PHOTO BY ZORC PHOTO & DESIGN, CLEVELAND

University Hospitals and Rainbow Babies & Children's Hospital recently opened the Minimally Invasive Neurosurgery Lab, the only facility of its kind. The lab is a center for developing new methods and tools, and a place to teach the latest surgical techniques.

Cohen's practice focuses mainly on brain and spinal tumors, endoscopic surgery and congenital disorders. His partner, Dr. Shenandoah Robinson, has built a thriving program focusing on the surgical treatment of epilepsy. She works on this with Rainbow's pediatric neurologists, and on her other specialty—the surgical treatment of spasticity.

Teaching minimally invasive surgical techniques is a major focus, and Cohen's team teaches the course for the American Association of Neurological Surgeons. "We have them come here and operate on plants and vegetables. Retrieving pumpkin seeds is a favorite activity around Halloween," he says. Cohen is especially proud of the hospital's new Minimally Invasive Neurosurgery Lab, the only such facility in existence. He sees it as a center for developing new methods and tools, and a place to teach the latest techniques. "We are planning to use virtual endoscopy, a form of virtual reality, in training students and surgeons. To replace the pumpkins, of course."

CARDIOTHORACIC SURGERY

The cardiothoracic team, led by Division Chief Hani Hennein, MD, can literally fix a broken heart, or when necessary, build a new one using the patient's own tissue. Using minimally invasive microsurgery techniques and bloodless surgery, the division has an unprecedented 100 percent survival rate, even when their smallest patients may weigh less than a pound.

Dr. Hennein uses three Rs to describe the main goals of his team. First and foremost is "results," and the team's record of 100 percent patient survival to date is clear evidence of excellence in the OR.

Second on the list is "relationships," including the importance of doctor/patient/family bonds, relationships among his own CTS team of nurses and specialists, and especially the camaraderie among the surgeons comprising the Rainbow Surgical Specialists. "Contrary to popular myth," he explains, "we're not all lone rangers with enormous egos. There's nothing as rewarding as being able to share with other professionals who are going through the same experiences, the same challenges."

The third focus is "research," and Dr. Hennein has a short wish list that he hopes his work and that of others will eventually provide. "I'd like to have a good artificial heart especially designed for children. I'd like to see more work on pulmonary hypertension in kids, maybe advances in gene transfer that would change an at-risk child's destiny. And I'd love to be able to put a child on bypass without opening the sternum." This last wish speaks to the growing field of minimally invasive and bloodless surgery so important to the Rainbow vision.

Dr. Hennein marvels at the advances in his field over his 10 months at Rainbow and 15 years as a cardiothoracic surgeon. "With a four-millimeter camera and scope, we've brought incisions down from a three-inch gash to a tiny half-inch entry, and we're able to put it where it can't be seen. And advances in blood management mean kids over 20 pounds rarely get blood products anymore."

Size and age do matter in Dr. Hennein's world. While most adult surgery is done on a fully grown heart's surface, the congenital defects he attacks deal with abnormal internal and external structures—a missing valve or entire ventricle, a misplaced aorta—in a growing organ. Using a brightly colored model, he shows parents how he will literally rebuild their baby's heart.

OTHER RAINBOW SURGICAL SPECIALISTS

- Anesthesiology
- General Pediatric Surgery
- Ophthalmology
- Orthopaedic Surgery
- Otolaryngology
- Plastic and Reconstructive Surgery
- Urology

INTO THE FUTURE

In addition to traditional classroom and lab teaching of surgical skills, there is emphasis on helping physicians improve their communication skills and bedside manner, as well as community outreach on prevention—especially injury and child abuse prevention. Dr. Cohen has developed an e-newsletter titled "The Cutting Edge," which will soon be available on the hospital's Web site or by e-mail. It incorporates information and training, and will offer CME credits to physicians.

From the most personal touch of a surgeon and support staff focused on the benefits of close family interactions, to the remote manipulation of a microsurgery tool, the Rainbow Surgical Specialists embrace both ends of a wide spectrum of surgical techniques and approaches. At one end is the emotional support of family-centered healing, and at the other end is what Dr. Cohen describes as "what used to be considered science fiction."

Rainbow Surgical Specialists, Inc. can be reached at (216) 844-UHHS. Visit their Web site at www.rainbowbabies.org. ■