Recurrent melanocytic lesions - a better dermoscopic term before the final diagnosis?

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Abstract

Introduction. As we are not fully aware of the histological diagnosis at the presentation we often need to excise the lesion, therefore we feel that before receiving the report it is more appropriate to use the term of recurrent melanocytic/nonmelanocytic lesions before finalizing the case.

Method. Workup steps are highlighted as well as the differential diagnosis using dermoscopy, confocal microscopy and histopathology is discussed.

Results. Different challenging questions are raised throughout this process, with answers being provided and argued.

Discussion. We would like to discuss around a common clinical situation of patients with traumatized and recurrent nevi and we highlighted in conclusions why we should use the proposed term of melanocytic/nonmelanocytic lesions rather than recurrent/traumatized nevus before the histopathologic exam.

Keywords:
Melanocytic lesion, non melanocytic lesion, traumatized nevus, recurrent nevus

Rezumat

Introducere. Decoare la primul examen clinic nu dispunem de un diagnostic histopatologic, adesea este nevoie să excizăm leziunea, de aceea este mai prudent că înainte de examenul histopatologic să folosim termenul de leziune melanocitară sau nonmelanocitară recurentă.

Metodă. Voi urmări pașii ce ajută diagnosticul diferențial între nevi și melanom cu ajutorul dermoscopiei, microbiologiei confocale, histopatologiei și corelațiile dintre ele.

Rezultate. Diverse întrebări care apar în cursul acestui proces vor primi și răspunsuri argumentate.

Discuții. Voi discuta despre situație frecvent întâlnită în practica zilnică și anume nevi traumatizați sau recurenti și voi evidenția în concluzie de ce înainte de rezultatul examenului histopatologic trebuie să folosim termenul de leziune melanocitară/nonmelanocitară și nu acela de nev recurent.
I. Introduction

We would like to discuss about the correct term for a frequent situation in a daily practice that we have encountered after two cases. It is not unusual for patients to present with traumatized nevi or recurrent nevi. They are afraid of the implications of the diagnosis and us, as dermatologists, often need to perform complete excision followed by a histopathological examination.

After receiving the report, we can establish the diagnosis of recurrent nevus - if a development of a melanocytic lesion at the place of the removal of a previously benign nevus was found. Just because we don't know beforehand if it is or if it was a common nevus, a dysplastic nevus, a Spitz nevus or a melanoma, we require the excision to have the definitive diagnosis. Until then, what should we do? It is important to take the history and to know any changes of the lesion in time. Inquiring about the previous treatment or trauma would also be valuable.

One of the most frequent questions is if the trauma is a melanoma inductor? In a well-known study Walton et al. found no evidence of a malignant change after they examined 112 biopsy samples from the nevi removed by shave biopsy followed immediately by electrodesiccation and then completely excised in a time interval of one year. They concluded that trauma is not a melanoma inductor, but rather the future melanoma was already undergoing malignant change at the time of the initial biopsy.

II. Material, Methods

At presentation, it is important to consider the differential diagnosis from clinical point of view and to establish whether this is a melanocytic or a non-melanocytic lesion. Obviously it is very important to perform dermoscopy of the lesion. Dermoscopy can differentiate as to whether the actual or the previous lesion was a – common nevus, dysplastic nevus, Spitz nevus or melanoma. The first step in dermoscopy is to state if this is a melanocytic or non-melanocytic lesion and for this purpose we have the following dermoscopic criteria: for the melanocytic lesions - pigment network, streaks, dots, globules, blotches, blue white structures and for non-melanocytic - blue-gray blotches, arborizing vessels, milia-like cysts, comedo-like openings, red-blue lagoons, central white patch, crusts.

Most often, the recurrent or traumatized nevus reveals in dermoscopy a typical starburst pattern (black diffuse pigmentation with regular radial streaks at the periphery) situated in the whitish pink scar-like area at the centre and surrounded by a thin light-brown pigment network at the periphery similar to Spitz Nevus, either situated at the periphery of the traumatized or recurrent nevus. Regarding the scars following incomplete surgical removal, like shave biopsies, the typical features observed in such recurrent nevi are of a roundish scar revealing in the center atypical prominent network structures, globules and/or irregular streaks and, typically, a heterogeneous pigmentation. It is important to keep in mind that any signs of growth on dermoscopy or spitzoid pattern of the nevi in adulthood are a major indication for the lesion to be excised. The dermoscopic pseudogrowing sign - an apparent active lesion or the dermoscopic spitzoid pattern are due to the process of repairing the tissue that takes part in the scar. We suggest that there is a mechanical path of this process - the scar grows and some melanocytes, nests and melanin migrate from the dermis to epidermis in this way following the vertical and eccentric growth of the scar due to the process of healing.
One of our patients, had a previous linear trauma resulted from a scratch with a window glass. Dermoscopy identified the image presented in Figure 4 and the histopathology reported a dysplastic nevus. The second patient had a recurrent melanocytic lesion, the dermoscopic picture is seen in Figure 5 and histopathology result was also of a dysplastic nevus.

However, in cases where no histopathologic diagnosis of the previously removed lesion has been performed, complete excision is mandatory(6). Obviously, it is important, if possible, to perform confocal microscopy (CM), but this technique is not (yet) available everywhere, since it is time consuming and expensive. CM is valuable to differentiate between the recurrent nevus, hyperpigmentation seen in the scar and melanomas. Recurrent nevus can reveal typical honeycomb pattern observed at the spinous-granular layers, focal streaming of basal keratinocytes, single bright nucleated cells at suprabasal epidermal layer correlating to melanocytes in pagetoid pattern seen on histopathology, as well the focal loss of the ring pattern at the dermo-epidermal junction and irregularly shaped dermal papillae due to distortion caused by scarring. The scar hyperpigmentation can show pigmented basal keratinocytes without nests(7). Melanomas are characterized in confocal microscopy mostly by epidermal disarray and pagetoid cells in the epidermis, non-edged papillae, cellular atypia at the junction, and atypical nests and bright nucleated cells in the upper dermis(7a).

Finally, the histopathological examination is (still?) the golden standard for the diagnosis. Roy King et al. observed in a retrospective study that some cases of recurrent nevi had histological overlap with the regression seen in malignant melanomas and in a large series (357) of recurrent melanocytic lesions 28% were dysplastic nevi and 1% being melanomas. The histological characteristics of the recurrent lesions were as follows: predominant 74%- melanocytic nests, 33%-residual nevus, 26%-atypia and 26% single cells(8).

Regarding the immunohistochemical studies S100 protein and Melan-A can not differentiate between melanoma and recurrent nevus(9,10). In melanoma there is a strong immunolabeling for gp100 with HMB-45 in the junctional and also in the dermal component of the lesion(11,12); in recurrent nevus the same immunolabeling is strong in the junctional part and not in the dermal part of the nevus(10,11).

Another challenging question would be whence had originated the recurrent lesion - regrowth from peripheral or profound dermal melanocytic lesions(13), melanocytes from the adjacent epidermis(2,8) or from remaining adnexal structures(8,14)?

III. Discussions and conclusions

After these considerations we are proposing the following three aspects:

1. From the clinical and dermoscopical point of view it is important to establish if the
lesion is melanocytic or non-melanocytic and subsequently to decide if excision and histopathological examination are required.

2. If melanocytic, the dermoscopic spitzoid pattern of the recurrent melanocytic lesion is probably due to the process of repairing the tissue that takes part in the scar and is not mandatory a dermoscopic sign of melanoma until otherwise proven. When no histopathologic diagnosis of the previously removed lesion has been performed or when the traumatized nevus has a dermoscopic spitzoid pattern the excision is mandatory.

3. It is better to use in these situations the term melanocytic/nonmelanocytic recurrent/traumatized lesion. It is important not to use before the histopathological report the term recurrent/traumatized nevus because it could be a melanoma or a non-melanocytic lesion- determinant for the patient’s outcome and also important from the legal point of view.

**Bibliography**