

〈教育セミナー〉

(21世紀へ向けてのアンチエイジング—しわを防ぐために)

皮 膚 の 構 造 と し わ

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Structure of the Skin and Wrinkles

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Abstract

Wrinkles may be defined as creases or furrows in the skin surface. Some previous investigators classified the wrinkles into several morphological types, such as orthostatic, dynamic, gravitational, linear, glaphic, crinkle etc. However, these are not generally accepted because of only macroscopic classification. In this report we classified wrinkles into four types depending on their shapes and histological findings: 1) fine, 2) shallow, 3) deep, and 4) saggy. The fine wrinkles are a developed skin marking (area cutanea) due to water loss of the skin especially the epidermis. The histology shows irregularly thickened horny layers of the epidermis. The shallow wrinkles form a larger skin fold than that of the fine wrinkles. The histology shows a decrease in connective tissue (mainly elastic fibers) of the subepidermis. The deep wrinkles develop a deep and linear configuration on sun-exposed skin. It is formed due to the different degrees of elastotic changes in the dermis between the wrinkle area and the surrounding areas. The wrinkle area shows rather mild elastotic changes than the surrounding areas where demonstrate more severe changes. The saggy wrinkles are formed due to either loss or degeneration of elastic fibers and the effect of gravity. These may develop on both sun-protected and sun-exposed skin. The deep wrinkles do not disappear on stretching although the other types disappear.

We also demonstrate skin replica and high resolution ultrasound imaging as well as ultrastructure of these wrinkles.

Key words: wrinkles, skin, histology, ultrastructure, skin replica, ultrasound imaging.