The impact of stress incontinence surgery on female sexual function

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OBJECTIVE: We sought to describe change in sexual function 2 years after surgery to treat stress urinary incontinence.

STUDY DESIGN: This analysis included 655 women randomized to Burch colposuspension or sling surgery. Sexual activity was assessed by the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) among those sexually active at baseline and 2 years after surgery.

RESULTS: Mean PISQ-12 total score improved from baseline 32.23 ± 6.85 to 36.85 ± 5.89. After surgery, fewer subjects reported incontinence (9% vs 53%; $P < .0001$), restriction of sexual activity as a result of fear of incontinence (10% vs 52%; $P < .0001$), avoidance of intercourse because of vaginal bulging (3% vs 24%; $P < .0001$), or negative emotional reactions during sex (9% vs 35%; $P < .0001$). Women with successful surgery had greater improvement PISQ-12 scores (5.77 vs 3.79; $P < .006$). Sexually active women were younger, thinner, and had lower Medical, Epidemiological, and Social Aspects of Aging scores (total and urge subscale) than sexually inactive women.

CONCLUSION: Sexual function improves after successful surgery and does not differ between Burch and sling.

Key words: Burch, Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire, sexual function, sling, stress incontinence surgery

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Women with urinary incontinence have been shown to have poorer sexual function than continent women.[1-3] However, the relationship between severity of incontinence and level of sexual dysfunction is unknown. Likewise, the effects of surgery for stress urinary incontinence (SUI) on sexual function are inconsistent, with more consistency in postintervention improvement reports when condition-specific sexual function instruments are used.[4-6] The Stress Incontinence Surgical Treatment Efficacy Trial (SISTEr)[7] was a multicenter, randomized, controlled clinical trial designed to compare 2-year outcomes of the Burch colposuspension with the autologous rectus fascial sling procedure. This report describes the cross-sectional relationship between severities of incontinence and sexual function in SISTEr participants prior to undergoing surgery. We also report changes in sexual function 2 years postsurgery and factors associated with this change.

Materials and Methods

Women with predominant SUI were recruited into the SISTEr trial between February 2002 and June 2004 at 9 clinical sites located throughout the United States. A total of 655 women were randomized in the operating department to undergo either a Burch colposuspension or an autologous rectal fascial sling procedure. The study protocol was approved by the institutional review board of each participating institution and all women provided written informed consent. The details of the design of the trial have been previously reported.[7] Briefly, women were eligible for the study if they had SUI symptoms for at least 3 months, desired surgery, and reported voiding < 12 times per day. They were also required to have predominant SUI based on a higher percentage of stress-type symptoms reported on the Medical, Epidemiological, and Social Aspects of Aging (MESA) Questionnaire compared with urge-type symptoms.[7,8] Other eligibility criteria were a bladder capacity of ≥ 200 mL, a postvoid residual volume of ≤ 150 mL, urethral hypermobility on cotton swab testing (resting angle or maximum

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TABLE 1
Demographics and clinical characteristics

	Sexually active (n = 450)		Not sexually active (n = 205)		
	N	%	N	%	*P* value
Race/ethnicity					.09
Hispanic	43	10	28	14	
White, non-Hispanic	332	74	145	73	
African American, non-Hispanic	28	6	15	8	
Other	46	10	11	6	
Education					.06
< High school	33	7	21	11	
High school or equivalent	113	25	57	29	
Some post-high school	194	43	63	32	
Baccalaureate degree	67	15	31	16	
Graduate degree	43	10	27	14	
Marital status					< .001
Married/living with a partner	360	80	83	42	
Not married	90	20	116	58	
Smoking status					.03
Never smoked	249	55	103	52	
Former smoker	130	29	76	38	
Current smoker	71	16	20	10	
HRT use					< .001
No	152	34	79	40	
Yes	133	30	89	45	
Premenopausal	164	37	31	16	
POP-Q stage[a]					.07
0	21	5	8	4	
I	83	18	45	23	
II	282	63	104	52	
III	51	11	36	18	
IV	13	3	6	3	
	Mean	**SD**	**Mean**	**SD**	
Age (y)	49.5	9.5	57.4	10.1	< .001
BMI	29.2	5.8	31.6	5.9	< .001
UDI[b]: total	150.1	49.2	152.4	47.2	.58
UDI: stress	78.8	21.3	76.1	23.1	.14

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straining angle > 30 degrees), and observed urine leakage as a result of a provocative stress test performed with a bladder volume of ≤ 300 mL.

Women were excluded from the study if they were < 21 years of age, were not ambulatory, were pregnant or planning pregnancy within 24 months, were within 12 months postpartum, were undergoing cancer therapy, were given the diagnosis of a systemic disorder affecting bladder function (eg, multiple sclerosis, spinal cord injury), had urethral diverticulum, had prior augmentation cystoplasty or artificial sphincter, had recent pelvic surgery, or were participating in a treatment trial that could influence the results of SISTEr.

Data were obtained prior to (at baseline) and 2 years after surgery, except for women who underwent retreatment for SUI prior to the 2-year follow-up; their information was obtained prior to retreatment. Study measures assessed by self-reported questionnaires and clinical examination included sociodemographic characteristics, body mass index (BMI), prolapse stage by Pelvic Organ Prolapse (POP)-Quantified (POP-Q), history of hormone replacement therapy, Q-tip displacement, and smoking status. Severity of incontinence was assessed by the MESA, a standardized 24-hour pad test, and the Urogenital Distress Inventory (UDI).[9] The UDI instrument includes subscales to measure obstructive, irritative, and stress urinary symptoms. Possible scores for each subscale range from 0-100 with a higher score indicative of more urogenital distress.

Overall treatment success was defined as a composite measure that included: (1) no SUI symptoms on MESA; (2) a negative pad test (< 15 mL urine leakage over 24 hours); (3) no urinary incontinence on 3-day voiding diary; (4) a negative provocative stress test; and (5) no retreatment for SUI. Because we did not expect improvement in the urge component of women with concomitant urge incontinence at time of enrollment we defined a second primary outcome as SUI-specific success, which required: (1) no SUI symptoms; (2) a negative stress test; and (3) no SUI retreatment.