


Case Report

Lipoma involving the hand at an unusual location: A report of two cases

Ganesh S. Dharmshaktu, MS. Ortho.¹, Naveen Agarwal, MS. Ortho.¹, Ishwar S. Dharmshaktu, MS. Ortho.¹ , Tanuja Pangtey, MS. path.²

Departments of ¹Orthopedics and ²Pathology and Blood Bank, Government Medical College, Haldwani, Uttarakhand, India.

*Corresponding author:

Ganesh S Dharmshaktu,
Department of Orthopedics,
Government Medical College,
Haldwani, Uttarakhand, India.

drganeshortho@gmail.com

Received: 08 February 2023

Accepted: 29 March 2023

Epub Ahead of Print: 14 April 2023

Published: 31 July 2023

DOI

10.25259/JMSR_34_2023

Quick Response Code:



ABSTRACT

The lipomas in the palm are a rarity and are reported sporadically in the medical literature. Many smaller lesions may even go unnoticed due to minimal clinical symptoms. Clinical suspicion and judicious use of imaging may reveal lesions at an uncommon location. Histological confirmation, however, is the basis of the appropriate diagnosis. We describe two cases of lipoma at uncommon sites with the relevant description of both cases managed by surgical excision and histological confirmation. One case of a mid-palmar lipoma in a 42-year-old female and a lipoma adjacent to the right thumb base near the first web space in a 29-year-old male patient are described. The diagnosis was confirmed on histopathology in both cases. The excision biopsy resulted in complete removal; no recurrence or complication was noted in the follow-up of 6 and 8 months, respectively. Our case report highlights the importance of the early diagnosis and excision before involving adjacent vital structures or growing larger. Clinical suspicion and judicious use of imaging are important for the appropriate diagnosis at an uncommon location.

Keywords: Benign lesion, Finger, Hand, Lipoma, Lump, Palm, Tumor

INTRODUCTION

Lipomas are the most common soft-tissue lesions in the body, usually presenting as a painless mass. Diagnosis can be easily made by and ultrasonography or magnetic resonance imaging (MRI).^[1] These lesions, comprising mesenchymal fibro-fatty tissue, are uncommon in the hand. However, lipomas, on the hand, are reported as sporadic reports or small series in the literature. Hand lipomas can be subcutaneous, sub-aponeurotic, and intramuscular, with sub-aponeurotic being the commonest. Deep-seated lipomas are the most common and giant lipomas (size more than 5 cm) may occasionally compress the median, ulnar, or both nerves simultaneously.^[2] The large hand lipomas in hand may present with implications like compression to neurovascular structures.^[3] Meticulous surgical excision is usually curative and good outcome has been reported in most cases (with or without nerve compression). Rarely, digital nerves passing through the mass need to be transected and later repaired under microscopy following lipoma excision.^[4] Other reasons for their removal are esthetic concerns and the possibility of rare malignant potential into liposarcoma.^[5] As most reported cases describe larger masses or with

How to cite this article: Dharmshaktu GS, Agarwal N, Dharmshaktu IS, Pangtey T. Lipoma involving the hand at an unusual location: A report of two cases. *J Musculoskelet Surg Res*, 2023;7:202-5.

adjacent structure involvement and associated clinical features, our cases differ for being diagnosed and managed early, before involving adjacent vital structures or growing bigger to result in much larger dissection for excision later.

CASE REPORT

Case 1

A 42-year-old female presented with a swelling in her right mid-palm area that was not visible but could be palpated on deep palpation. The swelling was initially small but gradually increased in size in the past year. The swelling could be felt on deep palpation as a non-tender, soft, and well-defined mass in the mid-palm region. There was no functional limitation or distal neurovascular deficit. The MRI revealed a hyperintense, well-defined lesion in the mid-palmar space under the deep fascia with no attachments to the adjacent bony or tendinous structures. The surgical excision was advised for histopathological diagnosis and the lesion was approached through an incision over the palmar crease overlying the swelling. The subcutaneous and deep dissection was carefully done to avoid injury to the neuromuscular structure. A $2.5 \times 2 \times 2$ cm yellowish mass was found loosely adherent to surrounding tissues and was excised [Figure 1a-c]. Histopathology revealed the presence of a lobular architecture of mature adipocytes with eccentric nuclei and the presence of thin-walled dilated blood vessels [Figure 2a]. No foci of lipoblasts or chicken wire pattern were noted. The findings were suggestive of a mature lipoma. The post-operative and follow-up period was uneventful. Active range of motion finger exercise was encouraged, resulting in good functional outcomes [Figure 2b and c] with the patient performing activities of daily living. No recurrence was noted in the follow-up of 6 months.

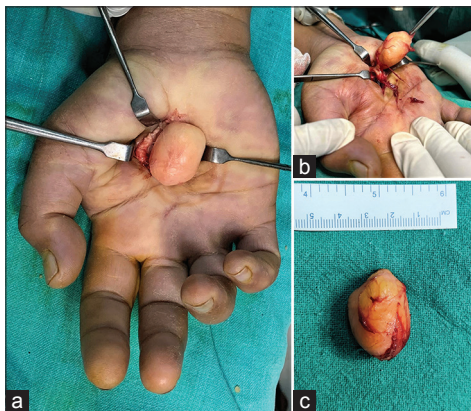


Figure 1: The clinical intraoperative image shows a yellowish, well-defined, and smooth mass in the mid-palmar region (a). The mass was loosely adhered to the adjacent flexor tendon and adjacent soft tissues (b). The entire mass was excised following careful dissection for biopsy (c).

Case 2

A 29-year-old male presented with a painless mass over the base of his right thumb since the past 2 years that did not hinder activities of daily living. Cosmetic concerns and the urge to know the nature of the mass led to the consultation. There was no tenderness or raised temperature and the mass had a smooth edge and soft consistency and was slightly mobile in both axial and longitudinal directions [Figure 3a]. Ultrasonography revealed a soft-tissue mass with no vascular abnormality or osteoarticular connection. The differential of a lipoma was provided and an excision biopsy was planned through a small incision centered over the mass. Careful dissection of skin and superficial tissues led to a whitish-yellow mass [Figure 3b] that was not adherent to underlying structures and was dissected en masse [Figure 3c]. It measured about 2.9×1.9 cm [Figure 4a]. The histopathology finding confirmed that the mass comprised mature adipocytes suggesting a lipoma [Figure 4b]. No immediate or remote complications were noted [Figure 4c] and no recurrence was noted in the follow-up of 8 months.

DISCUSSION

In a large series of 27 cases of hand lipomas, only two cases in the mid-palm region were noted (affecting the palm, wrist, and fingers).^[6] In nine cases involving the finger, the dorsal aspect was more commonly (eight cases) involved than the volar (one case). Complete excision, however, was

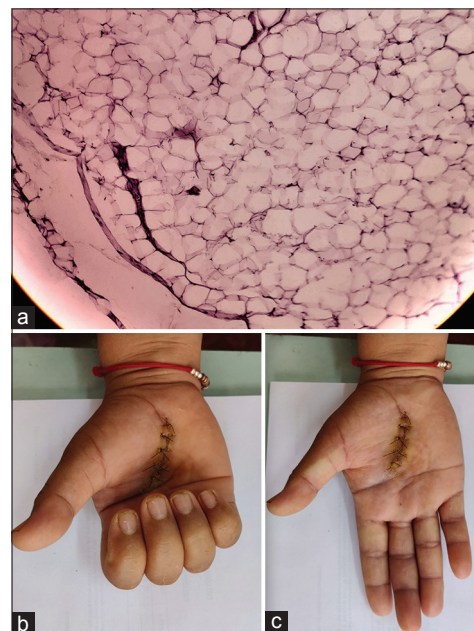


Figure 2: The histology revealed a mesh of mature adipocytes without cellular atypia suggesting a mature lipoma (a). The wound healed well, and no functional limitation was noted in the follow-up (b and c).

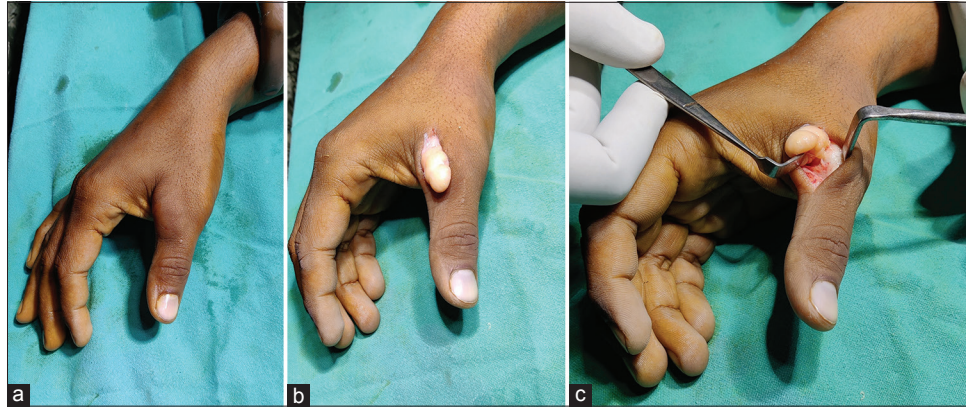


Figure 3: The lump is in the base of the right thumb near the web space (a). The dissection revealed a yellowish-white mass (b) which was carefully excised completely (c).



Figure 4: The mass was excised for the histopathological study (a), which revealed a mass composed of adipocytes (b). The wound healed well without recurrence or functional limitation (c).

found to be curative in that series and keeping lipomas in the differential diagnoses of soft-tissue hand lesions were advocated. Our cases describe a mid-palm lipoma and finger lipoma at neither the pure volar nor the dorsal aspect of the finger. Therefore, they are unusual.

Palmar lipomas are uncommon; they may present when large with location-specific compression to nearby structures such as isolated nerves or carpal tunnel.^[7] In severe clinical problems, the excision and release of the affected nerve may be required. In one case, despite two carpal tunnel release surgeries, persistent pain led to repeat investigations revealing a giant lipoma of deep palmar spaces requiring repeated surgery.^[8] Without advanced imaging facilities, ultrasound can diagnose lipomas early, even the deep-seated ones or those attached to a tendon.^[9] The masses in our cases were not large (>5 cm), loosely attached to flexor tenosynovium in one case, and removal was uncomplicated. There are, however, reports of multi-compartment

involvement of lipoma in hand and sometimes even Parona's space or dorsal compartments between metacarpals.^[10] Apart from nerve compressions, complaints of difficulty in grasping and dexterity should be investigated thoroughly in each case.

Finger lipomas, on the other hand, make for <1% of hand cases.^[6,11] Sometimes, these slow-growing lesions may interfere with adjacent neuromuscular structures, especially when larger.^[12] The location of our second case near the first web space and neither the pure volar nor dorsal aspect of the finger is an unusual feature. One case of a giant lipoma similar to our case, involving the first webspace with invaginating the thenar muscle, was reported.^[13] The mass affected the pinching movement between the thumb and the index finger and underwent marginal excision and a good outcome. Only three cases of palmar involvement and one case of index finger radial aspect were noted in a recent series of 13 cases of hand lipomas.^[14] Nearly, all cases involved adjacent structures, unlike our cases that were diagnosed and operated on before growing bigger and complicating the clinical picture or operative process. The case description of one of the cases in the article shows an intraoperative picture similar to our first case. In another rare case, multilocular lipoma was reported involving the middle and the index finger with opposing surfaces at the ulnar border of the index and the radial border of the middle finger.^[15] There was associated paresthesia and tingling sensation and the case was managed by surgical excision.

CONCLUSION

Any painless lump, however, clinically quiescent, should be investigated thoroughly to reach an appropriate diagnosis. Clinical examination coupled with advanced imaging modalities supplements the diagnosis. The excision biopsy, in most cases, has both diagnostic and therapeutic value.

AUTHORS' CONTRIBUTIONS

GSD: Data acquisition, review of literature. ISD and NA: Writing the original draft. TP: Editing the final draft. All authors have critically reviewed and approved the final draft and are responsible for the manuscript's content and similarity index.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY FOR MANUSCRIPT PREPARATION

The authors confirm that there was no use of Artificial Intelligence (AI)-Assisted Technology for assisting in the writing or editing of the manuscript and no images were manipulated using the AI.

DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patients consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

FINANCIAL SUPPORT AND SPONSORSHIP

This study did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CONFLICTS OF INTEREST

There are no conflicting relationships or activities.

REFERENCES

- Singh V, Kumar V, Singh AK. Giant palmar lipoma: A rare presentation. *World J Plast Surg* 2017;6:248-50.
- Unal M, Demirayak E, Acar B, Kose O. Simultaneous median and ulnar compression neuropathy secondary to a giant palmar lipoma: A case report and review of the literature. *Cureus* 2018;10:e2198.
- Kim HW, Lee KJ, Choi SK, Jang IL, Lee HJ. A large palmar lipoma arising from flexor tenosynovium of the hand causing digital nerve compression: A case report. *Jt Dis Relat Surg* 2021;32:230-3.
- Kim KS, Lee H, Lim DS, Hwang JH, Lee SY. Giant lipoma in the hand. *Medicine (Baltimore)* 2019;98:e18434.
- Leclere FM, Casoli V, Pelissier P, Vogt PM, Desnouveau CS, Spies C, *et al.* Suspected adipose tumours of the hand and the potential risk for malignant transformation to sarcoma: A series of 14 patients. *Arch Orthop Trauma Surg* 2015;135:731-6.
- Pertea M, Lunca S, Filip A, Moraru DC, Carp C, Pinzaru R, *et al.* Atypical sites of the lipoma on the hand and fingers: Clinical and imaging features and surgical outcome. *Diagnostics (Basel)* 2022;12:2286.
- Pagonis A, Givissis P, Christodoulou A. Complications arising from a misdiagnosed giant lipoma of the hand and palm: A case report. *J Med Case Rep* 2011;5:552.
- Warwick D, Kar S, Harris M. Ultrasound case report of a palmar lipoma causing carpal tunnel syndrome. *Ultrasound* 2013;21:224-7.
- Bocchiotti MA, Lovati AB, Pegoli L, Pivato G, Pozzi A. Case report of multi-compartmental lipoma of the hand. *Case Rep Plast Surg Hand Surg* 2018;5:35-8.
- Balvis-Balvis P, Yanez-Calvo J, Castro-Menendez M, Ferreiros-Conde MJ. Giant lipomas of the hand. Our experience. *Rev Iberam Cir Mano* 2020;48:72-8.
- Chronopoulos E, Ptohis N, Karanikas C, Kalliakmanis A, Plessas S, Neofytou I, *et al.* Patient presenting with lipoma of the index finger: A case report. *Cases J* 2010;3:20.
- McCulloch IL, McClellan WT. Lipoma of the finger with neuromuscular bundle divergence. *ACS Case Rev Surg* 2020;3:5-7.
- Iyengar KP, Matar HE, Loh WY. Giant hand lipoma invaginating the thenar muscles. *BMJ Case Rep* 2014;2014:bcr2014203963.
- Nadar MM, Bartoli CR, Kasdan ML. Lipomas of the hand: A review and 13 patient case series. *Eplasty* 2010;10:e66.
- Alsinar TA, Alhablany TM, Alokaili HR, Altamimi AS, Rashidi ME. Multilobular lipoma in the middle and index fingers: A case report. *Cureus* 2022;14:e22172.