

Trigger point injections followed by myofascial release in the treatment of pelvic floor tension myalgia

Krotova N¹, Petrov S¹, Loktev A²

1. Saint-Petersburg First Medical University name I P Pavlov, 2. Fomin Clinic

Introduction

Pelvic floor tension myalgia (PFTM) refers to a subtype of chronic pelvic pain that is characterized by the presence of tender and distinct hyperirritable areas in taut muscle bands. These palpatory findings are typically described as trigger points.

However, according to the recent ICS report on the terminology for pelvic floor muscle assessment, the term 'tender point' should be used as the standardized term to describe these areas of localized muscle tenderness. Disorders of increased pelvic floor muscle tone affect approximately 13 to 22% of women and lead to chronic vaginal discomfort and dyspareunia. Treatment modalities for PFTM aim to relax the pelvic floor.

There are various conservative and invasive approaches in management of PFTM, including pelvic floor physical therapy, trigger point injections (with local anesthetics and steroids), and botulinum toxin injections.

The proposed mechanisms of action of trigger point injections are disruption of reflex arcs within skeletal muscles, release of endorphins, and mechanical changes in abnormally contracted muscle fibers.

Pelvic floor physical therapy is first-line therapy for treatment of pelvic floor tension myalgia. Pelvic floor trigger point injections are added if symptoms are refractive to conservative therapy or if patients experience a flare.

The primary objective was to determine if a session of physical therapy with myofascial release immediately following pelvic floor trigger point injections provides improved pain relief compared to trigger point injection alone.

Methods

This was a retrospective cohort analysis of 63 female patients with pelvic floor tension myalgia who underwent pelvic floor trigger point injections alone or pelvic floor trigger point injections immediately followed by pelvic floor physical therapy. Visual analog scale (VAS) pain scores were recorded pre-treatment and 2 weeks post-treatment. A 10-point VAS was used ranging from "no pain" (score of 0) to "pain as bad as it could possibly be" (score of 10). The primary outcome was the change in VAS between patients who received pelvic floor trigger point injections alone and those who received pelvic floor trigger point injections followed by myofascial release.

Eligibility criteria for the study included women with pelvic floor trigger points who failed initial physical therapy treatment and oral or transvaginal muscle relaxant medications.

In our practice, patients typically undergo 2 physical therapy sessions per week for 10 sessions by a trained pelvic floor physical therapist.

Between patients, the trigger point injection technique varied in specific locations injected and total sites injected.

With the patient in the lithotomy position, the provider performs single digit transvaginal palpation of the bilateral levator ani muscle complex (pubococcygeus, iliococcygeus, puborectalis) and obturator internus muscles (Fig. 1,2).

The presence of trigger points was defined as palpable nodule in the taut bands of the skeletal muscles' fascia. Verbal confirmation of the trigger point was verified by the patient.

A dry needle was injected into each trigger point. For each injection, a 7 inch, 22-gauge spinal needle was passed transvaginally through into the desired location (Fig.3) The depth of injection for each trigger point was approximately 2 cm.

A post trigger point injection pelvic floor physical therapy session typically lasts 15 mins.

Of the 63 patients in this study, 18 received pelvic floor trigger point injections alone and 45 patients received pelvic floor trigger point injections followed by myofascial release.

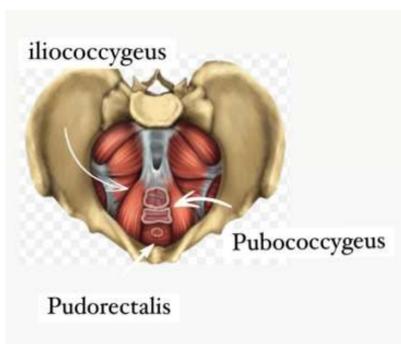


Fig.1

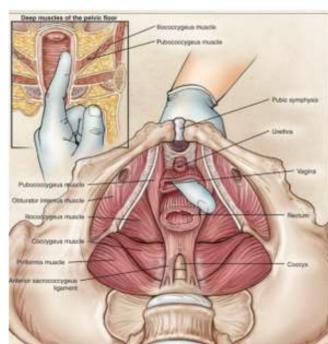


Fig.2



Fig.3

Results

A total of 63 patients with PFTM refractive to conservative treatment (physical therapy and muscle relaxants) who underwent PFTPI alone or PFTPI immediately followed by PFPT were included in this retrospective study.

Of the 63 patients in this study, 18 received pelvic floor trigger point injections alone (group 1) and 45 patients received pelvic floor trigger point injections followed by myofascial release (group 2).

The median pre-treatment VAS score was 9 for both groups.

The median post-treatment score was 6 for the pelvic floor trigger point injections only group and 4 for the Pelvic floor trigger point injections followed by myofascial release group, showing a median change in VAS score of 2 and 4, respectively (p = 0.041) – fig.4

80% of patients in the pelvic floor trigger point injections followed by myofascial release group had a VAS score improvement of 3 or more, while 42% of patients in the pelvic floor trigger point injections only group had a VAS score improvement greater than 3 (p = 0.007) – tabl.1

Tabl. 1

	Trigger point injection only (N=18)	Trigger point injection followed by PT (N=45)	P value
Duration of pain (months), median (range)	27.0 (5.0, 230.0)	31.0 (5.0, 340.0)	0.276
Pre-treatment VAS score, median (range)	9.0 (4.0, 10.0)	9.0 (4.0,9.0)	0.976
Post- treatment VAS score, median (range)	6.0 (0.0, 8.0)	4.0 (0.0, 9.0)	0.041*
Change in VAS score (post-pre), median (range)	- 2.0(-7.0,0.0)	- 4.0(-9.0,0.0)	0.030*
VAS score improvement of 3 or greater	9 (42%)	60 (80%)	0.007*

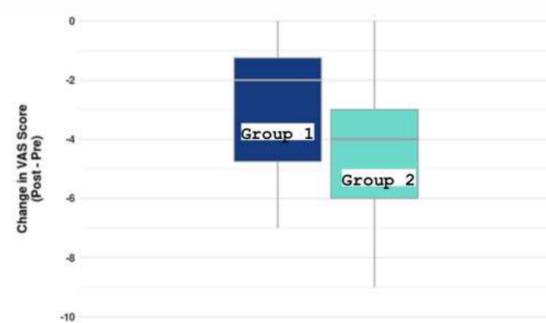


Fig.4

Conclusions

PFTPI followed by immediate myofascial release is a safe and effective treatment option for patients with PFTM, offering better improvement in pain than PFTPI alone.

The pain-relieving effect provided by the PFTPI may allow for tolerance of deeper physical therapy and internal manual release.

Multidisciplinary and multimodal treatment is a crucial part of management of patients with PFTM. Standardization of examination, diagnosis, and treatment algorithms will allow to improve clinical outcomes.

References

- Bartley J et al (2019) Transvaginal trigger point injections improve pain scores in women with pelvic floor hypertonicity and pelvic pain conditions. Female Pelvic Med Reconstr Surg 25(5):392–396
- Engeler DS et al (2013) The 2013 EAU guidelines on chronic pelvic pain: is management of chronic pelvic pain a habit, a philosophy, or a science? 10 years of development. Eur Urol 64(3):431–439
- VenâncioRde A, Alencar FG, Zamperini C (2008) Diferent substances and dry-needling injections in patients with myofascial pain and headaches. Cranio 26(2):96–103