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## Musculoskeletal

## Acetabular paralabral cyst causing compression of the sciatic nerve

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## ABSTRACT

Acetabular paralabral cysts are common. They vary in their clinical presentation and may be asymptomatic or cause pain and restriction at the hip joint. In rare instances they may cause symptoms by compressing local neurovascular structures. We report a case of symptomatic compression of the sciatic nerve by a posteriorly displaced acetabular paralabral cyst.

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## Case report

A 30-year-old woman was referred to the orthopedic clinic for assessment of progressive symptoms of left hip, thigh, and gluteal pain over the course of several months. The severity of the pain fluctuated, and the pain occasionally radiated to the left foot. Physical findings included limited external rotation of the left hip joint and a normal straight leg raise test. Sensation was intact with focal discomfort over the left gluteal region. No motor deficits were reported. Recent X-rays of the

left hip and a magnetic resonance imaging (MRI) of the lumbar spine were normal.

3T MRI of the pelvis was performed. Imaging showed a lobulated 2-cm T2 hyperintense structure arising from the posterior labrum and protruding posteriorly to abut the left sciatic nerve (Fig. 1). There was associated STIR signal hyperintensity in the left sciatic nerve (Fig. 2A and B). The findings were consistent with a left acetabular paralabral cyst (APLC) impinging on the left sciatic nerve.

The patient was managed conservatively because of the perceived high risk of sciatic nerve damage during surgery.

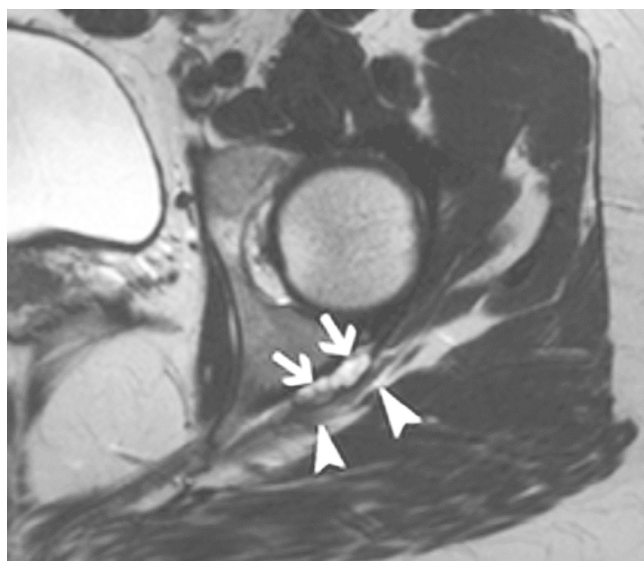
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**Fig. 1 – Axial T2-weighted image showing a lobulated 2-cm hyperintense structure arising from the posterior acetabular labrum (arrows) consistent with a paralabral cyst. Arrowheads show the adjacent left sciatic nerve.**

## Discussion

Acetabular paralabral cysts (APLCs) are common. They have been described in up to 26.2% of asymptomatic hips [1]. They are invariably associated with acetabular labral tears [2].

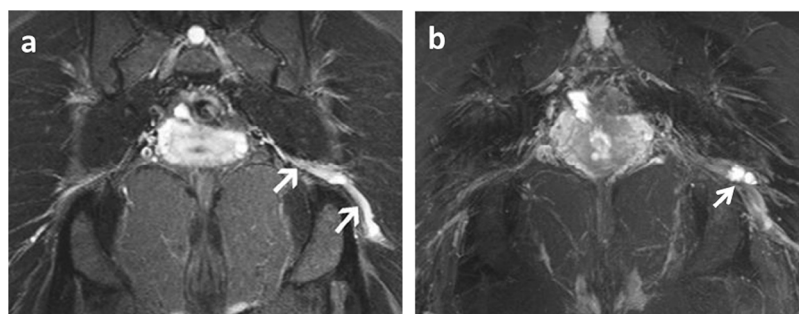
APLCs vary widely in their clinical presentation. They may be completely asymptomatic, or they may produce hip pain severe enough to warrant surgical intervention [1,3,4]. Pain is typically sharp and sudden and may be associated with clicking, popping, and snapping at the hip. Patients may also describe locking of the joint or restriction of rotational movements. Some of the symptoms experienced by patients with APLCs relate to underlying labral pathology [2]. On rare occasions, paralabral cysts at the hip have caused symptoms through compression of local neurovascular structures such as the femoral vein and the femoral, obturator, and sciatic nerves [5–9].

The term sciatica describes pain in the lower back and hip that radiates down the back of the thigh into the leg [10]. It is extremely common and carries a lifetime incidence of 13%–40% [11]. The sciatic nerve is formed from divisions L4–S3 of the lumbosacral plexus. The sciatic nerve emerges from the pelvis through the greater foramen and courses inferolaterally. It supplies the muscles of posterior thigh, leg, and foot, and provides sensory innervation to the skin of most of the leg and the foot [10]. The most common cause of sciatica is prolapse of an intervertebral disc with compression of the L5 or S1 component of the sciatic nerve. Other less frequent causes of sciatica include piriformis syndrome, sacroiliitis, pelvic trauma, or tumor [9,10].

This paper presents an unusual instance of an APLC causing symptomatic compression of the left sciatic nerve. The case underlines the fact that the radiologist should consider an APLC in the investigation of sciatica in the presence of a normal MRI of the lumbar spine.

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**Fig. 2 – (A) Coronal short tau inversion recovery image showing hyperintensity of the left sciatic nerve (arrows) and (B) coronal maximal intensity projection image showing lobulated hyperintense paralabral cyst (arrow) insinuating into the sciatic nerve.**

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