Title:

**Spontaneous Gastrocnemius Hematoma Mimicking Acute Limb Ischemia**

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Introduction:

The causes of unilateral calf swelling are varying, including spontaneous gastrocnemius hematoma. Magnetic Resonance Imaging is the gold standard procedure to confirm the diagnosis, and ultrasound is a fast and reliable adjunct for doctors to assess lower limb soft tissue.

Case:

A 73-year-old man presented with a-three-day history of non-traumatic right calf swelling, and pain which was aggravated upon movement. His medical history was significant for hypertension and hyperlipidemia. He was not on anticoagulant or antiplatelet. No history of lower limb surgery or vascular defect. Her physical examination showed gross swelling over right calf, visible superficial vein, calf tenderness, cold peripheries, capillary refill time was 2 seconds, and distal pulses were not palpable. Peripheral sensation was intact. No sonographic evidence of deep venous thrombosis from ultrasound Doppler assessment. Point-of-care ultrasound (POCUS) of right leg soft tissue showed loss of normal striation of muscle, with heterogenous echogenicity suggestive of intramuscular hematoma. Minimal amount of blood noted from bedside needle aspiration. Computed tomographic angiography of lower limb demonstrated hypodense collection within gastrocnemius muscle with mass effect, but no thrombosis seen.

Discussion:

This case illustrates the significant role of POCUS in evaluation of the cause of calf swelling. This case is unique because it is rare for spontaneous gastrocnemius hematoma to have identical clinical signs with acute limb ischemia. It is very challenging to differentiate between both pathologies without radiological imaging.

Conclusion:

Spontaneous intramuscular hematoma should be highly suspected as one of the causes of unilateral calf swelling. POCUS assessment has high accuracy and promising in use.