Journal of Orthopaedic Reports 2 (2023) 100165

Contents lists available at ScienceDirect

Journal of Orthopaedic Reports

journal homepage: www.journals.elsevier.com/journal-of-orthopaedic-reports

Case Report

Ischiofemoral impingement caused by an intrapelvic lipoma of the sciatic nerve - A rare case presentation

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ARTICLE INFO

Keywords:
Sciatica
Radiculopathy
Ischiofemoral impingement
Magnetic resonance imaging
Lipoma

ABSTRACT

Introduction: Sciatica referring to radicular pain that travels along the path of the sciatic nerve in the affected lower limb is a common complaint and traditionally due to lumbar spine nerve impingement. There can be multitude of entities responsible for its aetiology and may mimic other pathologies. Ischiofemoral impingement (IFI) due abnormal contact between the lesser trochanter of the femur and the ischium leading to compression of nearby soft-tissue structures such as Quadratus Femoris muscle may imitate sciatica.
Case report: We report a rare cause of Ischiofemoral impingement (IFI) due to a lipoma causing impingement of the sciatic nerve presenting as sciatica, left lower limb radiculopathy posing a diagnostic dilemma.
Conclusion: This case-report highlights the importance of a thorough clinical evaluation, a high index of suspicion and critical role of cross-sectional imaging in reaching a conclusive diagnosis and effective patient management.

1. Introduction

Ischiofemoral impingement (IFI) is an increasingly recognised condition due to reduced distance between the lesser trochanter of the femur and the ischium leadingly to compression of adjacent structures. IFI typically presents as chronic pain in the hip region, groin and/or buttock and may radiate distally.[1] Characteristically the condition is associated with abnormalities of the Quadratus Femoris muscle (edema, tears or atrophy); however the symptoms may mimic surrounding pathologies such as iliopsoas tendonitis, hamstring injury, piriformis syndrome or bursitis.[1,2] IFI typically affects middle-aged or elderly women with insidious onset of symptoms. Initially described by ***Johnson*** in 1977 in patients presenting with persisting pain after total hip replacement, our case description highlights a rare presentation of the condition due to compression of the sciatic nerve in the Ischiofemoral space (IFS) due to an intra-pelvic lipoma. It raises awareness of the condition and role of cross-sectional imaging in effective management of the patient.[3,4]

2. Case report

A 75-year-old female patient presented with a 5- month history of insidious onset of twitching and left leg pain not responding after trying home treatments or regular painkillers. There was no history of antecedent trauma but she was on surveillance for her treated carcinoma of breast. She walked with an antalgic gait. Though she had low back pain, she pointed to her pain originating in the buttock and radiating downwards in the left leg. Clinical examination revealed an increased lumbar lordosis with altered sensation in the left sciatic nerve distribution. Passive straight leg-raising (SLR) test evoked her symptoms at an arc of 50° with further aggravation of pain during passive dorsiflexion of the ipsilateral ankle and the foot. There was no motor deficit in the leg (L1-S3) and a normal plantar response. Hip rotations were free with no tenderness over the sacro-iliac joints.

The patient underwent a magnetic resonance imaging (MRI) of lumbar spine and pelvis to explore the sit and cause of her pain. MRI scan of the lumbar spine revealed no evidence of metastasis or nerve root compression. However, the MRI of the pelvis demonstrated a large (9.5 cm × 7 cm x 4 cm) lipoma involving the ischiofemoral space (IFS). The deep, intrapelvic, lipoma was closely related and causing impingement of left sciatic nerve. The lipoma was hyperintense to muscle on T1 and exhibited homogenous signal suppression on fat suppression sequences. The sciatic nerve displaced posteriorly by the lipoma as depicted in Figs. 1 and 2. The ischiofemoral interval on the left was 2.3cm (right - 2.8 cm) The muscles in particular the hamstrings, iliopsoas, and the glutei

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https://doi.org/10.1016/j.jorep.2023.100165
Received 6 February 2023; Received in revised form 9 March 2023; Accepted 10 March 2023
Available online 13 April 2023
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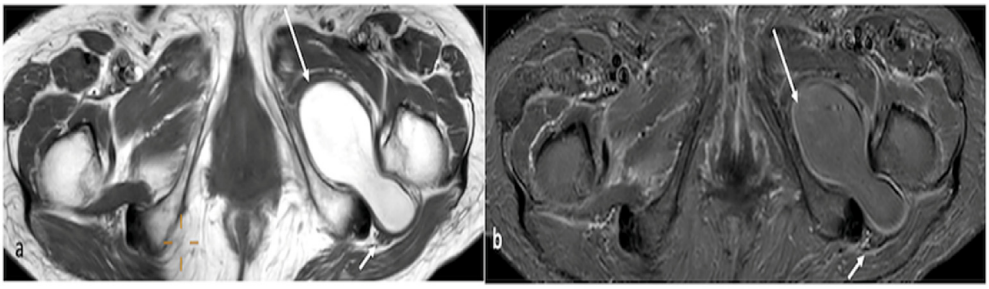


Fig. 1. Axial T1 (a) and STIR (b) showing large lipoma (long arrow) in the left ischiofemoral interval with posterior displacement of left sciatic nerve (short arrow).

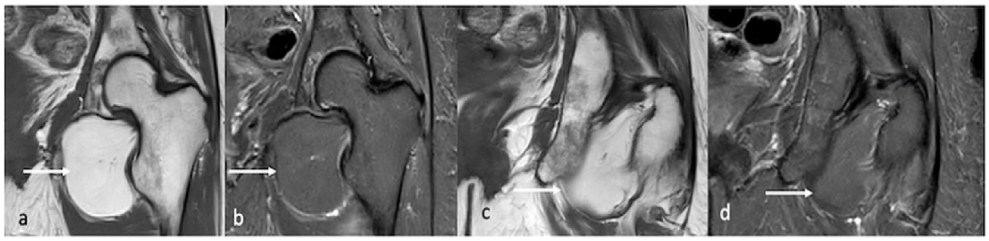


Fig. 2. Coronal T1 (a and c), STIR (b and d) sequences showing large lipoma in the left ischiofemoral interval (arrow).

were normal. There was no edema in relation to the quadratus femoris. The femoral head, neck and ischium in particular were normal. No ischial trochanteric, iliopsoas or subgluteal bursitis was noted.

A diagnosis of Ischiofemoral impingement (IFI) secondary to narrowing of the IFS due the space occupying lesion of lipoma causing impingement of left sciatic nerve was made and she was referred to the tertiary surgical oncology centre for planned excision of the swelling.

3. Discussion

Ischiofemoral impingement (IFI) is an intriguing condition characterised by abnormal contact between the lesser trochanter of the femur and the ischium thereby reducing the Ischiofemoral space (IFS) and/or quadratus femoris space (QFS) leading to symptoms of hip, buttock or referred pain in the ipsilateral leg.[1,2,5]

Traditionally seen in middle-aged or elderly women, it was initially described by Johnson in 1977 in patients presenting with persisting pain after total hip replacement.[6] However, Ischiofemoral impingement (IFI) has been increasingly reported in patients with no previous history of trauma or who have undergone surgical operations in this region and even in the paediatric age group.[7,8]

Clinically, the diagnosis can be delayed due to its insidious onset, vague symptoms and overlapping features with other common conditions such as iliopsoas tendonitis, hamstring injury, piriformis syndrome or snapping hip syndrome or lumbar radiculopathy.[9] The presence of sciatica like symptoms and history of malignancy in our patient made us suspect a spinal lesion.

There are congenital or acquired reasons for a narrowing of the ischiofemoral space (IFS) with characteristic features of affliction of the Quadratus Femoris muscle due to compression or impingement.[1,2] Cross-sectional Imaging modalities such as dynamic ultrasound and magnetic resonance imaging (MRI) play a crucial role in establishing diagnosis and guide management.[2,3,9,10]

MRI in our patient was able to demonstrate deep, intrapelvic, lipoma involving the ischiofemoral space (IFS) and causing impingement of left sciatic nerve leading to her symptomatology. This case report demonstrates the need of an high index of suspicion, awareness of condition of Ischiofemoral impingement (IFI) which may present as left lower limb radiculopathy mimicking a spinal lesion but could be due an unusual deep, intrapelvic pathology such as lipoma impinging on the sciatic nerve.

Author contributions

MJ, KPI, DB, and RB equally contributed for the manuscript.

Funding sources

Nil.

Institutional ethical committee approval

Not required.

Patient/guardian consent

Patient's consent has been obtained for publication of the images for scientific purpose.

Declaration of competing interest

Nil.

Acknowledgments

Nil.

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