease, whether truly present, suspected by the patient, or erroneously diagnosed by another physician, are frightened. The public is well aware of the prevalence of heart disease and of its ability to disable or kill suddenly and without warning. One of the physician's first responsibilities is to allay this fear. He can often do this either by showing the patient that heart disease is not present or that the cardiac pro-

blem is of minor consequence. In treating the patient with serious heart disease, the physician must, by his attitude and demeanor, establish trust and confidence. It is surprising how often physicians do just the opposite, that is, they intensify anxiety by making gloomy pronouncements about the serious nature of the condition and morbid accounts of possible future consequences. Another negative strategy is to take a cold and mechanistic approach, ordering multiple tests and then describing in detail to the patient the intricacies of his altered cardiac structure and function. With our modern penchant for pharmacologic or surgical answers to cardiac problems, we have lost sight of the importance of the physician himself in the therapy scheme. The patient must have confidence in the physician as a person; such confidence develops when the physician establishes early on that he is interested in the total well-being of the patient and that he cares for the patient as an individual, not as a case of 3-vessel disease. Only by knowing the patient in this way, in concert with a broad understanding of the disease process, can the physician differentiate the proper therapeutic choice from the many modalities available. Because patients are afraid, they frequently require reassurance; this requires spending time with the patient, often talking about matters seemingly unrelated to the cardiac problem. Some may be reassured by knowing the most minute details of their problems; others may be reassured by talking to others with similar problems. Exercise and activity may be reassuring; the physician should encourage the patient to do as much as his functional limitations allow. A positive attitude on the part of the doctor engenders hope in the patient. Denial may be a defensive response to illness; in such cases, confrontation with the facts of the illness may be useful. Depression is common in patients with heart disease and may be masked by pronounced anxiety or somatic overconcern. Symptoms invariably worsen when the patient is depressed. It is important to recognize depression because it may be augmented by many cardioactive drugs and may affect the patient's ability to tolerate a surgical procedure. Often the patient is unaware of depression and family members are the first to point it out to the physician.

Treatment with drugs is inevitable for most patients with heart disease, and for many, drug therapy will be required for many years. Before embarking on what may be life-long drug therapy, the physician must ask what is the long-term efficacy of the treatment and what negative effects can be expected, that is, is the treatment worse than the disease? In many cases there are no answers to such questions. In