

〈一般論文〉

アメリカ在住女性における目尻シワ、弾力性および皮膚色の民族間比較

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Ethnic Differences in Facial Photodamages such as Wrinkling and Elasticity and Skin Colors

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Abstract

Skin photodamage is physiologically correlated with several alterations mainly in the dermal extracellular matrix. Although cutaneous melanin content has been well known to protect the skin against sun exposure, little is known how extent intrinsic ethnicities including skin colors correlate with skin photodamages. Here, we investigated the correlation between photodamages, such as wrinkling and deterioration of elasticity, and skin colors using the subjects from four ethnic skin groups, Caucasians, Hispanics, Asians and, African-Americans under the same environmental condition. Wrinkle scoring, image analyses with skin surface replicas and cutometer measurement for elasticity indicated that Caucasian facial skin with the lightest skin color had the highest wrinkle score as well as the worst aggravated skin roughness and elasticity parameters. In contrast, African-American skin with the darkest skin color had the lowest wrinkle score and skin roughness and the greatest values of elasticity. Surprisingly, Asian skin with a similar L* value with Caucasian skin showed the comparable levels of wrinkle and elasticity compared to those of African-American skin. Additionally, Caucasian skin illustrated the biggest differences in elasticity between sun-exposed and sun-protected areas, whereas African-American skin exhibited the smallest differences. Taken together, these findings demonstrated the clear ethnic differences in photodamages and some unidentified protection factors in addition to melanin content in the skin.

Key words: ethnic difference, photodamage, wrinkle, elasticity, skin color.