Spindle Cell Lipoma of the Hallux: A Rare Entity

Lipoma de Células Fusiformes do Hálux: Uma Entidade Rara

Keywords: Hallux; Lipoma
Palavras-chave: Hálux; Lipoma

Spindle cell lipoma (SCL) is an uncommon histological entity of benign lipogenic tumors, characterized by mature adipocytes and small uniform spindle cells.[1-3] This tumor usually manifests in middle-age male patients and the most common sites are the posterior neck, shoulder, and posterior trunk.[1,4,1] Spindle cell lipomas rarely occur in the distal extremities. Clinical studies analyzing a total of 897 lipomas, reported only three lipomas located in the foot (0.33%).[6]

A 77-year-old male was referred to the Plastic Surgery Department of our university hospital for evaluation of a large and longstanding mass of the dorsal aspect of the right hallux. The lesion was noticed 20 years ago, and it has gradually enlarged in size particularly in recent months, causing increased difficulty in wearing footwear. The clinical examination revealed a 50 x 40 mm nodular tumor, firm, not painful on palpation with distended but intact overlying skin. There was no evidence of bone changes or calcifications on dorsoplantar and lateral x-ray views of the foot. The ultrasound revealed a hypoechoic subcutaneous circumscribed oval mass measuring 44 x 35 mm that resembled an epidermoid cyst.

Surgical excision of the lesion was performed under local anesthesia. Intraoperatively, the mass was in the subcutaneous layer of the hallux abutting and distorting the extensor tendon apparatus with close contact with the bone. Macroscopically, the mass was pale yellow, oval shaped, with an elastic consistency and encircled by a fibrous tissue layer, weighed 26 g, measuring 41 x 31 x 23 mm (Fig. 1A). Microscopically, it was an adipocytic tumor composed mainly of mature adipocytes, but also bland spindle cells and ropy collagen (Fig. 1B). CD34 antibody was positively expressed in the spindle cells of this tumor (Fig. 1C). These findings were consistent with the diagnosis of SCL.

Most of these soft tissue tumors found in the foot were reported to be benign (87%).[6] Regarding malignant soft tumors, dorsal synovial sarcoma, and clear cell sarcoma of the foot account for the most common. Although rare, giant cell tumor is the most locally aggressive with a high recurrence rate.[6,7] An accurate diagnosis is essential, because a wide excision can cause serious disabilities. It is a very rare location for this benign tumor and as such the clinical differential diagnosis does not usually encompass it. Although not commonly described in the field of Plastic Surgery, the diagnosis of SCL can be clearly made by pathologists. Knowledge of patient history, physical examination and radiological imaging is important but can be nonspecific. Therefore, it can be difficult to characterize soft tissue tumors in unusual locations. Proper management with surgical excision and histological evaluation is essential for differential diagnosis from other rare malignant neoplasms, since SCL is a benign tumor, and even though it can be locally invasive, it has a good prognosis and can be cured by complete excision.

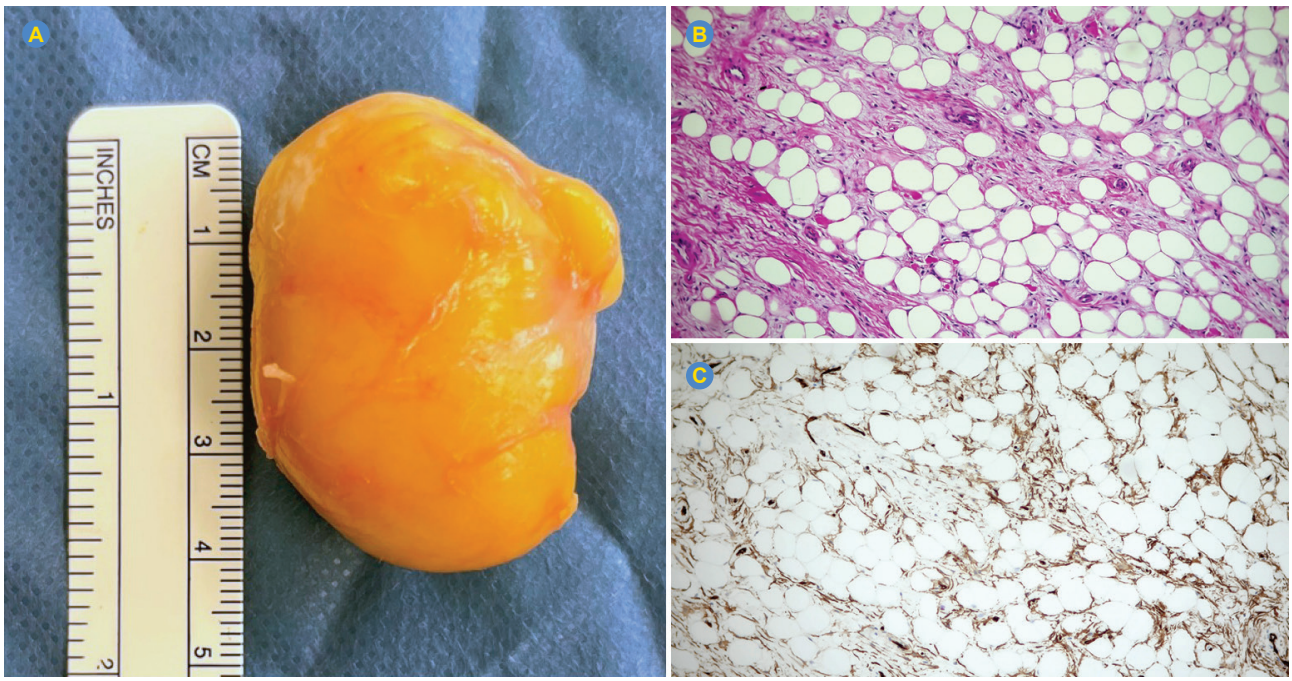

Figure 1 – Spindle cell lipoma of the hallux dorsum with 41 mm width: pale yellow oval shaped mass, with elastic consistency and encircled by a fibrous tissue layer (A). Hematoxylin and eosin staining of the tumor: mature adipocytes mixed with a bland spindle cell proliferation and ropy collagen (amplification x100) (B). Anti-CD34 immunohistochemical staining of the tumor (amplification x100) (C).

AUTHOR CONTRIBUTIONS

SMS: Data collection, writing and critical review of the manuscript.

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IMB: Writing and critical review of the manuscript.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

COMPETING INTERESTS

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