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Topically applied vitamin C increases the density of dermal papillae in aged human skin.

Sauermann K, Jaspers S, Koop U, Wenck H.; BMC Dermatol. 2004 Sep 29;4(1):13.

ABSTRACT

BACKGROUND: The influence of ageing on the density of the functional entities of the papillae containing nutritive capillaries, here in terms as the papillary index, and the effect of topically applied vitamin C were investigated by confocal laser scanning microscopy (CLSM) in vivo.

METHODS: The age dependency of the papillary index was determined by CLSM on 3 different age groups. Additionally, we determined the effect of a topical cream containing 3% vitamin C against the vehicle alone using daily applications for four months on the volar forearm of 33 women.

RESULTS: There were significant decreases in the papillary index showing a clear dependency on age. Topical vitamin C resulted in a significant increase of the density of dermal papillae from 4 weeks onward compared to its vehicle.

Reproducibility was determined in repeated studies.

CONCLUSIONS: Vitamin C has the potential to enhance the density of dermal papillae, perhaps through the mechanism of angiogenesis. Topical vitamin C may have therapeutical effects for partial corrections of the regressive structural changes associated with the aging process.