

# Squamous cell carcinoma *in situ* crocodilus: Plaques of squamous cell carcinoma *in situ* simulating crocodile skin



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**Key words:** Bowens; clinical-pathology correlation; dermatopathology; dermoscopy; pathology; SCC; SCC *in situ*.

## INTRODUCTION

Herein we report 2 cases of a unique clinical presentation of squamous cell carcinoma (SCC) characterized by a red scaling plaque with discrete keratotic, firm white papules. Both plaques resembled crocodile skin (Fig 1). To our knowledge, this is a novel presentation of SCC not previously described in the literature.

## CASE REPORT

An 85-year-old White woman with fair complexion and a history of multiple nonmelanocytic skin cancers was evaluated for a red scaly plaque of unknown duration on her lower portion of the left leg (Fig 2, A). On physical examination, this plaque was characterized by discrete, white, firm papules overlying a red scaly 2 × 3-cm plaque. Dermoscopy demonstrated white, oval-shaped projections on a pink, finely scaling background (Fig 2, B and C). These projections appeared somewhat more prominently with nonpolarized dermoscopy. Histopathology demonstrated papillated epidermal hyperplasia, full-thickness squamous atypia, and overlying compact hyperkeratosis with prominent parakeratosis and a dermal, band-like, inflammatory infiltrate. The surface epithelium demonstrated invaginations filled with parakeratosis that corresponded to the clinical and dermoscopic firm, white, discrete, and oval-shaped projections (Fig 3, A and B). The diagnosis was SCC *in situ*.

### Abbreviation used:

SCC: squamous cell carcinoma



**Fig 1.** Crocodile skin. Image available at and reprinted from: <https://i.pinimg.com/originals/de/e6/c2/dee6c2d6e3f7b935faf87e92b9132d84.jpg>

An 88-year-old White man with a previous history of Mohs micrographic surgery for a SCC of the scalp developed a 2 × 2-cm plaque on his scalp (Fig 4, A). On physical examination, the plaque was characterized by discrete, white, firm papules overlying a red scaly 2 × 2-cm plaque. Dermoscopy (polarized and nonpolarized) demonstrated white, oval-shaped projections on a pink, finely scaling background (Fig 4, B and C). Histopathology demonstrated atypical keratinocytes throughout all layers of the epidermis, focally extending to the base of the

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Funding sources: None.

IRB approval status: Not applicable.

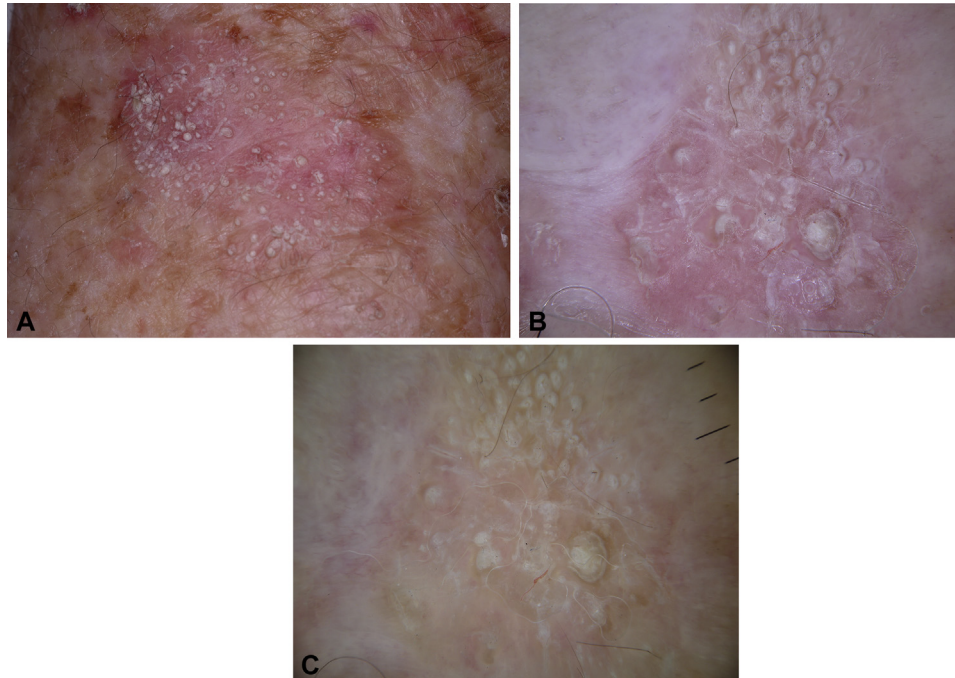
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JAAD Case Reports 2022;26:57-60.

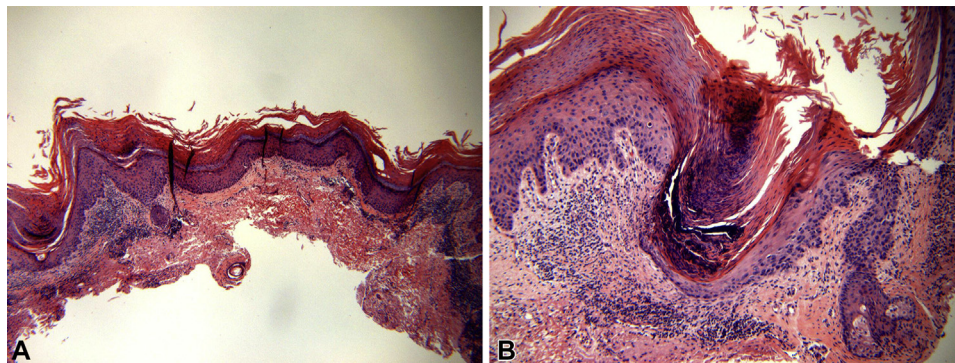
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<https://doi.org/10.1016/j.jdc.2022.04.028>



**Fig 2.** **A**, Red scaly plaque with discrete, white keratotic papules on the leg. **B**, Dermoscopy with contact nonpolarization. **C**, Dermoscopy with contact polarization.

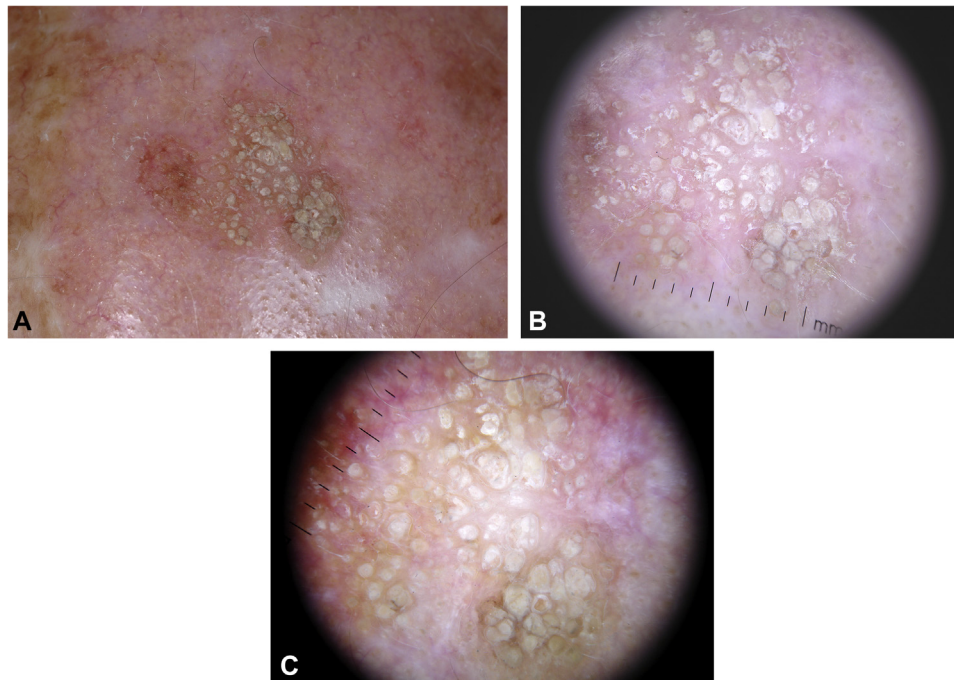


**Fig 3.** **A**, Scanning magnification: Papillated epidermal hyperplasia, full-thickness squamous atypia, and overlying compact hyperkeratosis with parakeratosis and a dermal band-like inflammatory infiltrate. The surface epithelium revealed invaginations filled with parakeratosis that correspond to the clinical and dermoscopic white, oval-shaped projections (hematoxylin-eosin stain; original magnification:  $\times 80$ ). **B**, Higher power magnification: Squamous atypia involving all cell layers of the epidermis and the prominent parakeratotic filled invaginations (hematoxylin-eosin stain; original magnification:  $\times 250$ )

shave-biopsied specimen. Compact hyperkeratosis, parakeratosis, and invaginations filled with parakeratosis were noted. The diagnosis was SCC *in situ*, but invasive SCC could not be ruled out, because the atypical keratinocytes on the shaved specimen focally extended to the base of the specimen.

### Discussion

SCC and solar or actinic keratoses are the most common type of malignancy in humans.<sup>1</sup> SCC may occur in several organs, such as skin, lung, gastrointestinal tract, and genitourinary tract. Histologically, cutaneous SCC is a malignant neoplasm of epidermal



**Fig 4.** **A**, Red scaly plaque with discrete, white keratotic papules on the scalp. **B**, Dermoscopy with contact nonpolarization. **C**, Dermoscopy with contact polarization.

**Table I.** Dermatoscopic features of nonpigmented SCCs

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• Vessels
Red dots: Diffuse or clustered (partially obscured by scale)
Coiled: Diffuse or clustered (partially obscured by scale)
Surrounded by halo
Twisted loops (half looped or twisted looped)
Linear irregular (serpentine)
Polymorphic
• Scale: white structures on surface of lesion
• Keratin: orange-to-tan structures
• Blood spots: red-to-red–brown structures
• Ulceration
• Shiny, white structures (lines, oval, or rosettes)
• White circles (follicles)
• White circles with central, yellow plug (keratin pearls)

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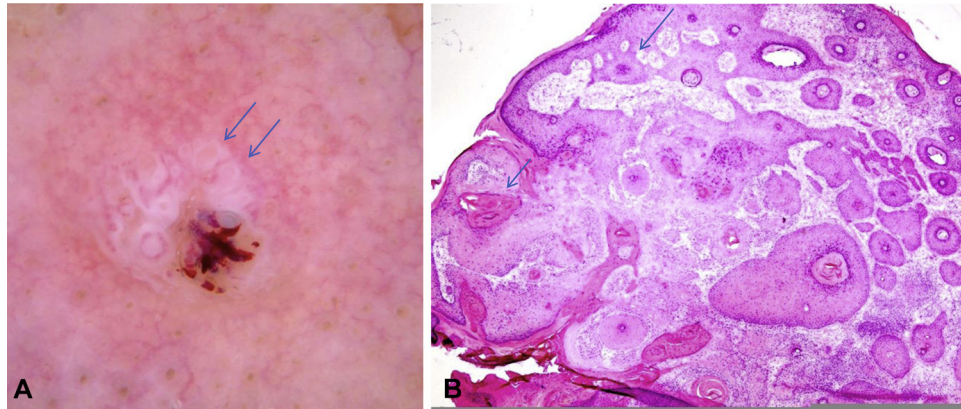
keratinocytes, which demonstrate characteristic features such as crowded, enlarged and pleomorphic nuclei, eosinophilic cytoplasm, and abnormal signs of cornification, which may include dyskeratosis and parakeratosis.<sup>1</sup>

The classic dermoscopy features of SCC *in situ* and SCC (Table I) have been described extensively and include glomerular vessels and dotted vessels, scaling, keratin pearls, and white, shiny structures.<sup>2</sup>

The presentation of white discrete papules on dermoscopy, as noted in our cases, has, to the best of our knowledge, never been described for SCC or for SCC *in situ*. These keratotic firm papules are distinctly different from what is observed clinically with squamous pearls or squamous clods with white circles. These findings are often associated with scaling and possible induration but not firm discrete white papules, as seen in our cases. Squamous pearls or eddies dermoscopically appear as circular or ovoid structures of an orange-brown (tan) color and a white peripheral rim (keratin pearls) (Fig 5, A and B). In contrast, our cases exhibited discrete, round, firm, circular structures projecting upward on a pink base. These dermoscopic features were due to the mounds of parakeratotic material projecting upward.

In the 2 patients presented, the clinical presentation of SCC *in situ* was novel. Rather than the typical red, scaling papules, or plaques, there were red, scaling plaques studded with white discrete firm papules. The differential diagnosis for the clinical presentation included SCC *in situ*, actinic comedonal plaque,<sup>3</sup> and Favre-Racouchot syndrome. As this appears to be a distinct clinical presentation of SCC *in situ*, we propose that it be called “SCC *in situ* crocodilus,” given that it resembles the appearance of crocodile skin. Further studies will be needed to elucidate the clinicopathologic behavior of this new entity.





**Fig 5.** **A**, Dermatoscopic image of SCC on face: Squamous pearls (*arrows*) appear as circular or ovoid structures of an orange-brown (tan) color and a white peripheral rim (keratin pearls). **B**, Histology of SCC with squamous eddies keratin pearls (*arrows*). (Hematoxylin-eosin stain; original magnification:  $\times 10$ .)

#### Conflicts of interest

None disclosed.

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