

A Palmar Lipoma with Median and Ulnar Nerve Compressive Symptoms

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ABSTRACT

Although lipoma is common in the upper limbs, it rarely occurs in the palm, and usually does not compress the surrounding structures. Here, we report a patient presenting with compressive neuropathy of the ulna and median nerves secondary to a palmar lipoma. Surgical excision led to full neurological recovery.

Key Words:

Lipoma, Compressive neuropathy

INTRODUCTION

The most common soft tissue tumour in the hand is the ganglion, followed by giant cell tumours of the tendon sheath and epidermal inclusion cysts¹. Although lipomas are the most common soft tissue tumour in the body, they are not frequently found in the hand. Compression of peripheral nerves by lipomas are even more unusual and only a few cases have been reported in the literature^{3,4}.

CASE REPORT

A 47-year-old female presented with a two year history of a painless, slow growing mass over her right palm. Over the last 6 months, she experienced progressive numbness of all fingers and had increasing difficulty performing her work as a tailor especially in handling the scissors.

Examination revealed a soft lobulated mass with a smooth surface and well defined margins over her palm. The power of abductor pollicis brevis, opponens pollicis and interosseus muscles were assessed and found to be a grade 4, as was the grip strength. Both the Froment sign and the Tinel test over the carpal tunnel were positive, but the Phalen test was negative. The two point discrimination test revealed decreased sensibility along the ulnar nerve distribution but not over the median nerve distribution. Magnetic Resonance Imaging revealed a bright and homogenous signal characteristic of fatty tissue on T1 weighted image (Fig. 1). The lesion was encapsulated and the volar aspect was

lobulated. Our differential diagnosis included a lipoma or a giant cell tumour and an excision biopsy was planned.

Intra-operatively, a 6 x 5 cm multi-lobulated, well encapsulated, yellowish mass was removed. The soft mass engulfed parts of the flexor tendons to the middle and ring finger and was noted to be deeper in the thenar eminence and more superficial over the hypothenar region (Fig. 2A). The superficial branch of the ulnar nerve was compressed into an hour-glass shape (Fig. 2B). Histological findings revealed mature adipocytes separated by thin fibrovascular septa (Fig. 3). There were no lipoblasts or abnormal mitotic figures suggestive of malignancy.

The patient's numbness was fully resolved by four months after surgery. Strength in the abductor pollicis brevis, opponens pollicis and interosseus muscles returned to normal as did grip strength. The Froment sign was negative post-operatively and the two point discrimination was 5 mm over both the median and ulnar nerve distribution. The patient was able to resume work as a tailor.

DISCUSSION

Palmar lipomas do not usually cause numbness or weakness of the hand. A solitary lipoma can compress peripheral nerves in two situations: i) subcutaneous lipomas compressing nerves that run superficially over it ii) deeper-seated lipomas compressing the nerve in more profound locations⁵. A positive Tinel sign can sometimes be elicited in a tumour that is compressing a nerve⁴.

Simple imaging such as ultrasound is useful for a superficially located lipoma. MRI, however, provides correct diagnosis in about 94% of cases⁶. More importantly, MRI can delineate the relationship between the tumour and adjacent structures allowing the surgeon to plan the operation especially in a confined area with vital structures like the hand. The majority of patients will start to show improvement immediately after surgery. Motor deficits may require up to 3 months for full recovery⁴.

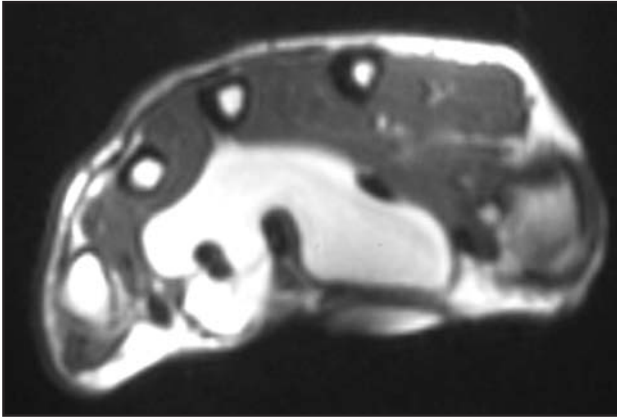


Fig. 1: An axial T1 weighted MRI scan shows a multi-lobulated homogenous bright signal over the volar aspect of the palm from the ulnar border of the thenar eminence to the hypothenar region.

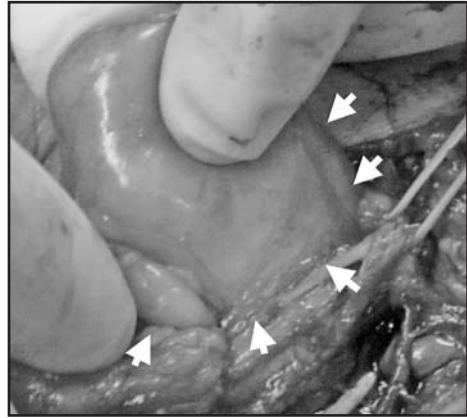


Fig. 2A: Intraoperative photograph shows the yellowish tumour (arrows) deep within the thenar eminence and engulfing flexor tendons.

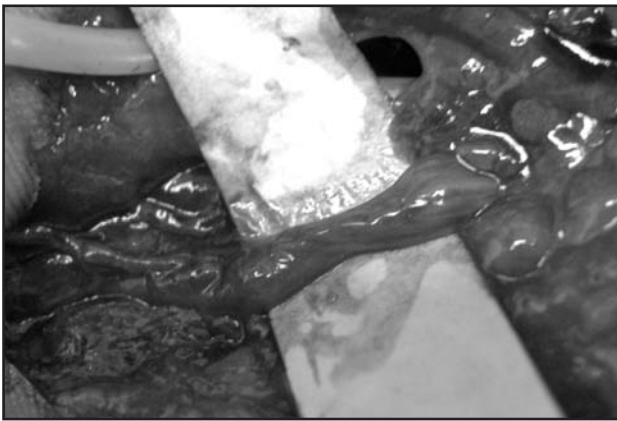


Fig. 2B: Hourglass appearance of the superficial branch of the ulnar nerve caused by compression exerted from the tumour.

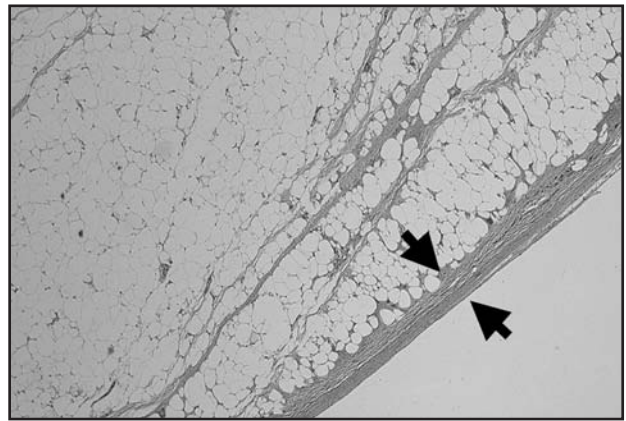


Fig. 3: Histological section clearly shows mature adipocytes with no evidence of cellular atypia. There is a layer of synovial lining encapsulating the mass (arrows).

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