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Fractional microablative CO_2 laser in breast cancer survivors affected by iatrogenic vulvovaginal atrophy after failure of nonestrogenic local treatments: a retrospective study

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Abstract

Objective

Vulvovaginal atrophy (VVA) is a condition frequently observed in menopause. Its symptoms can significantly affect the quality of life of patients. Since VVA is related to estrogen deficiency, chemotherapy and hormone therapy for breast cancer (BC) might cause VVA by inducing menopause. Given the lack of effective treatment for VVA in BC survivors, we retrospectively evaluated the efficacy and tolerability of fractional microablative CO_2 laser therapy in these patients.

Methods

We treated 82 BC survivors with three cycles of CO_2 laser after failure of topical nonestrogenic therapy. The severity of symptoms was assessed with a visual analog scale (VAS) at baseline and after completion of laser therapy. Differences in mean VAS scores of each symptom before and after treatment were assessed with multiple t tests for pairwise comparisons. Multivariate analyses were used to adjust the final mean scores for the main confounding factors.

Results

Pre versus post-treatment differences in mean VAS scores were significant for sensitivity during sexual intercourse, vaginal dryness, itching/stinging, dyspareunia and dysuria ($P<0.001$ for all), bleeding ($P=0.001$), probe insertion ($P=0.001$), and movement-related pain ($P=0.011$). Multivariate analyses confirmed that results were significant, irrespective of patients' age and type of adjuvant therapy.

Conclusions

This study shows that CO_2 laser treatment is effective and safe in BC patients with iatrogenic menopause. However, the optimal number of cycles to administer and the need for retreatment remain to be defined. Prospective trials are needed to compare CO_2 laser therapy with therapeutic alternatives.