Can Pelvic Floor Muscle Training Improve Sexual Function in Women with Pelvic Organ Prolapse? A Randomized Controlled Trial

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ABSTRACT

Introduction. Pelvic floor muscle training (PFMT) has level 1 evidence of reducing the size and symptoms associated with pelvic organ prolapse (POP). There is scant knowledge, however, regarding whether PFMT has an effect on sexual function.

Aim. The aim of the trial was to evaluate the effect of PFMT on sexual function in women with POP.

Methods. In this randomized controlled trial, 50 women were randomized to an intervention group (6 months of PFMT and lifestyle advice) and 59 women were randomized to a control group (lifestyle advice only).

Main Outcome Measures. Participants completed a validated POP-specific questionnaire to describe frequency and bother of prolapse, bladder, bowel, and sexual symptoms and answered a semi-structured interview.

Results. No significant change in number of women being sexually active was reported. There were no significant differences between groups regarding change in satisfaction with frequency of intercourse. Interview data revealed that 19 (39%) of women in the PFMT group experienced improved sexual function vs. two (5%) in the control group ($P < 0.01$). Specific improvements reported by some of the women were increased control, strength and awareness of the pelvic floor, improved self-confidence, sensation of a "tighter" vagina, improved libido and orgasms, resolution of pain with intercourse, and heightened sexual gratification for partners. Women who described improved sexual function demonstrated the greatest increases in pelvic floor muscle (PFM) strength (mean 16 ± 10 cmH_20s) and endurance (mean 150 ± 140 cmH_20s) ($P < 0.01$).

Conclusion. PFMT can improve sexual function in some women. Women reporting improvement in sexual function demonstrated the greatest increase in PFM strength and endurance. **Brækken IH, Majida M, Ellström Engh M, and Bø K. Can pelvic floor muscle training improve sexual function in women with pelvic organ prolapse? A randomized controlled trial. J Sex Med 2015;12:470–480.**

Key Words. Pelvic Floor Muscle Training; Sexual Function; Pelvic Organ Prolapse; Muscle Strength and Endurance; Physical Therapy

Introduction

Approximately 50% of women lose some of the supportive mechanisms of the pelvic floor due to childbirth leading to variable degrees of pelvic floor muscle (PFM) and/or pelvic organ descent [1]. The prevalence of pelvic organ prolapse (POP) has been reported to be as high as 94% when including small, asymptomatic prolapses (stage I) [2,3]. The high prevalence was found among 497 women aged 18–82 years attending for annual examination in the United States [3]. POP and

urinary incontinence may be linked to sexual dysfunction, such as sexual avoidance, orgasm deficiency, poor body image, and reduced sexual desire and arousal [4,5]. The sensation of obstruction within the vagina and vaginal laxity are two main reasons given for reduced sexual satisfaction in women with POP [6]. Seven randomized controlled trials (RCTs) have evaluated the effect of PFM training (PFMT) on sexual function in postpartum women [7–10], gynecologic cancer survivors [11], women with stress urinary incontinence [8,12], and in women with POP [13]. Although PFMT has been demonstrated to reduce severity of POP and improve bladder and bowel symptoms [14–17], there is currently a lack of knowledge regarding whether PFMT has an effect on sexual function [18].

Aim

The aim of the present study was to evaluate the effect of PFMT on sexual function in women with POP, including frequency of sexual intercourse, sexual satisfaction, ability to orgasm, and other issues women reported as affecting their sex life. Another objective was to determine if any improvements in sexual function were related to increases in PFM function (strength, endurance, and vaginal resting pressure).

Methods

Design

This was the secondary analysis of a partially blind RCT where subjects were stratified according to severity of POP [15]. All the subjects gave written informed consent and the Regional Committee for Medical Research Ethics approved the study.

Participants

Subjects were recruited via community gynecologists and advertisements in local newspapers.

Scandinavian-speaking women with stage I, II and III POP, regardless of POP symptoms [19] were enrolled. Exclusion criteria were: POP stage 0 or IV, inability to contract the PFM, breastfeeding, delivery of a baby within the past 12 months, pregnant or plans to conceive a child within the next six months, previous POP surgery, use of pessary, radiating back pain, pelvic cancer, neurological or psychiatric disorders, untreated urinary tract infection, frequent or persistent coughing, and inability to participate for more than 4 weeks of the intervention period.

Intervention

All participants received written information regarding POP and were informed to avoid straining (e.g., during defecation). Subjects in both groups were also taught how to contract their PFM before and during increases in abdominal pressure, such as with coughing, sneezing, and heavy lifting [20]. Control subjects were asked not to commence or alter preexisting PFMT regimes during the intervention period. Women in the PFMT group were instructed to undertake three sets of 8–12 repetitions of near maximal PFM contractions daily and to use an exercise diary to record compliance [21,22]. Exercise sessions were individually supervised by a physical therapist (PT) once a week during the first 3 months and every second week during the last 3 months. Women in the intervention group also received a booklet and a DVD of the exercise program.

Procedures

All subjects first completed a validated POP questionnaire including questions regarding symptoms of POP, bladder, bowel, and sexual function [23]. A clinical examination followed, at a private physical therapy institute by a PT (IHB). All women were thoroughly instructed in how to contract the PFM with no use of abdominal, hip, or gluteal muscles or increase in intra-abdominal pressure. The ability to contract the PFM vas observed as an inward lift of perineum and confirmed by vaginal palpation [24]. PFM function was examined by manometry and included PFM strength, endurance, and vaginal resting pressure [25,26]. At a university hospital, the grade of POP was thereafter established by a gynecologist (MM) based on the POP quantification system [19]. Both assessors were trained by well-recognized and respected researchers and clinicians (KB and MEE) prior to commencement of the study. Participants were stratified according to stage of POP and then randomized to either the PFMT or control group via a computer-generated random number system transferred to opaque sealed envelopes by a statistician. Information for decoding randomization was kept by the statistician. The nurse who administered the randomization of subjects was blind to all data with the exception of the stratification criterion (stage of POP). It was not possible to blind subjects to their group allocation due to the nature