Oh MYositis

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Chief Complaint

Left thigh pain

History of Present Illness

48-year-old obese female with past medical history of poorly controlled diabetes who presents with a 4-day history of constant and acute worsening left upper thigh pain. Patient went to PCP earlier today and had bloodwork and ultrasound of leg which was negative for DVT.

- Pain described as sharp and throbbing localized to left medial thigh
- Acutely worsened over past 2 hours
- No recent trauma. No relieving factors, exacerbated with movement and touch.
- No associated fever, cough, rash or SOB
- No history of smoking or drinking.

Pertinent Exam Findings

Vitals: T 98.4 HR 89 BP 142/91 RR 22 SpO2 93% (RA)

General: Unable to ambulate secondary to pain, brought back in a wheelchair. Significant distress secondary to leg pain. Obese.

Cardiovascular: Regular rate and rhythm. BLEs well perfused with palpable dorsalis pedis pulses.

Musculoskeletal:

- **LLE**: Approximate 6 cm x 6 cm exquisitely tender area on left medial thigh with overlying edema, erythema and fluctuance; no cyanosis, streaking, no lesions, no peripheral edema and no calf tenderness
- **RLE**: No tenderness, no rashes, no lesions, no peripheral edema, and no calf tenderness

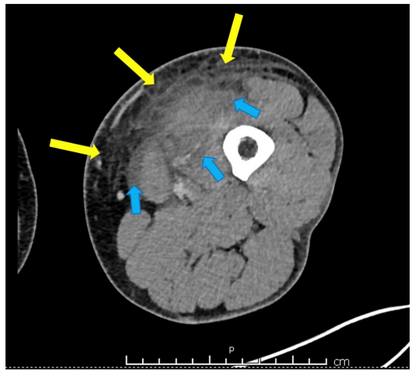
Pertinent Labs & Imaging

CBC: WBCs 15.9 (82.8% neutrophils), otherwise WNL

CMP: Glucose 361, otherwise WNL

CK : 100 **Lactic acid**: 3.4

ESR: 25 **CRP**: 2.1

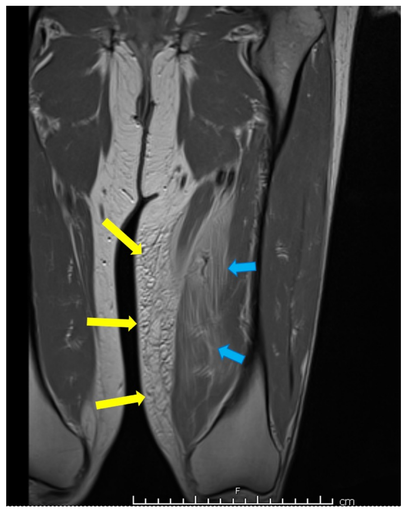


CT Left Lower Extremity

MRI Left Lower Extremity

CT (with contrast) and MRI (with and without contrast) of LLE:

- Extensive subcutaneous **edema** over anterior and medial aspect of distal left thigh (yellow arrows)
- Subjacent extensive **hypodensity**(CT)/**high signal** (MRI) throughout vastus medialis muscle (blue arrows)
- No soft tissue air



MRI Left Lower Extremity

Clinical Course

- Immediate surgery consult, CT scan and IV antibiotics
- Case discussed with general surgery and radiologist. Concluded: **high suspicion for diabetic myonecrosis and low suspicion for necrotizing fasciitis** (based on exam and duration of symptoms and imaging).
- Patient was admitted as necrotizing fasciitis remained on differential
- **MRI** confirmed diagnosis of diabetic myositis with myonecrosis

Discussion

- Diabetic muscle infarction (DMI) is the term used for **spontaneous ischemic necrosis of skeletal muscle** – a rare complication of long-standing and poorly controlled DM
- Exact **pathophysiology is unknown**, although the source of skeletal muscle injury is thought to be secondary to hypoxia-reperfusion injury, atherosclerotic occlusion or vasculitis with thrombosis
- Average age of presentation is 40, more common in women and type 1 diabetics presenting with **atraumatic extremity pain** without systemic signs
- DMI most commonly affects a single lower limb and most commonly is the **quadriceps** about 60% of the time
- Bloodwork tends to be unremarkable. **MRI is considered the diagnostic imaging tool of choice** but CT scan can be used
- **No definitive standard of care** for managing patients with DMI, however, studies have shown that it responds well to conservative treatment with NSAIDS and is self-limiting

Clinical Pearls

- Diabetic myositis and myonecrosis should be considered in the differential diagnosis for diabetic patients presenting with extremity pain and swelling but is a diagnosis after excluding necrotizing fasciitis
- MRI serves as the best tool for diagnosis
- Treatment involves supportive care, glycemic control, and NSAIDs or antiplatelet therapy