

Reactive Pigmentation of Skin Graft Mimicking a Lentigo Maligna Recurrence: a Case Report

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Introduction

There is limited information on dermoscopy of recurrent hyperpigmentation in skin grafts following lentigo maligna (LM) excision, especially in facial locations. We present a case with highly suspicious dermoscopic features of local recurrence of LM within the skin graft.

Case Presentation

A 49-year-old woman consulted with a 3-year history of hyperpigmented lesion on the left cheek, with gradual growth and darkening in the last 11 months. Physical examination revealed phototype IV and an 15-mm diameter brown macule. Dermoscopic evaluation (3Gen – DermLite DL4®) showed a pseudo-network with asymmetric pigmented follicular openings (Figure 1, A and B). Incisional biopsy was performed and confirmed the diagnosis of LM. Wide local excision with 5-mm margin was performed, followed by immediate reconstruction with a retro-auricular split-thickness

skin graft. Histopathologic examination confirmed the diagnosis of LM, without ulceration, mitosis, nor lympho-vascular invasion, and with clear surgical margins. At a 3-month follow-up, the patient reported recurrent pigmentation within the scar. Physical examination revealed an erythematous scar with a brown pigmented border, 13 x 10 mm in diameter (Figure 1C). Dermoscopic evaluation showed brown pigmented areas extending slightly beyond the edge of the graft, with a pseudo-network pattern, asymmetric pigmented follicular openings and circles within circles, predominantly in the upper lateral area (Figure 1D). Recurrent LM versus reactive graft pigmentation were the proposed diagnosis. A new biopsy was performed, with complete excision of the scar, and histopathologic study ruled out malignant melanocytic neoplasia, with findings of dermal scarring, foreign body-type granulomas and dermal melanosis. SOX-10 staining showed normotypic melanocytes, adequate in number and size (Figure 2, A- C). Patient remains without signs of recurrence or pigmentation at the 6-months follow-up.

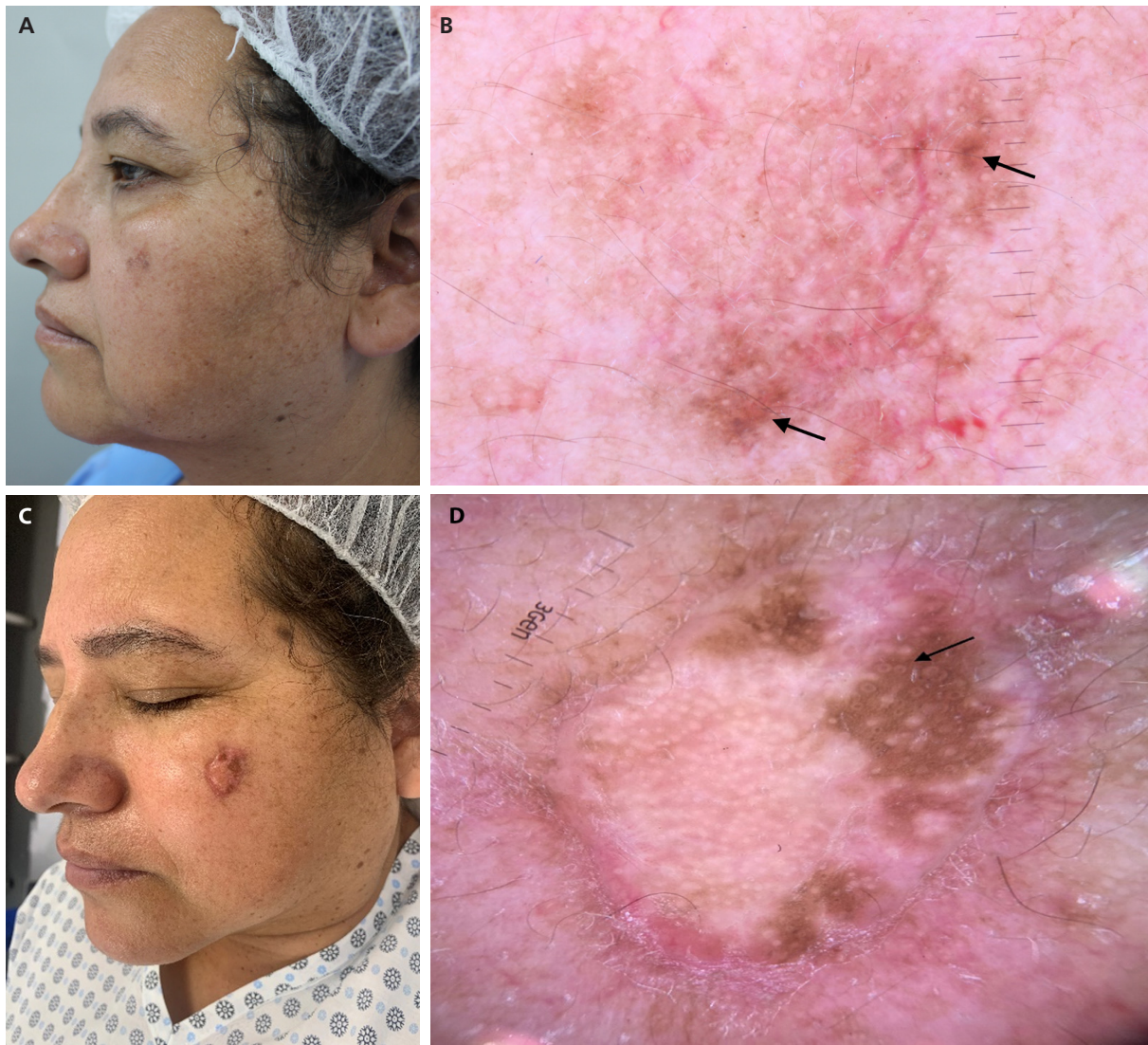


Figure 1. (A) Clinical appearance pretreatment. Hyperpigmented macula, 15 x 11 mm in diameter, on the left cheek. (B) Dermoscopy pretreatment. Brown macula, with pseudo-network structure. Loss of follicular openings is observed isolated in the periphery (arrows). Arboriform telangiectasias at the bottom of the lesion. (C) Clinical appearance after surgery. Erythematous plaque with a scar-like aspect and a brown pigmented border measuring 13 x 10 mm in diameter, on the left cheek. (D) Dermoscopy after surgery. In the center of the lesion: follicular openings can be seen forming whitish circles. In the periphery: brown pigmentation which exceed the edge of the scar with the appearance of a pseudo-network. In superior lateral region: structures in a double concentric circle (arrow).

Conclusions

The most frequently described dermoscopic features of reactive pigmentations includes: a homogeneous radial band-like and continuous brownish lines that extends perpendicularly to the scar [1]. This case report describes unusual dermoscopic characteristics of reactive pigmentation within a skin graft, resembling a recurrence of LM. Circle within circle sign is associated with LM with an odds ratio of 6.32 [2]. In addition, hyperpigmentation exceeding the edge of the scar is considered one of the most important criteria to suspect recurrent melanoma.

In our case, the pattern of double circles associated with hyperpigmentation that exceeds the edge of the graft scar was observed, leading to suspect a recurrence of LM, which was histologically ruled out. We suggest that in grafts of the facial area in patients with darker skin phototypes, the underlying inflammation related to scarring would lead to reactive melanosis with a double circle pattern on dermoscopy as seen in LM recurrence in a scar. As reported by Navarrete-Dechent et al. in patients with scar tissue from previous treatment of LM, dermoscopy of melanoma-specific features has limitations [3], therefore, histopathological confirmation is essential for the differential diagnosis.



Figure 2. (A) Histopathology examination (H&E, 4x) shows a slightly atrophic epidermis with basal hypermelanosis. Proliferation of fibroblasts in the dermis associated with a perivascular lymphohistiocytic inflammatory infiltrate and the formation of granulomas with multinucleated giant cells. (B) Higher magnification (H&E, 20x) shows basal hypermelanosis without proliferation of melanocytes. (C) SOX-10 staining shows melanocytes of adequate number and size, equidistant and normotypic.

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