

Giant lipoma of the forearm

JS Huntley, J McEachan

INTRODUCTION

A case of a giant lipoma of the forearm is described, with management dictated by the size of the tumour and the differential diagnosis. Operative findings are discussed in light of the absence of neurological features, despite the bulk of the tumour and the encasement of the ulnar nerve.

DISCUSSION

Lipomas are common benign tumours in a subcutaneous setting, and are occasionally encountered more deeply, including in inter- and intramuscular regions (Gold and Oppenheim, 1954; White and Hanna, 1962; Leffert, 1972; Higgs et al, 1993; Fitzgerald et al, 2002). Giant

lipomas of the upper limb can cause two problems:

1. Awkwardness or clumsiness caused by physical bulk, i.e. interference with normal kinetics and range of movement
2. Neurovascular compression, e.g. posterior interosseous nerve in the region of the arcade of Frohse (Higgs et al, 1993; Fitzgerald et al, 2002).

Figure 1. Preoperative views. a. Volar. b. Dorsal.



Figure 2. Magnetic resonance imaging scan.

Transverse section of right forearm showing extent of lipoma.

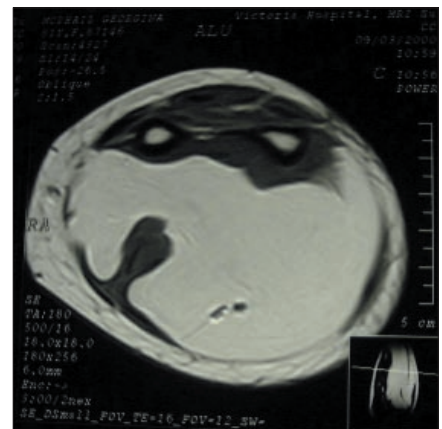
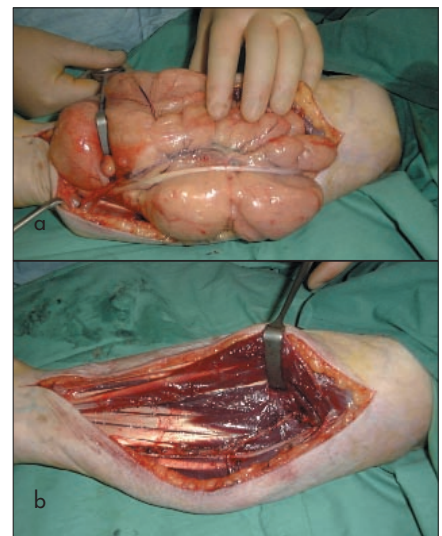


Figure 3. Intraoperative views.



CASE REPORT

An 81-year-old right-hand dominant lady was referred with a painless lump in her right forearm. This had been diagnosed as a lipoma 2.5 years previously, on clinical grounds, but it had grown substantially in the intervening period (Figures 1a and b). There was no functional impairment. She was otherwise healthy and had no relevant medical history.

On examination, the mass was soft and diffuse, occupying the entire ulnar–volar aspect of the forearm. There was no neurovascular deficit.

In view of the possibility of a sarcoma, a computed tomography scan of chest and abdomen was performed, which was normal, and the magnetic resonance imaging (MRI) scan of her right forearm repeated (Figure 2). The MRI suggested that there may be some necrotic debris in the centre of the tumour. A focus of low grade liposarcoma could not be excluded, so an excision biopsy was performed.

A midline incision was made from the cubital fossa to the distal wrist crease. The lipoma protruded from under the deep fascia on the ulnar side of palmaris longus, which was therefore retracted radially. The ulnar artery and nerve entered the mass approximately 7 cm from the wrist, and were otherwise encased along its length. The nerve and vessels were dissected clear (Figure 3a). Interestingly, there was no soft tissue support for the ulnar nerve along its course within the tumour mass. A plane was developed between the lipoma and musculature, allowing complete removal of the tumour (Figure 3b). The tourniquet was released before closure to confirm reperfusion of the ulnar artery and allow haemostasis.

Histology showed only lipoma with no suspicious features. She regained the full range of elbow and wrist movements by her 6-week review, and was discharged.

Mr JS Huntley is Lecturer in Orthopaedics and Trauma, Musculoskeletal Research Unit, Medical School, Edinburgh EH8 9AG and Mr J McEachan is Consultant in Orthopaedics and Trauma, Queen Margaret Hospital, Dunfermline, Fife

Correspondence to: Mr JS Huntley

It was surprising that this patient had no neurovascular problems given the size of the tumour, the extent to which the ulnar artery and nerve were incorporated within its substance (*Figure 3*), and the apparent avascularity of a long section of the nerve.

The early differential diagnosis included a sarcoma. Magnetic resonance imaging is the investigation of choice for the delineation of soft tissue masses (Peh et al, 1995). For lipomata, signal intensities have particular characteristics, as for subcutaneous fat. However, infarction, fibrosis and

haemorrhage may be difficult to differentiate from liposarcoma (Peh et al, 1995). If there are concerns, biopsy may be performed, but only after consultation with the surgeon who would perform the subsequent resection. In this case, a complete excision was the preferred option.

Giant lipomas are encapsulated so a plane can usually be developed (Higgs et al, 1993; Fitzgerald et al, 2002). They can be multilobular, and it is important to remove all portions to minimize the possibility of recurrence. This woman remains well, and

3 years post-excision has no evidence of recurrent disease. **HM**

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