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

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#### 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.

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