

Orthopedics

This Week

The Picture of Success: Dr. David Wong

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Think, “Harry Potter in a white coat.” Prior to his journey through medical school, Dr. David Wong, fellow of the Royal College of Surgeons of Canada, underwent a formal education that few people experience. But more on that later.

Dr. Wong, now director of the Advanced Center for Spinal Microsurgery at Presbyterian St. Luke’s Medical Center in Denver, grew up surrounded by talk of mitosis and meiosis. “I’m from a medical family. My dad was an internist and my mom was a nurse. In high school I discovered a love of sports. As you can imagine, I spent a lot of time in the orthopedic surgeon’s office. Watching the doctor drain my knee was fascinating. Therein lay the hints of my orthopedic future.”

Canadian by birth, David Wong sought out the finest education possible in order to lay the groundwork for his future. But he didn’t know he’d need a tailor. Smiles Dr. Wong, “I went to school at Trinity College at the University of Toronto, which had a very formal, scholarly atmosphere. For meals, we had to wear a jacket and tie, as well as an academic gown. Distinctions were made between professors and students by the length of the sleeve on one’s gown: long for them, short for us. The professors also wore hoods and cowls. The school’s distinguished ambiance was equaled by the challenging, high level education it delivered.”

Surrounded by the best in college, David Wong realized that to continue in this vein, he need only stay put. “Having had an outstanding educational experience at Trinity, I continued my studies at the University of Toronto. Premed, my master’s degree, internship, residency, and fellowship—all were done there. At the time, Toronto was the Mecca of orthopedics. I did my research fellowship with Bob Salter, of continuous passive motion fame. This work led me into my master’s of science program. I also did some work with Bob Jackson, who taught me the importance of innovation. He took a lot of flack about introducing knee arthroscopy to North America; fortunately for everyone, he persevered. The person who influenced me most was Ian Macnab, an amazing conceptualist and innovator who developed the classifications for spinal stenosis and spondylolisthesis and was an early innovator in the MIS field. I was quite content in my professional life. As time went on, however, an era began where the budget of the Canadian health system was being cut. More and more physicians left Toronto or Canada altogether.”

The dark night was beginning ... even for a knight. “Bob Salter, who had received The Order of Canada, which is akin to being knighted, had his research budget halved by the Medical Research Council of Canada. I knew that was a bad sign. My experience was equally



unsettling. One night while working with Ian Macnab, a neurosurgeon came to us for help because his patient, a female with metastatic breast carcinoma, was headed towards paraplegia. He asked us to stabilize her spine. Although Macnab had probably the second largest spine unit in Canada, we didn’t have enough instrumentation to fix this patient’s spine. Because the hospital inventories had been cut back, we had to call around to other hospitals and beg for pieces of instruments. It was quite an eye-opener for me. Even today, while the Canadian health system is great for primary care—and the majority of people only need primary care—if someone needs more advanced care, the system often breaks

down and there are long waiting lists for sometimes life-saving procedures.”

Continues Dr. Wong, “It was around this time that Dr. John Leidholt from the Denver Orthopedic Clinic was visiting the University of Toronto. We struck up an acquaintance and he later called me when they were looking for a spine surgeon. I left Canada for the U.S. in the fall of 1984.”

Years later, however, David Wong continues to be influenced by his Canadian roots. “With the old way of doing laminectomies, patients often needed fusion at some later point. Dr. John McCulloch, another Macnab fellow on staff at the University of Toronto (and later a partner in my Denver practice), was an innovator who banged the drum for switching to Microscopic/MIS techniques, thus significantly decreasing morbidity. It was in working with him that I developed an appreciation for the importance of this concept. This change has gone hand in hand with changes in the technology, including, for example, improvements in optics for microscopes. We also now have better alloys, resulting in smaller implants and instruments. The technology has followed the thought process of trying to decrease morbidity.”

What specifically has this scholarly surgeon been working on? “In addition to treating patients, I have been involved in research on OP-1 BMP for spinal fusion. We are looking for a way to stimulate bone formation without bone graft. One of the things we undertook was fusion entirely through a microscope using OP-1 BMP. My other project has been the Porous Coated Motion (PCM) cervical artificial disc. I am one of the

primary investigators for the FDA IDE study of the PCM disc. There are good studies showing that with fusion there is a defined rate of breakdown of adjacent disc levels; so the big question is whether we can prevent adjacent level disease. We still need better answers to clinical problems.”

So what challenges does this industry watcher see? “Orthopedics is quite a competitive, healthy, market. The flip side of this is that we’re stuck with a legal system loaded with professional and product liability issues that are influencing innovation. This is one of the reasons early clinical trials are increasingly going to Europe or Brazil.”

Peering through the looking glass of future orthopedics, Dr. Wong continues his search for lower morbidity. “I believe that in 10 years a lot of spine procedures will be done as MIS microsurgical interventions. Even fusion will eventually be done with MIS and in a less morbid fashion—smaller incisions, less stripping of muscles from the spine. We will get to the point that disc arthroplasty will use better biomaterials than artificial knees and hips. Currently, we leave some motion in the spine, but there is no shock absorber capacity. Maybe it sounds radical, but I think we can have both.”

From the OR to the lab to the boardroom. “From 2002 to 2003 I was privileged to spend a year as the president of NASS. It was enlightening to see that so many good people were willing to volunteer time to help the profession. It was a joy to meet them and discuss common interests. I also developed an appreciation for the importance of being involved outside of direct clinical care.

Our field is now very influenced by Washington, the insurance industry, and the legal realm. Most of us just want to help patients; the reality is that we have reached the point where we can’t ignore the influence of outside agencies.”

With some time freed up from his days at NASS, Dr. Wong now has some time for R&R. “My family and I really enjoy being together. My wife was my high-school sweetheart. We have been married for 33 wonderful years and are very proud of our two daughters. Our 17-year-old is an equestrian who won her division at one of the premier horse shows in Ocala, Florida, last season. Our 14-year-old is a field hockey aficionado who was recently chosen for the Colorado under-16 team to represent the state at the International California Cup Tournament in L.A. One of the things we enjoy doing together is skiing. My colleagues and I were team surgeons for the U.S. Freestyle team—a great chance to get a few tips from the pros. My wife’s parents, in their mid to late 70s, sometimes accompany us to the slopes. I try to keep them off the black trails, however.”

And at the end of the day, it’s always nice to go home without the neighbors accosting you. Says Dr. Wong, “I have operated on several neighbors, as well as the parents of my children’s schoolmates. Fortunately, the surgeries turned out well, meaning that I can go home without having to sneak in the house.”

Dr. David Wong’s motto: “Always, always have a ‘patient first’ orientation. If you do this, the side issues usually work themselves out.”