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A rare tumor with atypical location: Schwannoma of the ulnar nerve - case study

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Abstract
Schwannomas are rare benign tumors. Their location on the ulnar nerve is particularly uncommon in young adults. We present the case of a 22-year-old male who was followed for a progressively developing painful mass on the medial aspect of his left arm, associated with sensory disturbances that evolved toward early muscle atrophy in the hypothenar compartment. MRI revealed a well-defined mass within the sheath of the ulnar nerve. Complete surgical excision was performed. Histopathological examination confirmed the schwannomatosis nature of the tumor. At the latest follow-up, the patient showed complete functional recovery without recurrence of pain or residual sensory disturbances. Untreated ulnar nerve schwannomas can lead to pain, paresthesia, and motor deficits due to chronic compression. Diagnosis relies on the triad of clinical evaluation, imaging, and histological confirmation. Despite their rarity, schwannomas should be systematically considered in the differential diagnosis of any upper limb mass presenting with neurological signs.

Keywords: Schwannoma- ulnar nerve- MRI-paresthesia

Introduction

Schwannomas, or neurilemmomas, are tumors that develop from Schwann cells that constitute the myelin sheath of peripheral nerves. These neoplasms represent less than 5% of all benign soft tissue tumors. Their location on the ulnar nerve remains exceptional, particularly in the young adult population [1]. The potential severity of this location lies in their initially asymptomatic evolution, which can progressively generate neurological deficits through chronic compression [1-2]. We report a case illustrating this particular neural evolution and its management.

Case report

A 22-year-old male patient consulted our trauma surgery department for a progressively developing mass over a two-year period, which had recently become painful, located on his left arm. The patient's history revealed no family history of neurofibromatosis or other neurocutaneous syndromes.

Clinical examination identified a palpable mass on the medial aspect of the distal third of the arm, tender on palpation, mobile relative to the cutaneous and deep planes, measuring approximately 4 to 5 centimeters in its greatest diameter. Tinel's sign was positive, and examination of the hand revealed slight atrophy of the hypothenar region compared to the contralateral side.

Magnetic resonance imaging demonstrated a well-defined, homogeneous mass within the neural sheath of the ulnar nerve, without signs of malignancy (fig 1). Contrast enhancement suggested an ulnar nerve schwannoma, although histological confirmation remained essential.

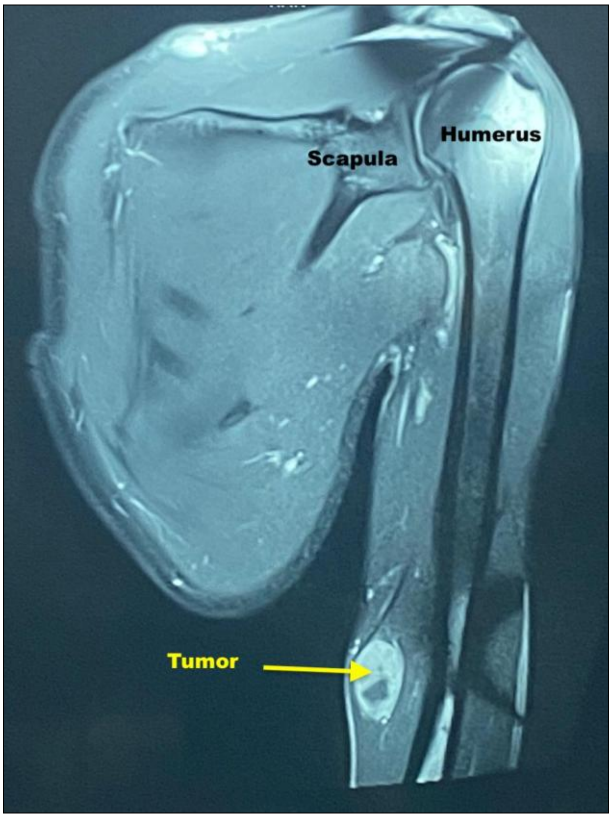

Fig 1: MRI of the arm demonstrated a well-defined, homogeneous mass within the neural sheath of the ulnar nerve

Given the clinical data, radiological findings, and functional requirements of the patient, surgical intervention was scheduled. In the supine position and under general anesthesia, we performed complete surgical excision of the mass using magnifying loupes to precisely identify the neural structures (fig 2a). Nerve continuity was preserved (fig 2b), and the excised specimen was sent for histopathological analysis.

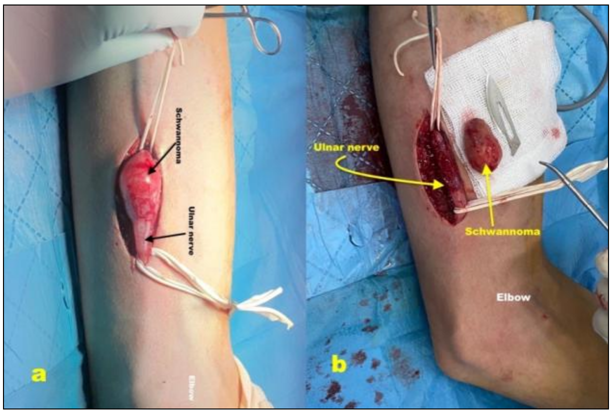

Fig 2: Operative aspect of the tumor mass within the ulnar nerve.

In the immediate postoperative period, the patient exhibited mild hypoesthesia in the sensory distribution of the ulnar nerve at the level of the hand. Histopathological examination confirmed the diagnosis of benign schwannoma without signs of malignancy.

At the six-month follow-up, the patient no longer reported any pain or residual hypoesthesia, no tumor recurrence was observed, and normalization of the trophicity of the hypothenar compartment was noted.

Discussion

The clinical presentation of ulnar nerve neurilemmomas varies and depends on several factors: tumor size, precise location, and number of nerve fascicles involved. Schwannomas are typically solitary; however, instances of multiple locations have been recorded, complicating both diagnosis and treatment strategies [3-4-5]. Untreated ulnar nerve schwannomas can lead to pain, paresthesia, and motor deficits due to chronic compression.

Ancient schwannoma is an uncommon degenerative variant of this tumor type that radiologically and, on occasion, histologically resembles malignant traits while preserving benign behavior [4-6]. The conclusive diagnosis depends on histopathological analysis informed by imaging, especially MRI, which serves as the standard examination.

Surgical excision is the preferred treatment, necessitating careful dissection of the tumor while maintaining the functional integrity of the affected nerve to reduce postoperative neurological complications. Microsurgical techniques conducted with an operating microscope or magnifying loupes facilitate intracapsular excision and meticulous interfascicular dissection [4-7-8].

Large or symptomatic tumors necessitate prompt surgical intervention. On the other hand, when there are multiple locations, the doctor needs to think carefully and talk to the patient about the benefit-risk ratio, since there is a chance of residual neurological deficit [2-4]. The prognosis following surgical excision is typically favorable, characterized by a minimal recurrence rate and an almost negligible risk of malignant transformation, thereby necessitating long-term follow-up.

Conclusion

Despite its rarity, ulnar nerve schwannoma should always be examined when examining upper limb tumors, particularly if there are neurological symptoms. Informing doctors about this unusual ailment allows them to make an early diagnosis and receive the finest treatment guidance.

Statement of Ethics

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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References

1. Boustany A, McClellan WT. Schwannoma of the ulnar nerve: a case report and review of the literature. W V Med J. 2012;108(2):36-38.
2. R A M, V N. Golf ball near elbow: a rare presentation of a giant ulnar nerve Schwannoma. 2025. https://core.ac.uk/works/164730743/
3. Lim CY, Low TH, Sivanoli R, Teh KK, Thuraisingham R. Multinodular/plexiform schwannoma of the ulnar nerve. ANZ J Surg. 2014;84(1-2):93-94. DOI:10.1111/ans.12231
4. Yoon T, Hong KY. Multiple ancient schwannomas of the ulnar nerve at distant sites: a case report. Arch Hand Microsurg. 2022;27(1):88-92. DOI:10.12790/ahm.21.0136
5. Multiple schwannomas of the ulnar nerve: a case report. https://pubmed.ncbi.nlm.nih.gov/8891988/

6. Prasad GR, Khan AU. A rare case of ancient Schwannoma of the ulnar nerve. Int Surg J. 2025;12(3):466-468. DOI:10.18203/2349-2902.isj20250594
7. Turkish Journal of Plastic Surgery. https://journals.lww.com/tjps/fulltext/2019/27030/giant_schwannoma_of_the_ulnar_nerve_compressing.8.aspx
8. Mustac F, Poturica M, Bulic K. Double schwannomas of the ulnar nerve: case report. Acta Chir Croat. 2020;17(1):1. DOI:10.5281/zenodo.4010883

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