

Vaginal application of fractional CO2 laser (FemiLift) and improvement of female sexual response

Authors: Femopase, G; Femopase, S; Alonso Salas, SM

Córdoba, Argentina

Abstract

Introduction. A common consultation in women is the feeling of vaginal laxity, referring decreased genital friction during intercourse thus affecting sexual response. Application of fractional CO2 laser (FemiLift), which splits the laser beam into a 9 x 9 matrix of 81 tiny spots, creates thermal and ablative effect on vaginal walls, triggering a significant improvement in the production of collagen within vaginal submucosa. Furthermore, retraction and decreased diameter of the vaginal canal improves friction and traction on bulbo-clitoral organ which improves sexual response. This treatment is outpatient, painless, quick and simple to perform in the office.

Materials and Methods. This is a quantitative, descriptive transversal study. The sample consisted of 241 patients aged 38-60 years. Inclusion criteria are delivery, vaginal laxity, decreased sexual response; this last variable evaluated by the Female Sexual Function Index (FSFI). Exclusion criteria were vaginal infection, pregnancy, infection with Herpes Virus, gynaecological oncologic disease, chronic corticosteroid therapy, medication that causes photosensitivity, HPV infection, collagen disease.

Results. The sexual response of women through the FSFI before and 60 days after treatment (overall index score) was evaluated. The results were: 80% of women experienced a marked improvement in sexual response (+6 points), 11% reported moderate improvement (4-5 points), 6% slight improvement (2-3 points) and 3% saw no significant changes. On women who experienced a marked improvement in sexual response (80%), 86% reported improvement in orgasmic response, 65% noticed improvement in vaginal lubrication with 54% increased total satisfaction domain score.

Conclusion. Vaginal application of fractional CO2 laser (FemiLift) is a minimally invasive technique that significantly improves sexual response of women. This procedure is ambulatory, painless and uncomplicated.

Introduction

The vaginal laxity is a frequent complaint. This leads to reduced friction and traction on bulbo-clitoral organ generating a decrease in the female sexual response. Orgasm and female sexual response are affected in women who present vaginal laxity. The sexual response does not depend exclusively on the anatomical indemnity of the genitals, but this is an essential aspect of sexual response.

The factors that predispose women to have vaginal laxity contemplate delivery whether dystocic or multiparity, use of forceps, vaginal tears, perimenopause, menopause.

At present there are few studies studying orgasmic frequency in women with vaginal laxity. This study aims to assess female sexual response after the application of carbon dioxide laser vaginal split. The thermal and laser ablative effect allows us to improve the vaginal laxity, by retracting and stimulating the formation of collagen. Application of fractional CO2 laser (FemiLift), which splits the laser beam into a 9 x 9 matrix of 81 tiny spots, creates thermal and ablative effect on vaginal walls, triggering a significant improvement in the production of collagen within vaginal submucosa.^{1 2 3}

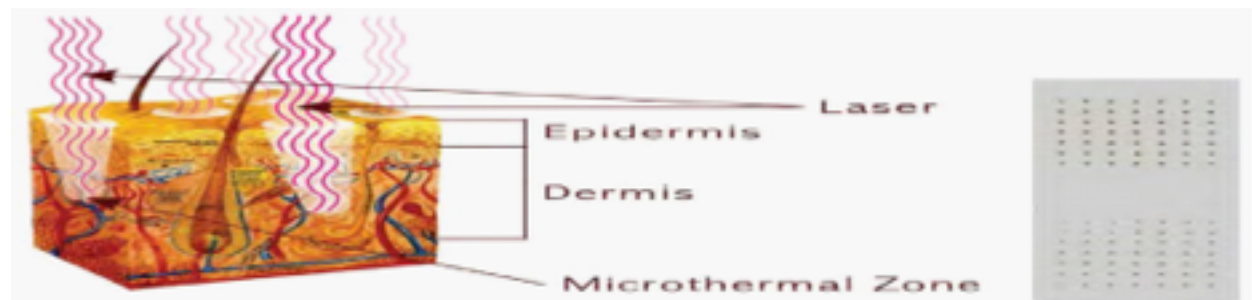


Figure 1. Pixel fractional CO2 laser



Figure 2. Effect of fractionated laser vaginal mucosa

The female sexual response was assessed by the FSFI questionnaire, which allows women to express their difficulties objectively.

Materials and Methods

This is a quantitative, descriptive transversal study. Realized in the city of Cordoba, Argentina, in the period from August 2013 to March 2015.

The sample consisted of 241 patients aged 38-60 years. Sampling was systematic of those women who go to the gynecologist.

The inclusion criteria were delivery, vaginal laxity, decreased sexual response; this last variable evaluated by the Female Sexual Function Index (FSFI)⁴. All women were performed anamnesis, physical and gynecological examination, and the FSFI questionnaire to assess sexual response. The FSFI is formed by 19 questions that assess six domains, desire, satisfaction, lubrication, orgasm, pain, excitement. Each domain has its questions with a score generated by a subtotal and the total sum of these arises of the index. This questionnaire was conducted in the first consultation and again at 60 days after application of laser. The questionnaire was completed by each woman at home to do it in this way quietly thinking in all aspects analyzed. This allows us that she realizes of what creates difficulties in their sexual response.

The exclusion criteria were vaginal infection, pregnancy, infection with Herpes Virus, gynaecological oncologic disease, chronic corticosteroid therapy, medication that causes photosensitivity, HPV infection, collagen disease.

Some of these criteria are part of the contraindications for application of carbon dioxide laser vaginal mucosa.

Exclusion were considered positive for those pathologies diagnosed prior to the interview.

It should inform the patient about the procedure, its effects and possible complications (burning, vaginal transudate), is performed consent reported.

The application of laser procedure involves placing a speculum and cleanse the vaginal walls with a swab.

Removing the speculum. Lubricate the handpiece (Femilift) with water based lubricant or saline. The handpiece is placed in the vagina and positioned toward the area where you want to apply laser. In this case, for vaginal laxity, was performed in 3 and 9 hour. This procedure was repeated three times on each side.

Three sections were performed one per month.

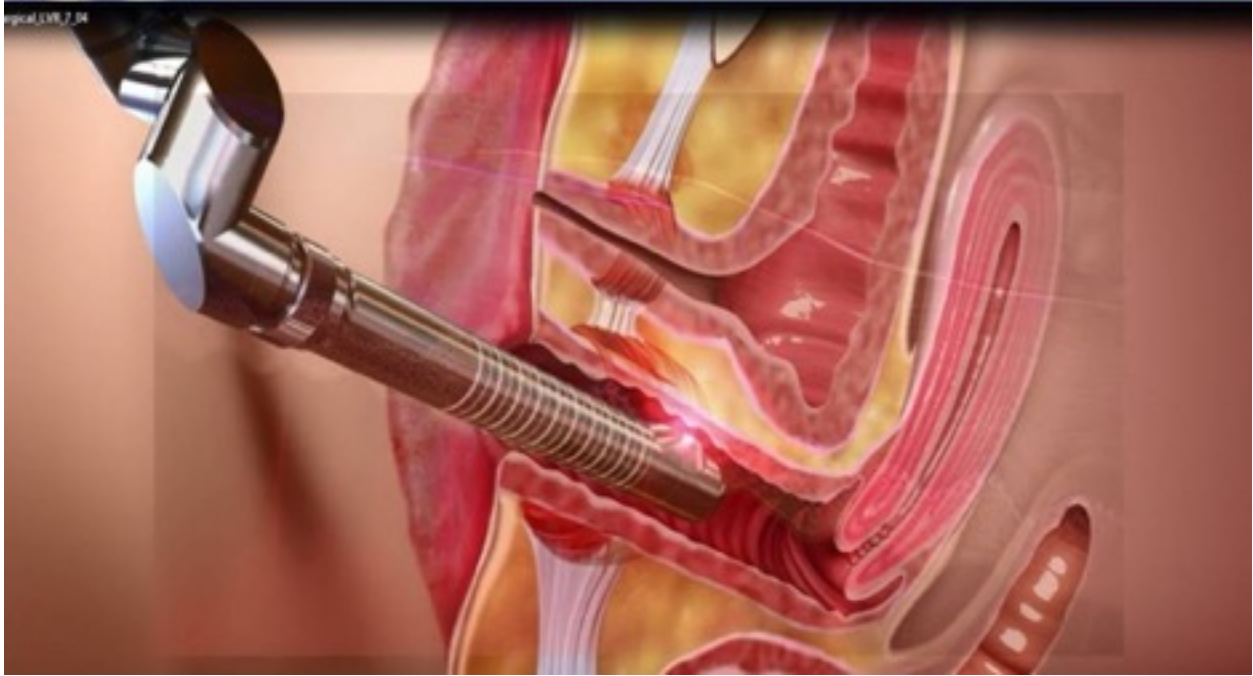


Figure 3. Application of CO2 laser in the vagina



Figure 4. Disposable handpiece



Figure 5. The handpiece has a line along that lets you know the area to affect the laser beam

Sixty days after the last application the FSFI questionnaire was performed to assess changes in sexual response of women.

Results

The sexual response of women through the FSFI before and 60 days after treatment (overall index score) was evaluated. Descriptive statistical analysis of the variables was performed.

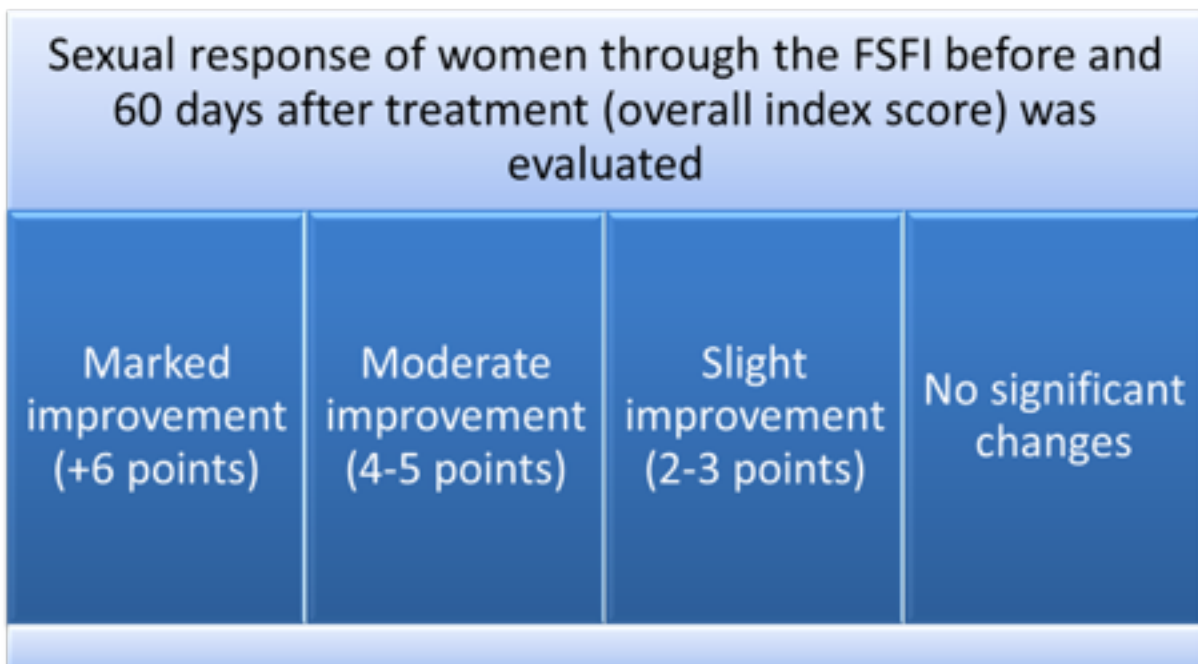


Figure 6. Overall index evaluation of FSFI

The results were: 80% of women experienced a marked improvement in sexual response (+6 points), 11% reported moderate improvement (4-5 points), 6% slight improvement (2-3 points) and 3% saw no significant changes.

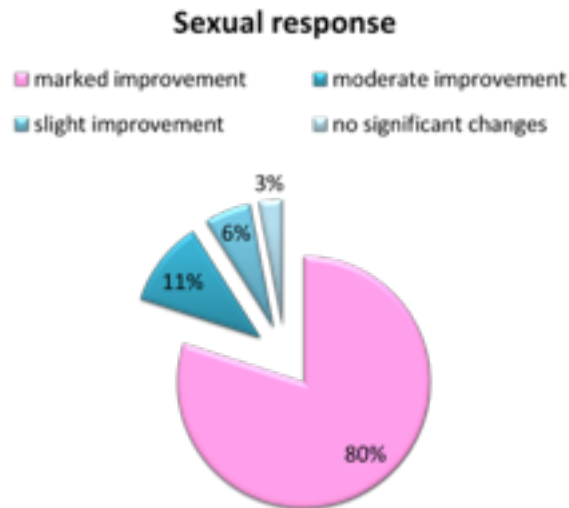


Figure 7. FSFI index changes

On women who experienced a marked improvement in sexual response (80%), 86% reported improvement in orgasmic response, 65% noticed improvement in vaginal lubrication with 54% increased total satisfaction domain score.

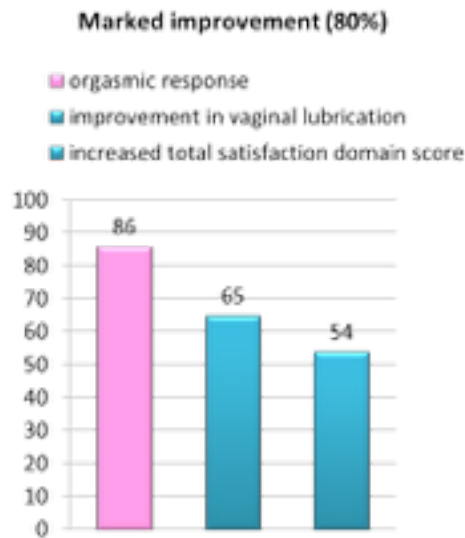


Figure 8. Domains generated improvement of FSFI

Comments

No previous studies have found that analyze changes in female sexual response after the application of fractional CO2 laser with handpiece Femilift.

A study entitled "vaginal erbium laser for the treatment of genitourinary menopausal syndrome: preliminary results", says that the genitourinary menopausal syndrome affects up to 50% of postmenopausal women. This may interfere with sexual function and quality of life. At the end of treatment the results were significant improvement in symptoms (vaginal dryness and dyspareunia) and 93.4% of patients described the procedure as excellent or good.⁵

However to have greater thermal effect, the CO2 laser creates greater stimulation of collagen formation.

Conclusion

Application of fractional CO2 laser is an outpatient, painless and uncomplicated procedure that improves female sexual response. The effect of laser stimulate collagen production in the vaginal mucosa and to generate retraction in the same. Improved traction on bulbo-clitoral organ improves sexual response.

Bibliography

1. Cisnero Vela JL, Camacho Martinez F. Laser fuentes de luz pulsada intensa en dermatología y dermocosmetica. Ed. Amolda. 2002. Caracas, Venezuela.
2. Alexiades-Armenakas, M. R., J. S. Dover, et al. (2008). "The spectrum of laser skin resurfacing: nonablative, fractional, and ablative laser resurfacing." *J Am Acad Dermatol* 58(5): 719-737; quiz 738-740.
3. Jung, C. W. (2008). "Understanding of CO2 laser in dermatology." *Journal of dermatology korean society for laser medicine and surgery* 12(1): 90-99.
4. Raymond Rosen, Ph.D., Dept. of Psychiatry, Robert Wood Johnson Medical School, Piscataway, NJ 08854, USA. The Female Sexual Function Index (FSFI): A Multidimensional Self-Report Instrument for the Assessment of Female Sexual Function. *Journal of Sex & Marital Therapy*, 26:191–208, 2000 Copyright © 2000
5. LEVANCINI A, Marco y GAMBACCIANI, Marco. *Rev. chil. obstet. ginecol.* 2015. vol.80, n.2, pp. 145-150. ISSN 0717-7526. Láser erbium vaginal como tratamiento del síndrome genitourinario de la menopausia: resultados preliminares.