Introducing the Efficiency of a Cosmetic on Fragile Skin

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Introduction
Ageing is one of the main causes of impairment of the skin, but other factors such as environmental conditions, and aesthetic treatments, also have a substantial impact on the quality of the skin. To assess the repairing and soothing capacity of a product on fragile or weakened skin, a study was conducted during the winter of 2012-2013 in the department of dermatology of West China Hospital in Chengdu.

Material and methods
The study was performed on the facial skin of healthy Asian women divided into two groups: in the first group, there were 51 women aged between 30 and 65, who received an aesthetic treatment (mesotherapy, IPL, chemical peel, laser…), and in the second group there were 42 women aged between 18 and 35 with very sensitive skin (sensitivity to cosmetics, temperature changes, etc…). Both groups applied a cosmetic repairing cream twice daily for 28 days (hydrating and nourishing excipient enriched in madecassoside, D-panthenol, betaglycrrhetinic acid and a sugar derivative: Proxylane).

To assess the results in the first group a clinical scoring method was used together with a self-assessment questionnaire on D0, D3 and D28, with an additional self-assessment at home on D7, as well as photographs of 5 subjects on D0 and D28. The subjects in the second group were first pre-selected from a questionnaire about the sensitivity of their skin, then enrolled after confirmation of their sensitivity by a capsaicin test on the nasogenian folds. Assessments were performed on D0, D7 and D28 and consisted of clinical scoring and self-assessment for all of the subjects, as well as photographs of 5 subjects on D0 and D28. The capsaicin test was performed again on D28 to assess changes in sensitivity.

Results
In group 1, the application of the product immediately after an aesthetic treatment induced a reduction of erythema in 6 subjects out of 10, a diminution of oedema in half of the subjects, and the disappearance of dryness in 9 subjects out of 10 (Figure 1). After 3 days of application, these side-effects had quite completely disappeared (only some very slight reactions were still present). After 28 days of repeated applications of the product, 86% of the subjects declared that the repairing process of their skin was improved, and 88% felt that the product was like a “second skin”. For 9 subjects out of
10, damages to the skin were repaired and micro-irritations were soothed. In addition, the skin was nourished and hydrated for 86% of the subjects and protected for 90% (Figure 2).

% of Women presenting side effects of aesthetic treatment (Clinical scoring)

![Figure 1: Group 1 - Efficacy of the product on the side effects of aesthetic intervention (in this graph are only represented women presenting slight to severe reactions)](image1)

After repeated applications of the products, women declared to get:

![Figure 2: Group 1 - Efficacy of the product after repeated applications on the skin quality, protection and repair](image2)

In group 2, the subjects whose sensitive skin usually caused discomfort, redness, and dryness declared that their skin was transformed: their skin redness, dryness and discomfort sensations were immediately reduced by the application of the product (Figure 3). Moreover, after repeated applications of the product, the skin was nourished and hydrated for 90% of them, had ideal elasticity for 88%, and 93% declared that it was firmer and more tonic. Improvement of homogeneity and texture was reported by 93% of the subjects. In addition, skin sensitivity was improved in 98%
of the women (Figure 4), demonstrating the improvement of the barrier function: whereas 72% of the subjects were highly sensitive to capsaicin on D0 (sensitive at $10^{-4}$ %), only 10% were still sensitive at this concentration on D28 (no subject was still sensitive at the smallest concentration of $3.16 \times 10^{-5}$ %) (Figure 5).

**Figure 3:** Group 2 - Efficacy of the product on the skin redness, dryness and discomfort (from women self-assessment).

**Figure 4:** Group 2 - After 28 days of repeated applications of the product, most of the women declared that their skin were less sensitive than before to environmental factors.
Figure 5: Group 2 - 98% of the subjects showed an improvement of their skin sensitivity threshold with regard to capsaicin. Only one subject had no improvement regarding the concentration threshold with capsaicin. However, although she felt both slight burning and tingling on D0 with C5, she only felt slight itching on D28.

Conclusion

Through its action as a “second skin”, the cream rich in repairing and soothing active ingredients protects the skin from environmental aggressions (98% of the subjects) and soothes micro-irritations (93% of the subjects) (Figure 6). Nearly all women found their skin was almost free of clinical symptoms after 28 days of treatment (Figure 7).

Figure 6: Group 2 - Example of efficacy of the treatment in one subject (decrease of skin redness...)

![Figure 7: Skin condition before and after treatment.](image)
Figure 7: Most of the symptoms relating to the consequences of aesthetic treatment or sensitive skin were decreased as early as after the first application of the product, and they had mostly disappeared after 28 days of treatment.

Reference