A Mystery Afoot

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HISTORY

54 y.o. male presents with chronic left ankle pain starting 15 years ago without injury. Pain is located anteriorly and proximally to the ankle joint, and very sensitive to the touch. Patient has seen 11 physicians since the symptoms started and received PT, NSAIDs, Tylenol, lidocaine patches, and a cortisone injection into the joint without relief. A lidocaine injection into the subcutaneous tissue gave 100% relief for 2 hours.

Previously, he had had extensive workup including an initial US in 2017 showing serpiginous blood vessels deep to the EHL and EDL tendons without mass or synovitis, an MRI in 2017 showing tendinopathy of the Achilles with no mass in the area of pain, and an MRI in 2020 with tendinopathy of the Achilles and peroneal tendons, mild posterior tibialis tenosynovitis, and trace ankle joint effusion. EMG in 2020 showed possible mild L superficial peroneal sensory neuropathy.

PHYSICAL EXAM

Patient well appearing, ambulatory

Left Ankle:

Inspection: No apparent effusion

Palpation: TTP over EHL and Tibialis Anterior tendons just proximal to ankle joint.

ROM: Full and symmetric, notable pain reduction with both dorsiflexion and plantarflexion. Focal area of tenderness ~2cm proximal to the anterior distal tibiofibular joint

Strength intact

Sensation equal bilaterally

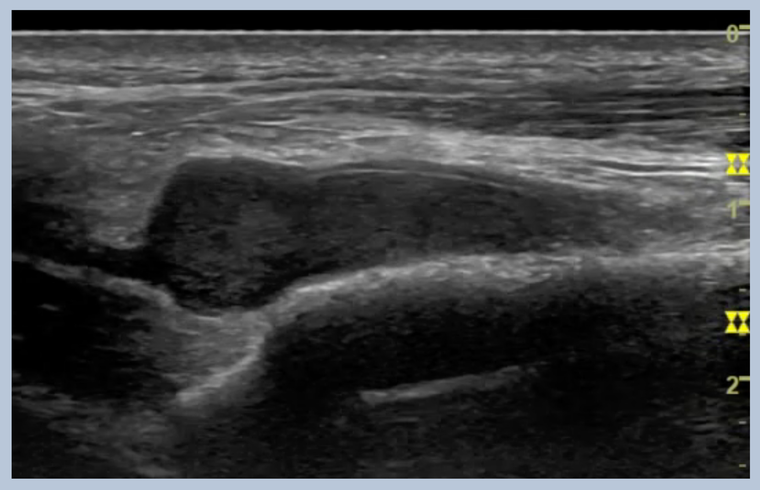
DIFFERENTIAL DIAGNOSIS

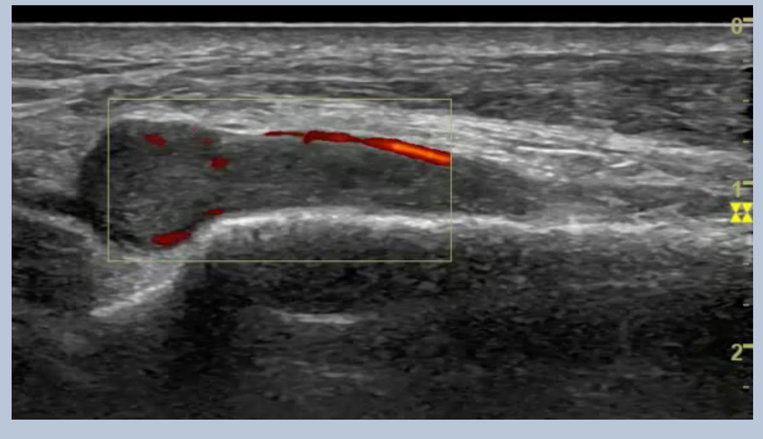
1. Nerve sheath tumor
2. Osteoarthritis
3. Soft tissue mass (including tendon or synovial)
4. Vascular malformation
5. Ankle extensor tendinosis

LABS & IMAGING

Limited US: **ill defined mass** off the anterior tibial artery between tibialis anterior and EHL tendons. 2.7 x 0.8 x 1.1 cm. Notable blood flow proximally and within mass, but absent distally. Tender to sonopalpation. No tenosynovitis.

MRI: Elongated **3.0 cm lesion** deep to the flexor hallucis longus tendon at the level of the distal left tibia, along the course of the anterior tibial artery, with moderate diffuse enhancement and associated vascularity proximally and distally.





WORKING DIAGNOSIS

Soft tissue tumor (glomus tumor)

TREATMENT/OUTCOME

Patient with 15 years of left ankle pain, found on most recent imaging to have a soft tissue mass corresponding to the location of the pain. This was not present on multiple prior imaging studies. Recommended incisional biopsy and possible excision with orthopedic surgery. During the procedure, the frozen pathology returned as a well encapsulated brown-tan soft tumor deep to retinaculum, consistent with a benign glomus tumor. Surgical excision is considered curative. Early occult lesions of glomus tumor may not be palpable.

The tumor was fully excised, including all of its surrounding capsule that was not adherent to a vessel or nerve. Pain was significantly improved after excision.

RETURN TO ACTIVITY

Following recovery from surgery, the patient was able to resume physical activity and ambulation as tolerated. Instructed to follow up as needed. This patient was last seen in the clinic in 2/2023 (prior to excision), but he reported good post-surgical improvement over the phone.

DISCUSSION

Glomus tumors are painful but benign tumors stemming from glomus bodies, which are neuromyoarterial receptors. The classic triad of symptoms is paroxysmal pain, point tenderness, and cold hypersensitivity. Glomus tumors are most commonly found in the hands. It is less common to see them in non-hand areas. Due to the rarity of glomus tumors in the foot, diagnosis can often be difficult and delayed. Imaging (ultrasound and MRI) can help with diagnosis.