ANESTHESIA IN COSMETIC SURGERY

One major by-product of the aging baby-boom generation has been a surging interest in cosmetic surgery. Outpatient cosmetic surgery clinics have sprouted up in droves all over the United States, and the number of cosmetic procedures performed in 2005 increased by more than 95% from the previous year. Although procedures like facelifts and abdominoplasties are considered minimally invasive, the anesthetic protocols and regimens involved are often overly complex and unnecessarily toxic. Major complications involving anesthesia in this (and any other) surgical milieu can range from severe postoperative nausea and vomiting (PONV) to postoperative pain to mortality. Although mortality may be rare, there have been many cases in which perfectly healthy cosmetic surgery patients require emergency intervention due to a severe complication involving anesthesia. In recent years, many new anesthetic protocols have been developed to reduce the incidence of PONV and other complications, while ensuring that effective pain management and level of "un-awareness" during surgery are always maintained.

Barry L. Friedberg, M.D., is a volunteer assistant professor at the Keck School of Medicine, University of Southern California. Since 1992, he has practiced exclusively in the subspecialty of office-based anesthesia for elective cosmetic surgery. He founded the Society for Office Anesthesiologists (SOFA) in 1996 that he merged in 1998 with the Society for Office Based Anesthesia (SOBA), another non-profit, international society dedicated to improving patient safety through education. Dr. Friedberg is the developer of propofol ketamine (PK) technique designed to maximize patient safety by minimizing the degree to which patients need to be medicated to create the illusion of general anesthesia, that is, "no hear, no feel, no recall."

Anesthesia in Cosmetic Surgery

BARRY L. FRIEDBERG, M.D.

Assistant Professor in Clinical Anesthesia
Volunteer Faculty
Keck School of Medicine
University of Southern California
Los Angeles, CA

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Come mothers and fathers
Throughout the land
And don't criticize
What you can't understand
Your sons and your daughters
Are beyond your command
Your old road is
Rapidly agin'
Please get out of the new one
If you can't lend your hand
For the times they are a-changin.'

– Robert "Bob Dylan" Zimmerman
"The Times They Are A-Changin," 1963

To my parents, my first teachers, who taught me it was acceptable to not be like everyone else as long as I aspired to be the best I could be.

To Willy S. Dam, M.D., of Bispebjerg Hospital, Copenhagen, my first anesthesia teacher, who encouraged me to become an anesthesiologist.

To all the patients who have suffered from previous anesthetics and who may now be relieved of their PONV, postoperative pain, and prolonged emergences.

Contents

Foreword

Physicians, like all people, live in a world that is proscribed more by what we do in rote fashion every day than by what we understand in any meaningful way. Our modern lives have become so harried that most of us barely have enough time to pause and reflect on what we have done and where we are going.

Dr. Barry L. Friedberg, at great personal effort and time, has put forth this pearl of a book: ideas, methods of practice, and salient knowledge on the cutting edge of modern medical practice as they apply to the world of minimally invasive anesthesia for cosmetic surgery. As many of our practices prove every day in operating rooms across the United States and beyond, the information and anecdotes provided here apply equally well to a whole host of different anesthetic and surgical settings.

Modern science is replete with heroic strides in improving patient care and decreasing perioperative morbidity and mortality—and yet, today, we still do not understand the underlying mechanisms of general anesthesia on the brain, *much less the construct of consciousness itself!*

The field of anesthesiology and perioperative medicine achieved unprecedented gains in patient outcomes through the advent of pulse oximetry decades ago. Since then, we have refined our techniques, implemented new airway devices, decreased postoperative nausea and vomiting, improved our times to "street readiness," and done a better job of managing pain. Now is the time to move to the next level of patient care.

Dr. Friedberg, through unrelenting drive and perseverance, has brought to light the benefits of the age-old concept that "less is more." Through the use of minimally invasive anesthetic techniques, a resurgence in the prudent use of ketamine via the propofol-ketamine (PK) technique, and the application of brain wave (level-of-consciousness) monitoring, Dr. Friedberg has brought anesthesia care to a higher plane.

When Albert Einstein died, curious scientists autopsied his brain in the futile quest to glean some insight into one of humanity's greatest minds. They were desperately seeking answers to how this one man transformed Newtonian physics into an advanced understanding of the universe itself. Today, physicists struggle with String Theory and other abstract mathematical concepts to solve the ultimate riddle of bridging relativity theory with quantum mechanics in one grand unifying equation. But back in 1905, when Einstein's first papers were reaching the scientific print, he was greeted as a heretic. At one point, a group of one hundred of the world's most renowned scientists signed a document stating that Mr. Einstein was not correct in his radical departure from

conventional theory. Albert Einstein is reported to have replied, in paraphrase, "if they were so sure that they were right and I was wrong, then why does this letter contain one hundred signatures—in that case, they should need only one signature!"

In this same vein, there have been those detractors who espouse opposition to some of the elegant medical practices and insights put forth by Dr. Friedberg. To those voices, hiding in the shadow of inexperience, I say with a loud and confident voice—come join us, read on, and enjoy this journey along the road to greater insight and knowledge. Some have suggested that Dr. Friedberg is "redefining anesthesia"—and, in some contexts and practice paradigms, this may be true. I like to think of his work, and this book, as a stepping-stone to the next level of patient care.

Adam Frederic Dorin, M.D., M.B.A.
Medical Director
Grossmont Plaza Surgery Center
San Diego, CA

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Introduction

Anesthesiology has undergone remarkable changes in recent years. Among them is the development of anesthesia subspecialties and of anesthesiologists who focus most or all of their time in one area of anesthesia practice. This change has several advantages for patients, surgeons, and anesthesiologists. For one, the anesthesiologist learns the needs and expectations of the surgeon, which optimizes surgical outcome for patients. Furthermore, knowing what to expect, the anesthesiologist is better able to adjust both the doses and timing of drugs so that patients are adequately anesthetized for surgery but then emerge from anesthesia in a timely and comfortable manner. Nowhere are these issues more important than when surgery is performed in the ambulatory or office-based setting. Expectations are that patients undergoing surgery in these settings will go home the same day. Resources for extended care are usually nonexistent, as they should be.

Providing anesthesia for office- or clinic-based cosmetic surgery has emerged as one subspecialty area for anesthesiologists. For patients, convenience is greatly enhanced and costs are greatly decreased in office- or clinic-based cosmetic surgery. To provide the best anesthetic care in this specialized setting requires certain skills that are not emphasized in most anesthesia training programs. Fortunately, we are blessed with a resource prepared by a highly skilled and experienced anesthesiologist.

In this book, Dr. Barry L. Friedberg has assembled a compendium of his fifteen years of providing anesthesia care in the office setting. Where scientific documentation is available, Dr. Friedberg provides it. Where it is lacking, he guides the reader with recommendations that represent both reasoned judgment and innovative, effective results. He knows what works and what doesn't and explains his views in text and illustrations that are concise and informative.

Any anesthesiologist contemplating providing anesthesia care for cosmetic surgery, regardless of the surgical setting, needs to read this book. For those providing care in the office or clinic setting, it is virtually mandatory. By reviewing this text, anesthesiologists will avoid the pitfalls that exist in this practice and conclude their days with grateful patients and happy surgeons.

C. Philip Larson, Jr., M.D., C.M., M.A.
Professor Emeritus
Anesthesiology & Neurosurgery, Stanford University
Professor of Clinical Anesthesiology
David Geffen School of Medicine at UCLA

Preface

The very essence of leadership is that you have a vision.

—Theodore Hesburgh

Caesar's *Gallic Wars* begins with the observation that "All Gaul is divided into three parts." *Anesthesia in Cosmetic Surgery* is also divided into three parts.

Part I, Chapters 1–10, is devoted to minimally invasive anesthesia (MIA)® for minimally invasive surgery. (The United States Patent and Trademark Office [USPTO] granted trademark serial number 76/619,460, file number 067202-0312946 to minimally invasive anesthesia [MIA] to Dr. Friedberg in 2005.)

Part I advances the premise of a unitary anesthetic technique for *all* elective cosmetic surgery. Part I challenges the belief that only some types of elective cosmetic surgery are suitable for intravenous sedation. Many readers may be similarly challenged by the description of abdominoplasty, an extraperitoneal procedure, as a minimally invasive surgery.

Inasmuch as the MIA™ technique is not universally applicable for every surgical personality, Part II, Chapters 11–13, is dedicated to providing a comprehensive view of other anesthetic techniques administered by dedicated anesthesia professionals. Deliberately omitted are those approaches of oral and intravenous sedation directed by the surgeon in the absence of a dedicated anesthesia provider.

There is much about the practice of anesthesia in cosmetic surgery that is not specifically related to anesthetic technique. Part III, Chapters 14–18, and Appendices A and B illustrate the chasm between the medically indicated (third-party reimbursed) anesthesia practice and that particular to anesthesia for elective cosmetic surgery.

The reader who demands Level 1 study to accept new solutions to clinical problems is reminded that neither aspirin nor penicillin ever had a Level 1 study to validate their efficacy. Nonetheless, both are well-accepted therapeutic agents. The efficacy of the MIA™ technique will eventually make it a widely accepted practice.

"Insanity" is sometimes defined as performing the same act in the same way, over and over, yet expecting a different outcome. Only by changing the "script" can outcomes be improved. MIA™ for minimally invasive surgery represents a paradigm shift or change in the "script" for the anesthetic management of the patient intraoperative experience. **MIA™ technique is not only different from anesthetic techniques described in Part II but also safer.** Superior postoperative outcomes for postoperative nausea and vomiting (PONV) and pain management with MIA™ technique are described in Part I.

In 2007, American soldiers are dying in Afghanistan and Iraq. HIV/AIDS is still causing deaths throughout the world. Deaths from malnutrition, starvation, and natural disasters still plague the third world. A nuclear disaster from weapons of the former Soviet Union in the hands of rogue nations or terrorists remains a threat. According to the National Highway Transportation and Safety Administration (NHTSA), on American highways in 2004, there were 105 daily deaths (or 38,253 for the year) from motor vehicle accidents. Whereas death is a constant in life, the public has grown somewhat able to accept these kinds of deaths. Death surrounding elective cosmetic surgery, surgery without medical indication, is never an acceptable outcome for the patient, the patient's family, the anesthesiologist, the surgeon, or the lay public.

There is a "perfect storm" of forces that have made this book not only possible but necessary. The baby-boom or "me generation," born 1946 to 1964, is beginning to age. Social forces creating the "sandwich" effect of simultaneously caring for parents and children have created economic forces dictating that this generation will postpone retirement. The work force is a competitive environment with a heavy emphasis on a youthful appearance. The combination of narcissism and the need to remain competitive at work has created a huge impetus for "boomers" to seek cosmetic relief of the aging process.

In the course of seeking cosmetic surgery, many patients receive general anesthesia, opioid-based IV sedation, or regional anesthetics in hospital surgicenter (ASC) and office-based settings (see Part II). When death occurs in the office-based setting, the public and media find it unacceptable. "Dying to be beautiful," read the headlines. States like Florida, California, New York, and others have rushed to regulate the office surgical suite because it is frequently the site for elective cosmetic surgery.

Sadly, what remains is the absurd situation that it is acceptable to have a death from a pulmonary embolism following an abdominoplasty in a hospital or ASC setting but not the exact same outcome in an office-based setting. The emerging hypocrisy is that the hospital and ASC lobbies in Florida (and others to follow) have persuaded the legislatures to mandate reporting of all mortalities from office-based cosmetic surgery while remaining exempt from the same requirement. This is clearly not in the interest of public safety. *All* deaths from elective cosmetic surgery should be subject to the same reporting and scrutiny as those in the office-based setting.

The old maxim that "while the surgeon can only maim, the anesthesiologist can kill" rings true in the effort to affect the ultimate negative anesthesia outcome. How can tragic deaths in cosmetic surgery be avoided? Is the answer somewhere in the future with better drugs or better monitors? *It is not possible to get the right answer by asking the wrong question.* "Have we overlooked existing drugs, techniques, and/or monitors that can provide for a safer anesthetic with better outcomes?" is, perhaps, the more insightful question. The answer to this question is at the heart of the MIA™ technique.

Barry L. Friedberg, M.D.
Corona del Mar
California

List of Contributors

David Barinholtz, M.D.
President and CEO
Mobile Anesthesiologists, LLC
Chicago, IL

Meena Desai, M.D.
Managing Partner
Nova Anesthesia Professsionals
Villanova, PA

Adam Frederic Dorin, M.D., M.B.A.
Medical Director
Grossmont Plaza Surgery Center
San Diego, CA

Norig Ellison, M.D.
Professor of Anesthesia
University of Pennsylvania
Philadelphia, PA

Holly Evans, M.D., F.R.C.P.
Associate Professor
Department of Anesthesiology
Division of Ambulatory Anesthesiology
Duke University Medical Center
Durham, NC

Barry L. Friedberg, M.D.
Assistant Professor in Clinical Anesthesia
Volunteer Faculty
Keck School of Medicine
University of Southern California
Los Angeles, CA

Scott D. Kelley, M.D.
Medical Director
Aspect Medical Systems, Inc.
Norwood, MA

Marc E. Koch, M.D., M.B.A.
Founder and CEO
Somnia Anesthesia Services, Inc.
New Rochelle, NY

C. Philip Larson, Jr., M.D., C.M., M.A.
Professor Emeritus
Anesthesiology & Neurosurgery
Stanford University
Palo Alto, CA
Professor of Clinical Anesthesiology
David Geffen School of Medicine at UCLA
Los Angeles, CA

Norman Levin, M.D.
Chief, Department of Anesthesiology
Century City Hospital
Los Angeles, CA

Ann Lofsky, M.D.
Staff Anesthesiologist
Saint John's Hospital
Santa Monica, CA
Anesthesia Consultant and Governor Emeritus
The Doctors' Company
Napa, CA

Joel McMasters, M.D., M.A.J., M.C., U.S.A.
Assistant Chief of Anesthesia
Director of Total Intravenous Anesthesia
Brooke Army Medical Center
San Antonio, TX

Joseph Niamtu III, D.M.D.
Private Practice
Cosmetic Facial Surgery
Richmond, VA

Rodger Wade Pielet, M.D.
Clinical Associate
Department of Surgery
University of Chicago
Chicago, IL

Chris Pollock, M.B.
Consultant in Pain Management and Anaesthesia
Hull and East Yorkshire Hospital Trust
Hull, England

David Rahm, M.D.
President and CEO
Vitamedica
Manhattan Beach, CA

David B. Sarwer, Ph.D.
Departments of Psychiatry and Surgery
The Edwin and Fannie Gray Hall Center for Human Appearance and the Weight and Eating Disorders Program
University of Pennsylvania School of Medicine
Philadelphia, PA

James A. Snyder, D.D.S.
Founder and CEO
Center for Dental Anesthesiology
Alexandria, VA

Susan M. Steele, M.D.
Professor
Department of Anesthesiology
Division of Ambulatory Anesthesiology
Duke University Medical Center
Durham, NC