Journal of Bangladesh College of Physicians and Surgeons
Vol. 29, No. 3, July 2011

# Giant Schwannoma of Median Nerve at Forearm

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**Abstract:**

***Schwannomas are common benign nerve tumors occurring in the peripheral nerves. A very large schwannoma of more than 7 years duration, originating from the median nerve in the forearm in a 40 years old woman, is reported. There was numbness and tingling sensation in the forearm and hand. It was 18 cm in length and 8 cm in diameter. On the palm, there were signs of sensory disturbance with atrophy on the thenar muscles. Surgical removal was performed under operating microscope by separating the nerve fascicles from the tumor. There were 2 more tumors (1.5x2cm) on median nerve at elbow above the mentioned one. Histological examination revealed schwannoma. At 3.5 year follow-up, the patient was asymptomatic with excellent relief of symptoms with good forearm and hand motor function, though thenar atrophy persisted. The tumor did not recur. Although cases have been reported in the literature, this is probably the largest ever described with 2 more adjacent schwannomas.***

*Key words:* ***Median nerve, Giant schwannoma, Forearm***

***(J Bangladesh Coll Phys Surg 2011; 29: 174-176)***

## Introduction:

Schwannomas are benign neoplasm arising from schwann cells of peripheral nerve sheath. In 1935, Stout [1] first described this as fibrosarcoma, though he changed his opinion in 1949 after observing the outgrowth of schwann cells in vitro from such tumors. Median nerve is one of the common sites for schwannoma. Pain and paresthesias may occur when the tumor reaches large size. Surgical removal of a Schwannoma is usually curative. Although cases have been reported in the literature, this is probably the largest ever described with 2 more adjacent schwannomas of median nerve.

## Case report:

A 40 year-old female presented with gradually enlarging swelling in her forearm for last seven years. There was numbness, tingling sensation with recent onset pain in right forearm and hand for last 03 years. On examination there was a mass in whole front of right forearm measuring about 18x8 cm, seem to be fixed with muscles, non tender and firm to cystic in consistency. There was a scar over skin due to herbal application (Figure-1A). There was thenar muscle atrophy on right side with mildly reduced modalities of sensation in hand along the distribution of median nerve. The patient had no stigmata of neuro-fibromatosis. Preoperative percutaneus FNAC revealed schwannoma. The tumor was exposed by long anterior forearm incision (Figure-1B&2A). Under operating microscope widely spreaded median nerve fascicles over the tumor surface were preserved carefully during dissection of the tumor(Figure-1B). After removal of the tumor median nerve was examined proximally and distally. Two small tumors (1.5x2cm) were found proximally at the elbow and just above the elbow. These two tumor were also removed carefully under the microscope. There was cystic degeneration in the large tumor, found after sectioning before sending for histopathology. Histology revealed schwannoma in all tumors (Figure-2B). Post operatively(3.5 years after operation),patients all symptoms disappeared, her motor function is good both in forearm and hand, sensation is normal but thenar atrophy still persisted without any recurrence of tumor.

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**Received:** 21 January, 2010 **Accepted:** 29 December, 2010

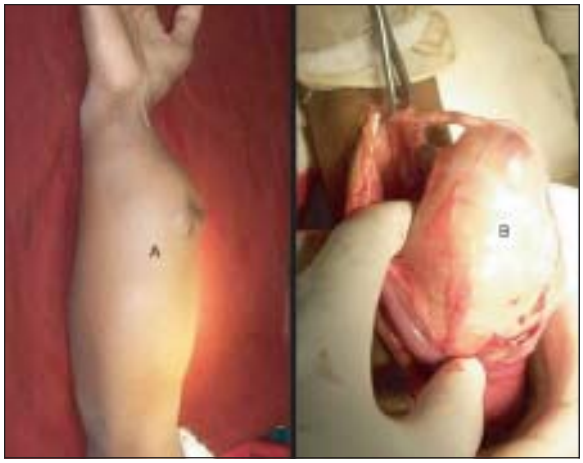

**Fig.-1**:*A-preoperative picture of forearm and hand; B-Per-operative picture(Tumor and median nerve seen).*

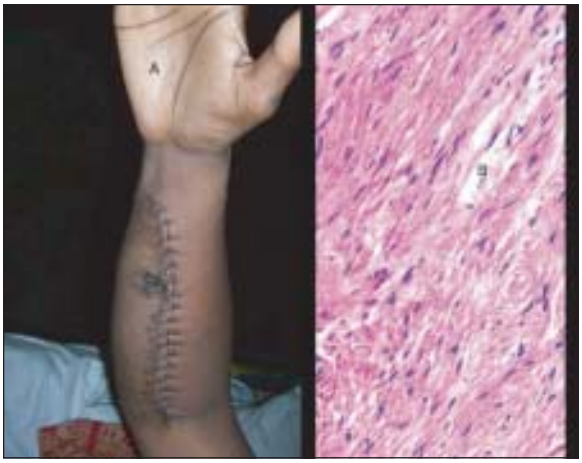

**Fig.-2**:*A-postoperative picture of forearm and hand; B-Microphotograph of histopathology(arranged and wavy tumor cells in long fascicles);[H&E, X200]*

**Discussion:**

Schwannomas are benign, slowly growing and encapsulated[2] tumors arising from the neurilemmal sheath, common in all ages, without obvious preference to either sex[3]. Most patients are 40 years old and their lesions ordinarily are soli-tary.[3] Most schwannomas are found in peripheral nerve fibers in the limbs, head, and neck. In a small proportion of cases obvious stigmata of Von Recklinghausen's disease are accompanied[3,4].

Cut section of schwannoma shows grey white in color, whorled with areas of hemor-rhage[4]. Histologically, schwannomas consist of compact cellular lesions (Antoni type A tissue) and loose, hypocellular myxoid lesions with microcystic spaces (Antoni type B tissue)[5,6].

Malignant transformation has only been reported on rare occasions[7]. Most Schwannomas

occur as a solitary lesion, but they can occur as multiple lesions and can affect one or several nerves[8]. In the extremities, they may arise from any of the peripheral nerves, with a predilection for the peroneal and ulnar nerves[7]. The tumor is usually first seen as a painless, asymptomatic mass and is present several years before it is noticed. The tumor is usually less than 5cm in diameter. Pain and paresthesias may occur when the tumor reaches sufficient size to compress the involved nerve[7].

Surgical excision is the treatment in schwannoma. The first priority in the treatment of benign nerve sheath tumors is to prevent axonal damage[9]. In contrast to a neurofibroma, the schwannoma can be separated from the involved nerve. Initially, the tumor may appear attached to nerve fibers, and on occasion, a few nerve fibers may need to be resected with the tumor. The nerve should be inspected for the possibility of additional tumors[10] as we found additional two tumors on the same nerve.

In our case we found that the tumor was slow growing, initially asymptomatic and later it produced symptoms due to bigger size. Even in such a big tumor nerve fibers were easily identified, separated from the tumor and well preserved using microsurgical techniques .Without microsurgical techniques preservation of nerves fibers and fascicles are seem to be difficult. Careful proximal and distal checking of involved nerve is very important to identify the existence of other smaller schwannoma that we found here. In this long standing huge tumor degenerative changes and rarely malignant changes can take place but here fortunately only cystic degeneration took place.

Surgical removal of a Schwannoma is usually curative. Recurrence is rare and relief of symptoms is common[7].

**Conclusion:**

In benign schwannoma, even in very big and long standing tumor very good result can be achieved with proper microsurgical treatment.

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