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A new diagnostic technique for tinea incognito: In vivo reflectance confocal microscopy. Report of five cases.

Turan E, Erdemir AT, Gurel MS, Yurt N.; Skin Res Technol. 2012 Jun 7. doi: 10.1111/j.1600-0846.2012.00615.x.

ABSTRACT

BACKGROUND/PURPOSE: In vivo confocal laser scanning microscopy (CLSM) is a modern non-invasive method for investigation of the skin that allows real-time visualization of individual cells and subcellular structures with the highest resolution imaging comparable to the routine histopathology. Our aim was to demonstrate the potential of CLSM for non-invasive diagnosis of difficult tinea incognito cases.

METHODS: Clinically atypical lesions in five cases of tinea incognito due to dermatophyte spp. were demonstrated using reflectance confocal laser scanning microscopy (RCM), parallel to KOH preparation and fungal culture of skin scrapings performed in the same patients.

RESULTS: The morphological features characteristic for tinea incognito, namely linear branched hyphae in the intercellular area of the stratum corneum, were readily detectable by means of CLSM. In vivo tissue imaging were performed at three different wavelengths (785, 658, 445 nm) and the best images of fungal elements were obtained at 445 nm. All of our five cases had similar reflectance confocal microscopical findings.

CONCLUSIONS: Our findings suggest the potential of CLSM as a non-invasive tool for the diagnosis of tinea incognito having atypical clinical appearance. Although at present the reflectance confocal microscopy cannot replace the current diagnostic standards for tinea incognito, it may be successfully used as in vivo non-invasive screening tool to facilitate the diagnosis and point to the need for further investigation of the patient.