



Blue-white veil pattern in dermoscopy: Not just in melanoma but what else?

Dermoskopide mavi beyaz tül: Yalnızca melanomda değil, başka nerede?

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Introduction

An irregular, indistinct, confluent blue pigmentation with an overlying white, ground-glass haze named "blue-white veil" (BWV) is among the criteria in algorithms used to diagnose melanoma. It is seen rarely in basal cell carcinoma (BCC)¹.

Case Report

Fifty-five year old male patient was admitted with a black flat papule on his nose. The lesion had been present for more than 5 years and had grown in the last few months. Dermoscopy of this seven mm, black, regular and distinct bordered flat papule revealed maple-leaf like areas, large blue-gray ovoid nests, multiple blue-gray globules, arborizing vessels and BWV (Figure 1). The BWV was prominent between the nests and globules and was shading almost entire surface of the lesion. Histopathologically the tumor was a nodular type BCC with no hypergranulosis or hyperkeratosis. (Figure 2).

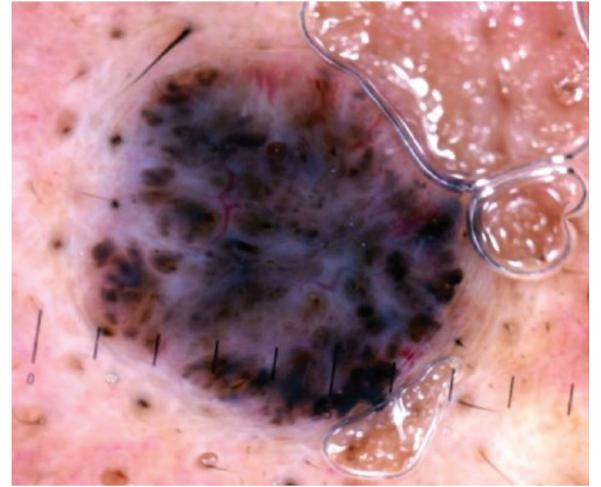


Figure 1. Dermoscopic view of the black papule on the nose. Maple-leaf like areas, large blue-gray ovoid nests, multiple blue-gray globules, arborizing vessels and blue-white veil are seen

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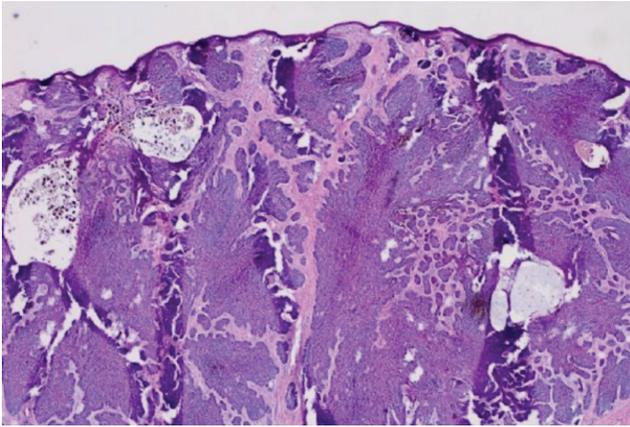


Figure 2. Histopathological view of the basal cell carcinoma (hematoxylin and eosin, x100)

Discussion

A model for dermoscopic diagnosis of pigmented BCC is determined in 2000 by Menzies et al.² This model is based on the absence of pigment network and presence of at least one of the positive feature including "ulceration", "maple leaf like areas", "blue-gray ovoid nests", "multiple blue-gray globules", "spoke-wheel areas" and "arborizing (tree like) vessels", which were accepted as "classical criteria" afterwards. Later, other authors described additional "non-classic" features such as "short fine telangiectasia", "multiple small erosions", "concentric structures", "multiple in focus blue/gray dots" "shiny white to red structureless areas"³⁻⁵. BWV do not rank among the classical dermoscopy criteria of pigmented BCC and data about this pattern was even not mentioned in many articles on dermoscopic features of BCC^{3,4,6-8}. These articles were mostly about the superficial type BCC. BWV pattern was recognized in 9.4-57.5% of BCC's in two studies from Turkey^{9,10} and 1.8-15% of BCC's in other countries^{2,5,11}. A review of 31 studies is showed that BWV pattern was present in 10% of a total of 5950 BCC¹². The tumor in our case was heavily-pigmented, relatively large in diameter and had a long duration, with the unusual BWV pattern on dermoscopy. As in our case, BWV and other features of melanocytic lesions have been reported more frequently in heavily-pigmented BCC, making it difficult to differentiate these lesions from melanomas or other melanocytic lesions^{5,13}. Supporting this, Bakos et al.¹⁴ presented a superficial pigmented BCC with unusual radial streaking and blue-white colour in structureless areas. In another puzzling case, an extremely rare neoplasm; melanoma in situ colonizing BCC showed BWV on dermoscopic examination¹⁵.

Histopathological type and degree of pigmentation affects dermoscopic findings of BCC's and BWV is seen mostly in nodular type tumor, as in our case^{11,12,16}. We do not know yet BWV pattern in BCC could be related to clinical features of the lesion such as duration of the tumor or ethnicity of the patient.

Histopathological counterpart of BWV is defined as an acanthotic epidermis with compact orthokeratosis, hypergranulosis and rarely parakeratosis just above the pigment deposition of melanin loaded melanocytes and/or macrophages in the dermis^{10,17-19}. However, Demirtaşoğlu et al.⁹ could not get correlation between the BWV on dermoscopy and its corresponding histopathology in their studies. We also did not see hyperkeratosis and hypergranulosis in our case but

think that fibromyxoid stroma between the tumor islands might lead to BWV appearance on dermoscopy.

Dermoscopic features may also provide clues for prognosis and/or therapeutic response. For superficial BCC, Arostegui Aguilar et al.²⁰ showed that BWV was associated with a worse response to treatment with imiquimod. In case of melanoma, this pattern was shown to be more common in invasive melanomas than melanoma in-situ²¹. BWV also highly correlated to histological ulceration, mitotic rate $>1 \text{ mm}^2$,²² and BRAF mutation in melanoma²³ which could have therapeutic implications.

Take home message: Although initially observed and described for specific diagnoses, dermoscopic structures and features such as "BWV" may also be seen in other lesions and thus may be confusing. One way to overcome such disorientation is to publish all unusual findings and also be abreast with current dermoscopic literature.

Keep dermoscopying!

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