

Diabetic myonecrosis presenting as unilateral thigh pain and swelling

Ha Eun (Grace) Kim, Rahul Gandhi, George Waterworth, Yesim Morice

A 56-year-old woman presented with a two-week history of atraumatic left thigh pain and swelling. She had a background of poorly controlled type 2 diabetes with a recent HbA1C of 134mmol/mol (normal <40mmol/mol). She was afebrile and the rest of her vital signs were normal. Her left thigh was swollen and tender. There were no abnormal skin findings. Laboratory evaluation showed a normal white blood cell count. There was elevation of both CRP at 86mg/L (normal <5mg/L) and CK at 343U/L (normal 22–198U/L). Ultrasound and CT of the left thigh revealed a well-defined intramuscular fluid collection in the vastus lateralis. MRI findings are shown in Figure 1.

The considered differential diagnoses were diabetic myonecrosis, infectious myositis, necrotic neoplasm or abscess.

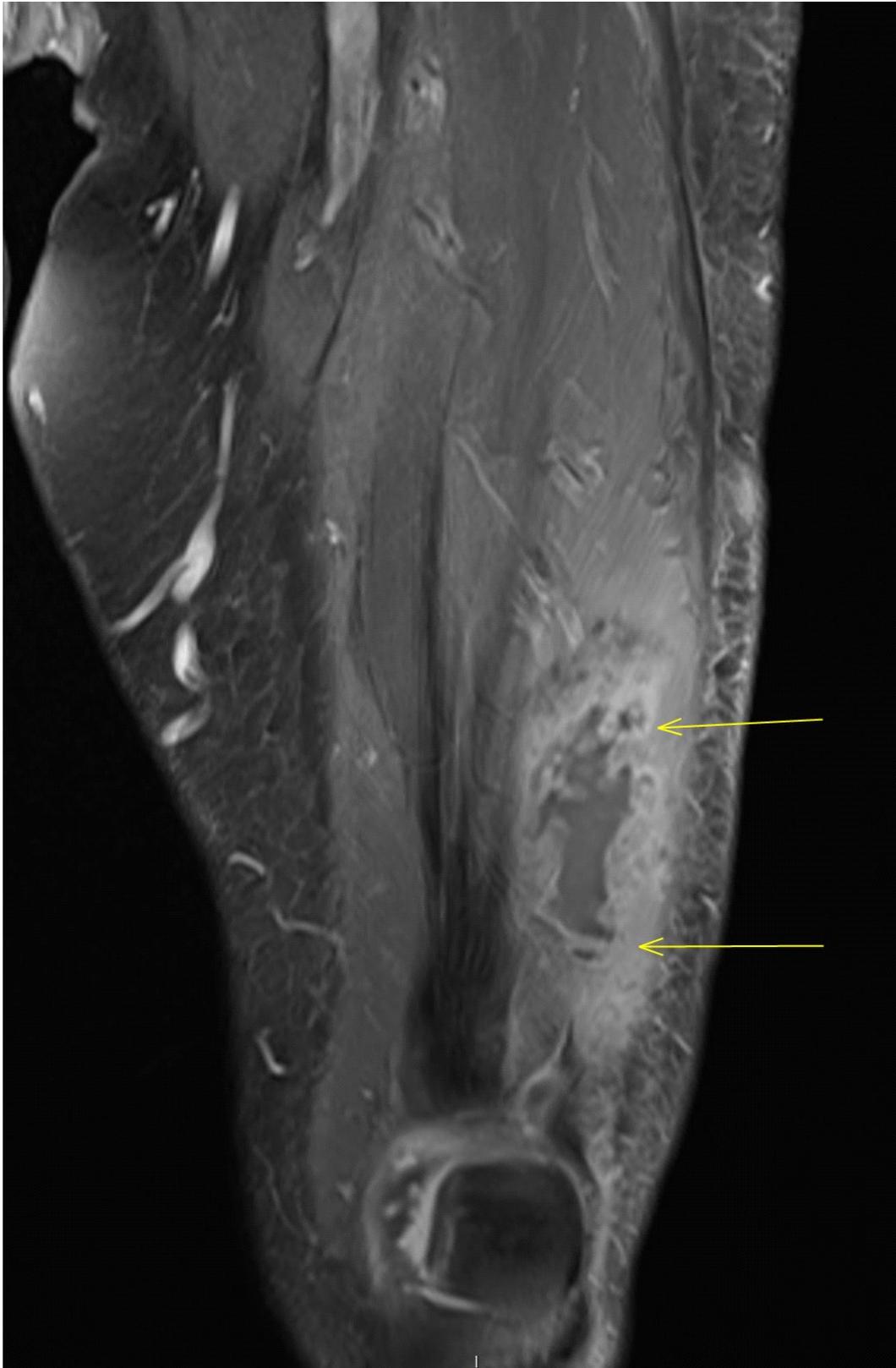
Discussion

In the setting of this clinical presentation of a patient with poorly controlled diabetes without fever or leucocytosis, and supportive MRI findings, we made a diagnosis of diabetic myonecrosis. The diagnosis was reaffirmed by spontaneous clinical improvement and decreasing inflammatory markers without antibiotic treatment but only tighter glycaemic

control. Therefore, we felt a biopsy was not indicated as it would not change management and would expose the patient to unnecessary risk of infection and haematoma. Outpatient follow-up at two weeks confirmed complete clinical resolution, and an ultrasound examination showed no residual collection and improved muscle architecture.

Diabetic myonecrosis, or diabetic muscle infarction, is a rare complication of diabetes.¹ This diagnosis should be considered in patients with poorly controlled diabetes presenting with acute onset of pain and swelling of the lower limbs, particularly in the thigh.² The pathogenesis is uncertain, but it has been attributed to microvascular thrombosis and ischaemia caused by endothelial damage.^{3,4} Muscle biopsy is typically not required unless there is uncertainty regarding the diagnosis.⁵ Short-term prognosis is good, but long-term prognosis is poor, which reflects the underlying severity of arteriopathy in these patients.^{6,7} Estimated mortality from a major vascular event within two years after an episode of diabetic myonecrosis is reported to be 10%.⁸ Treatment is conservative with a focus on diabetes control, analgesia and rest.^{1,9}

Figure 1: Coronal post-contrast T1 fat saturated MRI of the left thigh shows a hyperintense fluid collection and diffuse surrounding enhancement within the oedematous vastus lateralis muscle and sub-fascial fluid collection along the lateral surface.



Competing interests:

Nil.

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