A CLINICAL STUDY TO ASSESS THE EFFICACY AND TOLERANCE OF A FACIAL SERUM WITH ANTI-ACNE BENEFITS

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INTRODUCTION

Acne vulgaris is a chronic inflammatory skin disease with a multifactorial pathogenesis.[1, 2]
The principal actors are the sebaceous gland, keratinocytes of the follicle, *Cutibacterium acnes* and the skin microbiome/innate immunity.[3]
Dermocosmetics (DC) play more and more frequently a role as adjuvants to pharmacological treatments to mitigate side effects, as stand-alone products in the maintenance after an initial treatment with pharmacologically active treatments or in the management of mild acne.
The tested DC serum contains salicylic acid, glycolic acid, niacinamide and lipohydroxy acid.

OBJECTIVES

This study evaluated the efficacy and safety of a facial serum with anti-acne benefits in oily skin prone to acne.

MATERIALS & METHODS

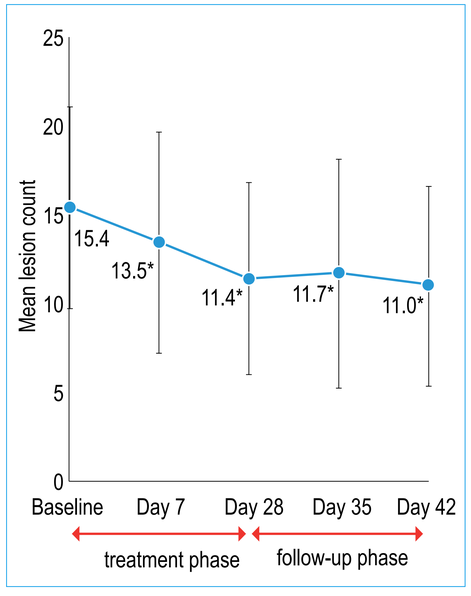
A single-centre study was conducted in China in 46 female volunteers aged between 18 to 37 years.
Subjects applied 3 drops in the evening of a serum, as well as a moisturizer and a sunscreen for 4 weeks followed by a 2-week application period of the moisturizer and sunscreen only.
The number of inflammatory (papules and pustules), non-inflammatory lesions (comedones and microcysts) and postinflammatory hyperpigmentation marks (erythema and pigmentation) as well as pore visibility (on a score ranging from 0 = none to 7= severe) and skin tone evenness on a score 0 = very even to 9 = very uneven skin tone) were assessed by the dermatologist at Baseline, Day 7, Day 28, Day 35 and Day 42.
Subjects completed a satisfaction questionnaire at Day 28.

RESULTS

Data from 42 subjects were available for the data analysis. The mean age was 25.1±6.21 years, 26% of the subjects had sensitive skin.
The number of non-inflammatory lesions (Figure 1) had significantly ($p<0.01$) decreased at Day 7 and Day 28 (25.9%). So did the number of inflammatory lesion (40.0% at D28, Figure 2).
The number of postinflammatory hyperpigmentation marks (Figure 3) had significantly ($p<0.01$) decreased at Day 7 with a 12.5% decrease at Day 28.
The skin pore visibility score (Figure 4) had significantly ($p<0.01$) improved at Day 7 and Day 28 (18.1%) so did the skin tone evenness score (Figure 5) at Day 28 (2.8%, $p<0.01$).
Overall, 71% of the subjects considered that the «number of their pimples had decreased», 76% stated that their «pimples became unremarkable», 76% that «the discomfort caused by pimples was reduced», 77% that «skin oiliness had improved». 81% of the subjects were satisfied with the product and 95% were «willing to continue using the serum».

NON-INFLAMMATORY LESION COUNT OVER TIME

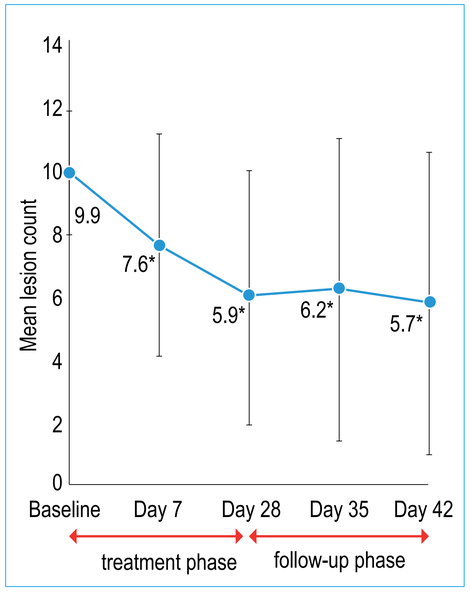
Figure 1



**p<0.01 compared to Baseline*

INFLAMMATORY LESION COUNT OVER TIME

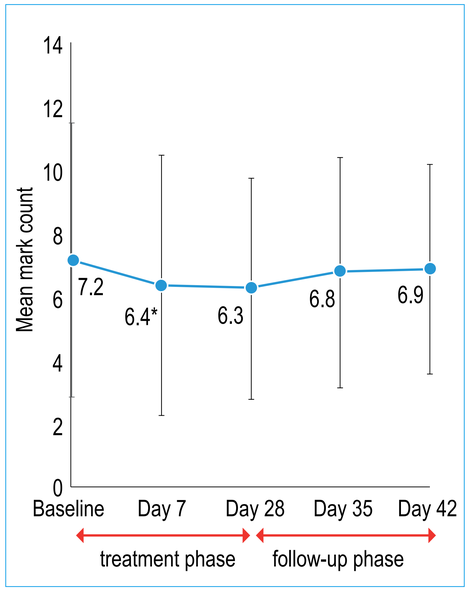
Figure 2



**p<0.01 compared to Baseline*

POST INFLAMMATORY HYPERPIGMENTATION MARKS OVER TIME

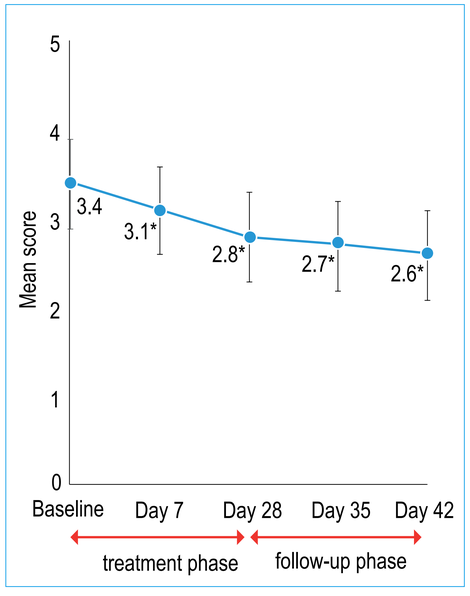
Figure 3



**p<0.01 compared to Baseline*

SKIN PORE VISIBILITY SCORE OVER TIME

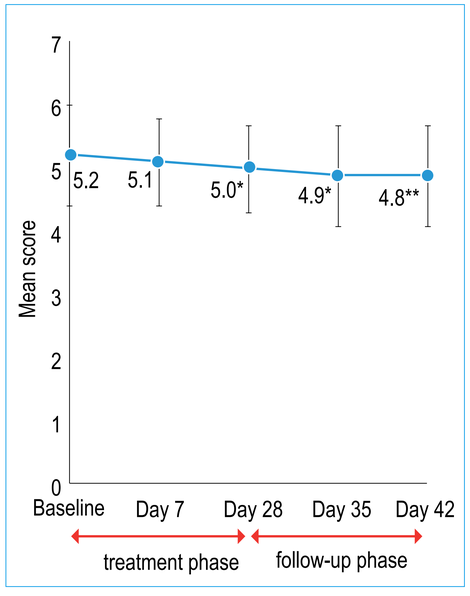
Figure 4



**p<0.01 compared to Baseline*

SKIN TONE EVENNESS SCORE OVER TIME

Figure 5



**p<0.05 compared to Baseline, **p<0.01 compared to Baseline*

CONCLUSION

After 4 weeks of a daily application of the serum, the number of non-inflammatory and inflammatory lesions, pore visibility and skin tone evenness had significantly improved in subjects with acne. Results were maintained during a follow-up period of 2 weeks.

References

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