

# The Use of High Resolution Videodermoscopy in Eyelid Pigmented Lesion: A Case Series

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## Abstract

Eyelid lesions are tricky for many dermatologists. Eyelid semimucosa presents a different histopathological architecture and the classic dermoscopic patterns of pigmented lesions are not found in this area. We examined thirty patients with eyelid pigmented lesions: nevus, melanosis, seborrheic keratosis, pigmented Basal cell carcinoma, melanoma, apocrine hidrocystoma and actinic keratosis. Dermoscopy let us to underline some features that could help clinicians to discern benign lesion from malignant ones.

**Keywords:** *Eyelid margin; Pigmented lesions; Dermoscopy*

## 1. Introduction

Eyelid lesions are tricky for many dermatologists. Eyelid semimucosa presents a different histopathological architecture, well-defined by “the grey line”, which splits the eyelid into two parts: an anterior segment and a posterior one. Because of that, the classic dermoscopic patterns of pigmented lesions are not found in this area, making early diagnosis more difficult. We present a case series of several patients with pigmented eyelid lesions that we analysed with high-resolution videodermoscopy.

## 2. Report

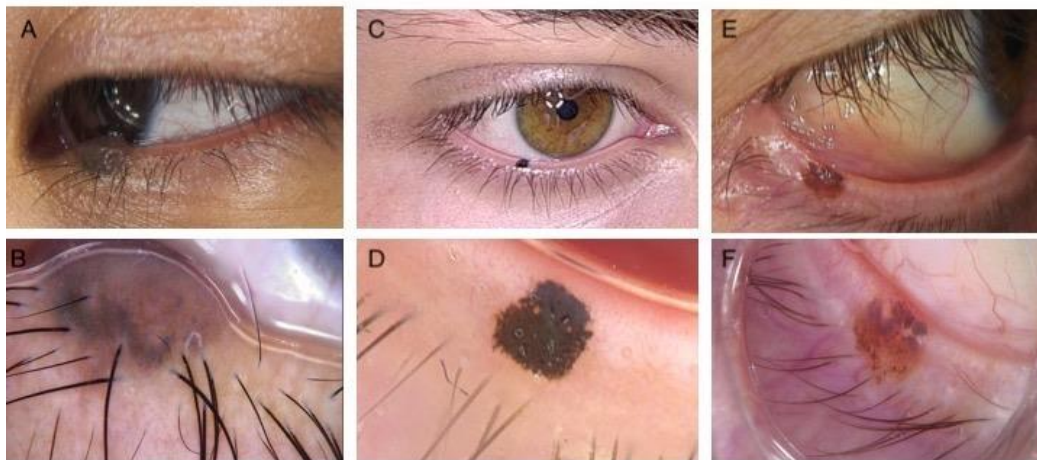
Thirty patients with eyelid pigmented lesions were examined. All patients were asymptomatic and in some of them the detection occurred during dermatologic visit or eye examination. At clinical evaluation, no visual impairment was present. Because of the personal medical history negative for congenital eyelid lesions, the majority of lesions had been investigated with a

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videodermoscopic follow up for three years in order to demonstrate the benign nature, except for a few select cases that were histologically analysed.

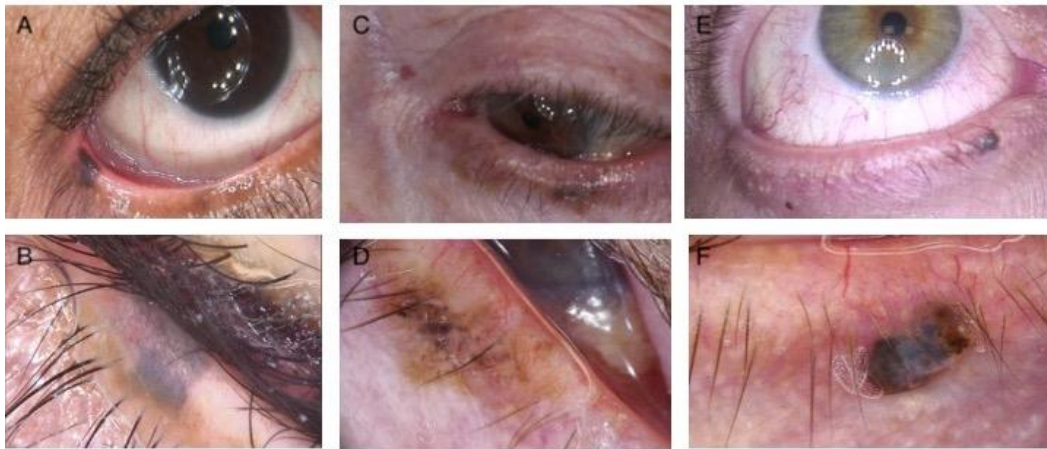
In sixteen patients, the eyelid lesions were suggestive for palpebral nevus; in particular four of them had been also histologically confirmed. In those cases, clinical examination showed small, homogeneously pigmented or hypopigmented, well-shaped lesions; the eyelashes were conserved. In seven patients, at dermoscopic exam the eyelid nevus appeared as a papule with fine superficial vessels, brown halo, and foci of structureless pigmentation. On the contrary, four patients showed flat nevus in which there was the absence of a classic pigmented network or globular pattern, but the dominant pattern was represented by a poorly defined and amorphous pigmentation that often spared the openings of Meibomian glands. One patient shows a flat nevus with reticular pattern, that has never been described in literature, for all we know. In some patients, we could see granular patterns with greyish dots, a probable sign of melanophages in the lamina propria. In two patients, we observed two dermoscopic patterns well-separated by the grey line: a cobblestone pattern on the cutaneous side and amorphous pigmentation on the mucous side. Similarly, two patients presented blue nevus in which there were two distinct dermoscopic patterns: a uniform steel blue colour on the anterior segment and a blue-brown colour on the posterior segment.

We also detected eyelid melanosis, that has not yet been described. In three patients, dermoscopy showed irregular diffuse brownish pigmentations that revealed parallel or ring-like patterns at dermoscopic exams similar to those we find in the genital melanosis [1] (FIG. 1).



**FIG. 1. Clinical and dermoscopic aspects of eyelid nevus: a-b) Dermal nevus with brown structureless pigmentation and conserved eyelashes; c-d) Flat nevus with reticular pattern; e-f) Flat nevus with two dermoscopic patterns well-separated by the grey line.**

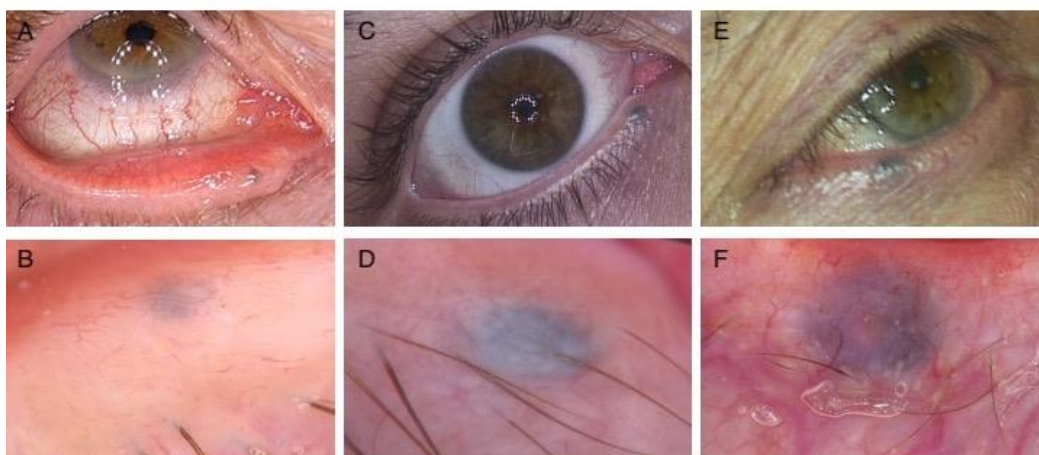
Two patients had eyelid seborrheic keratosis with cerebriform pattern. In five patients, the diagnostic hypothesis was of pigmented Basal cell carcinoma (pBCC) and all five patients had received histological confirmation. In these cases, pBCC appeared as light brown, poorly defined lesions with an irregular, flat or elevated surface madarosis. Dermoscopy detected brown structureless pigmentation associated with small dots and globules. It also showed linear vessels arranged perpendicularly to the eyelid margin, that is very suggestive for eyelid pBCC along with madarosis [2,3] [FIG. 2].



**FIG. 2. Clinical and dermoscopic aspects of blue nevus (a-b), melanoma (c-d) and basal cell carcinoma (e-f); we can notice that the nevus spares the openings of Meibomian glands, while in the last two lesions, there is madarosis.**

Two patients showed irregular pigmented eyelid lesions of which the diagnosis was melanoma. Retrospectively, the dermoscopic observation showed a brown structureless background and disseminated blue-grey areas with a whitish veil in the centre, in one case, and peppering, in the other case.

Finally, the retrospective analysis of the last two cases was more difficult. In one case, the histological diagnosis was apocrine hidrocystoma, that appeared macroscopically as a rounded and bluish lesion, placed close to lacrimal punctum. Dermoscopy revealed a milky-bluish structureless background with a whitish halo and without vascular pattern. Similarly, the other patient showed a bluish and well-shaped lesion but in this case the diagnosis of pigmented actinic keratosis was histologically confirmed. The dermoscopic exam revealed preservation of eyelashes, bluish purple background with superficial fine telangiectasia (FIG. 3).



**FIG. 3. Clinical and dermoscopic aspect of three different blue lesions: a-b) Blue nevus with blue homogenous pattern and remnants of pigmentation, suggestive for melanocytic lesion; c-d) Apocrine hidrocystoma with milky-bluish structureless area; e-f) Actinic keratosis with bluish purple homogenous area.**

### 3. Discussion

In our case series, the majority of eyelid lesions are benign, but the presence of malignant tumours underlines the importance of undergoing these lesions. Most lesions are localised on the inferior eyelid margin, except for two patients who had the upper eyelid margin affected, and it is probably due to sun damage. Thanks to the peculiar dermoscopic patterns, clinicians could discriminate the lesions that need to be examined by biopsy from those that do not need [4]. The doubt cases are linked to the semimucosa nature of this area, that explains the multicomponent, the amorphous or polymorphic vascular patterns even in benign cases.

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