

Comparison of the Changes in Sexual Function of Premenopausal and Postmenopausal Women Following Transvaginal Mesh Surgery

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ABSTRACT

Introduction. The effect of transvaginal mesh (TVM) surgery on sexual function between premenopausal and postmenopausal women remains controversial.

Aim. To compare the changes in sexual function of premenopausal and postmenopausal women following TVM repair.

Methods. One hundred and fifty-two consecutive women with symptomatic pelvic organ prolapse (POP) stages II to IV were referred for TVM procedures at our hospitals. Sixty-eight women were included because they were sexually active and had complete follow-up. All subjects were divided into the premenopausal (N = 36) and postmenopausal (N = 32) groups. Preoperative and postoperative assessments included pelvic examination using the POP quantification (POP-Q) system and a personal interview with the Female Sexual Function Index (FSFI), Urogenital Distress Inventory (UDI-6), and Incontinence Impact Questionnaire (IIQ-7).

Main Outcome Measures. The FSFI, UDI-6, and IIQ-7 questionnaires.

Results. The mean age, rates of hypertension, and previous hysterectomy were significantly higher in the postmenopausal group ($P < 0.05$) compared with the premenopausal group. As for the POP-Q analysis, there was a significant improvement at points Aa, Ba, C, Ap, and Bp ($P < 0.001$) in both groups except for total vaginal length ($P > 0.05$). Similarly, the UDI-6 and IIQ-7 scores significantly decreased postoperatively ($P < 0.01$). After POP surgery, the score of the dyspareunia domain decreased significantly in the premenopausal group ($P < 0.01$) but was not the case for the postmenopausal group ($P > 0.05$). There were no significant changes in other domains and total scores in both groups ($P > 0.05$). However, higher rates of worsening dyspareunia and total scores were noted in the premenopausal group ($P = 0.03$ vs. 0.033).

Conclusion. TVM procedure is effective for the anatomical restoration of POP. However, individual domain of FSFI such as dyspareunia may worsen in the premenopausal women. Additionally, our results revealed that over one third of premenopausal women could have a worsening sexuality domain postoperatively, with significantly higher rate of deteriorated dyspareunia and total FSFI scores than postmenopausal women. **Long C-Y, Hsu C-S, Wu M-P, Lo T-S, Liu C-M, and Tsai E-M. Comparison of the changes in sexual function of premenopausal and postmenopausal women following transvaginal mesh surgery. J Sex Med 2011;8:2009–2016.**

Key Words. Dyspareunia; Functional Changes in Sexual Symptoms Following the Pelvic Organ Prolapse Surgery; Menopause; Pelvic Organ Prolapse; Sexual Function; Transvaginal Mesh Repair; Urinary Symptom

The first two authors contributed equally to this work.

Introduction

Pelvic organ prolapse (POP) is a common gynecologic disease in aging women, adversely affecting the quality of life in terms of urinary, bowel, and sexual symptoms [1–3]. Nearly 11% of all women need some type of operation for POP or urinary incontinence in their lifetime, with 29% needing a second operation for recurrence within 5 years [4]. Traditional anterior and posterior colporrhaphies have been the established treatment for POP over the last century but carry a higher rate of recurrence [4–6]. Therefore, surgery with implantation of mesh or graft materials has become increasingly popular over the last decade because of the excellent short-term cure rate [7–9]. Perigee/Apogee® (AMS, Inc., Minnetonka, MN, USA) and Prolift® system (Gynecare Prolift, Ethicon, Inc., Piscataway, NJ, USA) are examples of synthetic mesh kits recently developed and adopted in pelvic reconstruction.

Estrogen deficiency after menopause alters urogenital vascularization [10,11] and pH, which may cause symptoms of urogenital atrophy, including overactive bladder, pruritus, dryness, and dyspareunia. However, over 75% women undergoing POP repair fall into the age group of postmenopausal women [12]. With the prolongation of life expectancy, it becomes a critical issue regarding functional changes in sexual symptoms following the POP surgery that should be discussed with patients.

The Female Sexual Function Index (FSFI) is a questionnaire proposed by Rosen et al., who demonstrated its reliability and validity [13]. It is a 19-question, self-report measure of female sexual function. The instrument is comprised of six domains, including sexual desire, subjective arousal, lubrication, orgasm, satisfaction, and pain. Each domain is assigned a minimum and maximum score, and the total score for sexual function is the sum of all domains. The Taiwan translation of the FSFI has been validated for linguistic accuracy in a recent report [14].

Reviewing the literature, the effects of POP or transvaginal mesh (TVM) surgery on sexual function remains controversial [15–17]. Lack of standardized surgical techniques and validated instruments further complicates interpretation of such studies. Another possibility is that discrepancies of sexual symptoms exist between premenopausal and postmenopausal women. Thus, all participants were divided into the premenopausal and postmenopausal groups, and every domain on the FSFI were applied in them.

Aims

The purpose of this study was to compare the changes in sexual function of premenopausal and postmenopausal women following the transvaginal pelvic reconstruction with synthetic mesh.

Methods

From June 2004 through July 2009, 152 consecutive women with symptomatic POP stages II to IV defined by the POP quantification (POP-Q) staging system [18] were referred for TVM procedures (80 Perigee and/or Apogee; 72 Prolift devices) at our hospitals. Among them, 109 (71.1%) women were postmenopausal. Concomitant midurethral sling operations, including tension-free vaginal tape (TVT) (Gynecare TVT, Ethicon, Inc.), TVT obturator (Gynecare TVT-Obturator System, Ethicon, Inc.), and Monarc (AMS, Inc.), were performed in women with current or occult urodynamic stress incontinence (USI). Sixty-eight women were included because they were sexually active and had complete follow-up. “Sexually active” was defined as a woman with vaginal intercourse in the 6 months prior to this intervention.

We defined “menopause” as a woman with an elevated serum follicle-stimulating hormone level of greater than 40 IU/L and an estradiol level of less than 20 pg/mL. All participants were divided into the premenopausal group (N = 36) and postmenopausal group (N = 32). Current hormone user was defined as a woman taking continuous hormone therapy for at least 6 months before surgery, and she continued medication after TVM. Preoperative and postoperative assessments included pelvic examination using the POP-Q system, urodynamic study, and a personal interview to evaluate urinary and sexual symptoms with the short forms of the Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) [19], and the FSFI.

Point Aa of the POP-Q system is located at the midline of the anterior vaginal wall, 3 cm proximal to the external urethral meatus, and the corresponding point of posterior vaginal wall is Ap. Point Ba represents the most distal position of any part of anterior vaginal wall from anterior vaginal fornix or vaginal cuff to point Aa, and the corresponding point of posterior vaginal wall is Bp. Point C is the most dependent edge of the cervix or the leading edge of the vaginal cuff after hysterectomy. The total vaginal length is measured as the greatest depth of the vagina in centimeters. All

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