Changes in Sexual life after Single-incision mid-urethral sling under local anesthesia for SUI treatment: 2-years follow-up.

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Abstract

The objective of this research is to assess the effectiveness and changes in sexual function after treating female stress urinary incontinence (SUI) using a single-incision mid-urethral sling (SIMS) technique performed under local anesthesia. A total of 50 sexually active Caucasian women underwent SIMS for SUI and then participated in a follow-up assessment spanning a duration of 24 months. Standardized questionnaires (ICIQ-SF, FSFI, PISQ-12) were used to assess the continence state and sexual life of the patients. The assessment of sexual function pre-operatively and 24 months after surgery shown a statistically significant improvement in all domains, except for pain, as indicated by the FSFI scores. Assessing the effects of urinary incontinence through the utilization of the FSFI (Female Sexual Function Index) and PISQ-12 (Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire) revealed diminished sexual function in females with pelvic floor disorders. The management of urinary incontinence using SIMS not only results in a notable enhancement in continence but also in sexual function.

Introduction

Urinary incontinence is a prevalent disorder that impacts approximately 25% of women. It is closely associated with decreased quality of life (QOL) and sexual dysfunction [1]. Sexual function may experience enhancement if the condition of incontinence is successfully treated without giving rise to any additional adverse effects (e.g., pain, mesh erosion). Sexual function is negatively impacted by surgical and postoperative complications, including de novo urgency, pain, and dyspareunia. Examining changes in sexual function after incontinence surgery yields inconclusive results, as certain studies indicate improvement, while others indicate deterioration, and yet others indicate no change in sexual function complaints [2]. The FSFI is a clinically useful multidimensional scale; a score of 26.55 differentiates women with and without sexual dysfunction [3]. The aim of this study is to assess the effectiveness and alterations in sexual function after treating female SUI with a single-incision SIMS under local anesthesia.

Methods and Materials

A prospective cohort study was conducted in a Urogynecologic unit of a tertiary academic center from December 2019 to January 2023. All patients consecutively treated with SIMS for SUI were included. The patients presented with SUI, and they were initially examined in the outpatient department (history, POP-Q, cough stress test, urodynamic exam). All patients presenting with concomitant pelvic organ prolapse, prior incontinence surgery, or absence of sexual activity were excluded. Patients' continence status and sexual life were evaluated utilizing standardized questionnaires (ICIQ-SF, FSFI, PISQ-12). The patients were evaluated at 24 months with a clinical examination that including a stress test, check for erosion, and questionnaires (PGI-I, PGI-S, ICIQ-SF, FSFI, PISQ-12). Statistical analysis was performed with Microsoft EXCEL.

Table 1. Baseline Characteristics, demographics & Urodynamics

Baseline Characteristics, demographics & Urodynamics	
Baseline Characteristics	**Statistics**
Total Number of patients, N	50
Mean age, (SD) years	58.02 (10.25)
BMI, (SD) kg/m2	29.37 (5.01)
Parity, (SD) N	2.56 (0.95)
Race/Ethnicity, n (%)	Caucasian, 100 %
Narrow introitus, (GH≤2)	12.00 %
Menopause	70.00 %
Mean ICIQ-VS score, (SD)	4.67(4.76)
Urodynamic results	
SUI, N - %	50, 100%
MUI, N - %	14, 28%
Mean Stress test (SD), No cough	1.36 (0.48)
Mean VLPP (SD)	58.83 (35.73)
Mean MCC (SD), ml	464 (126)
Mean F/F Qmax, (SD)	22.51 (14.23)
Mean F/F Qave, (SD)	9,83 (6.57)

SD=Standard Deviation; BMI=Body Mass Index; GH=Genital Hiatus; ICIQ=International Consultation Incontinence Questionnaire; SUI=Stress Urinary Incontinence; MUI=Mixed Urinary Incontinence; VLPP=Valsalva Leak Point Pressure; MCC=Maximum Cystometric Capacity; F/F=Free flow.

Results

A total of 50 Caucasian sexually active women consecutively underwent SIMS for SUI and returned for a 24-month follow-up; demographics are shown in Table 1. At the 24 months follow-up, the stress test was negative in 96% (48/50), 94% (47/50) had PGI-I scores 1 and 2, and 84% (42/50) had PGI-S score 1. Mean ICIQ-SF score decreased from 13.76±2.97 preoperative to 2.26±2.93 at 24 months follow up. No mesh erosion was recognized (Table 1). A total of 31 patients (62%) showed improvement in total FSFI scores, whereas 9 patients (18%) showed deterioration, and 10 patients (20%) had no changes on the FSFI questionnaire. The mean total FSFI score was statistically significantly improved from 18.85±9.10 to 21.62±8.61. Preoperatively, only 13 patients (26%) had scores showing normal sexual function, while 37 patients (74%) had FSFI total values >26. Following a 24-month follow-up, the number of patients without female sexual dysfunction increased to 38% (19/50). When evaluating the PISQ-12 results, 39 patients (78%) demonstrated an increase in total scores, while 8 patients (16%) demonstrated a decrease, and 3 patients (6%) exhibited no change. The mean total PISQ-12 score was statistically significantly improved from 29.20± 7.30 to 35.26±5.11. If we separate the patients into 2 groups, menopausal (n=35) or not (n=15), we observe the same significant improvement to the mean total FSFI score (15.71±8.48 to 188.37±8.19 and 26,17±5.80 to29.21±2.89) and PISQ-12 score (27,57±6.35 to 33.66±4.87 and 33.00±8.15 to 39.00±3.55) in both groups. (Table 2)

Table 2. Post-operative examination results

Pre- vs Post-operative continence and sexual function results					
Cure rate			Pre-operative	24 months	p
PGI-S			N/A	1.16±0.37	-
PGI-I			N/A	1.26±0.63	-
ICIQ-SF	**All** (N=50)		**13.76±2.97**	**2.16±2.67**	**<0.001†**
	Severe incontinence (N=32)		14.19±2.96	2.9±3.3	<0.001†
	Moderate incontinence (N=18)		**13.00±2.91**	**3.44±3.43**	**<0.001†**
Positive Stress test, No			50/50, 100%	2/50 6.3%	-
Sling Erosion			-	0/50 0%	-
Sexual function			Pre-operative	24 months	p
FSFI	**All** (N=50)	**Total**	**18.85±9.1**	**21.62±8.6**	**<0.001†**
		Desire	2.95±1.28	3.66±1.39	<0.001†
		Arousal	3.77±1.53	3.36±1.50	<0.001†
		Lubrication	2.99±1.92	3.37±1.86	<0.001†
		Orgasm	2.71±2.20	3.44±1.81	<0.001†
		Satisfaction	3.62±1.85	3.97±1.66	<0.001†
		Pain	3.81±1.68	3.82±1.79	0.959
	Severe incontinence (N=32)		18.61±8.56	21.58±7.99	<0.001†
	Moderate incontinence (N=18)		19.28±10.24	21.71±9.86	<0.001†
	Menopause (N=35)		15.71±8.48	18.37±8.19	<0.001†
	No menopause (N=15)		26.17±5.80	29.21±2.89	0.023†
PISQ-12	**All** (N=50)		**29.20±7.30**	**35.26±5.11**	**<0.001†**
	Severe incontinence (N=32)		28.09±7.35	35.16±5.19	<0.001†
	Moderate incontinence (N=18)		31.17±6.99	35.44±5.12	<0.001†
	Menopause (N=35)		27.57±6.35	33.66±4.87	<0.001†
	No menopause (N=15)		33.00±8.15	39.00±3.55	0.006†

†=statistically significant; PGI-S=Patient Global Impression-Symptoms, PGI-I=Patient Global Impression-Improvement; ICIQ=International Consultation Incontinence Questionnaire; SF=Short Form; FSFI=Female Sexual Function Index; PISQ-12=The Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire.

Discussion

Evaluation of sexual function pre-operatively and 24 months post-operatively revealed a statistically significant improvement in all domains except pain as measured by FSFI scores. Assessing the effects of urinary incontinence through the utilization of the FSFI and PISQ-12 reported poorer sexual function in women with pelvic floor disorders. The treatment of urinary incontinence with SIMS leads not only to a significant improvement in continence but also in sexual function.

Conclusions

SIMS may be a useful technique in the treatment of SUI. They have a high success rate, a low morbidity rate, and have been shown to lead to improvements in continence and sexual function at 24 months of postoperative follow-up.

References

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