

47th Global Nursing & Healthcare Conference

March 01-03, 2018 | London, UK

Comparison of stratum corneum hydration with temperature and air humidity

Michiyo Yamamoto, Yuko Hayashi and Yuki Otsuyama
Hokkaido University of Science, Japan

The purpose of this study was to clarify the changes in the stratum corneum hydration compared to temperature and air humidity. The subjects of this research were 58 older adults. The research was conducted in March and May of 2017. A self-administered questionnaire consisted of demographic data, frequency of taking bath, nutritional status (MNA®-SF) and condition of xerosis cutis. The stratum corneum hydration was measured on the center forearm by Mobile Moisture HP10-N®. Data was analyzed for gender, age, frequency of taking bath and nutritional status to examine differences in stratum corneum hydration. Later, differences of the stratum corneum hydration data obtained in March and May were examined. The results of this research displayed 32 female subjects (55.2%), 35 subjects under 75 years old (60.3%), 28 subjects who took a bath every day or almost every day (48.3%), 12 subjects at risk of malnutrition (20.7%) and eight subjects with rough skin (13.8%). There was no significant difference recognized in the stratum corneum hydration with respect to gender, age, frequency of taking a bath or nutritional status. At the time of the study in March and May, the temperature was $24.9 \pm 0.4^{\circ}\text{C}$ and $24.4 \pm 0.4^{\circ}\text{C}$ ($p > 0.001$), respectively, and the air humidity was $29.8 \pm 1.3\%$ and $47.3 \pm 3.6\%$ ($p > 0.001$), respectively. The stratum corneum hydration in March and May was 41.6 ± 8.5 (minimum value, 22.0; maximum value, 59.7) and 50.3 ± 9.0 (minimum value, 34.0; maximum value, 72.0) ($p > 0.001$) respectively. The stratum corneum hydration was found to be significantly low in low humid environments.

Biography

Michiyo Yamamoto has completed her PhD from Sapporo Medical University. Her major was Public Health and she studied about end-of-life care of older adults. She teaches Gerontological Nursing at Hokkaido University of Science from 2013. Her research focuses on aged skin, end-of-life care, and interprofessional education.

Notes: