
RSNA Press Release

Rotator Cuff Treatment Provides Immediate Tendonitis Relief

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OAK BROOK, Ill. — A minimally invasive procedure to treat tendonitis in the rotator cuff of the shoulder provides immediate symptom relief to the patient, according to a study published in the July issue of *Radiology*. The study found that ultrasound-guided nonsurgical therapy significantly reduces pain from calcific tendonitis of the rotator cuff and restores lasting mobility after treatment.

"With this treatment, we were able to establish a single inexpensive and effective treatment for calcific tendonitis of the rotator cuff. This has never happened before," said co-author Luca M. Sconfienza, M.D., from the Unit of Radiology, IRCCS Policlinico San Donato, University of Milan School of Medicine in Milan, Italy. "Symptoms improved in patients treated with our procedure compared to non-treated patients."

Calcific tendonitis is a condition that causes the formation of small calcium deposits within the tendons of the rotator cuff in the shoulder. It is most common in adults in their 40s. In most cases, the deposits become painful and can restrict mobility of the shoulder. In minor cases, physical therapy or anti-inflammatory medications may be sufficient to address the problem until the calcifications break apart spontaneously. In severe cases, patients may require shockwave treatment or open surgery to remove the calcium. Open surgery requires a hospital stay and rehabilitation and, on rare occasions, may result in major complications, such as tendon rupture.

"This treatment could completely replace other treatments that are affected by several limitations and complications," Dr. Sconfienza said.

Ultrasound-guided percutaneous (through the skin) therapy represents an effective and inexpensive alternative to surgery that is less stressful for the patient. For the 20-minute procedure, the shoulder is anesthetized and, with ultrasound guidance, a radiologist injects a

At A Glance

- A large-scale study found that minimally invasive, ultrasound-guided percutaneous therapy effectively treats tendonitis caused by calcium deposits in the shoulder.
- The therapy takes about 20 minutes, is inexpensive and resulted in a considerable reduction in symptoms in a majority of patients in the study.
- Calcific tendonitis typically affects middle-aged adults and can cause pain and a reduction in shoulder mobility.

saline solution into the rotator cuff to wash the area and break up the calcium. A second needle is used to aspirate, or withdraw, the calcium residue. Recovery time is about an hour.

"People with calcific tendonitis should know that with a simple, one-time ultrasound-guided procedure, they could recover completely from the terrible pain constantly affecting their shoulder," Dr. Sconfienza said.

For the study, Dr. Sconfienza, senior author Giovanni Serafini, M.D., from the radiology unit at Santa Corona Hospital in Pietra Ligure, Italy, and colleagues used ultrasound-guided percutaneous therapy to treat 235 shoulders in 133 women and 86 men (mean age 42) with calcific tendonitis. An additional 68 patients (31 men and 37 women) did not receive treatment and acted as a control group. All of the patients had shoulder pain that was unresponsive to previous medical treatment. Follow-up was conducted after 1 month, 3 months, 1 year, 5 years and 10 years.

The results showed that treated patients exhibited a considerable reduction in pain and significant improvement to mobility of the affected limb after 1 month, 3 months and 1 year compared to non-treated patients. Five and 10 years after the procedure, the condition of non-treated patients had improved to the point that reported outcomes were similar to those of the treated group.

While few institutions currently offer this therapy, Dr. Sconfienza says that, theoretically, the procedure could be performed in any hospital or clinic that has ultrasound equipment with a superficial probe.

"There are millions of people in the world affected by calcific tendonitis," Dr. Sconfienza said. "This treatment can provide quick and inexpensive relief for all of them."

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"Rotator Cuff Calcific Tendonitis: Short-term and 10-year Outcomes after Two-Needle US-guided Percutaneous Treatment: Nonrandomized Controlled Trial." Collaborating with Drs. Serafini and Sconfienza were Francesca Lacelli, M.D., Enzo Silvestri, M.D., Alberto Aliprandi, M.D., and Francesco Sardanelli, M.D.

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