

The Society for Minimally Invasive Spine Surgery

By Elizabeth Hofheinz, M.Ed., M.P.H.

Perhaps the spine surgeons fascinated by minimally invasive surgery (MIS) inherently trust the natural order of things, i.e., the body as is.

They know that to be effective, one doesn't have to go in and make bold moves. The moves they make are small, subtle, and sophisticated.

And they want to tell the world. So what better way to advance a field than form an organization and champion the merits of said field? Says Choll Kim, assistant professor of Orthopedic Surgery at University of California, San Diego (UCSD) and director of the spine fellowship program, "With benefits for patients, surgeons, and hospitals, MIS surgery has the potential to dramatically improve spine care. Less trauma, less blood loss, smaller scars, and fewer days in the hospital are but a few of the advantages to these types of procedures. There seems to be a serious learning curve for surgeons, however. We are not exactly sure why adoption of MIS techniques in practice lags behind the interest that people express in the technology. For this and other reasons, several prominent surgeons have joined together to form the Society for Minimally Invasive Spine Surgery."

Continues Dr. Kim, "The MIS Society, housed at UCSD, evolved from a small group of surgeons that got together at other meetings to discuss MIS surgery. We all have a passion for the technology and feel that it's the next important wave in the spine world. While MIS has been 'on the table' for several years now, we noticed it wasn't going anywhere because there was no concerted effort to move the technology forward. And we determined that none of the existing organizations incorporated all MIS presentations and lectures. In 2005 I sat down with a number of MIS experts, including Dr. Larry Khoo of the University of California, Los Angeles, as well as Dr. Bill Taylor of UCSD, all of whom had an enthusiastic response to the idea of starting a society."

Things have already gone better than expected. Dr. Kim, administrative director of the MIS Society, notes, "We held our inaugural meeting in San Diego last November.



The response was so high—especially at the last minute—that our location ended up being too small. There were 50 participants and faculty, although we had anticipated 25. We held cadaver labs, case presentations, and discussions. We also had the first founders meeting, which gave us an opportunity to assess our current situation and begin to plan for the future. After the meeting, we obtained feedback from participants, most of whom expressed an interest in getting more actively involved with the organization."

Those who take up the MIS mantle could have their work cut out for them. "We must address the issue of the MIS learning curve," says Dr. Kim, who, as an associate editor of the *SAS Journal* for the MIS section, will help bring MIS concepts to SAS Journal readers. "Meeting after meeting where I am on the faculty, I leave certain that many people go home and never do MIS surgery. The majority of the courses are put on by companies that sell MIS products. Typically, these are two day events that may in fact be overwhelming to some surgeons. At this point, we are not sure if surgeons are timid about trying MIS or if something is lacking in the training. The state of MIS spine surgery now is very challenging. When I work with fellows and residents at UCSD, I can clearly see how difficult MIS surgery is to teach compared to open surgery. Overall, I think the key is understanding the technology. To determine if training is meeting these and other needs, the Society plans to survey people who attend various MIS courses. Depending on the answers, we can improve future training courses. For example, let's take a training that contains information on five different MIS techniques. If participants say, 'This is too overwhelming. I need training on only *this* technique, then we'll hold that training and then evaluate it. Aside from this matter, the other relevant issue comes from the world of marketing. I think that a number of unproven spine technologies have been marketed to surgeons, the surgeons adopted them, then found that the products don't necessarily work well. One of our goals is to take a hard, honest look at the effectiveness of MIS techniques, including the complications."

As of now, the positives appear to significantly outweigh the negatives. Says Dr. Kim, "The most striking difference between MIS and non-MIS spine surgeries is short-term

outcome. Patient progress at the three-month mark after an MIS surgery is far beyond that of a non-MIS procedure. If we look at patients at the two-year mark, however, there is not much difference. There are no surgical outcome measures that examine this closely, however. Much of our information comes from clinical experience. For example, I recently performed a procedure on a patient with degenerative scoliosis who went home in two days. It was a multilevel reconstruction, which, if it had been done 'open,' would have meant a five-day hospital stay for the patient. The pain factor is important too. Those coming off an MIS surgery typically require less pain medication than patients who have undergone an open procedure. For patients who undergo open procedures, *their* first few days of recovery is hellish."

As for the MIS Society, it faces challenges of a different kind. "As organizations grow, it's difficult to maintain focus," states Dr. Kim. "Our goal is to have a small society that allows participants to get together and have in-depth discussions and meaningful interactions. We will have to learn to grow, however, because we believe that in the future, all spine surgery will be minimally invasive. Key to our mission is that we are perceived as a very legitimate, academic society that people can turn to for honest scientific information and advice."

"To this end," continues Dr. Kim, "we want to avoid being overrepresented by any one group in the industry. We hope to have a number of industry colleagues helping to support the Society until it is off the ground. Of course, industry benefits by supporting anything that advances MIS surgery. The interest in our inaugural meeting was overwhelming. We had to decline several sponsors as we ran out of room. Many more wanted to make sure they would be part of the program next year."

And in between the meetings, how will the work of the Society get done? Says Dr. Kim, "I envision the Society functioning like a small organization that has subgroups. We have established project committees that set their own agendas, tackle the issues as they see fit, and present their findings. We are studying the workings of other organizations' committees to see what we might learn. Additionally, we are facilitating multicenter interactions so as to enhance the exchange of information and the cross-pollination of ideas."

As for the learning curve issue, there has been some progress. "We have identified what we think people need to help them embrace MIS spine surgery," says Dr. Kim. "First, we need to know how to train surgeons so they can do the procedures reliably. Secondly, we must have rigorous scientific studies and evaluations that look at the efficacy of MIS. The role of our society will be to put the information out there, in essence saying, 'These are the advantages and disadvantages to MIS spine surgery. You can make your own decisions because we're giving you objective information.'"

And while they leave their patients with only a stitch or two, they leave one another in stitches. "Our meetings are full of good-natured jesting amidst the knowledge and science. Last year we wound up the meeting with a party at my house. I won't say who beat whom in ping pong or pool, but let's say there are a few surgeons looking forward to rematches this year. Our 2007 meeting will be in November in San Diego. While the theme is still to be decided, key topics will be understanding the MIS learning curve and creating the MIS Spine Society Outcomes Questionnaire."

The Society for Minimally Invasive Spine Surgery ... the power of thinking small.

Orthopedics This Week is published 40 times a year by RRY Publications LLC, a subsidiary of Robin Young Consulting Group.

116 Ivywood Lane, Wayne, PA 19087 877-817-6450 www.ryortho.com

Reprinted with permission of RRY Publications LLC

© Copyright 2007 RRY Publications LLC

