



# International Journal of Surgery Science

E-ISSN: 2616-3470  
P-ISSN: 2616-3462  
© Surgery Science  
www.surgeryscience.com  
2019; 3(1): 259-261  
Received: 07-11-2018  
Accepted: 11-12-2018

**Dr. Sooraj T**  
Postgraduate, Department of  
General Surgery, Vinayaka  
Missions Medical College and  
Hospital, Vinayaka Missions  
Research Foundation (DU),  
Karaikal, India

**Dr. S Shanmugasundram**  
Assistant Professor, Department of  
General Surgery, Vinayaka  
Mission's Medical College,  
Vinayaka Mission Research  
Foundation-DU, Keezhakasakudy,  
Karaikal, India

**Dr. G Ambujam**  
Professor, Department of General  
Surgery, Vinayaka Mission's  
Medical College, Vinayaka Mission  
Research Foundation-DU,  
Keezhakasakudy, Karaikal, India

**Dr. Jinsha A**  
Postgraduate, Department of  
Otorhinolaryngology, Vinayaka  
Mission's Medical College,  
Vinayaka Mission Research  
Foundation-DU, Keezhakasakudy,  
Karaikal, India

**Dr. Harikrishnan SA**  
Postgraduate, Department of  
General Surgery, Vinayaka  
Mission's Medical College,  
Vinayaka Mission Research  
Foundation-DU, Keezhakasakudy,  
Karaikal, India

#### Correspondence

**Dr. Sooraj T**  
Postgraduate, Department of  
General Surgery, Vinayaka  
Missions Medical College and  
Hospital, Vinayaka Missions  
Research foundation (DU),  
Karaikal, India

## Rare sites of benign nerve sheath tumours: (Median nerve, radial nerve and peroneal nerve schwannoma)

**Dr. Sooraj T, Dr. S Shanmugasundram, Dr. G Ambujam, Dr. Jinsha A and Dr. Harikrishnan SA**

**DOI:** <https://doi.org/10.33545/surgery.2019.v3.i1e.44>

#### Abstract

Schwannomas are also known as neurilemmoma. It is a nerve sheath tumour originating from schwann cells located in peripheral nerve sheaths. Incidence is common in 3<sup>rd</sup> to 6<sup>th</sup> decades. We are reporting a case of median nerve schwannoma. Diagnosis was confirmed by FNAC and MRI. Surgical intra capsular excision was done by preserving median nerve and postoperatively there was no neurological deficit. Histopathological examination confirmed schwannoma.

**Keywords:** Sheath tumours, median nerve, radial nerve, painful swelling

#### Introduction

Schwannomas are also known as neurilemmoma. It is a nerve sheath tumour originating from schwann cells located in peripheral nerve sheaths. They are benign, encapsulated tumours that rarely undergo malignant degeneration. Incidence is common in 3<sup>rd</sup> to 6<sup>th</sup> decades. These are the commonest tumours of the peripheral nerves, 5% of which occur in the adults and 19% of the tumours occur in upper extremities. They are common in acoustic nerve (cerebellopontine angle) but also can occur in peripheral nerve. It is ectodermal in origin. Schwannomas are generally presented as asymptomatic mass. Discomfort may be the only complaint of the patient and may also present as pain and hyperaesthesia. Magnetic resonance imaging is helpful in diagnosis. Surgical intra capsular excision is treatment of choice.

#### Case reports

##### Case-1

22 year old male patient presented with painful swelling of size 3x2 cms over right elbow joint.

##### Local examination

Tender, firm, oval shaped, smooth surface lump of size 3x2 cms was present over right elbow with restriction of vertical mobility. Distal neuropathic pain was present.



**Fig 1:** Preoperative image of median nerve schwannomas

### Investigation

All basic investigations were normal  
FNAC confirms schwannoma  
MRI:

Fairly large well defined oval shaped mass lesion in anterior aspect of elbow between brachialis and pronator teres which is continuous with neuro vascular bundle.

Post contrast studies shows questionable contrast enhancement of lesion Show median nerve schwannoma with predominant cystic component.

### Management

Intra capsular excision done and histopathological examination report confirms it to be median nerve schwannoma.



**Fig 2:** Ontable images of schwannoma arising from median nerve

Post-operative period

Uneventful.

No distal neuropathy or weakness of muscles supplied by median nerve was experienced.

No sensory loss present.

### Case-2

33yr old male presented with complaints of swelling on left elbow.

On examination nontender, restricted vertical movement, firm with smooth surface. Diagnosed as radial nerve schwannoma by FNAC and MRI.

Intra capsular excision was done, post operatively there was no neurological deficit.



**Fig 3:** Ontable image of schwannoma arising from radial nerve

### Case-3

38yr old male presented with complaints of swelling on left leg. On examination nontender, restricted vertical movement, firm with smooth surface. Diagnosed as peroneal nerve schwannoma by FNAC and MRI.

Intra capsular excision was done, post operatively there was no neurological deficit.



**Fig 4:** Ontable image of schwannoma arising from peroneal nerve

### Discussion

Schwannoma or Neurilemmoma is a rare benign peripheral nerve sheath tumour developing from schwann cells of peripheral nerve. It contributes to 8% of soft tissue tumour which arises from extra fascicular nerve sheath. Incidence is common in 3<sup>rd</sup> to 6<sup>th</sup> decades. Schwannomas can be asymptomatic or can produce pain, a positive Tinel's sign, and sensory alterations. The slow growth pattern of benign nerve tumours allows for adaptation of the nerve function to the pressure effects [1]. These are the commonest tumours of the peripheral nerves, 5% of which occur in the adults and 19% of the tumours occur in upper extremities. Presents of Antoni A and Antoni B areas in histology is the feature of schwannoma. Surgical enucleation being the established treatment modality. There are two types of surgical nucleation such as intracapsular and extracapsular techniques. Neurological deficit following intracapsular excision was significantly lower than extra capsular technique. In our cases we did intracapsular excision, post operatively there is no neurological deficit.

### Conclusion

Schwannoma is a very rare condition in which intra capsular excision is better than extra capsular technique to avoid iatrogenic nerve damage. Schwannomas are theoretically removable because they repulse fascicular groups without penetrating them, thus allowing their enucleation while preserving nerve continuity, as reported in our patient.

## Reference

1. Tarun Dusad, Meena DS, Narendra Saini, Yogesh Sharma, Deepak Khurana. Schwannoma of the Median Nerve at Mid Forearm Level Journal of Orthopaedic Case Reports. 2016; 6(2):66-68
2. Louis DS, Hankin FM. Benign nerve tumors of the upper extremity, Bulletin of the New York Academy of medicine. 1985; 61(7):611-620.
3. Holdsworth BJ. Nerve tumours in the upper limb a clinical review. Journal of Hand Surgery. 1985; 10(2):236-238.
4. Klijanienko J, Caillaud JM, Lagac'e R. Cytohistologic correlations in schwannomas (neurilemmomas), including "ancient," cellular, and epithelioid variants," Diagnostic Cytopathology. 2006; 34(8):517-522,
5. Akambi Sanoussi K, Dubert T. Schwannomes des nerfs périphériques de la main et du membre supérieur. Analyse de 14 cas. Chir Main. 2006; 25:131-5.
6. Kim SM, Seo SW, Lee JY, Sung KS. Surgical outcome of schwannomas arising from major peripheral nerves in the lower limb. Int Orthop. 2012; 36:1721-5.
7. Ogose A, Hotta T, Morita T *et al.* Tumors of peripheral nerves: correlation of symptoms, clinical signs, imaging features, and histologic diagnosis. Skeletal Radiol. 1999; 28:183-8.
8. Haussmann P. Malignant schwannoma of the median nerve. Handchir Mikrochir Plast Chir. 1988; 20:147-9.
9. Forthman CL, Blazar PE. Nerve tumors of the hand and upper extremity, Hand clinics 2004; 20(3):233-242.
10. Park MJ, Seo KN, Kang HJ. Neurological deficit after surgical resection of schwannomas of the upper limb,"Journal of Bone and Joint Surgery-Series B, 2009; 91(11):1482-1486,
11. Tang CYK, Fung B, Fok M, Zhu J. Schwannoma in the upper limbs, BioMed Research International, Article ID167196, 2013, 4.
12. Akambi Sanoussi K, Dubert T. Schwannomas of the peripheral nerve in the hand and the upper limb: analysis of 14 cases, Chirurgiedela Main. 2006; 25(3, 4):131-135.