Acta Dermatovenerol Croat 2016;24(2):144-147 CASE REPORT

Dermatoscopic Findings of Seborrheic Keratosis in Melanoma

Maria Luiza Brandão[1], Cíntia Maria Oliveira Lima[1], Heloísa Helena Moura[1], Cleide Ishida[1], Gabriella Campos-do-Carmo[2], Tullia Cuzzi[3], Marcia Ramos-e-Silva[1]

[1]Sector of Dermatology, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil; [2]National Institute of Cancer and Sector of Dermatology, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil; [3]Sectorof Pathology, University Hospital and School of Medicine, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

Corresponding author:
Prof. Marcia Ramos-e-Silva, MD, PhD
Rua Dona Mariana 143 / C-32
22280-020 Rio de Janeiro
Brazil
ramos.e.silva@dermato.med.br

Received: April 24, 1015
Accepted: December 15, 2015

ABSTRACT: Cutaneous melanoma may in some instances be confused with seborrheic keratosis, which is a very common neoplasia, more often mistaken for actinic keratosis and verruca vulgaris. Melanoma may clinically resemble seborrheic keratosis and should be considered as its possible clinical simulator. We report a case of melanoma with dermatoscopic characteristics of seborrheic keratosis and emphasize the importance of the dermatoscopy algorithm in differentiating between a melanocytic and a non-melanocytic lesion, of the excisional biopsy for the establishment of the diagnosis of cutaneous tumors, and of the histopathologic examination in all surgically removed samples.

KEY WORDS: seborrheic keratosis, melanoma, dermatoscopy

INTRODUCTION

Cutaneous melanoma is a sometimes very aggressive malignant tumor that may be confused with benign lesions. It must be considered in the clinical differential diagnosis of seborrheic keratosis, which is one of the most common benign neoplasia in adults from the fourth life decade. The vast majority is removed by electrosurgery and cryotherapy without histopathologic diagnosis confirmation or may simply not be treated (1,2). Actinic keratosis, verruca vulgaris, and solar lentigines are lesions that are often mistaken for seborrheic keratosis.

The objective of this report is to describe a case of melanoma with clinical and dermatoscopic presentation suggestive of seborrheic keratosis, emphasizing the relevance of the dermatoscopy algorithm for differential diagnosis between melanocytic and non-melanocytic lesions and the importance of excisional biopsy in the final interpretation of cutaneous tumoral lesions.

CASE REPORT

A 67-year-old female patient presented with a heterogeneous plaque on her right arm of 2 cm in the major axis. Colors varied from light brown to black and were asymmetrical, with irregular borders (Figure 1 and Figure 2). The lesion had been present for 3 years, and there had been progressive darkening in the last 2 years.

Acta Dermatovenerol Croat
2016;24(2):144-147

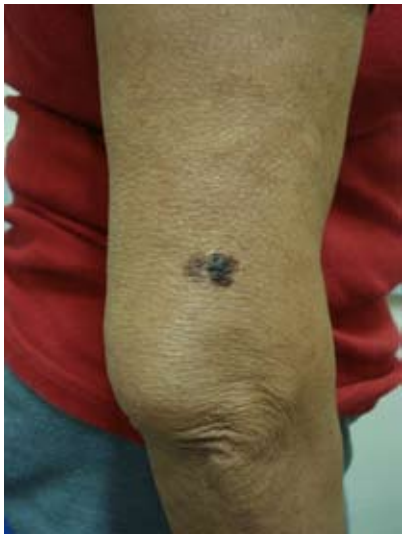

Figure 1. Asymmetrical dark brown lesion on the right arm, 2 cm in diameter.

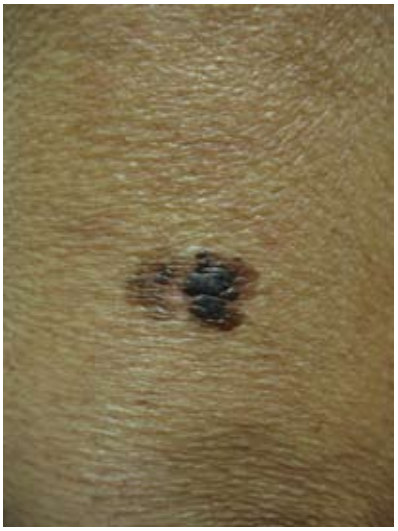

Figure 2. Close view of the lesion.

Multiple comedo-like openings were observed at dermatoscopic examination as well as some milia-like cysts in the darker portion of the lesion, the presence of a peripheral pigmented network resembling a digital impression, and a central bluish-gray area resembling a veil. Despite satisfying several criteria suggestive of seborrheic keratosis, the presence of a pigmented network, asymmetry, and bluish-like veil led to the dermatoscopic interpretation of suspicion of melanocytic lesion instead of seborrheic keratosis (Figure 3).

An incisional biopsy was performed in the most pigmented area of the lesion and, when examining the patient for the second time, the characteristics of the melanocytic lesion were more evident even without histopathologic opinion, so excisional biopsy was performed to improve the diagnosis.

The histopathology of the incisional biopsy (Figure 4) revealed a melanoma Clark II, Breslow 0.36 mm. The microscopic description included the presence of focal papillomatosis with formation of milia-like cysts, remnants of seborrheic keratosis. The exam of the excisional biopsy only showed the *in situ* component of the melanoma.

DISCUSSION

Dermatoscopy is a non-invasive technique that increases the diagnostic accuracy for cutaneous tumors, being especially useful for differentiation between classical clinical melanoma simulators (3). Although dermatoscopic criteria to distinguish melanocytic from non-melanocytic lesions have been described, some characteristics may confuse the examiner if present in the same lesion. In fact, several authors have already emphasized the possibility of making a misleading melanoma diagnosis when dermatoscopic features of a non-melanocytic lesion are found in the lesion, such as multiple milia-like cysts and pseudo follicular openings, especially if typical melanoma structures are absent (4,5).

Comedo-like openings may be seen in 71% of the lesions of pigmented seborrheic keratosis and milia-like cysts in around 66%. Milia-like cysts and comedo-like openings are considered optimal diagnostic criteria to identify the majority of seborrheic keratosis lesions, but the presence of other criteria such as cerebriform fissures, hairpin-like vessels, moth-eaten borders, and a digitiform pattern reduce the risk of diagnostic error, especially in lesions of pigmented seborrheic keratosis. Seborrheic keratosis can also contain structures of a pigmented-type network,

Figure 3. Dermatoscopy: comedo-like openings, milia-like cysts, pigmented peripheral network similar to a digital impression, and a central blue-grayish area.

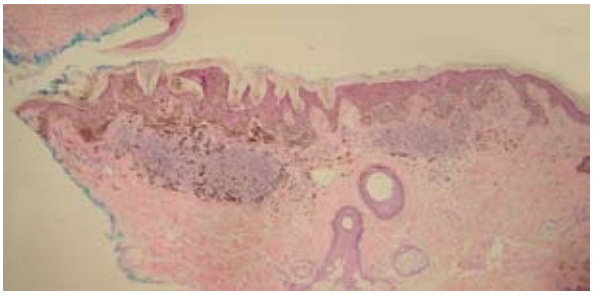

Figure 4. Focal papillomatosis with formation of milia-like openings, milia-like cysts, in situ component of melanoma (hematoxylin and eosin, ×40).

which however should not be mistaken for the typical pigmented network of melanocytic lesions (6).

In a comparative study of dermatoscopic characteristics of melanoma (n=37) and those of seborrheic keratosis/solar lentigines on the face, comedo-like openings, milia-like cysts were considered structures associated with benignity because they were not observed in any case of melanoma in the study (7). However, this finding should not be considered as 100% accurate because, on rare occasions, milia-like cysts and pseudo-openings are found in melanoma lesions (7-9).

Therefore, melanomas with clinical characteristics of seborrheic keratosis are real diagnostic pitfalls.

It is important to note that seborrheic keratosis is an entity of easy clinical diagnosis, usually not requiring dermatoscopic evaluation. If the dermatologist needs the dermatoscope to examine a certain lesion, it is probably because that lesion diverges from the customary clinical patterns and deserves attention to eliminate melanoma (5). Care must be taken to examine such suspect lesions following the dermatoscopic algorithm, whose first step is to classify the lesion as melanocytic or not instead of closing the investigation when finding typical structures of a non-melanocytic lesion, such as the visualization of pseudo cysts and pseudo openings in a seborrheic keratosis-like lesion.

It is still unclear in the literature whether seborrheic keratosis and melanoma can coincide in the same lesion or if seborrheic keratosis is a forerunner lesion. In fact, seborrheic keratosis lesions are so common that the likelihood of their occurrence concurrently with melanomas does exist. However, the existence of a carcinogenic factor influencing the growth of both lesions cannot be discarded (4).

Occurrence of melanoma within a seborrheic keratosis lesion and vice-versa is considered rare; however, the finding of basocellular and Bowen's disease in seborrheic keratosis lesions is considered more common (10).

Cascajo *et al*. (11) published a retrospective analysis of malignant lesions growing in an area adjacent to seborrheic keratosis. Of the 54 lesions studied, 43 basocellular carcinomas were found, 6 cases of Bowen's disease, 3 keratoacanthomas, and 2 melanomas. In this study, the term composite tumor was preferred instead of collision tumor, because one cannot affirm if the association between seborrheic keratosis and cutaneous neoplasia is a random event or if there is a pathogenic relation. Other authors, such as Yakar*et al*., Jones Caballero *et al*., and Zabel *et al*. (12-14), prefer the term collision tumor since they think there is a greater likelihood of coexistence by accident than due to a pathogenic causal factor.

There is a particular variant of melanoma that makes the differential diagnosis between seborrheic keratosis especially difficult: the melanoma type verrucous hyperkeratotic, a rare form of melanoma first described in 1967 (15). This variant is similar, both clinically and histopathologically, to seborrheic keratosis, and thus capable of inducing a diagnostic error (4,15). Kuehnl-Petzoldt *et al*. (16) presented a study where 101 patients (9%) had with the diagnosis of verrucous hyperkeratotic melanoma among 1108 patients with melanoma, and Blessings *et al*. (17) found 20 patients (3.2%) with hyperkeratotic verrucous melanoma in 618 melanoma patients. In both studies, approximately 70% of the hyperkeratotic verrucous melanomas were located in the extremities, mainly the legs (4,15).

In our case, we were unable to distinguish between the coexistence of seborrheic keratosis and melanoma with superposition of histological findings and the presence of epidermal seborrheic keratosis-like alterations induced by the melanoma.

CONCLUSION

We conclude that the finding of dermatoscopic alterations typical of several entities should not exclude the systematic search for elements that indicate the presence of an eventual concurrent melanocytic lesion. Dermatoscopy-histopathology correlation is fundamental as a method for verification of the multidisciplinary interpretative quality.

References:

1. Stern RS, Boudreaux C, Arndt KA. Diagnostic accuracy and appropriateness of care for seborrheic keratoses: a pilot study of an approach to quality assurance for cutaneous surgery. JAMA 1991;26591:74-7.
2. Chen SC, Bravata DM, Weil E, Olkin I. A comparison of dermatologists' and primary care physicians'

accuracy in diagnosing melanoma: a systematic review. Arch Dermatol 2001;137:1627-34.

3. Izikson L, Sober AJ, Mihm MC, Zembowicz A. prevalence of melanoma clinically resembling seborrheic keratosis. Arch Dermatol 2002;138:1562-6.
4. Carrera C, Segura S, Palou J, Puig S, Segura J, Marti RM, Malvehy J. Seborrheic keratosis-like melanoma with folliculotropism. Arch Dermatol 2007;143:373-6.
5. Braga JC, Scope A, Klaz I, Mecca P, Spencer P, Marghoob AA. Melanoma mimicking seborrheic keratosis: an error of perception precluding correct dermoscopic diagnosis. J Am Acad Dermatol 2008;58:875-80.
6. Braun RP, Rabinovitz HS, Krischer J, Kreusch J, Oliviero M, Naldi L, *et al*. Dermoscopy of pigmented seborrheic keratosis. Arch Dermatol 2002;138:1556-60.
7. Schiffner R, Schiffner-Rohe J, Vogt T, Landthaler M, Wlotzke U, Cognetta AB, *et al*. Improvement of early recognition of lentigo maligna using dermatoscopy. J Am Acad Dermatol 2000;42:25-32.
8. Argenziano G, Rossiello L, Scalvenzi M, Staibano S, Ruocco E, Cicale L, *et al*. Melanoma simulating seborrheic keratosis: a major dermoscopy pitfall. Arch Dermatol 2003;139:389-91.
9. Menzies SW, Crotty KA, Ingvar C, McCarthy WH. The diagnostic features of surface microscopy. In: An atlas of surface microscopy of pigmented skin lesions: dermoscopy. 2nd ed. Sydney: McGraw-Hill; 2003:6-52.
10. Birnie AJ, Varma S. A dermatoscopically diagnoses collision tumour: malignant melanoma arising within a seborrhoeic keratosis. Clin Exp Dermatol 2008;33:512-3.
11. Cascajo CD, Reichel M, Sánchez JL. Malignant neoplasms associated with seborrheic keratoses. An analysis of 54 cases. Am J Dermatopathol. 1996;18:278-82.
12. Yakar JB, Sagi A, Mahler D, Zirkin H. Malignant melanoma appearing in seborrhoeic keratosis. J Dermatol Surg Oncol 1984;10:382-3.
13. Jones-Caballero M, Peñas PF, Buezo GF, Fraga J, Aragüés M. Malignant melanoma appearing in a seborrhoeic keratois. Br J Dermatol 1995;133:1016-108.
14. Zabel RJ, Vinson RP, McCollough ML. Malignant melanoma arising in a seborrheic keratosis. J Am Acad Dermatol 2000;42:831-3.
15. Haruna K, Suga Y, Mizuno Y, Ikeda S. Malignant melanoma with a seborrheic keratosis-like clinical presentation. Indian J Dermatol 2009;54:387-8.
16. Kuehnl-Petzoldt C, Berger H, Wiebelt H. Verrucous-hiperceratotic variations of malignant melanoma: a clinicopathological study. Am J Dermatol 1982;4:403-10.
17. Blessing K, Evans AT, al-Nafussi A. Verrucous naevoid and keratotic malignant melanoma. A clinicpathological study of 20 cases. Histopathology 1993;23:453-8.