

# Report of two cases of subcutaneous lipoma over the finger and review of literature: case series

## Benign tumour

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**Abstract** We are reporting two rare cases of subcutaneous lipoma. One was present over the dorsal aspect of the right index finger, and another was over the volar aspect of the middle finger. In first case, it was extending proximally from the proximal interphalangeal joint. Surgical excision of the tumour was done. In follow-up, patient is doing well with normal finger movements. Although, it is not the only case reported, lipoma of the index finger is very uncommon.

**Keywords** Benign · Tumour · Hand · Ultrasonography · Surgery

## Introduction

Lipomas are among the most commonly encountered benign soft tissue tumours [1]. Majority of lipomas are located in the head and neck region as well as over the shoulder and back [2]. They can occur anywhere on the body but are rarely found on the finger, with reported incidence of 1% [3]. In our both cases, the initial diagnosis was made by ultrasonography (USG), which was confirmed on histopathology.

## Case report 1

A 40-year-old woman presented at the surgery outdoor with complaints of swelling in the right index finger. It was present since 9 months and was slow growing. There was little difficulty in flexion movements of the finger.

On examination, there was a solitary mobile swelling of size 4 × 3 cm on the right index finger on the dorsal aspect of the proximal phalanx. Overlying skin was normal. It was firm in consistency, and edges were well defined. Ultrasonography revealed a large soft tissue mass in subcutaneous area of the index finger, and provisional diagnosis was kept as lipoma (Fig. 1). Surgical excision was done under local anaesthesia. Grossly, it was a soft yellowish well-defined mass. The tumour was easily removed. Histopathology confirmed the diagnosis as lipoma.

## Case report 2

A forty-six-year-old male patient had a swelling in the interphalanx over the volar aspect of middle phalanx of the right middle finger since 3 months. Swelling was small in

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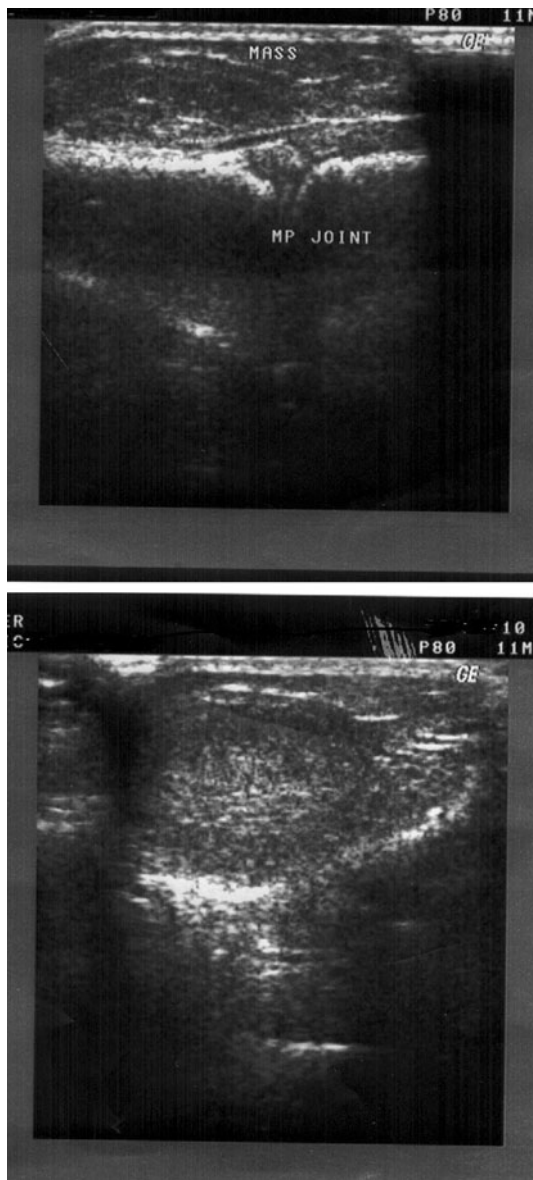
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**Fig. 1** Hypoechoic soft tissue mass seen beneath the swelling in the subcutaneous area

size with mild limitation of finger flexion. There was no complaint of pain or trauma. It was an incidental finding, as patient was taking treatment in our institute for skin ulcer over the chest. On examination, there was single swelling of size 1 cm, firm in consistency on the volar aspect of the middle phalanx of the right middle finger. There was 20 degree limitation of the flexion of the finger.

X-ray of the finger was normal. USG of the finger revealed soft tissue mass. Operative exploration was performed under local anaesthesia. A vertical incision was given over the swelling, and two tumours were found inside in the subcutaneous area of size 1.8 and 0.8 cm, respectively. These were adherent to the tendons and excised easily and completely. Histopathologically, the

mass was circumscribed and mainly showed a proliferation of mature adipocytes with intervening fibrous tissue and confirmed the diagnosis as lipoma.

## Discussion

Lipomas are common, benign tumours originating from adipose tissues. They are not very common in the hand and very rarely seen involving the fingers as observed by Posch [4]. The reported incidence is 1–3.8% of the benign tumours of the hand [4]. Their infrequent occurrence and exact anatomic distribution in the hand and upper extremity have been well documented. A review of the current literature shows that these lesions are most often asymptomatic and occur only rarely with the fingers [1]. The first patient reported was by Stein in 1959 [5] diagnosed as lipoma of the finger. According to our research through Western literature, only 15 cases were found reported, which were diagnosed as lipoma of the fingers [6]. From these, totally 4 were on the index finger, 2 cases occurring distal to the right proximal interphalangeal joint [7] and 1 case to the left index finger [8], all of them were post-traumatic in nature, and 1 was non-traumatic in nature close to the proximal and middle phalanx of the digit [2].

Lipoma is a slowly growing common solid tumour and occurs mostly in the fifth and sixth decade. These lightly encapsulated tumours are composed of mature fatty tissue where the central lipid droplet and peripherally located nucleus forms the characteristic signet ring cell [2]. They arise from mesenchymal primordial fatty tissue cells. These tumours may be superficial, arising from the subcutaneous tissues and or less commonly may be subfascial, arising deep in the palm within the Guyon canal, the carpal tunnel or the deep palmar space and generally being of bigger size [2]. Upper limb is one of the favoured sites for lipoma but due to unknown reasons, the lipomas are very uncommon over the palm and very rare over the digits in spite rich presence of fat. In his series of 476 lipomas of the upper extremity, Barrile could find only 1 case of palmar lipoma [9].

Neoplastic lesions (liposarcoma, lipoblastoma, giant-cell tumour, spindle cell lipoma, angioliipoma and neural fibrolipoma) and non-neoplastic lesions (implantation cyst, pyogenic granuloma and nodular fasciitis) with clinical characteristics similar to those of a lipoma of the finger should be considered in the differential diagnoses of a mass on the finger [3]. Ultrasonography, computerized tomography or magnetic resonance imagings are useful investigations and differential diagnosis [10]. As in our both cases, diagnosis was made on ultrasonography as soft tissue tumour and provisional diagnosis kept as lipoma which was confirmed on histopathology.

## Conclusion

Although lipomas of the fingers are rare entities, their awareness is imperative, as it is difficult to diagnose. It is necessary to make the differential diagnosis from other soft tissue tumours and from the special lipomatous subtype.

**Conflict of interest** None.

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