

## A novel combinational Er:Glass Laser and Cryo therapy for Acne Vulgaris and Acne scars

**Introduction:** acne vulgaris remains a challenging disease to treat with a considerable impact on patient's quality of life; even after lesions have resolved; acne related scarring has been shown to lead to detrimental psychologic effects. Several treatment combinations have been studied to meet the need for effective, safe and tolerable procedures for acne and acne scars. A novel approach combines an Erbium:Glass (Er:Glass) laser with cryo-therapy for treating active acne, acne scars together with improvement of skin tone and texture.

**Objective:** to determine the safety and efficacy of the combination of 1540nm Er:Glass laser and cryotherapy for the treatment of acne lesions and acne scars.

**Methods:** eighteen 18 female patients with moderate to severe acne were treated with a combined therapy regimen using a fractional 1540nm Er:Glass laser (Harmony XL Pro™, Alma Lasers Ltd.) and cryo-therapy (Harmony XL Pro™, Alma Lasers Ltd.). Acne lesions were sequentially exposed to an energy range of 800kJ-1000kJ at a rate of 3Hz (7x7 pixel tip; fluence, 800-1200 mJ/pulse), then lesions were exposed to a 7min regimen of descending temperatures (-2oC increments/minute) ranging from 5oC(-7oC). Patients received 4-6 treatments with 2-week intervals and a follow-up visit 6 months after last session. Clinical evaluation included overall aesthetic appearance: scale of 0 (exacerbation)- 4 (76-100% improvement), assessed by 3 independent evaluators as well as pain perception and patient satisfaction (0-5).

**Results:** patients demonstrated moderate to significant improvement of acne lesions and scarring, pores and skin texture appearance (mean 3.3 at 6 months). Patient satisfaction scores revealed significant satisfaction, mean 4.8. Pain and adverse events were mild and transient.

**Conclusions:** the combination of 1540nm laser with cryo-therapy is a safe, effective and well-tolerated with sustained long-term results for active acne and acne scars.

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