



Ink-enhanced dermoscopy is a useful tool to differentiate acquired solitary plaque porokeratosis from other scaly lesions

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CLINICAL CHALLENGE

Porokeratosis usually presents as erythematous scaly plaques, and the histopathologic diagnostic feature of a cornoid lamella is often visible on clinical examination as a double edge rim of scale. In routine clinical practice, however, acquired single, erythematous scaly lesions have a wide differential diagnosis ranging from tumoral (eg, Bowen disease and actinic keratosis) to inflammatory (eg, contact dermatitis) diseases. Dermoscopy aids in narrowing the diagnostic possibilities and often helps the clinician reach a correct diagnosis. The dermoscopic features of porokeratosis have been described¹; however, many porokeratosis cases remain challenging to diagnose or have inconspicuous features under dermoscopy.

SOLUTION

We routinely use a simple method to evaluate solitary red macular scaly lesions. We often stain such lesions with a standard surgical marking pen (gentian violet) and then wipe off the ink with 70% isopropyl alcohol pad. In porokeratosis, the ink present within the groove of the cornoid lamella will persist even after the rest of the ink has been wiped off the surface (Fig 1, A-D). The resulting ring of ink makes it easy to confirm the diagnosis of porokeratosis. In contrast, cases of dermatitis, actinic keratosis, and Bowen disease will not display such a positive ring of ink (Fig 1, E and F). In conclusion, despite a broad differential diagnosis, the addition of the simple ink test can help enhance our diagnostic accuracy for porokeratosis by revealing the characteristic double collarette.² This in turn might help avoid an unnecessary biopsy.

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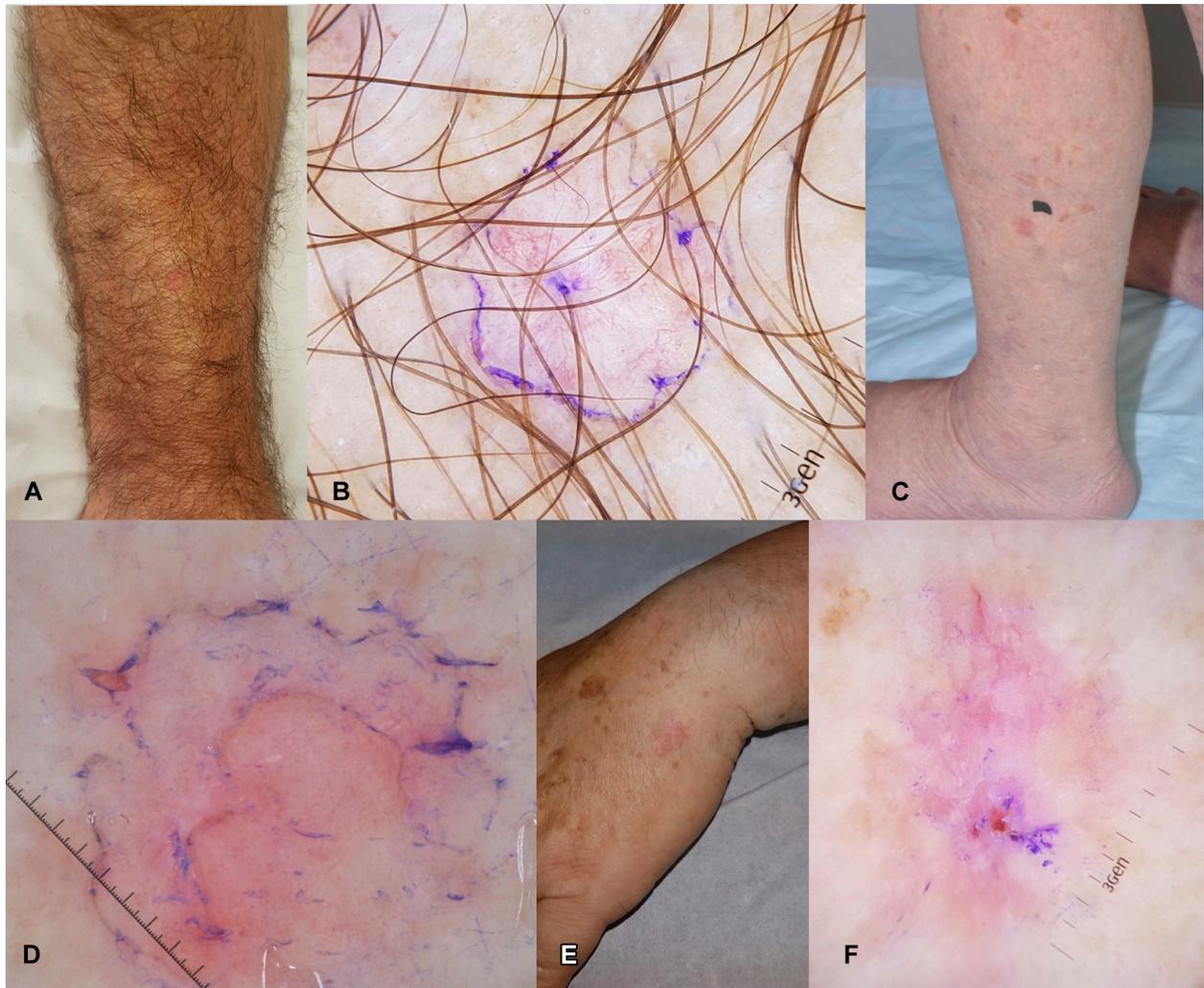


Fig 1. Representative clinical and dermoscopic images of erythematous scaly plaques and macules that are difficult to diagnose with the naked eye and could be porokeratosis, actinic keratosis, Bowen disease, or contact dermatitis, among others. Dermoscopic image demonstrates results of ink test, in which lesions were stained with a marking pen and wiped with a 70% isopropyl alcohol pad. **A-D**, Porokeratosis. **A**, Clinical image of nondiagnostic plaque on forearm. The differential diagnosis of this lesion included squamous cell carcinoma. **B**, Dermoscopic image of previous case (**A**). The ink test enhances the double keratotic rim. **C**, Clinical image of scaly plaque on lower limb. The differential diagnosis included Bowen disease. **D**, Dermoscopic image of the previous case (**C**) showing a positive ink test. **E** and **F**, Bowen disease. **E**, Clinical image of erythematous scaly plaque on hand. The biopsy confirmed squamous cell carcinoma in situ. **F**, Dermoscopic image of the previous case (**E**) showing a negative ink test. (**B**, **D**, and **F**, Nonpolarized dermoscopy; original magnification: $\times 10$.)

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