

## A RARE LOCATION OF LIPOMA ON THE SOLE OF FOOT

Ramesh Kumar Korumilli<sup>1</sup>, Anil Wattamwar<sup>2</sup>, Nikhil Naresh Veludandi<sup>3</sup>

<sup>1</sup>Professor and HOD, Department of General Surgery, SVS Medical College, Mahbubnagar, Telangana.

<sup>2</sup>Assistant Professor, Department of General Surgery, SVS Medical College, Mahbubnagar, Telangana.

<sup>3</sup>Postgraduate Student, Department of General Surgery, SVS Medical College, Mahbubnagar, Telangana.

**HOW TO CITE THIS ARTICLE:** Korumilli RK, Wattamwar A, Veludandi NN. A rare location of lipoma on the sole of foot. J. Evid. Based Med. Healthc. 2018; 5(4), 383-384. DOI: 10.18410/jebmh/2018/77

### PRESENTATION OF CASE

A 35-year-old male presented to the OPD with a 10-month history of an enlarging tumour on the medial side of the sole of the right foot not associated with pain, but sense of discomfort while walking from the past 4 months. A clinical examination revealed a 15 mm x 15 cm dome-shaped soft tumour below the head of the first metatarsal on the sole. It was well-confined, soft and not adherent to the basement structures. No tenderness was elicited.

### DIFFERENTIAL DIAGNOSIS

Ganglion, plantar fibromatosis.

### CLINICAL DIAGNOSIS

A clinical diagnosis of lipoma in the foot was made.

### PATHOLOGICAL DISCUSSION

FNAC was done and reported as lipoma.

HPE - A circumcised tumour was covered with thin fibrous tissue showing mature adipocytes.

### DISCUSSION OF MANAGEMENT

Lipomas are the most common soft tissue neoplasm accounting for almost 50% of all soft tissue tumours.<sup>1</sup> They are benign, mesenchymal neoplasms occurring in areas of abundant adipose tissue. They occur most frequently in obese patients.<sup>2</sup> Tumours of foot and ankle are rare accounting for only 4% of tumours.<sup>2</sup> Foot tumours usually are noticed because the foot has such thin skin and sebaceous tissue and little muscle that palpation of tumours is relatively easy and even a small lesion can lead to pain or functional disorders.<sup>3</sup>

Tumours of the foot are generally benign and originate from soft tissue. Ozdemir et al<sup>4</sup> analysed their own clinical cases of 196 foot and ankle tumours and reported that most common tumours was a ganglion followed by plantar fibromatosis and that they had four cases (2%) of lipoma in the region. A retrospective review of all cases consulted in the Department of Soft Tissue Pathology, Armed Forces Institute of Pathology over a 10-year period had 18,677

benign mesenchymal lesions and 1,478 cases (7.9%) of which occurred in the foot and ankle region. The last frequent foot and ankle tumours were fibromatosis, fibrous histiocytoma and giant cell tumour of tendon sheath. There were 62 cases (4.2%) of lipoma among them.<sup>5</sup> Lipoma of the foot should be differentiated from other lipomatous lesions such as fat herniation. A piezogenic pedal papule<sup>6</sup> is a dermatocele included by pressure. It appears when weight is placed on the heel and disappears when pressure is revealed. Histological findings of piezogenic papules are fragmentation of the dermal elastic tissue and herniation of subcutaneous fat into the dermis.<sup>7</sup> Brooke and MacGregor<sup>8</sup> reported a fatty tumour following a blunt trauma and first suggested that this lesion was not a true lipoma, but rather a prolapse of normal deep adipose tissue through a tear in the overlying fascia. Typically, pseudolipomas arise on the buttocks or thighs of females 6 to 12 months following blunt trauma.<sup>9</sup>

Another theory regarding the role of blunt trauma in the formation of lipomas is that inflammatory cytokines and mediators released by damaged and necrotic cells after trauma can induce the differentiation of preadipocytes to mature adipocytes.<sup>9</sup> Aust et al<sup>2</sup> distinguished these real lipomas from pseudolipomas by the presence of fibrous capsule. Signorini et al<sup>9</sup> also suggested the ongoing growth of the lesion was unlikely due to fat herniation. The tumour in the present case was able to be identified as a 'real' lipoma, because it was surrounded by a thin fibrous capsule and showed a gradual enlargement in size. The pathogenesis of the lesion in the current case may be attributed to the theory of a posttraumatic lipoma, since the tumour was located on the plantar aspect of the head of the first metatarsal, which is continually subject to repeated mechanical stress that could substitute for the blunt trauma.<sup>10</sup> We find a single study by Kerman and Foster described a lipoma in the plantar aspect of the left heel the lateral, which was very small.<sup>11</sup> Several histologic subtypes of lipomas like fibrolipoma, spindle cell lipoma, infiltrating lipoma, angiolipoma, myxoid lipoma, atypical lipoma and pleomorphic lipoma, etc. are also reported regularly.<sup>12</sup> The lesions-like ganglion or epidermal inclusion cysts and infections are easily differentiated from lipomas clinically. In our patient, final diagnosis was confirmed by the results of histologic evaluation.

Under ankle block anaesthesia, a vertical incision was made and the swelling was excised with an intact capsule.

*Financial or Other, Competing Interest: None.*

*Submission 06-01-2018, Peer Review 11-01-2018,*

*Acceptance 16-01-2018, Published 22-01-2018.*

*Corresponding Author:*

*Dr. Ramesh Kumar Korumilli,*

*Plot No. 70, Gruhalakshmi Colony,*

*Secunderabad- 500015.*

*E-mail: rameshkorumilli@gmail.com*

*DOI: 10.18410/jebmh/2018/77*

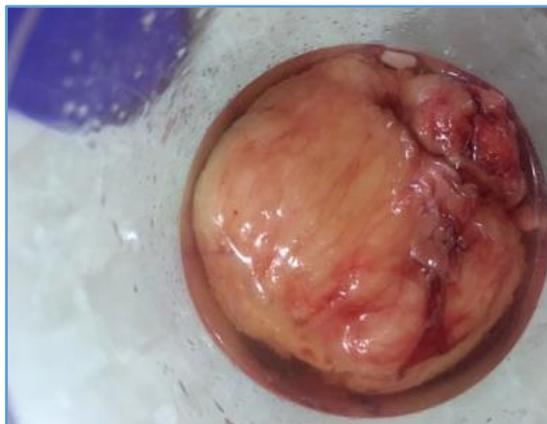




**Figure 1. Lipoma of Foot**



**Figure 2. Operative Picture**



**Figure 3. Specimen**

### FINAL DIAGNOSIS

Lipoma of the foot.

### REFERENCES

- [1] Myhre-Jensen O. A consecutive 7-year series of 1331 benign soft tissue tumors. Clinicopathologic data. Comparison with sarcomas. Acta Orthop Scand 1981;52(3):287-293.
- [2] Aust MC, Spies M, Kall S, et al. Lipomas after blunt soft tissue trauma: are they real? Analysis of 31 cases. Br J Dermatol 2007;157(1):92-99.
- [3] Berlin SJ, Mirkin GS, Tubridy SP. Tumors of the heel. Clin Podiatr Med Surg 1990;7(2):307-321.
- [4] Ozdemir HM, Yildiz Y, Yilmaz C, et al. Tumors of the foot & ankle: analysis of 196 cases. J Foot Ankle Surg 1997;36(6):403-408.
- [5] Kransdorf MJ. Benign soft-tissue tumors in a large referral population: distribution of specific diagnosis by age sex, and location. Am J Roentgenol 1995;164(2):395-402.
- [6] Shelley WB, Rawnsley HM. Painful feet due to herniation of fat. JAMA 1968;205(5):308-309.
- [7] Zaidi Z, Jafri N, Noori B, et al. Piezogenic papules-a study of 100 cases. J Pak Med Assoc 1995;45(4):93-94.
- [8] Brooke RI, MacGregor AJ. Traumatic pseudolipoma of the buccal mucosa. Oral Surg Oral Med Oral Pathol 1969;28(2):223-225.
- [9] Signorini M, Campiglio GL. Posttraumatic lipomas: where do they really come from? Plast Reconstr Surg 1998;101(3):699-705.
- [10] Kerman BL, Foster LS. Lipoma of the foot: a large and unusual case. J Foot Surg 1985;24(5):345-348.
- [11] Weiss SW. Lipomatous tumors. Monogr Pathol 1996;38:207-239.
- [12] Crundwell N, O'Donnell P, Saifuddin A. Non-neoplastic conditions presenting as soft-tissue tumours. Clin Radiol 2007;62(1):18-27.