Fact Sheet Eczema - Micreos Staphefekt SA.100 (Gladskin)

Eczema is a chronic inflammatory skin disease affecting many children and adults. Symptoms include dryness, redness and scaling of the skin. Itch is very characteristic and burdensome. The typical 'itch-scratch' cycle exacerbates symptoms and often results in sleep-deprivation, with consequential damage in development and concentration. Manifestation can be acute during physical activities. The negative impact of eczema on the quality of life can be very high.[1]

Eczema has a genetic background, and external factors trigger the disease. The bacterium *Staphylococcus aureus* is considered a causative and aggravating trigger for eczema. It colonizes the skin of the vast majority (70-90%) of eczema patients, is directly associated with flare-ups and is viewed as an independent cause of itch, irritation and infection (figure 1).[2,3,4,5]

Current eczema treatments include the use of emollients to moisturize the skin, corticosteroids to suppress inflammation, and antibiotics to control *S. aureus*. Because eczema is chronic, long-term treatment is needed. However, safety and resistance are concerns with regard to prolonged use of corticosteroids and antibiotics.[1]

Staphefekt SA.100 is an endolysin, a targeted antibacterial enzyme. Contrary to antibiotics, it kills only *S. aureus*, leaving the beneficial bacteria intact. And by targeting essential parts of the cell wall of *S. aureus*, resistance is neither observed nor expected.[6,7,8] As an active ingredient in emollients, Staphefekt is therefore suitable for long-term daily use as suppression therapy of *S. aureus* on the skin.9

In a questionnaire-based study by prof. Pasmans, pediatric dermatologist at the Erasmus Medical Centre Rotterdam, Staphefekt in an emollient (Gladskin) was applied on the skin by 48 patients suffering from eczema. After one month of daily use, patients experienced significantly less itch, redness, dryness, scratching and swelling of the skin (figure 2). Also, sleeping problems diminished significantly.10

People will always be challenged with *Staphylococcus aureus*, as it is often present on our body and in our environment. Colonization with this bacterium can lead to inflammation or infection, as is often the case in eczema patients. With Staphefekt, the first *targeted* antibacterial compound is available for daily use as maintenance therapy, to intervene before colonization can progress and lead to infection and flares of inflammation.

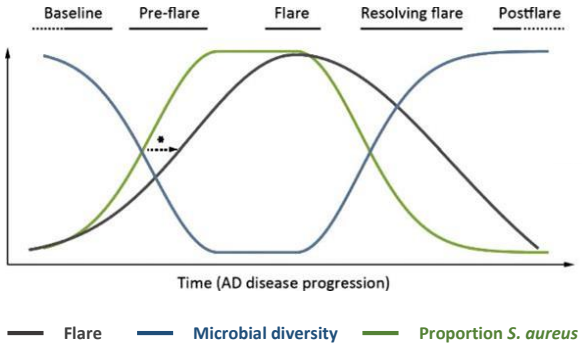

Figure 1. *The burden of S. aureus colonization is directly correlated with eczema flares. Flares are preceded by a decrease in microbial diversity and a disproportional rise of S. aureus. (Kong, Genome Res. 2012)[5]*

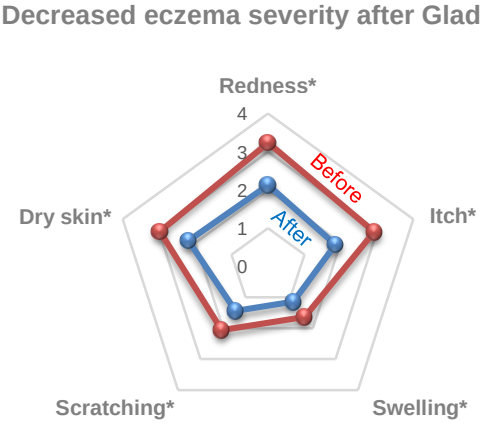

Figure 2. *All eczema severity scores were decreased significantly after use of Staphefekt in 48 patients (average use 37 days), as measured with the Eczema Area & Severity Index (EASI, *p<0.01). Also, sleeping problems diminished significantly (p<0.005).*

The first case study was a 29-year old man suffering from contact dermatitis triggered by glove use during work. Before starting treatment with Staphefekt, the presence of S. aureus in the lesions was confirmed (left). After 3 days he reported less inflammatory symptoms of redness and itch (right). After 6 weeks, S. aureus was not found anymore, while other skin bacteria remained unharmed.

References

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