

Clinical-Medical Image

“Tennis Leg”, When Ultrasound can make the Diagnosis

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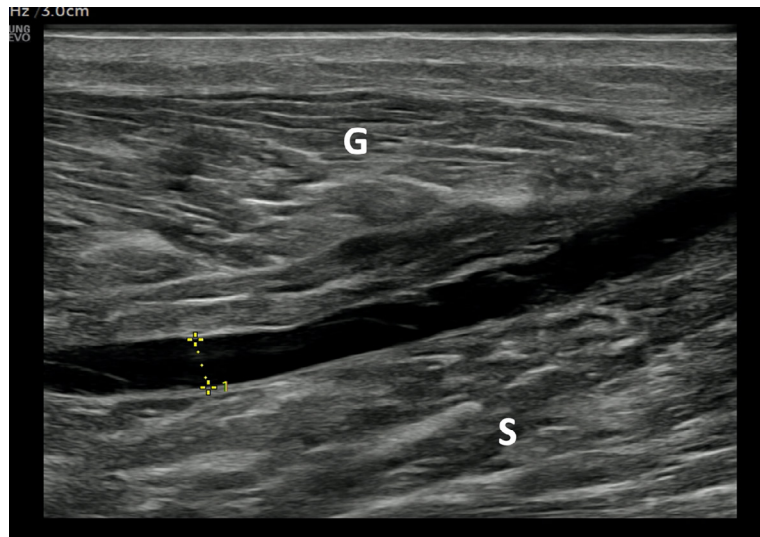


Figure 1: The image above represents a 45-year-old male patient, admitted for acute mid-calf pain felt while playing football. He reported hearing and feeling a “snapping” sensation posterior to his knee, followed by immediate swelling and an inability to bear weight. Ultrasound examination showed a fluid collection between the medial head of the gastrocnemius (G) and soleus (S) muscles without evidence of muscle rupture.

Clinical Medical Image

Abstract

“Tennis leg” is a myofascial or tendinous injury of the lower limb. It refers to acute mid-calf pain, with a sensation “snapping” within the calf. The diagnosis can be made with ultrasound. The main finding on ultrasonography is the existence of fluid between medial gastrocnemius and soleus muscle, most prominent at the level of the myotendinous junction.

Case Presentation

“Tennis leg” is a myofascial or tendinous injury of the lower limb [1] which was first described in a tennis player in 1883, but it can occur during many activities [2].

It refers to acute mid-calf pain, which typically occurs in active individuals, more frequently in middle-aged individuals.

The most frequent biomechanical causes of the injury are extension of the knee and forced dorsiflexion of the ankle [3].

It was attributed to rupture of the plantaris tendon [4]. Although rupture of the plantaris is possible, injury to the medial head of the gastrocnemius or injury to the gastrocnemius-soleus aponeurosis are far more common causes of tennis leg [2].

Clinically, it is felt as an acute mid-calf pain with a sensation “snapping” within the calf which can be heard by the patient. This is associated with focal tenderness and swelling, with sometimes a focal gap at the site of the tear [4] which can be masked later by swelling.

The main finding on ultrasonography is the existence of fluid deep to medial gastrocnemius and superficial to the soleus muscle, most prominent at the level of the myotendinous junction (Figure 1) without evidence of muscle rupture.

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A tear in the deep surface of gastrocnemius may be seen as a disruption in contour and echogenicity of muscle fibers [1]

The differential diagnosis in case of calf pain and swelling, can be made with deep vein thrombosis which may coexist with “Tennis leg”, and also with a ruptured Baker cyst [1].

Ultrasonography with B-mode and Doppler-mode is sufficient to make the diagnosis of “Tennis leg”, and rule out differential diagnoses.

Treatment is usually conservative and the condition self-limiting. Only in cases where severe swelling leads to compartment syndrome is surgical fasciotomy necessary.

Ultrasound examination showed a fluid collection between the medial head of the gastrocnemius (G) and soleus (S) muscles without evidence of muscle rupture.

Keywords: Tennis leg; Gastrocnemius muscle; Soleus muscle

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Conflict of Interest

There is no conflict of interest.

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