

Giant Lipoma of The Hand: A Case Report And Literature Review

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Abstract

Background: Lipomas are the commonest soft tissue tumors that arise from adipocytes. They are often located in the subcutaneous tissue and underlying fascia of the head, neck, shoulders, back and thighs. Upper extremity lipomas are gradually becoming frequent. Current popular nosology recognizes, in addition to subcutaneous localizations, intramuscular and intermuscular, even interosseous forms. Intramuscular lipomas of the hand are rare.

Case report: We deem interesting to report a peculiar case of a giant intramuscular lipoma of the thenar region in a 50-year-old patient with no antecedent of trauma. The authors intend, by means of this case report and relevant literature review, to highlight the pitfalls in the preoperative diagnosis as well as the management of this benign affection.

Conclusion: Giant lipomas are a cosmetic nuisance in the upper extremity. Further workup is often required to rule out malignancy. Currently only complete resection of symptomatic lipomas guarantees best functional outcome with less risk of recurrence.

Keywords: Lipoma, thenar, intramuscular,

I. Background

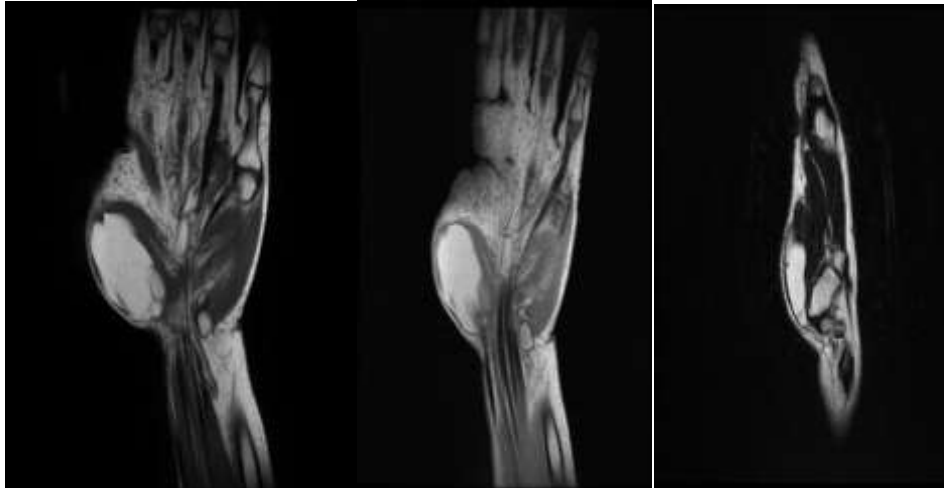
Lipomas constitute the most frequent benign mesenchymal tumors. Arising from primordial fatty cells, they could develop in the subcutaneous tissue of any part of the body. Deep-seated lipomas arising in the intramuscular or intermuscular regions are infrequent with incidence estimated between 0, 9% and 6% of lipomatous lesions according to many authors.

The commonest sites of involvement of intramuscular lipoma remain the investing fascia of the large muscles of the extremities notably those of the thigh, shoulder and upper arm. More so, intramuscular lipomas of the hand are even rare with very cases reported in literature. We hereby present the case of a 50-year-old woman without trauma antecedent who presented with a 3-year history of swelling in the thenar and recent impairment of grasping.

Case report

Patient, female, 55 years, with no significant clinical history nor prior trauma presented with a hitherto painless swelling of the right hand. History dated back three years prior to her admission with recent occasional numbness and pain in the arm standing out as major complaints during her consultation. Physical examination found a painless giant swelling in the left thenar, measuring 6cm * 4cm, easily movable untender, without modification of overlying skin.

Grasping was slightly impaired in the left arm with no sensory nor motor deficit. Ultrasound revealed a well-circumscribed highly echoic lesion of the thenar region measuring 7cm with minimal internal vascularity thus requiring further work up. Magnetic resonance imaging (MRI) came back for a highly intense T2-T1 lesion unenhanced with gadolinium injection and persistent on fat suppression sequence (Figure 1, 2, 3).



Figures 1-3: MRI images from left to right;

1. T1 sequence showing highly intense polylobulated mass of the thenar with well-defined margins
2. T2 sequence showing highly intense mass of the thenar
3. FATSAT sequence, slight persistence of lesion after fat suppression

Patient was admitted for surgical excision with per operative discovery of an intramuscular non-capsulated polylobulated yellowish mass measuring 52mm x 35mm (figure 4, 5, 6, 7). After careful dissection between layers of muscles of the thenar, tumor excision was done en bloc. Wound closure was achieved without tension nor residual cavity and immediate post-operative recovery was uneventful. Pathology findings came back for lipoma. Patient has not presented with any signs of local recurrence three months after surgery with favorable functional outcome.



Figure 4: Peroperative image showing intramuscular lesion of the thenar region



Figure 5: Peroperative image showing careful dissection between fibers of thenar muscles



Figure 6: Peroperative image after complete careful dissection revealing a yellowish polylobulated mass being resected en bloc



Figure 7: yellow roundish mass non capsulated measuring 52mm in long axis

II. Discussion

Lipomas are common benign soft tissue tumors usually localized superficially to the enclosing fascia in the subcutaneous tissues [1]. Arising from primordial fatty cells, they could develop in the subcutaneous tissue in almost any part of the body [2]. Deep-seated lipomas arising in the intramuscular or intermuscular regions are infrequent with incidence estimated between 0, 9% and 6% of lipomatous lesions according to many authors [3, 4,]. Most intramuscular lipomas are solitary with only a few cases reported involving multiple lesions affecting more than one muscle sites [1, 5, 6, 7, 8]. Intramuscular lipomas may occur in all age groups. Majority of cases occur between the ages of 40 and 70 years and a slight female predominance generally observed in recent literature as women have the capacity to build up more fat [9,10 11] as was the case of our patient.

Clinically, intramuscular lipomas most often present as a slowly growing asymptomatic mass or swelling with no palpable mass. Cosmetic deformity or compressive symptoms tend to bring small lipomas of the upper extremity to medical attention unlike rapidly growing masses in other locations of the body. Pain is usually a late symptom and may be due to compression of peripheral nerve or adjacent tissue as was the case in our patient. Dysfunction of the engaged muscle or even decreased range in movement have been reported in some cases of infiltrative deep seated lipoma [12, 13]

Giant lipoma, of the upper extremity, defined as lesions larger than 5 cm in any one dimension often warrant a work-up for malignancy [14]. Plain X-ray may reveal soft tissue shadowing with occasional calcification whereas variable echogenicity and even lack of apparent internal vascularity as well defined margins on ultrasound may not be enough arguments to rule out malignancy preoperatively. CT imaging or better still MRI is more useful when it comes to soft tissue tumors. Generally, lipomas appear as homogenous lesions demonstrating high signal intensity on both T1- and T2- weighted sequences. Fat-suppressed sequences demonstrate signal suppression similar to normal fat. In our case, the hyper intense T1-T2 nature of the lesion and its slight persistence on fat suppression was peculiar.

Recent rapid growth, size larger than 5 cm and intramuscular location have all been reported to be risk factors [14,15] and proper clinical evaluation of a large mass in the upper extremity must include imaging or biopsy to rule out malignancy.

Suction-assisted lipectomy has been suggested as a treatment option for giant lipomas yet the risk of damage to displaced nerves and other vital structures limits this mode of treatment [16]. Surgical excision is the treatment of choice when the patient is symptomatic and cosmetically acceptable as complete marginal excision of lipoma help prevent recurrences [17].

III. Conclusion

Lipomas of the hand are very rare and may require surgical excision when they become symptomatic. Further work up is sometimes necessary to rule out malignancy and guide therapeutic management. Currently, only complete surgical excision guarantees curative treatment with low risk of recurrence.

Authors' Contributions

All authors contributed either directly or indirectly in the writing and general format of this article

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