The Integrated Approach to Treating AAAs

One center's experience in combining the skills of vascular surgeons and interventional radiologists to achieve optimal outcomes.

BY BARRY T. KATZEN, MD

As with nearly every interventional procedure, physicians from the various specialties possess an independent skill set that they can offer AAA patients. In light of these unique talents, some centers have begun to incorporate hybrid approaches to their treatment protocols. An integrated team approach to treating AAA attempts to bring together the most experienced and skilled hands to optimize the availability of skills and resources necessary for endograft implantation. At our center, this means bringing an interventional radiologist and a vascular surgeon to work together on such cases.

NECESSITY IS THE MOTHER OF INVENTION

We began going down this path partly because we had gotten involved in the early endograft research in late 1993. At that point, it was clear that these large, cumbersome devices were going to require very sophisticated interventional knowledge along with surgical skills. The first trial in the US involved the Ancure device (Guidant Corporation, Indianapolis, IN), which was one of the most technically complex devices to use. At that time, vascular surgeons had very little of what are now called endovascular skills, yet due to the size of the devices, an interventional radiologist could not perform the procedure alone because it required surgical access. Also, for radiologists, the access requirements and potential associated risks, as well as the possibility of having to convert the patient to traditional surgery, signaled a clear need for surgical involvement. This twofold necessity prompted the marriage of high-level interventional skills with high-quality vascular surgery skills. Today, approximately 30% of endografts are implanted in angiographic environments that utilize an integrated team approach.

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REIMBURSEMENT ISSUES

There are different models for reimbursement. One possibility is to form a professional association that consists of all the interventional radiologists and vascular surgeons that perform these procedures in an institution, essentially creating a billing entity for that purpose. The collections could be distributed based on work performed, and the revenues should be shared between both groups. There are various economic integration models that work quite well in other areas, such as a noninvasive vascular laboratory that conducts multidisciplinary activity for which a multidisciplinary billing entity can be created.

An integrated team must have a billing vehicle. If you simply take the existing codes and bill them independently, there will not be a symmetrical proportion of codes, and thus, there will be inadequate reimbursement.

EVERYDAY ADVANTAGES

No matter what the application, the situations in which restructuring makes the greatest impact are those

that involve the greatest stress or complexity. If every endograft procedure performed went exactly as planned, a single-specialty approach would always suffice. The integrated team approach really pays off in the technically challenging cases when adverse events occur. With this approach, there is the benefit of two highly skilled physicians working together to solve any problem that might occur. We recently had such a situation, in which an iliac artery ruptured, causing a complex sequence of events that ultimately resulted in an endovascular repair of the ruptured artery. It was a clear-cut example to us of the benefit of having both sets of hands, skills, and experiences to handle the situation.

One of the advantages of integration is that in many ways it provides an ongoing vehicle for the transfer of knowledge. Working side-by-side creates a learning experience for both parties involved. Rather than having a situation in which one party has to learn critical skills and subtleties of technique in the context of performing procedures alone on live patients, an active dialogue between specialists results in an orderly transfer of knowledge between disciplines. Some people might feel that these cases are all performed by the radiologist, and that the surgeon is there simply to participate in the purely surgical aspects of the case. Such a scenario is not the optimal execution of the integrated team approach. Before going into a case, we conduct preprocedural planning. We understand that there are multiple components in each case (many of these devices require multiple steps), and we plan and assign tasks in advance. On any given day, one of us may deploy the body and be responsible for positioning, and the other operators may be responsible for components and other types of things. The next day, the roles could be reversed depending on the situation, but everyone is involved in the case.

FINDING THE RIGHT SETTING

AAA procedures are very dependent on imaging. One of the fundamental tenets of surgery is teaching surgeons to get the correct exposure to develop the ability see and do the work they need to do. Those same concepts also come into play in endovascular procedures, in which the operator's ability to visualize through imaging influences the success of the result. We believe that state-of-the-art imaging equipment is critical to success, which is why we have been performing these procedures in specialized angiographic suites for more than a decade.

We believe that the experience over the last 10 years shows that endograft procedures do not need to be performed in the operating room. In fact, every year we discuss this as a team and everybody has agreed that they are very pleased with the environment in which we work.

I am frequently asked if we have ever had to open up a patient in the angiosuite. The answer is yes but, fortunately, this occurrence has been extremely rare; our conversion rate is very low at approximately 1%. We have had a very good record in outcomes, and our wound infection rates in performing procedures in a modified angiographic suite are actually lower than those occurring in the operating room.

POSSIBLE PITFALLS

One potential disadvantage is that there has to be a captain of the ship, especially when decisions must be made in a hurry. Someone needs to have final authority, and the person in this role may depend on the situation. In that way, team approaches can sometimes be problematic. At our center, it is no longer really an issue because we have been doing it for so long, and we are accustomed to interacting with each other as a team. In the beginning, however, people are certainly reluctant to defer decisions or to ask for someone else's opinion.

There is also a potential economic disadvantage. Obviously, if a single operator is involved, it is likely that the operator will generate more income per case than he would in an integrated team environment.

FAVORABLE OUTCOMES ARE THE TRUE BOTTOM LINE

We track our outcomes quite carefully. Many of the procedures we perform are on patients who are less than optimal candidates who have higher medical comorbidities than those you would expect to see in a tertiary care facility. We believe our outcomes are equal to or superior to the published outcomes of any other center. Our outcomes have been published, and we believe that they have been accomplished by virtue of this integrated team approach.

AAA procedures continue to evolve, and we are constantly pushing the limits of technology, particularly in high-risk patients. We believe that we can do this while maintaining our safety record because we are able to combine the finely honed skills of a vascular surgeon with those of an interventional radiologist, allowing us to offer many more skills than any single individual could bring to a given patient. ■

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