Acquired lymphangiomas mimicking multiple hallux warts*

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DOI: http://dx.doi.org/10.1590/abd1806-4841.20175685

Abstract: Lymphangioma is an uncommon benign vascular tumour that involves lymphatic vessels. It can be acquired or, most frequently, congenital. The acquired form presents with dilated lymphatic channels due to an obstruction. These lesions have no risk of malignant transformation, but they have a high rate of recurrence whether removed. We present a case of a 52-year-old woman with acquired lymphangiomas mimicking warts. She came to our observation for some keratotic lesions on her feet. Clinically, we found three warts on the sole of her left foot, but we also noticed the presence of swelling and papillomatous wart-like papules on both halluces. The hallux papules were studied by performing an excisional biopsy and were found to be lymphangiomas.
Keywords: Hallux; Lymphangioma; Warts

INTRODUCTION

Acquired lymphangioma (AL) is an uncommon tumour of the superficial lymphatic vessels. The lymphatic channels become dilated due to an acquired obstruction. This lesion must be differentiated from the congenital superficial kind, known as lymphangioma circumscriptum; this is an hamartomatous malformation which occurs in childhood. In contrast, the acquired form arises in adults as consequence of several types of circumstances determining interruption of lymph drainage.[1,2]

Clinical aspect may be varied. Generally, it presents as multiple asymptomatic papules or vesicles filled whit clear fluid reflecting the histologic aspect of a cluster of ectatic vessels located in the dermis.[1] Sometimes it has a verrucous surface, therefore it may be mistakenly diagnosed as a wart.[1,2,3] We report a case of multiple acquired lymphangiomas of the hallux that mimicked warts.

CASE REPORT

A 52-year-old woman with a BMI (Body Mass Index) of 28kg/m^2, came to our observation for some asymptomatic keratotic lesions on the sole of her left foot and some papules on both her halluces; that appeared three months prior, concomitant with a mild feet edema without any apparent cause. On clinical examination, the lesions of the sole had the appearance of warts thus we decided to treat them with the application of a salicylic acid solution followed by multiple sessions of cryotherapy. Otherwise, the observation of the halluces showed the presence of swelling and papillomatous papules suspicious but not diagnostic for multiple warts (Figure 1 A and B). After cryotherapic treatment, the lesions of the sole were completely removed. The uncertain nature of the remaining lesions led us to perform an excisional biopsy. Histological examination of one of the papules showed that it was composed of

Work submitted on 10.02.2016
Approved by the Advisory Board and accepted for publication on 08.05.2016
* Work performed at the Department of Dermatology and Venereology, I.R.C.C.S. Istituto Ortopedico Galeazzi, University of Milan – Milan, Italy.
Financial Support: None.
Conflict of Interests: None.

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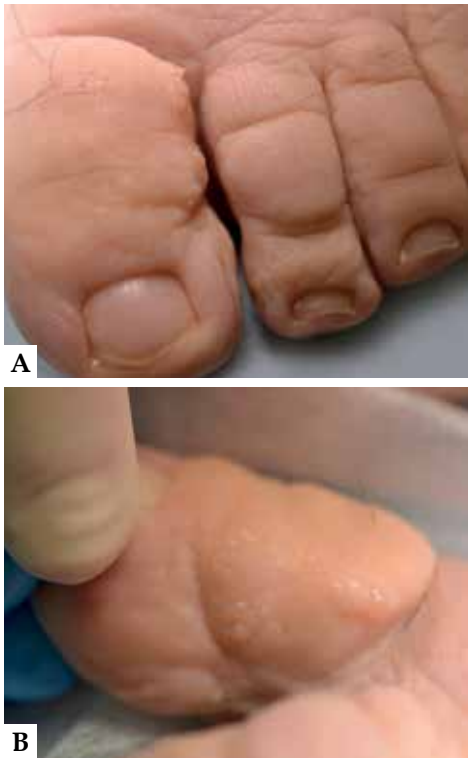

Figure 1: A and B - Small papillomatous papules mimicking warts on the left hallux of a 52-year-old woman

dilated thin-walled lymphatic vessels. It was located in the papillary and reticular dermis, extending into the epidermis (Figure 2). The wall of the enlarged lymphatic vessels was made of a single layer of endothelial cells with no atypia and traces of eosinophilic lymph filled the lumina (Figure 3). Considering all these findings, the diagnosis of lymphangioma was made. Due to the benign nature of the lesions, no excisional treatment was suggested. We prescribed daily use of compression stocking. At follow up, the clinical aspect of the lesions was unchanged, no other lesions appeared and the feet edema had diminished.

DISCUSSION

Lymphangiomas are rare benign vascular tumours that involve lymphatic vessels.[1] They are classified as congenital or acquired, also known as lymphangectasias.[2] The congenital forms are also divided in two types, based on the depth of the vessels. Lymphangioma circumscriptum is the superficial kind, whereas cavernous lymphangioma is the deep kind. In contrast, acquired lymphangiomas are superficial lymphatic ectasis.[1] The pathogenesis of dilatation is still unclear. It can develop secondary to a lymphatic disruption by an external cause. The literature reports numerous causes and associations. AL usually arises after surgery or radiotherapy (e.g. mastectomy, prostatic and penile surgery, cervical cancer surgery). The scar tissue occludes the lymphatic channels, which results in a backflow of lymph and in an expansion of the dermal lymphatic vessels. They also appear after infections (e.g. filariasis, tuberculosis) which lead to a long-standing lymphedema. There are reported cases after recurrent erysipelas, scrofuloderma, trauma, lymphatic obstruction by tumour, scleroderma, severe photoaging, penicillamine dermatopathy and topical corticosteroid application. However, some cases have no recognisable causes as in our case report.[3,4]

Lymphangiectases occur in adults, in contrast to the congenital types, which are more common at birth or during childhood. The most affected areas are radiation sites, surgical scars, genital areas (e.g. vulva, penis), gluteal area and lower extremities.[1,4-7]

Clinically, these lesions appear as multiple clusters of translucent, fluid-filled, thick-walled papules or vesicles that resemble

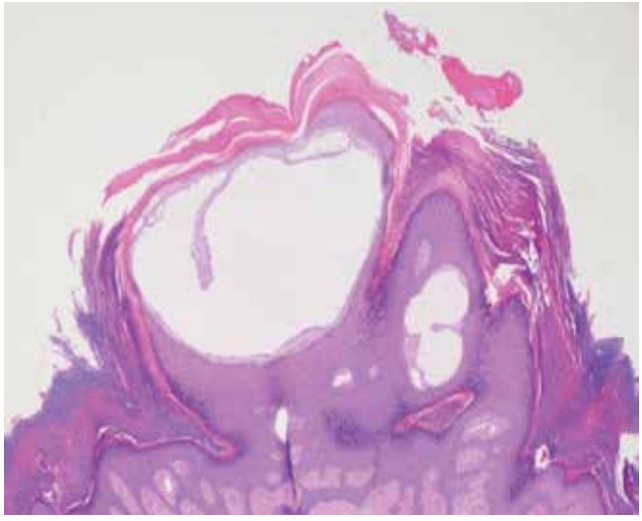

Figure 2: The lesion is situated in the papillary and reticular dermis extending into the epidermis; it is composed of large lymphatic channels with thin walls (Hematoxylin & eosin, X40)

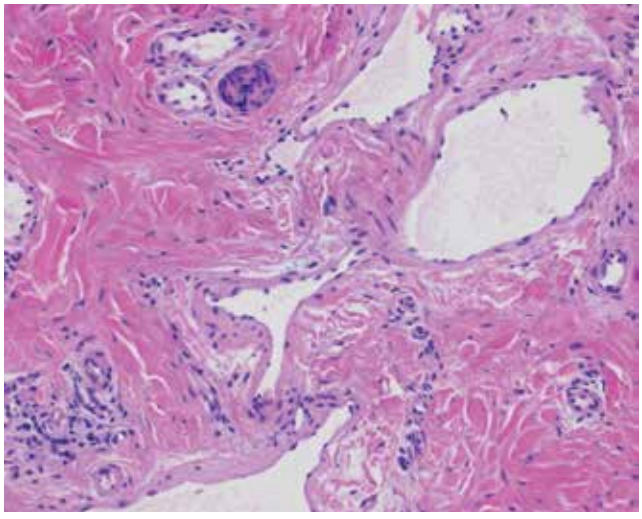

Figure 3: A single layer of endothelial cells with no atypia constitutes the wall of the lymphatic vessels; the lumina contains some eosinophilic lymph (Hematoxylin & eosin, X200)

frog spawn. They can range from white to flesh-coloured blisters. The vesicles measure commonly 2-5mm in diameter. The skin between the lesions appears normal, but a coexisting lymphedema occurs very often. Sometimes they have a cauliflowerlike appearance mimicking warts.[1,2,3] The vesicles may break and milky fluid may come out. In our case the patient had no real lower limb lymphedema, but just a mild feet edema and swelling.

On histopathological examination, AL presents dilated lymphatic channels in the papillary and reticular dermis. A single layer of endothelial cells constitutes the walls of these vessels, which may be filled by red blood cells and proteinaceous material.[1] Immunistochemistry studies are useful to differentiate lymphangiectases from other lesions, such as verrucous hemangiomas. The lymphatic endothelial cells result positive for anti-CD31 and podoplanin (D2-40 antibody), whereas they are negative for anti-CD34 and factor VIII.[1,3,4]

Observation, with treatment reserved only for complications, could be a therapeutical option. However, many medical and surgical treatments have been suggested. Cleaning the affected area daily is important to prevent superinfection of broken vesicles. Surgical treatments, including total excision, cryotherapy, and laser therapy may be useful but the lesions have a high recurrence rate after treatment.[1,2,4] The importance of making a correct diagnosis is directly linked to the risk of having complications from the treatment for wrong diagnosis as, for example, the use of keratolytic products for warts like we did as first therapeutic option in our patient.

Cellulitis, pain and chronic drainage are the most frequent complications. In addition, chronic lymphedema is associated with risk for lymphoangiosarcoma.[4] Therefore, it is advisable regular follow up of patients.❑

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How to cite this article: Diani M, Turina M, Cozzi C, Altomare G. Acquired lymphangiomas mimicking multiple hallux warts. An Bras Dermatol. 2017;92(5 Suppl 1): 11-3.