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Ischio-Femoral Impingement Syndrome- A Case Report

M. Mekouar[1*], Z. Maflah[1], M. Ouali Idrissi[1], B. Boutakioute[1], N. Cherif Idrissi Gannouni[1]

[1]Radiology Department of the Marrakech Mohamed VI University Hospital

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***Corresponding author:** M. Mekouar
Radiology Department of the Marrakech Mohamed VI University Hospital

Abstract | **Case Report**

Ischio-femoral impingement syndrome is a rare cause of hip pain caused by narrowing of the ischio-femoral space and associated abnormalities of the quadratus femoris muscle. Imaging findings also include an increased ischial angle and increased femoral angle. Causes of IFI are innumerable and range from congenital causes such as coxa valga and developmental dysplasia of the hip to acquired causes such as intertrochanteric femoral neck fractures, or total hip arthroplasty. Treatment varies from conservative to endoscopic surgery.

Keywords: Ischiofemoral Impingement, Hip Pain, Narrow Ischiofemoral Space, Extra-Articular Hip Pathology, Sciatic Nerve Entrapment, Female Musculoskeletal Disorders.

INTRODUCTION

Ischiofemoral impingement syndrome (IFIS) is a rather rare and underrecognized clinical entity characterized by chronic groin, buttock or hip pain. Imaging plays a fundamental role in diagnosing this condition by providing evidence of narrowing of the space between the lesser femoral trochanter and the ischial tuberosity [1].

The exact prevalence of IFIS is still to be determined as this entity remains poorly understood [2].

It was first described in 1977 by Johnson in three patients with persistent hip pain after hip surgery, namely total hip arthroplasty or proximal femoral osteotomy [3].

Nowadays nonetheless, cases of IFIS affecting native hip joints of patients without a previous history of surgery or trauma are being reported [4-6].

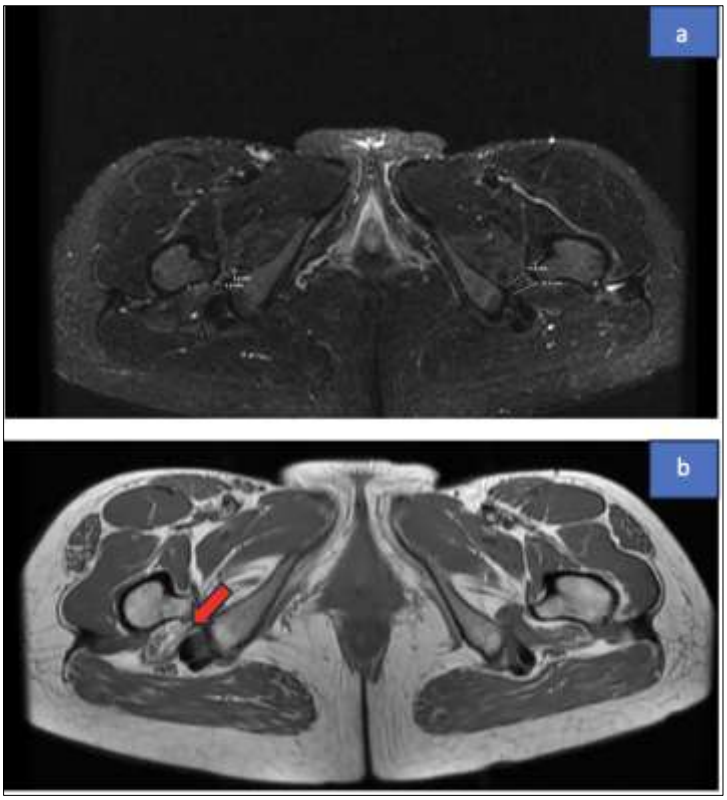
Treatment can range anywhere from conservative options such as activity, restriction, NSAIDS, and CT or US guided steroid or local anesthetic injections to endoscopic surgery [7].

CASE REPORT

A 52-year-old woman presented with progressive right buttock and groin pain radiating to the posterior thigh, worsening with walking and long strides. No prior trauma or surgery was reported. Clinical exam showed pain on hip extension, adduction, and external rotation, with tenderness over the ischiofemoral space.

Pelvic radiographs were normal. MRI revealed narrowing of the ischiofemoral space (5.4 mm) and quadratus femoris space (7 mm), with T2 hyperintensity in the quadratus femoris muscle, confirming a diagnosis of ischiofemoral impingement syndrome [7-11].

Management was conservative with NSAIDs, physiotherapy, and activity modification, leading to marked clinical improvement over 8 weeks.



a- Axial: T1W and PDFS MRI images, showing reduction of the right ischiofemoral space compared to the left
b- Axial: T1W image: subtle fatty atrophy of the right quadratus femoris muscle (red arrow)

DISCUSSION

Ischiofemoral impingement syndrome (IFIS) is defined as symptomatic narrowing of the space between the ischial tuberosity and the lesser trochanter, causing entrapment of soft tissues like the quadratus femoris, hamstring tendons, or iliopsoas tendon [7-11]. It primarily affects middle-aged women, representing up to 75.9% of cases in some series [8-10], but has also been observed in men, children, and post-operative hips [3-9].

Clinically, IFIS presents with progressive buttock, hip, or groin pain, worsened by hip extension, adduction, or long strides, and sometimes radiates to the knee or mimics sciatica [7–14]. Etiologies include congenital factors (e.g., coxa valga, dysplasia) and acquired causes (e.g., fractures, osteoarthritis, hip arthroplasty, tumors, abductor insufficiency) [7–17].

Differential diagnoses are broad, ranging from lumbar radiculopathy to piriformis syndrome and labral tears (16–20). While X-rays may appear normal, MRI is crucial, revealing a reduced ischiofemoral (<15 mm) or quadratus femoris space (<10 mm), often with T2 hyperintensity of the quadratus femoris [8-11]. Other MRI signs include increased ischial and femoral neck angles, which were statistically significant in IFI populations [21–23].

Treatment is generally conservative: rest, NSAIDs, physiotherapy, and image-guided steroid injections. Surgical decompression may be considered in refractory cases, typically by resecting the posterior part of the lesser trochanter

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