

## DERMOSCOPY CASE OF THE MONTH

### Combined Nevus – a Case Report

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#### Abstract

Combined nevi are melanocytic lesions composed of two or more distinct types of melanocytic populations within the same lesion. Different types of combined nevi may form bizarrely shaped, multicolored skin lesions, making them one of the greatest melanoma mimickers. We report a 48-year-old female patient with suspicious skin lesion in the left lumbar region. Clinically, there was an oval, slightly asymmetrical lesion measuring 6 x 4 mm, showing multiple colors and shades of brown and black. A dermoscopic examination revealed a brown-bluish coloration in the right part of the lesion, while a fine pigment network with perifollicular halo was found in the left part of the lesion, suggesting the diagnosis of a combined nevus. Histological examination showed a poorly circumscribed proliferation of dendritic melanocytes in the superficial and deep dermis and proliferation of melanocytes in the dermoepidermal junction. A surgical excision of the tumor was performed, in order to confirm the dermoscopic findings. In conclusion, dermoscopy is useful in differentiating combined nevi from other melanocytic lesions.

**Key words:** Nevus; Skin Neoplasms; Nevus, Blue; Nevus, Pigmented; Dermoscopy; Diagnosis; Melanoma

#### Introduction

Combined nevi are melanocytic lesions composed of two or more distinct types of melanocytic populations within the same lesion. These are uncommon lesions, accounting for less than 1% of all biopsied nevi (1, 2). Epidemiologically, they are most commonly seen in children and young adults, but they may occur at any age and in both sexes (1).

Different types of nevi may form bizarrely shaped and multicolored skin lesions, making them one of the greatest melanoma mimickers. Accurate clinical diagnosis is made only in 2.4% of all cases, whereas melanoma and dysplastic nevi are most frequent preoperative diagnoses (2).

The clinical presentation of combined nevi varies widely, depending on clinical features of individual components of two nevi cell populations. In addition, presence of trauma, inflammation or regression may modify the lesion, posing a diagnostic challenge even to the experienced dermatologists. Herein we present a case of a combined nevus in a 48-year-old female.

#### Case Report

A 48-year-old female patient was admitted to our Dermatovenereology Clinic for a regular skin examination. A suspicious skin lesion was detected in the left lumbar region. The patient claimed that as far she knew the lesion has been there for a few years, with no changes in size, color or shape. The patient's personal and family history was negative for any type of skin malignancy. Clinically, it was an oval, slightly asymmetrical lesion measuring 6 x 4 mm, showing multiple colorations and shades of brown and black (Figure 1).

A dermoscopic examination revealed a brown-bluish coloration in the right part of the lesion corresponding to blue nevus, while a fine pigment network with perifollicular halo was found in the left part of the lesion, consistent with a junctional nevus, thus suggesting the diagnosis of combined nevus (Figure 2).

A surgical excision of the tumor was performed in order to confirm the dermoscopic findings. Histological examination revealed the presence of poorly circumscribed prolif-

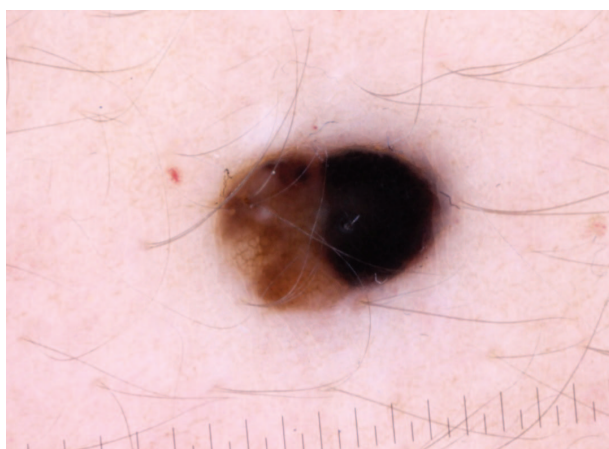


**Figure 1.** An oval, slightly asymmetrical lesion in the left lumbar region

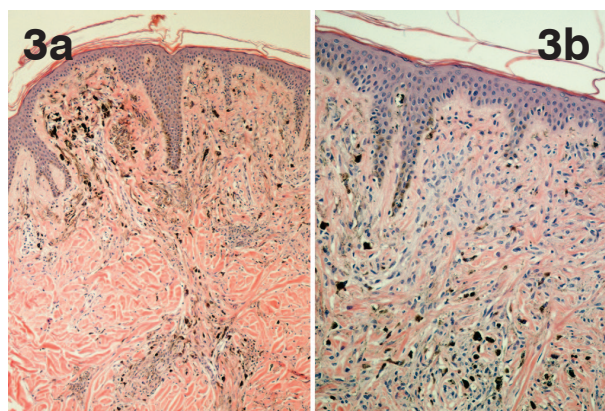
eration of dendritic melanocytes in the superficial and deep dermis, combined with conspicuous melanophages, corresponding to the blue nevus. In dermoepidermal junction, proliferation of melanocytes was present, as part of junctional nevus (Figure 3).

## Discussion

Collision or compound tumors are a co-existence of two different neoplastic lesions within the same biopsy specimen. Seborrheic keratosis, basal cell carcinoma, dermatofibroma are the most commonly found lesions



**Figure 2.** Fine pigmented network on the left and a brown-bluish coloration on right side of the lesion



**Figure 3. a.** Blue nevus: poorly circumscribed proliferation of dendritic melanocytes in the superficial and deep dermis: **b.** Melanocytic proliferation in the dermoepidermal junction as part of the combined nevus

in nonmelanocytic components of collision lesions, while the most frequently found combination is that of basal cell carcinoma and nevi (3, 4). A subtype of collision tumors, where tumor is composed of different forms of melanocytes is called a combined nevus. The origin of two distinctive melanocytic populations in combined nevi may be explained by two hypotheses: divergent terminal differentiation of a single cell population, or coexisting distinctive nevomelanocytes in the same lesion (5).

Patients with combined nevi often report a stable pigmented lesion which has been present for many years. In other cases, clinical manifestations of combined nevi are rapid growth, changes on pre-existing nevus, or occurrence of symptoms. In both cases, combined nevus often appears as an asymmetrical, multicolored macule, plaque or nodule. One part of lesion may be raised, whereas the other is flat (1, 2).

A large study of 511 identified cases of combined nevi was performed by L. Baran et al. (6). The most common type was the combination of common with blue nevi, commonly found on the trunk and in female patients.

Typical dermatoscopic features of individual components of combined nevi, together with anamnestic information of persistent skin lesions, are usually sufficient for making a diagnosis. In our patient, dermatoscopy revealed fine pigmented network indicating a melanocytic nevus and brown-bluish coloration

tion typical for blue nevi which corresponds to a combined nevus. When presented in combined nevi, blue coloration is usually located in the center of the lesion. Peripheral distribution can also be observed, like in our case, although it is more commonly exhibited in melanoma (7, 8). Since the lesion of our patient presented in the skin area not suitable for daily skin inspection, the patient could not provide reliable information on the possible changes in the size, shape and color of the nevus, indicating the need for surgical excision and histopathological examination.

Histopathological diagnosis is based on distinctive melanocytic population within the same biopsy. Histological features of individual components of combined nevi usually retain typical histological appearance, but sometimes components may be intermingled, making the histopathological diagnosis difficult (1). Richard et al. have examined 180 cases of combined nevi and reported that the most common combination was a common acquired nevus of compound type with a blue nevus (2). In our case, histopathological examination revealed features of junctional nevi at dermoepidermal junction and blue nevi in the dermis, that corresponded to features seen on dermatoscopy. Only 5 cases of common acquired nevus of junctional type associated with blue nevus were observed in the previously reported study (2).

## Conclusion

Combined nevi are uncommon melanocytic neoplasms usually misdiagnosed as melanomas. Dermoscopy is useful in differentiating combined nevi from other melanocytic lesions. In order to rule out melanoma, all suspicious lesions should be biopsied.

## References

1. Massi G, LeBoit PE. Combined nevus. In: Massi G, LeBoit PE, editors. Histological diagnosis of nevi and melanoma. 2nd ed. Heidelberg, Berlin: Springer; 2014. p. 285-300.
2. Scolyer RA, Zhuang L, Palmer AA, Thompson JF, McCarthy SW. [Combined naevus: a benign lesion frequently misdiagnosed both clinically and pathologically as melanoma](#). Pathology. 2004;36(5):419-27.
3. Boyd AS, Rapini RP. Cutaneous collision tumors. An analysis of 69 cases and review of the literature. Am J Dermatopathol. 1994;16(3):253-7.
4. Betti R, Menni S, Cerri A, Vergani R, Crosti C. Seborrheic keratosis with compound nevus, junctional nevus and basal cell carcinoma in the same lesion. Dermatology. 2001;203(3):265-7.
5. Crowson AN, Magro CM, Mihm MC Jr. The melanocytic proliferations: a comprehensive textbook of pigmented lesions. New York: Wiley Blackwell; 2001.
6. Baran JL, Duncan LM. [Combined melanocytic nevi: histologic variants and melanoma mimics](#). Am J Surg Pathol. 2011;35(10):1540-8.
7. Popadic M, Sinz C, Kittler H. [The significance of blue color in dermatoscopy](#). J Dtsch Dermatol Ges. 2017;15(3):302-7.
8. De Giorgi V, Massi D, Salvini C, Trezz E, Mannone F, Carli P. Dermoscopic features of combined melanocytic nevi. J Cutan Pathol. 2004;31(9):600-4.

## Kombinovani nevus – prikaz slučaja

### Sažetak

Kombinovani nevusi su melanocitične lezije sastavljene od dve ili više različitih populacija melanocita u jednoj leziji. Kombinacijom različitih nevusa u istoj leziji mogu se formirati lezije neobičnog izgleda i sa više boja, što ih čini jednim od najvećih imitatora melanoma. Prikazujemo 48-godišnju pacijentkinju sa sumnjivom lezijom na levoj slabinskoj regiji. Klinički, uočena je ovalna, blago asimetrična lezija dimenzija 6 x 4 mm, koja je pokazivala više nijansi braon i crne boje. Dermoskopski je uočena smeđepavičasta koloracija na desnoj

strani, dok je u levom delu lezije uočena pigmentna mreža sa perifolikularnim haloom, što je ukazivalo na dijagnozu kombinovanog nevusa. Histološki, uočeno je prisustvo dendritičnih melanocita u površnom i dubokom dermisu, kao i proliferacija melanocita u dermoepidermalnoj spojnici. Hirurška ekscizija je izvršena kako bi se potvrdio dermoskopski nalaz. Može se zaključiti da je dermoskopija korisna dijagnostička metoda u diferentovanju kombinovanih nevusa od drugih melanocitičnih lezija.

**Ključne reči:** Nevus; Kožne neoplazme; Plavi nevus; Pigmentni nevus; Dermoskopija; Dijagnoza; Melanom