



PHOTOTHERAPY, PHOTODYNAMIC THERAPY

LONG-TERM EFFECT OF ALA PHOTODYNAMIC THERAPY ON PHOTOAGING AFTER ACTINIC KERATOSIS TREATMENT

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Background: ALA-PDT is recommended for the treatment of actinic keratosis (AK). Recent studies have shown efficacy in photoaging as well, while, the long-term efficiency is poorly described in the literature.

Objectives: The aim of this randomized split-face clinical trial was to evaluate the efficacy of ALA-PDT in the treatment of AK and photoaging in long-term follow up.

Methods: Ten patients with AK were randomized treated with field-directed ALA-PDT in half face and lesion-directed ALA-PDT in another half face as control and follow up for 1 month, 6 months, 24 months. Clinical responses, global score of photoaging (GSP) subjective assessment, stratum corneum (SC) and transepidermal water loss (TEWL) were assayed before the treatment at each time follow up. Patients' satisfaction and side effect were collected.

Results ALA-PDT treatment of AK has complete response, it has efficacy in GSP, mottled pigmentation, roughness and sallowness improvement in 1 month, 6 months follow up. After 24 months follow up, the efficacy is mainly reflected in the improvement of fine line ($P=0.0369$), mottled pigmentation ($P=0.0263$) and TEWL ($P=0.0248$).

Conclusion ALA-PDT has a long-term efficacy on photoaging both in fine line, mottled pigmentation and skin barrier function.

Keywords: ALA-PDT; 5-Aminolevulinic acid; actinic keratosis; photoaging.

