

## Peripheral Nerve Tumor can Present as Sciatica - A Case Report -

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### ❖ Abstract ❖

Back pain associated with unilateral leg pain is the commonest presentation of intervertebral disc prolapse. However, these symptoms can be unrelated. Here we present a case involving a 40 year old female who presented with back pain and sciatica type pain in 1999 and treated accordingly before being correctly diagnosed as having Schwannoma/ Neurofibroma from tibial nerve in 2004. She was treated by dissecting the tumor from the nerve, keeping it intact with satisfactory postoperative results.

The current report shows that, in an out-patient clinic, it is important to acknowledge peripheral nerve tumors as a differential diagnosis of neuropathic pain in the lower extremity and also to have a high index of suspicion for these tumors for a diagnosis to be made, to avoid causing prolonged patient suffering.

### ❖ Case Report ❖

A 40-year-old woman, child minder by profession, was referred by general practitioner in September 1999 with a 1 year history of low back pain. She also complained of pain and dyesthesia around the left hallux ascending up to the medial aspect of ankle. She related the onset to long saphenous vein stripping surgery that she had for varicose veins. There was a previous history of back pain in Oct 1996 with right-sided sciatic pain which resolved spontaneously. There was no other significant medical history. Clinical examination revealed a normal lumbar lordosis with mild diffuse

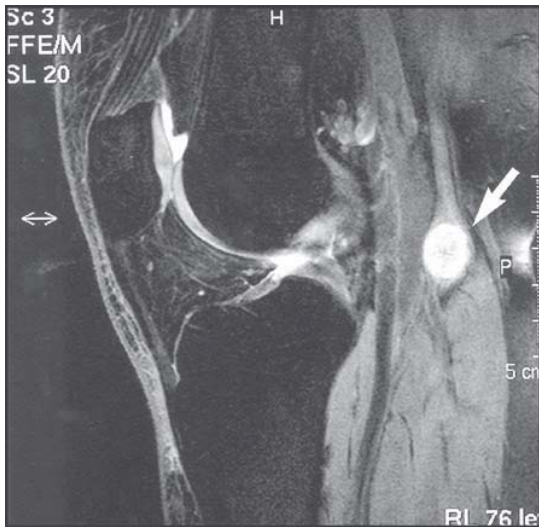
para-spinal tenderness in the lumbo-sacral region. Forward flexion beyond knees reproduced her symptoms while extension was normal. Straight leg raise (SLR) beyond 70° caused her pain in the back and posterior aspect of left leg and sciatic stretch test was positive. Neurological examination revealed normal motor power and deep tendon reflexes bilaterally (B/L) and decreased sensation in L4 & L5 dermatome on left side. Babinsky's sign was negative (toe flexion) B/L. A diagnosis of prolapsed intervertebral disc with L4 & L5 nerve root impingement was made. She was treated conservatively with analgesia and physiotherapy with partial relief from her symptoms.

In March 2003, she was reviewed again in clinic with complaint of worsening of symptoms over a period of 1 year. Her walking distance decreased progressively because of pain and numbness in left leg predominantly over the big toe and medial aspect of ankle. These symptoms disturbed her sleep now. On examination SLR on left side was 60° with positive sciatic stretch test, rest of the neurological examination was essentially same as before. Psychological assessment was carried out using the Modified Somatic Perception Questionnaire (MSPQ) [4] and modified Zung depression index [9]. She scored 9 (MSPQ) and 30 (Zung), which meant that she was neither distressed nor depressive. Low Back Pain Outcome Score [2] was 44 out of a total of 75. MRI scan of lumbo-sacral spine was obtained which was normal.

She was called for re-assessment and clinical examination was repeated. Palpation in the popliteal



fossa revealed a tender spot over the lateral aspect. No lump was palpable; however a slight fullness in the lateral part of the fossa was noted. Tinel sign could be elicited over the tender spot. Rest of the examination was same as before. Ultrasonography of the popliteal fossa revealed a solid lump 1.7 cm X 1.5 cm in dimension in the popliteal fossa very close to tibial nerve with a possibility of neuroma.



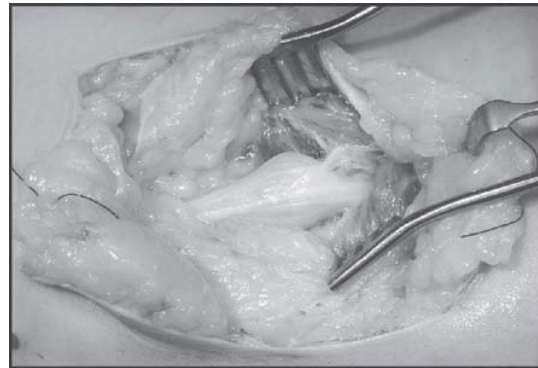
**Fig. 1 (a) : T2 weighted saggital scan reveals the well-demarcated spherical tumor in the popliteal fossa (arrow).**



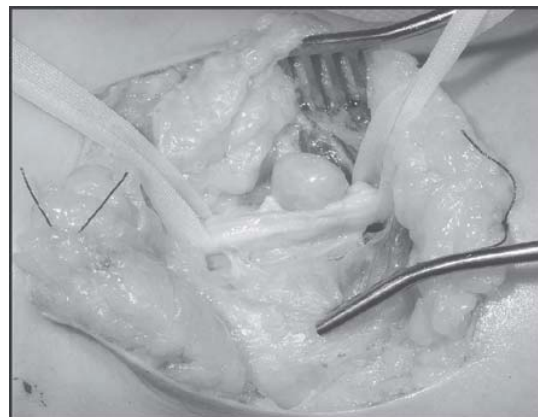
**Fig. 1 (b) : Gadolinium contrast does not cause any enhancement.**

MRI scan of knee joint confirmed the diagnosis with a possibility of Schwannoma/ Neurofibroma from tibial nerve (Fig.1).

The patient was operated in April 2004. She was placed in prone position and a lazy-S incision was used over the popliteal fossa. The tumour was difficult to palpate until the tibial nerve was dissected and the lump was found to be arising from the sheath of tibial nerve compressing the nerve itself. It was dissected out from the main nerve and excised leaving the tibial nerve intact (Fig.2). Histopathology of the specimen confirmed the diagnosis of neurilemoma (schwannoma). Three months after surgery, she had complete relief from the pain. She was left with slight numbness at the back of heel and lower calf, without any motor deficit and this did not seem to bother her. She was very pleased with the result and was therefore discharged.



**Fig. 2 (a) : Small spherical schwannoma is seen arising from the sheath of tibial nerve displacing and compressing the nerve itself**



**Fig. 2 (b) : The tumor has been enucleated from the nerve and ready to be excised**

## Discussion

Neurilemoma (NL) is a benign, usually encapsulated neoplasm derived from Schwann cells and, along with neurofibroma, constitutes one of the two most common peripheral nerve sheath tumours. They are commonly seen in flexor regions of extremities. It commonly affects people aged between 20 years to 50 years [8].

Histologically schwannoma consists of two components- a highly cellular region (Antoni A) and a loose myxoid region (Antoni B). No nerve fibres are present in the body of the tumour, although residual nerve of origin of tumour may be seen compressed to one side [3].

Low back pain associated with leg pain can easily lead a clinician towards a diagnosis of nerve root pathology originating in the spine especially in the presence of a painful SLR and a positive sciatic stretch test. However detailed clinical examination should be done to rule out other possibilities. Peripheral nerve tumors mimicking other diagnoses have been reported earlier. Ramsis FG (2001) reported a patient who was misdiagnosed for 10 years as non-specific S1 radiculopathy and psychogenic chronic pain syndrome and was finally diagnosed as a posterior tibial nerve neurilemoma. She had complete pain relief following excision of the neuroma [6]. Riccardi et al (1996) reported a case of neurilemoma of sciatic nerve confused with nerve root pain due to intervertebral disc pathology for many years before being finally diagnosed due to increase in size due to tumor growth [7]. Other diagnosis, which has been confused with peripheral nerve tumor in popliteal fossa, is a Baker cyst (DeLuca PF et al, 1999 Oriol Segura A et al, 1994) [1, 5].

The current report is in agreement with literature regarding the propensity of peripheral tumors to mimic other diagnoses. In an outpatient clinic important diagnostic clues can be missed such as happened in our patient, if not specifically looked for.

## Conclusion

Back pain associated with unilateral leg pain is the commonest presentation of intervertebral disc prolapse. However, these symptoms can be unrelated. We emphasize the need to acknowledge peripheral nerve tumors in the differential diagnosis of neuropathic pain in the lower extremity. A high index of suspicion is required to diagnose these tumors; otherwise, diagnosis is often delayed as in our patient, causing prolonged suffering.

## References :

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