Asymptomatic heterogeneously black-pigmented plaque in a 58-year-old man: an unusual presentation of a melanoma mimicker

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Case Presentation

A 58-year-old man with a history of nodular basal cell carcinoma presented with an asymptomatic black-pigmented lesion on his left shoulder, without variation in size over time, which had been present for years. Physical examination revealed an irregular black-bluish-pigmented plaque with a maximum diameter of 8 mm. The dimple sign was negative (Figure 1). Dermoscopy showed a pseudo-pigmentary network and comedo-like openings at its center, asymmetrical peripheral streak-like structures, areas of brown-bluish pigmentation, fingerprint-like structures, and eccentric milia-like cysts (Figure 2). The lesion was excised and histological examination was performed (Figure 3).

Diagnosis

Pigmented dermatofibroma

Figure 1. Physical examination revealed an irregular black-bluish-pigmented plaque with a maximum diameter of 8 mm. [Copyright: ©2018 Majerson-Grinberg et al.]
nonmelanocytic lesions, the black color may correspond to hemosiderin deposits inside the skin (as in the case presented), or be derived from the oxidized plug of keratin masses (as in the pseudocysts in the seborrheic keratosis [SK]), or result from artificial tattoos. Other melanoma mimickers with blue pigmentation are vascular lesions, Kaposi sarcoma, basal cell carcinomas (BCC), and radiation tattoos [5]. Most of the dermatoscopic criteria for MM were described in its superficial spreading variety. However, pigmented nodular melanoma could be recognized by the presence of a combination of blue and black color within the lesion (the “blue-black rule”). The presence of this feature plus one or more of the standard melanoma criteria reach a sensitivity of 84.6% [6].

Pigmented BCC may dermatoscopically simulate melanoma: when melanin from the tumor nest, as well as in stroma, is increased, the nests coalesce, forming an unstructured pigmented area. Other elements like ulceration, arborizing vessels, or maple-leaf-like or spoke-wheel areas can help identify it [7].

Clonal SK are characterized by milia cysts and sharply demarcated borders, but they often show areas of bluish pigmentation composed of multiple, variously sized, and irregularly distributed blue-gray ovoid roundish structures, which resemble the asymmetrical-globular pattern observed melanoma or the ovoid nests commonly described in BCC [8].

On the other hand, Ferrari et al described a group of atypical “non-DF like” patterns, including a melanoma-like subtype. One of the lesions showing this pattern was, as in this case, characterized by the presence of irregular streak-like structures [1,9] and this group was histopathologically related with HDF [1]. The most frequent dermatoscopic
features described of HDF are a homogeneous central bluish or reddish area, with white structures inside, and a delicate pigment network at the periphery with variable vascular structures [2]. Thus, melanoma cannot be ruled out, considering the multicomponent dermoscopic pattern of this entity.

Various DF dermoscopic structures appear to correlate with evolutive stages histopathologically. In our case, the basal keratinocytes accumulating melanin pigment in response to the inflammatory process would correspond dermoscopically to a pseudo-pigmentary network and irregular streak-like structures [1,10] as brown-bluish pigmentation that represents the blood phagocytosed by the tumor cells. We also propose that fingerprint-like structures are correlated with elongation of the rete ridges, as small buds of basolaid cells and sebaceous glands would reflect comedo-like openings and eccentric milia-like cysts. Milky red areas would correspond to blood vessels in the peripheral stroma of the tissue.

Dermatoscopic features of our case were highly indicative for melanoma and shared some features with clonal SK, such as milia-like cysts and areas of brown-bluish pigmentation, and clinically, it can be confused with a superficial pigmented BCC.

Conclusions

The present case of pigmented dermatofibroma is the first reported, to our knowledge, to exhibit simultaneously a milia-like cyst and streak-like and fingerprint-like structures.

In conclusion, we report an HDF with different dermoscopic features from previously reported observations, highlighting the importance of understanding that this rare subtype of DF presents polymorphic features at dermoscopy, so it should be included in the spectrum of melanoma mimickers. However, histopathological examination remains mandatory to reach an accurate diagnosis.

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