

Cutaneous Angioleiomyoma – A Rare Cause of Posterior Heel Pain: A Case Report

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Abstract

Heel pain is a common presentation in outpatient clinics. Here, we report a 69-year-old woman who complaint about a painful nodule on her left posterior heel. There was no history of trauma. The lesion developed during ten weeks without any bleeding or ulceration. On examination, we observed a subcutaneous firm nodule of about 1 cm in diameter. The lesion was hypoechoic in diagnostic sonography suggesting a fibromatous tumour, which was removed surgically. Histologic investigations confirmed the diagnosis of cutaneous angioleiomyoma. The occurrence of this benign tumour on the heel is quite uncommon but obvious a possible cause for heel pain. During follow-up, no recurrence was observed.

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Introduction

Cutaneous angioleiomyoma (ALM) is a benign smooth-muscle tumour. It occurs in several subtypes, i.e. venous, cavernous, solid, and lipomatous AL. The tumours can develop a variable degree of hyalinization or calcification. The vascular subtypes show a predilection for the lower limbs [1-3].

These tumours represent as painful well-circumscribed nodules in about 50% of cases. AL can occur at any age but reach a peak incidence between the 4th and 6th decade of life. Women are almost as double as much affected as men [4].

The following case report points to AL as a rare possible cause for heel pain.

Case Report

A 69-year-old woman presented with a painful nodule on her left posterior heel. She did not remember any trauma. The lesion developed during ten weeks without any bleeding or ulceration. Her medical history was unremarkable so far. She had no medications.

On examination, we observed a firm subcutaneous nodule covered by a callus reaction of skin on the left posterior heel of approximately 1 cm in diameter (Fig. 1a). Sonographic examination described a 10 x 7 x 5 mm large subcutaneous, well circumscribed, hypoechoic lesion closely related but not attached to the Achilles tendon.



Figure 1: Cutaneous angioleiomyoma on the left heel. (a) Clinical presentation as a firm subcutaneous nodule covered by epidermal callus formation (left). (b) Surgical specimen of a well-circumscribed tumour with a smooth surface (middle). (c) After wound closure (right)

We performed surgery under local anaesthesia to remove the lesion completely and obtain a histopathologically confirmed diagnosis. During surgery, we observed a well circumscribed firm tumour of about 1 cm in diameter with a smooth pseudocapsular surface (Fig. 1b). The tumour was not attached to deeper structures but skin.

The wound was sutured, and the subsequent healing process was uneventful (Fig. 1c).

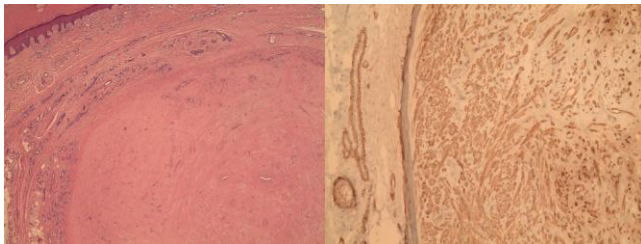


Figure 2: Histological examination of cutaneous angioleiomyoma. (a) A nodular hyalinized tumor of dermis and upper subcutaneous tissue with a pseudo capsule covered by hyperplastic, compact, orthokeratotic epidermis (hematoxylin-eosin, x 4) (left); (b) The tumor consisted of actin-positive spindle cells with uniform oval nuclei without atypia or increased mitotic activity (immunoperoxidase stain with monoclonal actin-antibody, x 10) (right)

Histologic examination revealed a nodular hyalinized tumour of the dermis and upper subcutaneous tissue covered by hyperplastic, compact, orthokeratotic epidermis. The tumour consisted of actin-positive spindle cells with uniform oval nuclei without atypia or increased mitotic activity. The vascular component was CD34-positive with thickened vessel walls. There was no expression of S100 (Fig. 2).

The diagnosis of AL, the venous type with hyalinization, was made. During follow-up of 12 months, no recurrence occurred.

Discussion

Our patient presented with posterior heel pain. Heel pain is not uncommon in outpatient clinics. Several differential diagnoses have to be considered.

Plantar fasciitis is the most common cause, with medial plantar heel pain after long periods of rest. A calcaneal stress fracture is progressively worsening during activity. Nerve entrapment, heel pad syndrome, neuromas, plantar warts, Achilles tendinopathy, Haglund deformity of the calcaneus, tarsal tunnel syndrome or sinus tarsi syndrome are other possible pathologies causing heel pain as well [5].

AL has rarely been described on the heel [6-9]. Since the tumours may be painful AL is an important differential diagnosis in heel pain, independent from the level of calcification.

AL is a benign tumour of smooth muscle origin. Diagnostic sonography demonstrates a well circumscribed hypoechoic nodule. AL has a characteristic histopathology that confirms the clinically suspected diagnosis [4]. In contrast to sporadic infantile or solitary adult myofibroblastomas somatic mutations of platelet-derived growth factor-receptor B are absent among AL's [10]. Treatment of choice is surgery, and the patient will become pain-free. In the case of complete excision, relapses are very uncommon [11].

The rare occurrence of AL on the heel and its clinical presentation as chronic heel pain prompted us to report this case. AL is a rare but possible cause of heel pain – in the present case of posterior heel pain. Complete pain-free remission is achieved by surgical removal of the benign tumour

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