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SAMER NAROUZE, MD, PHD: LEADING THE WAY IN ADVANCED PAIN MEDICINE

Pain management is a comprehensive team effort at The Center for Pain Medicine at Western Reserve Hospital. Shown here are a few members of that team (L-R): Dmitri Souzdalnitski, MD, PhD; Syed Ali, MD; Vicki Jessop, CNP; Glenn Rech, RPh; Samer Narouze, MD, PhD, Chair of The Center for Pain Medicine; Denise Roadman, PA-C; Greg Carpenter, PA-C; Leon Howard II, PhD, PCC-S; and Tim Sable, MD.

PHOTOS BY KEN LOVE COURTESY OF WESTERN RESERVE HOSPITAL

Samer Narouze, MD, PhD

Leading the Way in Advanced Pain Medicine at Western Reserve Hospital

BY ROBERT JANEK

OPIOID PRESCRIPTION AND ADDICTION ARE SERIOUS PROBLEMS. CONSIDER THESE FACTS FROM THE CDC: IN THE LAST 15 YEARS, PRESCRIPTIONS FOR OPIOIDS HAVE QUADRUPLED. DURING THAT SAME TIME PERIOD, MORE THAN 165,000 PEOPLE DIED FROM PRESCRIPTION OPIOID OVERDOSE. IN 2014 ALONE, NEARLY 2 MILLION AMERICANS WERE ADDICTED TO OR ABUSED OPIOID MEDICATIONS.

THE STATISTICS FOR OHIO are just as alarming, according to Samer Narouze, MD, PhD.

"Deaths due to unintentional drug poisonings increased between 2000 and 2012 by 336 percent — mostly due to prescription drug overdoses," he says. "In 2014, six to seven Ohioans died each day from a drug overdose."

Dr. Narouze is a board-certified anesthesiologist with subspecialty board certifications in pain medicine, interventional pain management, and neurology headache medicine. Internationally recognized, he has authored or co-authored more than 150 peer-reviewed journal articles, abstracts and case reports; delivered more than 180 invited presentations; and led more than 60 workshops on non-narcotic pain management treatments. He has also reviewed, by invitation, more than 100 articles and edited 5 medical textbooks including *Atlas of Ultrasound Guided Procedures in Interventional Pain Management*, and is currently an editor or reviewer for more than 17 professional medical journals, including *The Journal of the American Medical Association.*

Since 2010, Dr. Narouze has been Chair of The Center for Pain Medicine at Western Reserve Hospital in Cuyahoga Falls, where he directs a multidisciplinary team of specialists. They include four board-certified pain medicine physicians, two psychologists, a chiropractor, a physical therapist, six certified physician assistants and nurse practitioners, and a clinical pharmacist to monitor potential drug interactions. All are full time. All are onsite. And all are dedicated to a comprehensive approach to pain management in which opioids are the last resort.

"Non-opioid therapy comes first," says Dr. Narouze. "This is not new for us, but it is new for others since the paradigm change. In March, the CDC released its Guideline for Prescribing Opioids for Chronic Pain (for primary care physicians with patients 18 and older). Their first guideline, there are 12, is that non-opioid therapy comes first."

ABOUT DR. NAROUZE

Born and raised in Egypt, Dr. Narouze received his medical degree and master of science degree in anesthesiology and critical care from Ain Shams University in Cairo, where he later served for three years as an assistant professor. In 1996 he came to the United States.

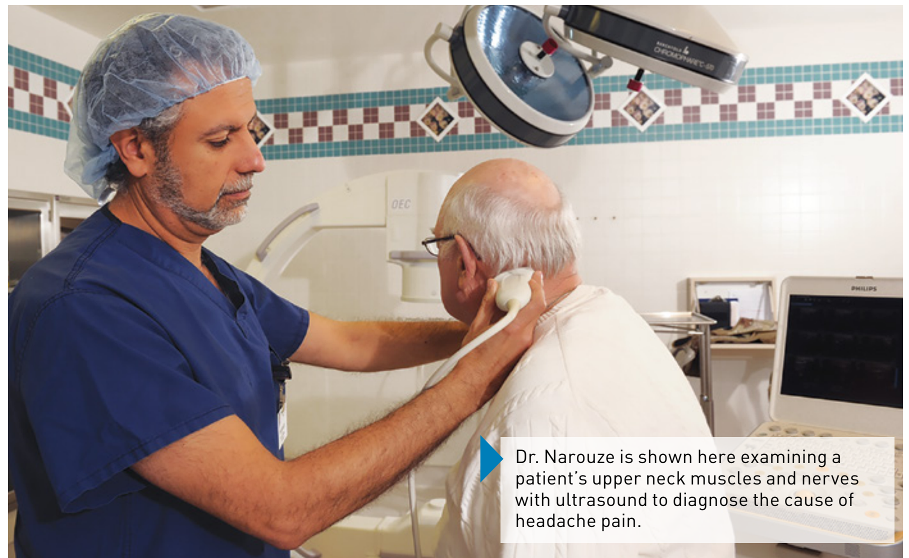
"I came here specifically for a pain management fellowship at Cleveland Clinic. It was a very competitive program, and the only way I could get in was to re-do everything. So I repeated my internship in internal medicine and residency in anesthesia at the Cleveland Clinic and then [in 2002] I was accepted into their pain management fellowship program," says Dr. Narouze.

In 2005, he joined Cleveland Clinic's staff, and later served as Program Director of its pain medicine fellowship program and as an Associate Professor at Cleveland Clinic Lerner College of Medicine. Seven years later, he earned a PhD in interventional management for cervicogenic headache and neck pain from Maastricht University in the Netherlands. Today, Dr. Narouze holds clinical professorships at Ohio State University, Ohio University College of Medicine, and Northeastern Ohio Medical University. Much of his teaching, however, is not done in a classroom; it's done at The Center for Pain Medicine at Western Reserve Hospital.

"We've had visiting faculty from Spain and visiting physicians from Hong Kong, Canada, Taiwan ... who came here to learn how we treat pain without narcotics," Dr. Narouze explains. "This hospital is not affiliated with a big university. People come here because they know we've established an excellent program with excellent staff."

Like Dr. Narouze, all of the Center's physicians — namely, Syed Ali, MD, Tim Sable, MD, and Dimitri Souzdalnitski, MD, PhD — are board-certified in anesthesiology and pain management, and all received their fellowship training from Cleveland Clinic, where all were "chief fellows" in pain management. Their experience spans 10–29 years.

As for their outcomes, they speak for themselves. And what they are saying, according to Dr. Narouze, is this: Non-opioid therapy works best to reduce and resolve pain in the majority of patients.



Dr. Narouze is shown here examining a patient's upper neck muscles and nerves with ultrasound to diagnose the cause of headache pain.

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NON-NARCOTIC PAIN MANAGEMENT

Opioids can reduce pain, but only by about 30 percent. In the short term, defined as three to seven days according to CDC guidelines, they may be beneficial in reducing acute pain. However, in the long term, patients become tolerant to narcotics, and some may even experience hyperalgesia (increased sensitivity to pain). In addition, there's the well-known risk of physical dependency and addiction.

So what are the non-pharmacologic alternatives? According to Dr. Narouze, and the CDC, there are many. They include

+ Physical therapy and exercise;
+ Psychological counseling to help cope with pain, deal with contributing stressors, and improve function;
+ Chiropractic medicine, including Active Release Technique, a soft-tissue motion treatment;
+ Relaxation therapies, including meditation and music therapy;
+ Functional medicine to eliminate risk factors, such as obesity and smoking, which may contribute to pain;
+ Medical interventions, such as nerve blocks, radiofrequency ablation and injections — joint injections, epidural injections, MSK injections.

Regenerative pain medicine, which utilizes platelet-rich plasma (PRP) to promote quick, natural healing, is also an option at Western Reserve Hospital.

"PRP treatment is for patients who don't heal appropriately or quickly enough," says Dr. Narouze. "We draw a patient's blood, use a specialized centrifuge to concentrate the platelets and growth factors responsible for healing, and inject this directly into the area of inflammation. PRP goes hand in hand with physical therapy."

He explains that the best indication for PRP therapy is recurrent injury to the hamstring, Achilles tendon or even temporomandibular joint. Tennis elbow and knee arthritis are also indications.

"This is my point: You find the source of the pain — the earlier, the better — and you treat that and hopefully reverse the complications, which would be chronic pain," Dr. Narouze says. "Just like you want to prevent diabetes from leading to amputation, you want to treat acute pain and subacute pain from escalating into chronic pain. If you don't, chronic pain becomes a disease in itself with complications like loss of function, disability and drug addiction."

Glenn Rech, RPh, monitors potential drug interactions for patients on site at Western Reserve Hospital's pharmacy.

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FINDING THE SOURCE OF THE PAIN

Unique to Western Reserve Hospital and to Dr. Narouze is the use of ultrasound to pinpoint the source of pain and treat it.

"Ultrasound is an inexpensive mode of imaging; it can be done at the bedside, and it's dynamic," Dr. Narouze says. "The patient can move the joint while you examine the joint and the tendons and muscles around the joint with ultrasound. With X-ray and MRI, you cannot put the joint or muscle into range of motion and examine it. So ultrasound is an unbelievable advantage."

He also performs interventions, such as nerve blocks, with ultrasound to determine the cause of pain. Traditionally, nerve blocks are performed with X-ray, which emits radiation. With ultrasound there's no radiation, so it's safer and can be used with pregnant women. Another benefit of ultrasound is its high-resolution images, which are better than X-ray and even better than MRI. And ultrasound is less expensive than X-ray and much less expensive than MRI.

"We use diagnostic nerve blocks to determine the cause of back pain. Is there nerve impingement? If so, what's the source? The spine? The disk? Or is the impingement distal? If you numb the nerve and the patient gets pain relief, then the disk that's sitting on that nerve is causing the pain," Dr. Narouze explains. He points out that MRI sometimes shows two or three bad disks, but only one of those disks may be causing the pain.

"So if you numb only one nerve root at one level, you pinpoint the pain at this level, and you do the surgery at this level," Dr. Narouze says. "It's outpatient surgery, and the patient goes home the same day."

In addition to back pain, ultrasound-guided nerve blocks can be used to pinpoint the cause of head and neck pain. Dr. Narouze literally wrote the book on this topic two years ago. (It's entitled *Interventional Management of Head and Face Pain: Nerve Blocks and Beyond*.) He also holds two patents for ultrasound-guided delivery of therapy devices.

"So again, you try intervention for headache pain before considering putting the patient on a strong opioid," he says. "Like the CDC guidelines recommend, you try A, B, and C before trying Z."

While he applauds the guidelines, he feels that they don't go far enough. They failed to address a few issues, namely, physician education, patient education and research. They also failed to address the question of when to refer a patient to a pain medicine specialist.

"The answer, quite simply, is when the primary care physician is not comfortable treating a patient … when the patient has persistent pain despite trying non-pharmacological therapy or short courses of opioid," Dr. Narouze says. "If the pain persists after that, it's time to stop the opioid, rethink the diagnosis, reevaluate the patient and refer the patient to a pain physician before the patient starts on a cycle of addiction."

He adds this analogy.

"It's like the endocrinologists. They want to see diabetic patients before they have gangrene and have to have a leg amputated. It's the same with pain medicine physicians. They want to see the patient before they're dependent on opioids. By then it could be too late."

The Center for Pain Medicine at Western Reserve Hospital has clinics located at the main campus in Cuyahoga Falls, and in Hudson, Streetsboro and Akron. Visit westernreservehospital.org for more information. To refer a patient, call 330-971-7246. ■