

**COST Action TD1206 Early Stage Researchers' Forum on
"The challenge of occupational skin diseases: Basic translational and applied research"
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ABSTRACT

Title: Efficacy of a stand-alone treatment with an emollient containing ceramides and magnesium in mild to moderate atopic dermatitis: a prospective, randomized, double-blind, OTC and hydrocortisone controlled trial

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Background: Atopic eczema (AD) is a major risk factor for occupational contact dermatitis (OCD). This might at least partly be explained by intrinsically impaired skin barrier in the individuals with a history of AD. Therefore, restoration of the skin barrier might be an important strategy in the prevention of OCD. Reliable evidence on efficacy of skin barrier repair is missing in particular the number of randomized, placebo controlled trials is scarce.

Material and Methods

100 AD patients entered the 6-weeks double blinded RCT with a split body design. The patients, with two comparable symmetric AD lesions on the left and right side of the body, were randomised in two groups. The group I simultaneously used Cer-Mg and HC while the group II was treated with Cer-Mg and EM. The primary outcome was the change in (local) SCORAD and secondary outcomes TEWL, skin hydration, skin surface pH, erythema and natural moisturizing factors (NMF) which were measured at baseline and after 3 and 6 weeks.

Results: Clinical improvement as evidenced by significant decrease of SCORAD was observed after all treatments after 3 and 6 weeks. After 3 weeks HC showed greater reduction of SCORAD in comparison to Cer-Mg, however after 6 weeks there was no difference between these two treatments. In group II, Cer-Mg showed a significantly greater reduction of SCORAD as compared to EM. Cer-Mg and HC led to a comparable improvement in the skin barrier function as evidenced by decrease in TEWL while EM increased TEWL. After 6 weeks Cer-Mg showed the highest increase in skin hydration as compared to both HC and EM. Treatments had only slight influence on surface pH. NMF was not influenced by Cer-Mg and EM, however HC decreased NMF levels by 22% after 6 weeks of treatment.

Conclusion: Cer-Mg cream has comparable clinical effectiveness and skin barrier effects as HC therapy in treating mild to moderated AD and has shown to be superior to EM. Furthermore, the present study confirms the negative effect of Topical corticosteroid on NMF.