ABSTRACT
BACKGROUND/PURPOSE: The aim of this study was to measure lentigines' pigmentation over a long period of time and evaluate if summer over-pigmentation can be avoided by the use a SPF30 day skin cream. METHODS: Seventeen healthy female volunteers aged 50 and over and presenting lentigines participated in the study from spring to summer. Throughout the study, all subjects applied a SPF30 daily skin cream to only one hand. Color measurements of the target lesions were performed with a chromameter and with a color-calibrated camera. Target lesions were also imaged with in vivo reflectance confocal microscopy (RCM). A specific procedure for re-registering the images was developed to ensure that the same papillae were measured over time. RESULTS: Both color measurement methods, chromametry and color-calibrated camera, showed that lentigines treated over time with the SPF30 day skin cream were significantly lighter than the non-treated lentigines. The RCM images showed a decrease in the papillary contrast for the treated lentigines. CONCLUSION: This study shows that this over-pigmentation can be avoided using a SPF30 day skin cream. Moreover, we have demonstrated that very fine re-registration of the RCM images is possible and ensures a more robust analysis. © 2018 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. KEYWORDS: color measurement; lentigo [MeSH]; reflectance confocal microscopy; skin [MeSH]; skin aging [MeSH]; skin cream [MeSH]; skin pigmentation [MeSH]; sun protection factor [MeSH] PMID: 29446160 DOI: 10.1111/srt.12458