Climacteric - Vol. 17, No. 4, 2014. Epub 2014 Jun 5

A 12-week treatment with fractional CO_2 laser for vulvovaginal atrophy: a pilot study

Salvatore S[1], Nappi RE[2], Zerbinati N[3], Calligaro A[4], Ferrero S[5], Origoni M[1], Candiani M[1], Leone Roberti Maggiore U[1]

1: San Raffaele Hospital, Milan - Italy. 2: Policlinico S. Matteo, University of Pavia, Pavia - Italy. 3: University of Insubria, Varese - Italy. 4: University of Pavia, Pavia - Italy. 5: San Martino Hospital, University of Genoa, Genoa - Italy.

Abstract

Objective

This pilot study aimed to assess the efficacy and feasibility of fractional CO_2 laser in the treatment of vulvovaginal atrophy (VVA) in postmenopausal women.

Methods

VVA symptoms were assessed before and after three applications of laser over 12 weeks in 50 women (age 59.6 ± 5.8 years) dissatisfied with previous local estrogen therapies. Subjective (visual analog scale) and objective (Vaginal Health Index Score, VHIS) measures were used during the study period to assess VVA. Quality of life was measured by using the SF-12. A subjective scale to evaluate the degree of pain related to the laser application and the degree of difficulty to perform the laser procedure was used.

Results

Fractional CO_2 laser treatment was effective to improve VVA symptoms (vaginal dryness, vaginal burning, vaginal itching, dyspareunia, dysuria; $p < 0.001$) at 12-week follow-up, as well as the VHIS (13.1 ± 2.5 at baseline vs. 23.1 ± 1.9; $p < 0.001$). Both physical and mental scores of quality of life were significantly improved in comparison with baseline ($p < 0.001$). Satisfaction with the laser procedure was reported by 42 women (84%) and a minimal discomfort was experienced at the first laser application, mainly because of the insertion and the movements of the probe. Finally, the technique was very easy to perform in all women starting from the second application at week 4 and no adverse events were recorded during the study period.

Conclusions

A 12-week treatment with the fractional CO_2 laser was feasible and induced a significant improvement of VVA symptoms by ameliorating vaginal health in postmenopausal women. Further controlled studies should be performed to confirm the present data and to assess the long-term effects of the laser procedure on vaginal tissues.