

Use of the *MonaLisa Touch*[®] Treatment for Post-Partum Dyspareunia. A Pilot Study

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Objectives: This pilot study aimed to assess the efficacy in treating perineal pain symptoms in women who had late post-partum dyspareunia.

Materials and methods: The study involved six patients who had late post-partum dyspareunia. Over a time period from January 1, 2013 through August 31, 2014, patients were subjected to *MonaLisa Touch*[®] CO₂ laser treatment.

Results: Study results showed that two months after the treatment, out of a total of six patients, four treated for pain following episiorrhaphy or vaginal tear reported improvement in symptoms. The other two patients who underwent cesarian section, one has noticed a significative improvement while the other patient had modest pain reduction after two treatments.

Conclusions: This pilot study has shown the effectiveness of the *MonaLisa Touch*[®] fractional CO₂ laser treatment in patients with post-partum perineal pain.

Key words: perineal trauma, CO₂ fractional laser, post-partum dyspareunia, episiotomy, perineal tear.

INTRODUCTION

The term perineal pain can be defined as a localized pain in the genitalia and the pelvic floor, which can be caused both by the perineal musculotendinous unit and organs in the pelvic.

The pain is typically felt in the perineal region with possible radiation to the inguinal, lumbar, genital, sacrococcygeal and suprapubic levels.

The intensity and frequency of algic symptoms can vary from case to case; the pain can either be associated with specific symptoms affecting the urogenital and/or digestive apparatus as well as the central or peripheral nervous system, or the only clinical manifestation.

This painful and debilitating condition that affects women is often associated with psychological suffering, causing negative repercussions on their lives¹⁻².

Indeed, these conditions can cause anxiety and/or depression in women, social and working restrictions, sexual dysfunction, and even prevent them to seek medical help.

Perineal pain occurs quite frequently in postpartum spontaneous³⁻⁴, episiotomy-assisted vaginal delivery and instrumental delivery (forceps and vacuum-assisted), and is a depleting experience for puerperants.

Vaginal and perineal tears are also quite frequent in normal vaginal deliveries. Treatment with FANS and opioid painkillers can be effective, but impossible to administrate in cases of intolerance to painkillers or when long term treatments are required to resolve pain.

In this context, a controlled trial⁵ conducted in 237 women was performed to compare the effectiveness, side effects, and patient preference of two painkilling treatments for postpartum perineal pain. The selected patients had either an episiotomy or a third- or fourth degree perineal tear during vaginal delivery. One analgesic was ibuprofen and the other one, an association of paracetamol (acetaminophen with codein). Both painkilling treatments administrated orally every 4 hours were similar in efficacy. However, a significant percentage of treated women showed undesired side effects, such as nausea, gastralgia and disorientation, and some were rather unpleasant.

For our pilot study, to help ease relief of perineal pain symptoms with as few side effects as possible, we have chosen to use the *MonaLisa Touch*[®] method: an innovative CO₂ laser treatment developed by DEKA, which gently acts on the tissues to stimulate production of collagen, improve functionality of the area treated and restore the correct trophic balance of the mucosa.

MATERIALS AND METHODS

Between January 1, 2013 through August 31, 2014, 6 patients were treated for late post-partum dyspareunia at Gynaecological Endoscopy Functional Unit of the Republic of San Marino State Hospital. One year after childbirth those patients complained of persistent perineal pain and were unable to have a satisfactory love life.

Four patients had undergone episiorrhaphy or repair of a second- or third-degree vaginal tear, while two patients had had a caesarean. The patients reported particularly intense pain at the site of a past perineal scar, especially at the introitus and radiating out towards the rectum.

All of the patients had a pH between 5 and 7, and the Pap test and vaginal swab performed two weeks before the treatment resulted negative.

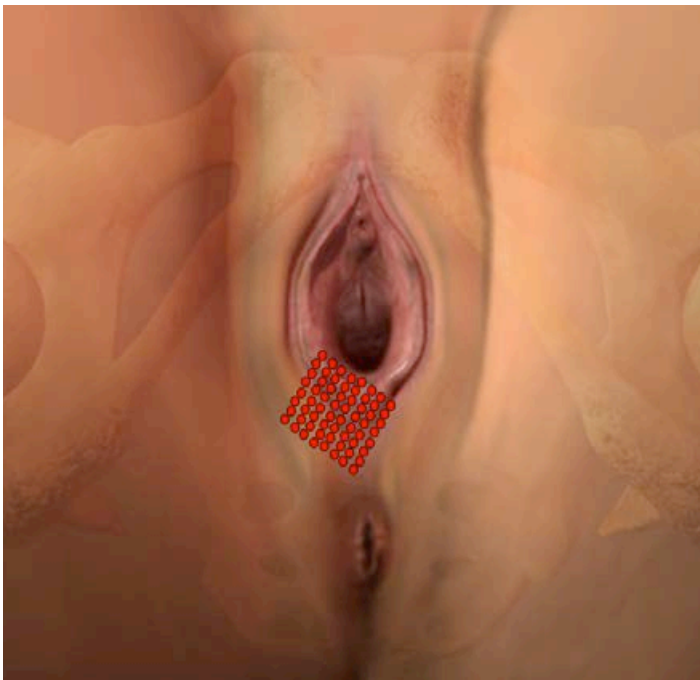


Fig. 1: Area where the laser treatment is usually performed.

Patients were subjected to the *MonaLisa Touch*[®] CO₂ laser treatment (SmartXide² V²LR system by DEKA - Florence, Italy).

Using a handpiece with 90° mirror, a treatment inside the vaginal canal was administrated using a power of 40W with a dwell time of 1000 μs, a spacing of 1000 μm and a Smart Stack level 2. At the introitus and in the vulvar site, a treatment was administrated using a power of 30W, at dwell time of 500 μs, spacing of 500 μm and a Smart Stack level 1.

The thermal energy of the laser was applied about 4-6 cm from the introitus, inside the vaginal canal, and about 4 cm outside the introitus on the scar wound or pain site, as shown in Figure 1.

In one case where a patient had a history of caesarean, a second session was needed due to poor response to treatment.

RESULTS

Study results revealed that two months after the treatment, all four patients treated for pain following episiorrhaphy or vaginal tear showed a significant improvement of the subjective symptoms. In particular, dryness was reduced by 69.23%, dyspareunia by 70.73% and pain at the introitus and in the perineovulvar region by 50%, as the graph shown in Figure 2.

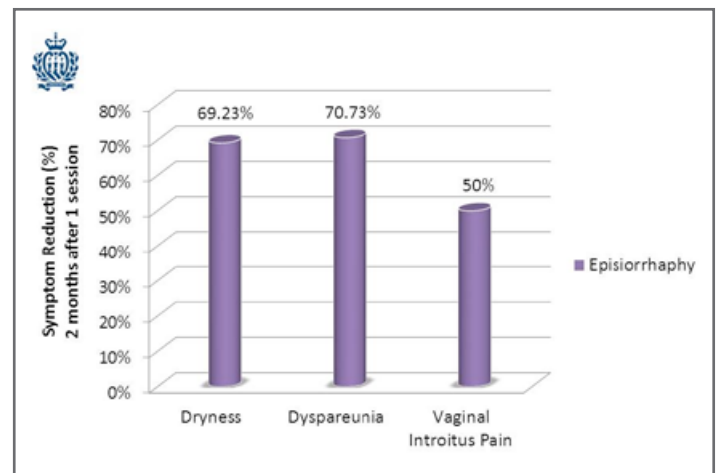


Fig. 2: Main percentage of pain symptoms reduction after one *MonaLisa Touch*[®] session in patients who underwent episiorrhaphy or repair of a second- or third-degree vaginal tear.

As for the two patients that had had a caesarean section, one had noticed a significative improvement after only one session (both dryness and dyspareunia improved by 50%), while the other patient reported no improvement after two treatments. This difference is probably attributable to the different pain aetiology disclosed by the two patients.

DISCUSSION

Only one of six patients (who had a caesarean) needed a second application because of poor response to first treatment. The remaining five patients reported a noticeable improvement of the subjective and objective symptoms in such way that they could resume sexual intercourse after months of abstinence.

It should be pointed out that almost all the patients have tried unsuccessfully options in the past for finding a remedy (physiotherapy, perineal massage, biofeedback, soothing anti-inflammatory creams), and during the check-up they expressed their amazement and gratitude for the marked reduction, if not disappearance of the symptoms.

One woman also became pregnant thanks to the laser treatment, as she was once again able to have intercourse with minimal pain, something she could not even think of before. This improvement allowed the patients to once again enjoy an untroubled intimate relationship with their partners and overcome not only the physical, but also the increasingly psychological hurdle.

The only patient that reported just a little less pain was one of the two who suffered from post-caesarean perineal pain. It is moreover difficult to fully understand the causality of this "late" post-caesarean dyspareunia and there is no clear support for hypotheses in literature of a causal relationship of caesarean delivery.

CONCLUSIONS

This pilot study has shown the effectiveness of the *MonaLisa Touch*[®] fractional CO₂ laser treatment in patients with post-partum perineal pain. This method designed to solve the problems related to post-menopause vaginal atrophy⁶⁻¹⁰ has proven to be extremely beneficial and also effective in other particular situations thus far difficult to resolve.

REFERENCES

1. Dyspareunia following childbirth. C. Kettle, K. Ismail, F. O'Mahony. *The Obstetrician & Gynaecologist* 2005; 7:245-249.
2. Postpartum Sexual Dysfunction: A literature review of risk factors and role of mode of delivery. A. Sayasneh, I. Pandeva. *BJMP* 2010;3(2):316.
3. Sexual function in women after delivery: Does episiotomy matter? I. Leal, S Lourenço, R Oliveira, A Carvalheira, J. Maroco. *Health* Vol.6, No.5, 356-363 (2014).
4. Late post-partum dyspareunia: Does delivery play a role? A. Fauconnier, A. Goltzene, F. Issartel, J. Janse-Mare, B. Blondel, X. Fritel. *Prog Urol* 2012, Article original 22, 4, 225-232.
5. Ibuprofen versus acetaminophen with codeine for the relief of perineal pain after childbirth: a randomized controlled trial. E.A. Peter, P.A. Janssen, C.S. Grange, M.J. Douglas. *CMAJ* October 30, 2001 165:1203-1209.
6. A 12-week treatment with fractional CO₂ laser for vulvovaginal atrophy: a pilot study. S. Salvatore, R.E. Nappi, N. Zerbinati, A. Calligaro, S. Ferrero, M. Origoni, M. Candiani, U.L. Maggiore. *Climacteric* Aug 2014, Vol. 17, No. 4: 363-369.
7. Microablative fractional CO₂ laser improves dyspareunia related to vulvovaginal atrophy: a pilot study. S. Salvatore, U.L. Roberti Maggiore, M. Origoni, M. Parma, L. Quaranta, F. Sileo, A. Cola, I. Bainsi, S. Ferrero, M. Candiani, N. Zerbinati. *Journal of Endometriosis and Pelvic Pain Disorders* 2014. DOI:10.5301/je.5000184.
8. Sexual function after fractional microablative CO₂ laser in women with vulvovaginal atrophy. S. Salvatore R.E. Nappi, M. Parma, R. Chionna, F. Lagona, N. Zerbinati, S. Ferrero, M. Origoni, M. Candiani, U.L. Maggiore. *Climacteric* Oct 2014, 21:1-21. [Epub ahead of print].
9. Microscopic and ultrastructural modifications of postmenopausal atrophic vaginal mucosa after fractional carbon dioxide laser treatment. N. Zerbinati, M. Serati, M. Origoni, M. Candiani, T. Iannitti, S. Salvatore, F. Marotta, A. Calligaro. *Lasers Med Sci* 2014 Nov 20. [Epub ahead of print]
10. Tratamiento de la atrofia vaginal en la menopausia con microablacion con laser de CO₂ fraccionado. Un nuevo enfoque. P. González Isaza, A.I. Ruiz Rosas, L. Galindo. *Revista de Enfermedades del Tracto Genital Inferior. COMEGIC* 2014, 8(1); pp. 36-40.