ARE SKIN REJUVENATION ASSESSMENTS REALISTIC? EVALUATION OF A CLINICAL STUDY INVOLVING A NUTRITIONAL SUPPLEMENT (Estime®-IBS).

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ABSTRACT

A new dietary supplement, Estime®-IBS, was investigated by skin ultrasonography for its possible action in improving photo-damaged skin. A four-month double-blind placebo-controlled study was conducted with 38 female volunteers, divided into two test groups (younger group: mean age 40 and older group: mean age 50) and two placebo groups (same ages). Results showed a statistically significant increase of epidermis+dermis thickness and dermis density, as compared to placebo. In the older group, after one month, the increase in epidermis+dermis thickness could be estimated to represent approximately 10 years of skin rejuvenation.

INTRODUCTION

Several clinical studies have shown that photo-ageing signs of the skin (e.g. wrinkles, dryness, loss of firmness) are accompanied by structural changes such as reduction of dermis density (DD) and epidermis+dermis thickness (EDT) [1,2]. The dietary supplement Estime®-IBS has in earlier studies shown to be effective in improving certain aspects of photo-damaged skin [3,4]. The ultrasonography parameters EDT and DD were used to assess the improvement of skin structure on two sites, the back of the hand (BH) and the ventral forearm (VF). The aim of the present work was to evaluate if it is realistic to express skin rejuvenation in years, using these parameters.

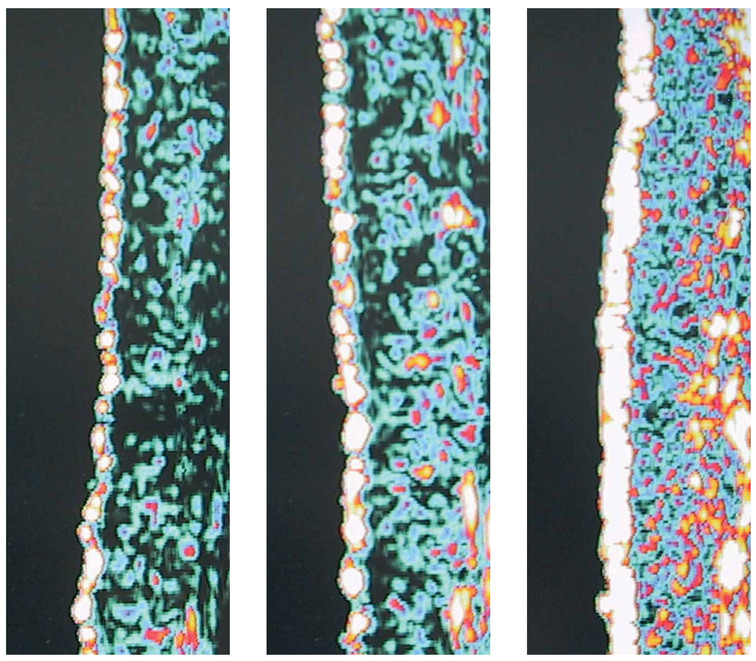

Figure 1 – Visible increases of epidermis+ dermis thickness and dermis density during a 3-month Estime®-IBS dietary supplementation. 43-year old woman. Back of the hand. 3-month dermis density increase vs. baseline: +79%.

Baseline *1 month* *3 months*

RESULTS

A four-month double-blind placebo-controlled study was conducted with 38 female subjects divided into two test groups (9 younger, 35-43, mean age 39.5±2.4; 10 older, 43-54, mean age 49.9±4.2) and two placebo groups (9 younger, 36-44, 40.1±2.7; 10 older, 46-51, 49.3±2.2). Each participant took one capsule daily of either the product or placebo for three months, followed by a supplement-free period of one month. Measurements were made on the back of the hand (BH) and the ventral forearm (VF) using a 20-MHz DermaScan®C device (Cortex Technology, Denmark) set on B-mode (fig. 1). BH: in the first month EDT increased from 0.99 to 1.17 mm in the older group and from 1.16 to 1.18 mm in the younger group. VF: in the first month EDT increased from 0.97 to 1.13 mm in the older group and from 1.11 to 1.13 mm in the younger group. A continuous evolution could be demonstrated over the three-month supplementation period (fig. 2). The DD parameter did also significantly improve in both age groups during the treatment. A better statistical significance (permutations) could be demonstrated showing that more subjects improved EDT and DD in the older group as compared to the younger group (table 1). Placebo results were not significant.

DISCUSSION

The synergistic effect of the active ingredients in the supplement appears to supports the skin's regenerative process in both age groups. The study shows that EDT results for the older group after one month significantly approached (BH) or equaled (VF) results, thus reaching the younger group's baseline values. The DD parameter was not useful as an indicator for rejuvenation in this study as the baseline values of the two groups did not differ essentially.

	Baseline	1 month	2 months	3 months	4 months
Test group					
10 older subjects (43-54)	0.974	1.126**	1.159**	1.192**	1.145**
		(+15.5%)	(+18.9%)	(+22.3%)	(+17.6%)
9 younger subjects (35-43)	1.106	1.132*	1.132**	1.224**	1.159**
		(+2.4%)	(+2.4%)	(+10.7%)	(+4.8%)
Placebo group					
10 older subjects (43-54)	1.047	1.106ns	1.126ns	1.119ns	1.132ns
		(+5.7%)	(+7.5%)	(+6.9%)	(+8.2%)
9 younger subjects (35-43)	1.132	1.119ns	1.106ns	1.106ns	1.113ns
		(-1.2%)	(-2.3%)	(-2.3%)	(-1.7%)

*Table 1 – Comparative test/placebo evolution of epidermis + dermis thickness on ventral forearms. In brackets: percent differences relative to baseline. Statistics: permutations data vs. baseline (*significant, **very significant, nsnon significant)*

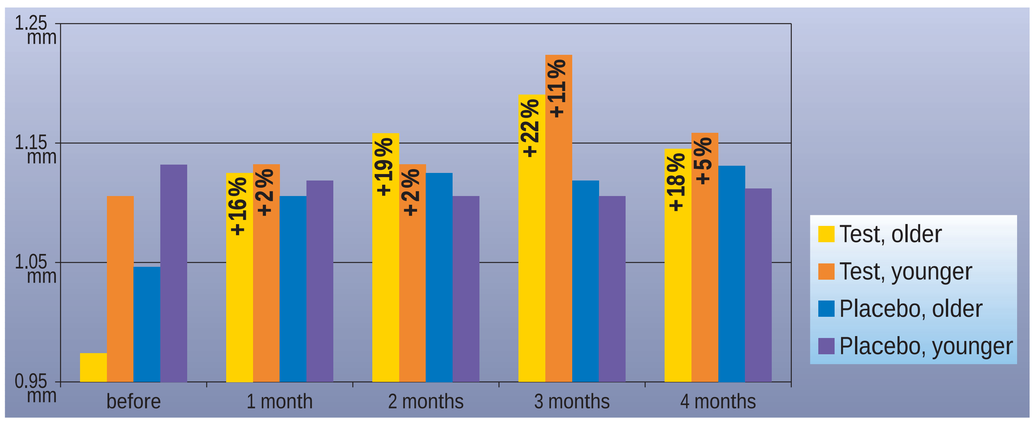

Figure 2 – Comparative test/placebo evolution of epidermis + dermis thickness on ventral forearms. Data from table 1.

CONCLUSIONS

This study showed that it is possible to make realistic assessments of skin quality improvements expressed in years, provided the differences in baseline values in the tested parameters are significant between the age groups. The difference in the EDT parameter in the present study represents approximately 10 years of skin quality improvement.

REFERENCES

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