

〈一般論文〉

テープストリッピングによる TEWL 変化と扁平指数の関連性

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Relationship between Flatness Index and TEWL Change Caused by Tape Stripping

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Abstract

Corneocytes contribute to maintain stratum corneum (SC) barrier function and to prevent the entry of inflammatory chemicals and irritants into skin. We have reported flatness index (FI) of corneocyte has correlation with SC barrier function stronger than projected area (PA) of corneocyte. Because corneocytes become thinner during maturation, FI reflects cell maturity. Recently it was shown that TEWL change during tape stripping of SC varies among individuals. It suggested that SC barrier function also varies among individuals. In this study, we examined the relationship of SC maturation to SC barrier function by using tape stripping and FI.

We investigated the relationship of TEWL increase and the FI during the tape stripping in the forearm region. As the results, most of the subjects showed an inverse relationship between TEWL and FI. However, subjects who showed relatively slow increase of TEWL with no change in FI throughout all layers of SC existed. These results approved there were individual differences on the process of SC maturation. Amount of protein in SC of these subjects suggested their SC were poorly stripped.

Key words: corneocyte, stratum corneum, tape stripping, TEWL, flatness index.