World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

Carpal tunnel syndrome due to a giant lipoma: A case report an review of the literature

Khalil SAHBANI [1, 2, *], Anass ABAYDI [2], Jihad RADI [1, 2], Kamal LAHRACH [1, 2] and Fawzi BOUTAYEB [1, 2]

[1] *Department of Traumatology, Orthopedic A Hassan II University Hospital Mohammed Ben Abdellah University, Fez, Morocco.*
[2] *Faculty of Medicine and Pharmacy and dentistry, Mohammed Ben Abdellah University, Fez, Morocco.*

World Journal of Advanced Research and Reviews, 2025, 25(01), 1664-1667

Publication history: Received on 12 December 2024; revised on 18 January 2025; accepted on 21 January 2025

Article DOI: https://doi.org/10.30574/wjarr.2025.25.1.0209

Abstract

Lipomas are very rarely localized to the hand and commissures. We report a case of a giant lipoma of the first commissure that had been evolving for 10 years in a 60-year-old woman with signs of carpal tunnel. The mass was removed en bloc without damage to vascular, neural or tendinous elements. Post-operative management was straightforward, and the patient recovered good mobility in her hand and fingers.

Keywords: Lipoma; giant; Nerve compression; Carpal tunel; Patient

1. Introduction

Benign tumoral pathologies of the hand are common, including lipomas, which account for only 1 to 3.8% of tumors of the hand and fingers [1]. A lipoma is said to be “giant” when the excised specimen exceeds 5 cm in diameter. We report the following case. We report a case of giant thenar lipoma invading the palm of the hand without clinical signs of neurovascular compression.

2. Case report

The patient was 60 years old, and had presented for over 10 years with a voluminous swelling of the left thenar loge, with paresthesia of the median nerve territory. Clinical examination revealed a subcutaneous tumour measuring approximately 7 cm in length x 4 cm in width (Figure 1).

* Corresponding author: Khalil SAHBANI

Figure 1 Preoperative aspect

The mass was soft, without inflammatory signs or pain, and appeared to be poorly limited, with smaller tumour extensions on the palm of the hand opposite the 3rd and 4th interosseous spaces. The phalen test was positive. The standard X-ray showed a shadow of a tissue image with no bone lesions. Ultrasound revealed a voluminous, homogeneous, hyperechoic, well-limited formation on the palmar surface of the left hand, measuring 70/40 mm, with no Doppler vascularization. Its appearance was strongly suggestive of a lipoma of the hand, with no tendon abnormalities.

Surgery was performed under locoregional anaesthesia, with a pneumatic tourniquet at the root of the limb. The approach allowed satisfactory exposure over the entire palm of the hand, revealing a lipomatous, encapsulated mass, pushing back the vascular-nervous pedicles of the long fingers without invading them, and remaining anterior to the flexor tendons (Figure 2).

The tumour was carefully dissected, enabling it to be removed en bloc without damaging the noble elements (Figure 3). Anatomical pathology revealed a fatty mass composed of adipocytes with vacuolated cytoplasm and peripheral nuclei, arranged in lobules separated by fibrous septa, with no signs of malignancy. This led to the conclusion of a lipoma.

Figure 2 Peroperative aspect of the lipoma

Figure 3 Lipoma after removal

3. Discussion

A lipoma is a benign tumour composed of mature fat [2]. It is often painless and usually appears as a soft, regular, mobile tumor. Posch [3] described the clinical test of applying ice to the tumor, which in the case of lipoma leads to solidification of the mass. The usual course is slow growth, which may stabilize spontaneously. Lipomas are benign tumours of extraneural origin, accounting for around 16% of all mesenchymal tumours [4]. Lipomas are rare in the hand. They are termed “giant” when the resection specimen exceeds 5 cm in diameter [5].

They appear mainly in the fifth and sixth decades of life. These tumors may be superficial, originating in subcutaneous tissue, or, less frequently, of subaponeurotic origin, arising from deep within Guyon's lodge, the carpal tunnel or the deep palmar space. Finally, in a few cases, they may originate in juxta-articular regions or close to the periosteum (para-osteal lipoma), they may reach the bone and cause cortical hyperostosis [6]. Clinically, superficial lipomas are often asymptomatic, slow-growing, of fluctuating soft consistency, lobulated and mobile. When located in anatomical defiles, they can cause nerve compression, resulting in downstream pain and sensory-motor disorders. Because of their size, they can lead to limited mobility and difficulty in grasping.

Radiological investigations diagnose lipoma in 71% of cases. Ultrasound and, above all, nuclear magnetic resonance imaging (MRI) are useful in assessing these lesions. The differential diagnosis involves other soft tissue tumours such as ganglion cysts, giant cell tumours, myxomas, angiolipomas, intraneural lipofibroma and liposarcoma [6]. The latter is the most risky differential diagnosis for the patient. It is the most common soft tissue sarcoma in adults, with a frequency ranging from 1.1 to 2.5/1000,000, peaking between the ages of 50 and 70 [7]. Marginal excision is the treatment of choice for benign lipomas. Careful identification and dissection of vasculo-nervous elements is required to avoid iatrogenic lesions. Exeresis must be as complete as possible to minimize the risk of local recurrence. However, such recurrences are exceptional [5,6].

4. Conclusion

Lipomas of the hand are a rare benign tumour. Their proximity to vascular-nerve structures means that great care must be taken during surgical dissection. MRI is the most interesting diagnostic tool, with a definite therapeutic impact. Only anatomopathological examinations can confirm the histological nature of the lesion.

Compliance with ethical standards

Acknowledgement

Acknowledgement for the staff of the department of orthopedics, Hassan II university Hospital, Fez, Morocco

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Glicenstein J, Ohana J, Leclercq C. Lipomes In: Glicenstein J, Ohana J, Leclercq C: tumeurs de la main. Berlin, Springer-Ver!lag. 1988; 78-83.

[2] Calandruccio JH, Jobe MT. In: Canale ST, editor Campbell operative. Orthopaedics 9th edition, St Louis: Mosby-Year Book, Inc. 1998;4:3704-5.

[3] Posch JL. Tumors of the hand. J Bone Joint Surg. 1956;38A(3):517-40. PubMed | Google Scholar

[4] Ersozlu S, Ozgur AF, Tandogan RH. Lipoma of the index finger. Dermatol Surg. 2007 Mar;33(3):382-4. PubMed | Google Scholar

[5] S, Hassoune J, Largab A. Lipome géant de la main. Rev Chir Main. 2010;29(1):44-7.

[6] Chronopoulos E1, Nikolaos P, Karanikas C, Kalliakmanis A, Plessas S, Neofytou I et al. Patient presenting with lipoma of index finger. Cases journal. 2010;3:20. PubMed | Google Scholar

[7] Laurino L, Furlanetto A, Orvieto E, Del Tos AP. Well-differentiated liposarcoma (atypical lipomatous tumors). Semin Diagn Pathol. 2001;18(4):258-62. PubMed | Google Scholar