

## Recurrent Nevus After Burn Injury

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### Introduction

Recurrent melanocytic nevus (RMN) is the name given to melanocytic lesions that grow after previous partial excision, usually by shaving. It presents a proliferation of melanocytes whose clinical aspect may be difficult to differentiate from melanoma, being therefore denominated pseudomelanoma [1].

### Case Presentation

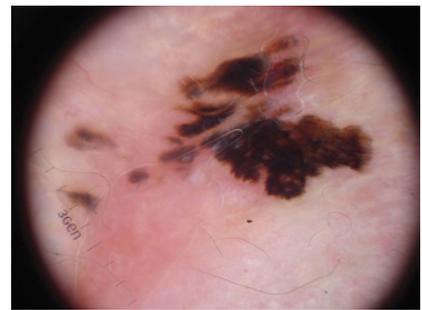
A 6-year-old girl was referred for evaluation of a melanocytic lesion in the right lower limb, noted 5 months after a third-degree burn in the same area and with progressive growth, according to a family member. Clinical examination revealed a hyperchromic macula, with 2 cm in the largest diameter and presence of light and dark brown areas and irregular borders (Figure 1). The dermoscopic features found were light brown and dark brown blotches, border asymmetry, and streaks at the periphery of the lesion (Figure 2). Confocal microscopy revealed single bright, nucleated cells of varying sizes and

shapes in the suprabasal epidermis (Figure 3). After 3 months, lesion growth was verified by means of comparative analysis of dermoscopy images (Figure 4). We opted for excision of the lesion and the specimen was sent for histopathological analysis, which revealed hyperkeratosis traversed by well-defined melanin pigment columns, atypical melanocytic proliferation in the lower layers of the epidermis, and a cicatricial fibrosing inflammatory process occupying the reticular dermis. The histological picture was consistent with junctional RMN associated with extensive scarring (Figure 5). No pagetoid migration of melanocytes or mitotic figures was observed.

### Discussion

Many theories have been proposed to clarify the possible origin of RMN. Among them, the proliferation of melanocytes in the adjacent epidermis, the proliferation of melanocytes from remnant adnexal structures, or the growth from residual intradermal melanocytic nevi are highlighted. It is known that 50% of recurrences are noted within 6 months of the surgical procedure. In a series of 80 cases studied by King et al., the

**Figure 1.** Pigmented macula, with 2 cm in the largest diameter and with light and dark brown areas and irregular borders. [Copyright: ©2019 Nardelli de Araujo et al.]

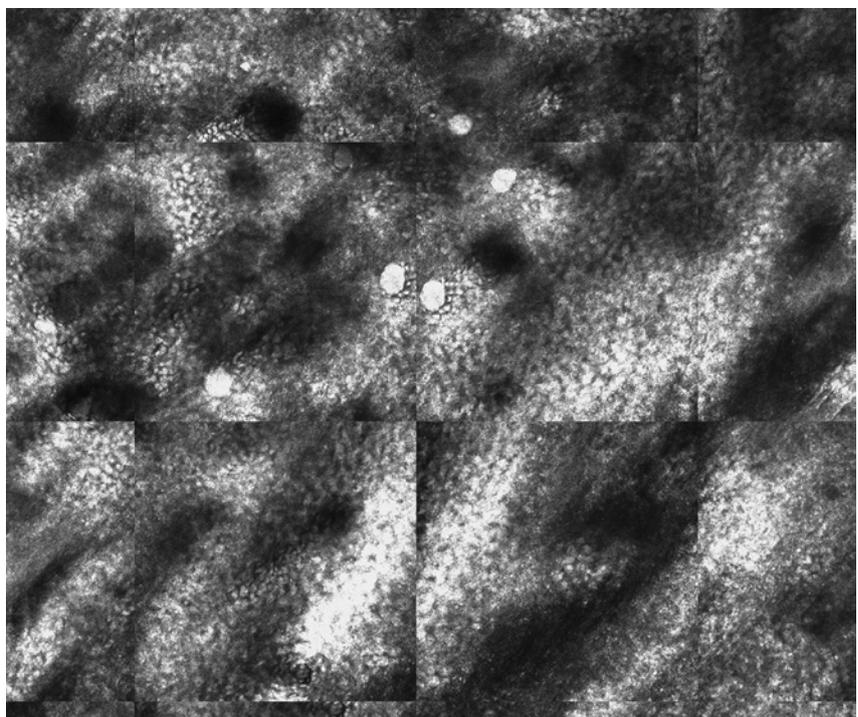


**Figure 2.** Dermoscopy shows light brown and dark brown blotches, border asymmetry, and streaks in the periphery of the lesion. [Copyright: ©2019 Nardelli de Araujo et al.]

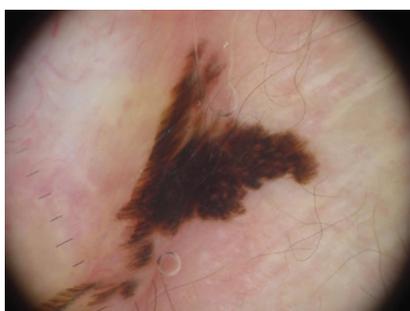
lesions seemed to be completely excised, which would suggest that the regrowth from residual nevus was unlikely [1]. In our case, no previous lesion in the right lower limb was referred before the burn injury.

Melanocytic lesions in large burns configure a challenge for dermatologists due to clinical and dermoscopic aspects. They can be classified clinically and histologically in reactive cicatricial pigmentation, recurrent nevus, incompletely excised melanoma, or metastatic melanoma [1,2]. No RMN descriptions were found in large burns. However, the authors emphasize that RMN should be remembered as a possibility due to tissue injury and scarring caused by burns.

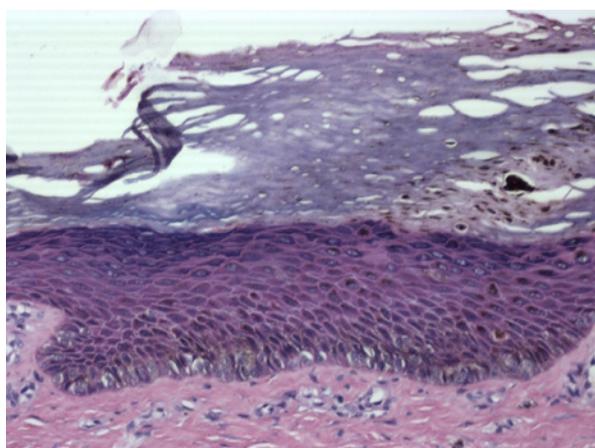
Considering that morphological changes of pigmented lesions are described as significant predictors of malignancy, it has been suggested that RMN would be an exception to this rule, since the continuous clinical modifications may occur over time as evidenced in the case described. However, it does not increase the risk for melanoma development. As a general rule, in these cases the pigment will not extend beyond the scar and the majority remain stable for years [2].



**Figure 3.** Confocal microscopy shows single bright, nucleated cells of varying sizes and shapes in the suprabasal epidermis. [Copyright: ©2019 Nardelli de Araujo et al.]



**Figure 4.** Dermoscopy performed 3 months after the first dermoscopy evaluation shows progressive enlargement beyond the burn scar with an increase in the irregular streaks. [Copyright: ©2019 Nardelli de Araujo et al.]



**Figure 5.** Histopathological analysis. Atypical melanocytic proliferation in the lower layers of the epidermis and the intradermal component with a cicatricial inflammatory process (hematoxylin and eosin, x200). [Copyright: ©2019 Nardelli de Araujo et al.]

## Conclusions

We emphasize the importance of clinical, dermoscopic, and histopathological evaluation of melanocytic lesions in large burns by dermatologists to avoid possible diagnostic errors and unnecessary interventions.

## References

1. King R, Hayzen BA, Page RN, Googe PB, Zeagler D, Mihm MC Jr. Recurrent nevus phenomenon: a clinicopathologic study of 357 cases and histologic comparison with melanoma with regression. *Mod Pathol*. 2009;22(5):611-617.
2. Longo C, Moscarella E, Pepe P, et al. Confocal microscopy of recurrent naevi and recurrent melanomas: a retrospective morphological study. *Br J Dermatol*. 2011;165(1):61-68.