

Beyond Radiculopathy: A Missed Sciatic Nerve Sheath Tumor Mimicking Radicular Pain

Antoine Sioufi, MD, Ramsis Ghaly, MD, Taruna Penmetcha, MD
John Stroger Hospital of Cook County, Chicago, IL

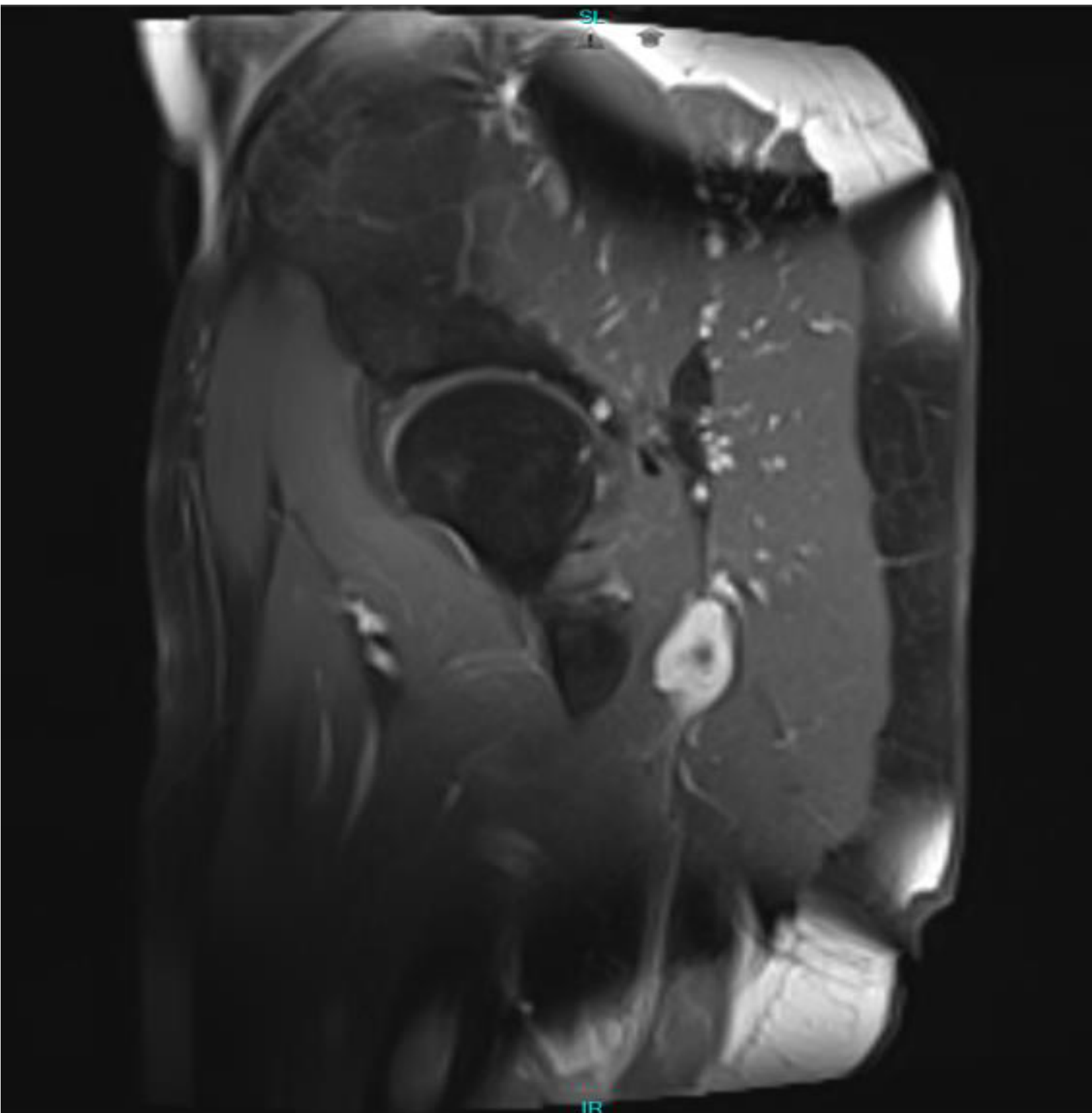


INTRODUCTION

Lumbar radiculopathy commonly causing lower extremity pain is often attributed to degenerative spinal pathology [2]. However, when patients fail to respond to conventional treatments, it is imperative to reassess the diagnosis and consider less common etiologies. This case highlights a patient initially diagnosed and treated for lumbar radiculopathy who continued to experience progressive symptoms despite multiple interventional and conservative therapies. Further investigation ultimately revealed a sciatic nerve tumor as the underlying cause of the persistent pain.

CASE PRESENTATION

A 64-year-old male presented with progressively worsening low back and left leg pain for seven months, clinically resembling L5 radiculopathy. The pain was disabling, rendering him largely sedentary. An initial lumbar spine MRI showed Grade 1 spondylolisthesis and moderate lateral recess stenosis. Patient was referred for PT and started on conservative management. He subsequently underwent a left L4-5 lumbar epidural steroid injection without relief, followed by a sacroiliac joint injection, also ineffective. With persistent symptoms, further investigation was pursued with MRI of the left hip, which revealed a 2.4 x 1.9 x 1.5 cm elongated, homogenous mass adjacent to the sciatic nerve and common hamstring tendon—suspicious for a nerve sheath tumor. On examination, the patient had a positive straight leg raise on the left, localized tenderness in the left gluteal region that reproduced sharp, electric pain radiating down the leg, and a positive Tinel’s sign over the sciatic nerve. He was unable to bear weight on the left leg, had noticeable limping, and exhibited profound motor weakness (2–3/5) in both dorsiflexion and plantarflexion. Given the clinical and radiographic findings, the patient elected to undergo surgical resection of the mass. Postoperatively, he experienced full neurological recovery and complete resolution of pain.



Differential diagnosis Lumbosacral Radiculopathy vs. Sciatic Nerve Tumor		
Feature	Lumbosacral Radiculopathy	Sciatic Nerve Tumor
Etiology	Nerve root compression (e.g., disc herniation, stenosis)	Neoplasm of sciatic nerve (schwannoma, neurofibroma)
Pain Character	Sharp, burning, radiating along nerve root	Constant aching, electric-shock pain on palpation
Aggravating Factors	Sitting, bending, coughing	Direct pressure, sitting, palpation of mass
Neurological Findings	Dermatomal sensory loss, reflex changes, myotomal weakness	Diffuse weakness/sensory loss; non-dermatomal
Straight Leg Raise	Often positive	May be positive but less specific
Tinel’s Sign	Typically negative	Often positive over sciatic notch or buttock
Pelvic/Hip MRI	Not standard initially	Key to diagnosis; shows mass along nerve
Response to Spine Injections	May improve symptoms	Typically no improvement
Definitive Treatment	Conservative, injections, decompression surgery	Surgical resection
Prognosis	Good with appropriate care	Good if diagnosed early and resected

DISCUSSION

This case underscores the importance of maintaining a broad differential when evaluating lumbosacral radiculopathy. While disc herniation is common, extraspinal causes such as peripheral nerve tumors must be considered, especially when patients fail to respond to standard interventions. Our patient received two spinal injections with no relief before further imaging revealed a sciatic nerve sheath tumor [3,4]. A detailed physical exam—including focal tenderness, Tinel’s sign, and profound weakness—offered key clues missed on initial evaluation. As Ghaly et al. emphasize, MRI should precede spinal injections to avoid misdiagnosis and guide appropriate management [1]. Hands-on assessment, anatomical knowledge, and clinical awareness are essential in identifying atypical pain generators and avoiding treatment delays. Comprehensive evaluation is critical for accurate diagnosis and optimal outcomes in refractory lumbosacral pain.

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