

CLINICAL HISTORY: A 42-year-old female with right calf pain with an injury to the medial head of the gastrocnemius for five years after a hiking injury.

TECHNIQUE: Multiplanar, multisequence fat and water weighted images of the right calf were performed.

FINDINGS: Diffuse marrow edema is relatively homogeneous throughout the medial head of the gastrocnemius muscle without associated edema of the lateral head of the gastrocnemius, soleus, deep posterior compartment, peroneal, or extensor anterior compartment. There is no volume loss or fatty infiltration of the muscle to suggest a chronic tear. A recurrent or active tear and recurrent strain with overlying fascial and subcutaneous inflammation are somewhat less favored given the presence of the superficial location. A compartment syndrome should be considered. Thickening along the plantaris tendon may represent an associated partial injury of the distal plantaris tendon at the level of the mid calf. No fracture of the tibia or fibula. Pretibial edema is identified. Anteromedial, anterolateral, and posteromedial fascial edema is identified. No myofascial herniation. No intramuscular mass or hematoma is identified.

Mild stress-related edema in the posterior tibia is likely. No fracture of the fibula. No tearing of the interosseous membrane.

IMPRESSION: MRI of the Right Lower leg

1. In the region of the medial skin marker is relatively homogeneous intramuscular edema within the medial head of the gastrocnemius without fatty infiltration, muscle loss, or major morphologic abnormality. No high-grade defect, hematoma, or retraction.. The differential diagnosis includes a recurrent muscle strain with acute or subacute fasciitis. Since there is no volume loss, a chronic tear is felt less likely. Some form of a compartment syndrome or inflammation myositis is also possible, but localized only to this muscle compartment. Compartment syndromes are rarer in the superficial posterior compartment. The lateral head of the gastrocnemius, soleus, deep posterior compartment, peroneal, and anterior compartment musculature is normal without edema or a muscle tear. Minimal, if any, scarring of the fascia along the plantaris tendon without a retracted plantaris tendon tear
2. Mild pretibial edema and slight stress-related edema within the proximal tibia or mildly prominent marrow within normal variation is observed, but no fracture of the tibia or fibula. Mild stress-related edema in the posterior tibia is likely. No fracture of the fibula. No tearing of the interosseous membrane.