



## Case Report

## Treatment of Myofascial Trigger Points of Pelvic Floor with Physiotherapeutic Package: A Case Report

Esmail Shokri<sup>1</sup>, Marzieh Mohamadi<sup>1</sup>, Saeed Heidari<sup>1\*</sup>

<sup>1</sup>Student Research Committee, Department of Physiotherapy, School of Rehabilitation Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

### ARTICLE INFO

*Article History:*

Received: 15/1/2015

Revised: 17/2/2015

Accepted: 30/2/2015

*Keywords:*

Physiotherapy

Pelvic floor muscle

Perineal pain

Trigger point

### ABSTRACT

**Background:** There are various factors that may cause pain and dysfunction in the pelvic region. Myofascial trigger points can likewise contribute in pelvic pain. Common treatments for myofascial trigger points include electrotherapy, laser therapy, massage, ischemic compression, dry-needling, stretch, icing, heating, and biofeedback.

**Case Report:** A 26 year old man with an exertion-related pain that lasted 5 months was referred for physiotherapy consultation. He had no pain at rest but reported a referral pain from perineal region to the anus and muscular stiffness following a bout of physical activity. On palpation there was a trigger point in the perineal region with referral pain to anus. At the beginning of the treatment, the patient was asked to stop his physical activities. The patient received a treatment package which was useful in the management of trigger points. After 7 sessions of treatment the pain was diminished and there was no exercise induced stiffness. The patient was followed for 10 months later and no pain and stiffness was reported.

**Conclusion:** The application of heat, friction massage, stretching, combined with endurance exercise could be an effective treatment for relieving the pain and muscular stiffness caused by trigger points.

2014© The Authors. Published by JRSR. All rights reserved.

### Introduction

The pelvis is the base of the human body which connects the upper and lower of the body. Pelvic dysfunction can result in many disorders in the lower extremities and pelvic floor structures [1]. Pelvic dysfunction may be caused by several visceral disorders. However, in up to 40% of cases, the dysfunction may not be correlated with any visceral complication [2]. Another cause of pelvic floor pain could be the existence of myofascial trigger points (MTrPs) [2, 3]. Development or activation of

MTrPs can be the result of muscle abuse and repeated motions as well as prolonged certain postures [2, 4].

MTrPs are hyper-irritable tender nodules in muscles and connective tissues which may induce pain by compression or stretch [3, 5, 6]. MTrPs may exist in any pelvic floor muscle and can cause hyperalgesia and allodynia. MTrPs may refer pain to the perineum, urethra and rectum [3]. Blood circulation may decrease in the sites of MTrPs and result in chronic local hypoxia and ischemia in that areas [3, 7]. Clinical symptoms of MTrPs include taut band, tenderness, referral pain, local twitch response and jump sign [8]. MTrPs are diagnosed by physical examination of the area and patient's feedback [8]. Treatment procedures for MTrPs include electrotherapy (such as transcutaneous electrical nerve stimulation, ultrasound,

\*Corresponding author: Saeed Heidari, School of Rehabilitation Sciences, Abiverdi 1 Street, Chamran Boulevard, Shiraz, Iran. Tel: +98-71-36271551, E-Mail: [saeedheidari298@yahoo.com](mailto:saeedheidari298@yahoo.com)

interferential therapy and laser therapy), massage, ischemic compression, dry-needling, stretching, icing, heating of the area, strain-counter strain, biofeedback, and other treatments. [4, 5, 8].

This report describes a patient suffered from anal pain due to MTrPs in pelvic floor muscles who was treated by a physiotherapeutic treatment package described below.

### Case Report

Patient was a 26 year-old male who suffered from an exertion-related pain in the perineal region for the duration of 5 months. The patient was an office staff who regularly played football three times a week. He reported no pain at rest, however after 30-45 minutes of physical activity, he complained of pain and muscle stiffness in the perineal region and anus. The score of his pain was 8 out of 10 based on a Numerical Rating Scale (NRS) (with 0 as no pain and 10 as extreme) [9]. He was referred to a physician to rule out hemorrhoid. CT-scan and blood biochemical attributes showed normal results. He had no gastrointestinal disease or contextual disorder.

After complete check-up by a physician, the patient was physically re-examined by the physiotherapist. There were no signs of abnormalities on visual examination. Palpation revealed a trigger point in perineal region. Pressure pain threshold at tender point site was 8 out of 10 based on the NRS [9]. Manual muscle testing of the Iliopsoas, back extensor, Piriformis and abdominal muscles was normal but there was a little weakness in gluteus Maximus & medius (Grade: 4+/5). The patient had normal range of motion in lumbar and hip joints. There were no dysfunction in sacroiliac and iliosacral joints based on Gillette's test, standing flexion tests and examination of bony landmarks (anterior superior iliac spine, posterior superior iliac spine & Ischial tuberosity). The results of our examination revealed the existence of a myofascial trigger point in the perineum.

This patient received a customized treatment protocol. To the best of our knowledge, this novel treatment protocol package has not been introduced yet. The treatment package for each session included:

- 1- Twenty minutes of moist heat applied on the perineal region;
- 2- Twenty seconds of friction massage for three times applied directly on the trigger point;
- 3- Thirty seconds of myofascial release technique applied on the pelvic floor muscles, four times per session.
- 4- Five minutes of moist heat applied on the perineal region.
- 5- A set of fifteen seconds of abdominal hollowing and glutei squeezing with twenty second hold time as an endurance exercise. This exercise was done by the patients for three to four times a day.

The aim of this treatment package was to treat trigger points by regaining optimum possible blood circulation in the site under treatment. The treatment continued for seven sessions until the pain stopped. Pressure pain threshold at the trigger point site was assessed after each session. After seven sessions of treatment, the

patient reported no pain without any change in the gluteal muscles strength. He was asked to return to his previous exercise in order to assess his symptoms during physical activities. Tenderness and referral pain was eradicated and he had no complains of pain or stiffness. The patient was followed ten months later and reported no pain and stiffness.

### Discussion

In this case, the application of a specific treatment protocol, relieved the pain and muscle stiffness which was attributed to a perineal trigger point. There is a large body of evidence that shows an association between MTrPs and pelvic pain [10-12]. A prevailing hypothesis regarding the pathogenesis of MTrPs states that muscle injury or overload results in excessive acetylcholine release from motor end plate. This elevated level of acetylcholine causes muscle spasm and results in decrement of arterial flow. Thus, the loss of blood circulation and lack of oxygen, calcium and nutrients affect the surrounding tissue [3, 8, 13, 14].

Previous reports have claimed that, restoring the blood circulation to the site of the trigger points will cure the hyperalgesic spots [7]. Therefore, our aim was to augment the blood circulation at the perineal trigger point in this patient. It is quite possible that the application of this treatment protocol has increased blood circulation to the pathologic site. Subsequently, an increase of tissue mobility would reduce muscle stiffness.

The vessels dilation due to heat is clear [15]. Muscle stretching and friction massage induce hyperemia in the tissue [13]. On the other hand, the pressure can eliminate muscle spasm that resolves insufficient blood circulation to the site [13]. Mohamadi et al. [6] state that muscle relaxation will improve blood circulation to the tissue.

According to Sullivan [16] endurance exercise regimens also improve blood circulation in the tissue. In this case, the repeated abdominal hollowing and gluteal squeezing was applied as an endurance exercise to improve pelvic floor muscle function. Therefore, we would like to state that this protocol might have increased blood flow to the trigger point site which alleviated the pain and stiffness in the patient.

### Conclusion

The application of the therapist's experience-based therapeutic package might increase the blood flow to the impaired site and facilitate tissue mobility. Therefore, in this patient the stiffness, tenderness and referral pain to the anus decreased. Thus it is suggested that this protocol can be used as an effective treatment for MTrPs.

**Conflict of Interest:** None declared.

### References

1. Chaitow L. Chronic pelvic pain: Pelvic floor problems, sacroiliac dysfunction and the trigger point connection. *Journal of Bodywork and Movement Therapies* 2007;11(4):327-39.

2. Starlanyl DJ. Pelvic Pain and Dysfunction, Fibromyalgia, and Trigger Points; 2012.
3. Pastore EA, Katzman WB. Recognizing myofascial pelvic pain in the female patient with chronic pelvic pain. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2012;41(5):680-91.
4. Aguilera F, Martín DP, Masanet RA, Botella AC, Soler LB, Morell FB. Immediate effect of ultrasound and ischemic compression techniques for the treatment of trapezius latent myofascial trigger points in healthy subjects: a randomized controlled study. *Journal of manipulative and physiological therapeutics* 2009;32(7):515-20.
5. Ibáñez-García J, Albuquerque-Sendín F, Rodríguez-Blanco C, Girao D, Atienza-Meseguer A, Planella-Abella S, et al. Changes in masseter muscle trigger points following strain-counterstrain or neuro-muscular technique. *Journal of bodywork and movement therapies* 2009;13(1):2-10.
6. Mohamadi M, Ghanbari A. Tension-Type-Headache treated by Positional Release Therapy: A case report. *Manual therapy* 2012;17(5):456-8.
7. Ghanbari A, Rahimjaberi A, Mohamadi M, Abbasi L, Sarvestani FK. The effect of trigger point management by positional release therapy on tension type headache. *NeuroRehabilitation* 2012;30(4):333-9.
8. Rickards LD. The effectiveness of non-invasive treatments for active myofascial trigger point pain: a systematic review of the literature. *International journal of osteopathic medicine* 2006;9(4):120-36.
9. Downie W, Leatham P, Rhind V, Wright V, Branco J, Anderson J. Studies with pain rating scales. *Annals of the rheumatic diseases* 1978;37(4):378-81.
10. Bassaly R, Tidwell N, Bertolino S, Hoyte L, Downes K, Hart S. Myofascial pain and pelvic floor dysfunction in patients with interstitial cystitis. *International urogynecology journal* 2011;22(4):413-8.
11. Bendaña EE, Belarmino JM, Dinh JH, Cook CL, Murray BP, Feustel PJ, et al. Efficacy of transvaginal biofeedback and electrical stimulation in women with urinary urgency and frequency and associated pelvic floor muscle spasm. *Urologic nursing* 2008;29(3):171-6.
12. Jarrell J. Myofascial dysfunction in the pelvis. *Current pain and headache reports* 2004;8(6):452-6.
13. Blanco CR, de las Peñas CF, Xumet JEH, Algaba CP, Rabadán MF, de la Quintana MCL. Changes in active mouth opening following a single treatment of latent myofascial trigger points in the masseter muscle involving post-isometric relaxation or strain/counterstrain. *Journal of Bodywork and Movement Therapies* 2006;10(3):197-205.
14. Chaitow L, DeLany J. *Clinical application of neuromuscular techniques: the upper body*: Elsevier Health Sciences; 2008.
15. Wolgin F. *The Nursing Assistant* 2005 Ed: Rex Bookstore, Inc; 2005.
16. Sullivan PE, Markos PD. *Clinical decision making in therapeutic exercise*: Appleton & Lange Norwalk, CT; 1995.