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## AACE Clinical Case Reports

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## Visual Vignette

## A Case of Diabetic Myonecrosis

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## ARTICLE INFO

## Article history:

Received 4 February 2021

Received in revised form

10 March 2021

Accepted 11 March 2021

Available online 26 March 2021

## Case Presentation

A 35-year-old Caucasian man presented for 1 month of acute onset atraumatic left lateral thigh pain, swelling, and warmth. An outside physician gave a left trochanteric bursal steroid injection approximately 2 weeks before admission, without symptom relief. He presented to our hospital for persistent symptoms. Medical history included 11 years of type 2 diabetes (hemoglobin A1C 14.6%, 136 mmol/mol) complicated by non-proliferative retinopathy and nephropathy (estimated glomerular filtration rate 58; microalbuminuria). Medications included glargine 25 units/day, prandial lispro 15 units, and metformin with inconsistent medication adherence. Examination revealed temperature 98.8°F, pulse 96/minute, respirations 15 breaths/minute, blood pressure 94/49 mm Hg, oxygen saturation 100%, body mass index 23.65 kg/m<sup>2</sup>, with left lateral thigh tenderness, induration, edema, and increased warmth without erythema. Left hip flexor, knee flexor, and knee extensor strength were reduced due to pain; dorsalis pedis pulses 2+. Laboratories demonstrated white blood cell count 28 k/μL (normal 4.5–11), creatinine kinase 295 U/L (normal 40–280), and sedimentation

rate 46 mm/hour (normal 0–15). Initial noncontrast left femur magnetic resonance imaging (MRI) (Fig. 1) demonstrated marked signal increase (asterisks) within the gluteus maximus and vastus lateralis, as well as the adductor magnus (not shown) with extensive subcutaneous edema (arrow). Subsequent fever and rising creatine phosphokinase (CPK) (458 U/L) prompted repeat MRI (hospital day 3; Fig. 2), which revealed multiple large gluteus maximus (arrows), gluteus minimus, and vastus lateralis abscesses.

## What is the diagnosis?

## Answer

Diabetic myonecrosis. This is a rare diabetes complication attributed to uncontrolled (mean A1C 9.3%, 79 mmol/mol) diabetes with resultant diabetes complications, including vascular disease.<sup>1,2</sup> Diagnosis is based on clinical presentation,

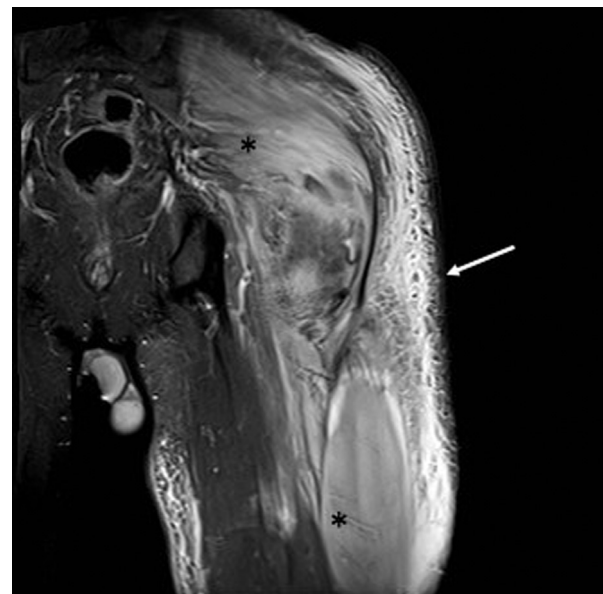


Fig. 1.

**Abbreviations:** CPK, creatine phosphokinase; MRI, magnetic resonance imaging. Editor's Note: Submissions to "Visual Vignettes" are welcomed. Please submit online via the Journal's Editorial Manager site.

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<https://doi.org/10.1016/j.aace.2021.03.007>

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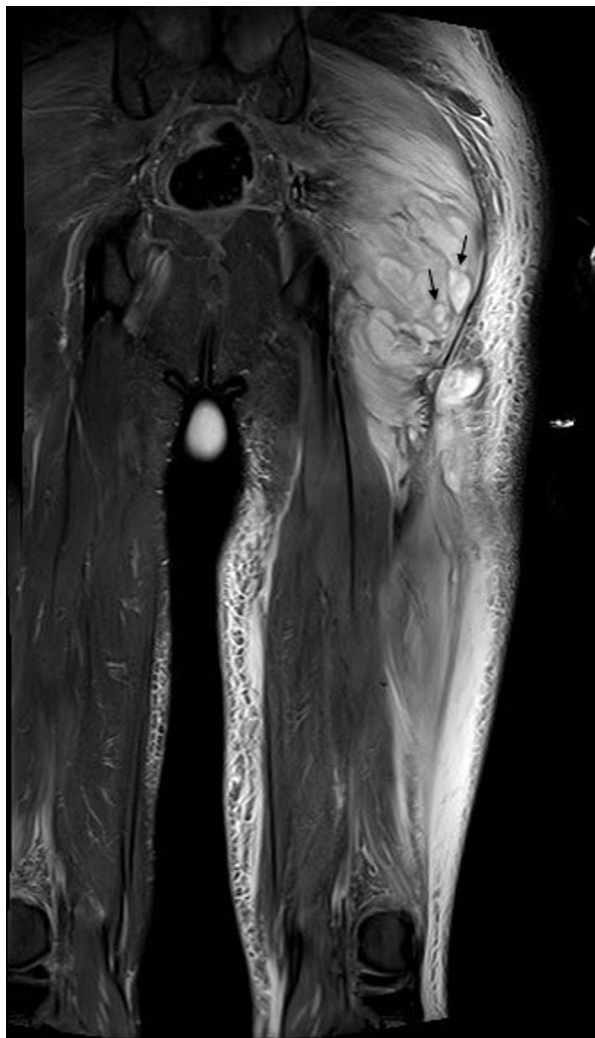


Fig. 2.

including sudden onset atraumatic pain and swelling (typically involving the thigh) and MRI demonstrating hyperintense signal from involved muscles in the absence of other etiologies.<sup>1,2</sup> Biopsy is reserved for atypical, worsening, or unclear cases.<sup>1</sup> Our patient's initial presentation was consistent with diabetic myonecrosis; treatment included analgesics, aspirin, bed rest, and glycemic control.<sup>1,2</sup> Subsequent fever, an uncommon feature of diabetic myonecrosis,<sup>1</sup> and increasing CPK prompted repeat left thigh MRI (Fig. 2) that demonstrated superinfected diabetic myonecrosis with intramuscular abscesses. In the setting of uncontrolled diabetes, the 1 to 3 week window for pyomyositis abscess formation<sup>3</sup> suggested the trochanteric injection 19 days prior as the infection source. He required abscess drainage and antibiotics, resulting in clinical improvement. Abscess cultures were sterile, potentially impacted by antibiotics. Our case is unique as there was pyomyositis superimposed upon diabetic myonecrosis, highlighting that these are not mutually exclusive diagnoses and that new fever and/or increasing CPK should prompt consideration of pyomyositis in a patient with diabetes.

#### Disclosure

The authors have no multiplicity of interest to disclose.

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