



A RARE CASE REPORT ON ANCIENT SCHWANNOMA OF RIGHT LITTLE FINGER

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ABSTRACT

A 70-year-old woman had become aware of a mass on the dorsal aspect of the middle phalanx of her right little finger 9 years earlier. Her medical history was unremarkable, with no traumatic injury of the right little finger. Initial examination revealed a hard, immovable swelling of 15×10 mm on the dorsal aspect of the middle phalanx of the right little finger. No pain, sensory disturbance, or motor dysfunction was noted. The patient underwent FNAC at Adichunchanagiri Hospital and Research Centre and features were suggestive of benign spindle lesion/possibility of peripheral nerve sheath tumor. Total excision of the tumor was performed under block. Histopathological findings revealed circumscribed benign tumor composed of hyper cellular and hypo cellular areas, hyper cellular area shows fibro collagenous tissue, spindle cells in palisading arrangement, whereas hypo cellular area shows edema with thrombosed vessels, also hyalinisation and myxoid changes at places are observed. Based on these findings, the patient was diagnosed as having ancient schwannoma. There was no evidence of infection, pain, complications such as recurrent tumor at 6 months postoperative.

KEYWORDS : Swelling, Finger, Tumor , Benign, Malignant

INTRODUCTION-

Schwannoma is the most common soft-tissue tumor arising in the peripheral nerves. The majority of schwannomas develop in the head and neck region, and those arising in the distal upper limb, such as in the hand and wrist, account for <1% of all cases [1]. In particular, schwannoma arising in the digits distal to the interphalangeal joint is extremely rare [2]. Ancient schwannoma, a subclass of schwannoma that shows degenerative changes during the long course of tumor formation, is also extremely rare in the distal hand region [3][4][5]. Ancient schwannoma is accompanied by various histological degenerative changes, such as cysts, hyalinization, angiogenesis, and atypical nuclei. Because of such histological changes, ancient schwannoma is often misdiagnosed as sarcoma or soft-tissue neoplasm in clinical practice [3]. Here, the authors report an extremely rare case of ancient schwannoma arising on the dorsal aspect of right little finger and provide a review of the literature.

A Clinical Case-

A 70-year-old woman had become aware of a mass on the dorsal aspect of the middle phalanx of her right little finger 9 years earlier. The tumor had enlarged gradually over the years. Her medical history was unremarkable, with no traumatic injury of the right little finger. The tumor appeared to be sporadic, with no clinical finding's indicative of neurofibromatosis. Patient was untroubled by the tumor and did not seek treatment before presenting to us. Initial examination revealed a hard, immovable tumor of 15×10 mm on the dorsal aspect of the middle phalanx of the right little finger. No pain, sensory disturbance, or motor dysfunction was noted.

The patient underwent FNAC at Adichunchanagiri Hospital and Research Centre and features were suggestive of benign spindle lesion/possibility of peripheral nerve sheath tumor. Total excision of the tumor was performed under block. Histopathological findings revealed circumscribed benign tumor composed of hyper cellular and hypo cellular areas, hyper cellular area shows fibro collagenous tissue, spindle cells in palisading arrangement, whereas hypo cellular area shows edema with thromboses vessels, also hyalinisation and

myxoid changes at places are observed. Based on these findings, the patient was diagnosed as having ancient schwannoma. There was no evidence of infection, pain, complications such as recurrent tumor at 6 months postoperative.



Image-1 Pre-operative Picture Showing Swelling Over Dorsum Of Right Fifth Finger.



Image-2- Intra Operative Picture Showing mass Lesion After Dissection

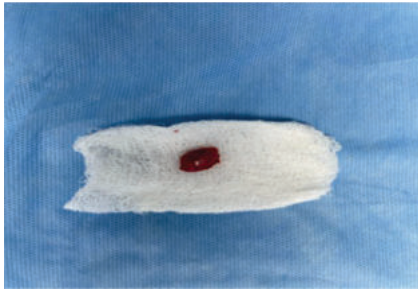


Image-3- Excised Mass Of Size A 1.5 Cm X1 Cm

Total excision of the tumor was subsequently performed with digital block. The tumor was excised. Skin closed with Ethilon 3-0.

Histopathological findings revealed circumscribed benign tumor composed of hyper cellular and hypo cellular areas, hyper cellular area shows fibro collagenous tissue, spindle cells in palisading arrangement, whereas hypo cellular area shows edema with thromboses vessels, also hyalinisation and myxoid changes at places are observed. Based on these findings, the patient was diagnosed as having ancient schwannoma.

There was no evidence of infection, pain, complications such as recurrent tumor at 6 months postoperative period.

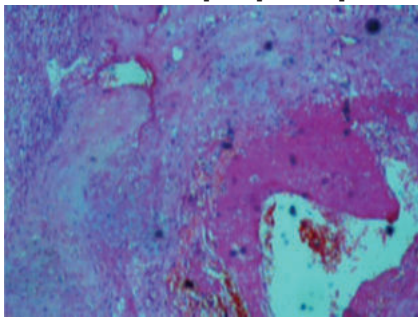


Image-4- Histopathological Picture Showing Blood Vessels With Intra Luminal Thrombosis (black Arrow) And Degenerated Cells (red Arrow).

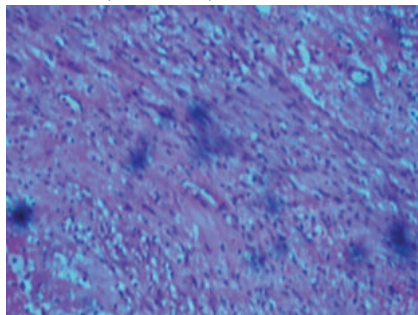


Image-5- Histopathological Picture Showing Spindle Cells With Nuclear Atypia (black Arrow)

DISCUSSION-

In Ackerman and Taylor's first report of ancient schwannoma in 1951, 10 of 48 neurogenous tumors of the thorax reviewed could be distinguished from typical neurilemmoma by the pronounced histological degenerative changes they had undergone [6]. As many studies have reported [3] ancient schwannoma tends to develop in areas deep inside the body where detection is relatively difficult (i.e., in the head and neck or thoracic region, retroperitoneum, or pelvic cavity). In such cases, patients tend not to be aware of the schwannoma, resulting in delayed diagnosis and the discovery of ancient schwannoma after many years. Histopathologically, the tumor shows a mixture of Antoni type A and B patterns and may

contain prominent blood vessels with hyalinized walls or calcification. These degenerative changes are thought to be caused by insufficient blood flow due to the continuously enlarging tumor [7]. Our literature search for ancient schwannoma of the hand or finger revealed one report of ancient schwannoma arising in the middle finger. Therefore, the present case seems to be the first of ancient schwannoma arising in the little finger and specifically the dorsal aspect of the distal phalanx. White [8] reported schwannomas of the hand and wrist presenting with pain or tenderness and paresthesia in 89% and 59% of cases, respectively, but our patient experienced no pain and was not troubled by the schwannoma, leaving it untreated for many years until it eventually changed into ancient schwannoma.

Humber et al [9] performed preoperative CT imaging of ancient schwannoma in the upper lip and reported that the CT findings were extremely useful for accurate determination of the tumor margin and cystic degenerative changes. Multidetector CT findings in the present case were also useful in determining the location of the tumor relative to the distal phalanx and the size, spread, and internal structure of the tumor.

In general, schwannomas including ancient schwannomas are easy to excise because by definition they do not intertwine with the nerve fascicles, and therefore, nerve-sparing excision can be performed. In the present case, damage to the digital nerve was avoided by gentle excision. Excision en-bloc is reported to be the only treatment for ancient schwannoma, and post resection recurrence is rare. [10]. Indeed, no recurrence was observed at 6 months postoperative in the present case. Caution must be paid when examining patients with ancient schwannoma because it is sometimes difficult to differentiate it from malignant tumors due to the presence of large cystic myxomatous areas with variable bizarre spindle cells and occasional mitoses.

CONCLUSION-

The authors report on an extremely rare case of ancient schwannoma arising on the dorsal aspect of the middle phalanx of the right little finger. In the present case, FNAC was useful in determining differential diagnosis of the swelling and HPE confirmed the diagnosis of ancient schwannoma, a rare entity.

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