

Mimicking Abscess: A Case of Myositis Ossificans



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Introduction

Myositis ossificans (MO) is a rare condition characterized by heterotopic ossification within skeletal muscle tissue, which typically occurs as a result of trauma or injury. Diagnosis of MO can be challenging, especially when presenting with symptoms resembling abscess formation. This case study discusses a unique presentation of MO in a patient initially suspected to have an abscess.

Case Report

A 63-year-old female with a medical history of hypertension and hyperlipidemia presented with dysarthria and mental changes resulting from an intracerebral hemorrhage involving the pons on November. This led to stupor and tetraplegia, prompting transfer for comprehensive rehabilitation. On admission (January 9), due to persistent fever without a clear focus, CT scan was performed, revealing swelling with suspicious fluid collections in the right hip, initially suspected as abscesses. Subsequent MRI detected a loculated fluid collection in the right medial thigh muscle layer, also initially deemed an abscess. Lab tests indicated mild leukocytosis and elevated C-reactive protein (CRP 1.4, WBC 11500), with no other specific findings. Despite empirical ceftriaxone administration, fever persisted even after its administration, prompting a change to teicoplanin due to difficulty in obtaining drainage or culture from the suspected thigh abscess area. Rising alkaline phosphatase (ALP) levels (1/15: 185, 1/18: 260) prompted a whole-body bone scan on 1/23, revealing heterotopic ossification (HO) in the right thigh and hip joints. After 4 weeks of antibiotics treatment, f/u CT(E) indicated decreased swelling, but newly observed multiple calcifications in the right hip, raising suspicion of myositis ossificans. Treatment involved discontinuing antibiotics and initiating conservative therapy with NSAIDs and ROM exercises, as surgery was deemed impractical due to the patient's condition and complications.

Discussion

MO, a self-limiting, reactive, bone-forming process of soft tissues, can mimic abscess or malignancy early in its development, particularly in the absence of characteristic presentation and imaging findings. Medical history, physical exams, and imaging aid diagnosis, with elevated alkaline phosphatase post-injury. In this case, despite antibiotics, the patient experienced intermittent fever, with a decrease in frequency over time but frequent instances of slightly elevated body temperature. While MO typically involves heat sensation and pain at the site, systemic fever may also be present. Although the patient had right thigh swelling, there was minimal local inflammation and heat sensation, and systemic fever intermittently occurred even after antibiotic administration. Hence, the cause of fever in this patient may be central fever due to pons intracerebral hemorrhage rather than an abscess. This case highlights diagnostic challenges in MO resembling abscesses, emphasizing accurate diagnosis and multidisciplinary management.

Figure 1. 1.9 CT(E)

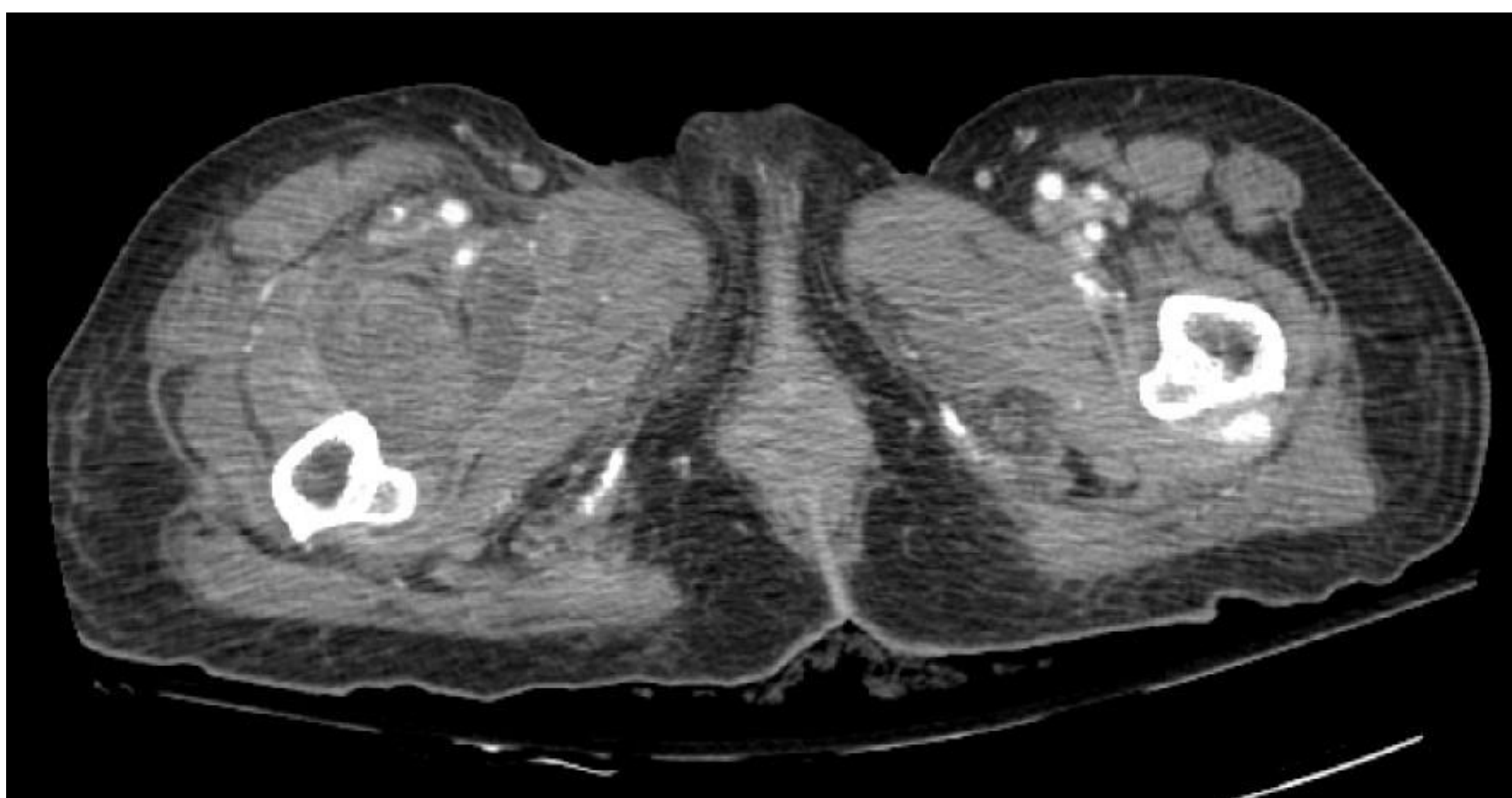


Figure 2. 1.9 MRI(E) T2

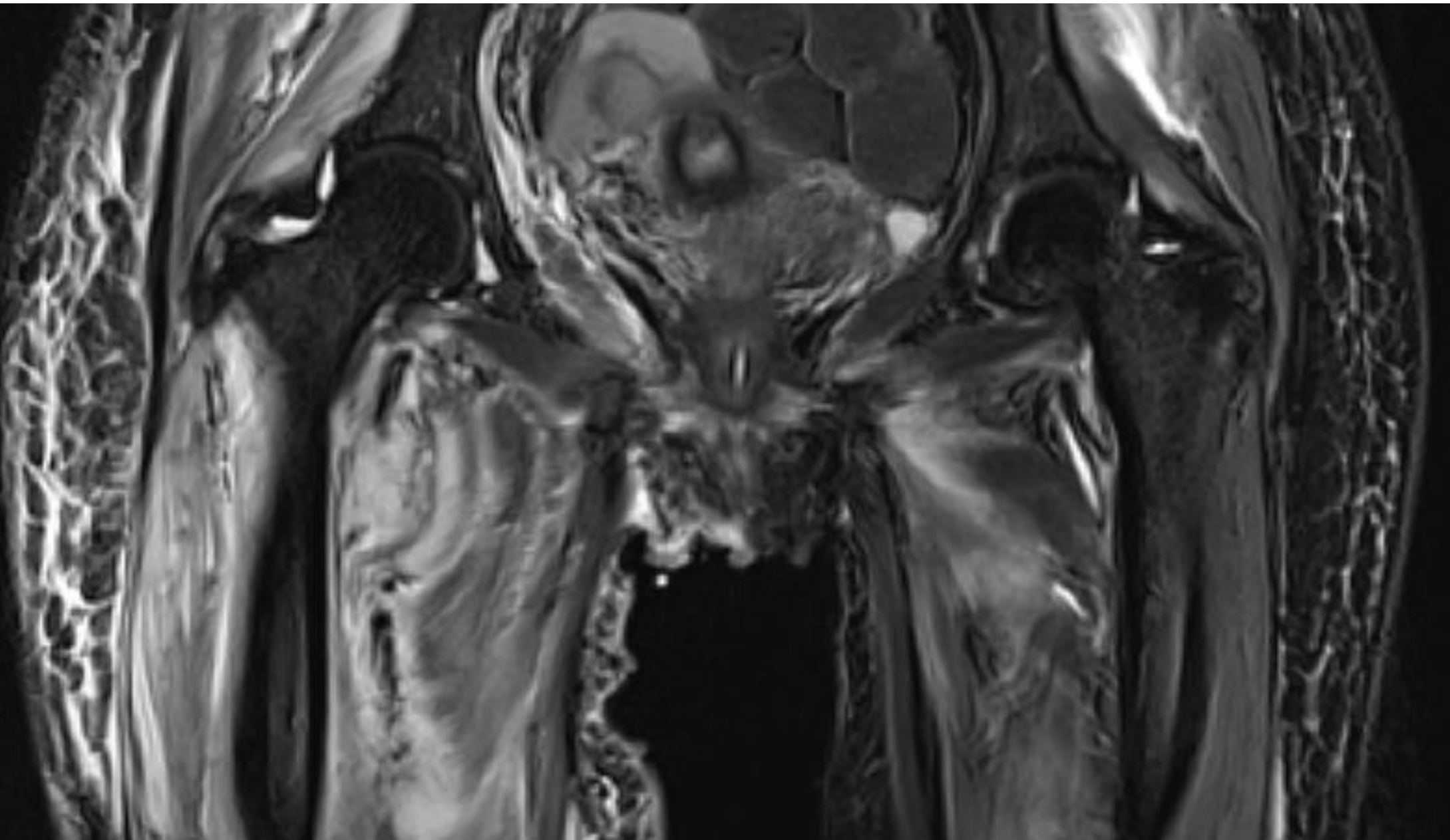


Figure 3. 2.5 CT(E)

