



LASERS

LASER-ASSISTED PHOTODYNAMIC THERAPY FOR ACTINIC KERATOSIS

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Introduction: Photodynamic therapy (PDT) with methyl aminolaevulinate (MAL) is effective for actinic keratosis (AKs) in field-cancerized skin. Ablative carbon dioxide (CO₂) laser creates an abrasion that facilitate MAL uptake and may improve PDT efficacy.

Objective: The Objective of this study was to evaluate efficacy and safety of laser CO₂-assisted MAL-PDT in field-directed treatment of AKs.

Material and Methods: Ten patients with confocal microscopy diagnosis of AK were enrolled with a total of 13 AKs. A dermoabrasion of the lesion was performed with an ablative CO₂ laser and immediately after topical MAL was applied on the AK lesions and incubated for 70 to 90 minutes.

Irradiation was performed with a red light source. All the patients received two rounds of CO₂-laser assisted-MAL- PDT at 2-week intervals and underwent clinical and confocal microscopy evaluation at 10 weeks after the first treatment.

Results: The complete clearance rates (CRs) at 10 weeks after the first treatment with CO₂ laser assisted MAL-PDT were 89.78%.

There were no significant side effects associated with the combination of CO₂ laser and PDT.

Conclusion: CO₂-laser assisted MAL-PDT is effective and safe for treatment of AK in field-cancerized skin, and even reduced the incubation time of the photosensitizer treatment. It is minimally invasive, and it could be a great option for patients under risk of surgical complications.

