Case Report

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Iliopsoas Abscess in Children - A Forgotten Diagnosis

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Abstract

Iliopsoas abscess is a rare diagnosis in children. We recently encountered two cases which were managed at our institution. A 11-year female presented with thigh and inguinal swelling while 3-year male child presented with limp and fixed flexion deformity of right leg. Due to the differing presentation, imaging studies are often important before management is planned. Ultrasound scan is the most common investigation followed by computerized tomography (CT) scan in a selected few. The girl underwent a CT scan followed by incision and drainage (I&D) of the iliopsoas abscess while the boy underwent ultrasound-guided pigtail catheter insertion. Both cases were successfully treated. Atypical presentation of iliopsoas abscess makes the diagnosis difficult and requires a high degree of clinical suspicion for making correct diagnosis. Imaging studies help with diagnosis in such cases. Less invasive techniques like image-guided aspiration and catheter drainage can be helpful in carefully selected cases.

Keywords: iliopsoas abscess, atypical presentation, percutaneous drainage, paediatric

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DOI- 10.13107/ijpo.2021.v07i02.107 | www.ijpoonline.com

Case 1

An 11-year-old girl presented with history of swelling in the left thigh and left inguinal region associated with fever for 15 days. Initially the thigh abscess was noted which was managed elsewhere by I&D. Following this, there was no respite in her fever or pain, and she developed an inguinal abscess. Clinically, the thigh abscess was deep seated, and the inguinal abscess was superficial one with no associated palpable lymph nodes. On further examination it was evident that on attempting to passively move the leg, there was expulsion of pus from the thigh abscess and arching of the back. This prompted us to consider the possibility of iliopsoas abscess. She further underwent a CT scan which showed a collection of 2.5 × 3 × 8 cm in the left iliopsoas muscle (Figure 1). After ruling out involvement of the spine and left hip joint, she underwent an I&D of the abscess described above. The collection was large and amenable to drainage through a flank incision. The pus sent for culture revealed methicillin-sensitive staphylococcus aureus (MSSA). She was treated with appropriate intravenous antibiotics and discharged. There was no recurrence of symptoms and movements of the left leg and hip have normalized.

Submitted: 5 June 2020; Reviewed: 21 August 2020; Accepted: 15 November 2020; Published: 10 May 2021

Figure 1: Computerized tomography scan of the girl with left iliopsoas muscle abscess

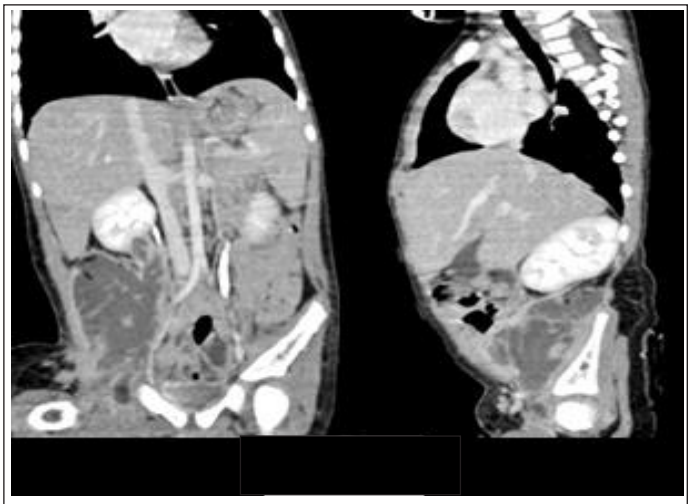

Figure 2: Computerized tomography scan of the boy with right iliacus muscle abscess

Case 2

A 3-year-old boy presented with a 5-day history of limping on the Right side. There was no history of fever. There was a flexion deformity of the hip and every attempt to extend the leg was excruciatingly painful. Radiographs of right hip along with the leg were performed to rule out involvement of the hip joint. A CT scan was also obtained which showed a collection of 2 × 3 × 5 cm in the right iliac muscle (Figure 2). The spine and hip joint were not involved. This child underwent an ultrasound-guided pigtail catheter (10 French) insertion. The location of the abscess was within the pelvis and drainage with an incision was not an easy option compared to catheter drainage. The pus culture revealed methicillin resistant staphylococcus aureus (MRSA) and he received appropriate intravenous antibiotics. The flexion deformity improved, and he could extend the right leg actively without pain. The catheter was kept in situ for 5 days and removed following a check ultrasound scan. There was no recurrence of symptoms or restriction in movement.

Discussion

The iliopsoas compartment is an extraperitoneal space which extends from the posterior mediastinum to the hip joints. It contains the psoas major, psoas minor and iliacus muscles which are primarily involved in the flexion of the hip joint [1]. The most common pathology affecting the iliopsoas space is inflammation followed by hemorrhage and neoplasia [2].

The most common symptoms of iliopsoas abscess are fever, pain and limp. Most cases present with at least one of the above symptoms. Other signs include fixed flexion deformity of the affected thigh and pain on passive or active extension. Due to the close proximity of the hip joint and other intraabdominal structures, differential diagnoses include septic arthritis of hip joint, osteomyelitis or appendicular lump. Laboratory investigations show elevated blood counts with neutrophilia and elevated C–reactive protein. Blood culture is positive in about one-third of cases [3].

The pathogenesis is different in the paediatric and adult populations. It is mostly due to a primary infectious process in children while it is following contiguous spread of infection in adults. Spread of infection from spine, kidneys, appendicitis or retroperitoneal lymphadenitis is less common in children, with the exception of those who are immunocompromised [4].

Investigations of importance are the X-ray spine with hip joints which can either direct towards the cause of abscess or rule out other differentials. Ultrasound of abdomen and pelvis helps in identifying the origin and extent of collection which will help plan the management. Joint effusion and other pathologies can also be confirmed or ruled out by sonography. Due to the varied presentation of iliopsoas abscess and the associated differentials, a computerized tomography may sometimes be necessary while investigating such cases [5].

Staphylococcus aureus is the most commonly isolated organism. Others include Staphylococcus hominis and Klebsiella pneumoniae [6].

Management includes administration of intravenous antibiotics and open or percutaneous drainage. Ultrasound guidance helps in performing percutaneous drainage procedures with or without catheter insertion. For large and long-standing cases, open drainage provides better results than percutaneous methods [7].

Conclusion

Paediatric iliopsoas abscess is a rare condition. It is associated with atypical presentation and such cases cause delay in diagnosis. High degree of clinical suspicion and imaging techniques will help in an accurate diagnosis. Timely intervention through intravenous antibiotics with open or percutaneous drainage will prevent further insult. Less invasive procedures such as pigtail catheter drainage can alone suffice in selected cases.

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

Conflict of interest: Nil; **Source of support:** None

References

1. Cronin CG, Lohan DG, Meehan CP, Delappe E, McLoughlin R, O'Sullivan GJ, et al. Anatomy, pathology, imaging and intervention of the iliopsoas muscle revisited. Vol. 15, Emergency Radiology. 2008. p. 295-310.

2. Wong-Chung J, Bagali M, Kaneker S. Physical signs in pyomyositis presenting as a painful hip in children: A case report and review of the literature. Vol. 13, Journal of Pediatric Orthopaedics Part B. 2004. p. 211-3.

3. Wang E, Ma L, Edmonds EW, Zhao Q, Zhang L, Ji S. Psoas abscess with associated septic arthritis of the hip in infants. J Pediatr Surg. 2010 Dec;45(12):2440-3.

4. Elliott C. Paediatric Iliopsoas abscess: A case report. Australas J Ultrasound Med. 2013 Nov;16(4):198-201.

5. Dietrich A, Vaccarezza H, Vaccaro CA. Iliopsoas abscess: Presentation, management, and outcomes. Surg Laparosc Endosc Percutaneous Tech. 2013 Feb;23(1):45-8.

6. López VN, Ramos JM, Meseguer V, Pérez Arellano JL, Serrano R, Ordonez MAG, et al. Microbiology and outcome of iliopsoas abscess in 124 patients. Medicine (Baltimore). 2009 Mar;88(2):120-30.

7. Zhou Y, Li G. Diagnosis and management of complicated intra-abdominal infection in adults and children: Guidelines by the Surgical Infection Society and the Infectious Diseases Society of America. Chinese J Infect Chemother. 2010 Jul 20;10(4):241-7.

How to Cite this Article

Raj V, Chinya A, Sardessai S, Vernekar J | Iliopsoas Abscess in Children - A Forgotten Diagnosis | International Journal of Paediatric Orthopaedics | May-August 2021; 7(2): 17-19.