

Palmar lipoma: A case report

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Abstract Lipoma is the most common soft tissue tumor arising from mesenchymal cells. But lipomas are rarely found in hands. A 21-year-old presented with small sized left palmar lipoma located along the thenar crease in sub-facial plane. Tumor was excised completely and no recurrence was noted after three years of follow up.

Key words

Lipoma, palmar fascia, excision, thenar crease, mesenchymal cells.

Introduction

Lipomas are the single most common soft tissue tumor,¹ accounting for approximately 16% of soft tissue mesenchymal tumors.² They are benign and can involve any part of the body commonly presenting as a gradually progressive, soft and non-tender mass. However, their presentation in the hand is infrequent with a reported incidence of about 1% and since they often arise from the subfascial tissues, they may be mistaken for ganglion cysts.²

Hand lipomas are generally asymptomatic; however, when they may grow and become too large to impair mobility or else cause symptoms due to compression of the nerves.³ Lipomas must be correctly defined in extent preoperatively with imaging exams and the proper management is the complete and meticulous excision.

In this report, the author presents a case of a female patient with palmar lipoma, successfully treated with tumor excision. The case is present

due to its relatively rare incidence.

Case Report

A 21-year-old university student presented with a swelling over her left palm that had attracted her attention before six months. The patient did not feel any pain nor did she have any tingling sensation or numbness over the palm or the fingers but was anxious about it. There was neither history of trauma nor any other medical or surgical history of significance.

On clinical examination, there was a single swelling located over the thenar crease (**Figure 1A**). On palpating the swelling was 1.2 cm x 1 cm, single, non-tender, immobile, soft, non-compressible with well-defined margins and smooth surface. Patient had no motor or sensory deficit. A high resolution ultrasonography done of the swelling was suggestive of lipoma. MRI scan was advised to study the extent of the lump but due to poverty, the patient could not afford the study. Hence, based on the clinical examination and ultrasound report, a provisional diagnosis of lipoma was made. Options of careful observation and that of excisional biopsy were offered to the patient after proper explanation. Patient preferred excision and after securing informed consent and operation was conducted electively under regional anesthesia.

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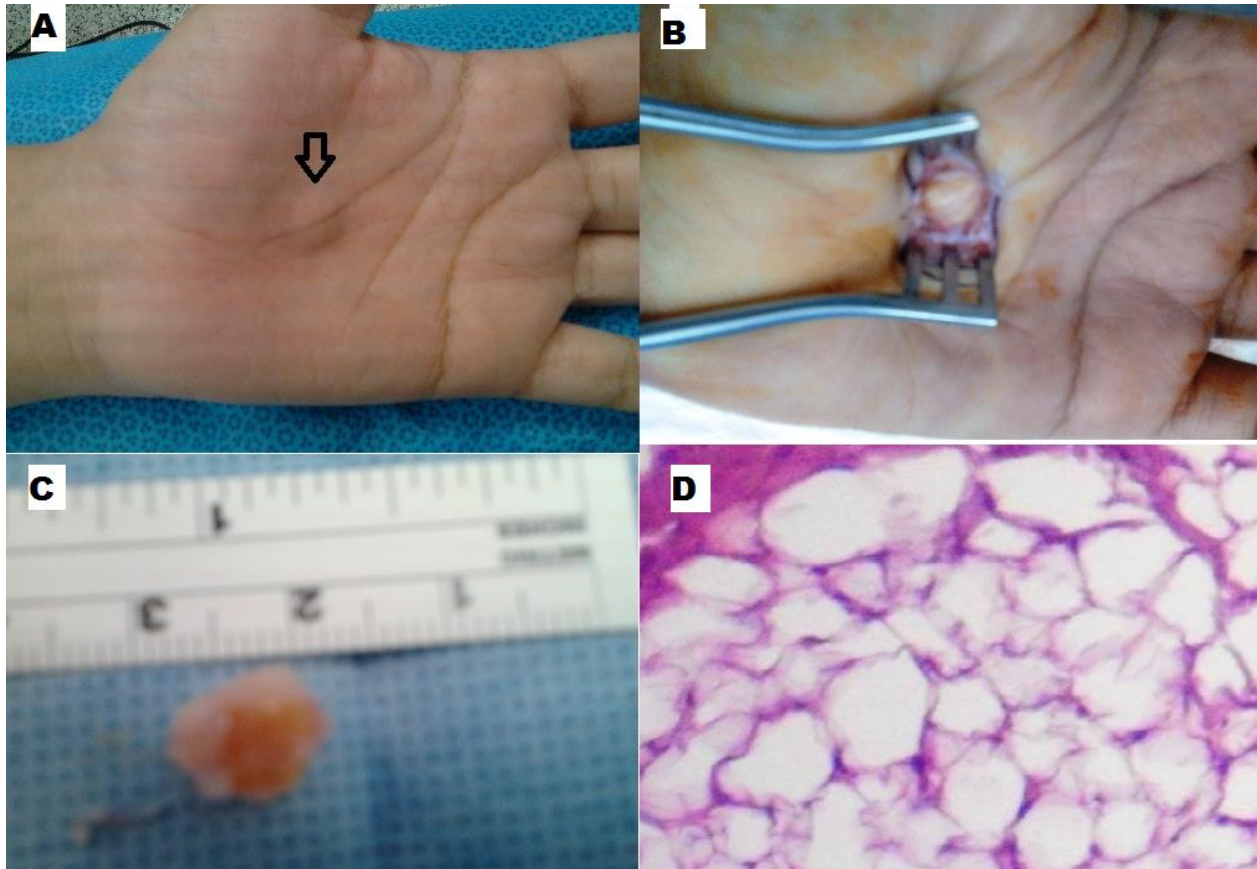


Figure 1 A- Lipoma over the thenar crease (arrow); B- Fatty lump in sub-facial plane C- Excised specimen; D – Histopathology mature adipocytes with few thin capillaries (H&E stain)

With the arm tourniquet inflated and magnification gained under corneal loupe, an incision was made over the thenar skin crease where the swelling was prominent. Intra-operatively, well-encapsulated, yellowish fatty lump was identified, in a plane deep to palmar fascia (**Figure 1B**). The lump was delineated on all sides, taking care to preserve the neurovascular structures. The lump was removed en masse (**Figure 1C**) and sent for histopathological analysis. Tourniquet was deflated and adequate hemostasis was achieved with bipolar cautery. Skin was closed with 4-0 prolene and compression dressing was applied. In the postoperative period, the patient did not report any restriction in the finger movements or any loss of sensations. The sutures were removed after a week. The physiotherapist aided the patient in regaining complete passive and

active movements. Histopathology (**Figure 1D**) showed the mass to have thin capsule and comprised of cells resembling mature adipocytes with a few thin capillaries, thereby confirming the diagnosis of lipoma. After a follow-up of three years, patient had no clinical evidence of recurrence and was satisfied with the management.

Discussion

Lipoma is a universal tumor and accounts for approximately 16% of soft tissue mesenchymal tumors.² These tumors consist of cells resembling mature fat cells and may occur in subcutaneous, inter-muscular or intra-muscular locations.⁴ Palmar region has a good amount of fat; however lipomas are only rarely seen at this location.⁴

Lipomas have the ability to insinuate themselves into small recesses and thus produce tumors of any size or shape by infiltration of spaces not tightly bound by protecting sheaths as fascia. This is especially true with tumors of the hand where lipomas occur in various anatomic locations within it, even though most of the tumors occur in subfascial plane.^{2,4} Superficial lipomas arise in the subcutaneous plane whereas the deep lipomas may arise in the flexor tendon sheaths, the carpal tunnel, in attachment to bones, inside muscles and in the deep palmar spaces. Lipomas occurring inside the tendon sheath are called endovaginal lipomas whereas deep lipomas which arise outside the tendon sheath are known as epivaginal lipomas.⁵ Giant lipomas have been described as those that are larger than 5 cm and ought to be considered as malignant until proved otherwise.⁴

Lipoma in the hand usually presents as painless lump and may attain a large size by the time a patient seeks consultation with the healthcare provider. However, the lipomas growing in confined spaces like carpal tunnel or tendon sheaths may cause trigger finger,⁶ restricted mobility, muscle atrophy, nerve compression/carpal tunnel syndrome^{7,8} or even bony erosion. The deep lipomas are considerably larger in size and lesser well-defined due to the thick palmar fascia that obscures the true size and extent of these tumors. Hence, thorough preoperative assessment and proper imaging is imperative before planning any surgical intervention or else the surgery may be end in being more extensive than originally planned, due to distortion of the anatomy.⁵

Histologically, lipomas resemble normal adipose tissue very closely. The lesions are encapsulated and composed primarily of uniformly sized and shaped, well-circumscribed mature adipocytes. However, lipomas are not derived from mature adipocytes but rather from mesenchymal pre-

adipocytes.¹ Ultrasound is diagnostic and is cost-effective when the suspicion for malignancy is low and the tumor is not in proximity with surrounding neurovascular or bony structures. Ultrasound demonstrates a homogeneous and circumscribed hyperechoic area; however, angioliipomas and low-grade liposarcomas containing both benign and malignant fat tissue may mimic lipomas in ultrasound study.⁹ With computed tomography (CT scan), lipomas exhibit smooth well-defined edges, a uniform density that is comparable to the normal fat, and do not enhancement with intravenous contrast.¹ Using magnetic resonance (MRI) imaging, a homogeneous, high-intensity signal similar to normal fat are observed.¹ Both CT scan and MRI are reliable for diagnosis, localization, estimation of dimensions, as well as, evaluation of bony involvement but MRI has been found to be more sensitive and specific (94%) for diagnosis.

As far as the treatment is concerned, small-sized asymptomatic lipomas may be observed without intervention after proper explanation to the patient. However, complete surgical excision is indicated and curative when pain, impaired hand function, compression neuropathy, anxiety or cosmetic concern is present. Outcome of surgery is excellent with most of the patients with resumption of full hand functions.

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References

1. Nadar MM, Bartoli CR, Kasdan ML. Lipomas of the hand: a review and 13 patient case series. *Eplasty*. 2010;**10**:e66.

2. Kamra HT, Munde SL. Lipoma on palmar aspect of thumb: a rare case report. *J Clin Diagn Res*. 2013;**7**:1706-7.
3. Ribeiro G, Salgueiro M, Andrade M, Fernandes VS. Giant palmar lipoma - an unusual cause of carpal tunnel syndrome. *Rev Bras Ortop*. 2017;**52**:612-5.
4. Singh V, Kumar V, Singh AK. Case report: A rare presentation of giant palmar lipoma. *Int J Surg Case Rep*. 2016;**26**:21-3.
5. Kamra HT, Munde LS. Lipoma on Palmar Aspect of Thumb: A Rare Case Report. *J Clin Diagn Res*. 2013;**7**:1706-7.
6. Pampliega T, Arenas AJ. An unusual trigger finger. *Acta Orthopaedica Belgica*. 1997;**63**(2):132-3.
7. Sbai MA, Benzarti S, Msek H, Boussen M, Khorbi A. Carpal tunnel syndrome caused by lipoma: a case report. *Pan Afr Med J*. 2015;**22**:51.
8. Vekris MD, Lykissas MG, Beris AE. Median nerve compression secondary to lipoma arising from flexor tenosynovium: a case report. *Hand Surg*. 2007;**12**:83-6.
9. Hwang S, Adler RS. Sonographic evaluation of the musculoskeletal soft tissue masses. *Ultrasound Q*. 2005;**21**:259-70.