

# Case Report on Incidental Diagnosis of Nerve Sheath Tumor in a Patient with Thigh Pain and Back Pain

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## ABSTRACT

We report a case of 28-year-old female who presented with progressively worsening low back pain since 1 year and anterolateral thigh pain since one and half months. Anterolateral thigh pain is not an uncommon condition in pain management practice and it is usually due to entrapment of lateral femoral cutaneous nerve. It can be associated with low back pain which can commonly be of diskogenic origin especially in patients of younger age group. On clinical evaluation, prima facie this patient's symptoms appeared to be due to meralgia paresthetica with lumbar diskogenic pain. However, on investigation it has been found that a nerve sheath tumor was responsible for the patient's symptoms. This case underlines the need of an open approach during the evaluation of the patient even if the case appears to have spot diagnosis.

**Keywords:** Anterolateral thigh pain, Back pain, Nerve sheath tumor.

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## INTRODUCTION

Chronic low back pain is one of the most common entity one encounters in pain management practice. Common causes of chronic low back pain include diskogenic causes, facet joint arthropathy, ligament sprain, myofascial pain syndromes, and vertebral fractures.<sup>1</sup> The most common cause of the radiating low back pain is prolapsed intervertebral disk<sup>2</sup> though one should be aware of other causes. Also, presentation of pain along anterolateral aspect of thigh is not uncommon and is usually due to entrapment of lateral femoral cutaneous nerve. We report a case of 28-year-old female who presented with low back pain and also anterolateral thigh pain on right side. Contrary to common diagnosis as mentioned above, it turned out to be due to nerve sheath tumor.

## CASE DESCRIPTION

A 28-year-old female came with the complaint of pain over the right anterolateral aspect of thigh since one and half months. Pain was associated with tingling and numbness; and it was nonprogressive in nature. History was suggestive of no motor weakness. On numerical rating scale (NRS), pain score was 6–7 and neuropathic pain score was 8 based on the pain detect tool. Also, patient had history of dull aching low back pain since 1 year with pain worsening progressively over the period of time. It was diffuse, poorly localized at upper lumbar region, nonradiating, and not associated with neuropathic features of pain. Patient denied any history of trauma. No aggravating or relieving factors were reported. There was no significant medical or surgical history.

On examination, vital signs were within normal limits. Forward bending of the back reproduced the back pain. Deep percussion of back was painful at L2 and L3 levels. However, palpation was not painful. Sensation to touch was diminished by 30% on right side at L2/L3 dermatome as compared to left side. Motor examination and reflexes were normal for both the lower limbs. Straight leg raising test was negative bilaterally; Tinnel's sign was negative for lateral cutaneous nerve of thigh. On per abdominal examination, no abnormality detected. There was no significant medical or surgical history.

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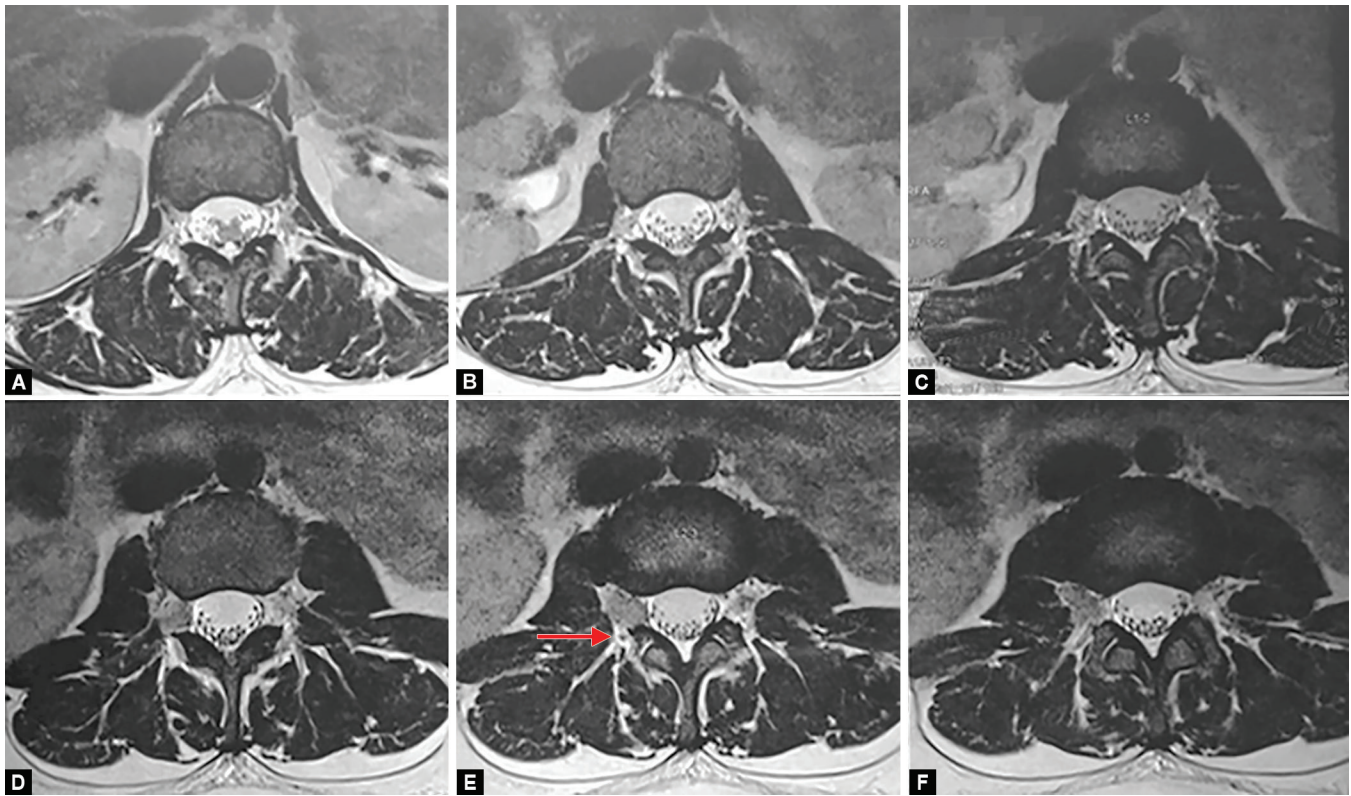
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Magnetic resonance imaging for lumbosacral spine was advised, which showed 10 × 6 mm well-defined T2 hyperintense lesion at right L2–L3 neural foramen suggestive of nerve sheath tumor. So the patient was referred to the spine surgeon for further management.

## DISCUSSION

Pain over the anterior and the anterolateral aspect of thigh is not an uncommon complaint. Causes of anterior and lateral thigh pain include pain arising from the hip joint such as osteoarthritis, acetabular labral tear, femoroacetabular impingement, stress fracture, hip joint laxity; gluteal tendinopathy, trochanteric bursitis, and myofascial pain syndrome.<sup>3</sup> Neuropathic pain over the anterior and anterolateral aspect of thigh is principally due to anterior cutaneous branch of femoral nerve and lateral femoral cutaneous nerve, respectively.<sup>4</sup> Entrapment of lateral femoral cutaneous nerve, i.e., meralgia paresthetica, is one of the most common causes of anterolateral thigh pain with the incidence rate of 4.3 per 10,000 persons per year and is more common in age group of 20–40.<sup>5</sup> In this case, prima facie meralgia paresthetica appears to be the diagnosis. But it can also be the presentation of radicular pain arising from L2 and L3 nerve roots.



Figs 1A to E: MRI showing nerve sheath tumor

The back pain was reproducible on forward flexion and also deep percussion was painful, which is suggestive of pathology arising from the deeper structure of the spinal column. This can be diskogenic pain or pain due to vertebral compression fracture.<sup>1</sup>

However, this could not explain the association of back pain and thigh pain. Moreover, back pain was progressively worsening and was preceded by the thigh pain. This can be a clue that pathology arising from deeper structure of spinal column can also be the cause for thigh pain apart from back pain. Back pain with duration of more than 6 weeks is a red flag and imaging study is indicated for the evaluation.<sup>6</sup> So magnetic resonance imaging (MRI) was advised which showed nerve sheath tumor at right L2–L3 neural foramen. Incidence of neural foraminal tumors is 1–5%.<sup>7</sup> Most common nerve sheath tumors of the spine are solitary spinal nerve schwannomas or neurofibromas.<sup>8</sup> Most commonly affected age group is from 25 years to 50 years. These tumors arise from sensory nerve roots, are encapsulated and well-defined, and separated from other rootlets.<sup>9</sup> These tumors most commonly present with pain which is followed by sensory abnormalities, most commonly paresthesia. Motor deficit is uncommon initially. MRI is the gold standard for diagnosis and surgical resection is the gold standard for treatment of spinal schwannoma.<sup>8</sup> So referral to spine surgeon is necessary for adequate management of such patients (Fig. 1).

## CONCLUSION

Based on the evaluation of this case, we are of the opinion that clinicians should always be open to and search for uncommon incidental pathologies which can mimic the common pathologies like in our case where prima facie clinical presentation could suggest

a diagnosis of meralgia paresthetica with the intervertebral disk or the vertebral disease.

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