

## CASE REPORT

### Recurrent haemosiderotic fibrohistiocytic lipomatous lesion of the hand

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#### Abstract

Haemosiderotic fibrohistiocytic lipomatous lesion (HFLL) is a rare lesion, with uncertain aetiology, occurring almost predominantly in the lower limb. The lesion is known to recur locally in the foot and ankle region. We report a recurrent HFLL affecting the hand in a 55-year-old female, after excision of a soft tissue swelling in the same location 2 years previously. There was no history of trauma and the histological appearances of the original and recurrent lesions were almost identical, favouring a neoplastic nature of HFLL.

**Keywords:** haemosiderotic fibrohistiocytic lipomatous lesion, hand

#### INTRODUCTION

Haemosiderotic fibrohistiocytic lipomatous lesion (HFLL) is a rare lesion of uncertain aetiology which predominantly affects the foot and ankle. The lesion was first described in 2000.<sup>1</sup> Only two of the previously reported cases occurred in the hand.<sup>1,2</sup> Lesions affecting the lower limb are known to recur locally but a recurrence in the hand has not yet been described.<sup>1,2</sup> We report a case of recurrent HFLL affecting the hand.

#### CASE REPORT

A 55-year-old female presented with a recurrent swelling on the dorsum of her right dominant hand. Her family physician had excised a soft tissue swelling from the same area two years previously. The original swelling had histological features which were thought to be of cutaneous myxoma. Subsequently, she noticed a more generalised swelling affecting the same area. There was no pain associated with the swelling and she had not had any history of trauma.

Physical examination revealed a soft, ill-defined swelling over the dorsum of the second metacarpal distally. There was no attachment to tendon and no transillumination. There were no changes in the overlying skin. Plain radiographs were normal. An ultrasound examination was

reported as a 3 x 1 cm solid soft tissue mass deep to the extensor tendon. The mass was not arising from the tendon or metacarpophalangeal joint. The possibility of postoperative scarring or recurrent myxoma was suggested.

Based on these findings, the patient underwent excision biopsy of the swelling. At operation, the mass was poorly defined and had a fatty appearance with haemorrhagic areas. It was attached to the overlying skin and to the periosteum of the 2nd metacarpal bone and surrounding, but not attached, to the extensor tendon.

#### Pathology

Histological examination of the excised mass showed mature adipose tissue with focal proliferation of spindle cells in myxoid stroma. The spindle cells showed mild nuclear pleomorphism and occasional mitoses. Inflammatory cells, occasional multinucleate giant cells and pigmented macrophages were also seen (Figures 1 A, B & C). Immunohistochemistry showed that the spindle cells expressed vimentin and CD34 but were S100 protein and desmin negative. Special stains confirmed the presence of haemosiderin. In view of these findings, the specimens from the original swelling were re-examined and found to be very similar to the recurrent swelling with adipose tissue, spindle cell proliferation with

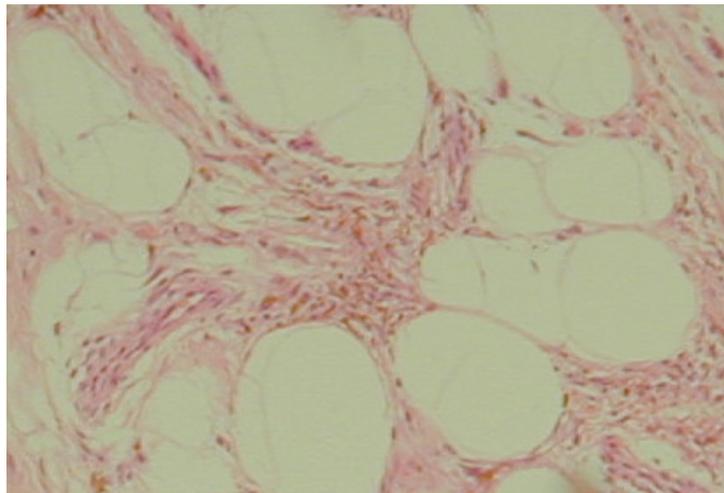


FIG. 1A: Mature adipose cells with haemosiderin deposits. (H&E, 100x)

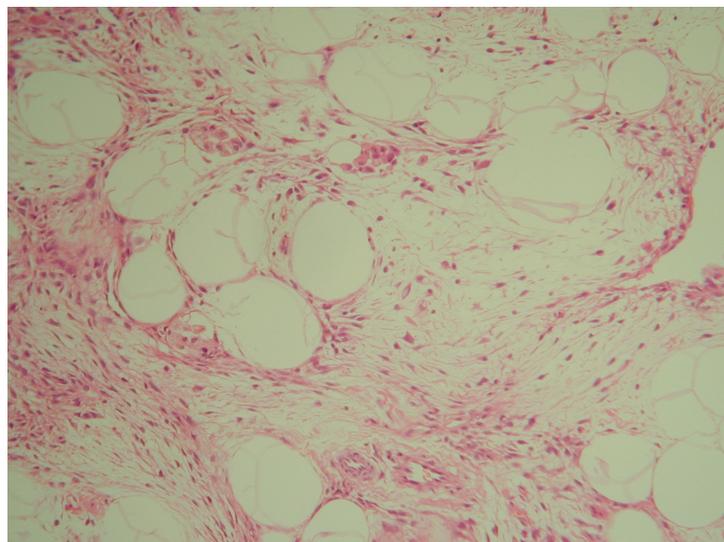


FIG. 1B: Mature adipose cells with spindle cells. (H&E, 100x)

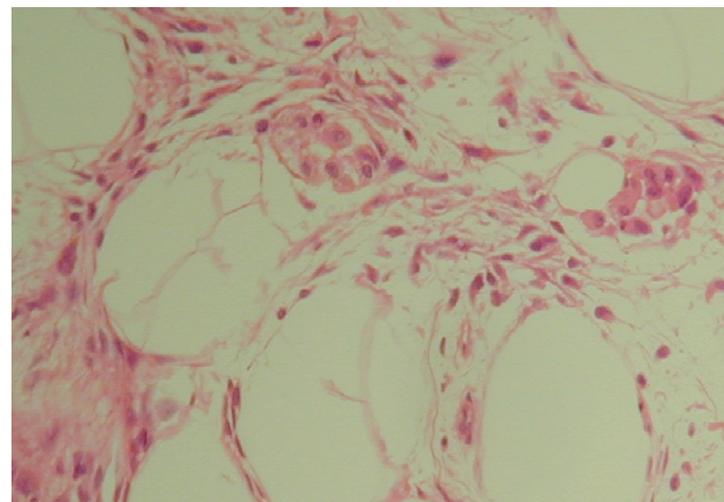


FIG. 1C: Higher magnification showing spindle cells between adipose cells. (H&E, 400x)

nuclear hyperchromasia and occasional mitoses and haemosiderin deposition. A diagnosis of recurrent HFLL was made.

## DISCUSSION

HFLL was first described as a distinct entity in 2000.<sup>1</sup> Including this case, the total number of cases reported is 34.<sup>1-10</sup> The most common clinical features among reported cases are occurrence in the foot and ankle region (30 cases), predilection for middle age females (25 cases), and the tendency for local recurrence (11 cases). There are two previous case reports of HFLL affecting the hand; both occurred in males and were treated with local excision with no recurrence.<sup>1,2</sup>

The histological features are consistently shown to be a mixture of mature adipose cells, spindle cells and haemosiderin pigment. The spindle cells are negative for S-100 protein and desmin and positive for vimentin and CD34.

The aetiology of HFLL remains controversial. Some favour a reactive aetiology based on the predilection for lower limbs, presence of inflammatory cells with a history of trauma or venous stasis in nearly half of the cases. The local recurrence is thought to be due to inadequate initial excision as the lesion has poorly defined margins.<sup>1,5</sup> Others suggest a neoplastic aetiology based on the consistent histological features and the absence of fat necrosis. The term "haemosiderotic fibrohistiocytic lipomatous tumour" (HFLT) has also been suggested.<sup>1,2</sup>

Our case shares some features with the previously reported cases. It occurred in a middle-aged female and recurred locally after excision. The histological features and immunohistochemistry markers were similar to previous cases. The distinct feature is the anatomical location in the hand. There was no history of trauma in our case and the histological appearances of the original and the recurrent lesions were almost identical. These features support the possible neoplastic origin of HFLL. The histological diagnosis of the original swelling was incorrect, presumably due to the rarity of the lesion and its predilection for the foot and ankle region. This is in common with several previously reported cases where incorrect histological diagnoses were initially given, including well differentiated liposarcoma, giant cell tumours and fibrous histiocytoma.<sup>1,2</sup>

In conclusion, we described a rare case of recurrent HFLL affecting the hand with features favouring a neoplastic aetiology.

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