

MANAGEMENT OF THE STRETCH MARKS PREVENTION IN PREGNANT WOMEN WITH A DERMO-COSMETIC DRY OIL

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INTRODUCTION & OBJECTIVES

Stretch marks represent one of the most undesirable and common physiological skin changes that occur during pregnancy, usually range from 50 up to 90% according to the literature. The abdomen, breasts, thighs, and hips are the most impacted due to mechanical stretching of the skin in association with hormonal factors. Dryness of stratum corneum makes it more rigid and increases mechanical stresses in underlying tissues, especially dermis [1, 2]. So, hydration rise by the product can contribute to reduce tissues deformation and dermis rupture. Several studies have shown that improving collagen production, skin elasticity and skin hydration can help in the prevention or the improvement of stretch marks. The aim of this study was to evaluate the interest, and the tolerance of a dermo-cosmetic dry oil designed for preventing stretch marks in pregnant women.

MATERIALS & METHODS

First, the moisturizing properties of the dry oil was assessed during 24hr using a Corneometer® CM825 (Courage + Khazaka) on the forearms of 10 women (in average 40 years old). Second, the immediate effect on suppleness was evaluated by measuring the skin suppleness (Uf = maximal amplitude, Ue = instant extensibility) after 30min with a Cutometer® MPA 580 (Courage & Khazaka), vs. untreated area on the abdomen of 10 women (in average 26 years old). Third, in an open intra-individual study under dermatological control, 31 pregnant women (in average 25 years old, 14 weeks of gestation and phototype IV 90% and III 10%) were included without stretch marks on the abdomen at day 0 (D0) prone for developing them (family history, presence on other body areas). They applied the dry oil once or twice daily for 112 days on the abdomen, hips, thighs, and buttocks by circular massages. The Davey's clinical scoring was used to determinate the striae severity (0 to 8), a cutometer for the skin measurements, and a self-assessment questionnaire for subjective evaluation, after 56 and 112 days of use, in parallel with the tolerance by the investigator.

RESULTS

The dry oil presented a **significant hydration** increase up to **41%** after 2hr ($p < 0.001$) and **15%** at 24hr ($p < 0.05$) compared to untreated area. In addition, the **skin suppleness** was significantly improved by increasing Uf and Ue, **+4.6%** ($p < 0.05$) and **+6.7%** ($p < 0.05$) respectively, compared to untreated area.

Moreover, only 3 subjects developed stretch marks during the clinical study, out of 31 included after 112 days of use, associated with a mean **Davey's clinical scoring** of **0.31**. At D112, **89%** of the subjects present **no stretch marks**, **4% mild** and **7% severe stretch marks**. In addition, the **skin elasticity** (Ur/Ue) was significantly improved at D56 (**+4.92%**, $p < 0.001$) and D112 (**+10.25%**, $p < 0.001$) compared to D0.

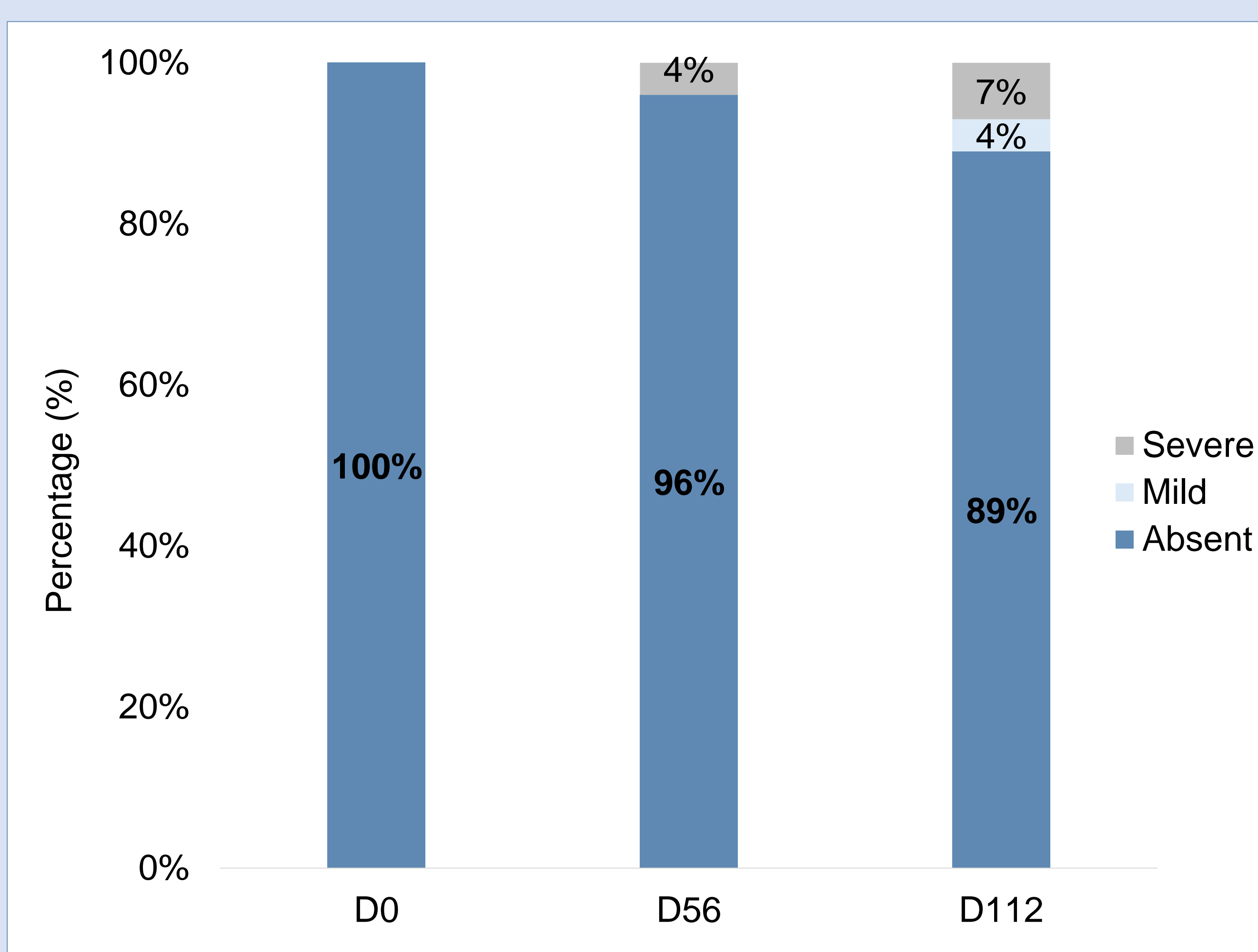


Figure 1. Severity of Striae gravidarum (D0, N=31; D56, N=25; D112, N=28)



Figure 2. Results of net skin elasticity ($R5 = U_r/U_e$) (D0, N=31; D56, N=25; D112, N=28; paired t-test)

The product was very appreciated by large majority of subjects (from 80% to 92%) for its **immediate efficacy** especially in term of **skin texture, smoothing effect, and moisturizing properties**. They also appreciated the product for its long lasting effects after 112 days of use with skin regained **its softness**, skin was **nourished, moisturized, sublimated**, regained its **comfort, suppleness, and texture** was **refined** and **smoothed**. **96%** of subjects agreed that the product was an **ultra-nourishing** oil and were satisfied with the appearance of their skin. During the study, the product was **very-well tolerated** by the subjects.

CONCLUSION

This study demonstrates the benefit of using the studied dry oil in the management of stretch marks in pregnant women, particularly through the improvement of skin elasticity and suppleness. Furthermore, the oil was very well tolerated. Besides, this dry oil contains jojoba oil, known to stimulate Type I procollagen synthesis [2], which can contribute to visco-elastic skin properties improvement. In accordance with the ecobiological approach, which involves addressing the underlying causes (lack of lipids) as well as the visible signs (dry skin), the oil exhibits long-lasting efficacy.

References :
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[3] Ranzato E, et al. J Ethnopharmacol. 2011 Mar 24;134(2):443-9.