

A Lifetime of Learning

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Twenty-five years ago, when I finished my surgical training and obtained certification by the American Board of Surgery and the American Board of Colon and Rectal Surgery, I felt relief and told myself that my education was finally finished. How wrong I was! I do know surgeons who, although my contemporaries, quite literally “finished” their education after residency, and I can see how dramatically their practice of colon and rectal surgery differs from mine. Thus, I feel it is truly necessary that we continue to broaden our horizons through a lifetime of learning.

The American Board of Medical Specialties has only recently approved significant changes in the way its member boards provide certification and recertification for physicians. One of the new concepts involves moving from recertification to maintenance of certification. One of the four basic components of maintenance of certification or continuing competence is “evidence of commitment to lifelong learning and involvement in a periodic self-assessment process.” It is ironic that so many years earlier, in 1982, Bert Portin¹ entitled his presidential address to this society “self-assessment and self-education.” It is also no accident that most institutions of higher learning refer to their graduation exercises not as completions but as “commencements,” thus reflecting the beginning of a lifetime of learning.

The need for lifelong learning is particularly evident in medicine. During the past 25 years the changes in colon and rectal surgery have been quite dramatic. I will mention but a few of the innovations that I have had to adopt to stay current in the practice of our specialty. I would remind you that it was during my year as a resident in colon and rectal surgery in 1974 that the name of our Society was changed from

the American Proctologic Society to The American Society of Colon and Rectal Surgeons.

The first of these innovations is the colonoscope, a tool that sets the colon and rectal surgeon apart from most of our general surgical colleagues and that is, in my opinion, critical to the practice of our specialty. During my residency I was exposed to colonoscopy but participated in fewer than ten examinations. I was therefore unprepared to be an independent endoscopist. By reading, observing, and much of the trial and error involved in self-teaching, I have become the one to whom several of the gastroenterologists in my community refer their more challenging endoscopies. I have also participated in the endoscopic training of nearly 70 residents in our specialty.

My early education in the new field of surgical stapling came at the hands of the manufacturer's representative. We first stapled pink foam rubber, and then canine intestine. Finally, he was present in the operating room with me when I performed several early cases. He assured me that the instruments were properly assembled and that I “used them properly.” Discussion with and observation of other surgeons as well as advances in stapler technology have brought me today to the point of being able to perform rectal anastomoses lower than I ever previously imagined that I could.

The development of surgical stapling has, in my opinion, come at a cost to surgical education. I am still somewhat surprised to hear that some residents in our specialty are exposed almost exclusively to stapling during their training. What do we do when the machine does not work?

Even my hand-sutured anastomotic technique has evolved considerably over the years. Initially, I learned a two-layer technique with catgut and silk sutures. Later, because of the influence of one of our residents, I began to use a single layer of interrupted polypropylene. That approach gave way to a continuous single-layer technique with polypropylene,

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which closely approximates the technique used by aortic surgeons. More recently, I have begun to use an absorbable monofilament suture with the continuous single-layer technique.² To quote Lord Moynihan, “. . . in the craft of surgery, the keyword is simplicity.”

I would agree wholeheartedly that as our technology advances, our learning curve can be shortened by hearing about and observing the tricks (and mistakes) of others. The ileoanal and coloanal operations represent major advances in the treatment of inflammatory bowel disease and cancer that have significantly improved the quality of life for countless of our patients. One of the advantages of our training in surgical technique and not just specific operations is our ability to combine techniques, such as combining the mucosectomy of the Soave procedure with the anastomosis of the Altemeier procedure. In 1979, after hearing Professor Utsunomiya³ describe the J-pouch, I was able to return home and perform my first ileal pouch-anal anastomosis. Such success is what the lifetime of learning is all about.

Interestingly, one aspect of colorectal surgery that has not changed for me is the dissection of the rectum for cancer. Despite the recent fervor for sharp rectal mobilization, the “holy plane” of Bill Heald, and mesorectal excision, the technique I learned from Dr. Richard Martin at M.D. Anderson Hospital in 1972 remains “state of the art” today. For 28 years I have known that the proper plane for mobilization of the rectum is outside its fascia propria!

Changes have occurred not only in my opinions and use of surgical techniques but also in my ability to comprehend literature related to my field. For example, in 1962, while I was an undergraduate at Rice University, James Watson, Francis Crick, and Maurice Wilkins received the Nobel Prize for describing the double helix of the DNA molecule. I could not have imagined at that time the human genome project or our current level of understanding of the microbiologic basis for so many of the diseases that we treat. It has required a great deal of repetition for me to be able to name, much less discuss intelligently, subjects such as microsatellite instability, mismatch repair, and polymerase chain reactions. If I do not continue my lifetime of learning, in three to five years I will not even be able to understand the colorectal literature.

The duration of hospitalization and even the necessity for hospitalization have been questioned and ultimately shortened during the past two decades. During my residency in colon and rectal surgery, a seven-day hospital stay after a surgical

hemorrhoidectomy was routine. In 1974 it would have been unthinkable for me to perform a hemorrhoidectomy and send the patient home directly from the recovery room. Even more foreign to my thinking would have been the notion of discharging a patient four or five days after a major colorectal resection. The dramatic evolution of our thinking about the need for postoperative hospitalization led in 1999 to Mike Snyder's and my editing a textbook entitled *Ambulatory Anorectal Surgery*.⁴

Colon and rectal surgeons have of necessity become involved with new diagnostic modalities in the management of the diseases that we treat. When initially reported, intrarectal ultrasound seemed to be an excellent tool for the evaluation of rectal cancer and incontinence. My initial experience with the studies performed by our radiologists, however, did not yield accurate results, and I suspected that the problem might be caused by sampling error. The radiologist did not palpate or visualize the lesions and therefore did not ensure that the probe was placed above the tumor to allow sampling of the entire lesion. To better understand the instrument and its application, I visited centers where the colon and rectal surgeons were performing their own ultrasound examinations. My clinic then purchased an ultrasound machine, and I began performing studies on my patients and those of my partners. Fairly quickly, our results began to correlate closely with the pathologic findings. It would be difficult today to practice colon and rectal surgery without endorectal ultrasonography performed by a surgeon. It is of note that the intrarectal ultrasound course given during this meeting has been consistently our most popular and was oversubscribed this year even before the preliminary program was mailed. A lifetime of learning.

Another example of the application of innovative technology to our specialty is the development of anorectal physiologic studies for the evaluation of anal incontinence. Such studies have greatly enhanced our diagnostic skills and my ability to predict the outcome of my surgical efforts. Our laboratory is important both to the care of our patients and the education of our residents in colon and rectal surgery.

Our management of patients with fecal incontinence has benefited from developments in other fields of surgery. The artificial anal sphincter is an outgrowth of lessons learned from the urologists in the development of the penile prosthesis and the artificial urinary sphincter. The spinal cord stimulator used by neurosurgeons for pain control has been

implanted into the transposed gracilis muscle to provide constant contraction of the muscle. I was fortunate to be part of groundbreaking studies in the treatment of incontinence with both the artificial anal sphincter and the neostimulated graciloplasty. These advances will allow us to restore anal control to many patients previously doomed to diapers or a stoma.

Another milestone in the history of abdominal surgery has been reached in recent years. Among the most frustrating and challenging problems that we face as surgeons is that of intra-abdominal adhesions, which make our operations more difficult and are often the cause of intestinal obstruction. The recent development of products that can reduce the formation of such adhesions⁵ has provided us with new opportunities to take better care of our patients. I expect this area of surgical innovation to change the practice of surgery significantly during the next several years. I confess that I was initially skeptical about these agents, but am now actively involved in clinical research to reduce intra-abdominal adhesions.

Time does not permit me to discuss in detail other major advances of our specialty that I have had to learn to stay at the cutting edge (no pun intended). Some of these include laparoscopy, adjuvant chemotherapy and radiotherapy, and the use of biologic glues in the treatment of anal fistulas.

Another aspect of our responsibility in embracing surgical or technologic advances includes deciding which "advances" not to adopt. Examples of some of those that I chose to "wait and see about" were the continent ileostomy and its various modifications, laser and cryohemorrhoidectomy, and more recently, Doppler-guided hemorrhoidal ligation. I will participate in a clinical trial evaluating stapled hemorrhoidectomy before making a decision about its place in my surgical armamentarium. Our lifetime of learning involves deciding both what to do and, importantly, what not to do.

Outside the technical progress in surgery there has been a major need for continuing education in the area of the socioeconomic aspects of medicine. As a medical student, I never dreamed that physicians would be compensated on the basis of the length of their history and physical examination or their clinic notes, much less how many "bullet points" were included. I was taught that brevity and getting to the important issues were marks of the skilled physician! Now we need to attend almost-yearly socioeconomic updates, such as those given at this meeting, to keep abreast of how to code and charge for the work that

we do as well as how to avoid large fines or even incarceration! This is not the type of lifetime learning that I had in mind!

One of our responsibilities (and joys) as physicians is to participate in the education of other physicians. Many of the satisfactions from my career in surgery have come from my contact with surgeons in training. Their inquisitive minds and the myriad of questions that they generate serve to keep the senior surgeons reading, thinking, and hopefully, innovating within our specialty. As an aside, I have told many of you that directing a residency program is like having a large number of children for whom I have no financial responsibility. Even the concept of "how to teach residents" has been another stimulation for my continuing education. Some among us, including Richard Reznick of Toronto, have made the field of surgical education their own lifetime of learning. Clearly, it is no longer acceptable to answer a young surgeon's question about why we do something with "well, that is the way we have always done it."

Another notable change in colon and rectal surgery has been the dramatic increase in the number of women in our specialty. In 1974 there were two female colon and rectal surgeons. Today, 73 women have been certified by the American Board of Colon and Rectal Surgery, and I am fortunate to have participated in the training of 12 of them.

I am especially pleased to have served on the American Board of Colon and Rectal Surgery, the result of the genius and vision of our forefathers in this specialty. During eight years on the Board, I was able to see the examinations of the American Board of Colon and Rectal Surgery evolve from being relatively freeform to being standardized and subjected annually to psychometric analysis to ensure their validity. The recertification process was also put into place, and I even voluntarily took the examination to become recertified. I consider my service on the board to have been one of my most satisfying contributions to colon and rectal surgery.

Outside the practice of surgery, there have been other major developments that I have had to embrace to keep from becoming a dinosaur. One of the most notable of these is the personal computer. This machine represents a huge step, particularly for a person who in college used a slide rule and logarithms for complex calculations. As a self-taught computer enthusiast, I find that the computer now allows me to help my daughter with her homework without a trip to the library, to perform sophisticated searches of the

medical literature from my home or office, and to give eye-catching presentations without the need for slides. I am able to make changes to a presentation within minutes of stepping to the podium. I cannot imagine how much more difficult it would have been to be President of The American Society of Colon and Rectal Surgeons (ASCRS) without E-mail, a cellular phone, and the fax machine, none of which existed in 1974.

Some of the presentations from this meeting will soon be available on the ASCRS Web site for continuing medical education credit. The Society hopes to have some or all of next year's ASCRS meeting available live on the Internet. I may soon be able to continue my lifetime of learning from my home.

Finally, as my year as President draws to an end, I look forward to replacing the hours that I have devoted to the nonmedical aspects of colon and rectal surgery with free time. Instead of playing golf like many of my colleagues, my real passions are fly-fishing and scuba diving. Learning to fish with tiny flies has been a major educational endeavor of mine over the last 25 years and remains a challenge that I hope to pursue vigorously over the next several decades. Diving also requires formal training and periodic refresher courses as well as lots of experience. Among my long-term goals, other than spending more time with my family, are to tie more flies, to catch more trout, and to make more dives, all of which will require continuing my lifetime of learning.

I would like to thank you for the honor of allowing me to serve this past year as president of your society. My family members have been more than generous

with the amount of time I have taken from them to serve you this year. To illustrate, my six-year-old daughter, Alexis, said to me, "Dad, there are good and bad things about your being president. The bad thing is that you are gone from us so much, but the good thing is that since you are the boss, you will not get fired!" My wonderful wife, Kelly, has rarely complained about my absence or the hours that I spend on the phone or on the computer. In addition, I wish to thank my partners, residents, and staff, without whose support my role as president this year would not have been possible. I sincerely hope that many of you in the audience have already and will continue to enjoy your careers as colon and rectal surgeons and your lifetime of learning as much as I have.

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