Reflectance-Mode Confocal Microscopy for the In Vivo Detection of *Sarcoptes scabiei*

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Reflectance confocal microscopy (RCM) represents a novel technique for the in vivo visualization of the skin at a nearly histologic resolution. We investigated the possibility of detecting *Sarcoptes scabiei* using RCM.

Three patients with lesions suggestive of scabies were examined by RCM. On confocal images, *S scabiei* appeared as an ovoid body with a dorsal surface marked by refractive bristles and spines (denticles). In the anterior part of the mite we detected refractive squat structures with a conoid appearance, corresponding to the 2 pairs of short legs, and a polygonal highly refractive area, corresponding to the head. The mite’s body was marked by transverse corrugations with a linear symmetric appearance (Figure 1).

On the block image, a tortuous large segment, the burrow, was identified, containing roundish refractive particles, corresponding to eggs and mite feces. The mite was clearly detected at the end of the burrow (Figure 2).

After identification of the lesion inhabited by the mite with RCM, the skin scraping test was performed on that lesion (Figure 3).

Reflectance confocal microscopy enabled the in vivo noninvasive visualization of the *S scabiei*. This technique could be effective to explore numerous lesions for diagnostic confirmation of a suspected scabies infestation.

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