

〈一般論文〉

日本人女性の角層セラミドプロファイルの部位差解析

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Variations of Ceramide Profile in Different Regions of the Body of Japanese Females

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Abstract

The objective of this study was to clarify variations of the ceramide (CER) profile in human stratum corneum (SC) in different regions of the body and to estimate the contributions of CERs to the SC barrier and water holding functions. Based on the information that there are great variations of SC functions among body sites, we compared the CER profiles obtained from 11 different anatomical sites in healthy Japanese females. Not only the physiological parameters of SC but also the CER profile showed body region variations. Especially, strong (significant) regional variations of the CER profile were shown in the lip and the palm; the total CER level, the composition of CER [NP] contains non-hydroxy fatty acid and phytosphingosine and CER [NH] contains non-hydroxy fatty acid and 6-hydroxy sphingosine, the levels of longer species of CER [NS] contains non-hydroxy fatty acid and sphingosine were less, but the composition of CER [NS], CER [AS] contains alpha-hydroxy fatty acid and sphingosine and the levels of shorter species of CER [NS] were more than those of the upper arm. The total CER level on palm displayed strong correlations with the values of capacitance. Our results indicate that there are the regional variations of the CER profile in the healthy Japanese female and which may contribute to the SC functions.

Key words: ceramide, body regions, stratum corneum, TEWL, capacitance.