

The Global Approach to Cardiovascular Disease

It's time to get on board with multispecialty collaboration.

BY ALEX POWELL, MD, AND RAMON QUESADA, MD

For more than 20 years, cardiovascular interventionists and the centers that nurture them have watched the progress of their multidisciplinary movement with a mixture of excitement and chagrin. The inherent value of bringing together all the disciplines in cardiovascular disease to treat patients in a coordinated, cooperative way is indisputable—and much progress has been made toward that goal. Yet too often, diverse specialties in the field continue to interact in ways that are counterproductive to optimal patient care.

Since its founding in 1987, Baptist Cardiac & Vascular Institute (BCVI) has fostered close clinical collaboration in a multidisciplinary center of excellence where the entire human vasculature is treated holistically, as one system. The evolving concept of a “vascular interventional specialist,” rather than a cardiologist, radiologist, neurologist, or surgeon who practices endovascular techniques, is one that the Institute has pioneered vigorously. Let us say right up front that the Institute doesn't claim to have the ultimate solution or the perfect multidisciplinary model for everyone. However, we can attest to the fact that a multidisciplinary future is coming, driven by advances in devices and techniques that are obscuring the old boundaries between cardiac and peripheral intervention.

NEW DEVICES AND TECHNIQUES DRIVE COLLABORATION

For 22 years—almost as long as the Institute has been in operation—the International Symposium on Endovascular Therapy (ISET) meeting has been an integral part of our vision of a more collaborative, holistic model for endovascular medicine. Our continued goal has been promoting integrated training pathways and an approach that corresponds more closely to the actual presentation of cardiovascular disease in patients than any artificial specialty boundaries.

The source of this year's ISET worldview is a new global awareness at the Institute driven by breakthrough clinical

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collaborations. Over just the past year, new devices and techniques have dramatically enlarged the shared space of our interdisciplinary practice. In four separate cases, a team of interventional radiologists and cardiac and vascular surgeons recently performed successful aortic “debranching” bypass/stent graft procedures to treat descending thoracic aortic aneurysms. More invasive than aneurysm endografting, yet still less invasive than traditional open surgery, each of these debranching procedures was planned and executed by a multispecialty team of operators.

In another dramatic case of clinical collaboration at the Institute, a vascular surgeon, an interventional radiologist, and an interventional cardiologist together gained surgical access, performed endovascular grafting, and implanted an atrial septal defect closure device in an unusual and challenging complex dissecting abdominal aortic aneurysm.

Equally significant is the growing body of interdisciplinary experience using new crossing wires and techniques for recanalizing chronic total occlusions in both the coronaries and peripherals. In fact, there are many areas at the Institute where peripheral and coronary treatments benefit from more integration, such as the use of bifurcation stents for the left anterior descending artery and similar challenges in the tibial vessels.

Access is another theme that can bring together the various specialties to share cutting-edge expertise from the diverse vascular beds in which they operate. For example, the same large sheath sizes and conduits

required for aortic and iliac therapy are likewise required for endovascular treatment of complex congenital heart disease. The evolving field of percutaneous aortic valve replacement also draws heavily on vascular surgery's expertise in creating secondary conduits to femoral cut-down (eg, via retroperitoneal aortic access or synthetic iliac graft).

When implanted coronary devices embolize, the skills of interventional radiologists in retrieving emboli from various parts of the vasculature are critical resources. Even such dramatic examples of interdisciplinary collaboration are merely the tip of a much larger iceberg of possible everyday cross-specialty interactions.

MORE THAN THE SUM OF OUR SPECIALTY PARTS

Our goal is to unite our physicians across specialty lines, both administratively and clinically. There are no visual barriers between the glass-walled procedure rooms of our gallery and no obstruction to members of one specialty learning about the new device or procedure premiered with good results by the "operator next door." The result is an ability to draw upon, without friction, all the clinical resources required for comprehensive, quality cardiovascular care, including, for example, anesthesiology that is on call 24/7 for quick conversion to open surgery in our angio suites.

Progress in the endovascular field has always relied significantly upon advances in various specialty areas that cross-fertilize to synergistic effect. In short, interdisciplinary collaboration has collectively produced more rapid advances than any of the discrete specialties could have working alone. Working together, the disciplines are more than the sum of our specialized parts. And, if we reflect even further on advances adopted by each specialty from outside that specialty's treatment model, we must acknowledge that even the parts are more than they would have been standing alone.

It's time to honor this multidisciplinary reality and its undeniable record of success by rededicating ourselves to collaboration as the gold standard, the practice model for endovascular medicine. In fact, given the rapidly expanding demand for less-invasive treatment of everything from heart disease to cancer, interdisciplinary collaboration in training, research, and clinical practice may be the only way to produce the requisite number of vascular interventional specialists with the proven skills and the strongly positive outcomes the market requires.

COMPETENCE VERSUS PROFICIENCY

Simply training and credentialing specialists to perform more catheter-based procedures in an every-man-for-

himself struggle for market share is not the answer. In fact, this process is completely counterproductive to the globally informed clinical decision making and the threshold case volumes necessary to meet endovascular medicine's rightfully high proficiency standards.

Competence as defined by each specialty's discrete treatment model, which emanates from that discipline's narrow—some would even say, "provincial"—course of training, is surely a competence of limited scope when weighed against a global endovascular practice model. Can a procedure chosen from a single-specialty repertoire even come close to generating the same level of clinical confidence as a course of therapy selected from an expansive multidisciplinary knowledge and skills base?

It is also a well-accepted principle that certain minimum procedural volumes are routinely associated with better patient outcomes in the high-proficiency endovascular arena, where patient selection is also paramount. Yet who in our field has failed to notice the growing list of transcatheter techniques being added to each specialty training module—or the growing number and variety of hospital staff credentialed for endovascular procedures?

Is there any way a random distribution of endovascular patients across the entirety of credentialed staff could generate confidence that the highest standards for either operator proficiency or patient selection are being effectively upheld?

AIMING FOR MULTIDISCIPLINARY CLINICAL EXCELLENCE

Achieving operator volumes commensurate with outcomes of the highest quality practically demands a multidisciplinary, collaborative approach. Such a model achieves the highest standards of operator proficiency and superior outcomes by incentivizing the various specialties to work together to ensure that not only the most skilled operators operate but that only carefully selected patients undergo high-stakes therapies such as carotid stenting.

Likewise, we believe the best way to achieve true multidisciplinary collaboration, whereby the full spectrum of specialty resources can be drawn upon seamlessly for the maximum benefit of patients, is to make sure that all the disciplines are on equal footing in terms of the ability to evaluate and admit patients independent of referrals. We must resist the temptation to have treatment centers dominated by a single specialty. To the contrary, the institution must be committed to the survival and success of all disciplines.

Considering the obvious turf battles among interventional cardiology, interventional radiology, and vascular

surgery—not to mention the intraspecialty struggles between cardiac and vascular surgery and even medical and interventional cardiology—strong medical leadership is also crucial. Such leadership must promote an understanding that the success of all depends on compromises that may not result in everyone getting what they want every time.

Collaboration in an atmosphere of mutual respect has profound benefits, including broad-based job satisfaction and the kind of increased institutional support with capital equipment and marketing resources that can be won via a united front. In these challenging times, such support could prove crucial in competing against more serious adversaries that likely lie outside the parochial sphere of the typical turf battle. How many times have physicians been defeated by larger market forces while competing locally against those with whom they should have made common cause?

Last but not least, one of the most satisfying benefits of collaboration is the comment heard frequently from Institute patients who like that their physicians are working together. It is another reminder of the value of tearing down artificial walls and joining the global future.

For insight into the nascent global future of endovascular medicine, one need only look at dramatic changes in course design for this year's 22nd annual ISET meeting, held January 17 through 21, in Hollywood, Florida. This year, for the first time, ISET will take down some very formal and visible barriers in its course design, integrating coronary and peripheral subjects in a way that highlights the value of translational educational content. One of the most striking examples of this will be the discussion of percutaneous aortic valve therapy within the thoracic endograft sessions, based on shared surgical access challenges. We and our fellow ISET course directors clearly hope that in bridging the gaps between specialty and procedural silos, everyone can benefit from lessons that are learned once and then widely disseminated so they do not have to be learned again and again. ■

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