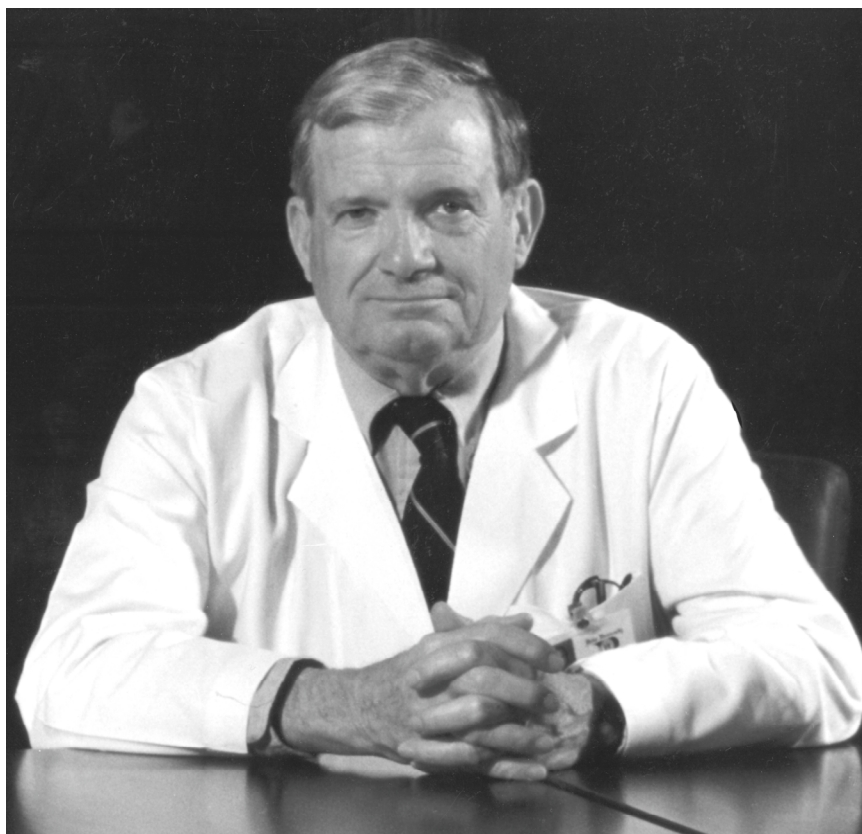


At the Heart of Medicine



Essays on the Practice of Surgery and Surgical Education



David C. Sabiston, Jr., M.D.

At the Heart of Medicine



Essays on the Practice of Surgery and Surgical Education



By

David C. Sabiston, Jr., M.D.

Edited and with an Introduction and Epilogue by

Barton F. Haynes, M.D.

CAROLINA ACADEMIC PRESS

Durham, North Carolina

Copyright © 2006 by Barton F. Haynes
All Rights Reserved

Grateful acknowledgement is made to the following publishers, editors, or authors for permission to reproduce previously published work: Alpha Omega Alpha Honor Medical Society, American Journal of Cardiology, American Surgeon, Association of American Medical Colleges, Journal of Neurosurgery, Annals of Surgery, Annals Thoracic Surgical, Surgery, Bulletin of the American College of Surgeons, Clinical Cardiology, Caduceus, Circulation, American College of Surgeons, Johns Hopkins Medical Journal, Duke University Press, Journal of Thoracic Cardiovascular Surgery, Proceedings of the Rockefeller Archive Center, Radiology, North Carolina Medical Journal, New England Journal of Medicine, Dr. David C. Sabiston, Jr, Lippincott, Williams & Wilkins.

Library of Congress Cataloging-in-Publication Data

Sabiston, David C., 1924-

At the heart of medicine : essays on the practice of surgery and surgical education /
by David C. Sabiston, and edited by Barton F. Haynes.

p. cm.

ISBN 1-59460-163-1

1. Surgery--Philosophy. 2. Surgery--Study and teaching. 3. Duke University.
Medical Center. Dept. of Surgery--History. I. Haynes, Barton F. II. Title.

[DNLM: 1. Duke University. Medical Center. 2. Surgery--Collected Works. 3.
Academic Medical Centers--history--Collected Works. 4. Surgery--history--Collected
Works. 5. Surgical Procedures, Operative--Collected Works. WO 7 S113a 2005]

RD31.5.S33 2005

617'.0071'1756563--dc22

2005020786

Carolina Academic Press
700 Kent Street
Durham, North Carolina 27701
Telephone (919) 489-7486
Fax (919) 493-5668
E-mail: cap@cap-press.com
www.cap-press.com

Printed in the United States of America

Dedication

*T*o the surgeons of the United States for dedicated patient care,
and to Aggie Sabiston, my wife, for dedicated care of our family.

Contents

Acknowledgments	xi
Introduction	xiii

Part I *Background and Early Days*

Chapter 1	David Sabiston on David Sabiston	3
Chapter 2	Taking Care of Business	17

Part II *The Duke Department of Surgery*

Chapter 3	The Duke University Medical Center	23
Chapter 4	Deryl Hart: Leader in the Development of the Duke University Medical Center	31
Chapter 5	The Department of Surgery of Duke University Medical Center	37

Part III *History of Surgical Medicine*

Chapter 6	Major Contributions to Surgery from the South	47
Chapter 7	The First Hundred Years: The <i>Annals of Surgery</i> and a Century of Progress	73
Chapter 8	Surgeons and the Nobel Prize	79
Chapter 9	Friedrich Trendelenburg	91
Chapter 10	Allen O. Whipple	97
Chapter 11	Alfred Blalock	101
Chapter 12	Henry T. Bahnson	121

Part IV *Surgical Education*

Chapter 13	Medicine as a Career	139
Chapter 14	A Continuum in Surgical Education	145
Chapter 15	The Training of Academic Surgeons for the Future: The Challenge and the Dilemma	159
Chapter 16	The Effect of the Three-Year Medical School Curriculum on Undergraduate Surgical Education: A Professor's Point of View	165
Chapter 17	The Surgical Medical Student Curriculum at Duke	171
Chapter 18	Specialization in Surgery	179
Chapter 19	The University Teaching Hospital	183

Part V *The Heart*

Chapter 20	The Coronary Circulation	191
Chapter 21	Coronary Endarterectomy	209
Chapter 22	Observations on the Coronary Circulation, With Tributes to My Teachers	219
Chapter 23	Effect of Cardiac Contraction on Coronary Blood Flow	239
Chapter 24	The Direction of Blood Flow in Anomalous Left Coronary Artery Arising from the Pulmonary Artery	245
Chapter 25	Coronary Arteriography in the Selection of Patients for Surgery	253
Chapter 26	The Diminishing Mortality of Coronary Artery Bypass Grafting for Myocardial Ischemia	261
Chapter 27	Radionuclide Angiocardigraphy in the Diagnosis of Congenital Heart Disorders	277

Part VI *The Lungs*

Chapter 28	The Diagnosis of Pulmonary Embolism by Radioisotope Scanning	291
------------	---	-----

Chapter 29	Diagnosis of Massive Pulmonary Embolism in Man by Radioisotope Scanning: First Report of Use of Urokinase to Treat Pulmonary Embolism	299
Chapter 30	The Pathophysiology of Pulmonary Embolism: Relationships to Accurate Diagnosis and Choice of Therapy	305
Chapter 31	Radioactive Ventilation Scanning in the Diagnosis of Pulmonary Embolism	321

Part VII *The Practice of Surgery*

Chapter 32	Professional Liability in Surgery: Problems and Solutions	329
Chapter 33	The Antivivisection Movement: A Threat to Medical Research and Future Progress	343
Chapter 34	National Health Insurance	351
Epilogue	by Barton F. Haynes	361
Sources of Chapters		365
Index		369

Acknowledgments

I am grateful to a number of individuals for their assistance with this book. Thanks to Walter Wolfe, Ted Pappas, James Lowe, R. Randal Bollinger, and Robert Jones for comments on the book. Kim McClammy created the electronic version of the manuscript and made countless revisions. Aggie Sabiston oversaw the project and added important facts and perspective. I thank David Sabiston for allowing his words to be edited and compiled in this book, and as well, for his unwavering support of my career at Duke during the past twenty-five years. David C. Sabiston, Jr., is not only a surgeon's surgeon; he is also a supporter and mentor to people throughout the Duke family.

Barton F. Haynes, M.D.

June 2005

Introduction

This book is a compilation of essays by David C. Sabiston, Jr., one of the great American surgeons of the twentieth century. A protégé of Alfred Blalock at Johns Hopkins Medical School, Sabiston became Chair of Surgery at Duke University School of Medicine in 1964, and for the next thirty years, shaped American Surgery by the force of his intellect, by his teaching, and by his editorships and national leadership. His seminal research accomplishments led in the development of surgical methods to revascularize the heart, and, as well, led to development of radionuclide scanning of the lung for the diagnosis of pulmonary embolus.

He patterned the Duke Department of Surgery training program after Blalock's program at Johns Hopkins. Early in Sabiston's career, Blalock sent Sabiston to work with Donald Gregg at the Army Institute of Research in Washington, D.C. to perform basic research on coronary blood flow, an experience that shaped Sabiston's career. After becoming Chair of Surgery at Duke, Sabiston provided the means for every surgery resident to spend two years in basic research during clinical training. Sabiston's philosophy was that the best surgeons were curious and competent scientists as well as technically proficient surgeons.

David C. Sabiston, Jr. also influenced a generation of surgeons worldwide by his thirty-five years of editorship of *Sabiston's Textbook of Surgery*, numerous other surgical textbooks, and as editor in chief of the *Annals of Surgery* for over thirty years. His leadership in American Surgery was recognized by his peers with his election as President of the American College of Surgeons.

Although traditional in his views on training surgeons, Sabiston was a visionary who could recognize important future opportunities. He was the only administrative leader at Duke who recognized the

importance of the AIDS epidemic in 1983. When others ignored the epidemic, David Sabiston invested \$5 million dollars and, with a gift from the DuPont company, built the Surgical Oncology Research Facility, a 30,000 square foot Biosafety Level-3 laboratory for AIDS research. From the Department of Surgery program in AIDS, led by Dani Bolognesi, Kent Weinhold, and Thomas Matthews, came two AIDS drugs—AZT and the fusion inhibitor, Fuzeon. David Sabiston never wrote about his contributions to AIDS research, so I have told this story in my epilogue.

His interest in his students and residents earned him every teaching award at Duke, and, as well, earned him the National Teacher of the Year Award from Alpha Omega Alpha. More than one former student has told me long after graduating from Duke that “the greatest thrill of my medical school time was being personally taught surgery in the laboratory by Dr. Sabiston.” Thus, the Sabiston work ethic and his professional values will live on in every Sabiston trainee.

One of the most decorated and honored surgeons of our time, Sabiston has received numerous awards and honorary degrees. However, a major lasting legacy is the legion of surgeons trained from 1964–1994, many of whom have gone on to become division chiefs and departmental chairs around the United States.

Finally, David Sabiston established a tradition of excellence at Duke University that permeated every department in the medical center for thirty years, and this tradition continues even after his retirement.

The purpose of this book is to create a volume that presents representative samples of David Sabiston’s major scientific works, and, as well, presents a series of essays on topics that are important to various aspects of surgical medicine. I have edited David Sabiston’s scientific papers by not including the methods sections and many of the scientific graphs and charts. This was done to preserve the content of the classic message of the text, while making the chapter more readable to the non-researcher. I hope these essays remind current and future generations of doctors of the levels of excellence and commitment he expected in good physicians.

The book starts with chapters on his background and early development in Sabiston’s own words, “David Sabiston on David Sabiston.”

Next, we hear of his views on the development of surgery at Duke University School of Medicine and how the Hopkins traditions were transplanted to Duke. Seven chapters in the book are Sabiston's treatises on the history of surgery and reveal that Sabiston was an avid historian.

An additional seven chapters teach us his philosophy for training students and residents in surgical medicine and should be required reading for surgical educators today. One of the most striking lessons in these seven chapters is the clear message of how much time and teaching it takes to make a good surgeon.

Next come reprints of portions of Sabiston's classic papers on revascularization of the heart and diagnosis of pulmonary embolism, followed by three chapters on Sabiston's views on important professional issues such as professional liability, animal rights activism, and national health insurance. Finally, the epilogue tells the story of the Surgery Department and early AIDS research at Duke.

Taken together, Sabiston's essays on surgical practice and life in medicine reflect a long and richly productive body of work that has touched the lives of physicians and patients worldwide for nearly half a century. They are timely and are written in a style that reflects the man himself—insightful, thoughtful, straight-forward, and gracious.

Barton F. Haynes, M.D.

June 2005

At the Heart of Medicine



Essays on the Practice of Surgery and Surgical Education

