

[Randomized Controlled Trial](#) > [Am J Clin Dermatol](#). 2013 Apr;14(2):147-53.

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The anti-wrinkle efficacy of argireline, a synthetic hexapeptide, in human subjects: a randomized, placebo-controlled study

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Abstract

Background: Argireline is a synthetic peptide that is patterned from the N-terminal end of the protein SNAP-25 and has been shown to reduce the degree of facial wrinkles. It is reported to inhibit vesicle docking by preventing formation of the ternary SNARE complex and by interfering in catecholamine release. The anti-wrinkle efficacy of argireline has not been studied in Chinese subjects.

Objective: The objective of the study was to evaluate the safety and efficacy of argireline in the treatment of peri-orbital wrinkles in Chinese subjects.

Methods: A total of 60 subjects received a randomized treatment of argireline or placebo in a ratio of 3:1. Argireline or placebo was applied to their peri-orbital wrinkles twice daily for 4 weeks, and then evaluations were made for the improvements in wrinkles. In the subjective evaluation, Daniell's classification and Seeman's standard were applied to make a global assessment of changes in the appearance of peri-orbital lines. In the objective evaluation, silicone replicas of the skin at the application area were made before and after the treatment, which were analyzed by a wrinkle-analysis apparatus.

Results: In the subjective evaluation, the total anti-wrinkle efficacy in the argireline group was 48.9 %, compared with 0 % in the placebo group. In the objective evaluation, the parameters of roughness were all decreased in the argireline group ($p < 0.01$), while no decrease was obvious in the placebo group ($p > 0.05$).

Conclusions: This study showed that argireline had a significant anti-wrinkle effect