

New IR treatment for 'tennis elbow' reduces pain and inflammation without surgery

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Tennis elbow, the painful chronic condition that affects up to 3 percent of the U.S. adult population, can be effectively treated through transcatheter arterial embolization (TAE), an image-guided, non-surgical treatment that decreases abnormal blood flow to the injured area to reduce inflammation and pain, according to research presented today at the Society of Interventional Radiology's 2019 Annual Scientific Meeting. The condition, also known as lateral epicondylitis, stems from repetitive stress injuries that occur in activities such as sports, typing and knitting, and the injury is common in carpenters, cooks and assembly line workers impacting basic tasks that affect job performance and quality of life.

"Tennis elbow can be difficult to treat, leaving many patients unable to perform the simplest tasks, such as picking up their children, cooking dinner, or even working on a computer. With this frustration, many patients turn to invasive major surgery after years of failed [physical therapy](#) and medication use," said Yuji Okuno, MD, Ph.D., founder of the Okuno Clinic in Japan and lead author of the study. "We were interested to see if this technique, already in use in other areas of the body, would be effective for this common, debilitating condition and help people immediately regain a range of motion that many of us take for granted in our everyday tasks."

Dr. Okuno's team conducted a prospective study in 52 patients with [tennis elbow](#) who did not find relief from other forms of treatment. The patients received TAE between March 2013 and October 2017 and were followed for up to four years after the treatment. The researchers said they found statistically significant reductions in pain-rating scores, using methods including the Quick Disability of the Arm, Shoulder and Hand scores; visual analog scale pain rating scores; Patient-rated Tennis Elbow Evaluation scores; and pain-free grip strength. Additionally, images taken in 32 patients two years after undergoing TAE showed

an improvement in tendinosis and tear scores.

The treatment can be completed in approximately one hour and requires only a needle hole to access the radial artery in the wrist under local anesthesia. A catheter is moved through the wrist to the elbow where the inflamed [blood vessels](#) are embolized, preventing excessive blood flow to the affected part of the elbow. The treatment is safe and effective and doesn't require physical therapy, researchers said. No [adverse events](#) were observed and no [patients](#) experienced negative effects to the surrounding bones, cartilage or muscles.

Tennis elbow is caused by overuse and repetitive stress to the tendons and muscles around the elbow. It typically affects people who play sports with repetitive swinging motions, such as tennis or golf, but it can also affect job performance of carpenters, cooks, assembly-line workers and others. While pain is a hallmark symptom, chronic tennis elbow can cause loss of grip and arm strength, limited use of the arm, and burning sensations on the outer portion of the arm.

More information: Abstract 25: Midterm clinical outcomes after transcatheter arterial embolization for lateral epicondylitis resistance to conservative treatment. Y. Okuno; M. Shibuya. Okuno Clinic, Tokyo, Japan. SIR Annual Scientific Meeting, March 23-28, 2019. This abstract can be found at [sirmeeting.org](#).

Provided by Society of Interventional Radiology

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