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Pixel co2 laser in the treatment of sexual complains of patients with vulvovaginal atrophy

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Introduction

Menopause is associated with anatomical and physiological changes of the vagina, such as genital atrophy, which can lead to sexual and urinary symptoms in some cases (genitourinary syndrome). To ameliorate these symptoms, CO_2 laser may be a promising method for the treatment of vulvovaginal problems .

Aim

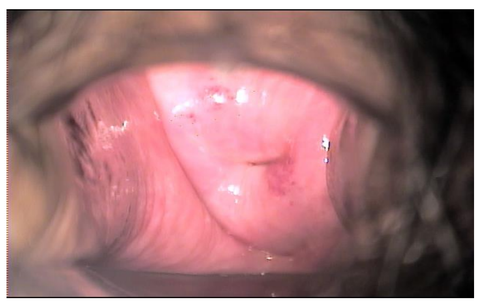
To assess the effects of pixel CO_2 laser on vulvovaginal atrophy for the treatment of sexual complains.

Method

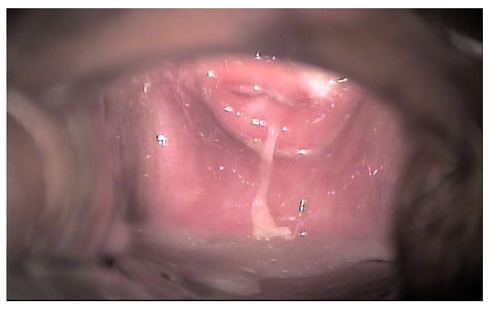
31 subjects with vulvovaginal atrophy were submitted to 1 to 3 treatment sessions of vaginal pixelated CO_2 laser (Alma Laser Femilift™), consisting in 3 sets of 12 circumferential pulses at 1cm increments from de vaginal apex until the introitus at 100mj/pixel, ablation matrix 9x9 dots, pulse mode 1Hz. Each patient answered a questionnaire where they described sexual and urinary symptoms in a scale and were evaluated about physical changes in vaginal anatomy before and after every procedure.

Endpoints: Sexual intercourse frequency, anatomical changes (vaginal wrinkles, paleness of the mucosa, vaginal wall fragility, hemorragic suffusion, endocervical mucus) ; subjective response of patients about: pain at intercourse (penetration and in depth), urinary incontinence, fecal incontinence, desire, orgasm, dryness.

Femilift™ Vaginal Laser Probe and laser parameters (image courtesy of Alma Lasers)



64yo, 12 years of menopause. Colposcopic view before CO_2 vaginal laser: cervical atrophy with hemorrhagic suffusion, paleness of vaginal wall and lack of vaginal wrinkles.



Colposcopic view after CO_2 vaginal laser: epithelized cervix with escamous-columnar junction =0, type 2 normal transformation zone . Presence of cervical mucus and intense aqueous vaginal content.

Results

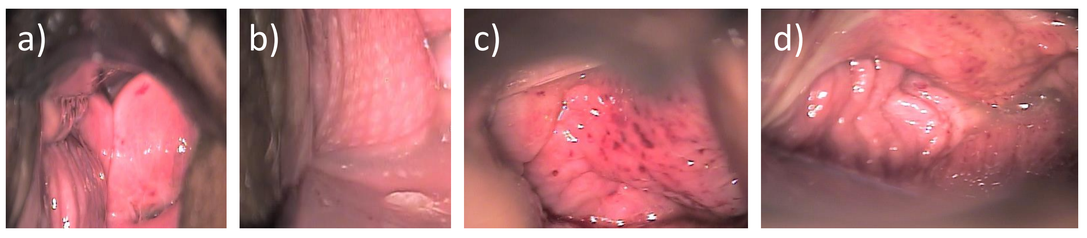
Our sample was composed of 31 women, aged 48 to 76 y (mean 59,01 ± 6,72 y). Eight patients received one round of laser therapy, 13 received two, and 10 received three rounds.

Mean time of menopause was 10,03 ± 6,55 years. Time of menopause negatively influenced on the results (<0.05).

Laser application was usually followed by symptoms like abundant aqueous vaginal discharge lasting mean 3,6 days ± 2,7 days. Bleeding was present after 35,04% of laser sessions.

Vulvar burning was referred by ‘26,08% of patients after laser application. One single report of vulvar itching. Vaginal discharge was found in 8,78% of patients after laser.

Sexual intercourse frequency: The number of sexual intercourses per month improved after the laser during the follow up: 1,85 ± 2.17 (baseline), 3.71 ± 3.74 (1st month of treatment), 5.78 ± 6.40 (2nd month of treatment), 7.6,40 ± 6,17 (3rd month of treatment, p<0.01 compared the baseline with 2nd and 3rd month of treatment). 20 patients reported increase in intercourse frequency, 3 reported decrease and 8 reported no change at all.



*Evolution of CO_2 laser on the vaginal wall in patient 57 years, 9 years of menopause. **a)** Baseline: paleness of mucosae, petechiae and lack of wrinkles; **b)** Immediatelly after Laser application: pattern of white dots over vaginal wall, abundant hydrorrhea; **c)** 3 days after treatment: hemorrhagic suffusions, increase of redness of mucosae; **d)** after 5 days: presence of vaginal wrinkles, abundant aqueous vaginal discharge (hydrorrhea) and mucous secretion.*

Anatomical changes

Vaginal wrinkles: 29 patients presented absence or decrease of the wrinkles in vaginal mucosa. Wrinkles were restored after treatment in 25 patients (8 after 1 session, 16 after 2 sessions and 1 after 3 sessions).

Paleness of the mucosa was present in 29 patients, improving in 27 after the first laser session.

Vaginal wall fragility: 18 patient presented bleeding at insertion of vaginal speculum. After one round of laser, only two patients remained with this symptom.

Hemorragic suffusion, in 23 patients were found petechiae in the vaginal mucosa. After the first laser session, the aspect of vaginal mucosa improved in 19 patients. Two patients improved after the second laser session and two patients showed no response.

Endocervical mucus was absent in 29 patients, being restored in 27 patients after the first laser session.

Subjective response of patients

Pain at intercourse (penetration and in depth): Complaints of superficial and deep pain during sexual intercourse were reported by 26 patients. Two patients denied dyspareunia and three had no sexual activity. After treatment, 23 (88,46%) reported decrease of pain.

Urinary incontinence: Urinary incontinence was reported by 16 patients. It ameliorated after treatment in 13(81,25%) patients.

Fecal incontinence: The number of complaints of fecal incontinence was low in our sample, reported by 4 patients.

Desire: 23 patients reported low sexual desire before treatment. After laser, 21 (91,30%) reported increase in sexual desire. One patient reported no change and another one reported decrease in sexual desire after treatment.

Orgasm: Anorgasmia was reported by 10 participants. 80% reported improvement in orgasm quality after laser applications.

Vaginal dryness: Vaginal dryness was reported in 29 patients. After treatment, there was no complains of dryness in all patients.

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Conclusions

Vaginal CO_2 laser improved the frequency of sexual intercourse and ameliorated the sexual complains and stress urinary incontinence.

Time of menopause negatively influenced on the results.

Acknowledgements

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