The Fellows Top Gun Challenge

The Society for Clinical Vascular Surgery and industry collaborate to bring fellows together in a simulator training competition.

BY JEAN BISMUTH, MD, AND ALAN B. LUMSDEN, MD

Three years ago, Alan B. Lumsden, MD, engaged in a relationship with Boston Scientific Corporation (Natick, MA) to start the Fellows Top Gun Challenge at the Society for Clinical Vascular Surgery. The interest and exposure to the concept was, however, diminutive. This year, with the support of W. L. Gore & Associates (Flagstaff, AZ) and Boston Scientific, we were once again able to offer this experience to the vascular fellows. We sought to change the format to not only bring more attention to the competition but also to highlight a very important relationship between industry and academic surgery. Furthermore, we aimed to make this a more fellow-friendly event because ultimately our goal was for fellows to interact with each other in a collegial challenge and to spark an interest in this educational model.

Boston Scientific continued to sponsor the endovascular portion of this competition, and with the support of W. L. Gore, we initiated a suturing competition on an anatomical model. This combination was believed to embody a vascular fellow's training, namely open and endovascular techniques, and represented the Top Gun Challenge for 2009. This year, Boston Scientific partnered with Simbionix (Cleveland, OH) for an endovascular simulator (Figure 1), whereas the open simulator was a model from Limbs and Things (Savannah, GA) (Figure 2). Due to some logistic limitations, the Limbs and Things model was altered to better suit the competition format. In order to gain maximum involvement from the public and fellows, we projected the open simulator onto a 52-inch LCD monitor, which invoked interactive involvement in the form of jeering and cheering. The interest level for the competition was greater than we ever imagined—so much so that we turned fellows away who were interested in participating.

Today, vascular fellows start their training more concerned about their open operative numbers as more and more procedures go the endovascular route. They are flown to company headquarters, spend more time in hybrid suites, and some are perhaps privileged enough to have access to an endovascular simulator. This is why we believed it was important to incorporate an open vascular simulator and give the fellows and visitors a glimpse at the inherent value of inanimate models. The approach of having the simulators back-to-back at the entrance to the exhibitor hall proved to be central to its success. The booth was constantly surrounded by visitors who scrutinized the efforts of fellows who quickly seemed to forget where they were as they became engrossed in their work.

Figure 1. Simbionix instructor works with a fellow.

The Top Gun challenge had a preliminary competition in which fellows competed on the endovascular trainer to perform a renal artery intervention and the proximal anastomosis of a femoral-popliteal bypass

with a PTFE graft. Overall, the scoring proved to be fairly challenging, as most fellows were quite strong in both disciplines. Contrary to our preconceived notions, fellows who performed well in one technique were also found to be strong in the second technique. Similarly, fellows who were poor open surgeons were also poor endovascular ones.

The observations made by the judges were that mistakes made by the fellows at the bottom of the group were fundamental, and they could easily be taught with these inanimate models because they actually all possessed the raw skills. The final cases consisted of a carotid endarterectomy and stenting procedure. The top two fellows in the suture challenge were Guillermo Escobar (Michigan University) and Houman Tamaddon; the endovascular candidates were Tae Song and Nabeel Rana (Southern Illinois University School of Medicine). Senior surgeons Kim Hodgson, MD, and Peter Lawrence, MD, who proved to be very stimulating and insightful in their approach at involving onlooking fellows and guests, judged the finals. The program has come quite far since it started 3 years ago, and although fellows participated more this year, there seems to be some apprehension at becoming totally engrossed in the event. Although we believe there is real educational value in the event, it is also an occasion to show the true camaraderie that exists in vascular surgery; after all, we are a fairly small community. The overall winners for the open competition were Guillermo Escobar and Nabeel Rana for the endovascular portion. As winners, they each received a prize of $500; the runners-up each received a leather flight jacket to stay in line with the Top Gun theme.

The interest in the competition also generated many fascinating discussions about the value of inanimate training, particularly in a time when trainees are limited by their allowable work hours due to regulations from the Accreditation Council for Graduate Medical Education. We have, in a partnership with W. L. Gore, put in place open simulators at The Methodist Hospital in Houston, Texas, to allow residents to learn basic principles and techniques in open vascular surgery in order to maximize their experience when they join the vascular service. The fact is that although endovascular surgery is quickly dominating the vascular repertoire, open surgery is here to stay. Fellows are doing fewer cases, and therefore, patients may be facing less-prepared surgeons. Because graduating fellows are likely to have seen fewer carotid endarterectomies and peripheral bypasses, we should take advantage of opportunities such as the Top Gun Challenge in which we partner with industry to promote surgical education.

Figure 2. A fellow practices his skills on the open simulator.

How should vascular surgery programs develop skills training beyond this? Industry has access to animal labs, anatomical models, and all the devices needed to sufficiently train up-and-coming surgeons or seasoned surgeons who want to polish their skills, but ultimately, academic programs must make a concerted effort to develop such educational opportunities. The fellows' competition allows people to appreciate the value of such training models but should prompt further development potentially even to include a practical portion in the board exam, as is the case in Europe. Other opportunities in vascular training include cadaver courses, porcine models, flow simulators, and ultrasound techniques. We look forward to having these tools at The Methodist Hospital, giving us the opportunity to offer training sessions in all aspects of vascular surgery. ■

Jean Bismuth, MD, is a vascular surgeon and Assistant Professor of Medicine at The Methodist Hospital in Houston, Texas. He has disclosed that he holds no financial interest in any product or manufacturer mentioned herein. Dr. Bismuth may be reached at jbismuth@tmhs.org.

Alan B. Lumsden, MD, is a professor of surgery and Chief of Division of Vascular Surgery & Endovascular Therapy at Michael E. DeBakey Department of Surgery, Baylor College of Medicine, in Houston, Texas. He has disclosed that he is a paid consultant to Boston Scientific Corporation and W. L. Gore & Associates. Dr. Lumsden may be reached at (713) 798-2151; alumsden@bcm.edu.