

The Effectiveness of Pelvic Rehabilitation Program on Genitourinary Syndrome in A Breast Cancer Survivor: A Case Report

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Background

Breast cancer survivors are often confronted with long-term side effects from cancer treatments, including the genitourinary syndrome of menopause (GSM), a collection of symptoms affecting the genital and urinary systems. GSM significantly impacts the quality of life (QoL) due to symptoms like vaginal dryness, dyspareunia, and urinary incontinence. These symptoms are predominantly linked to the estrogen-suppressing effects of cancer treatments, such as chemotherapy, aromatase inhibitors, and ovarian suppression therapy, which induce menopause-like states in premenopausal women.

Case Description

A 48-year-old breast cancer survivor with a history of stage II HER-2 positive breast cancer and GSM presented with stress urinary incontinence (7–8 times weekly), moderate dyspareunia, and vaginal dryness. The patient underwent a three-month pelvic rehabilitation program, including pelvic floor muscle training with biofeedback, manual therapy, and a tailored home exercise regimen focused on pelvic stabilization and tissue extensibility.

Clinical Findings

Baseline assessment revealed pelvic floor muscle (PFM) weakness and overactivity, with EMG showing an elevated resting tone of 6.6 μV , poor relaxation, and weak voluntary contractions (quick flicks 11.8 μV ; tonic holds 9.9 μV). Manual muscle testing rated PFM strength at 3/5 with limited endurance (5-sec hold, 7 reps). Palpation identified increased tone in the levator ani, urogenital triangle, and obturator internus with right-sided tenderness. The Vulvar Assessment Index (10/15) confirmed severe vulvovaginal atrophy with poor elasticity and dryness. Patient-reported outcomes indicated moderate urinary incontinence (ICIQ-UI-SF score: 11) and significant distress related to vaginal dryness and dyspareunia (ICIQ-VS and ICIQ-FS), with notable negative impact on sexual function and quality of life.

Intervention

The patient completed a comprehensive three-month pelvic rehabilitation program for GSM symptoms, including urinary incontinence, vaginal dryness, and dyspareunia, consisting of twice-weekly supervised sessions (1 hour each: 15 minutes education, 45 minutes PFM exercises) and daily home exercises (30–60 repetitions, five days per week). Baseline assessment revealed PFM weakness, high resting tone, pelvic floor tension myalgia, poor bladder habits, and inadequate intra-abdominal pressure control, which guided the use of PFMT with EMG biofeedback, manual therapy, bladder training, and individualized home exercises.

Outcomes Measures

PFM strength increased from 3/5 to 4+/5, resting tone decreased from 6.6 μV to 1.3 μV , and both quick flick and tonic hold contractions showed enhanced recruitment and endurance. Urinary incontinence resolved completely (ICIQ-UI-SF 11 \rightarrow 0), with no weekly leakage episodes. Vaginal dryness and dyspareunia were reduced (VAS 8/10 \rightarrow 4/10; intercourse pain 6/10 \rightarrow 4/10), and quality of life improved, reflected in decreased ICIQ-VS and ICIQ-Female Sexual Matters scores. Overall, the patient reported satisfaction with her progress and improved well-being.

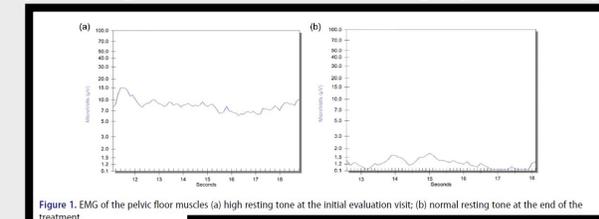


Figure 1. EMG of the pelvic floor muscles (a) high resting tone at the initial evaluation visit; (b) normal resting tone at the end of the treatment.

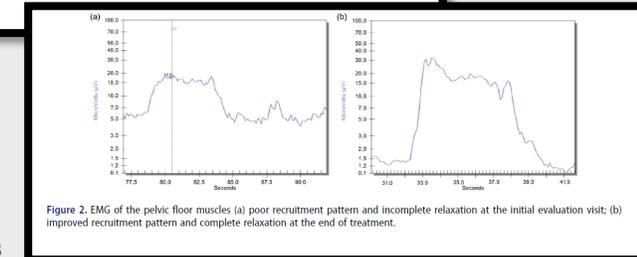


Figure 2. EMG of the pelvic floor muscles (a) poor recruitment pattern and incomplete relaxation at the initial evaluation visit; (b) improved recruitment pattern and complete relaxation at the end of treatment.

Implications

This case highlights that a structured, multimodal pelvic rehabilitation program can effectively improve pelvic floor muscle function, urinary continence, and sexual health in women with GSM. Combining supervised PFMT with EMG biofeedback, manual therapy, bladder training, and individualized home exercises not only reduces symptoms such as vaginal dryness, dyspareunia, and incontinence but also enhances overall quality of life. These findings support the integration of comprehensive, patient-specific pelvic rehabilitation strategies in clinical practice to address both functional and psychosocial aspects of GSM.

References

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