Barry T. Katzen, MD

EVT's Chief Interventional Radiologist and pioneer of live cases discusses their educational value and ethical challenges, and his recent awards.

Why did you begin to develop live case presentations? As I began to start performing angioplasty in the mid-1970s, and as balloons were developed in the latter part of the 1970s, it became apparent that this was going to become an incredibly important technology that could not wait for people to be trained during their residencies. So the challenge became, "How do you take practitioners who already have a foundation of skills and train them to do a procedure they haven't done before?" We tried to figure out a way to get the audience as close to the angiography table as possible without being there, and that is where the rapidly evolving television technology came into play.

Andreas Gruentzig is credited with doing the first cases, in Zurich in 1976. Within 6 months, I did the first live cases in the US. We did these courses once a month with 23 people for 7 months a year, and then we moved to an auditorium with larger groups once or twice a year.

In the beginning, we had people clustered around the angiography table—three to five people would come and observe—and I became very passionate about trying to teach people angioplasty and to learn these new, less-invasive techniques. It seemed to me that by using video technology, we could attempt to put people "tableside" without actually having them physically there. There were too many people to teach and not enough room around the table.

What were your early challenges, and what did you learn through this process? One of the biggest early challenges was the relatively primitive technology. There were two types of technology: the huge television cameras that were on big cradles and carts and the early-generation portable video cameras that were just evolving in the mid-1970s. We had primitive technology from an audiovisual point of view, and we did not have the technology to send video over long distances very easily. The movement of video technology into the consumer world was a huge step at the time. Moving away from studio production with big equipment, which was usually expensive at the time, was a big step. The other challenges were creating an environment in which you knowingly have a lot of outside people watching how you treat patients, how you interact, how you work from a technical point of view; this required a lot of adjustment, not just for the physicians but everyone involved, to get used to working on camera.

Did those first case presentations result in criticism? In the early years, live case presentations were viewed as incredibly extraordinary types of educational events that were very unique. For several years, we were the only ones in the US using these educational techniques. I am proud that I, along with my team in Alexandria, Virginia, was able to pioneer the use of video and live cases for educational purposes in the US. I was very honored that this was mentioned when I received an award at the recent VIVA meeting. I think something many people take for granted now is being able to go into a conference environment, sit in a seat, and feel like you are in the cath lab; it was such an unusual experience. I do not think I ever received criticism for it. There was a great deal of incredibly positive support for it—to the point that people were interested in using this as a valuable educational tool. I was interested in changing the paradigm about how education occurred in the procedural world. If you want to teach people "how to," you cannot use a book. The best way to train someone is to work side by side. However, it is relatively inefficient; you can only train one person at a time, and it may not be effective for those who do not have a sound foundation of skills on which to build. I was interested in developing a technique, an educational tool that would allow physicians to teach other physicians the "how to" in real time.

What are the ethical issues surrounding live cases? I think a lot of the ethical issues are relatively recent. It has been almost 30 years since we did the first live case, and the ethical issues have become more of a problem in the changing environment we have seen in the past 10 years. Doing live cases now as an educational tool challenges both the operator and the audience for a couple of rea-

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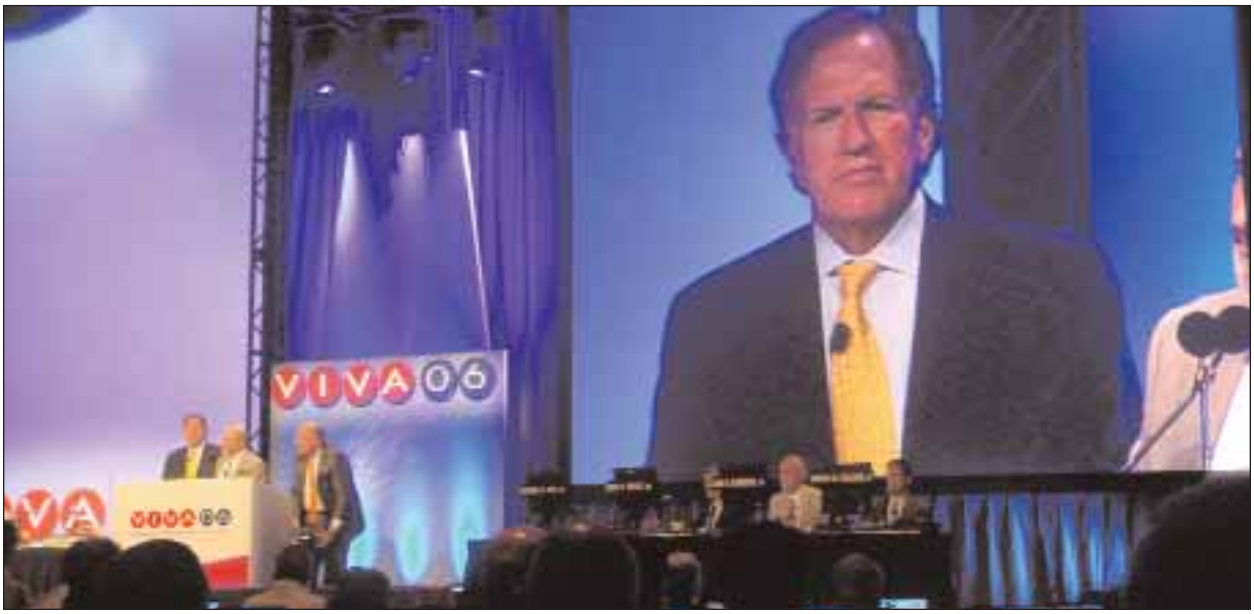

(Photo courtesy of Takao Ohki, MD)

Figure 1. Dr. Katzen receives the LIVE Award at VIVA 2006 for achievement in advancing medical care.

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sons. One is that if you are doing a live case, the number one priority should be to deliver quality patient care to that patient. There are those who criticize live cases and say it is distracting to the operator, and some operators lose sight of the original focus in the interest of the show or what might be perceived as the showmanship part of live cases. We cannot relinquish our responsibilities as physicians to make sure the patient gets the best quality care. I think that is the biggest challenge to people ethically. Another related challenge is to make sure that you are not making decisions that are influenced by the fact that you are doing a live case. It is not infrequent to see people making decisions in a live case format where they say, "Look, I would not do this if it was not a live case." Finally, I think people need to remember a patient's rights in this context, and they need to understand that teaching in a live case format is a skill in itself, and it has to be learned. Just because someone is an excellent technician or operator does not make them a good teacher or give them the ability to interact and not be distracted by the things going on in a live case. I think everyone who contemplates doing live case programs needs to remember that and consider whether it is right for them. You have to have the highest standards and project those, having the lofty responsibility of teaching by example. Your actions will affect many physicians who are learning through the live case.

What do you feel that live cases bring to ISET? To me, ISET is the pinnacle of live case instruction. Our goal in the live cases at ISET is to make the audience members feel like they are in the angio suite, not just through use of sophisticated technology, but through the fact that we are all trained and comfortable and interacting with the audience throughout the course of treatment, just like we would if we were interacting with them live through the day. That is our goal. As a result, not only do we use technology and trained operators to get there, we also go through a process of defining the educational objectives with each patient. We ask ourselves why we feel there is value in showing a particular case in a live case format. As teachers, we make sure that our goals for the audience are communicated. The live case content at ISET consistently receives the highest level of critique scores from our registrants and faculty alike. Although many program directors may question the value of these cases, we have no question that they bring unique educational value at ISET.

What does it mean to you to receive the esteemed CIRSE Gold Medal for outstanding achievement in interventional radiology, as well as the LIVE Award at VIVA? It was a huge personal honor. It meant an awful lot because, among other things, I was the first non-European to receive the CIRSE Gold Medal. I have worked many years on trans-Atlantic collaboration with our European colleagues. The ceremony was very outstanding, and it was clearly one of my all-time career highlights. Any personal recognition I have achieved is really a function of all the partners, nurses, and technologists with whom I have been fortunate to work side by side over the years in treating patients. Any achievement that I have made, and any recognition that I might receive is really a result of all of them. Receiving the LIVE award this year had particular meaning because I have devoted much of my professional life to vascular education and expansion of the field of vascular therapy. To be recognized by a multidisciplinary group of physicians and leaders is a source of great pride and gratitude to me. ■