

MEDIAN NERVE SCHWANOMMA: A RARE PERIPHERAL TUMOR

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Abstract :

Schwannomas are benign tumors that mostly arise from the acoustic division of the vestibulocochlear nerve in the auditory meatus. In the peripheral nerves they are rarely found as solitary nodules. We present a rare case of a benign swelling in the forearm which was found to be a schwannoma along the course of median nerve

Key words: Brachial Plexus, median nerve Acoustic, neuroma, Benign.

Introduction

Median Nerve is a branch of medial and lateral cord of Brachial Plexus with a Root Value of C5, C6, C7, C8, and T1. It supplies Pronator teres in arm. In forearm it supplies Flexor carpi radialis, Palmaris longus, and Flexor digitorum superficialis. Group 1 muscles of hand Abductor pollicis brevis, Flexor pollicis brevis and opponens pollicis. They arise from the flexor retinaculum, scaphoid and trapezium and are inserted into the base of the proximal phalanx of thumb, but the opponens is inserted into the shaft of first metacarpal bone. These are innervated by median nerve. Damage in wrist causes Paralysis of thenar muscles and Lumbricals 1 and 2, Loss of opposition of thumb, Ape thumb deformity, sensory loss over thumb, adjacent 3 ^{1/2} fingers and radial 2/3 rd of palm.

Schwannomas are benign tumors but rare ¹that mostly arise from the acoustic division of the vestibulocochlear nerve in the auditory meatus. In the peripheral nerves they are rarely found as solitary nodules .They are slow growing ². They effect Median nerve and ulnar nerve in upper limbs usually.³

We present a rare case of a benign swelling in the forearm which was found to be a schwannoma.

Case Report:

A 35 Year old male presented with a slowly enlarging painful mass in his arm which was there for the last six years. On examination it was about 4-5 cms in length. There was no motor atrophy and rest of the examination was normal.

The Scan revealed this 5 cm mass with homogeneous low intensity signal. The diagnosis was supported by excisional

biopsy. The lesion was surgically removed and six months post operative examination of the patient showed full functional recovery.

Microscopic Histology:

This tumor revealed cystic mass with a dark brown fluid. With hypocellular and hypercellular areas. Foci of necrosis hemorrhage and myxoid background was noticed in this case.

Discussion

The Schwannomas originate from Schwann cells. The histopathological examination of schwannomas presents two patterns, designated Antoni A and Antoni B. These are created by spindle cells with elongated nuclei and fibrillated cytoplasm, predominantly those of Schwann cells. Antoni A tissue is compact, with a prominence of interwoven fascicles. Antoni B tissue is porous and less structured. The cells are dispersed randomly about blood vessels, microcysts, collections of xanthomatous cells and sites of previous hemorrhage. Lymphocytes attest to antecedent degenerative events within Antoni B tissue. The degree of nuclear pleomorphism varies considerably among acoustic neurinomas as well as between different areas within the same tumor. It should be kept in mind that Granular cell myoblastomas are unusual rare benign tumors that most likely arise from Schwann cells rather than muscle as their name implies. They are found primarily in the breast, tongue, skin, mouth, upper respiratory tract, and gastrointestinal tract. Also Distinction from neurofibromas which are poorly encapsulated and may have a combination of randomly arranged spindle-shaped cells. These tumors originate as a proliferation of all the elements of the peripheral nerve. The clinical entity i.e. the Neurosarcomas usually originate by malignant degeneration of either neurilemmomas or neurofibromas, in addition to developing de novo. These tumors usually occur in adults.

Goals of surgical treatment are removal of the tumor⁴ and it is an effective treatment modality⁵. Since these tumors usually grow very slowly, small tumors that have minimal or no symptoms (asymptomatic) can be safely observed with regular MRI scans and left untreated unless they grow dangerously. Schwannomas are benign and usually do not metastasize but they may continue to grow and compress important .Their Association with Schwannomastosis should be excluded.⁶

Conclusion:

Although Schwannomas are rare tumors and frequently present inside auditory canal sometimes they can be found along peripheral nerves and rarely along median nerve. And can be easily confused with lipoma, fibroma, xanthoma or a ganglion. Careful evaluation of this tumor which in rare cases can progress to a malignant tumor must be borne in mind.

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Fig 1: A swelling around Median Nerve (Schwannoma)



Fig 2: A CT Scan showing a Mass around Median Nerve (Schwannoma)

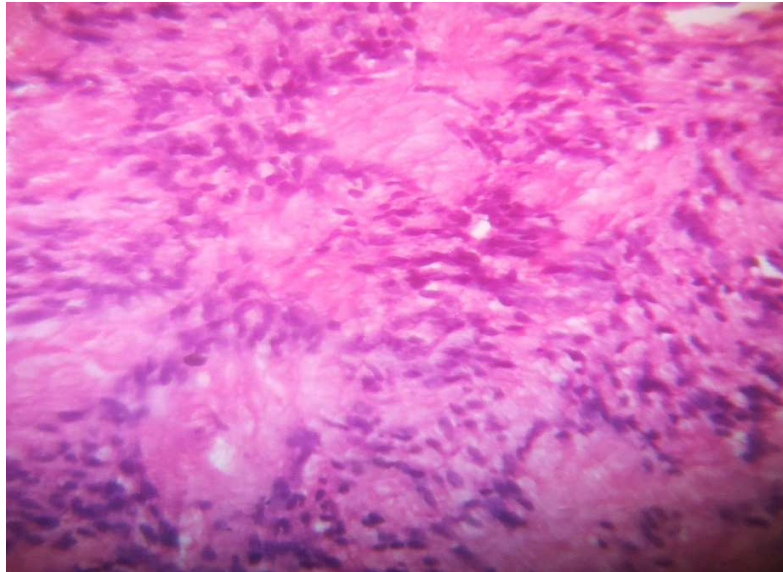


Fig 3: Histopathological examination of a Schwannoma

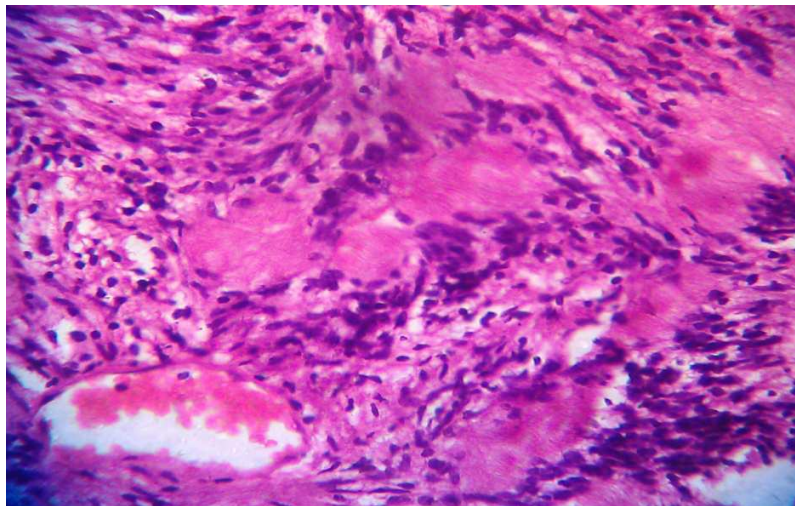


Fig 4: Histopathological examination of a Schwannoma