**Perioperative Behavioral Therapy & Pelvic Muscle Strengthening Does Not Improve Quality of Life After Apical Prolapse Surgery: A Randomized, Controlled Trial**

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**ABSTRACT**

**INTRODUCTION:** The value of perioperative behavioral therapy with pelvic floor muscle training (BPMT) for improving health-related quality of life (HRQOL) and sexual function is unknown in women undergoing transvaginal reconstructive surgery. While patients with better muscle conditioning have improved outcomes in a variety of surgeries (1), it is not standard practice for pelvic surgeries and robust clinical data supporting the practice is needed. (2)

**OBJECTIVE:** To evaluate the effect of perioperative BPMT on HRQOL and sexual function over 24 months following vaginal surgery for pelvic organ prolapse (POP) and stress urinary incontinence (SUI). This report describes a planned secondary analysis of women undergoing surgery as part of the Operations and Pelvic Muscle Training in the Management of Apical Support Loss (OPTIMAL) trial. (3)

**METHODS:** Adult women planning vaginal surgery for stage 2-4 POP and SUI enrolled in a multi-site 2x2 factorial randomized controlled trial and underwent randomization to two interventions: 1) peri-operative BPMT versus usual perioperative care and 2) sacrospinous ligament fixation (SSLF) versus uterosacral ligament suspension (ULS). Participants underwent transvaginal surgery (SSLF or ULS for POP and a midurethral sling for SUI) and received usual care or 5 perioperative BPMT visits: one preoperative (2-4 weeks before surgery) and 4 postoperative sessions (2, 4-6, 8, and 12 weeks after surgery) individualized with progressive pelvic floor muscle exercise and education on behavioral strategies for reducing urinary and colorectal symptoms. The Pelvic Floor Impact Questionnaire short form subscales (Urinary [UIQ], Prolapse [POPIQ], and Colorectal/anal [CRAIQ]), the SF-36, and the Patient Global Impression of Improvement (PGI-I) assessed outcomes related to HRQOL before and after randomization. The POP/UI sexual questionnaire short form (PISQ-12), a modified body image questionnaire, and self-reported post-operative treatment for dyspareunia at 6, 12, and 24 months addressed sexual function after randomization. Differences from baseline in QOL measures to 24 months were assessed between treatment groups using linear models.

**RESULTS:** Of the 374 subjects who were randomized for the behavioral intervention (n=186) and usual care (n=188), the proportion of participants withdrawing after randomization were similar [34(18%) BPMT, 24(13%) usual care, p=0.15]. Completed questionnaires at 24 months were available for 152(82%) of BPMT and 154(82%) of usual care subjects. Self-reported adherence to exercise in the BPMT group was good at 12 (86%) and 24 (81%) months. Participants had significant improvements in UDI, POPDI and CRADI at 6 months post-operatively that were sustained at 24-months with no significant differences between groups (Figure). SF-36, PGII, PISQ-12, body image, and post-operative treatment for dyspareunia were also similar for both groups.

**CONCLUSIONS:** Perioperative BPMT performed as an adjunct to two different types of vaginal surgery for POP and SUI does not improve quality of life or sexual function compared with usual care. While individualized treatments including physical and behavioral therapy can be offered to women reporting new or unresolved symptoms following surgery, our findings do not support routine perioperative BPMT for women undergoing vaginal surgery for stage 2-4 prolapse and SUI.

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