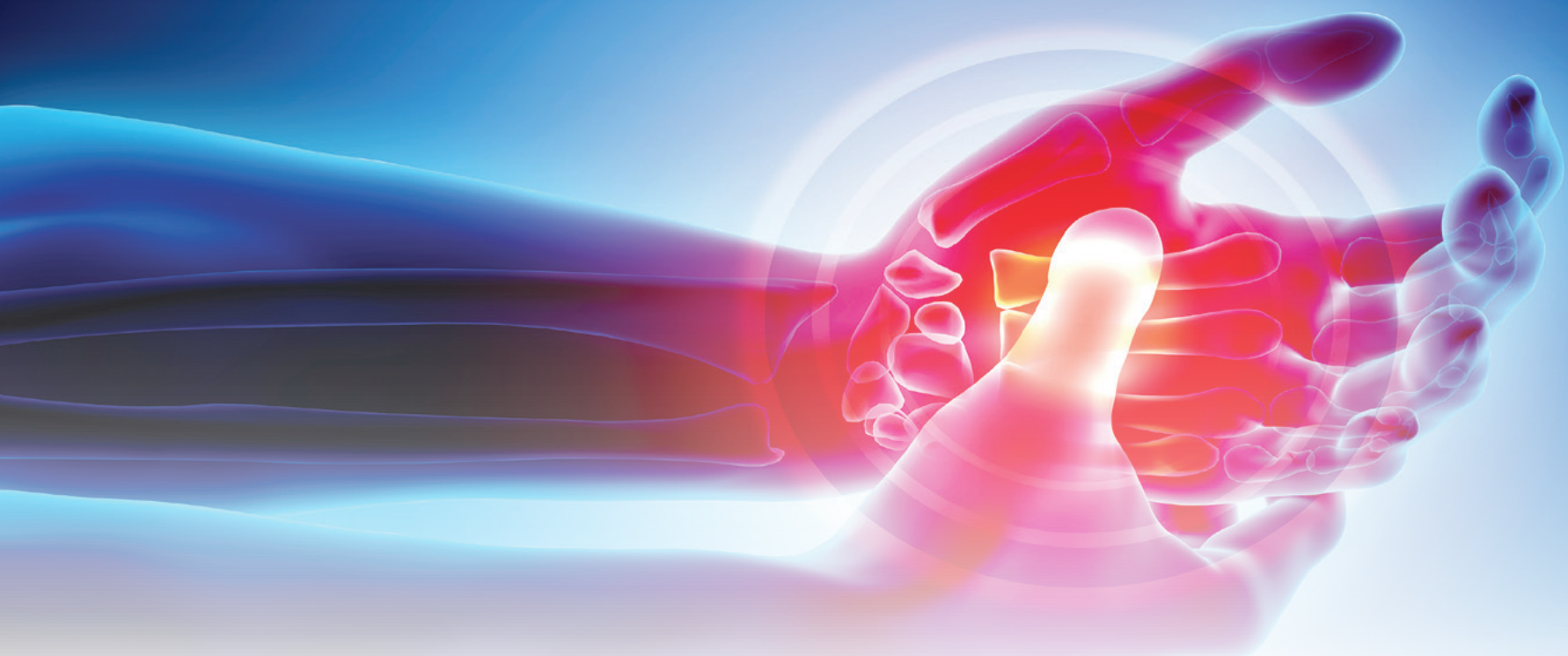

Carpal Tunnel Patients Benefit From Combination of Nonsurgical Treatments

Michael F. Pizzillo, MD
Shoulder, Hand and Upper Extremity Surgery

Carpal tunnel syndrome is a prominent diagnosis in a hand surgeon's practice. This directly reflects the presence of carpal tunnel syndrome in the general population, in which nearly half of all work-related injuries are attributed to the syndrome (*J Orthop Sports Phys Ther* 2017;47[3]:162).

"Demographically, I see patients from a wide range of age groups, from teenagers to patients well into their 70s and even 80s. However, carpal tunnel syndrome is more prevalent in working populations," said Michael F. Pizzillo, MD, a shoulder, hand and upper extremity surgeon with Englewood Orthopedic Associates, part of the Englewood Health Physician Network.

Although workplace activities can put pressure on the median nerve, there are often many factors, both occupational and nonoccupational, that contribute to the development of carpal tunnel syndrome, Dr. Pizzillo explained. They include work-related factors, such as repetitive wrist or digital motions and vibrations, and nonoccupational factors ranging from diabetes to rheumatoid arthritis. According to the National Institute of Neurological Disorders and Stroke, women are three times more likely than men to develop carpal tunnel syndrome.

Patients with the syndrome typically present with numbness and tingling resulting from pressure on the median nerve. "The classic symptoms are numbness and tingling in the radial 3 1/2 digits—thumb, index, long and radial 1/2 of ring finger—with nocturnal exacerbation of symptoms," Dr. Pizzillo said. "On examination, patients may present with a positive Tinel's sign [lightly tapping an affected nerve to check for a tingling sensation] and Phalen's [wrist flexion] test. They can have a loss of 2-point discrimination and, less frequently, thenar atrophy in more severe cases. Electromyography and ultrasound can be useful as ancillary diagnostic tools, but clinical symptoms and physical examination findings alone can establish the diagnosis."

> Women are three times more likely than men to develop carpal tunnel syndrome.

Fortunately, most patients with carpal tunnel syndrome will not require surgery and will respond well to conservative treatment (*J Orthop Sports Phys Ther* 2017;47[3]:151-161).

This approach "includes night splinting, anti-inflammatory medications, activity modification and, oftentimes, a cortisone injection, which may help temporize symptoms," Dr. Pizzillo said. Patients are also advised to avoid activities that could exacerbate their symptoms.

Patients who do not respond adequately to conservative approaches are candidates for carpal tunnel release surgery.

"Surgery is reserved for those patients who fail conservative treatment and have persistent or progressive symptoms, or patients who present with evidence of a severe neuropathy," Dr. Pizzillo said. "Surgical options include both mini-open and endoscopic procedures, which are typically performed under local anesthesia with intravenous sedation.

"Patients have a soft, flexible dressing after surgery and are able to move their fingers and wrist immediately," said Dr. Pizzillo, adding that recovery following treatment for carpal tunnel syndrome can vary and return to work is often dictated by the patient's job requirements. "Recreational activities that require repetitive or sustained grip are limited for a few weeks after surgery."

Typically, patients who undergo surgery for carpal tunnel syndrome have a low rate of complications, Dr. Pizzillo said, and it is one of the most successful procedures in hand surgery (*Orthop Clin North Am* 2016;47[2]:425-433). Recurrence rates are low, and the current surgical approaches are working well for this relatively common affliction. ●