

(シンポジウム：化粧品とは)

乾皮症と尿素について

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Asteatosis and the Effects of Urea Ointments

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Abstract

The changes in the epidermis of the aged people, especially patients of xerosis senilis was explained by the data which were obtained by the histological and electron microscopical examinations and also by the examinations using a special equipment, which measured the water content of the surface of the stratum corneum.

The changes seen in the xerotic skin were followed:

- 1) A thick, compact stratum corneum formation.
- 2) The decrease of the stratum granulosum formation.
- 3) the loss of keratin pattern formation in the stratum corenum. Keratin fibers appeared to be electron dense throughout of the whole stratum corneum.
- 4) An abnormal lamellar granules formation, the lamellar structure of which was lack.
- 5) The water content of the surface of the stratum corneum was remarkably reduced.
- 6) After the treatment of urea ointment for two weeks, the clinical signs had remarkably improved. The water content of the stratum corneum of the urea-treated skin returned to within normal range.
- 7) The effect of urea ointment on the nature of the stratum corneum was examined using the stratum corneum of both cow hoof and cow snout, as references of the normal and abnormal stratum corneum respectively.

Sliced stratum corneum were immersed in the urea solution and placed in a humid chamber in the electric balance and the loss of water from the sliced stratum corneum was measured as the loss of weight. These results showed that urea was absorbed in the stratum corneum, which kept the water in its molecule and gave the stratum corneum the humidity.