

## Giant Lipoma of the Upper Extremity: Report of 2 Cases and Literature Review

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### Abstract

### Case Report

Lipomas are common, benign slow-growing tumours of fat cells (adipocytes). They can occur anywhere in the body, but they are mostly found on the neck, shoulders and trunk. Lipomas are generally small about 3 cm in diameter. However, when a lipoma grows to a size larger than 10 cm it is referred to as a giant lipoma and they make up only 1% of all lipomas. Though usually they are benign in nature, it is essential to rule out the possibility of malignancy due to their large size before undergoing their complete resection. Here we present the cases of a 56-year-old woman with a giant lipoma on her left arm and a 58-year-old man with a giant lipoma on his right shoulder.

**Keywords:** Benign tumour, giant lipoma, lipoma surgery.

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## INTRODUCTION

Lipomas are one of the most common mesenchymal benign tumours worldwide, lipomas are slow developing tumours that can be found anywhere in the body. They are considered giant when their size is over 10 cm in diameter or their weight is over 1 kg (Sanchez *et al.*, 1993). Giant lipomas make up only 1% of lipomas, although considered benign they need to be excised either to rule out malignancy or to alleviate symptoms such as mechanical dysfunction pain or paraesthesia resulting from compression of adjacent nerves (Rydholm & Berg, 1983). Here we present the cases of a 56-year-old woman with a giant lipoma on her left arm and a 58-year-old man with a giant lipoma on his right shoulder.

## CASE PRESENTATION

### Case 1:

A 56-year-old woman came to the orthopaedic surgery examination room with complains about a big swelling in her left arm. The patient reported that this swelling developed over 10 years at least, from the size of a chestnut to that of a large sized tumour of roughly 14cm with no physical dysfunction. This tumour was superficial, not painful, with fibrous consistency, well circumscribed, freely movable from profound tissues but with visible collateral venous circulation (figure 1,2).



Figure 1: A mass measuring 14 cm in patient 1

Radiographic imaging was conducted firsthand wish found a normal humeral bone and no calcification of the tumour, Magnetic resonance Imaging (MRI) was performed immediately after wish revealed a giant subcutaneous mass reaching deep contact with the latissimus dorsi, deltoid, infraspinatus and triceps muscles, which are spared without signal abnormalities measuring 11-6-14 cm.

Surgical biopsy confirmed benign nature of the tumour followed by surgical excision 15 days later: a vertical incision was performed on the skin then the

tumour was separated from the adjacent tissues and removed entirely in one bloc (figure 3).



**Figure 2: Mass of patient 1 before resection**



**Figure 3: Mass of patient 1 after resection**

#### **Case 2:**

A 58-year-old man with no notable medical history with a giant swelling in his right shoulder. The patient reported that this swelling was slowly developing over 15 years from a few centimetres to a large tumour that eventually incapacitated his shoulder movement.

The tumour was located in the postero-external face of the shoulder near the arm pit, it was massive, superficial, not painful, rubbery and well limited. The adduction of the arm was limited by the tumour which caused a lot of discomfort to the patient (figure 4).



**Figure 4: Mass of patient 2 before resection**

The same procedure was conducted: first, a radiographic imaging which did not reveal any bone anomaly nor any calcification of the tumour, second, an MRI was performed immediately after which revealed a subcutaneous mass on the posterior surface of the scapula and humerus near the infraspinatus and deltoid muscles reaching 10-07-19cm.

Surgical biopsy confirmed the benign nature of the tumour followed by surgical excision 20 days later: a horizontal incision was performed on the skin then the tumour was separated from the underlying tissues and removed in one bloc (figure 5,6).



**Figure 5: Mass of patient 2 during surgery**



**Figure 6: Mass of patient 2 after resection**

## DISCUSSION

A solitary lipoma is one of the most common soft tissue benign tumours, likely to be present in the age group 40-60 years. It is more commonly seen in females than males in earlier studies however in recent studies the Sex ratio is roughly even. 4/5 of lipomas have a diameter <5cm, and 1/5 are between 5 and 10 cm, with only about 1% beyond 10 cm. Subcutaneous lipomas are the most common and are located frequently in the neck, trunk and shoulder whereas the hand and leg locations are considered rare (Rydhholm & Berg, 1983).

Lipomas are generally only seen as cosmetic or physical deformities therefore are usually neglected by the patients, especially, in poor communities. Due to their size and weight, giant lipomas could potentially result in functional limitations or show signs of compression, albeit this is uncommon (Balakrishnan *et al.*, 2012). It is likely that only a small proportion of lipomas might undergo malignant transformation. However, it may be concluded that a tumour 5 cm or larger or a subfascial tumour is relatively more likely to be a sarcoma. It is recommended that until proven

otherwise, every soft tissue tumour measuring more than 5 cm should be deemed malignant (Johnson *et al.*, 2001).

In our cases, both tumours were subcutaneous measuring more than 10 cm, a Magnetic resonance Imaging MRI and a surgical biopsy were advised to confirm its benign nature. Although, the routine imaging technique for lipoma is Ultrasonography, MRI can also be done to rule out malignancy (liposarcoma). Since the relative incidence of liposarcoma is very low (2.5 per million per year), an MRI should be used only when there is a strong clinical suspicion suggested by a large size (more than 5 cm), rapid growth, pain, and immobility (Nandra *et al.*, 2015).

Lipomas are traditionally managed by a complete surgical excision. Although, there are several reports describing the advantages of large sized lipoma removal by suction assisted lipectomy through small incisions such as superior aesthetic outcome and decreased morbidity compared with open surgery (Rubenstein *et al.*, 1985). The possible drawbacks of this procedure are: A higher risk of recurrence due to

incomplete removal resulting from the fragmentation of the specimen and nerve damages resulting from blunt trauma (Silistreli *et al.*, 2005).

## CONCLUSION

Giant lipomas contribute to only 1% of all cases of lipomas. Such a large size (more than 10 cm) always involves a possibility of malignancy. This malignancy can be suspected due to clinical features like large size (>5cm), rapid growth, pain, and immobility. Imaging techniques like USG or MRI, and cytopathology should be used to confirm diagnosis. Lipoma is traditionally managed by a complete surgical excision. Recently, liposuction and suction-assisted excision have been carried out as alternative therapies. Either of these techniques, in good hands, gives satisfactory results.

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