

Pelvic Floor Physical Therapy for the Treatment of Dyspareunia in Post-Operative Transgender Woman: A Case Report

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Abstract:

Introduction

Pelvic floor physical therapy (PFPT) has been studied thoroughly for the treatment of various pelvic floor disorders such as myofascial pain, dyspareunia, vaginismus, and vulvodynia in cisgender females. However, the effectiveness of PFPT has not been adequately assessed or described in transgender individuals.

Case Presentation

Four months after gender affirming neovagina surgery, a 19 year old transgender woman presented with dyspareunia with a scale of 9 out of 10 pain. Biofeedback EMG electrode sensor pelvic floor muscle therapy was used to generate electrical impulses that facilitate pelvic floor muscle contraction and relaxation with a pressure sensor placed in rectum/vagina to evaluate the strength of muscle contractions as biofeedback. Additionally, a new Kegel exercise program was initiated and vaginal and perineal estrogen therapy was started as an adjunct treatment. Pain level with intercourse decreased to 6/10 by the 3rd session and the patient reported no pain with intercourse after the 6th session. No recurrence of dyspareunia was reported with continued home Kegel exercises and electrical stimulation.

Discussion

Pelvic floor disorders in transgender individuals require a multidisciplinary approach to treatment, and the literature is limited in terms of the prevalence and management of dyspareunia after gender-affirming surgery in transfeminine individuals. We present case report on the management of dyspareunia treated successfully with PFPT in a transgender woman.

Conclusion

PFPT could be an effective option for treatment of dyspareunia in transfeminine individuals after gender affirming surgery. Yet, further research is needed to evaluate its impact on pelvic floor disorders and standardize the treatment.

Keywords: pelvic floor physical therapy; transgender women; neovagina surgery; pelvic floor disorder; dyspareunia

Introduction

Pelvic floor physical therapy (PFPT) is a program that utilizes various exercises that aim to improve pelvic floor muscle strength, endurance, power, relaxation, or a combination, to provide relief for pelvic floor disorders including dyspareunia [1]. It improves relaxation, awareness and muscle proprioception as well as elasticity of the pelvic floor muscles and vagina.

A plethora of evidence exists to support the use of PFPT for the treatment of pelvic floor disorders including myofascial pain, dyspareunia, vaginismus,

and vulvodynia [1]. A randomized controlled clinical trial by Schvartman et al. comparing a group of climacteric women with dyspareunia who received five sessions of PFPT versus no pelvic training reported that the group which received PFPT had improved pain, quality of life, sexual and pelvic floor muscle function [2]. In a retrospective observational study by Bedaiwy and colleagues, 146 patients with chronic pelvic pain and dyspareunia who received at least 12 sessions of PFPT reported improvement in dyspareunia, and pain scores improved proportionally to the number of physical therapy visits completed [3]. Manual techniques including vaginal dilation exercises, home exercises, thermal therapy, pelvic floor exercise protocol, biofeedback, electrical stimulation and myofascial techniques to decrease levator ani muscle overactivity were utilized in these studies on cis-gendered individuals.

Gender affirming surgery offers significant benefit to patients with gender dysphoria [4] and has been shown to improve quality of life [5-7]. Despite a steady rise in the number of gender-affirming surgeries in the USA, only 10% of transfeminine individuals have completed vaginoplasty and 45% desire the procedure [8] which indicates the highly anticipated increased need for gender affirming surgeries in near future.

The majority of studies on genitopelvic disorders including dyspareunia focus on heterosexual and cisgender females. The prevalence of dyspareunia among women in the United States is high, ranging from 8 – 21% [9]. Despite the life changing physical and psychological improvements achieved with gender affirming surgery, pelvic floor disorders are encountered commonly after vaginoplasty. A recent study surveying transfeminine individuals reported that 372 of 605 (61.5%) responders experience pain with intercourse [10], with dyspareunia being the most common symptom interfering with regular sexual activity [11-12]. Yet, data regarding the management of new onset or preexisting pelvic floor disorders in this population is scarce. Fernando and colleagues performed the only randomized controlled trial assessing routine use of PFMT among 37 patients who had undergone vaginoplasty for gender affirmation. Although routine utilization of PFMT did not improve patient reported ease of dilatation scores (Visual Analog Score 0-10) at 12 weeks when compared with sham treatment sessions, patients with preexisting pelvic floor problems showed a significant improvement in symptoms with PFMT [13]. Even though this study has provided important information, details of PFPT sessions were lacking and the question of whether PFPT is effective for postoperative dyspareunia remains unanswered.

In this case report, dyspareunia in a transgender woman was treated with biofeedback EMG electrode sensor pelvic floor muscle therapy (PFMT). Muscles and nerves were stimulated by biofeedback to generate electrical impulses that facilitate pelvic floor muscle contraction and relaxation. PFMT included electrostimulation, biofeedback, and vaginal dilators that were used to help with the isolation of the pelvic floor musculature, and these modalities were used mostly in combination. Specifically, electrical stimulation assisted patients with isolation of the proper muscles, and biofeedback was achieved with a pressure sensor either in the rectum or neovagina to assess the strength of the muscle contractions.

Although extensive literature exists proving the efficacy of PFMT in cis female populations, there is little evidence evaluating the potential benefit of PFPT among transgender women with pelvic floor disorders. In this case report, we seek to demonstrate the efficacy of PFPT on dyspareunia in a transgender woman.

Case Presentation

Four months after gender affirming surgery, a 19 year old transgender woman presented with insertion pain during intercourse with a scale of 9 out of 10. Pain symptoms had been present for the previous 2 months before presenting to our clinic. Pelvic floor rehabilitation therapy with biofeedback was started after lack of improvement with home Kegel therapy. The patient was instructed on proper isolation of pelvic floor muscles. Kegel maneuvers were performed under visual video computerized observation. At all therapy sessions, biofeedback and electrical stimulation were initiated. EMG electrode sensor/probe was inserted into the neovagina to stimulate periurethral muscle activity, and monitoring patches were placed on the abdomen for 15 minutes. Resting pelvic floor muscle activity for the first 3 sessions was 5 mmHg and abdominal resting activity was 10 mmHg. For the next 4 sessions they were 2 and 5 mmHg respectively. Patient was instructed to contract and relax the muscles for a duration of 10 seconds with 10 to 14 repetitions. Maximum and average contraction strength is detailed in Table 1. Electrical stimulation was initiated for 15 minutes at 12.5 Hz frequency for the first 4 sessions and was increased to 100 Hz for the last three sessions. The average fast twitch for the pelvic muscles is detailed in Table 2. Patient tolerated the procedures well. Decreased length of muscle contraction was used to determine muscle fatigue.

The patient was given instructions for a new home Kegel exercise program. The program composed of contracting and holding pelvic floor muscles for 10 seconds and relaxing for 10 seconds with 10 to 14 repetitions 3 times a day in sitting, standing and lying positions. Patient was also started on 1 mg estrogen to be applied every night intravaginally and on the perineum for 1 week and was instructed to perform electrical stimulation for 20 minutes 3 times a day before intercourse. The frequency of electrical stimulations was 12.5 Hz for the first 4 sessions and it was increased to 100 Hz for the last 3 sessions. For the first 4 sessions, the patient used vaginal dilator #2 and for the last 3 sessions, dilator #3 was used (Table 3). Pain level with intercourse decreased to 6/10 by the 3rd session and no pain with intercourse was reported after the 6th visit. Supervised therapy concluded at this time and the patient continued home Kegel exercises and electrical stimulation with no recurrence of dyspareunia.

Discussion

There is a paucity of literature on the prevalence and management of dyspareunia after gender-affirming surgery in transfeminine individuals, and currently there is no standardized guideline on the number, intensity, modality and length of PFPT sessions to use in this population. The etiology of dyspareunia is multifactorial and may include anatomic, psychologic, and social factors, therefore management often includes a multidisciplinary approach. A wider

knowledge of how to manage pelvic floor disorders in transgender patients and a higher number of general providers who are trained in this field, such as physical therapists, is needed to meet the future expectations.

We present the first known case report on the management of dyspareunia with a focus on PFPT in a transgender woman after undergoing gender-affirming surgery. Similar to the aforementioned studies which were performed on cisgender women, our patient reported an improvement in pain score from 9/10 to 0/10 after 6 therapy sessions, which is encouraging for future practices. The details of the PFPT sessions provided in this case report could guide clinicians and physical therapists as to how to advance in their practice.

Conclusion

PFPT could be an effective treatment option for dyspareunia, which is a very common and notable problem in transfeminine individuals after gender affirming surgery. Further reports comparing interventions and long-term outcomes would help facilitate widely available and robust use of PFPT in transgender individuals with dyspareunia.

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Patient Consent

The patient gave a written informed consent for this case report to be written and published.

Conflict of Interest

Authors declare that they have no conflict of interest regarding publication of this case report.

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