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Lower Extremity Neuroma: An Unusual Cause of Leg Pain

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Neuromas are among the most frequently encountered peripheral nerve tumors. The formation of neuromas following a surgical neurotomy because of diverse indications has been reported earlier (1-4). At times, these may present as atypical thigh or groin pain (5, 6). To our knowledge, there is no published report on the occurrence of neuroma in a small peripheral nerve branch following a blunt trauma.

A 43-year-old gentleman presented with a complaint of sudden onset of severe and lancinating pain in his left lower thigh that he had been experiencing for the past 9 months, which would last only for few seconds. The pain was radiating toward the medial aspect of the upper thigh and was precipitated after occasional light touch. There were no sensory or motor deficits, and no palpable mass was found on examination. Apparently, the symptoms began a year ago following a minor trauma in the inferior-medial area of his left thigh. The injury caused a small hematoma in the same region, but no obvious fracture or skin laceration was evident. The haematoma gradually resolved on its own in the following month. The patient did not have any other disease. Magnetic Resonance Imaging (MRI; 1.5T, and subsequently with 3T-MRI) and ultrasound were performed. Only a 3T-MRI of the lower thigh showed an intensely contrast-enhancing space occupying a lesion (4×5 mm in size) extending from the anterior to the lower end of the femur without any bony attachment, immediately posterior to the lateral border of the vastus-medialis muscle (Figure 1). A diagnosis of benign neuroma was made. A conservative treatment with anti-epileptic drugs, tricyclic antidepressants, and analgesics failed to show any improvement. Therefore, as a next step, 5 mL of 1% lignocaine was injected using a semi-blind method for diagnostic purpose. Ultrasound guidance was sought to locate the sagittal plane whereas the cross-sectional plane was merely an imagination. Following the injection, the patient reported pain relief for nearly 12 hours. Considering this to be a positive result, another injection was given with 5 ml of 6% phenol in the same location on the following day. The patient reported complete

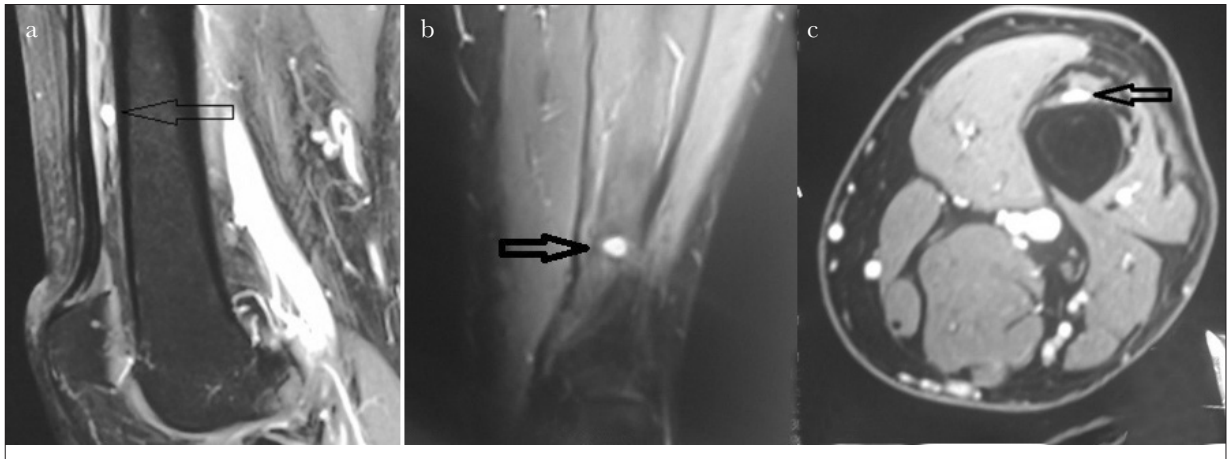

Figure 1. a-c. Post contrast fat saturated T1 weighted MRI images showing an enhancing mass lesion in the left lower thigh region in saggital (a); coronal (b); and in axial (c) views

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pain relief after 3 days; the effect is persisting even after 6 months of the phenol injection.

Lower extremity neuromas have been reported in relation with femoral, sciatic, and obturator nerves (6, 7). Different treatment options including excision biopsy and computed tomography-guided drainage of the cystic neuroma have been described for benign neuromas (8). MRI is the modality of choice for evaluating suspected neurogenic tumors (9). In this patient, considering the size and nature of the lesion, only symptomatic treatment was attempted, aiming for pain relief. Surgical treatment, which includes exploration and localization of such a small tumor, may prove extremely challenging.

The outcome suggests that a 3T-MRI is optimum for the diagnosis, and if pharmacotherapy fails, image-guided perilesional neurolysis should be attempted. Perilesional phenol injection could be an effective method for long-term pain relief in such patients.

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