Role of *Centella asiatica* and ceramide in skin barrier improvement: a double blind clinical trial of Indonesian batik workers

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Background

*Centella asiatica* is traditional plant that proofed to provide moisturizing effect. Batik workers are directly or indirectly exposed to chemicals and lead to skin barrier disruption, especially in hands area. Moisturizer application in batik workers is expected to improve skin physiological condition and prevent contact dermatitis. This study aims to determine the effect of *Centella asiatica* and ceramide in trans epidermal water loss (TEWL), stratum corneum hydration, and skin acidity (pH).

Method

This study was double blind clinical trial of 30 batik workers in Paseseh Village, Tanjung Bumi Subdistrict, Bangkalan Madura Regency, Indonesia. Baseline was recorded in the first examination, two and four weeks after treatment *Centella asiatica* or ceramide cream. Biological function of the skin (TEWL, stratum corneum hydration level, and skin acidity) was examined using Cutometer dual MP-580.

Results

*Centella asiatica* gave significant improvement in evaluation of corneometer palmar, corneometer dorsum and skin acidity dorsum after four weeks treatment. Ceramide cream application also gave the significant improvement in evaluation of corneometer palmar, skin acidity palmar, TEWL dorsum, corneometer dorsum and skin acidity dorsum.

Conclusion

*Centella asiatica* and ceramide can improve skin barrier hydration in order to prevent the risk of contact dermatitis in batik workers.

References