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Neurosurgery

AN UNCOMMON CASE OF POST TIBIAL NERVE SHEATH SCHWANNOMMA IN A YOUNG MALE: A CASE REPORT

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ABSTRACT A 29-year-old young male presented with pain left ankle on the medial aspect for the past six years. In the absence of any history of trauma and no visible or palpable mass, patient was being treated symptomatically with little or no relief. Patient was found to be suffering from nerve sheath tumour arising from post tibial nerve, based on the detailed clinical assessment followed by magnetic resonance imaging (MRI) of the left ankle at our centre. Patient underwent ultrasound-guided excision of nerve sheath tumour with no neurological deficit. His histopathological report showed nerve sheath mass to be schwannoma. We present a case report of schwannoma arising from post tibial nerve in a young adult which is an uncommon occurrence, highlighting, the need for greater degree of suspicion on the part of physicians to diagnose the disease early and prevent the diagnostic delay, as prevalent in present scenario

KEYWORDS : Nerve Sheath Tumor, Posterior Tibial Nerve, Schwannomma

INTRODUCTION

Schwannomas are benign tumours that arise from the peripheral nerve sheath. They constitute about 5% of benign soft tissue tumors[1]. These tumours are generally found on the trunk, head, neck, and upper limbs but are rarely found in the lower limbs[2]. Schwannomas arising from post-tibial nerve are even a rarer occurrence.[3]

We present a case of Schwannoma arising from post post-tibial nerve in a young gentleman.

Case Report

A 29-year-old male patient with no known previous Co morbidities presented with history of pain left ankle for the past six years duration. Pain was insidious in onset, on the medial aspect of his left ankle between medial malleolus and tendoachilles. Pain initially occurred after walking for about one kilometre. Initially, pain was mild to moderate in intensity for which patient had taken over the counter medicines with relief. Gradually pain increased in intensity over a period of three years and started affecting his daily activities like walking to a nearby store, climbing stairs of his apartment building, running even for a few hundred meters. There was no radiation of pain. No visible swelling or skin changes were present.

Patient had consulted various doctors for the same and in absence of any history of trauma, no associated symptoms, no visible or palpable swelling patient was managed with oral analgesics, ice packs, compression bandages with rest. However, patient experienced recurrent pain at the same location. In view of the above patient had undergone x ray of the ankle which was essentially normal. With worsening of symptoms patient visited our department

On physical examination no local skin changes, no swelling over the retro malleolar region was present over the left ankle. No weakness of plantar and dorsiflexion was present. Tenderness was present on direct palpation along with positive Tinnel sign. Dorsiflexion-eversion test was negative. Rest of the neurovascular examination was normal. No neurocutaneous markers

Patient underwent MRI of the left ankle which showed a lesion of 2.0 x 1.8 x 1.5 cm over the left retro malleolar space which was isointense on T1 and hyperintense on T2 [Figure 1]. On the basis of clinical examination and radiological findings, a decision of total excision of mass was taken.

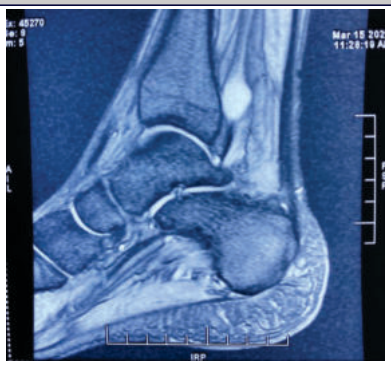

Figure 1: Showing Lesion of 2.0 x 1.8 x 1.5 cm Over the Left Retro Malleolar Space Which was Hyperintense on T2

Under spinal anaesthesia, a vertical incision midway between medial malleolus and tendoachillis was made. Incision was deepened and ultrasound-guided localization of mass was done in order to prevent injury to post tibial artery and nerve. On dissection, well encapsulated mass of size 2.0 x 1.8 x 1.5 cm, pearly white in appearance was seen which was attached to nerve by two fascicles one superior and another inferior [Figure 2]. Mass was excised and sent for histopathology. The wound was closed in layers. Patient was ambulant by the next day with no neurological deficit.

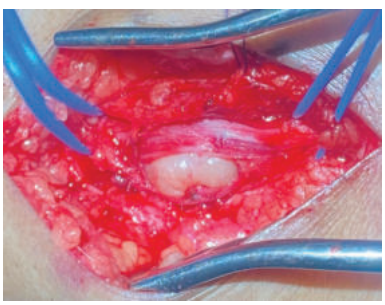

Figure 2: Showing Well Encapsulated Mass Attached to Nerve by Two Fascicles One Superior and Another Inferior

Histopathological report showed well-circumscribed spindle cell neoplasm, disposed in alternating hypocellular and hypercellular areas. The hypercellular areas showed elongated to wavy

hyperchromatic nuclei. Nuclear palisading was seen. No increase in mitosis, necrosis or atypia was seen [Figure 3]. Thus, suggesting mass to be schwannoma.

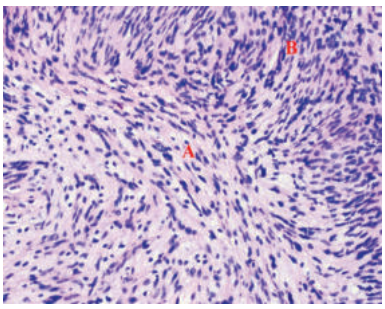

Figure 3: Showing – A– Hypocellular Antony A cells; B- Hypocellular Antony B cells

DISCUSSION

Most symptoms due to post-tibial nerve compression can be attributed to Tarsal tunnel syndrome. It is caused by the compression of post tibial nerve in tarsal tunnel producing neuropathy and pain in the foot. Common intrinsic causes, caused by space-occupying lesions, for tarsal tunnel syndrome include enlarged varicose veins, ganglion cyst, lipoma, and hindfoot deformity[2]. Schwannoma arising from post tibial nerve as a cause of tarsal tunnel syndrome is uncommon[3].

Neurilemmomas, both schwannomas and neurofibromas, have an affinity for the cranial nerves, most commonly eighth cranial nerve, but they may be found anywhere in the body. Involvement of foot is not common [3,4]. Other authors have also found neurilemmomas to be a rare entity in the foot. Different studies conducted by Das Gupta, Spiegel and White were of the same conclusion. A total of 557 neurilemomas were reviewed by the above authors, with only 19 (2.93%) involving the foot[4]. Since it is a slow-growing tumour the diagnosis is generally delayed. In a previous study, only three patients were diagnosed out of a cohort of 25 with Schwannoma of post tibial nerve in first year of presentation [5] with the longest delay in diagnosis of thirty years.

Since, Schwannomas are the least common of the benign peripheral nerve tumour and most of the tumours present in the fifth decade of life[2]with nonspecific symptoms to start with, it becomes difficult to diagnose it in early stage. Slow growing nature of the tumour leading to non-palpable mass also leads to delayed diagnosis.

To arrive at a clinical diagnosis of tarsal tunnel syndrome, a prominent symptom of schwannomas arising from post tibial nerve, a detailed history followed by physical examination including Tinnel sign and dorsiflexion and eversion test should be done. These tests vary in specificity and sensitivity based on the disease stage.

To arrive at a clinical diagnosis of tarsal tunnel syndrome, a prominent symptom of schwannomas arising from post tibial nerve, a detailed history followed by physical examination including Tinnel sign and dorsiflexion and eversion test should be done. These tests vary in specificity and sensitivity based on the disease stage.

Surgical excision is the treatment of choice with excisional biopsy being done easily since it is an encapsulated tumour

CONCLUSIONS

Schwannoma of the post-tibial nerve is a rare entity. It being a slow-growing tumour with no visible mass for a prolonged time, nonspecific symptoms initially and generally arising in the middle age group further makes diagnosis difficult in a young individual as with our case. A high degree of suspicion should be there on physicians' mind to catch the disease early in its course and prevent the usual delay in diagnosis, as is the case in the present scenario.

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