Case Report

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Pyomyositis of Iliacus in an Adolescent: A Case Report

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Abstract

Pyomyositis of the iliacus muscle is rare in children and adolescents. It has an overlapping presentation with septic arthritis of the hip or spondylodiscitis. A 15-year-old boy presented with progressive left hip pain, fever, and limp. T2 weighted MRI images revealed hyperintensities in the iliacus and piriformis muscles. Open surgical drainage was performed with postoperative antibiotics. Hip arthrotomy was not carried out. Complete healing with resolution of symptoms occurred at 2 weeks. This case highlights the importance of prompt imaging and surgical intervention in managing rare musculoskeletal infections, as well as the need for clinicians to maintain a high suspicion for pyomyositis adjacent to the hip joint and avoid unnecessary arthrotomy.

Keywords: Pyomyositis, Iliacus, Hip, Case report

Introduction

Pyomyositis of the iliacus muscle is deep seated and poses a diagnostic challenge; clinical presentation is variable and may include buttock, hip or low-back pain, fever, and limp. Physical signs are often subtle and can mimic radicular pain or septic arthritis of hip leading to diagnostic uncertainty. Once diagnosed, the mainstay of treatment remains antibiotics with drainage of the abscess when required [1-4].

Case report

A 15-year-old boy presented with 10-day history of progressive pain in the left hip and buttock region. There was radiation of pain to the knee and limp. This was associated with fever of 1000 F for the same duration. A screening Magnetic resonance imaging (MRI) of spine and pelvis (Fig. 1) done elsewhere 3 days after symptom onset was suggestive of sacroiliitis. The total leukocyte count (TLC) was 11,000 cell/μL of blood, erythrocyte sedimentation rate (ESR) was 68 mm/hour and C-reactive protein (CRP) was 79 mg/dL. Considering a low to moderate grade of fever and involvement of the sacroiliac joint, the previous treating physician diagnosed tuberculosis of the left sacroiliac joint and commenced anti-tubercular therapy (ATT). On presentation at our center 10 days later, the patient had severe hip pain with inability to bear weight and a fever of 1000 F. On examination, the left hip was held in 10° flexion, and any active or passive movement was painful. Laboratory studies revealed total leukocyte count of 13,800 cell/μL and elevated inflammatory markers- (ESR – 68 mm/hour and CRP – 134 mg/dL). Plain radiograph of the hips was unremarkable (Fig. 2). Considering the clinical picture and the laboratory parameters, possibilities of pyogenic discitis, left sacroilitis and left hip septic arthritis were considered.

An MRI of the pelvis revealed left sided iliacus abscess measuring 6 × 3.5 × 2 cm (Fig. 3a) as well as a piriformis abscess measuring 3 x 1 x 1.5 cm (Fig. 3b). There was hyperintensity in the adjoining ilium, sacrum and left sacroiliac joint suggestive of oedema without abscess formation. A surgical drainage of pyomyositis was done using the lateral window of the ilioinguinal approach. Pus collection beneath the

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Figure 1: T2-saggital section of lumbo-sacral region showing no evidence of discitis

iliacus muscle was drained. Drainage of the piriformis abscess was performed using the Kocher-Langenbeck approach. The wounds were closed over negative suction drains. Cultures grew methicillin sensitive Staphylococcus aureus and appropriate antibiotics were started. After 4 days, the fever returned along with erythema and soakage of the anterior

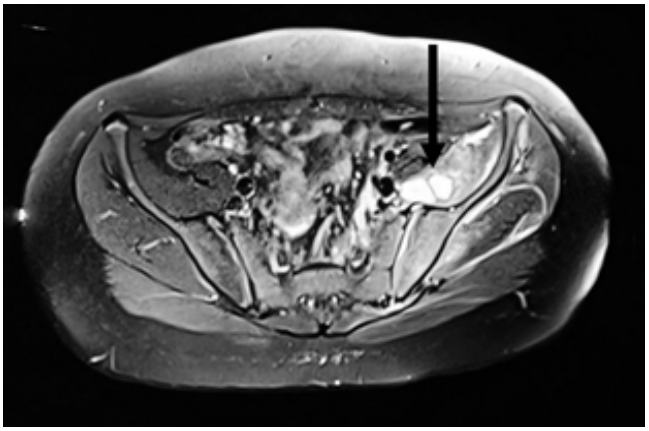

Figure 3a: Axial section of pelvis showing hyperintense focus in the left iliacus with oedema of surrounding fibers (black arrow)

Figure 3: Unremarkable antero-posterior radiograph of pelvis with both hips

wound site. A second debridement was done, and residual pus and clotted blood was evacuated and wound packed with gauze. Delayed closure was undertaken after 10 days. Intravenous antibiotics were administered for a total of 2 weeks followed by oral therapy for 4 weeks. At 2 weeks follow up, the boy reported complete resolution of pain, had regained full active and passive hip range of motion and was independently ambulant without aids. There was no recurrence of infection at last follow up, 4 months later.

Discussion

Any child presenting with pain in the hip region, fever, and inability to bear weight is considered as septic arthritis of the hip. Pyomyositis and osteomyelitis remain the most common conditions mimicking septic arthritis of the hip [5]. Tuberculosis of the sacroiliac joint is common in the developing world, requiring ATT for a period of 12 – 18

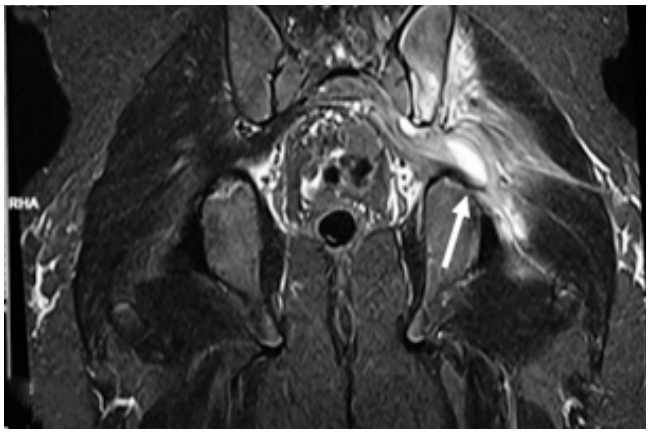

Figure 3b: Coronal MRI section of pelvis with both hips showing hyperintense shadow in the piriformis suggesting abscess along with oedema of surrounding fibers (white arrow)

months [6, 7]. Therefore, it is imperative to prove the diagnosis of tuberculosis prior to starting ATT by Biopsy, acid fast bacilli cultures or by cartridge-based nuclear acid amplification test (CBNAAT). Failure to diagnose adequately and starting ATT merely on suspicion may result in unnecessary treatment lasting for several months with its antecedent adverse effects.

Pyomyositis of the iliacus can sometimes be confused or be associated with sacroiliac joint involvement or adjacent iliac bone involvement. It can also be associated with pyomyositis of the short external rotators and obturator internus as well as osteomyelitis of pelvic bones, infection of the sacroiliac joints with spillover of the abscess into the muscles [8-10].

Magnetic resonance imaging (MRI) is the imaging modality of choice, defines the infective focus clearly and helps in deciding the area of surgical drainage [11-14]. Some of these patients may have a sympathetic effusion in the hip, which does not require arthrotomy. Aspiration of the hip carried out prior or at the time of surgical drainage of abscess clears the doubt; however, if pus or purulent fluid is aspirated, additional arthrotomy needs to be carried out [5]. Failure to correctly identify the focus of infection and opening the hip joint on presumptive diagnosis of septic arthritis in every hip pain associated with fever and inability to bear weight can result in unnecessary arthrotomy and increase the morbidity. This may also result in extended hospital stay, and the need for repeated surgeries [15].

Iliacus being a deep-seated muscle, gravity-dependent drainage is not possible. Primary closure of the wound in such situations can lead to a relapse of the infection. A delayed primary or secondary closure is recommended.

Conclusion

This case emphasizes the importance of maintaining a high index of suspicion for uncommon areas of pyomyositis in the hip region. Prompt imaging and surgical drainage of abscess has a favorable outcome in such cases.

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Declaration of patient consent : The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given the consent for his/ her images and other clinical information to be reported in the journal. The patient understands that his/ her names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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