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Case Report

Primary Infective Pyomyositis of the Hip Abductors Presenting as Trochanteric Bursitis

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ABSTRACT

Introduction: Pyomyositis is an uncommon suppurative infection of skeletal muscle. In recent times, it is becoming more prevalent in the context of immunosuppression and diabetes and it is known to show a preponderance for pelvic girdle muscles. We present a case of a primary infective pyomyositis of the gluteal musculature in a diabetic patient which presented initially as a typical greater trochanteric bursitis.

Case Report: A 52 year old female presented with sudden onset left lateral thigh pain localized to the greater trochanteric region. Relevant comorbidities included a BMI of 35, uncontrolled non insulin-dependent diabetes mellitus and hypertension. Her HbA1c on presentation was 97mmol/mol. She had a raised CRP of 92 with a normal white cell count. MRI confirmed an ill-defined collection overlying the gluteal tendon insertions with extensive surrounding oedema. The patient was surgically managed and underwent incision and drainage through a direct lateral incision. Samples sent were positive for staphylococcus aureus and the patient was commenced on IV flucloxacillin. They progressed to a full recovery.

Conclusion: We recommend that consideration be given to infective pyomyositis in the differential for patients presenting acutely with trochanteric hip pain. Pyrexia, raised inflammatory markers and a history of diabetes mellitus or other immunosuppressive conditions should raise clinical suspicion for occult infection even in the setting of a common clinical complaint such as trochanteric hip pain. MRI is essential in achieving early diagnosis and surgical drainage and medical management can lead to a good clinical recovery.

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Introduction

Pyomyositis is an uncommon suppurative infection of skeletal muscle. In recent times, it is becoming more prevalent in the context of immunosuppression and diabetes and it is known to show a preponderance for pelvic girdle muscles [1, 2, 3]. The etiology of pyomyositis is thought to be through hematogenous spread of bacteria, often without a primary local wound or infection [4]. The most common organisms involved are associated with skin flora such as Staphylococcus Aureus, Staphylococcus Epidermidis and other local organisms [1]. Patients may present with non-specific lateral hip pain in the region of the greater trochanter. Progressive clinical deterioration with failure to respond to conservative measures such as analgesia and local steroid injections should raise suspicion for an infective

pyomyositis. Diagnosis can be confirmed with magnetic resonance imaging of the affected region.

Pyomyositis is rarely the primary suspected cause in a differential diagnosis and may be mistaken for an inflammatory bursitis or tendinopathy, both of which are much more common entities. Image-guided aspiration with drainage for culture and sensitivity is recommended to distinguish infected and aseptic pathologies. If an infective source is confirmed, antibiotics with surgical intervention may be required if image guided drainage is not adequately therapeutic. We present a case of a primary infective pyomyositis of the gluteal musculature in a diabetic patient which presented initially as a typical greater trochanteric bursitis.

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Case Report

I Presentation

A 52 year old female presented with sudden onset left lateral thigh pain localized to the greater trochanteric region. She had reduced mobility with swelling over the greater trochanter. Relevant comorbidities included a BMI of 35, uncontrolled non insulin-dependent diabetes mellitus and hypertension. Her HbA1c on presentation was 97 mmol/mol. She had a raised CRP of 92 with a normal white cell count. She presented at first to the emergency department and was managed conservatively with analgesia and NSAIDs with a provisional diagnosis of trochanteric bursitis.

II Investigations

Initial hip radiographs showed mild degenerative changes bilaterally only. Subsequently, an ultrasound was performed to confirm a suspected trochanteric bursitis. This was a technically difficult examination due to the patient's BMI. The only finding of note was a tear in the gluteus medius tendon with no discrete collections identified. We proceeded to MRI several days later as the patient's symptoms were progressively deteriorating. The MRI was performed with contrast using STIR sequencing (Figure 1). It confirmed a small defect in the gluteus medius tendon as seen on ultrasound but also detected an ill-defined 5.7 x 4.1 x 1.6cm collection overlying the gluteal tendon insertions with extensive surrounding oedema. Of note there was no hip joint effusion or marrow oedema affecting the femur or acetabulum.

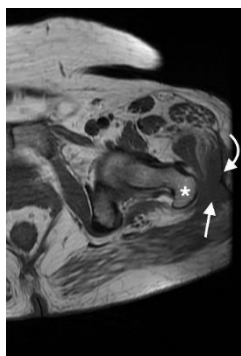


Figure 1: Transverse T1-weighted MRI image. This shows a hypointense abnormality (arrow) between the left greater trochanter (*) and the iliotibial band (curved arrow).

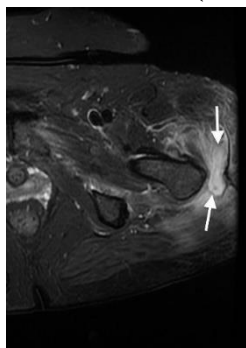


Figure 2: Transverse STIR image. Confirms that the abnormality on the T1-weighted image represents a fluid collection (arrows). There is florid oedema in the adjacent gluteal musculature, representing associated inflammatory change.

III Management

The patient was surgically managed. Incision and drainage were performed through a direct lateral incision over the greater trochanter under general anaesthetic. Three samples of purulent fluid were isolated from the collection and sent for culture and sensitivity. All three samples were positive for *Staphylococcus Aureus* and the patient was commenced on IV flucloxacillin initially which was ultimately changed to oral linezolid as the patient's inflammatory markers improved. She was discharged home well on a total of 8 days of oral linezolid.

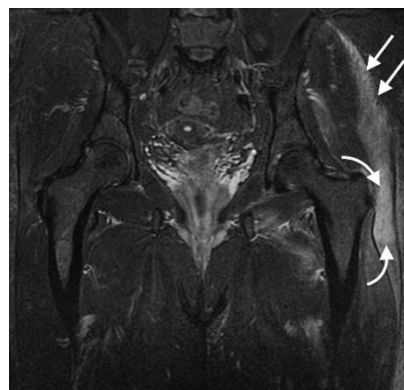


Figure 3: Coronal STIR image. The fluid collection superficial to the greater trochanter is again demonstrated (curved arrows). The oedematous change in the gluteal musculature (arrows) extends superiorly as far as the iliac crest. The extent of this oedema is much more than would be expected with a simple bursitis and strongly suggested an infective process

IV Follow up

A week following discharge, the patient was seen in our outpatient clinic. On examination, her pain had greatly improved, and the surgical incision was healing well. Her WCC and CRP had normalised at this time. Repeat follow up examinations in the clinic have shown an uncomplicated and complete recovery and our current goal is to help improve her glycaemic control with our diabetic liaison team.

Discussion

As previously mentioned, pyomyositis is now becoming more prevalent among immunosuppressed and diabetic populations [5, 6]. In general, the initial presentation of this condition may be in keeping with a typical greater trochanteric bursitis. In this case, radiographs and ultrasound investigations were non-diagnostic and so MRI was the investigative medium of choice for pyomyositis. In the early stages of development, antibiotics alone may suffice for treatment however, as in this case, once a collection or abscess has formed it requires formal surgical or radiographic-guided drainage. Complications of delayed diagnosis include progression to intractable symptoms, systemic sepsis and osteomyelitis [7, 8].

Conclusion

In conclusion, we recommend that consideration be given to infective pyomyositis in the differential for patients presenting acutely with trochanteric hip pain. Pyrexia raised inflammatory markers and a history

of diabetes mellitus or other immunosuppressive conditions should raise clinical suspicion for occult infection even in the setting of a common clinical complaint such as trochanteric hip pain. MRI is essential in achieving early diagnosis and surgical drainage and medical management can lead to a good clinical recovery.

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