



Case report: Application of the biomechanical model of Fascial Manipulation® in the case of vulvodynia

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ABSTRACT

Vulvodynia is one of the more common pelvic floor dysfunction that women suffer from and affects up to 20% of women and is mostly seen as a dysfunction of the pelvis, lumbar spine and hip joint. It is not enough to base gynecological or physiotherapeutic interview only on the symptoms associated with this region of the body, but even seemingly “unrelated” symptoms such as endocrine dysfunctions or skin alterations, which at first may seem unrelated to physiotherapy, need to be taken in consideration. Vulvodynia is a complex and multidimensional problem requiring a comprehensive approach. The Fascial Manipulation concept is the only physiotherapeutic method giving the possibility of such a global analysis of a patient and focused on the cause of effective treatment. The data collected in detail, combined with the motor and palpation verification, allow the therapy to be planned in detail and with a very good result.

Keywords: Chronic urogenital pain; Fascial Manipulation; pelvic floor dysfunction; vulvodynia

INTRODUCTION

This case study will present the possibilities of the Fascial Manipulation® (FM) method to a complex pelvic floor dysfunction, as seen in everyday physiotherapy practice. It provides an overview of treatment and the outcomes with a one year follow up.

Vulvodynia presents as a spectrum of symptoms, often described as persistent or provoked burning in the vulva area of at least six months duration, as typically seen in chronic pelvic pain (CPP) conditions.¹ As a chronic pain syndrome, vulvodynia affects various aspects of a woman's life; personal, social and economic. When literature portrays the disorder as a global and holistic dysfunction, with a range of comorbidities, it implies a need for a global, holistic and multidisciplinary approach to the management of the problem.² Physiotherapists are well

qualified to address such pain disorders, giving due attention to the anatomical and physiological factors from a myofascial perspective, an appropriate first line of intervention.^{3,4} In this article we demonstrate the application of the biomechanical model of (FM) method for internal dysfunction as an effective treatment of CPP in cases such as vulvodynia

CASE REPORT

Ewelina is a 28-years-old woman, working as a clerk for the last four years. She was referred by a gynecologist, who diagnosed her with vulvodynia, based on the presence of symptoms of nine years duration. Over the last two months she experienced symptoms of burning, itching, painful tampon insertion and painful intercourse. These symptoms progressively increased until they became unremitting and as a result, she sought a medical consult.

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During the initial assessment a number of other problems were identified. Over the last nine years she also experienced bilateral back pain, which increased after giving birth five years ago and was aggravated by house work. Predating these problems, she reported complaints in extremities, involving her hand and also the head. These date back to when she was a one year old and developed a distal phalanx of the fourth right finger after a cut, which resulted in a bad scar. When she was three-years-old she started to have sight problems involving myopia and began to squint more with her right eye. Ten years ago, she was diagnosed with insulin resistance in conjunction with polycystic ovaries. Six years ago, she developed problems with temporomandibular joint (TMJ), more on the right than on the left, which was manifested in pain and clicking while eating. What is also worth mentioning is that over the last three years she experienced hormonal fluctuations resulting in androgenic alopecia for three years, acne for two years, as well as hypothyroidism for one and half years. According to the biomechanical model guidelines the oldest problem and dysfunction may lead to fascial compensation. According to a working hypothesis based on the model, the hand was a sign that the first segment was affected, from where, all other compensations started, moreover, the glandular and vascular sequences, cutaneous and thermoregulatory systems became involved, including the receptor sequence, together with the photoreceptor apparatus.

Assessment, treatment and results

For the assessment of burning, itching, painful tampon application and painful intercourse the VAS scale was used as well as a self-assessment of life satisfaction. During first session the patient rated the level of burning and itching sensations as 6/10; painful tampon application and sexual intercourse as 9/10, which meant that sexual intercourse and tampon application were impossible. Her self-assessment of life satisfaction was rated as 8/10, which meant that she was not satisfied (1-3 very satisfied, 4-6 satisfied, 7-10 not satisfied).

She underwent eight sessions of FM, with a frequency of six sessions of one per month and two sessions bi-monthly. First session took place on 27th of March 2018 and the last one on 18th of December 2018.

First session, based on the above hypothesis consisted of an assessment which was performed focusing on the Receptor Sequence, which is closely related to functional coordination of the head, hands and feet. The oblique catenary was treated. The next session focused on the oblique catenary as well. Next two sessions revolved around the structure of the latero-lateral line, and the treatment of this catenary gave the expected result. The three catenaries are shown in Figure 1, Figure 2 and Figure 3.

Subsequent therapies were aimed at balancing the tension in the myofascial system. In general, there were 54 points (CFs and CCs) treated and 26 quadrants of superficial fascia.

The final result was very good, with burning and itching sensation completely resolve (0/10); both tampon application and sexual intercourse became possible with no pain (0/10); and self-assessment of life satisfaction was 3/10 (very satisfied). The most positive effect was noted after the fourth session, when the level of pain and burning sensations decreased to 3/10. What is also worth mentioning is the fact that all other comorbidities, such as bilateral back pain, TMJ pain, clicking and acne disappeared. Moreover, during a follow up ultrasound of the abdominal wall, the number of ovarian cysts decreased from 16 to only one. The result of the therapy was again verified by a follow up phone call a month later, and then after 4 months, 8 months and 12 months following the conclusion of therapy. After the final follow up the gains were still present and none of symptoms came back.

Using the model of the FM method interconnects autonomic, visceral and hormonal connections creating the potential to impact multiple systems. This enables such results as balancing hormonal levels, decreasing the number of ovarian cysts and improving acne. This may seem unattainable by means of manual

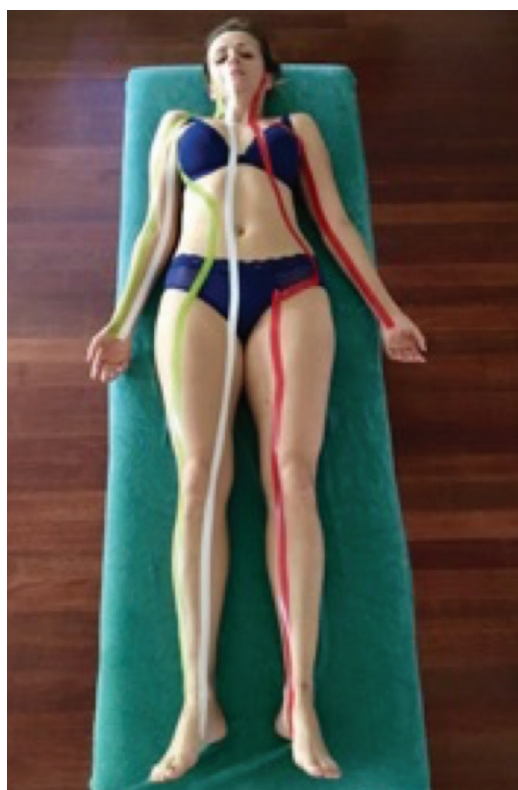


Figure 1. Photo of the three catenaries in front. White line; AP, Yellow line; catenary LL, Red line; OB
AP: Anterio-posterior, LL: Latero-lateral, OB: Oblique catenary

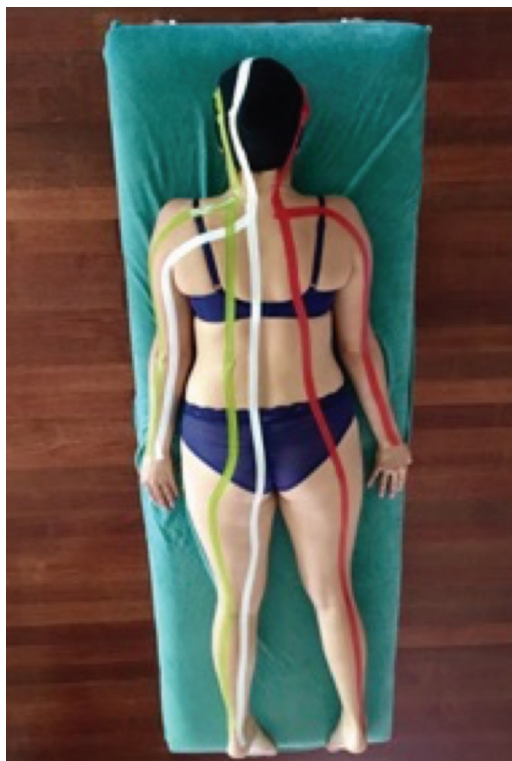


Figure 2. Photo of posterior catenaries

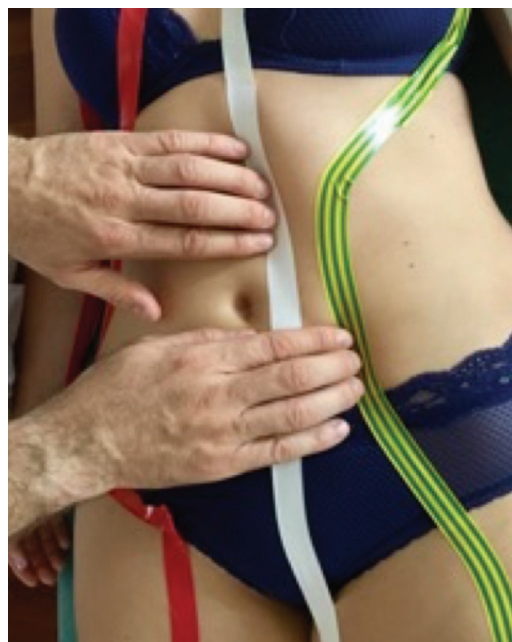


Figure 3. Photo of comparative palpation of the antero-posterior and latero-lateral catenary. The aim of palpation is to localize the most altered point of points creating the line of tension of each catenary

therapy but it can be explained by the FM model which says, that improving or restoring appropriate vital space for the organ has positive influence on its function.^{5,6} Such results are attainable

as demonstrated in the case study presented. Further research into fascial mechanisms will assist in further elaborating the mechanisms and means by which such outcomes are possible.

CONCLUSIONS

Based on the above case, the FM method may prove to be an effective tool for the treatment of patients with chronic urogenital pain. The global approach to dysfunction allows for a cause-oriented, or source-oriented treatment of an altered fascial system. In the case of Ewelina, the key element turned out to be manipulation of the fascia in the extremities of the body, hands, head and feet, triggered by trauma to the right finger in childhood which became a starting point for fascial imbalance. Therefore, we can hypothesize that no matter what problem the patient has, the most important element is to find the primary disorder in the fascial system. This is especially the case when dealing with long-lasting chronic pain, involving sensitive and delicate areas such as the pelvic floor, both from the perspective of the patient, and their relations with a partner or husband.

DISCUSSION

The complexity of CPP affects up to 20% of women and is mostly seen as a dysfunction of the pelvis, lumbar spine and hip joint.⁷ It is not enough to base gynecological or physiotherapeutic interview only on the symptoms associated with this region of the body, but even seemingly “unrelated” symptoms such as endocrine dysfunctions or skin alterations, which at first may seem unrelated to physiotherapy, need to be taken in consideration.⁸ Hartman and Sarton⁹ claims that normalizing all disorders may be pivotal in decreasing complaints of chronic vulvar pain and sexual dysfunction. There are suggestions that pelvic floor muscles hypertonicity is a perpetuating factor in CPP, but it is worth asking why pelvic floor muscle are in a hypertonic state?¹⁰ Are they the source of problem or a symptom of fascial imbalance in the body? Berghmans¹¹ emphasis on the role of musculoskeletal compensations, as a significant contributor, forms part of a holistic approach to the CPP. The biomechanical model and FM method helps to ensure that nothing is overlooked or missed because of its thorough data collection protocol and acknowledgement of the psychological component.¹¹ There is no significant evidence that treating local hypertonicity provides long lasting results, in light of the fact that a 50% improvement is equal to placebo effect.¹²

Many authors emphasize the need to create a protocol for the assessment and treatment of vulvodynia. Due to the huge variability of potential causes of provoked vulvodynia, the FM method seems to meet the criteria of a diagnostic and therapeutic

tool in such a complex problem as CPP.¹³ Morin et al.¹⁴ states that there is not enough research information to provide a clear directive on how to secure the best result in dealing with provoked pelvic pain in cases such as vestibulodynia. Studies with high risk of bias and focused on local treatment (biofeedback, dilators, electrical stimulation) were partially successful but only in reduction of pain and not in eliminating the pain.¹⁴ Similar observations were made by Gentilcore-Saulnier et al.¹⁵. Although the author recognizes the role of myofascial factors in CPP, they overlook the importance of the continuity of the fascial system in the human body. It is also worth mentioning that an incorrect activation of the autonomic nervous system (ANS) is a possible and important element in provoking symptoms. Itching, burning sensations are related to superficial fascia and cutaneous nerves, which have direct connection with paravertebral and prevertebral ganglia of the ANS. These interactions are well described in the FM model and may also explain some of the psychogenic components of CPP. This helps in understanding how psychological and emotional aspects may impact on pelvic floor muscles and why they are important in the assessment of CPP.¹⁶ This is significant in light of the fact that a prior diagnosis of anxiety disorder may contribute to a tenfold increase in sexual pain.¹⁷ Many authors propose a multidisciplinary approach to the management of CPP. Consequently, physiotherapeutic, psychological and educational aspects are all important in achieving a long-lasting result. The FM method is consistent with such an approach.^{18,19}

DISCLOSURES

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REFERENCES

1. Vural M. Pelvic pain rehabilitation. *Turk J Phys Med Rehabil* 2018; 64: 291-9.
2. Hartmann D, Sarton J. Chronic Pelvic Pain. *Best Pract Res Clin Obstet Gynaecol* 2014; 28: 977-90.
3. Prather H, Dugan S, Fitzgerald C, Hunt D. Review of anatomy, evaluation, and treatment of musculoskeletal pelvic floor pain in women. *PM R* 2009; 1: 346-58.
4. Morin M, Carroll MS, Bergeron S. Systematic Review of the Effectiveness of Physical Therapy Modalities in Women With Provoked Vestibulodynia. *Sex Med Rev* 2017; 5: 295-322.
5. Stecco L, Stecco C. *Fascial Manipulation for Internal Dysfunctions*. Piccin Nuova Libreria, 2014; 36-40.
6. Stecco L, Stecco A. *Fascial Manipulation for Internal Dysfunctions, Practical Part*. Piccin Nuova Libreria, 2014; 204-11.
7. Prendergast SA. Pelvic Floor Physical Therapy for Vulvodynia: A Clinician's Guide. *Obstet Gynecol Clin North Am* 2017; 44: 509-22.
8. Prather H, Spitznagle TM, Dugan SA. Recognizing and treating pelvic pain and pelvic floor dysfunction. *Phys Med Rehabil Clin N Am* 2007; 18: 477-96.
9. Hartmann D, Sarton J. Chronic pelvic floor dysfunction. *Best Pract Res Clin Obstet Gynaecol* 2014; 28: 977-90.
10. Hartmann D. Chronic vulvar pain from a physical therapy perspective. *Dermatol Ther* 2010; 23: 505-13.
11. Berghmans B. Physiotherapy for pelvic pain and female sexual dysfunction: an untapped resource. *Int Urogynecol J* 2018; 29: 631-8.
12. Brotto LA, Yong P, Smith KB, Sadownik LA. Impact of a multidisciplinary vulvodynia program on sexual functioning and dyspareunia. *J Sex Med* 2015; 12: 238-47.
13. Goldstein AT, Pukall CF, Brown C, Bergeron S, Stein A, Kellogg-Spadt S. Vulvodynia: Assessment and Treatment. *J Sex Med* 2016; 13: 572-90.
14. Morin M, Carroll MS, Bergeron S. Systematic Review of the Effectiveness of Physical Therapy Modalities in Women With Provoked Vestibulodynia. *Sex Med Rev* 2017; 5: 295-322.
15. Gentilcore-Saulnier E, McLean L, Goldfinger C, Pukall CF, Chamberlain S. Pelvic floor muscle assessment outcomes in women with and without provoked vestibulodynia and the impact of a physical therapy program. *J Sex Med* 2010; 7: 1003-22.
16. Stein A, Sauder SK, Reale J. The role of physical therapy in sexual health in men and women: Evaluation and treatment. *Sex Med Rev* 2019; 7: 46-56.
17. Basson R, Gilks T. Women's sexual dysfunction associated with psychiatric disorders and their treatment. *Womens Health (Lond)* 2018; 14: 1745506518762664.
18. Brotto LA, Yong P, Smith KB, Sadownik LA. Impact of a multidisciplinary vulvodynia program on sexual functioning and dyspareunia. *J Sex Med* 2015; 12: 238-47.
19. Allaire C, Williams C, Bodmer-Roy S, et al. Chronic pelvic pain in an interdisciplinary setting: 1-year prospective cohort. *Am J Obstet Gynecol* 2018; 218: 114.