
RSNA Press Release

New Treatment Eliminates Heel Pain Caused by Plantar Fasciitis

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At A Glance

- A new ultrasound-guided outpatient technique is an effective treatment for plantar fasciitis.
- The 15-minute procedure eliminated pain and inflammation in 95 percent of patients within three weeks.
- Plantar fasciitis is the most common cause of heel pain, affecting one million people annually in the U.S.

CHICAGO — Combining an ultrasound-guided technique with steroid injection is 95 percent effective at relieving the common and painful foot problem called plantar fasciitis, according to a study presented today at the annual meeting of the Radiological Society of North America (RSNA).

"There is no widely accepted therapy or standard of care for patients when first-line treatments fail to relieve the pain of plantar fasciitis," said the study's lead author, Luca M. Sconfienza, M.D., from Italy's University of Genoa. "Our new technique is an effective, one-time outpatient procedure."

Plantar fasciitis, the most common cause of heel pain, is an inflammation of the connective tissue called the plantar fascia that runs along the bottom of the foot, from the heel to the ball of the foot. The condition accounts for 11 percent to 15 percent of all foot symptoms requiring professional care and affects one million people annually in the U.S.

Conservative treatments, which may take up to a year to be effective, include rest, exercises to stretch the fascia, night splints and arch supports.

When the condition does not respond to conservative treatments, patients may opt for shockwave therapy, in which sound waves are directed at the area of heel pain to stimulate healing. Shockwave therapy is painful, requires multiple treatments and is not always effective. Complications may include bruising, swelling, pain, numbness or tingling and rupture of the plantar fascia. In the most severe cases of plantar fasciitis, patients may undergo invasive surgery to detach the fascia from the heel bone.

For this study, Dr. Sconfienza and colleagues used a new ultrasound-guided technique, along with steroid injection, on 44 patients with plantar fasciitis that was unresponsive to conservative treatments.

After injection of a small amount of anesthesia, the anesthetic needle is used to repeatedly puncture the site where the patient feels the pain. This technique is known as dry-needling. Dry-needling creates a small amount of local bleeding that helps to heal the fasciitis. Lastly, a steroid is injected around the fascia to eliminate the inflammation and pain. The technique is performed with ultrasound guidance to improve accuracy and to avoid injecting the steroids directly into the plantar fascia, which could result in rupture.

After the 15-minute procedure, symptoms disappeared for 42 of the study's 44 patients (95 percent) within three weeks.

"This therapy is quicker, easier, less painful and less expensive than shockwave therapy," Dr. Sconfienza said. "In cases of mild plantar fasciitis, patients should first try noninvasive solutions before any other treatments. But when pain becomes annoying and affects the activities of daily living, dry-needling with steroid injection is a viable option."

Co-authors are Francesca Lacelli, M.D., Giovanni Serafini, M.D., Giacomo Garlaschi, M.D., and Enzo Silvestri, M.D.

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RSNA is an association of more than 42,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care through education and research. The Society is based in Oak Brook, Ill. (RSNA.org)

Editor's note: The data in these releases may differ from those in the printed abstract and those actually presented at the meeting, as researchers continue to update their data right up until the meeting. To ensure you are using the most up-to-date information, please call the RSNA Newsroom at 1-312-949-3233.

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