ABSTRACT BOOK ABSTRACTS



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AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

## IMPACT OF CARCININE SUPPLEMENTATION ON SKIN QUALITY AND CORRELATION WITH METABOLIC PARAMETERS: A PLACEBO-CONTROLLED DOUBLE-BLIND RANDOMIZED CLINICAL TRIAL

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Introduction: carcinine is a dipeptide found in mammalian tissues (SONG et al., 2014). Studies have demonstrated its anti-inflammatory, anti-glycant and antioxidant activity by different mechanisms (Hinkley et al., 2007) and it could be used in the treatment of metabolic syndrome (MS) (Anderson et al., 2018). On the other hand, aging process shares aspects of MS pathophysiology and could be treated with carcinine (Babizhayev 2011), although there is no study evaluating both skin and MS simutaneously.

Objective: we hypothesized that carcinin would improve skin quality, glycemic control, insulin resistance and lipid profile in overweight and obese patients.

Materials and Methods: female patients, aged between 40 and 60 years, body mass index between 25 and 34.9 (kg / m2) were eligible to participate in a randomized, double-blind, placebo-controlled clinical trial. 38 patients were recruited and assigned to intervention group (n = 19, receiving 1 capsule of 200 mg of carcinine daily) or control (n = 19). Photographs were taken and samples of blood and anthropometry were collected at baseline, after 45 and 90 days. A photo analysis software was used to evaluate wrinkles, erythema and pigmentation. Statistical analysis was performed using two-way ANOVA, considering a level of significance of 5% ( $\alpha = 0.05$ ).

Results: after 90 days, carcinine supplementation resulted in a significant decrease in wrinkles, erythema, and pigmentation (p<0.001), paralled by reduction of fasting glycemia (p = 0.001), fructosemia (p = <0.001) glycated hemoglobin (p = 0.003), cholesterol (p = 0.004), insulin (p = 0.038), abdominal circumference (p = 0.013) and HOMA-IR (p = 0.039).

Conclusions: the parameters investigated showed a significant improvement after 90 days











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of supplementation. Addcionally, beyond its own results, this study reinforces the need to treat the patient as a whole, since improving their clinical conditions (e.g., MS) has a positive impact on all tissues, including skin.



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