

CASE REPORT

Dermoscopic Features of Eccrine Poroma

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Abstract. Eccrine poroma is a benign adnexal neoplasm that clinically may mimic malignant skin tumors such as squamous cell carcinoma and amelanotic melanoma. The dermoscopic features of pigmented and nonpigmented eccrine poroma have recently been described. We present 2 cases of eccrine poroma, with their dermoscopic features. The lesions were characterized by multiple red lacunes and a polymorphous vascular pattern in both cases. Dermoscopy can improve the clinical diagnosis of this benign adnexal skin tumor.

Key words: eccrine poroma, adnexal skin tumor, dermoscopy.

CARACTERÍSTICAS DERMATOSCÓPICAS DEL POROMA ECRINO

Resumen. El poroma ecrino (PE) es una neoplasia anexial benigna que puede simular clínicamente tumores cutáneos malignos como el carcinoma epidermoide o el melanoma amelanótico. Recientemente se han descrito las características dermatoscópicas del PE pigmentado y no pigmentado. Presentamos 2 casos de PE con sus características dermatoscópicas. Ambos casos se caracterizan por presentar múltiples lagunas rojas y un patrón vascular polimorfo. La dermatoscopia puede mejorar el diagnóstico clínico de estas tumoraciones anexiales benignas.

Palabras clave: poroma ecrino, dermatoscopia, tumor anexial cutáneo.

Introduction

Eccrine poroma (EP) is a benign adnexal neoplasm composed of epithelial cells with poroid or distal ductal differentiation.

Clinically, it tends to present as a solitary tumor most frequently on the plantar surface of the foot in adult patients. However, the clinical characteristics can vary widely, with diagnosis as small pink colored papules, large verrucous plaques, or exophytic nodules in a range of sizes and locations. A pigmented variant of EP has also been described. This great variability in presentation explains the difficulties dermatologists can face in the differential diagnosis of this adnexal tumor from tumors like squamous cell carcinoma, basal cell carcinoma or nodular amelanotic melanoma, among others.¹

Dermoscopy is a noninvasive and immediate technique that can help in the diagnosis of EP. There are very few

reports on the dermoscopic features of EP. We present 2 clinical cases of EP with their dermoscopic features.

Case Descriptions

Case 1

A 76-year-old woman with no relevant medical or surgical history presented with a cutaneous lesion on the plantar surface of the left foot with onset a year previously. Clinically, the lesion was an asymptomatic erythematous nodule of 8 mm in diameter (Figure 1A), with a homogeneous appearance and irregular but well-defined edges. The dermoscopic image (Figure 1B) revealed irregular linear vessels, glomerular vessels, and hairpin vessels. Furthermore, the lesion presented a creamy-red background tone and multiple red lacunes. A biopsy was taken and the lesioned area was resected. Histological study showed a tumor consisting of cells with eosinophilic cytoplasm arranged in strands, oval nuclei, and evident nucleolus, without atypia or mitosis. The stroma was composed of dense fibroconnective tissue with abundant enlarged vessels (Figure 1C). A diagnosis of EP was made, and no complications were seen in subsequent visits.

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Figure 1. A. Erythematous nodule on the plantar surface of the foot. B. Dermoscopic image with the presence of multiple red lacunes, glomerular vessels, and hairpin vessels. C. Histological image (hematoxylin-eosin, $\times 20$) showing strands of basaloid cells surrounded by dilated vessels.

Case 2

An 86-year-old woman presented with an asymptomatic cutaneous lesion on the external face of the left buttock with onset many years previously (Figure 2A). The lesion had been treated previously with cryotherapy. Clinically, this was a plaque 4 cm in diameter, with a multifocal appearance, of erythematous color, irregular but well-defined edges, and a central area of scarring caused by the prior cryotherapy. In dermoscopic terms, the whole lesion presented a polymorphic vascular pattern composed of irregular linear vessels, red lacunes, glomerular vessels, and hairpin vessels (Figure 2B). Complete surgical removal of the lesion was undertaken. Histology revealed the lesion to be EP, consisting of a proliferation of small basaloid cells, with no atypia or mitosis, in solid nest formations in the epidermis and dermis (Figure 2C).

Discussion

The term EP was originally described by Goldman et al² in 1956 to refer to a benign tumor of the sweat gland consisting of epithelial cells with eccrine type distal tubular differentiation. However, many authors suggest the term can be used to refer to both eccrine and apocrine tumors.³

The pathogeny of EP is unknown, although it has been associated with scarring, trauma, and radiation.⁴⁻⁶ EP represents 10% of all sweat gland tumors. There is no predilection according to race or sex. It tends to be diagnosed in patients aged from 40-70 years.

The most common location is on the foot (47%), although cases have been described on the head, trunk, and upper limbs. Around 8% of patients with EP present multiple EPs.⁷

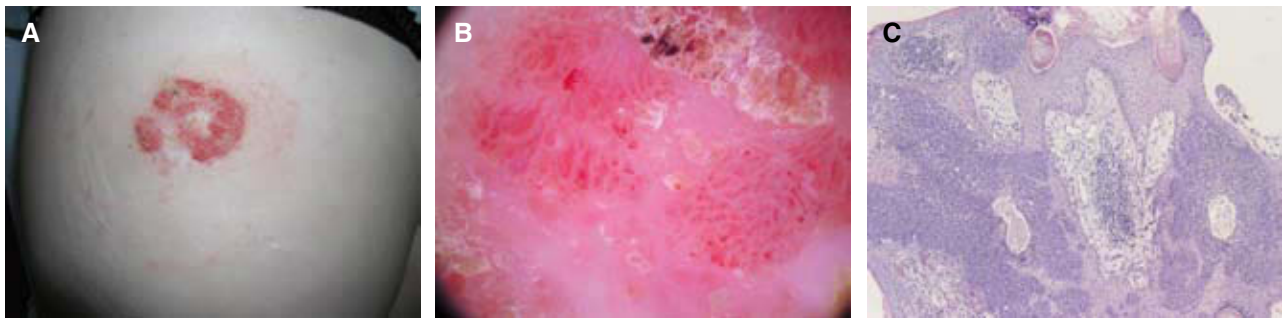


Figure 2. A. Multifocal erythematous plaque on the buttock. B. Dermoscopic detail of a polymorphic vascular pattern consisting of linear vessels, glomerular vessels, and hairpin vessels. C. Histological image (hematoxylin-eosin, ×20) of a tumor consisting of strands of basaloid cells with atypia or mitosis located in the epidermis and upper dermis.

Table. Summary of the Dermoscopic Features of Eccrine Poroma

Authors	Cases Described	Dermoscopic Features
Kuo et al ¹³ (2003)	2 pigmented eccrine poromas	Multiple blue-gray globules, gray-blue ovoid nests, branched vessels
Altamura et al ¹⁴ (2005)	Nonpigmented eccrine poroma in the pubic region	Polymorphic vascular pattern: irregular creamy-red areas, red lacunes, irregular linear vessels, hairpin vessels, comma vessels
Nicolino et al ¹ (2007)	1 pigmented eccrine poroma and 1 nonpigmented eccrine poroma	Pigmented eccrine poroma: gray-blue ovoid nests, irregular linear vessels (less well defined and with less branching than in basal cell carcinoma) Nonpigmented eccrine poroma: polymorphous vascular pattern (irregular linear vessels, creamy-red areas, red lacunes, glomerular vessels, and hairpin vessels)
Our cases	2 non-pigmented eccrine poromas	Olymorphous vascular pattern consisting of irregular linear vessels, red lacunes, glomerular vessels, and hairpin vessels

Clinically, they tend to be slow growing, asymptomatic lesions, in the form of an erythematous papule of a soft consistency. Cases have also been described of EP in the form of exophytic or ulcerated nodules, or hyperkeratotic plaques. Pigmented forms of EP constitute 17% of cases.⁸

The malignant variant of EP, porocarcinoma, is a far less common entity. It tends to be diagnosed in later life, mostly arising from a preexisting EP.^{9,10}

Histologically, EP is composed of strands of basaloid cells very similar to the cells of the distal eccrine and apocrine excretory duct that emerge from the epidermis and penetrate the dermis forming broad and uniform columns.¹¹ These cells are periodic acid-Schiff (PAS) positive, with rounded nucleus and scant cytoplasm, showing no abnormalities or mitosis. Melanic pigment is found in the pigmented form of EP. The extensive vascularization that tends to be present in the surrounding stroma contributes to the clinical aspect. The EP cells test positive for cytokeratins and carcinoembryonic antigen.¹²

There have been recent descriptions of the characteristics of both pigmented EP and the classic or nonpigmented type (Table).^{1,13,14} Pigmented EP can present dermoscopic

features in common with pigmented basal cell carcinoma, including multiple blue-green globules, gray-blue ovoid nests, or branched vessels.¹³ However, the branched vessels observed in EP tend to be less clear and present fewer divisions, and they must be differentiated from the typical branched vessels observed in basal cell carcinoma.¹

Altamura et al¹⁴ described the characteristic dermoscopy findings relating to non-pigmented EP as the presence of irregular creamy-red areas, red lacunes, and irregular linear vessels. Nicolino et al¹ confirmed the presence of these findings, proposing that a polymorphic vascular pattern (defined as the presence of more than one type of vascular structure) is the most important dermoscopic feature of EP. The polymorphic vascular pattern is also present in our 2 cases, corresponding to histological findings of the abundant presence of dilated vessels in the surrounding stroma. However, the presence of several types of vessels can also be seen in squamous cell carcinoma, amelanotic melanoma, and porocarcinoma.¹⁵

In conclusion, we present 2 cases of nonpigmented EP, with many clinical differences, but with some very similar dermoscopic characteristics (red lacunes and polymorphic

vascular pattern). Dermoscopic analysis of these lesions can help us with differential diagnosis, although neither clinical findings nor dermoscopy can guarantee that we can distinguish such lesions from amelanotic melanoma, porocarcinoma, or squamous cell carcinoma. Future work on the dermoscopic characteristics of adnexal tumors will improve our understanding and recognition of these lesions.

Conflicts of Interest

The authors declare no conflicts of interest.

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