

Hydration, pH, pigmentation, sebum and skin texture: an in vivo non invasive study in centenaries

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Skin is the largest organ of the human body and during aging it shows easily modifications caused by the senescence. Hydration, pH, pigmentation, sebum and skin texture may undergo modifications, above all in centenaries. We can find some papers that analyse the modifications induced by aging (Marrakchi et al., 2007); but no one of these studies people in the range 90-110 years old. Thus, our work has the aim to verify how these parameters can change. In our study we recruited 80 volunteers of Sardinian population divided in two groups: young and old people. We analyzed levels of sebum, hydration, pigmentation and pH with instruments of Courage + Khazaka electronic GmbH. Then we prepared the imprint that must be observed at SEM. The microscope used was a FEI INSPECT S, wherewith we took some photos of each imprint. The modifications are: hydration and sebum decrease significantly in centenaries; pigmentation and pH levels were higher in the old volunteers like demonstrated by other authors (Stucker et al., 2002). Studying skin texture, we found a diminution of furrows in old people. We can say that decrease of hydration and sebum is mainly linked to low level of hormones, such as estrogens and androgens, while the augmentation of pigmentation is due to the thinness of skin; the higher values of pH have probably a relation with a minor presence of sebum and water in cutaneous surface. Furthermore, accuracy of the pictures taken with SEM demonstrates that the study of skin texture associated with analysis of pH, sebum, pigmentation and hydration can help the comprehension of skin aging.

References

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