



LIPOMA OF THE EXTENSOR TENDON SHEATH OF THE HAND – A RARE CASE REPORT

Plastic Surgery

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ABSTRACT

Lipoma is one of the most common soft tissue tumors of the body but it is extremely rare in the upper extremity in particular in the hand, where it represents the 8% of benign tumors. These lesions are characterized by a progressive enlargement and they can compromise the hand functionality. We present a case report of a lipoma of the extensor tendon sheath of the hand which was evaluated by MRI and was surgically excised.

KEYWORDS

Benign, Tendon sheath, Surgical excision

INTRODUCTION

Lipomas are relatively common benign tumors composed primarily of adipose tissue. They can occur anywhere on the body and are seen often in the hands and forearm. Typically localized to the subcutaneous fat layer, a lipoma is rarely associated with a tendon sheath or tendon compartment, and when it occurs, the lipoma is called lipoma of the tendon sheath. [1,2] While there are numerous case reports of lipomas of the tendon sheath occurring in association with tendons in the lower extremity, there is only one report, to our knowledge, of their occurrence in the extensor compartments of the hand.[3] We report a rare case of lipoma of the tendon sheath localized to the extensor compartment of the hand, which was successfully treated with surgical excision.

CASE REPORT

A 43 year old female presented to the Department of Plastic & Reconstructive Surgery with a swelling of the dorsum of left hand since 4 years. She also complains of occasional pain over the swelling for the past 2 months, which is a dull aching and aggravated on extending the wrist and fingers. She had no other swellings elsewhere and no comorbid factors. On examination, there was a 4 x 3 cm firm swelling on the dorsal aspect of the left hand over the 4th and 5th metacarpal regions, non-tender, not warm, mobile more in transverse than longitudinal direction and with no involvement of the skin. (Fig. 1)



Fig. 1 – Pre – op picture showing the swelling on the dorsum of left hand

MRI of the left hand showed a well defined T1 and T2 weighted homogenous hyperintense lesion seen involving the dorsal aspect of left hand adjacent to the 4th metacarpal bone elevating the adjacent extensor digitorum tendon. The lesion measures 1.1 x 2.4 x 3.1 cm and is suppressed on STIR weighted images suggestive of an adipocytic lesion. The margins of the lesion appear regular with no obvious internal septations or altered signal intensity within the lesion, thus suggesting a possibility of a lipoma. (Fig. 2)

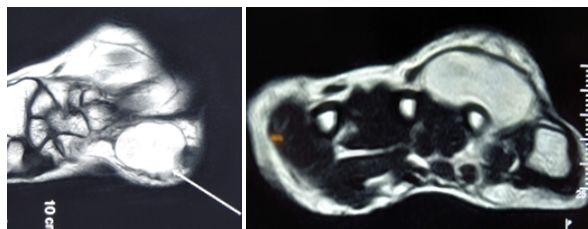


Fig. 2 - MRI showing a well defined T1 and T2 weighted homogenous hyperintense lesion seen involving the dorsal aspect of left hand adjacent to the 4th metacarpal bone elevating the adjacent extensor digitorum tendon

Under axillary block, tourniquet control and loupe magnification, a lazy S-shaped incision was made over the dorsal aspect of the left hand over the summit of the lesion and deepened in layers. A 3.2 x 2.5 cm firm yellowish lesion with distinct margins and smooth surface was found under the 4th and 5th extensor digitorum tendon of the left hand and was attached to the paratenon. The lesion was excised in toto and sent for histopathology. Post-operative was uneventful and patient was discharged on the next day. Histopathological examination confirmed the lesion to be a lipoma. (Fig. 3,4,5)



Fig. 3 – Intra-op picture showing the lesion under the 4th and 5th extensor digitorum tendons



Fig. 4 – Picture showing the lipoma after dissecting off and retracting the tendons



Fig. 5 – Photograph of the specimen after excision

DISCUSSION

Tendon sheath lipomas are very rare, benign lesions occurring in the upper or lower extremities, but commonly seen in the wrist and palm.[4] Further, lipomas of flexor tendon sheaths have known to be reported.[5] There are only a handful of case reports in the literature of lipomas of the tendon sheath, and only one to our knowledge of the existence in the extensor compartments of the hand.[3] Lipoma originates from mesenchymal preadipocyte cells and histologically is identical to normal fat tissue [9]. There are 2 types of tendon sheath lipomas: discrete solid masses of adipose tissue and adipose tissue coupled with hypertrophic synovial villi (or, lipoma arborescens).[6,7] The latter is significantly more common than the former. Although both types of lipoma of the tendon sheath are benign, they can cause symptoms such as pain, finger stiffness, and nerve compression.[8] Thus, they require surgical excision. The general workup for lipoma of the tendon sheath generally includes thorough history, physical examination, and imaging such as MRI. MRI is usually diagnostic and can aid in surgical planning by knowing about the plane of the swelling and the status of the tendons.[1] Regarding their overall prognosis, all lipomas including large ones are benign but can transform into liposarcomas in rare cases.[6] Giant lipoma sizing ≥ 50 mm should be removed due to the possibility of malignant transformation to sarcoma, despite the rare occurrence in the hand [10,11]. Lipomas are typically treated surgically by simple excision, and lipoma of the tendon sheath is no different. As long as complete excision of a tendon sheath lipoma is performed, recurrence rates are less than 5%.[2,5]

CONCLUSION

Though lipomas are the most common benign tumours of the body, their occurrence in the hand is uncommon, more so involving the extensor tendon sheaths. A thorough physical examination with appropriate imaging confirms the diagnosis, after which surgical excision of the lesion can be done. Large lipomas have the rare tendency of becoming malignant, therefore, histopathological examination is mandatory.

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