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High-definition optical coherence tomography and reflectance confocal microscopy in the in vivo visualization of a reaction to permanent make-up.

Maier T, Flaig MJ, Ruzicka T, Berking C, Pavicic T.; J Eur Acad Dermatol Venereol. 2014 Feb 17. doi: 10.1111/jdv.12402.

ABSTRACT

BACKGROUND AND OBJECTIVES: After permanent make-up treatments, eczematous and granulomatous reactions may occur which need anti-inflammatory treatment. For the definite diagnosis oftentimes biopsies are recommended. In vivo imaging such as reflectance confocal microscopy (RCM) and high-definition optical coherence tomography (HD-OCT) has been successfully used in the non-invasive diagnosis of various dermatoses before. **METHODS:** Here, we report on non-invasive imaging of a reaction towards permanent make-up in a 40-year-old woman by using HD-OCT and RCM. **RESULTS:** Both in HD-OCT and in RCM subepidermal pigment and granulomatous changes could be visualized and correlated with the histopathological findings. Regression of the lesions in response to topical steroids and intralesional injections of steroids and 5-fluorouracil is reported and treatment options are discussed. **CONCLUSION:** Non-invasive imaging techniques such as HD-OCT and RCM allow the visualization and localization of exogenous pigment and help in the evaluation of adverse reactions due to permanent make-up tattooing.