Reinventing the Vascular Surgeon

For vascular surgeons keen on becoming endovascular specialists, an honest look in the mirror may uncover historical flaws in need of repair.

BY FRANK J. CRIADO, MD

The need for vascular surgeons to be percutaneous-intervention-capable operators is self-evident. It is also (finally!) something upon which we can all agree. The practical implications and pathways to achieve such a proposal, however, continue to be elusive and are far from clear. A look in the mirror to attempt to understand why it has taken us this long to become major players in the "endovascular revolution" would be a healthy first step in such an endeavor. The following are some of the possible and intriguing reasons for this phenomenon.

THE "CRAZY CHARLIE" SYNDROME

The term "Crazy Charlie" was often used in surgical circles in the 1970s and 1980s to express negative views on Dr. Charles Dotter's proposed transluminal angioplasty (PTA) technique—first introduced by him in 1964. This name-calling reflected surgeons' near-universal rejection of angioplasty as a viable treatment option; such negativism went to the extreme of questioning the appropriateness of applying the name "angioplasty" to a nonreconstructive catheter-based approach. Unfortunately and almost tragically, it went further than that: the surgical community as a whole completely failed to understand the potential of PTA. In so doing, surgeons became self-excluded in the ongoing process of evolutionary changes and technological advances that led to the entirely new era in vascular and interventional medicine that we all want to be part of at present. It represented, without a doubt, one of the most refined expressions of collective stupidity (and near-sightedness) ever exhibited by a professional group.

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ADMITTING WHAT WE KNOW TO BE TRUE

To this day, surgeons continue to decry the need to learn and perform percutaneous approaches when, in the words of some, "Everything can and perhaps should be done in the operating room (OR) through a small cutdown. After all, a small incision has never hurt anyone, has it?" This denial represents a completely misguided, jaundiced perception of endovascular intervention, fueled by surgeons' skill limitations vis-à-vis percutaneous catheter-based procedures.

UNDERESTIMATING ENDO

Many vascular surgeons fail to understand the enormity of the endovascular specialty. Instead, they have looked upon interventional techniques as merely a small group of procedures that may be helpful in a handful of cases. "How long could it possibly take for a seasoned surgeon to learn and master such simple techniques? Two weeks, one month max!" Such views are so blatantly wrong and misguided that there should not be a need for further qualification, although they may continue to exist in the minds of some vascular surgeons today. Our own endovascular fellowship program has taught us important lessons in these areas. The fellows (or *endovascular associates* as they are officially recognized in our hospital) come to us after having completed a standard 1- or 2-year

vascular fellowship. Typically, they have had little or no previous endovascular training or experience. The fellows' principal responsibility in our service is to run the angiosuite. They also scrub in the OR during stent graft cases and do some (though relatively little) traditional vascular surgery. It is only after the first 6 months, after having done hundreds of diagnostic and interventional percutaneous procedures, that they begin to feel confident about their ability to handle "all comers," gaining puncture access through almost any vessel, and tackle most—even complex—vascular situations, carotid intervention included. And they are still years away from becoming seasoned endovascular interventionists!

A LIMITED REPERTOIRE

Some surgeons continue to adhere to the view that it may be sufficient to learn and perform only a few endovascular techniques (eg, AAA and renal interventions). This is clearly a self-defeating proposition on several accounts. First and foremost, we must understand once and for all that "You can't dabble in 'endo' and be any good at it." To those who may be reluctant to side with me, I would offer this argument: How would you react to the hypothetical argument that "surgeons" could learn only certain aspects of relevant anatomy, and only perhaps a couple of anastomotic techniques and bypass procedures, without the need for exposure to the full range of technical possibilities and equipment, and still qualify as perfectly safe and competent operators?

LEAVING HOME

Here is yet another misconception: "The OR is the optimal and natural environment for surgeons' endovascular activities because of familiarity and access. Additionally, sterility and the chance to perform combined or bail-out surgical procedures are definite advantages." This is not a critical error, but rather a reflection of inexperience and incomplete understanding. Although the OR may be—for obvious reasons—an appropriate initial setting for vascular surgeons to perform endovascular procedures, the wisdom of gaining access to the best imaging suites in the hospital as one's ultimate goal cannot be denied. While both environments, surgical and interventional, can be combined, typically in the setting of a fixed-system imaging endovascular suite that is OR-capable, this is not the reality that surgeons are likely to encounter in most hospitals. Furthermore, the wisdom of creating such a suite within the OR area is definitely arguable. In any case, the vast majority of vascular surgeons would do well evolving into the mindset that "real" interventional specialists work in "interventional" areas; by and large, such areas reside outside the OR!

My dear colleagues, you are sure to encounter nothing but difficulty and disappointment on your endovascular journey unless you start by recognizing the aforementioned pitfalls. They represent an almost certain way to perpetuate the vascular surgeons' plight of inferiority and noncompetitiveness in front of other interventional specialists. The endovascular discipline is all about image-guided therapy. The "where and how" are therefore absolutely critical.

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For the sake of this discussion, I will direct my remarks to the two prototypical groups of vascular surgeons who may seek to become endovascular experts: those in the nascent stage of their careers, and those who have been in a strictly surgery-oriented practice for a long time, but who are now looking to explore endovascular therapy.

THE NEW BLOOD...

Young vascular surgeons who are about to enter or are presently in the midst of fellowship training, and those who completed it in the very recent past are paramount in this movement. Hopefully, your fellowship program provided ample exposure to all forms of catheter intervention and diagnostic angiography, ideally in an angiosuite setting. If this is the case, you have it made! If not, I would strongly recommend that you complete an additional endovascular fellowship providing that type of opportunity, with a minimum duration of 6 months.

...AND THE OLD GUARD

Vascular surgeons in practice, especially those who completed their fellowship training more than 10 years ago face perhaps the biggest challenges. There are no easy or readily available pathways to acquire endovascular skills with the scope and depth that are necessary to adhere to the aforementioned principles. Mini-fellowships of 1 to 3 months are valuable experiences, but are likely insufficient. Enrolling in longer programs of 6 to 12 months would be extremely difficult; besides, very few such opportunities are available. In the face of such dilemmas, I would suggest considering the following:

• Surgeons with little or no endovascular experience must attend one or more accredited CME courses that cover the basics of the endovascular specialty; hands-on animal and simulation lab components would be valuable;

• The "just-do-it" approach is no longer acceptable in today's environment because of issues related to ethical considerations, hospital privileges, and medico-legal implications;

• Mini-fellowships of 3 months or longer duration are a good start, but they must be recognized as such, allowing for only a cautious, introductory endovascular practice that can only grow in scope and complexity with evolving experience and seasoning skills;

• Collaboration with other endovascular specialists is a viable alternative in some cases. However, I would only consider this if it were conducive to the two ultimate goals of eventually becoming a skilled independent operator and gaining access to the best imaging suites in the hospital.

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WHAT DOES THE FUTURE HOLD?

This article represents the author's views and understanding of vascular surgeons' historical struggle with endovascular intervention. They have evolved from experience, taking place over a period of many years (since 1987) devoted to the practice and teaching of catheter-based procedures within the setting of a vascular surgery service. These ideas and real-life observations will hopefully enlighten many and serve as a template of sorts for the fundamental change in direction that must occur for surgeons to remain relevant and perhaps retain a position of pre-eminence as the vascular field marches on—unstoppably—into a future that is all but sure to be dramatically different from the past. Although open standard surgery will continue to be necessary for many patients in the years to come, its role will be drastically diminished. Interventional, less-invasive approaches will be dominant. Surgery will no longer be at the center of the vascular specialty. It follows that only physicians who can adapt to or be trained for the future will retain a leading role in 21st-century vascular medicine. ■

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