CASE REPORT

Pigmented eccrine poroma: report of an atypical case with the use of dermoscopy*

Poroma écrino pigmentado: relato de caso atípico com descrição da dermoscopia

Fabiana Carvalho de Almeida[1]
Ângela Cristina Rapela Medeiros[3]
Silvana Maria de Morais Cavalcanti[2]
Márcia Almeida Galvão Teixeira[2]

DOI: http://dx.doi.org/10.1590/abd1806-4841.20131255

Abstract: Poromas are uncommon benign neoplasms originating from the terminal ductal portion of the sweat glands, mainly characterized by skin-colored or pink pa pules or nodules, usually on the extremities. Due to their rarity, the pigmented form clinical hypothesis is hardly ever suggested and psychopathology is fundamental. We report a case of pigmented eccrine poroma in the right palmer area, a location considered atypical. We stress the importance of dermoscopy as a method for diagnosis of poromas, especially in the differential diagnosis with other pigmented nodular-popular lesions.
Keywords: Dermoscopy; Eccrine glands; Neoplasms

Resumo: Os poromas são neoplasias benignas incomuns oriundas das porções ductais terminais das glândulas sudoríparas. Caracterizam-se principalmente por pápula ou nódulo cor da pele ou róseo, em geral nas extremidades. Devido à raridade, a hipótese clínica da forma pigmentada dificilmente é aventada, sendo fundamental a histopatologia. Relata-se caso de poroma écrino pigmentado na região palmar direita, localização considerada atípica. Ressalta-se a importância da dermoscopia como método auxiliar no diagnóstico do poroma e, principalmente, no diagnóstico diferencial com outras lesões pápulo-nodulares pigmentadas.
Palavras-chave: Dermoscopia; Glândulas é crinas; Neoplasias

INTRODUCTION

Poromas were first described in 1956 by Pinkus, Goldman and Login as tumors of the eccrine sweat glands, although there are reports of exocrine differentiation also.[1,2] Exocrine poromas (EP) derive from the intraepidermal portion of eccrine sweat ducts.[3,4,5] It is an uncommon pathologic condition that appears predominantly between the fourth and sixth decades of life. [5] Its pathogenesis is unknown, but may be related to trauma, radiation or scars.[3,6]

Clinically it presents as a skin-colored or pink papule, plaque or nodule, usually single, but exophytic or ulcerated nodules and hyperkeratotic plaques are also described.[3] There is a malignant variant, the porocarcinoma, which may be a primary tumor, but generally results from the malignant transformation of EP.[7] Approximately 8% of cases present as multiple lesions, named poromatosis.[3] The lesions tend to be asymptomatic and, in roughly 50% of cases, are located in the plantar region.[3] The pigmented variant corresponds to only 17% of cases and is usually underdiagnosed, as it is mistaken for other pigmented tumors.[3,8] Dermoscopy assists in the differentiation of

Received on 02.06.2011.
Approved by the Advisory Board and accepted for publication on 25.09.2012.
* Study carried out at the Teaching Hospital Oswaldo Cruz, University of Pernambuco (Hospital Universitário Oswaldo Cruz - Universidade de Pernambuco (HUOC-UPE) – Recife (PE), Brazil.
Conflict of interest: None
Financial funding: None

[1] Residency in Dermatology at the University of Pernambuco (Universidade de Pernambuco - UPE); MD, volunteer Dermatologist at the Dermatology service of the Federal University of Sergipe (Universidade Federal de Sergipe - UFS) – Aracaju (SE), Brazil.
[2] Master's Degree in Health Sciences from the University of Pernambuco (Universidade de Pernambuco – UPE); PhD in Tropical Medicine from the Federal University of Pernambuco (Universidade Federal de Pernambuco); Professor of Dermatology at the Teaching Hospital Oswaldo Cruz, University of Pernambuco (Hospital Universitário Oswaldo Cruz - Universidade de Pernambuco (HUOC-UPE) – Recife (PE), Brazil.
[3] PhD in Medicine (Internal Medicine) – University of São Paulo (Universidade de São Paulo - USP) - Professor of Dermatology at the Teaching Hospital Oswaldo Cruz, University of Pernambuco (Hospital Universitário Oswaldo Cruz - Universidade de Pernambuco (HUOC-UPE) – Recife (PE), Brazil.

these tumors.[9] The diagnosis is histological and the treatment surgical, with only rare recurrences.[4,5]

CASE REPORT

A female, 36-year-old patient, of mixed race, homemaker, with history of asymptomatic lesion in the palm of her right hand for 3 years. During the examination a dark papule, of firm, marked consistency, well-defined contour and anfractuous surface, measuring around 0.5 cm diameter was observed in the right palmar region (Figures 1 and 2).

Dermoscopy revealed a white-gray area; black dots; polymorphic vascular structures and bluish-red gaps (Figures 3 and 4). There were no pseudopods, webs or pigmental striae.

Histopathology revealed proliferation of uniform cuboid cells with light-colored cytoplasm and evident intercellular bridges (Figure 5). There was also hyperkeratosis, melanin pigments and abundantly vascularized stroma, aspects that are compatible with pigmented eccrine poroma (PEP). There were no alterations suggestive of malignancy (Figure 6). After diagnostic confirmation, the lesion was surgically removed.

DISCUSSION

The preferred location of non pigmented EP are the palms and plantar region, which are the sites with higher concentration of eccrine sweat glands.[6] However, in pigmented variants, this localization is quite atypical.[10] In 2007, Hu *et al* revised the literature of the 1966 – 2006 period and found 15 cases of the pigmented form of poroma, but none in the acral region, which led them to suggest that the melanocytes in the palmar and plantar regions presented reduced migration, proliferation and survival.[10] In an attempt to explain this fact, they performed histological and immunohistochemical analyses of the tumors and observed that the expression of melanocyte stimulating factors by tumor cells is associated with the colonization of melanocytes only by non acral pigmented poromas. Nevertheless, they concluded that this finding alone would not be sufficient to explain the presence and/or absence of pigment in tumors in this location.[10] In addition to this report, there is a case described by Rivera *et al*, in 1999, of a PEP in the plantar region that simulated a melanoma.[5]

There is no predilection for race or sex, except for the pigmented variant, which predominates in the

Figure 1: Well-delimited pigmented papule, measuring about 0.5 centimeters

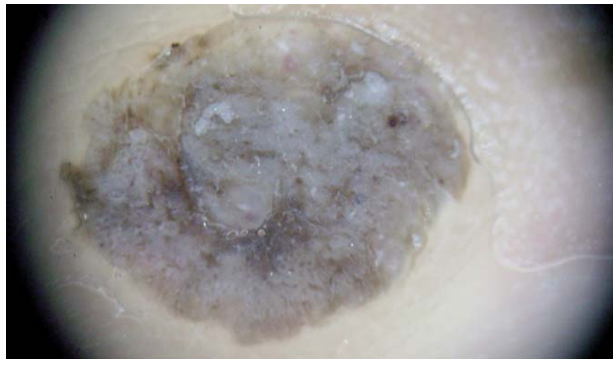

Figure 3: White-gray area; black dots; polymorphic vascular structures and bluish-red gaps

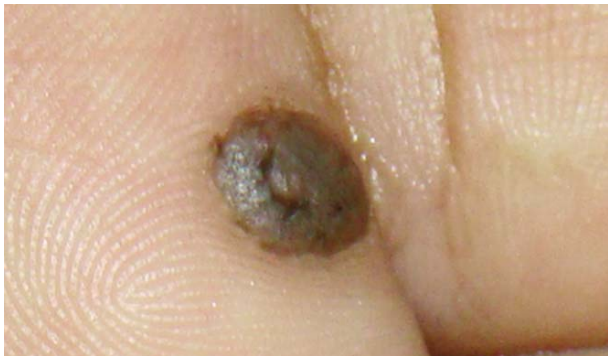

Figure 2: In the larger image enlargement, an anfractuous surface can be seen

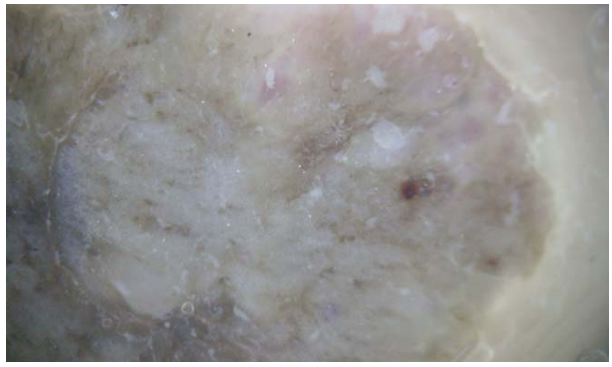

Figure 4: In the detail, a bluish-red gap and polymorphic vascular structures are noted

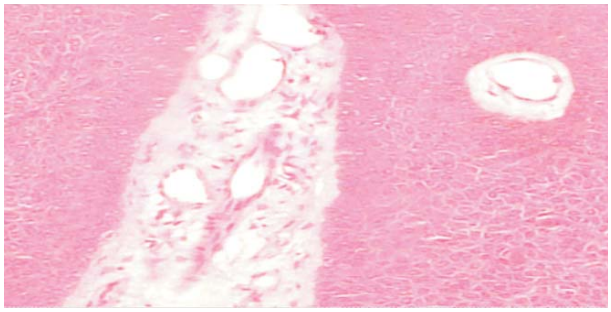

Figure 5: Proliferation of uniform cuboid cells with light cytoplasm

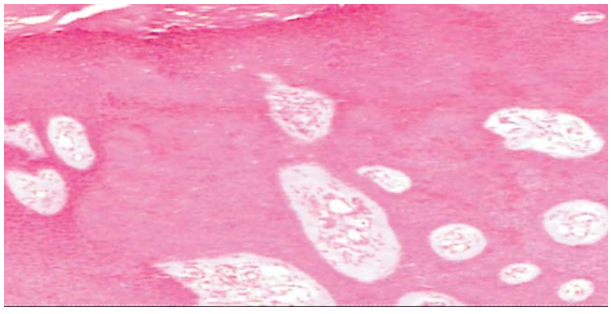

Figure 6: Presence of hyperkeratosis, melanic pigment and abundantly vascularized stroma

black race; in this regard our case concurs with the literature.[9,10]

As there is no consensus about poroma dermoscopic findings, the importance of dermoscopy is in assisting the differential diagnosis, mainly with melanoma, seborrheic keratosis (SK), pigmented basal cell carcinoma (BCC) and angiokeratoma, which have well-defined suggestive patterns.

There are few reports of PEP dermoscopy. The first descriptions were made in 2003, by Kuo and Ohara, of two pigmented lesions, one on the thigh and the other on the dorsal surface, where ovoid nests and bluish-gray dots were observed, besides vascular structures in an arborescent pattern. They suggested the pigmented BCC hypothesis, but the histopathological investigation revealed it was a PEP.[9] In 2007, Nicolino *et al* performed dermoscopy of papular pigmented lesion in the pubic region and detected a central bluish-white spot, which can occur in melanoma; a black spot in the periphery, corresponding to the vascular lesion, and hairpin vessels in keratinized tumors, especially in SK.[11] Due to the diversity of findings, surgical removal of the lesion was requested and the histopathological exam confirmed PEP. The most extensive description was made in 2010, by Minagawa and Koga, who assessed 12 cases of pigmented poromas, two in the hand and two in the foot, but it was not specified if it was in the palmar-plantar regions.[8] Dermoscopy found 11 types of structures, with predominance of vascular ones (hairpin vessels, polymorphic and arborescent), followed by structures similar to globules (non associated with melanocyte nests); comedo-like openings (present in lesions with hyperkeratosis); ulceration; bluish-red gaps (corresponding to cyst spaces); hypopigmented areas and structures of the leaf type. Other characteristics such as striae, whitish-blue veil, regression and spot structures, common in melanoma, were observed only in the histological variant with epidermal localization, the hydroacanthoma simplex. According to them, the presence of these diverse components would be a consequence of the varied quantity of melanin in tumors and the different histological patterns, since four variants are described: hydroacanthoma simplex, eccrine poroma, dermal ductal tumor and poroid hidradenoma. The authors identified two main types of pigmented poroma, one that simulates pigmented BCC and one that simulates SK. Histologically it was observed that the deeper tumors were more like the pigmented BCC and those with hyperkeratosis were similar to SK.[8] In the reported case a grayish-white area was found, corresponding to hyperkeratosis; black dots, equivalent to intraepidermal melanocyte aggregates; polymorphic vascular structures, which were not well distinguished because a device with non-polarized light was utilized (Heine Delta 20) and bluish-red gaps, referring to dilated vascular spaces in the superior dermis. In spite of the hyperkeratosis, the SK hypothesis was not considered, due to its absence in the palmar-plantar region. In this case, the main differential diagnosis was melanoma, due to the location, clinical aspect of the lesion and the intense vascularization. In the case described by Rivera *et al* in the plantar region there was clinical suspicion of melanoma, although dermoscopy of the lesion was not carried out.[5]

The histopathological investigation was compatible with PEP, clarifying the diagnosis. In this case, the option was to have the lesion surgically removed, as it was the treatment of choice; however, shaving or electrocoagulation may also be an alternative. ❑

REFERENCES

1. Goldman P, Pinkus H, Rogin JR. Eccrine poroma: tumors exhibiting features of the epidermal sweat duct unit. AMA Arch Derm. 1956;74:511-21.
2. Kamiya H, Oyama Z, Kitajima Y. "Apocrine" poroma: review of the literature and case report. J Cutan Pathol. 2001;28:101-4.
3. Avilés-Izquierdo JA, Velázquez-Tarjuelo D, Lecona-Echevarría M, Lázaro-Ochaita P. Características dermatoscópicas del poroma ecrino. Actas Dermosifiliogr. 2009;100:133-6.
4. Pareyón LAR, Rojas PB, Garibay AR. Poroma ecrino pigmentado. Presentación poco habitual. Rev Cent Dermatol Pascua. 2001;10:70-2.
5. Rivera OL, Mora S, Gutiérrez RM, Novales J. Poroma ecrino simulando un melanoma maligno. Reporte de un caso y revisión de la literatura. Rev Cent Dermatol Pascua. 1999; 8:35-8.
6. Torres-González S, Carranza MV, Coloma JNS, Ruiz EB. Poroma ecrino plantar, presentación de un caso. Rev Cent Dermatol Pascua. 2006;15:19-22.
7. Mulinari-Brenner FA, Bastos CAS, Santamaria JR, Mukai MM, Filho EAA, Neto JF. Eccrine porocarcinoma: report of four cases and literature review. An Bras Dermatol. 2009;84:519-23.
8. Minagawa A, Koga H. Dermoscopy of pigmented poromas. Dermatology. 2010;221:78-83.
9. Kuo H, Ohara K. Pigmented eccrine poroma: a report of two cases and study with dermatoscopy. Dermatol Surg. 2003;29:1076-9.
10. Hu SCS, Chen GS, Wu CS, Chai CY, Chen WT, Lan CCE. Pigmented eccrine poromas: expression of melanocyte-stimulating cytokines by tumor cells does not always result in melanocyte colonization. J Eur Acad Dermatol Venereol. 2008;22:303-10.
11. Nicolino R, Zalaudek I, Ferrara G, Annese P, Giorgio CM, Moscarella E *et al*. Dermoscopy of eccrine poroma. Dermatology. 2007;215:160-3.

MAILING ADDRESS:
Fabiana Carvalho de Almeida
Rua Urquiza Leal, 568, Apto 801 - Salado Filth
49020-490 - Aracaju - SE
Brazil
E-mail: fabi_dealmeida@yahoo.com.br

How to cite this article: Almeida FC, Cavalcanti SMM, Medeiros ACR, Teixeira MAG. Pigmented eccrine poroma: report of an atypical case with the use of dermoscopy. An Bras Dermatol. 2013;88(5):803-6.