

## Simple methods to enhance the diagnosis of scabies

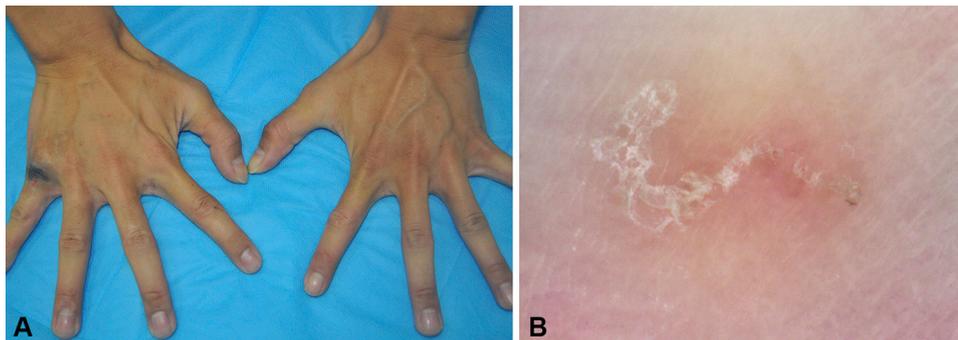


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**Key words:** dermoscopy; ink staining; scabies; ultraviolet.

### CLINICAL CHALLENGE

The clinical manifestation of scabies can be atypical or inconspicuous and get misdiagnosed. It's characteristic dermoscopic finding is dark-brown triangular structures, corresponding to the mite's anterior, located at the end of the burrow.<sup>1</sup> Despite the availability of dermoscopy, scabies can be challenging to diagnose (Fig 1, A and B).



**Fig 1.** Hands (A) and dermoscopic image of skin (B) of patient with severe itching between fingers. No noticeable lesions were discernable to the eye but whitish scales were detected upon magnification. (B, Original magnification:  $\times 50$ .)

### SOLUTION

We used 3 simple methods to enhance the diagnosis of scabies. First, ultraviolet dermoscopy<sup>2</sup> (ultraviolet band 400 nm, SmartV 150DF, JEDA, Nanjing, China) of the suspected lesion showed a bright blue fluorescence around the scales with a serpiginous outline (ie, burrow of scabies) (Fig 2, A). Second, a 1-minute staining of the same lesion with washable blue ink [HERO, Shanghai Hero (Group) Co, Ltd, Shanghai, China] and polarized dermoscopy showed a clear outline and, more importantly, the *Sarcoptes scabiei* mite and its eggs at the end of the burrow (Fig 2, B). Third, polarized dermoscopy at a higher magnification (Fig 2, C) allowed better discernment of the mite and eggs than the lower magnification (Fig 2, B). Thus, the above techniques provided more definitive confirmation of the diagnosis of scabies.

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**Fig 2.** Dermoscopic images of scabies lesion. **A**, Ultraviolet dermoscopy showed bright white fluorescence. **B** and **C**, Polarized dermoscopy after ink staining showed burrow, mite (*white arrow*), and its eggs (*blue arrows*). (Original magnification: **B**,  $\times 50$ ; **C**,  $\times 200$ .)

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