A Surgeon's AAA Self-Discovery

Robert H. Schell, MD, FACS, a practicing vascular surgeon, discusses undergoing an endovascular repair after detecting his own abdominal aortic aneurysm.

First, what can you tell us about your abdominal aortic aneurysm (AAA) practice at the Owensboro Medical Health System in Kentucky?

We are a 400-bed facility with two surgeons who perform endovascular repair of AAAs. We do approximately 65 procedures for AAAs each year, about 75% of which are currently stent graft placements. I estimate that we will perform 50 endovascular procedures this year. Since we began performing endovascular grafting in 2004, we have had about 130 cases with approximately the same number of open surgeries to treat AAAs. We have experience with all commercially available endovascular grafts, and our procedure volumes have increased steadily over the past few years. It is easy to see why endograft procedures are increasingly practiced more frequently than open surgeries for AAAs; our open surgery patients often stay in the hospital for 7 to 10 days, whereas our endograft patients leave in 1 to 2 days. Furthermore, the mortality rate associated with an open procedure is 3% to 5% versus 1% for the endovascular approach.

We understand that your experience with AAAs is more than just professional. Would you share those details with us?

In September 2008, a new piece of ultrasound equipment was delivered to the vascular lab in my office. When we set it up, I pointed the probe at my stomach, and much to my surprise, I saw that I was looking at an aneurysm—not a huge one; it was only about 4.1 or 4.2 cm. This was particularly surprising because like many others with AAAs, I was asymptomatic, and I did not have any of the risk factors other than being male and older than 50 years. I was not a smoker, nor did I have high blood pressure or any signs of heart disease. Although I was not out of the woods, I was not in what I considered to be imminent danger, and therefore, I decided to revisit my case in a few months. In November, my partner and I went to an ultrasound course in Florida, and I volunteered myself for a scan. My AAA was then at measured 4.5 cm. Because it had grown in a relatively short period of time, I resolved to have it repaired. I scheduled a computed tomography (CT) scan several weeks later and made plans to have it repaired in December 2008. I did not undergo a long, drawn-out evaluation process, but once I decided to have the AAA repaired, it bothered me that I was forced to wait an additional amount of time before undergoing the procedure. I kept thinking about how many times I had told my patients that the odds were in their favor and that "watchful waiting" does not necessarily increase one's chances of a disastrous outcome. Now that I have gone through this

Figure 1. Dr. Schell's aneurysm before stent graft placement (anteroposterior view).

Figure 2. Lateral view of aneurysm before treatment.

process myself, I have a lot more sympathy for my patients regarding their anxiety associated with waiting for a procedure to take place. I no longer say that waiting is not a big deal, because I truly understand the fear that patients experience after the diagnosis and before the surgical repair.

Figure 3. The aneurysm after stent graft placement (anteroposterior view).

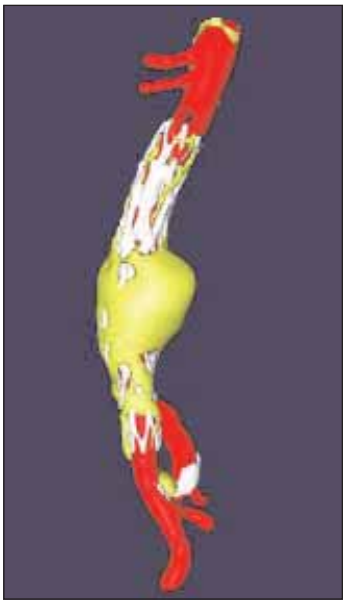

Figure 4. Lateral view of the aneurysm after placement.

How active were you in planning your procedure?

After observing that my aneurysm had grown, I decided to see Matthew Jung, MD, a vascular surgeon at Baptist East Hospital in Louisville, Kentucky, who trained me in endovascular repair of AAAs. I thought it would put too much pressure on my partner in Owensboro if I had the procedure done at my own hospital. After the CT scan, Dr. Jung's assessment confirmed my own, and we agreed that the aneurysm should be treated with an endovascular graft. Because of my anatomy, specifically my inferior mesenteric artery, we both wanted to be sure that the proximal body of the graft would be long enough to cover it. Based on my personal experience, I chose the Powerlink stent graft (Endologix, Inc., Irvine, CA). During the past couple of years, I have grown to favor this device because of the ability to position it on the native bifurcation. Dr. Jung performed the procedure with Hermann Kaebnick, MD, assisting, and it lasted about 2 hours. I also had a pressure-sensing device (EndoSure Wireless AAA Pressure Measurement System, CardioMEMS, Inc., Atlanta, GA) placed in the aneurysm sac during the operation to allow for future aneurysm sac pressure monitoring. I owe a debt of gratitude to Drs. Jung and Kaebnick for their excellent care.

How would you describe the immediate recovery period in the weeks that followed the procedure?

For about 2 weeks after the procedure, I experienced some groin pain; however, because it had been done percutaneously—although it is often done through two small groin incisions—the pain was minimized. I was able to resume normal daily activities almost immediately, and I was back to doing limited work as a surgeon in 2 weeks. After 1 month, I had completely recovered. I believe that I was able to return to work much quicker than I would have if I had undergone an open surgical procedure.

Have you performed any self-assessment follow-up evaluations, similar to your self-screening?

I have undergone a standard contrast CT scan, which showed thrombosis of the aneurysm and good positioning of the stent graft.

Have your impressions of endovascular repair changed as a result of your procedure, or were previous inclinations reinforced?

Overall, after being involved in aortic stent grafting for about 10 years, my impression is that the technology continues to evolve at a very rapid rate, and that the multiple devices available have made significant improvements in broadening the application of this technology to an ever-growing group of patients. In many centers, and in my personal experience, we can use aortic stent grafting in about 75% of infrarenal AAAs. When I realized I had an aneurysm, I did not hesitate to have a stent graft placed as the initial therapy. I consider it a privilege as a vascular surgeon to be involved in an era of such innovation and technical advancement in the treatment of a condition such as an AAA. We are all able to see the benefits that this technology has for our patients, and I certainly look forward to the continuing innovation and rapid change in this field.

In looking down the road at aneurysm treatment with stent grafts, there continue to be questions about endoleaks in patients and about challenging aortic anatomy and the proper follow-up care for aortic stent

grafts. As the technology of the grafts improves, the appropriate use of stent grafting continues to decrease the incidence of clinically significant endoleak. Also, with regard to follow-up of stent grafts, I think there is now a trend to follow stent grafts with ultrasound evaluation; although CT scans are very accurate, they also expose patients to intravenous contrast material, as well as repeated doses of x-ray.

Did you learn anything from your experience that you had not known prior to the surgery?

Yes, I learned how important it is that we as surgeons advocate patient-centered care and implement the recommendations of the Institute for Healthcare Improvement's "Five Million Lives" campaign to eliminate error and unnecessary injury in the hospital setting. When it comes to hospital care, patients feel helpless and dependent on us, and anything we can do to provide comfort for them—whether it is physical or emotional—is critical. As a patient, I realized the importance of respecting the patient's personal dignity. Obviously, I had already known this, and hopefully, I have always acted that way, but I had never known what it was like to be a patient—not since having my tonsils removed in the mid-1950s. I know that in my case, there was a one in 100 likelihood of a problem, but suddenly that 1% chance became very real, and the only thing that reassured me was my knowledge of the device and how much work we had done in our hospital to have the appropriate systems in place. I also admit that the night after the surgery, I was up all night because I never really considered how irritating a Foley catheter could be. I also learned that I should have practiced what I preached; I should have been screened at the age of 50, but because I could not feel the aneurysm, it never dawned on me that I might be at risk. Although I think most vascular surgeons are aware of the morbidity of the disease, I suspect that primary care physicians may not be as aware. Together, our goal should be to prevent the 15,000 deaths that occur from ruptured AAAs each year and to provide early diagnosis to patients with AAAs.

Considering that you are a vascular surgeon who treats AAAs regularly and your own was difficult to self-diagnose, what insight can you offer about how screening methods and initiatives can be enhanced to detect more AAAs in the population?

I think that nationally we are just now beginning to improve and increase public awareness of the threat of AAAs. It is true that about 200,000 new aneurysms are discovered each year. The prevalence of AAAs in men over the age of 75 is around 10% to 12%. This is a very significant number, and making the general public aware of this fairly common condition is a critical part of our approach to dealing with this problem preemptively.

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If you were to draft an update to the Screening Abdominal Aortic Aneurysms Very Efficiently (SAAAVE) legislation, which individuals would be included, and what would the screening entail?

It is well established that abdominal ultrasound is a very accurate, noninvasive, and cost-effective means of screening for aneurysms in appropriately selected patients. The SAAAVE legislation, which provides Medicare benefits for AAA screening, has recently been introduced. It is my impression that this legislation is about to be or may already have been modified to unlink the initial Medicare screening physical with the AAA ultrasound, thereby making ultrasound screenings an easier process for the patient. This would also allow it to be done any time on a one-time basis when it would be appropriate. This seems to makes good sense in terms of aneurysm detection in this group of patients. My information indicates that the current guidelines would include men ages 65 to 75 and occasionally women. Specifically, the requirements would include male ever-smokers and men and women with a family history of aneurysms. We might also want to consider including patients that have undergone coronary artery bypass grafting in the screening group. Obviously, if we screen the appropriate patients by the above guidelines, there will be a significant benefit to this group of patients. I think our initial goals should be to more widely promulgate the use of ultrasound screening for AAAs by making sure the general public is better informed by disseminating this information to them as well as to primary care providers. ■

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