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# Fractional CO<sub>2</sub> laser therapy: a new challenge for vulvovaginal atrophy in postmenopausal women

Siliquini GP<sup>1</sup>, Tuninetti V<sup>2</sup>, Bounous VE<sup>2</sup>, Bert F<sup>3</sup>, Biglia N<sup>2</sup>

1: Sedes Sapientiae Institute, Turin - Italy. 2: Umberto I Hospital, University of Turin, Turin - Italy. 3: University of Turin, Turin - Italy.



## Abstract

### Objectives

To evaluate the effects of CO<sub>2</sub> laser in the treatment of vulvovaginal atrophy (VVA) in postmenopausal women.

### Methods

VVA was assessed in 87 postmenopausal women (mean age 58.6±6.9 years) before and after the treatment. The protocol consisted of three monthly treatments and included the treatment of vulva. Subjective measures included VAS (Visual Analog Scale) both for vaginal dryness and dyspareunia; DIVA (Day-by-day Impact of Vaginal Aging); a questionnaire on treatment satisfaction and one about the degree of pain during the procedure. Objective measures included VHI (Vaginal Health Index) and VVHI (Vulvo-Vaginal Health Index). Time points of the study were at the screening visit (T0), at baseline (T1), at week 4 (T2), at week 8 (T3), after 3 months since the last laser application (T4), after 6 months (T5), after 9 months (T6), after 12 months (T7) and after 15 months (T8).

### Results

Treatment induced significant improvement in the VAS score. After treatment, VHI and VVHI indicated no VVA and this improvement was long lasting. Multivariate analysis showed that the time of follow-up was correlated with better VHI and VVHI ( $p < 0.001$ ). DIVA improved over time ( $p < 0.001$ ).

### Conclusions

This study shows that CO<sub>2</sub> laser treatment induces a significant and long-lasting improvement of symptoms.