

Case Report

A Giant Lipoma In The Hand - Report Of A Rare Case

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Citation

Kamath BJ, Kamath KR, Bhardwaj P, Shridhar, Sharma C. A Giant Lipoma In The Hand - Report Of A Rare Case. *Online J Health Allied Scs.*2006;1:6

URL

<http://www.ojhas.org/issue17/2006-1-6.htm>

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<http://openmed.nic.in>

Submitted: Apr 11, 2006; Revised: June 15, 2006; Accepted: June 23, 2006; Published: Jul 08, 2006

Abstract:

A 38 years old male patient presented with a large painless swelling in the right palm with ultrasound examination suggestive of fatty nature of the swelling MRI showing a well-circumscribed soft tissue swelling in the deep palmar space. The giant tumor of 6.5 X 4 cm was excised and the patient was symptom free two years following the surgery.

Key Words: Lipoma; Giant tumor; Deep palmar space; Surgical excision.

Introduction:

Lipoma is the most common and most widely distributed tumor seen in the body. The most common clinical presentation is a gradually increasing, soft and resilient, non-tender mass. Upper limb is one of the favoured sites for lipomas; Pack and Ariel reported 352 lipomas in 134 patients out of which 94 were in upper limb.(1) But for some reason not known, lipomas in the palm are very rare and when seen they are normally of a small size. Barrile could find only one case of palmar lipoma in his 476 lipomas of the upper extremity.(2) Only case reports and small series of this entity have been described in the English literature.(3-10) These tumors are rare and may be very deceptive in terms of their size. We herein report a case of giant lipoma of deep palmar space. The approach to such a rare problem has been described and the precautions while handling such a case have been highlighted.

Case Report:

A 38 year old male patient presented with the complaints of swelling in the right palm and difficulty in doing his daily activities since one and half years. He was a computer operator by profession. He first noticed the swelling on the thenar aspect of the palm one and half-years back, which slowly increased in size for first six months and then remained the same. He reported no pain in the palm or numbness in the fingers. On examination a swelling measuring 4 X 3 cm

was noticed on the right palm. Proximal to distal, it extended from 4cm distal to the wrist flexion crease to the proximal palmar crease. Medio-lateral extent was from the hypothenar eminence to the radial margin of the hand, obliterating the hollow of the palm [Figure 1].



Figure 1: The Zig-Zag incision used to excise the tumor. This incision allowed us the freedom of extending it and provided good exposure. It can be noted that on clinical examination the swelling was mainly on the thenar eminence only.

On palpation the margins of the swelling were not well defined. Swelling was non-tender, soft in consistency and non-compressible. There was no local rise of temperature or lymphadenopathy. The swelling was not fixed to the skin and overlying skin was normal. The swelling was not fixed to the underlying structures. There was no evidence of compressive neuropathy of the median nerve or any vascular deficit. Based on the features in history and clinical examination a diagnosis of lipoma or hemangioma was considered. Blood investigations were normal and x-ray showed a soft tissue swelling over the thenar eminence [Figure 2 A]. Ultrasound of the swelling was done, which showed the content of the tumor to be fat and helped to rule out hemangioma. MRI scan [Figure 2 B] showed a well-circumscribed soft tissue swelling suggesting lipoma. The extent of the tumor was clearly delin-

eated by the MRI; it showed the lesion to be larger than what was expected from the clinical examination and helped in planning the incision and operation. It also revealed the relation of the tumor to the important structures in the palm.

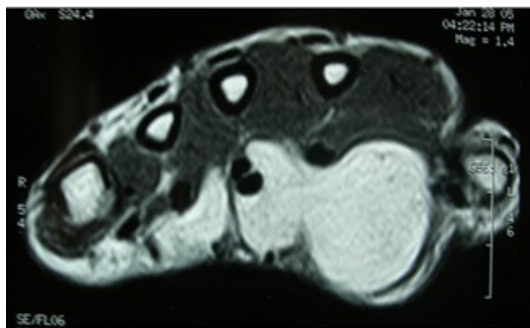


Figure 2: A: X-ray of the hand showing the soft tissue shadow in the palmar region. B: MRI showing the actual extent of the tumor and its relation with the important structures in the region.

The patient was positioned supine under general anesthesia and a tourniquet was applied over the arm. After adequate preparation and draping a zigzag incision was made over the palm, extending from the flexion crease of the wrist to the proximal palmar crease [Figure 1]. Careful dissection was carried out, starting proximally before the swelling area. The carpal tunnel was opened and all the important neurovascular structures and tendons identified all along the course distally [Figure 3 B].

Median nerve and its branches and digital vessels were identified and well protected. Palmar arch was preserved. The tumor was carefully dissected out and excised en masse [Figure 3 A]. The tumor measured 6.5 cm X 4cm [Figure 4].

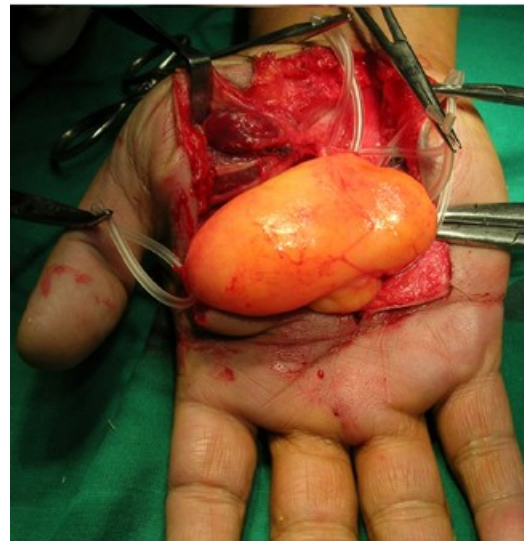


Figure 3: A: The excised tumor en masse. B: Picture showing the dissected and preserved important neurovascular structures.

Tourniquet was deflated and hemostasis achieved. Skin was closed over a drain and compression dressing applied.



Figure 4: Tumor measured about 6.5x4cm

Histopathological examination of the tumor stated it as lipoma with no neural element and with no evidence of any malignant transformation. Drain was removed on second day and sutures on the 10th day. Post operative period was uneventful. Gentle mobilization exercises of the hand were started at the end of the second week and patient was back to daily routine by the end of four weeks. He had excellent hand function without any deficits [Figure 5]. At two years follow up there was no evidence of any recurrence, patient continued to have normal hand function and was happy with the results.

Discussion:

Although there is a good amount of fat in the palm region, the commonest tumor of the body that arises in the fat, that is lipoma, is only rarely seen at this location. Many authors have highlighted the rarity of this lesion in the palm although there is no apparent reason for it.(3-10) Lipomas in the hand were classified by Mason (11) in 1937 as superficial and deep palmar lipomas; the deeper ones are less common than the superficial ones.(10) Lipoma in the hand typically presents as painless swelling and usually attains

a large size by the time patient seeks medical attention. Deep palmar lipomas have been reported to result in compressive neuropathy of the median nerve; some authors have observed grasping difficulties and decrease in the digital flexion and deviation of the fingers.(3, 8-10,12)

Oster emphasized on the peripheral location of these tumors in the palm because of the thick palmar fascia in the center.(3) In our case also the swelling was more over the thenar eminence [Figure2]. The thick palmar fascia further deceives the surgeon about the size of tumor. It may be hard to guess the size of these tumors thinking of the limited space available under the deep palmar space. Although on clinical examination the size of the swelling was only about 4 X 3 cm [Figure 2], the size of the tumor excised in our case was 6.5 X 4 cm [Figure 4], which accounts to a real giant lipoma of the palmar space. The association of median nerve compression appears quite possible and has been reported by many authors. In our patient there were no features suggestive of median nerve compression.

The tumors lie in close approximation with the important neurovascular structures and tendons, which makes the surgery very demanding. A surgeon trained in hand surgery should preferably do the surgery. The surgeon should anticipate the large size of the tumor and plan the incision accordingly [Figure 2]. The important neurovascular structures should be identified carefully and protected. The distorted anatomy because of the large tumors further adds to the woes of the surgeon. It is advisable to start the dissection and identification of all the structures proximally before the swelling and the proceed distally tracing and preserving all the important structures carefully [Figure 3B], MRI scan is an excellent investigation for preoperative planning as it tells the details about the extent of the tumor, also the ho-

mogeneous intensity of MRI indicates that the lesion is benign [Figure 1B].



Figure 5: Pictures showing the good hand function four weeks post-operatively.

Marginal excision is usually curative and chances of recurrence are minimal. Johnson et al advised that any soft tissue tumor lump, which is greater than 5cm, should be considered as malignant until proved other-

wise.(13) In our case the size of the tumor was much more than 5 cm but histopathology revealed no evidence of any malignant changes.

Conclusion:

Deep palmar lipomas are rare. They can be deceptively large and extensive. MRI scan is very helpful in planning surgery as it clearly shows the extent of the tumor and its relation with important structures. The surgical incision planned, should allow for proximal and distal extension of the incision. Vital structures should be identified and preserved proximally and followed distally. With careful surgical technique the complications can be prevented. Marginal excision of these tumors is curative.

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