Actinic keratosis of the lower lip treated with photodynamic therapy

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■ Cite as: *CMAJ* 2021 June 14;193:E912. doi: 10.1503/cmaj.202674

A 57-year-old man who was otherwise healthy presented to our dermatology clinic with a 6-month history of a painful mass on his lower lip. He worked outdoors with substantial lifelong sun exposure and he had a 20 pack-year smoking history. The lesions on his lip started as erythematous papules that had repeatedly ulcerated and slowly expanded. Physical examination showed a well circumscribed region of white hyperplasia, papillomatous hyperplasia and keratosis of his lower lip (Figure 1A). The rest of the physical examination was normal, including inspection of the cervical lymph nodes. Laboratory test results, including serology for syphilis and HIV antibodies, were unremarkable. Histopathologic biopsy at the junction of white hyperplasia and papillomatous hyperplasia confirmed a diagnosis of actinic keratosis (Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.202674/tab-related-content). Three weeks of topical imiquimod (5%) had been previously attempted without any effect, and the patient was reluctant to have a surgical excision, so we proceeded with 5 weekly sessions of photodynamic therapy (PDT) using topical 5-aminolevulinic acid (ALA) as a photosensitizing agent. We applied 20% ALA (118 mg) to the lesions with covering dressings for 3 hours, then treated with 632 nm noncoherent red light of 90 mW/cm^2 for 30 minutes. At a 3-month follow-up visit, we observed a remarkable cosmetic effect (Figure 1B).

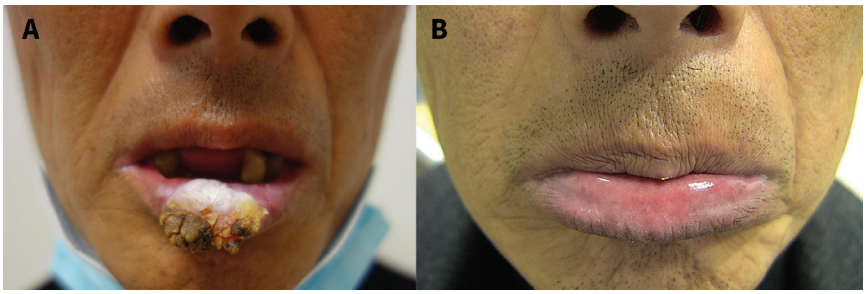

Figure 1: Actinic keratosis on the lower lip of a 57-year-old man. (A) Photograph of a well-circumscribed, irregular 2.5 × 2.3 cm mass on the patient's lower lip. (B) Photograph showing regression of the local lesions at 3-month follow-up after the last photodynamic therapy.

Actinic keratoses are precancerous lesions, with about 10% progressing into invasive squamous cell carcinomas.[1] They frequently arise on sun-exposed areas (e.g., face, scalp, neck, hands and forearms).[2] The differential diagnosis includes lichen planus, squamous cell carcinoma, cutaneous horn and keratoacanthoma. These can be distinguished readily with biopsy examination. Effective therapeutic options include cryotherapy, laser therapy, surgery, curettage, PDT and topical therapy with 5-fluorouracil, diclofenac 3% gel, or imiquimod.[2,3] We suggested PDT for this patient based on the site of the lesions, the failure to respond to topical medication and the patient's preference for nonsurgical interventions.[3,4] In addition, we suggested smoking cessation, given the probable contribution of tobacco to lesion development and recurrence.[1] He will be followed every 3 months, as the risk of recurrence within 12 months is 22%.[4]

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Competing interests: None declared.

This article has been peer reviewed.

The authors have obtained patient consent.

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Funding: This work was supported by NSFC (81903228 HG).

Acknowledgements: The authors thank Dr. Song Zheng and Dr. Bo Li for their assistance in pathology.

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