

Medical > In Vivo > Other material

42

The influence of different shavers on the skin quantified by non-invasive reflectance confocal microscopy.

Rodijk FM, Zanelli G, Geerligs M, van Erp PE, Peppelman M. *Skin Res Technol.* 2016 Aug;22(3):311-7. doi: 10.1111/srt.12263.

ABSTRACT

BACKGROUND: The impact of personal care devices on skin is mainly assessed using subjective tools. However, new objective, accurate non-invasive in vivo imaging techniques have been developed. The aim of this study was to evaluate the ability of reflectance confocal microscopy (RCM) in quantifying morphological impact of shavers on skin. Furthermore, tape stripping (TS) as method to study morphological impact of shavers was evaluated. **METHODS:** In 12 healthy male subjects, for two consecutive days, a split-face test was performed in the neck; on one side a shaver was applied, while the other side was exposed to TS. The stratum corneum (SC) thickness was quantified using RCM and sensory observations were evaluated using questionnaires. **RESULTS:** Shavers with a different impact on skin, can be discriminated by RCM; shaver B removed more SC after application than the skin friendlier shaver A. Furthermore, the changes in SC thickness induced by TS corresponded well to that of the shavers. **CONCLUSION:** RCM is able to quantify the impact of different shavers on skin. Besides, TS appeared to be a suitable model mimicking the mechanical impact of shavers on skin. RCM in combination with the TS model appeared to be a suitable minimally invasive model to obtain morphological and cell biological data on skin-material interactions caused by different personal care devices. © 2015 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. **KEYWORDS:** non-invasive imaging; personal care device; reflectance confocal microscopy; shaver; stratum corneum thickness; tape stripping PMID:27381679 DOI:10.1111/srt.12263