

THE HISTORY OF MEDICINE AS AN AID TO UNDERSTANDING THE PRESENT AND PREDICTING THE FUTURE

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I was delighted when Bill Winters asked me to write an editorial on the value of medical history in modern-day cardiovascular practice for the *journal of the Methodist DeBakey Heart Center*. Michael DeBakey helped create modern cardiovascular surgery. His remarkable career-spanning more than seven decades has been phenomenally fertile in terms of countless innovations and inventions that have revolutionized the care of patients with cardiovascular disease. He has operated on thousands of patients; mentored thousands of medical students, residents and practitioners; and has been a catalyst for many important changes in health policy. Dr. DeBakey understands the value of medical history. In his 1996 paper, "History: the torch that illuminates: lessons from military medicine," he encouraged us "to study the past and incorporate its lessons in future actions."¹

Cardiologists and cardiovascular surgeons can benefit from historical perspective as much as anyone. Indeed, we are fortunate that so many books and articles document the rich history of our twin specialties, and the advances in research and practice that led to their invention in the 20th century.^{2,7} Understandably, most of us are too busy thinking about the events of the moment to pay much attention to historical trends that are measured in years or decades, let alone centuries. But there is value, even comfort, in spending

some time attempting to place the challenges and opportunities of contemporary medical and surgical practice, research and education in a larger historical context.

Today, when many elements of our health care system are under siege, the history of medicine serves several useful functions. Physicians and surgeons work in an era of escalating expectations, eroding autonomy and decreasing discretionary time. There is so much—far too much—to know, to learn and to do. Many doctors are concerned about the future of medicine as they watch so many powerful political, economic and social forces transform health care, biomedical research and medical education. In this context the history of medicine can provide perspective and teach valuable lessons. Just as a patient's medical history helps us assess his or her symptoms and signs, and develop diagnostic and therapeutic strategies, the history of medicine reveals how our predecessors coped with challenges and seized opportunities.

Many prominent physicians have promoted medical history as a tool to better understand disease, help frame the present and speculate on the future. William Osler, the English-speaking world's leading physician a century ago, put it this way: "By the historical method alone can many problems in medicine be approached profitably."⁸ Paul Dudley White, America's first academic cardiologist, also thought medical history was important. In

1950, he wrote that by looking back "we acquire a better perspective of our own place in history with the humbling realization of our role as merely a link in the long chain of the acquisition and application of medical knowledge."⁹

The pace of discovery and innovation in cardiology and cardiovascular surgery has accelerated for five decades, fueled by a blend of altruism and ambition, massive federal funding, the high prevalence of cardiovascular disease and increasing societal expectations. As a result, doctors, hospitals, insurers and our government now struggle with whether, how, and when to incorporate new drugs, devices, diagnostic techniques and therapeutic procedures into clinical practice. The challenge is compounded because contemporary American culture covets the "newest" and "latest" of everything! Our obsession with newness isn't new, however. Chicago physician James B. Herrick, best known for his classic description of acute myocardial infarction, declared in 1903, "There is a tendency in these hurrying modern times to seize upon that which is new and quickly to forget the old."¹⁰

History can also teach us much

The National Library of Medicine contains hundreds of pages of medical history.¹⁵ Visit their web site (www.nlm.nih.gov) and click on "PubMed.", Select "Limits," then select "Subsets" in the far right field and click on "History of Medicine."

about ourselves: how we, as individual physicians and surgeons, confront challenges and change. Much has been written about physician burnout in this era of managed care, but the phenomenon is not new. In a series of letters William Osler wrote to friends and colleagues in 1904, he explained why, in words and phrases that reflected his personal struggle with burnout, he decided to leave Johns Hopkins to become Regius Professor of Medicine at Oxford. Written when Osler was 54 years old, these letters are compelling: "I am tired of the incessant racker of my present life." "I could not possibly last long at my present pace." "I am tired of the strain of the past few years which could only have one end - a breakdown."¹¹ If Osler felt this way a century ago it is little wonder that many doctors are struggling with the increasing demands of practice in the 21st century.

History reaches humility because it reveals how ephemeral "expert opinion" can be. Increasingly, therapeutic decisions in cardiology are guided by evidence derived from randomized clinical trials that is customized for a unique patient. Many of our management decisions, however, are still based on traditions of care shaped over the years by empiric observation or the opinions of experts. Two hundred years ago, many leading physicians of Europe and North America used leeches and lancets to bleed patients with "fever" and other problems. George Washington's death in 1799 was accelerated by aggressive blood-letting. During a 13-hour period shortly before he died, Washington's doctors removed 2 1/2 quarts of the former president's blood. By current standards this "treatment" seems incomprehensible (if not homicidal). Then,

however, blood-letting was championed by many prominent physicians, notably Benjamin Rush, a physician-signer of the Declaration of Independence. This "heroic" therapy reflected the lingering influence of Galen's humoral pathology (after 1500 years) and late 18th century interpretations of pathophysiology.

The history of coronary angiography provides a poignant example of resistance to innovation. Mason Sones, Jr., published a concise description of his technique of selective coronary angiography in 1962. This procedure made it possible, for the first time, to visualize the entire coronary arterial system in living humans. It is hard to imagine cardiology and cardiac surgery today without this valuable technique that catalyzed thousands of careers and a multitude of industries. Although some cardiologists in academic centers and referral hospitals embraced the technique soon after it was reported, a few influential voices urged caution. Four years after Sones's paper appeared, a writer editorialized in the *Lancet*, "Sufficient time has elapsed since the introduction of coronary arteriography for its usefulness to be assessed. As an aid to diagnosis in ischaemic heart-disease, it seems at present to offer little that cannot be more easily obtained by much simpler methods such as good history-taking and electrocardiography."¹²

This brief essay contains just a few examples of how medical history provides a useful perspective for evaluating the present and speculating about the future. History teaches many valuable lessons that can inform our decisions and help predict the consequences of our actions. Other essays have discussed several additional reasons that cardiologists, in particular, will find the history of medicine

entertaining as well as enlightening,¹³ There is a wealth of interesting historical material out there. I urge you to explore it.

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