International Journal of Science and Research Archive
eISSN: 2582-8185
Cross Ref DOI: 10.30574/ijsra
Journal homepage: https://ijsra.net/

(CASE REPORT)

Check for updates

A Rare Case Report: A Thumb Lipoma causing Ape Hand Deformity in a 58-year-Old Woman at Mbale Regional Referral Hospital

Owori Francis *, Abingwa John Patrick and Okware Patrick

Department of Surgery, Busitema University.

International Journal of Science and Research Archive, 2025, 17(01), 150-156

Publication history: Received on 28 August 2025; revised on 01 October 2025; accepted on 04 October 2025

Article DOI: https://doi.org/10.30574/ijsra.2025.17.1.2773

Abstract

Background: Ape hand deformity is an uncommon presentation, typically resulting from median nerve palsy or injury, and is rarely caused by space-occupying lesions such as lipomas.

Case Presentation: We report the case of a 58-year-old woman who presented to Mbale Regional Referral Hospital with progressive weakness of thumb muscles, restricted mobility, and difficulty in gripping objects. Examination revealed thenar muscle wasting and inability to oppose, abduct, or circumduction the thumb, consistent with ape hand deformity. Imaging and intraoperative findings confirmed the presence of a Lipoma at the base of the thumb compressing the median nerve. Surgical excision (lipomectomy) with nerve decompression was performed, followed by structured physiotherapy and occupational therapy. The patient experienced significant functional recovery and improvement in quality of life.

Conclusion: This case highlights the importance of considering rare etiologies such as lipomas in patients with atypical presentations of median nerve palsy. Early diagnosis and comprehensive management, including surgical intervention and rehabilitation, are essential for optimal functional outcomes.

Keywords: Ape hand deformity; Thumb Lipoma; Median nerve palsy; Case report

1. Introduction

Lipomas are the most common benign soft tissue tumors and arise from mature adipocytes [1]. They occur most frequently on the trunk and proximal extremities but are rare in the hand, accounting for less than 5% of all lipomas [2]. Palmar lipomas, which develop in the palm or thenar region, are even less common and present diagnostic challenges due to the complex anatomy of the hand [3].

Although usually asymptomatic, palmar lipomas may cause symptoms if they enlarge within confined spaces, exerting pressure on surrounding structures [4]. The median nerve is particularly vulnerable, and compression can mimic or trigger carpal tunnel syndrome or other neuropathies [5].

Ape hand deformity, classically associated with traumatic or degenerative median nerve palsy, is rarely reported as a consequence of lipomas [6]. This case adds to the small body of literature and underscores the role of space-occupying lesions in the differential diagnosis of such motor deficits [7].

* Corresponding author: Owori Francis

2. Case Presentation

2.1. Patient Bio data

A 58-year-old right-handed woman, peasant farmer, married with four children, presented to the Orthopedic Unit of Mbale Regional Referral Hospital in Eastern Uganda.

2.2. History of Presenting Complaint

She reported a ten-year history of progressive weakness of the right thumb, first noticed as difficulty in gripping objects and manipulating household items. Over time, she developed restriction of thumb mobility, particularly in opposition and abduction. The weakness was painless and gradually progressive. She also noted the presence of a slowly enlarging swelling at the base of the right thumb over the same period. There was no history of trauma, numbness, tingling sensations, night pain, or systemic symptoms such as fever or weight loss.

2.3. Past Medical and Surgical History

- No history of diabetes mellitus, hypertension, or other chronic illnesses.
- No previous surgeries on the hand or elsewhere.
- No history of long-term medication use.

2.4. Family History

There was no family history of neurological disorders, soft tissue tumors, or malignancy.

2.5. Social History

The patient was a non-smoker and did not consume alcohol. She was independent in her activities of daily living but had increasing difficulty with farm work and domestic chores due to her right-hand dysfunction.

2.6. Examination Findings

2.6.1. General Examination

The patient was in good nutritional status, afebrile, with stable vital signs.

2.6.2. Local Examination of the Right Hand:

- Inspection revealed wasting of the thenar eminence.
- A visible swelling was noted at the base of the right thumb.
- On palpation, the swelling was soft, mobile, non-tender, and well-circumscribed, measuring approximately 3.0 × 4.0 cm.
- There was weakness of thumb opposition, abduction, and circumduction consistent with ape hand deformity.
- Grip strength was reduced compared to the contralateral hand.
- No sensory deficits were noted in the median nerve distribution.
- The rest of the musculoskeletal and neurological examination was unremarkable.

Figure 1 The mass at the base of the thumb

2.7. Investigations

- **Ultrasound scan of the right hand** revealed a well-defined, hyperechoic lesion consistent with a Lipoma compressing the median nerve at the base of the thumb.
- **Routine blood investigations** (complete blood count, renal and liver function tests) were within normal limits.
- **Histopathology of excised specimen** confirmed a benign Lipoma composed of mature adipose tissue without atypical.

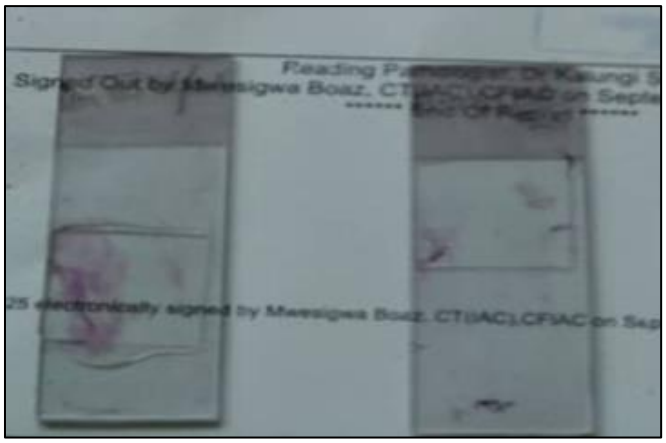

Figure 2 Histopathology of processed specimen

2.8. Management and Outcome

The patient underwent surgical excision (lipomectomy) with decompression of the median nerve under regional anesthesia. The postoperative course was uneventful. She was referred for physiotherapy and occupational therapy for rehabilitation. At three months follow-up, she demonstrated improved thumb mobility and grip strength, with significant recovery of hand function.

2.9. Provisional Diagnosis

Median nerve compression at the base of the thumb secondary to a space-occupying lesion (likely Lipoma) presenting as ape hand deformity.

Differential diagnoses considered: ganglion cyst, giant cell tumor of tendon sheath, fibrolipoma, or other benign soft tissue tumors.

2.10. Management

The patient underwent surgical excision (lipomectomy) with decompression of the median nerve under regional anesthesia. The excised specimen was sent for histopathology, which confirmed a benign lipoma. The surgery was uneventful.

Figure 3 Surgical operation in progress at thenar region

Figure 4 Gross specimen after excision showing a brownish appearance (Hibernoma)

2.11. Follow-up

The patient was discharged on the third postoperative day with instructions for hand elevation, wound care, and gradual mobilization. She was enrolled in a structured physiotherapy and occupational therapy program to restore thumb strength and dexterity.

At **2-week follow-up**, the surgical wound had healed well with no complications.

At **6-week follow-up**, she demonstrated improved thumb abduction and partial opposition, with increasing grip strength.

Figure 5 Surgical wound healing at week 6

At **3-month follow-up**, there was marked improvement in thumb mobility and hand function, enabling her to resume most of her domestic and farm duties. The thenar muscle wasting showed early signs of recovery. The patient expressed satisfaction with the outcome and reported improved quality of life.

Figure 6 Patient showing restored hand mobility and hand function

3. Discussion

Lipomas in the hand are uncommon but clinically significant when they compress nerves [8]. In our case, the lesion produced motor impairment of the median nerve branch, causing thenar wasting and ape hand deformity. Unlike most reported cases that present with sensory disturbances such as numbness or paresthesia, this case demonstrated a predominantly motor deficit [9].

Other reports have documented large palmar lipomas mimicking carpal tunnel syndrome, with symptoms resolving after surgical excision [10]. Similarly, intraneural lipomas of the median nerve have been described, highlighting the potential for benign adipose tumours to directly involve or compress neural structures [11]. Giant multicompartmental lipomas of the hand have also been reported, again demonstrating the diagnostic challenge and significant functional impairment that can result [12].

The gold standard for diagnosis is MRI, which delineates the size and relationship of the lipoma to adjacent structures, but in resource-limited settings, ultrasound remains valuable [13]. Early surgical intervention, followed by physiotherapy, remains the mainstay of treatment, with generally favourable outcomes

4. Conclusion

Palmar lipomas are rare entities that may lead to significant functional impairment when compressing neurovascular structures. Our case highlights the importance of including lipomas in the differential diagnosis of ape hand deformity and demonstrates that surgical excision combined with rehabilitation can yield excellent outcomes.

Patient Perspective

The patient reported significant improvement in hand function following the surgery and rehabilitation program. She expressed satisfaction with the restoration of thumb mobility, grip strength, and overall hand dexterity, which allowed her to resume daily activities, including household chores and farm work. The patient highlighted that before the surgery, simple tasks such as holding a cup or carrying small tools were difficult, but after structured physiotherapy and occupational therapy, she regained confidence in using her right hand. She also expressed relief at the resolution of the visible swelling at the base of her thumb and emphasized that early surgical intervention had a meaningful impact on her quality of life.

Recommendations

- **Early Recognition of Rare Causes:** Clinicians should maintain a high index of suspicion for space-occupying lesions, such as palmar or thenar lipomas, when evaluating patients with median nerve palsy or ape hand deformity, especially in the absence of trauma.
- **Comprehensive Clinical Assessment:** Detailed physical examination, including inspection and palpation of the hand and thumb, should be performed to identify subtle masses or localized swelling that may compress neurovascular structures.

- **Use of Appropriate Imaging:** Imaging modalities such as ultrasound or MRI should be considered to delineate the size, location, and relationship of soft tissue masses to nerves and vessels prior to surgical planning.
- **Timely Surgical Intervention:** Early surgical excision with careful nerve decompression is recommended to prevent irreversible motor deficits and optimize functional recovery.
- **Structured Rehabilitation:** Postoperative physiotherapy and occupational therapy are crucial to restore thumb strength, mobility, and hand function, and to improve the patient's quality of life.
- **Long-term Follow-up:** Patients should be monitored for recurrence, persistent deficits, or complications, particularly in cases with prolonged nerve compression or large tumors.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of ethical approval

All participants involved in this study were provided with clear and comprehensive information about the research purpose, procedures, potential risks, and their rights. Informed consent was obtained before participation, ensuring that individuals voluntarily agreed to take part with full understanding of the study's scope.

Statement of informed consent

Participants were also informed of their right to withdraw at any time without any negative consequences.

References

[1] Monroy MF, Durani P, Offer GJ. Unusual case of finger lipoma: a case report and literature review. Journal of Plastic, Reconstructive & Aesthetic Surgery. 2015 Feb 1;68(2):284-6.

[2] Kumar P, Das S, Kaur J. Giant palmar Lipoma with median nerve neuropathy: A case report and review of literature. Future Health Journal. 2024. Available from: https://futurehealthjournal.com/giant-palmar-lipoma-with-median-nerve-neuropathy-a-case-report-and-review-of-literature/

[3] Nadar MM, Bartoli CR, Kasdan ML. Lipomas of the hand: a review and 13 patient case series. Eplasty. 2010 Oct 25;10:e66.

[4] Copcu E. Can intramuscular lipoma have a post-traumatic origin?. British Journal of Dermatology. 2003 Nov 1;149(5):1084-5.

[5] Copcu E. Can intramuscular lipoma have a post-traumatic origin?. British Journal of Dermatology. 2003 Nov 1;149(5):1084-5.

[6] Zaottini F, Picasso R, Pistoia F, Pansecchi M, Tovt L, Macciò M, Sanguinetti S, Martinoli C. Imaging of anatomical variants around the wrist and hand. InSeminars in Musculoskeletal Radiology 2023 Apr (Vol. 27, No. 02, pp. 169-181). Thieme Medical Publishers, Inc..

[7] Rohde RA, Hodgman JE, Cleland RS. Multiple congenital anomalies in the E1-Trisomy (Group 16-18) Syndrome. Pediatrics. 1964 Feb 1;33(2):258-70.

[8] Mizuki D, Kaneko T, Hanada K. Successful treatment of topical photodynamic therapy using 5-aminolevulinic acid for plane warts. British Journal of Dermatology. 2003 Nov 1;149(5):1087-8.

[9] Sugarman GI, Rimoin DL, Lachman RS. The facial-digital-genital (Aarskog) syndrome. American Journal of Diseases of Children. 1973 Aug 1;126(2):248-52.

[10] Ko MJ, Chu CY. Topical tacrolimus therapy for localized bullous pemphigoid. British Journal of Dermatology. 2003 Nov 1;149(5):1079-81.

[11] Sadhukhan S, Bhardwaj A, Kumar S, Yadav T, Patra S, Tiwari S. Rare Masqueraders of Pure Neuritic Leprosy: A Report of Four Cases. Indian Dermatology Online Journal. 2025 Mar 1;16(2):280-5.

[12] Al Kaissi A, Kurz H, Bock W, Pärtan G, Klaushofer K, Ganger R, Grill F. Agenesis of the corpus callosum and skeletal deformities in two unrelated patients: Analysis via MRI and Radiography. Case Reports in Orthopedics. 2014;2014(1):186973.

[13] Tappero EP. SYSTEM ASSESSMENT. Tappero and Honeyfield's Physical Assessment of the Newborn: A Comprehensive Approach to the Art of Physical Examination. 2024 Jan 24:151.