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SCHWANNOMA OF THE POSTERIOR TIBIAL NERVE: A RARE CAUSE OF PARESTHESIA IN FOOT

Dr. Amit Bikram Shah*[1], Dr. Amit Limbu[1] and Dr. Ashbin Bhattarai[1]

Assistant Professor, Department of Orthopedics, B.P. Koirala Institute of Health Sciences, Dharan Sunsari, Nepal.

***Corresponding Author: Dr. Amit Bikram Shah**
Assistant Professor, Department of Orthopedics, B.P. Koirala Institute of Health Sciences, Dharan Sunsari, Nepal.

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INTRODUCTION

Schwannomas, also known as neurilemmoma, are the most common peripheral nerve sheath tumors originating from Schwann cells along the course of a nerve.[1] Although it can occur anywhere in the body, it is found less frequently in the lower extremities.[2] Schwannomas most commonly occur in the head and neck involving the brachial plexus and spinal nerves. The lower limbs are affected less often.[3] The diagnosis of a Schwannoma in a lower limb is often delayed for several years because it is frequently misdiagnosed as a benign solitary mass such as a ganglion, fibroma or myxoma.[4.5] This tends to occur in patients aged 30–60 years and has no race or sex predisposition.[6,7,8] The onset of symptoms is usually associated with location rather than the size of the tumor as symptoms of neural compression arise with the growth of the mass.[9]

KEYWORDS: Tumors, posterior tibial nerve, Schwannomas.

CASE PRESENTATION

37 years old female presented with complain of swelling over left popliteal region for 1year which was insidious in onset, slowly increasing in size to the current level, associated with occasional tingling sensation over lateral aspect of ipsilateral foot. She had no h/o pain over the region no history of fever, weight loss, constitutional symptoms, trauma and similar swelling in other parts of body.

On Examination. An approximately 3cm sized painless solid mass, pressure sensitive and firmly attached to the surrounding tissues. Slight percussion over the mass produced positive Tinel sign. The patient experienced mild numbness at the distribution of the tibial nerve at the foot but no motor weakness or muscle atrophy were detected. Despite the large period of the mass existence (1 years) the patient remained asymptomatic.

Based on the long history of the patient, and the clinical and FNAC report, the resection of the tumor was decided. Under spinal anesthesia. The surgery was performed with the patient in prone position so that the popliteal fossa was in good view. A 12 cm- "S" shaped incision was made from the superomedial to inferolateral corner. The subcutaneous tissue was dissected and the underlying neurovascular structures were identified after meticulous dissection. The posterior tibial nerve was separated from rest of the structures using nerve tape. We found a soft brown mass of 3 cm X 3 cm dimension covered by a white capsule. A complete excision of the mass was possible as it was clearly distinguishable from the surrounding unaffected nerves and soft tissue. The nerve sheath was later sutured with 9-0 prolene.

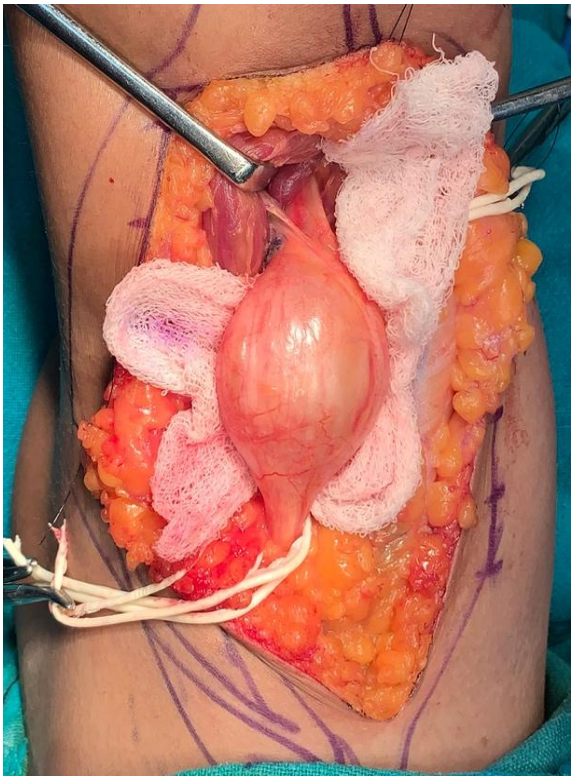

Figure 1: Well Encapsulated Mass.

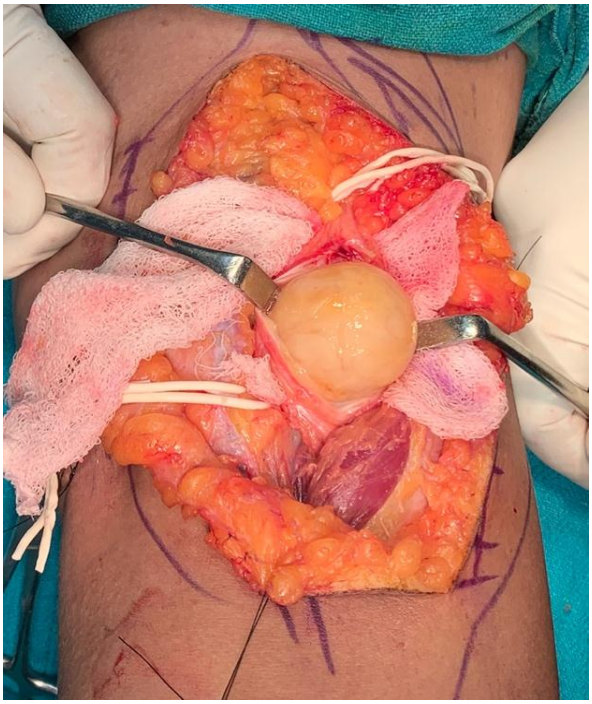

Figure 2: Intra-op Picture showing well encapsulated schwannoma within the fascicles of Tibial nerve in continuity.

Histological examination of the tumor showing characteristic pattern of benign Schwannoma: Postoperatively the patient has complete relief from pain and there was no neurologic deficit.

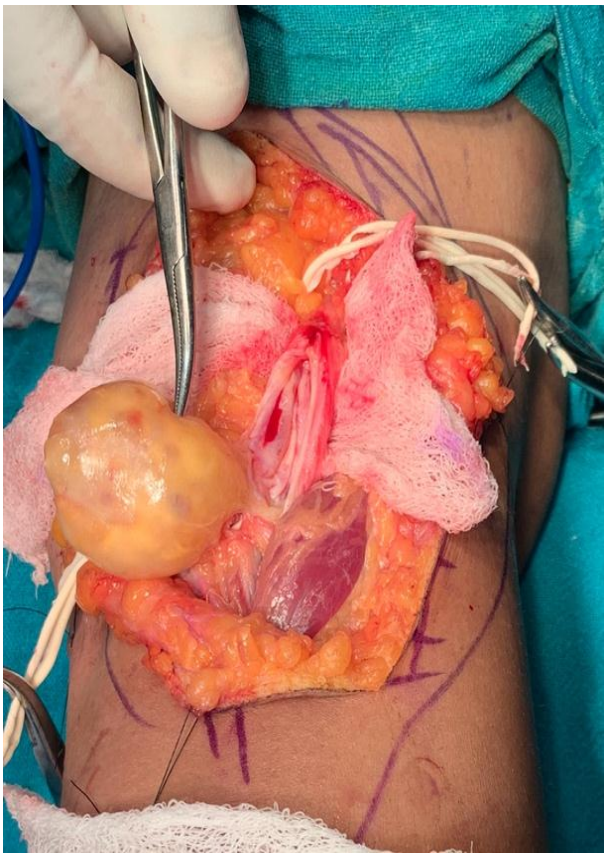

Figure 3: Soft brown mass of 3.0cms x 3.0cms in size.

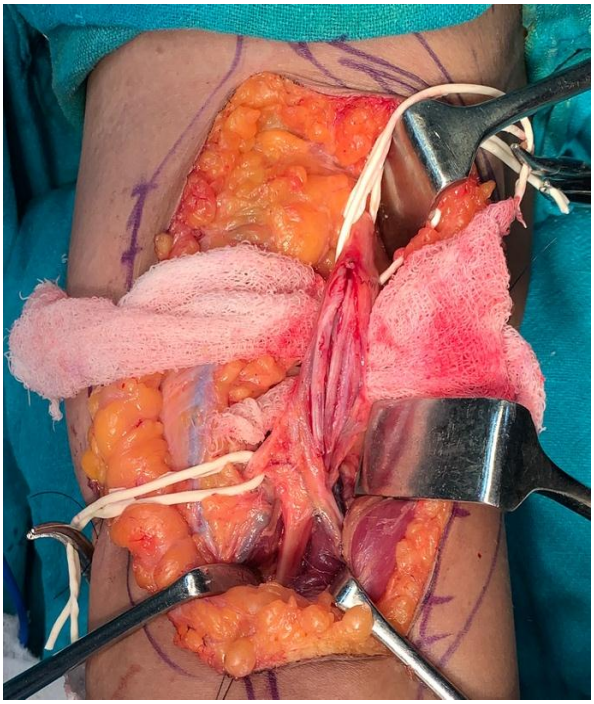

Figure 3: Tibial Nerve is intact with no intra-op damage to Fascicles.

DISCUSSION

Despite rare, tumors should be taken into account in the differential diagnosis of masses in the lower limbs. Schwannomas should be suspected in all cases where a slow growing, solitary mass is noted and there is on/off complains of paresthesia, although most of these tumors show a positive Tinel sign, paresthesia, and transverse mobility their clinical identification is somehow subjective and for this reason, they are frequently misdiagnosed due to similarities with other soft tissue tumors as lipoma, fibroma, cyst, ganglion or xanthoma

Surgical excision is the treatment of choice. Schwannomas are theoretically removable since they repulse fascicular groups without penetrating them thus allowing their enucleation while preserving nerve continuity,[10,11,12,13] reported in our patient.

CONCLUSION

Schwannoma is a rare tumor and if it is present over distal upper limb, they are easier to be noticed or palpated by the patient. Two types of schwannomas have been described. The first type involves well-encapsulated tumors in which they can be completely shelled out during the excision. The second one refers to tumors with fascicular involvement. So, a functional deficit may result with the tumor removal.[7] The most consistent feature with schwannomas is an absence of any specific signs and it rarely impairs nerve function. It occurs more in the mixed nerves instead of pure sensory or motor nerves.

Competing Interests

The authors declare that they have no competing interests.

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