Dermoscopy of a Squamous Cell Carcinoma of the Lower Lip Showing Multiple Rosettes

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Introduction

The term white shiny structures groups 3 well-defined morphologies including white shiny lines, white shiny areas, and rosettes. They all can be observed exclusively with polarized light dermoscopy. Rosettes are defined as 4 bright white circles arranged as a square resembling a 4-leaf clover, mainly localized in the follicular openings. Despite being well-described dermoscopically, their exact histology correlation is uncertain. The presence of white rosettes is suggestive of a diagnosis of actinic keratosis or squamous cell carcinoma (SCC), but they also can be seen in a range of skin conditions and in nonlesional photodamaged skin [1]. SCC of the lip represents 20% of all oral carcinomas; its dermoscopic criteria were recently described, with the main dermoscopic features being the presence of ulceration, scales, polymorphous vessels, and white structures such as white structureless areas, white shiny lines, white circles, and perivascular white halos [2]. Herein we report a case showing multiple rosettes on an SCC of the lower lip.

Case Presentation

A 65-year-old woman presented with an 8-month history of an enlarging asymptomatic lesion on her lower lip. Physical examination showed a well-defined, indurated, reddish ulcerated plaque measuring 1.5 cm in diameter with multiple small, whitish dots and a brownish crust (Figure 1). Dermoscopy revealed a yellow-brown serohematic crust, ulceration, blood spots, polymorphous vessels, bright white circles, white structureless areas, and multiple rosettes of different sizes and a red background (Figure 2, A and B). The histopathological examination revealed proliferation of atypical epithelial cells with eosinophilic cytoplasm, hyperchromatic and pleomorphic nuclei as well as focal formation of horny pearls (Figure 3A). Ulceration and superficial corneal material were also observed (Figure 3B). No vascular or perineural invasion was noted. Histopathology was consistent with well-differentiated SCC.
Conclusions
SCC of the lip shares several dermoscopic features with cutaneous SCC. In this report we describe the presence of rosettes on SCC of the lip as a novel dermoscopic finding. In agreement with other reports, we noticed that the size of rosettes may vary and they may look more like targeted follicles or white circles, meaning that both signs could be a progression of the same feature [1]. Although a definitive histopathological correlate has not yet been elucidated, it has been proposed that they are caused by the interaction of keratin-filled adnexal openings with the polarized light of the dermatoscope, or that they may correspond to changes induced by orthokeratosis and parakeratosis [1]. Because of the absence of follicular openings in mucous membrane, we consider that rosettes on the lip could be seen as due to an optical effect produced by the interaction of polarized light with the superficial corneal material; however, further studies are needed to confirm our preliminary observations. In addition, it has been reported that the presence of white and white-yellow color based in distinct dermoscopic structures is related to well or moderately differentiated variants of SCC [2]; the present case shows an adequate histopathological grade differentiation correlation.

References

Figure 1. Clinical presentation of a well-defined, firm, reddish ulcerated plaque, diameter 1.5 cm, in the center of the lower lip, with multiple small, whitish dots and a brownish crust on its lower portion.

Figure 2. Polarized dermoscopy shows a yellow-brown serohematic crust, ulceration (black arrow), blood spots (asterisk), polymorphous vessels, multiple rosettes, and bright white circles on a red background (A). Multiple rosettes of different sizes (B).

Figure 3. Histopathological analysis shows (A) proliferation of atypical epithelial cells with eosinophilic cytoplasms and focal formation of horny pearls (H&E, ×10). (B) Ulceration and superficial corneal material is also observed (H&E, ×10).